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AUG 12 2013

zia engineering & environmental consultants, llc

8 August 2013

Matthew Wunder
Conservation Services Division Chief
New Mexico Department of Game and Fish
P. O. Box 25112
Santa Fe, NM 87504

The New Mexico Department of Game and Fish does not anticipate significant impacts to state listed species, other wildlife of concern or their habitats from the proposed project(s) as described.

Date: 15-Aug-13 NMDGF No. 15826

Approved by: [signature]
Conservation Services Division
One Wildlife Way
PO Box 25112
Santa Fe, NM 87504 505-476-8101

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences

Dear Mr. Wunder,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

The subject property (figure attached) was originally leased by the BLM in 1961 under the Recreation and Public Purposes Act (R & PP) to the City of Truth or Consequences. Eventually, the landfill was closed in 1974 in accordance to the terms of the BLM lease. Starting in 2006, the City of Truth or Consequences began taking action under the direction of the BLM and the New Mexico Environment Department (NMED) to properly facilitate redevelopment of the property. In 2007, NMED informed BEI that they concurred with the no significant impact results and conclusions of the groundwater investigation following the clean-up and capping of the landfill. Recently, NMED has concurred with the findings that the accidental watering of the landfill cap from the nearby golf course did not significantly impact the integrity of the cap and thus potentially contaminating the groundwater.

Upon completion of the BLM environmental assessment, the City of Truth or Consequences would retain the patent of the 30-acre landfill. The property will not be altered once ownership has changed.

As part of the EA process, two alternatives were considered, the proposed action and no action. These alternatives considered include the following:

- Proposed Action – BLM lease to patent would be conveyed to the City of Truth or Consequences.
- No Action Alternative – BLM would retain ownership of the landfill and the City of Truth of Consequences would continue to lease the land from the BLM.

In accordance with environmental requirements of 24 CFR part 58 and the National Environmental Policy Act of 1969 (NEPA), the appropriate stakeholders and agencies must be consulted for their comments/review. If you determine concerns regarding this project, feel free to contact me, Leah

Markiewitz, at (575) 532-1526, ext. 702, or through e-mail at lmarkiewitz@ziaeec.com so that mitigating measures can be discussed and acted upon. Your comments can be as simple as checking off the appropriate box on the attached form, signing your name and placing your stamp and mailing it back to me at the address below, or faxing the signed form to me at (575) 532-1587. Thank you for your prompt response.

Attn: Leah Markiewitz
Zia Engineering & Environmental Consultants, LLC
755 S. Telshor Blvd., Suite F-201
Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

RECEIVED
AUG 22 2013

Leah Markiewitz

From: Gatewood, Richard H SPA <richard.h.gatewood@usace.army.mil>
Sent: Tuesday, August 13, 2013 3:22 PM
To: Leah Markiewitz
Subject: Landfill TorC (UNCLASSIFIED)
Attachments: scannedDoc.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Leah,

As usual the letter should have come to my address.

The Corps does not anticipate any significant impacts to Waters of the U.S.
from this action.

Thanks,
Rick Gatewood
US Army Corps of Engineers
Regulatory Manager for
Southern NM and West TX
505 S. Main St. Suite 142 Las Cruces, NM 88001

Office Phone 575-556-9939
Regulatory website:
http://www.spa.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx
Attachments greater than 4 MB use: https://safe.amrdec.army.mil/safe2/
Customer service survey: http://per2.nwp.usace.army.mil/survey.html

Classification: UNCLASSIFIED
Caveats: NONE

State of New Mexico
ENVIRONMENT DEPARTMENT

Office of the Secretary

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, NM 87502-5469
Telephone (505) 827-2855 Fax (505) 827-2836
www.nmenv.state.nm.us

RYAN FLYNN
Cabinet Secretary-Designate
BUTCH TONGATE
Deputy Secretary

October 1, 2013

Zia Engineering & Environmental Consultants, LLC
ATTN: Leah Markiewitz
755 S. Telshor Blvd, Ste F-201
Las Cruces, NM 88011
lmarkiewitz@ziaeec.com

RESPONSE BY EMAIL

RE: BLM Conversion of the R&PP Landfill Lease to Patent to the City of Truth or Consequences, Sierra County, NM

Dear Ms. Markiewitz:

Your letter regarding the above named project was received by the New Mexico Environment Department (NMED) and was sent to various bureaus for review and comment. Comments were provided by the Ground Water Quality and Surface Water Quality Bureaus and are as follows.

Ground Water Quality Bureau
New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) staff reviewed the above-referenced letter as requested, focusing specifically on the potential effect to ground water resources in the area of the proposed project.

An environmental assessment (EA) is being prepared on behalf of BASCOR Environment, Inc (BEI), Turtleback Mountain Partners and the City of Truth or Consequences to evaluate the proposed Bureau of Land Management (BLM) conversion of the R&PP landfill lease to patent to the City of Truth or Consequences. The project area consists of approximately 30 acres in Elephant Butte, Sierra County, NM. The property was originally leased by the BLM in 1961 under the Recreation & Public Purposes Act (R&PP) to the City of Truth or Consequences. The landfill was closed in 1974.

Beginning in 2006, the City of Truth or Consequences began taking action under the direction of the BLM and the NMED to properly facilitate re-development of the property. In 2007, NMED informed BEI that it concurred with the no significant impact results and conclusions of the ground water investigation following the clean-up and capping of the landfill. Recently, NMED has concurred with the findings that the accidental watering of the landfill cap from the nearby

golf course did not significantly impact the integrity of the cap and thus potentially contaminating ground water.

Surface Water Quality Bureau
The Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department (NMED) has no comments of the proposed action. It appears as though this land will not be utilized for any construction activities in the near future. It appears that this is a "land transfer" and no disturbance is anticipated. However, in the case of any construction activity, the U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area.

The CGP requires that a SWPPP be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 10.C.1.b)

You should also be aware that EPA requires that all "operators" (see Appendix A) obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications, and the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective February 16, 2012. The CGP, NOI, Fact Sheet, and Federal Register notice can be downloaded at: http://cfpub.epa.gov/npdes/stormwater/cgp.cfm

Also, depending on the final route to be taken, consultation with the U.S. Army Corps of Engineers to verify whether the proposed activity will require Clean Water Act §404 permitting is required prior to commencement of activities. Failure to receive and implement proper permit coverage would be a violation of the Clean Water Act. If you have questions about this coverage, please contact Marcy Leavitt, US Army Corps of Engineers, at (505) 342-3678.

I hope you find this information helpful.

Sincerely,

Morgan R. Nelson
Environmental Impact Review Coordinator
NMED File Number: EIR 4043

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
6200 Jefferson NE, Room 305
Albuquerque, NM 87109
Phone: (505) 761-4400 Fax: (505) 761-4462
Website: www.nm.nrcs.usda.gov

August 20, 2012

Mrs. Leah Markiewitz
Zia Engineering & Environmental
Consultants, LLC
755 S. Telshor Blvd., Suite F-201
Las Cruces, New Mexico 88011

Dear Mrs. Markiewitz:

Thank you for providing the Natural Resources Conservation Service (NRCS) the opportunity to review the proposed BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences, Sierra County, New Mexico.

The Farmland Protection Policy Act (FPPA) authorizes the NRCS to provide review of proposed projects that have the potential to irreversibly convert farmlands to non-farmland or irreversibly converting hydric areas to non-hydric uses as the result of programs funded by the federal government. In review of the information provided on the project, it is determined that the entire project is located in an urban or development area in an existing easement. The FPPA rules define farmland conversion to be "to the extent that it irreversibly converts farmland to other purposes", this project is not expected to have that effect. With this acknowledged, the proposed project will not cause Prime or Unique Farmlands or hydric soil to be converted to non-agricultural or non-hydric uses, and is not subject to the Act.

If you have any questions concerning soils information, please contact Clarence Chavez, Soil Data Quality Specialist, at (505) 761-4435 or email at clarence.chavez@nm.usda.gov.

Sincerely,

J. XAVIER MONTOYA
State Conservationist

cc:
Clarence Chavez, Soil Data Quality Scientist, NRCS, Albuquerque, NM

RECEIVED
AUG 26 2013

Helping People Help the Land

An Equal Opportunity Provider and Employer

8 August 2013

Matthew Wunder
Conservation Services Division Chief
New Mexico Department of Game and Fish
P. O. Box 25112
Santa Fe, NM 87504

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

Dear Mr. Wunder,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

The subject property (figure attached) was originally leased by the BLM in 1961 under the Recreation and Public Purposes Act (R & PP) to the City of Truth or Consequences. Eventually, the landfill was closed in 1974 in accordance to the terms of the BLM lease. Starting in 2006, the City of Truth or Consequences began taking action under the direction of the BLM and the New Mexico Environment Department (NMED) to properly facilitate redevelopment of the property. In 2007, NMED informed BEI that they concurred with the no significant impact results and conclusions of the groundwater investigation following the clean-up and capping of the landfill. Recently, NMED has concurred with the findings that the accidental watering of the landfill cap from the nearby golf course did not significantly impact the integrity of the cap and thus potentially contaminating the groundwater.

Upon completion of the BLM environmental assessment, the City of Truth or Consequences would retain the patent of the 30-acre landfill. The property will not be altered once ownership has changed.

As part of the EA process, two alternatives were considered, the proposed action and no action. These alternatives considered include the following:

- Proposed Action – BLM lease to patent would be conveyed to the City of Truth or Consequences.
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In accordance with environmental requirements of 24 CFR part 58 and the National Environmental Policy Act of 1969 (NEPA), the appropriate stakeholders and agencies must be consulted for their comments/review. If you determine concerns regarding this project, feel free to contact me, Leah

Markiewitz, at (575) 532-1526, ext. 702, or through e-mail at lmarkiewitz@ziaeec.com so that mitigating measures can be discussed and acted upon. Your comments can be as simple as checking off the appropriate box on the attached form, signing your name and placing your stamp and mailing it back to me at the address below, or faxing the signed form to me at (575) 532-1587. Thank you for your prompt response.

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Zia Engineering & Environmental Consultants, LLC
755 S. Telshor Blvd., Suite F-201
Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

8 August 2013

Wally Murphy, Field Office Supervisor
U.S. Fish & Wildlife Service
2105 Osuna NE
Albuquerque, NM 87113
Wally_Murphy@fws.gov

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

Dear Mr. Murphy,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

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Attn: Leah Markiewitz
Zia Engineering & Environmental Consultants, LLC
755 S. Telshor Blvd., Suite F-201
Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

8 August 2013

U.S. Army Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109-3435

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

To whom it may concern,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

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Attn: Leah Markiewitz
Zia Engineering & Environmental Consultants, LLC
755 S. Telshor Blvd., Suite F-201
Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

Consultation with U.S. Army Corps of Engineers

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences

☐ No significant impact anticipated

☐ Significant impact anticipated due to the following reasons:

_____

_____

_____

_____

_____

_____

_____

_____ _____

Signature Title

_____

Date

If faxing, please send to **Leah Markiewitz** at **(575) 532-1587**. Thank you!

8 August 2013

Morgan R. Nelson
Policy Analyst & Special Projects Manager
New Mexico Environmental Department
1190 St. Francis Drive, PO Box 5469
Santa Fe, New Mexico 87502-5469

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

Dear Mr. Nelson,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

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Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

8 August 2013

Mr. Barry Ragsdale
Sierra County Flood Director
855 Van Patten
Truth or Consequences, NM 87901
sierraflood@windstream.net
575-894-5552

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

Dear Mr. Ragsdale,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

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Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

Consultation with Sierra County Flood Commission

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences

☐ Project ***IS*** located within a floodplain

☐ Project ***IS NOT*** located within a floodplain

☐ No significant impact anticipated

☐ Significant impact anticipated due to the following reasons:

_____

_____

_____

_____

_____

_____

_____

_____ _____

Signature Title

_____

Date

If faxing, please send to **Leah Markiewitz** at **(575) 532-1587**. Thank you!

8 August 2013

Rhonda Smith , Chief
EPA, Region 6
Compliance Assurance and Enforcement Division
Office of Planning and Coordination (6EN-XP)
1445 Ross Avenue
Dallas, TX 75202-2733

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

Dear Ms. Smith,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

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755 South Telshor Blvd, Suite F-201 ● Las Cruces, New Mexico 88011 ● phone (575) 532-1526 ● fax (575) 532-1587

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Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

Consultation with EPA Region 6

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences

☐ No significant impact anticipated

☐ Significant impact anticipated due to the following reasons:

_____

_____

_____

_____

_____

_____

_____

_____ _____

Signature Title

_____

Date

If faxing, please send to **Leah Markiewitz** at **(575) 532-1587**. Thank you!

8 August 2013

J. Xavier Montoya
NM NRCS State Conservationist
6200 Jefferson NE
Albuquerque, NM 87109

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences.

Dear Mr. Montoya,

On behalf of BASCOR Environmental, Inc. (BEI), Turtleback Mountain Partners and the City of Truth or Consequences, this letter is to inform you of a brief history, the proposed action, and ask for your comments/review of the following proposed action. Truth or Consequences and the Bureau of Land Management (BLM) are in the process of completing a lease to patent of approximately 30 acres in Elephant Butte, Sierra County, New Mexico. BEI has been retained by Turtleback Mountain Partners and the City of Truth or Consequences to provide consulting services in support of this lease to patent. Zia Engineering & Environmental Consultants, LLC was hired by BEI to complete the required BLM environmental assessment of the property. The lead agency managing the completion of the environmental assessment is BLM under case number 0375740.

The subject property (figure attached) was originally leased by the BLM in 1961 under the Recreation and Public Purposes Act (R & PP) to the City of Truth or Consequences. Eventually, the landfill was closed in 1974 in accordance to the terms of the BLM lease. Starting in 2006, the City of Truth or Consequences began taking action under the direction of the BLM and the New Mexico Environment Department (NMED) to properly facilitate redevelopment of the property. In 2007, NMED informed BEI that they concurred with the no significant impact results and conclusions of the groundwater investigation following the clean-up and capping of the landfill. Recently, NMED has concurred with the findings that the accidental watering of the landfill cap from the nearby golf course did not significantly impact the integrity of the cap and thus potentially contaminating the groundwater.

Upon completion of the BLM environmental assessment, the City of Truth or Consequences would retain the patent of the 30-acre landfill. The property will not be altered once ownership has changed.

As part of the EA process, two alternatives were considered, the proposed action and no action. These alternatives considered include the following:

- Proposed Action – BLM lease to patent would be conveyed to the City of Truth or Consequences.
- No Action Alternative – BLM would retain ownership of the landfill and the City of Truth of Consequences would continue to lease the land from the BLM.

755 South Telshor Blvd, Suite F-201 ● Las Cruces, New Mexico 88011 ● phone (575) 532-1526 ● fax (575) 532-1587

Zia Engineering & Environmental Consultants, LLC conducted a review of the USDA Web Soil Survey and identified the following soils within the proposed project area.

Soil Name	Special Notes
Anthony-Vinton fine sandy loams	Classified as farmland of statewide importance but not a hydric soil
Bludpoint loamy fine sand, moderately rolling	Neither farmland of statewide importance or a hydric soil
Nickel, very gravelly fine sandy loam, very steep	Neither farmland of statewide importance or a hydric soil

In accordance with environmental requirements of 24 CFR part 58 and the National Environmental Policy Act of 1969 (NEPA), the appropriate stakeholders and agencies must be consulted for their comments/review. If you determine concerns regarding this project, feel free to contact me, Leah Markiewitz, at (575) 532-1526 or through e-mail at lmarkiewitz@ziaeec.com so that mitigating measures can be discussed and acted upon. Your comments can be as simple as checking off the appropriate box on the attached form, signing your name and placing your stamp and mailing it back to me at the address below, or faxing the signed form to me at (575) 532-1587. Thank you for your prompt response.

Attn: Leah Markiewitz
Zia Engineering & Environmental Consultants, LLC
755 S. Telshor Blvd., Suite F-201
Las Cruces, NM 88011

Sincerely,

Leah Markiewitz
Project Scientist / NEPA Specialist
Zia Engineering & Environmental Consultants, LLC

Enclosures: Project area Map

Consultation with NRCS

Subject: BLM Conversion of the R & PP Landfill Lease to Patent to the City of Truth or Consequences

☐ No significant impact anticipated

☐ Significant impact anticipated due to the following reasons:

_____

_____

_____

_____

_____

_____

_____

_____ _____

Signature Title

_____

Date

If faxing, please send to **Leah Markiewitz** at **(575) 532-1587**. Thank you!

State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Quality Bureau
District III Office
1170 N. Solano Drive, Suite M
Las Cruces, New Mexico 88001
Telephone (505) 524-6300
Fax (505) 526-3891

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

CINDY PADILLA
DEPUTY SECRETARY

June 1, 2007

John Tanaka, P.E., Senior Engineer
BASCOR Environmental, Inc.
800 West Central Road, Suite 104N
Mt. Prospect, IL 60056

RE: Former City of Truth or Consequences Landfill Ground Water Monitoring Report.

Dear Mr. Tanaka:

Serving on behalf of the New Mexico Environment Department (NMED) Ground Water Quality Bureau, I have completed a review of the letter report with attachments dated April 23, 2007. The report details the methods, results and conclusion of the ground water investigation you oversaw during mainly the month of March 2007.

The report successfully addressed concerns that NMED has expressed regarding the potential for leachate generation from the former, unregulated solid waste disposal site on federal land. Furthermore, the ground water sampling results presented support the major conclusions expressed in the report. Based on the information presented, I concur with the major conclusions that:

1. the buried solid waste has not significantly impacted local ground water quality, and

2. the occurrence of manganese concentrations in excess of the NM Water Quality Control Commission standard may be natural and/or an artifact of sampling methodologies.

Thank you for completing an expeditious ground water investigation as requested by NMED. Please continue to direct further information relating to the redevelopment landfill site and surrounding land parcels to my attention at the address above.

Sincerely,

Chris Whitman

Chris Whitman, Geoscientist
Remediation Oversight Section

cc: David Jevons, BLM, 1800 Marquess, Las Cruces, NM 88005
Jack Whitt, Turtleback Mtn. Partners, 120 Stagecoach Dr., Elephant Butte, NM 87935
Jaime Aguilera, City of TorC Manager., 505 Sims Street, T or C, NM 87901

357A

State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Quality Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2918
Fax (505) 827-2965

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

September 25, 2006

Mr. Jaime Aguilera, City Manager
City of Truth or Consequences
505 Sims Street
Truth or Consequences, NM 87901

RE: Closure Work Plan Approval for the Former City Landfill, Bureau of Land Management Recreation and Public Purposes Lease No. NM037574, Sierra County, New Mexico

Dear Mr. Aguilera:

The purpose of this letter is for the New Mexico Environment Department (NMED) to approve a work plan (Closure Plan) submitted August 28, 2006 from BASCOR Environmental, Inc. on behalf of the City of Truth or Consequences for a site located approximately 2 miles northeast of the city. The site is located on portions of 30.12-acres of federal land, leased from the Bureau of Land Management (BLM), for the purpose of municipal waste disposal. The city used the land for that purpose from the early 1960's to the mid 1970's. The work plan proposes to further assess any potential environmental contaminant issues that could occur with local land development. As submitted, the Closure Plan is being treated as a Corrective Action Report work plan under the New Mexico Water Quality Control Commission (WQCC) Regulations 20.6.2.1203.A NMAC since the waste disposal operations ceased prior to May 14, 1989, the date on which landfill closure plan requirements became effective in New Mexico.

The overall objectives of the work plan are to acquire further field data to determine an appropriate waste cover system, and to provide updated data on ground water quality. The following activities are proposed in the work plan:

- Clearing of brush, test trenching and pot-holing, and surface cleanup of white goods in order to provide access and confirm the lateral extent of past waste disposal practices.

- Design of a cover system based on general design criteria listed in current state regulations under 20.9.1 NMAC, Section 502. Some variation in design will likely be

necessary because the site includes both flat portions and steep slopes.

- Monitoring well installation to augment the existing well network and slug testing to estimate hydraulic conductivity of the shallow aquifer materials.

- A ground water potentiometric surface map will be developed using data from the well network. Ground water samples from each monitoring well in the network will be submitted to a laboratory for volatile and semi-volatile organic compounds, pesticides, polychlorinated biphenyls, and metals.

The above-referenced work plan is approved with the following conditions:

1.) The City of Truth or Consequences shall install at least 3 monitoring wells. One monitoring well shall be located upgradient of the site and 2 monitoring wells shall be located downgradient of the disposal areas.

2.) The monitoring wells shall be installed in accordance with NMED guidelines.

3.) Ground water samples shall also be analyzed for major cations and anions using appropriate EPA approved methods.

Please be advised that this work plan approval does not relieve the City of Truth or Consequences of responsibility if the plan fails to adequately address contamination related to waste management/disposal activities. In addition, NMED approval does not relieve the City of Truth or Consequences of its responsibility to obtain third-party access and to comply with any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

If you have any questions, please contact Bart Faris at (505) 222-9521 or Chris Whitman at (505) 647-7959. Thank you for the City's cooperation in this matter.

Sincerely,

William C. Olson, Chief
Ground Water Quality Bureau

cc: John Tanaka, P.E., BASCOR Environmental, 800 W. Central Rd., Ste. 104N, Mt. Prospect, IL 60056
Jack Whitt, Turtleback Mtn. Partners, 120 Stagecoach Dr., Elephant Butte, NM 87935
David Jevons, Bureau of Land Management, 1800 Marquess, Las Cruces, NM 88005
Chris Whitman, GWQB, NMED Dist. 3
Harry Mikel, SWB, NMED Dist. 3
ROS Reading File

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Las Cruces District Office
1800 Marquess
Las Cruces, New Mexico 88005
www.nm.blm.gov

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

1703 (03100)

AUG 30 2007

William C. Olsen
Ground Water Bureau Chief
Harold Runnels Building
P.O. Box 26110
Santa Fe, NM 87502-6110

Dear Mr. Olsen:

The Bureau of Land Management (BLM) is in the process of conveying to the City of Truth or Consequences (T or C) a former landfill located at lot 3, sec. 22, T. 13 S., R. 4 W., NMPM. BLM is requesting your approval of the enclosed Land Transfer Audit (LTA) report, which has determined there is no significant risk to human health or the environment. Included within the LTA are an Environmental Site Assessment Report and Mineral Potential Report. Based on the work completed as part of the LTA, BLM has found no evidence of hazardous substances or petroleum products on this property.

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), BLM is required to obtain concurrence from the appropriate state official when identifying uncontaminated Federal land for disposal. In order to continue the current momentum and work strategies, BLM and the City of T or C cordially request a response from NMED within 30 days of receiving the LTA, if at all possible.

After review and concurrence, NMED must provide certification to the City of T or C that based on the provided documents, it concurs that the contents of the conveyed site in question, does not threaten human health or the environment.

If you have any questions, contact David E. Jevons, Haz-Mat Coordinator, at (505) 525-4334 or by email at david_jevons@blm.gov; or Lorraine Salas, Realty Specialist, at (505) 525-4388 or by email at lorraine_salas@blm.gov.

Sincerely,

Tim Sanders

Tim L. Sanders
Assistant District Manager
Division of Multi-Resources

1 Enclosure

cc:
Auralie Ashley-Marx
Willie Kelley
Jaime Aguilera
✓Samuel J. Senn

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Las Cruces District Office
1800 Marquess
Las Cruces, New Mexico 88005
www.nm.blm.gov

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

NMNM 116816
(2800) 03100

Federal Express
8596 8985 5850

MAR 3 0 2007

APR 2007

Mr. Jaime Aguilera
City Manager
City of Truth or Consequences
505 Sims Street
Truth or Consequences, NM 87901

Dear Mr. Aguilera:

Enclosed are two copies of Form 2920-1 Land Use Application and Permit (serial number NMNM 116816) for your proposed golf driving range within the following described public land:

T. 13 S., R. 4 W., NMPM, Sierra County, New Mexico
sec. 22, lot 3.

Containing 10 acres, more or less.

Please sign and return both copies of the permit to the address shown above. Upon receipt of the two signed permits, the Bureau of Land Management will be able to issue the permit absent any other unresolved issues. A copy of the permit will be returned to you when signed by the authorized officer. Advance rental in the amount of $7,500.00 for a 3-year period is required prior to issuance of the permit. The monitoring fee for this permit is determined to be a Category 4, which is $990.00. Please submit both the rental and fees with the signed permits.

As mentioned in the Stipulations (Exhibit A) of the permit, a bond has been set in the amount of $100,000.00. The bond may be a surety or letter of credit (LOC). If a LOC is elected, the beneficiary must be listed as the "Department of Interior, Bureau of Land Management, Las Cruces District Office, 1800 Marquess, Las Cruces, NM 88005". A list of Approved Surety Certified Companies is enclosed for your use. In addition, an insurance policy covering property damage, personal injury, and public liability is required as stated in Exhibit A.

Also enclosed for your signature are two copies of an Indemnification Provision statement which will become part of the permit. Please return both copies with the signed permits.

You are allowed 30 days from receipt of this offer in which to return the executed permit, indemnification statement, bond, insurance, rental, and fees. If this requirement is not met, the land use application may be denied.

Should you have any questions please contact Angel Mayes, Realty Specialist, at (505) 525-4376.

Sincerely,

for Tim L. Sanders
Assistant District Manager
Division of Multi-Resources

4 Enclosures

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Las Cruces District Office
1800 Marquess
Las Cruces, New Mexico 88005
www.nm.blm.gov

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

NMNM 037574
2000 (03100)

AUG 2006 RECEIVED

AUG 2 2006

Mr. Jaime Aguilera
City Manager
City of Truth or Consequences
505 Sims Street
Truth or Consequences, NM 87901

Dear Mr. Aguilera:

We are in receipt of your recent letter regarding your desire to purchase the parcel of land administered by the Bureau of Land Management (BLM) and formerly used by the City of Truth or Consequences (City), New Mexico as a landfill. In your letter, you request information related to the costs and requirements involved in the transfer of the landfill to the City under the Recreation and Public Purposes Act (R&PP).

You have requested a patent for 30.12 acres, more or less, that was formerly leased under the authority of the R&PP to the City (NMNM 037574). The lease was issued on March 20, 1961, and was terminated on October 29, 1975. Upon your request, and only with the expressed approval of the BLM Director, the authorized office may issue a patent for the subject property. Before BLM can request approval for conveyance from the BLM Director to the City, the following steps must be completed.

1. Each landfill is unique and surrounding area and closure activity must be evaluated subject to onsite conditions. BLM will work closely with you and the State in development and implementation of a final closure plan. It will be necessary for the City to acquire final closure approval and documentation from the New Mexico Environmental Department (NMED) before BLM can proceed with the conveyance of the subject property.

2. The BLM will prepare a Landfill Transfer Audit (LTA) that must be conducted on the lands to be included in the patent. This assessment of the conditions of the subject lands prior to transfer of title to the City is an addition to CERLA 120(h) requirements. The City will be asked to send a copy of the LTA to NMED for review. After review, NMED must provide certification to the City that based on the provided documents, it concurs that the contents of the landfill site in question do not threaten human health or the environment.

3. Following completion of steps 1 and 2, the BLM, Las Cruces District Office will submit the request to the BLM Director recommending the issuance of patent.

The cost reimbursement provisions of 43 CFR 2743.3-1 (3) establishes a cost recovery for full reimbursement from the City for all administrative costs incurred by the United States during the site investigation. The cost recovery fees must be collected prior to beginning processing of the application for patent. The estimated cost for processing the landfill closure portion of this project is $19,379. If the cost of processing the landfill closure exceeds this estimate, additional funds will be requested from the City. In addition, unspent funds will be returned to the City at project conclusion.

The cost for patent of the subject property will be $10 per acre. The parcel is 30.12 acres. Therefore, the total cost is $301.20 for conveyance.

After you have reviewed the above information, we suggest you meet with our staff to review your proposal and the next steps. Following that meeting, and before we can begin processing your request for patent, the submission of the $19,379 estimated processing cost must be submitted to this office.

On a related subject, BLM will began work on a lease application for a golf driving range to be located on the former landfill property after BLM receives the cost recovery fees for the landfill closure and, simultaneously, BLM will begin review of your request for patent of the subject property. The lease would entail a short-term authorization for the placement and use of the subject property for the driving range. That lease would terminate upon issuance of the patent to the City.

If you are prepared to move forward on a driving range lease, we would like to include that discussion in a meeting between the City and our staff. Please note the process for analyzing a lease proposal could take several months to process and would include the publication of a Notice of Realty Action in the Federal Register making the lands available for lease. The steps and costs for processing a lease can also be discussed at the meeting.

We hope this helps outline the process for the patenting of the landfill site. We will make the processing of this landfill patent and your request for a lease for a driving range a priority and hope you will do the same. It will be imperative to work very closely with each other and the State agencies involved in the landfill approval process.

If you would like a meeting with our staff or have any further questions, please contact Angel Mayes, Realty Specialist at (505) 525-4376.

Sincerely,

Acting for Tim L. Sanders
Assistant District Manager
Division of Multi-Resources

1 Enclosure:
1 – Calculation of 5440 Account
for Landfill Conveyance

CALCULATION OF 5440 ACCOUNT FOR LANDFILL CONVEYANCE						
SPECIALIST	Vehicle (_miles@__ cents)	Total Cost of Vehicle Use	Hourly Rate	Hours Worked	Total Amount	Type of Work Performed
Haz-Mat Coordination	112 miles x .52 x 15 field trips	$873.00	$34.68	346	$11,999.28	Coordinate and review corrective action plan/closure plan, LTA report, potential EA, and site progress visits in the interest of the BLM.
Realty Specialist			$37.57	43	$1,615.00	Prepare Notice of Realty Action and process lands side of the transaction.
Managerial Staff			$43.35	43	$1,864.00	Management coordination, document review and approvals.
Total		$873.00		432	$15,478.00	
Total Estimated Labor and Vehicle cost	$16,351.00					
Indirect Cost of 18.4% 16351.00 X 18.4% = 3008	$3,008.00					
Operation Cost $19.20 plus Indirect Cost	$3,028.00					
TOTAL ESTIMATED COST	**$19,379.00**					

NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

1190 St. Francis Drive, P.O. Box 5469
Santa Fe, NM 87502-5469
Phone (505) 827-2900 Fax (505) 827-2965
www.nmenv.state.nm.us

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

RYAN FLYNN
Cabinet Secretary-Designate
BUTCH TONGATE
Deputy Secretary

December 13, 2013

Juan Fuentes, City Manager
City of Truth or Consequences
505 Sims
Truth or Consequences, NM 87901

RE: Corrective Action Report Work Plan Approval for the former Truth or Consequences Landfill, Elephant Butte, New Mexico

Dear Mr. Fuentes:

The New Mexico Environment Department (NMED) hereby approves a Corrective Action Report work plan and accompanying Quality Assurance Project Plan (QAPP) dated October 29, 2013 to conduct further monitoring for the site referenced above. The site is located in Township 13S, Range 4W, Section 22 of approximately 30 acres on federal land that was leased to the City of Truth or Consequences (T or C) from the Bureau of Land Management for a former landfill. Solid waste was disposed at the site between 1961 and 1974. A golf course driving range was built on and adjacent to the former landfill and received irrigation from approximately 2008 to 2013. Because the former landfill received surficial irrigation, NMED requested that additional site assessment activities be performed to determine if the irrigation has caused leaching of contaminants. NMED approves this work plan pursuant to the New Mexico Water Quality Control Commission (WQCC) Regulations 20.6.2.1203.A NMAC.

The work plan proposes the following assessment activities: 1) sample ground water monitoring wells on a regular basis, 2) sample four soil vapor probes in December 2013, 3) inspect the soil cover to detect erosion or other cap failure every six months, 4) repair any soil cover erosion as needed, and 5) mark the former landfill's boundaries with signs and/or barriers. Monitoring wells to be sampled include MW-1, MW-3R, MW-5, MW-8, MW-9, and MW-10. If the ground water level in any of these wells drops below the screened interval, an alternate well (MW-2R or MW-4) will be sampled. Ground water will be monitored quarterly for the first year (September 2013, December 2013, March 2014, June 2014), semi-annually for the next two years (December 2014, June 2015, December 2015, June 2016), and annually through the fifth year (June 2017, June 2018). Ground water samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds, specific metals, major ions, nitrogen species, pesticides, and herbicides. Soil gas samples will be collected and analyzed for methane. Monitoring reports will

be submitted to NMED after each sampling event. The depth to ground water underneath the site is approximately 11 feet.

Please be advised that NMED approval of the submitted work plan does not relieve the City of T or C of its responsibility if the site assessment fails to adequately identify or monitor contamination related to the site. In addition, NMED approval does not relieve the City of T or C of its responsibility to obtain third-party access and to comply with any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

Please provide NMED at least fifteen (15) days advance notice of all field activities. If you have any questions, please contact Ray Montes at (575) 647-7932. Thank you for your cooperation in this matter.

Sincerely,

Jerry Schoeppner, Chief
Ground Water Quality Bureau

cc: Michael Crepeau, Gordon Environmental, Inc., 213 S. Camino del Pueblo, Bernalillo, NM 87004
Samuel Senn, BASCOR Environmental, Inc, P.O. Box 669, Mt. Prospect, IL 60056
Kendrah Penn, Bureau of Land Management, 1800 Marquess, Las Cruces, NM 88005
Rusty Stovall, Bureau of Land Management, 1800 Marquess, Las Cruces, NM 88005
Vanessa Duncan, Bureau of Land Management, 1800 Marquess, Las Cruces, NM 88005
Michael Kesler, Manager, NMED District III Office
Ray Montes, GWQB
ROS Reading File

CLOSURE PLAN FOR THE FORMER TRUTH OR CONSEQUENCES LANDFILL

Elephant Butte, New Mexico

City of Truth or Consequences

August 2006

BASCOR Environmental, Inc.
consulting engineers and scientists

800 West Central Road
Suite 104N
Mt. Prospect, IL 60056

Phone: (847) 577-1980
Fax: (847) 577-1982

CLOSURE PLAN FOR THE FORMER
TRUTH OR CONSEQUENCES LANDFILL

ELEPHANT BUTTE, NEW MEXICO

CONTENTS

1.0 INTRODUCTION 1-1
1.1 Site Description 1-1
1.2 Property Ownership and Previous Site Use 1-2
1.3 Project Objectives 1-2

2.0 CURRENT ENVIRONMENTAL CONDITIONS 2-1
2.1 Preliminary Assessment 2-1
2.2 Phase II Investigations 2-2
2.2.1 Scope of Work 2-2
2.2.2 Laboratory Sample Results 2-2
2.2.3 Hydrogeologic Assessment 2-3
2.2.4 New Mexico Environment Department 2-3
2.2.5 Off-Site Sampling - Souder, Miller & Associates 2-3
2.3 Landfill Inspection 2-4
2.4 Summary 2-4

3.0 CLOSURE PLAN 3-1
3.1 Site Clearing 3-1
3.2 Test Trenches and Test Pits 3-1
3.3 Surface Cleanup 3-2
3.4 Landfill Cover System 3-2
3.5 Groundwater Monitoring 3-3
3.5.1 Monitoring Network 3-3
3.5.2 Hydraulic Conductivity Testing 3-4
3.5.3 Groundwater Sampling and Analysis 3-4
3.6 Future Land Use 3-6
3.7 Approvals and Submittals 3-6
3.8 Closure Schedule 3-7

4.0 HEALTH AND SAFETY 4-1

5.0 REFERENCES 5-1

TABLES

2-1 Comparison of Soil, Sediment, and Waste Sample Results to NMED Soil Screening Levels
2-2 Comparison of Groundwater Sample Results to New Mexico Groundwater Standards
2-3 Groundwater Analytical Data Summary - November 13, 1997
2-4 Soil Sample Analytical Results – November 2004

FIGURES

1-1 Site Location Map
1-2 BLM Parcel Site Plan
2-1 Site Investigation Sample Location Map
2-2 Redevelopment Plan
3-1 Conceptual Landfill Cover Sections

APPENDICES

A Documentation Regarding Historical Landfill Operations
B CCJM Preliminary Assessment Sample Location Map and Data Tables
C CCJM Monitoring Well Construction Diagrams
D CCJM Phase I and Phase II Site Investigation Data Tables

CLOSURE PLAN FOR THE FORMER TRUTH OR CONSEQUENCES LANDFILL

ELEPHANT BUTTE, NEW MEXICO

1.0 INTRODUCTION

BASCOR Environmental, Inc. (BEI) prepared this Closure Plan on behalf of the City of Truth or Consequences (T or C), New Mexico. The project site is a closed solid waste landfill formerly operated by T or C on land that the City leased from the U.S. Department of the Interior, Bureau of Land Management (BLM). The land is proposed for redevelopment as part of the Turtleback Mountain Resort in Elephant Butte, New Mexico. This Plan presents background information on the site, summarizes environmental investigations completed to date, and presents an approach to close the site to meet applicable regulations administered by the New Mexico Environment Department (NMED).

1.1 SITE DESCRIPTION

The subject site occupies 30.12 acres of land in Elephant Butte, Sierra County, New Mexico. Elephant Butte is located about 2 miles northeast of the City of T or C and the project site is located about 2.5 miles west of the Elephant Butte reservoir (Figure 1-1). In 2000, the population of Elephant Butte was 1,390.

The site is approximately rectangular and currently undeveloped. A paved access road (no longer maintained) runs north-south through the site, although public access is restricted. Properties immediately adjacent to the BLM parcel are being redeveloped as part of the Turtleback Mountain Resort (discussed further below). The site topography varies considerably. The eastern half of the site is relatively flat, then rises steeply (about 100 feet) to the west to a mesa through which the former landfill access road runs (Figure 1-2).

An area of solid waste disposal is present at the southwestern corner of the BLM parcel (Figure 1-2) that extends onto the adjacent parcel to the south. It is believed that this area was used primarily for “fly dumping” (no subsurface waste disposal).

1.2 PROPERTY OWNERSHIP AND PREVIOUS SITE USE

In March 1961, the City of T or C entered into a lease with BLM to use the site for solid waste disposal. The BLM leased the property pursuant to the Recreation and Public Purposes Act and assigned number NM 037574 to the lease. The site's use as a landfill pre-dates any State solid waste regulations, so the site is classified as "non-registered" by NMED.

Solid waste was disposed of at the site between 1961 and 1974. Based on available records, waste was typically disposed by dumping it from the east side of the elevated access road, allowing it to fall down the slopes, then burned. In about 1968, as a result of concerns raised by the Health Department, the City began to dispose of their waste on lower ground by pushing dirt over the waste with heavy machinery. By December 1974, use of the site as a landfill stopped, and an inspection by the BLM showed that the site was closed in accordance with the terms of the lease. Documentation regarding historical landfill operations is included in Appendix A.

The City of T or C intends to lease the site from the BLM to facilitate redevelopment of the property. In a letter to the City dated August 2, 2006, the BLM outlined several steps that needed to be completed before the sale could be finalized. Approval of this Closure Plan by NMED was one of those steps.

1.3 PROJECT OBJECTIVES

The overall objective of this project is to close the unregulated landfill in accordance with applicable NMED criteria and obtain a no further action letter from NMED. At the same time, the developer of the adjacent Turtleback Mountain Resort intends to put the property back into productive use by constructing a golfer's driving range over part of the site.

2.0 CURRENT ENVIRONMENTAL CONDITIONS

2.1 PRELIMINARY ASSESSMENT

In October 1990, C.C. Johnson & Malhotra, P.C. (CCJM) completed a Preliminary Assessment (PA) Report for the BLM (CCJM, 1990). The purpose of the PA was to assess whether site conditions posed a risk to human health and the environment. CCJM evaluated background information and collected four surface soil samples from the site. Three samples (SL01, SL02, and SL03) were from sediments (surface soil) in different drainage pathways leading from landfilled areas toward the eastern site boundary and one sample (SL04) was collected west of the access road to evaluate background conditions.

Each soil sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and metals. Two VOCs (chloroform and toluene) were detected in two of the soil samples (SL01 and SL03), but at concentrations below the analytical quantitation limit. Therefore, these values were flagged as estimated. Low concentrations (a maximum of 110 parts per billion) of several SVOCs were detected in two of the samples (SL02 and SL03). The pesticide 4,4'-DDE was the only compound detected above detection limits and was found only in sample SL02. No PCBs were detected in any of the samples. Background sample SL04 did not contain detectable concentrations of VOCs, SVOCs, PCBs, or pesticides. Detected compounds in soil were compared to generic Soil Screening Levels (SSLs) published by the NMED Hazardous Waste Bureau and Ground Water Quality Bureau [NMED, 2005] (Table 2-1). SSLs are chemical-specific concentrations calculated using standard exposure assumptions to evaluate whether a site may warrant further response action. However, SSLs are not cleanup standards or regulatory criteria. Table 2-1 shows that the concentrations of all detected compounds in soil were below the residential SSLs.

The sample location map and summary of the laboratory data prepared by CCJM are included in Appendix B.

2.2 PHASE II INVESTIGATIONS

2.2.1 Scope of Work

Based on their findings in the PA, CCJM recommended completion of additional site investigation activities. Between October 1993 and May 1994, CCJM completed the following site investigation activities on behalf of the BLM (CCJM, 1995):

- Collected and analyzed 2 samples of background soil;
- Collected and analyzed 8 samples of waste (WS01 through WS08);
- Installed 4 groundwater monitoring wells (MW01 through MW04);
- Installed 6 temporary well points (WP01 through WP06);
- Sampled and analyzed groundwater from monitoring wells and well points; and
- Completed a monitoring well and sample location elevation survey.

CCJM installed four 2-inch diameter monitoring wells at depths between 15 and 26 feet below land surface (ft bls). Well construction diagrams are included in Appendix C.

2.2.2 Laboratory Sample Results

During the SI, low concentrations of chemicals of concern (VOCs, SVOCs, pesticides, PCBs, and metals) were detected in environmental samples collected from surface and subsurface soil, sediment, and waste sources. With the exception of arsenic and lead detected at WS01, all sample concentrations were below the NMED SSLs. Sample WS01 was collected from a steep slope at the southeast corner of the landfill (Figure 2-1). Table 2-1 lists the maximum detected concentrations detected and the corresponding SSLs.

Groundwater samples were collected from monitoring wells and well points and analyzed for VOCs, SVOCs, pesticides, PCBs, and total and dissolved metals. Low concentrations of certain chemicals of concern were detected, but all were below their respective groundwater standards

(20.6.2 NMAC, New Mexico Water Quality Control Commission Regulations). Table 2-2 lists the maximum detected concentrations detected and the corresponding groundwater standards.

Appendix D contains tabulated soil and groundwater data from the SI Report (CCJM, 1995).

2.2.3 Hydrogeologic Assessment

During the Phase II investigation, CCJM collected water level data from the monitoring wells to assess the groundwater flow direction. Based on measurements made in three of the wells (no level data was collected from well MW-4), CCJM determined that the groundwater flow direction was south-southeast.

2.2.4 New Mexico Environment Department

On November 13, 1997, NMED collected groundwater samples from the four monitoring wells installed by CCJM. Samples were submitted for analysis of VOCs, SVOCs, pesticides, PCBs, and metals. All samples were below their respective groundwater standards, with the exception of manganese detected in samples from BLM Well #3 and BLM Well #4. Table 2-3 summarizes the laboratory data.

2.2.5 Off-Site Sampling - Souder, Miller & Associates

In November 2004, Souder, Miller and Associates, on behalf of Tiger Run Investments, collected soil samples from 12 locations (Figure 2-1) from an area south of the former T or C landfill property boundary that was used for solid waste disposal (fly dumping). Two samples (SS-1 and SS-2) were collected from within the former disposal area limits and the remaining samples (SS-3 through SS-12) were collected from the toe of the disposal area slopes. Samples were collected within 3 inches of the ground surface and submitted to a laboratory for analysis of VOCs, pesticides, PCBs, and total lead.

VOCs were not detected above laboratory detection limits in any of the samples, and 7 of the 12 samples did not contain pesticides or PCBs above laboratory detection limits. The samples also contained low concentrations of lead except for sample S-1, which contained 68,000 milligrams per kilogram (mg/kg) lead. The off-site soil sample laboratory data are summarized in Table 2-4.

2.3 LANDFILL INSPECTION

In February 2006, BEI inspected the general condition of the former landfill and its cover system. Solid waste (mostly glass and metal) was visible over much of the surface of the landfill, although its origin could not be determined. Some material may be from fly dumping after the site was closed, and some could be from erosion of the soil cover. On the steep slopes, limited vegetative cover existed and erosion features (rills and gullies) were noted. On the relatively flat area proposed for the driving range, the density of vegetation was much greater, and some areas were impassable. No odors were noted during the inspection.

2.4 SUMMARY

A number of environmental investigations were completed at the site after its closure by T or C. Based on a review of available reports and laboratory data; and a site inspection, it is BEI's opinion that the landfill operations caused minimal environmental impacts. The collection of additional field data is recommended to evaluate an appropriate final landfill cover system and to provide updated data on groundwater quality (see Section 3.0).

3.0 CLOSURE PLAN

This section describes the proposed tasks to close the site in compliance with applicable environmental regulations and site-specific criteria established by the BLM. In general, these tasks include the following:

- Clear vegetation from the site;
- Limited supplemental investigation activities to verify the extent of waste materials;
- Construction and maintenance of a soil cover system over the landfilled areas;
- Construction of a golf course driving range over areas not used for landfilling; and
- Groundwater monitoring.

Details regarding the above tasks are discussed below.

3.1 SITE CLEARING

The first step toward implementing closure and redevelopment of the former landfill site will be to clear vegetation from the eastern half of the site. Removed organic material will be stockpiled and burned on-site. If other types of solid waste are encountered, they will be stockpiled for future disposal at the Sierra County Landfill. The four existing monitoring wells will be marked and protected during clearing operations.

3.2 TEST TRENCHES AND TEST PITS

Previous visual inspections and surface and subsurface sample collection activities (see Section 2.0) were used to help define the limits of landfilled areas. To verify the horizontal extent of these areas, the estimated waste boundaries will be staked in the field. A series of test trenches and/or pits will then be dug along sections of the staked perimeter of the landfill, primarily on the northern, eastern, and southern edges. The estimated maximum depth of excavation is 3 to 5 feet below ground surface. At each location, excavated material will be visually examined for the presence of solid waste and field instruments will be used to screen the excavations for VOCs and methane. The observations and field data will be documented on a field log form and each

location will be photographed. If subsurface solid waste is encountered, additional trenches or pits may be dug. It is estimated that test excavations will require 2 to 3 days to complete.

After completing the test excavations, the boundaries of the landfill will be re-evaluated and surveyed by a licensed land surveyor. This survey will become the basis for establishing the limits of the proposed soil cover system and golf course driving range.

3.3 SURFACE CLEANUP

Removal of white goods and other large pieces of solid waste may be undertaken to prepare the surface for the soil cover system. Solid waste will be transported to the Sierra County Landfill for disposal.

3.4 LANDFILL COVER SYSTEM

A soil cover system will be placed over the landfilled area that is designed to prevent direct contact with waste materials and to minimize leachate generation by minimizing precipitation from infiltrating through the waste. Current NMED solid waste regulations (20 NMAC 9.1, Section 502) include the following general design criteria for final cover systems:

- Infiltration layer: at least 18 inches thick with a hydraulic conductivity < 1E-5 cm/sec.
- Erosion layer: at least 6 inches.
- Slope: no greater that 25%.
- Top of cover: 2-5% slope to prevent ponding and erosion (5% recommended).

The design of the proposed landfill cover system will consider these general criteria, although alternative design criteria may also be proposed. For example, a system using an evapotranspiration (ET) barrier may be cost-effective for this project. A typical ET barrier includes a foundation layer above the solid waste, followed by a surface/protection layer that consists of fine-grained soil. The thickness of the protection layer depends on its water storage capacity until the water can be removed by ET. Depending on the soil type used for the protection layer, a separate surface layer may be used to promote vegetative growth. Final cover

system design criteria will be further developed after completing the field tasks discussed in this section. Figure 3-1 shows conceptual cross-sections of potential landfill cover systems.

In addition to the general criteria described above, the cover system will be designed to perform under a variety of conditions without the need for extensive maintenance, while maintaining as natural an appearance as possible. Issues to be considered include:

- Short-term erosion during construction (rills, gullies, establishment of vegetation, wind erosion);
- Long-term erosion control (swales, ditches, downchutes, drop pipes, culverts, and geotextiles);
- Available soil types for the cover system;
- Type of vegetation; and
- Future adjacent land use and aesthetics.

Alternatives for construction on the steep landfill slopes will also be evaluated. Possible features to be incorporated into the cover design include the following:

- Terraces to break up long slopes;
- Geotextiles for slope stabilization; and
- Selected areas constructed steeper than 4H to 1V.

3.5 GROUNDWATER MONITORING

3.5.1 Monitoring Network

Available monitoring data indicate that the landfill has not significantly impacted groundwater at the site. However, continued protection of groundwater is one of the primary objectives of the landfill cover system. During construction of the landfill cover and driving range, the existing monitoring wells will be protected and 2 to 3 additional downgradient monitoring wells will be installed (Figure 2-1). Two existing high-capacity production wells located about 1000 feet south

of the former T or C landfill provide non-potable water for the golf course and will be incorporated into the groundwater monitoring network.

3.5.2 Hydraulic Conductivity Testing

To assess the potential for groundwater impacts, a range of hydraulic conductivity (K) of the upper aquifer will be determined by conducting slug tests at selected monitoring wells. These data will be used to estimate the groundwater flow rate. The "slug out" method will be used. A disposable bailer or solid slug will be submerged below the water level in the monitoring well prior to the start of the test. After the water level in the well re-equilibrates, the slug will be removed from the well to create a water-level drop, and water-level recovery will be monitored using a pressure transducer and data logger unit. Using commercially available computer software, the recorded water-level recovery data will be analyzed to determine the K values.

3.5.3 Groundwater Sampling and Analysis

After installation of the proposed monitoring wells, the entire network will be sampled. Water level measurements will be collected from each well using an electronic water level meter and these data will be used to develop an updated groundwater potentiometric surface map.

Groundwater samples will be collected using low-flow purging techniques. The required equipment for low-flow sampling includes:

- Electronic water level meter;
- Peristaltic pump with Teflon, polypropylene, or polyethylene tubing;
- Flow-through cell (YSI Model 556 or equivalent);
- 5-gallon bucket; and
- Disposable polyethylene bailers.

The general procedures for low-flow sampling are as follows:

1. Calibrate the flow cell following the manufacturer’s recommendations;

2. Measure the static depth to groundwater in each well using an electronic water level meter and calculate the volume of water in the well. Lower the influent tubing into the well so that the end is approximately at the midpoint of the well screen;

3. Connect the peristaltic pump to the flow cell inlet, attach tubing to the flow-through cell outlet, and insert the end into a 5-gallon bucket;

4. Start the peristaltic pump and flow cell and monitor the discharge rate to ensure that it is less than 1,000 mL/minute (or 1 gallon in 3.8 minutes). Set the time interval for reading stabilization parameters on the flow cell so that one reading is taken every time the flow cell volume is replaced (every 175 mL);

5. Monitor the flow cell display to assess if parameters have stabilized and sampling can begin. Uses the following ranges to determine whether water quality parameters have stabilized;

Stabilization Parameter	Stabilization Range
pH	0.2 units
Dissolved Oxygen	0.2 mg/L
Conductivity	0.020 mS/cm
ORP (Redox)	20 millivolts

6. Fill the appropriate containers using the discharge tubing from the flow cell (non-VOC analyses only). For split samples, alternate between “original” and “split” sample containers until filled;

7. If VOC samples are collected, remove the low-flow sample tubing from the well and slowly lower a bailer into the well. Fill the appropriate containers using a bottom-emptying device to minimize sample disturbance;

8. After sampling a well, decontaminate the flow-through cell and probes using non-phosphate detergent and a distilled water rinse. Dispose of all wetted tubing;

9. Repeat procedure at other wells using new tubing for each well; and

10. Record all measurements on appropriate log forms or in a field notebook.

Groundwater samples will be submitted to a laboratory for analysis of VOCs, SVOCs, PCBs, pesticides, and metals. One duplicate sample and one equipment decontamination blank sample will be collected as a quality control (QC) check. QC samples will be analyzed for VOCs only. Upon receipt of the analytical data, BEI will evaluate whether site conditions have changed significantly. At that time, a monitoring schedule and list of parameters of concern will be submitted to NMED.

FUTURE LAND USE

The proposed practice range facility will consist of earthen fill over the eastern portion of the site with a vegetative cover (grass) and landscaping. Grass will be placed and maintained using a total organic growing process that is also being used for the adjacent Sierra del Rio golf course. This will prevent runoff contamination resulting from the conventional synthetic fertilizers. A small structure will be placed on the east side of the facility to house the practice facility operator and practice balls. An irrigation system consisting of main line PVC piping and various irrigation heads will be installed to maintain the grass cover. The irrigation lines for the practice facility will be charged with water from the golf course irrigation pump system.

The facility will include putting and chipping areas with greens, and a sand practice facility. The proposed driving range is an outdoor 350-yard grass range that will accommodate up to 50 golfers at a time. It has been specially designed for the BLM tract location adjacent to a natural mesa and landscaped to limit ambient noises and to allow the public to relax and concentrate on use of the facility.

The practice facility will be operated during daylight hours. Operation of the facility will require personnel to retrieve the golf balls and transport them to a ball washing machine during various times of the day. Maintenance of the range will require watering and mowing at times during the week. A golf ball dispenser will be required and communication will be provided through a system connected directly to the adjacent clubhouse. There will be a driving range operator stationed at the facility during operating hours to manage the facility.

3.7 APPROVALS AND SUBMITTALS

Upon approval of this Closure Plan by NMED, the following tasks will begin:

- Site clearing;
- Test trenches and test pits;
- Surface cleanup; and
- Initial groundwater monitoring.

After the collection of additional field data, a brief report with groundwater sampling results, a groundwater monitoring plan, and a conceptual landfill design will be prepared and submitted to NMED. Detailed design of the cover system will then begin. When complete, design drawings and specifications will be submitted to NMED for approval.

3.8 CLOSURE SCHEDULE

The estimated closure schedule for this project is as follows:

Task or Event	Approximate Date
Submit Closure Plan	August 2006
Closure Plan Approved by NMED	September 2006
Begin Field Work	September-October 2006
Submit Landfill Cover Design to NMED	November-December 2006
Cover System Design Approved	January 2007
Begin Landfill Closure Construction (Practice Facility)	October 2006
Complete Practice Facility Construction	January 2007
Complete Cover System Construction	June 2008

4.0 HEALTH AND SAFETY

Prior to beginning any field work associated with this Closure Plan, BEI will prepare a Health and Safety Plan (HASP) that addresses potential site hazards. The HASP will apply to all site personnel, subcontractors, and visitors. Updates to the HASP will be prepared as required (i.e. when any tasks are modified, site conditions change, or new tasks are undertaken).

5.0 REFERENCES

C.C. Johnson & Malhotra, P.C. 1990. Final Truth or Consequences Landfill Site Preliminary Assessment, Las Cruces District, New Mexico. October 26, 1990.

C.C. Johnson & Malhotra, P.C. 1995. Final Site Inspection Report, Truth or Consequences Landfill, Las Cruces District, New Mexico. May 10. 1995.

New Mexico Environment Department. 2005. Technical Background Document for Development of Soil Screening Levels, Revision 3.0. August 2005.

Souder, Miller and Associates. 2004. Phase II Environmental Site Assessment, Former Oasis Golf Course Development, Elephant Butte, New Mexico. December 1, 2004.

TABLES

Table 2-1

Comparison of Soil, Sediment, and Waste Sample Results
to NMED Soil Screening Levels
Former T or C Landfill, Elephant Butte, NM

Preliminary Assessment (May 1990)

Compound	Maximum Concentration	Sample I.D.	NMED Residential SSL (ppm)
Chloroform	0.001 J	SL01	1.21
Toluene	0.001 J	SL01, SL03	252
Di-n-butylphthalate	0.041 J	SL03	6110
Fluoranthene	0.062 J	SL02	2290
Pyrene	0.052 J	SL02	21.3
Benzo(a)anthracene	0.038 J	SL02	6.21
Chrysene	0.053 J	SL02	0.955
bis(2-ethyhexyl)phthalate	0.077 J	SL02	347
Benzo(b)fluoranthene	0.11 J	SL02	6.21
Benzo(k)fluoranthe	0.11 J	SL02	62.1
Benzo(a)pyrene	0.050 J	SL02	0.621
4,4'-DDE	0.020 J	SL02	17.2
Arsenic	3.5	SL02	3.9
Beryllium	1.2	SL02	156
Cadmium	2.5	SL02	39
Chromium	23.2	SL02	234 (Cr VI)
Copper	61	SL02	3130
Lead	128 J	SL02	400
Mercury	0.69 J	SL02	10000
Nickel	17.6	SL02	1560
Selenium	2.1	SL02	391
Zinc	460 J	SL02	23500
Barium	497	SL02	5450
Iron	20100	SL02	23500
Manganese	724	SL02	10200
Vanadium	33.3	SL02	78.2
Aluminum	20800	SL02	77800
Cobalt	11.3	SL02	1520
Magnesium	9030 J	SL02	NA
Calcium	82300	SL02	NA
Sodium	255	SL02	NA
Potassium	5630	SL02	NA

Table 2-1

Comparison of Soil, Sediment, and Waste Sample Results
to NMED Soil Screening Levels
Former T or C Landfill, Elephant Butte, NM

Phase I Site Inspection (February 1994)

Compound	Maximum Concentration	Sample I.D.	NMED Residential SSL (ppm)
Acetone	0.193	WS01	12600
2-Butanone	0.007	WS05	4860
Methylene Chloride	0.037 J	WS01	64.7
Trichloroethene	0.008	WS05	0.226
Dibromochloromethane	0.012 J	WS05	4.42
Tetrachloroethene	0.025 J	WS01	3.52
Toluene	0.062	WS05	252
Benzene	0.009 J	WS04	3.32
2-Hexanone	0.005 J	WS01	NA
4-Methyl-2-pentanone	0.006 J	WS01	4360
Ethylbenzene	0.01	WS05	128
Xylene	0.032	WS05	102
Fluoranthene	0.19	WS04	2290
Pyrene	0.14	WS04	21.3
Benzo(a)anthracene	0.07	WS02	6.21
Chrysene	0.1	WS02	0.955
Benzo(b)fluoranthene	0.2	WS02, WS04	6.21
Benzo(k)fluoranthene	0.05	WS02, WS04	62.1
Benzo(a)pyrene	0.1	WS02	0.621
Phenanthrene	0.078	WS04	1830
alpha-BHC	0.00083 J	SS04	0.902
beta-BHC	0.0049	SS02	3.16
Dieldrin	0.0053 J	SS04	0.304
4,4'-DDD	0.0034	SS04	24.4
4,4'-DDE	0.037 J	SS04	17.2
4,4'-DDT	0.037 J	SS04	17.2
Endrin Aldehyde	0.0036 J	SD02	NA
alpha-Chlordane	0.0094 J	SS04	16.2
gamma-Chlordane	0.011 J	SS04	16.2
Aluminum	17000	SD02	77800
Arsenic	***5.2***	WS01	3.9
Barium	475	SD02	5450

Table 2-1

Comparison of Soil, Sediment, and Waste Sample Results
to NMED Soil Screening Levels
Former T or C Landfill, Elephant Butte, NM

Beryllium	1.2	WS04	156
Cadmium	6.9	WS01	39
Calcium	71700	SD02	NA
Chromium	67.9 J	WS04	234 (VI)
Cobalt	10.2	SD02	1520
Copper	132 J	WS01	3130
Cyanide	6.7 J	SD02	1560
Iron	21300 J	WS02	23500
Lead	***569***	WS01	400
Magnesium	8990	SD08	NA
Manganese	699	SD02	10200
Mercury	0.92	SD02	10000
Nickel	18.1	SD02	1560
Potassium	5510	SD02	NA
Selenium	0.24 J	SD07	391
Silver	1.7 J	WS01	391
Sodium	7250	SD08	NA
Thallium	0.59	WS04	5.16
Vanadium	23.3	WS04	78.2
Zinc	3030	WS01	23500

Notes:
1. All data in units of milligrams per kilogram (ppm).
2. NA - not available.
3. J - estimated value
4. Key to sample types:
   SL - surface soil
   SS - subsurface soil
   SD - sediment
   WS - waste source

Table 2-2

Comparison of Groundwater Sample Results
to New Mexico Groundwater Standards
Former T or C Landfill, Elephant Butte, NM

Phase II Site Inspection (August 1994)

Compound	Maximum Concentration	Sample I.D.	Groundwater Standard
Acetone	0.013	WP06	NE
1,2-Dichloroethene	0.001	WP02	NE
Methylene Chloride	0.004 J	MW03	0.10
Trichloroethene	0.009	WP02	0.10
Xylene	0.001	WP08	0.62
bis(2-ethyhexyl)phthalate	0.008	MW02	NE
Di-n-Butylphthalate	0.001	MW05	NE
2-Methylnaphthalene	0.001	MW02	NE
Phenol	0.002	WP05, WP08	0.005
alpha-Chlordane	0.0000066 J	WP02	NE
Aluminum	1.38 J	MW03	5.0 (Irr)
Arsenic	0.0162	WP05	0.10
Barium	0.184	WP01	1.0
Cadmium	0.0034 J	WP04	0.01
Calcium	284	WP05	NE
Cobalt	0.0094 J	WP05	0.050 (Irr)
Iron	0.658 J	MW03	1.0
Magnesium	71.6	WP05	NE
Manganese	7.11	WP05	0.20
Potassium	36.2	MW01	NE
Sodium	679	WP05	NE
Vanadium	0.0185	MW03	NE
Zinc	0.016 J	WP01	10.0

Notes:
1. All data in units of milligrams per liter (ppm).
2. NEA - not established.
3. J - estimated value
4. Groundwater standard values from New Mexico Water Quality Control Commission regulations (20.6.2.3103).
5. (Irr) - standard for irrigation use.
6. Key to sample locations:
   - MW - monitoring well
   - WP - well point

Table 2-3

Groundwater Analytical Data Summary - November 13, 1997
Former T or C Landfill, Elephant Butte, New Mexico

VOCs (8260)	BLM Well #1	BLM Well #2	BLM Well #3	BLM Well #4	Groundwater Standard
Benzene	0.001	<0.001	<0.001	<0.001	0.01

SVOCs (8270)	BLM Well #1	BLM Well #2	BLM Well #3	BLM Well #4	Groundwater Standard
Bis(2-ethylhexyl)phthalate	0.0132	0.0175	0.0153	0.0034 J	NE
Di-n-butyl phthalate	0.0012 J	0.0024	<0.00047	<0.00046	NE

Metals (200-Series)	BLM Well #1	BLM Well #2	BLM Well #3	BLM Well #4	Groundwater Standard
Arsenic	0.003	0.004	0.005	0.002	0.1
Chromium	<0.001	<0.001	0.001	<0.001	0.05
Manganese	0.07	0.14	0.43	0.34	0.2

Notes:
1. All results in units of mg/L.
2. Only compounds detected above detection limits are listed.
3. Samples collected 11/13/97 by NMED and analyzed by New Mexico Dept. of Health laboratory.
4. J - estimated value.
5. Groundwater standards from 20.6.2 NMAC.
6. NE - Not established.

Table 2-4

Soil Sample Analytical Results - November 2004
Former Disposal Area, Elephant Butte, NM

Pesticides	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	NMED Res. SSL (ppm)
4,4'-DDD	0.0058	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	24.4
4,4'-DDE	0.094	0.004	<0.002	<0.002	<0.002	<0.002	0.0053	0.032	0.0023	<0.002	0.017	<0.002	17.2
alpha-BHC	0.035	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.902
beta-BHC	0.16	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	3.16
gamma-BHC	0.0075	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	4.37

PCBs	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	NMED Res. SSL (ppm)
Aroclor 1016	0.062	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	3.93
Aroclor 1260	0.076	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.12

Metals	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	NMED Res. SSL (ppm)
Lead	68000	96	5.9	22	8.3	9.4	8.5	130	12	14	99	18	400

Notes:
1. All data in units of milligrams per kilogram (parts per million).
2. Samples collected by Souder, Miller and Associates and analyzed by Hall Environmental Analysis Laboratory.
3. Only detected compounds shown.

FIGURES

APPENDIX A

Documentation Regarding Historical Landfill Operaions

NM 037574 (4.20
R&PP Lease

DIVISION OF LANDS & MINERALS
PROGRAM MANAGEMENT & LAND OFFICE
P. O. Box 1449
Santa Fe, New Mexico 87501

October 4, 1967

CERTIFIED MAIL--RETURN RECEIPT REQUESTED

DECISION

City of Truth or Consequences 605 Sims Street Truth or Consequences, New Mexico 87901	:	NM 037574 Recreation & Public Purposes Lease

Compliance With Sanitation Laws Required

Recreation and Public Purposes Lease NM 037574 issued for a garbage disposal site on March 20, 1961 to the City of Truth or Consequences. The lease embraces Lot 3, Sec. 22, T. 13 S., R. 4 W., NMPM, containing 30.12 acres.

A recent examination of the land reveals several violations of the State and County Health and Sanitation Laws and the standards for sanitary land fills recommended by the New Mexico Department of Public Health. Our examination shows that the lessee has failed to comply with sanitation requirements in the following respects:

The sanitary land fill method of dumping is not being used on this 30-acre tract, although about 10 acres are suitable for this method.

The garbage is being dumped over an embankment and immediately set on fire. The dump area presents a very unsightly appearance, being about 50 yards from a road running from U. S. Highway 85 to Elephant Butte Lake State Park.

This tract is fenced on the east, west and south boundaries but any papers that are not burned can easily blow over the fence due to the topography of the land.

No cattle guards are present on the road crossing the north and south boundaries of the site. Car bodies have been dumped into a shallow ravine near the road in the north portion of the area.

Sec. 4(i) of the lease terms provides, "That non-compliance with State and County Health and Sanitation laws and regulations and failure to observe the terms and conditions will result in cancellation of the lease."

The City of Truth or Consequences is hereby allowed 60 days from receipt of this decision in which to comply with the sanitation laws and regulations established by the Sierra County Health Department and the New Mexico Department of Public Health. Should the City fail to comply within the time allowed, this office will initiate action to cancel the lease.

By copy of this decision the Sierra County Health Department, Truth or Consequences, New Mexico 87901, is being notified of these violations.

/s/ Harold A. Brands

Chief, Branch of Lands

cc: Sierra County Health Department
Las Cruces District Office

MDLarragoite:ar

Form 2400-1
(November 1965)
(formerly 4-1499)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LAND REPORT - FIELD EXAMINERS CONCLUSIONS

1. Applicant's Name and Address: City of Truth or Consequences
605 Simms Street
Truth or Consequences, New Mexico 87901

2. Type of Action or Application	3. Serial Number(s)	4. District
Five Year Compliance Check on R&PP (Sanitary Land Fill)Lease	NM 037574	Las Cruces -3
		5. County: Sierra County
		6. State: New Mexico

7. LANDS INVOLVED, SUMMARY LAND CAPABILITY CONCLUSIONS, CONCLUSION OF VALUE

UNIT NO.	TWP.	RGE	MER.	SEC.	SUBDIVISION	ACRES	VALUE
	LESSEE IS NOW COMPLYING WITH THE TERMS AND CONDITIONS OF THE LEASE						$
1	13S	4W	NMPM	22:	Lot #	30.12	
					TOTALS	30.12	$

LAND REPORT FIELD EXAMINERS CONCLUSIONS

8. LAND CAPABILITY CONCLUSIONS

The subject 30.12 acre site was last field examined in October 1969.

At this time Lessee had developed the sanitary land fill method of disposal on the lower elevation portions of the property. The area where dumping was originally practiced had been covered and the area fenced off from the road to prevent further use by the public. (also shown in the attached photos).

There was no fence across the north side of the 30.12 acre site (Lot 3 Sec. 22, T. 13 S., R. 4 W., NMPM) which would prevent livestock from getting onto this property. Attached is a letter from Leon J. Lenox, City Manager dated January 22, 1970, advising that a fence has now been completed around the dump.

In view of the foregoing, we recommend the City of Truth or Consequences is now complying with the terms of this R&PP (Sanitary Land Fill Site) Lease.

I Concur

J.W. Young
District Manager

I have personally examined and identified this property. I have no present or contemplated interest therein. The foregoing is true, to the best of my knowledge.

Harold E. Sanders	Realty Specialist	February 3,1970
(Signature of Examiner)	(Title)	(Date of report)

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : File Information

DATE: January 22, 1974

FROM : Marvin M. James, Realty Specialist

SUBJECT: R&PP Lease NM 037574, T. or C. Sanitary Landfill

Mr. George Lambert, Falls Land & Development Corp., called the District Manager and objected to the operation of the landfill because it was damaging the corporation's adjacent property. The landfill is in the vicinity of the more expensive residential lots and golf course that is under construction by Falls Corporation.

In response to this complaint, I called Roy McKeag, E.I.A. and Charles Merkowski, City Manager, and made arrangements to examine the landfill. Roy and I met Charles and examined the site on January 21st. The E1/2 of the 30 acre site, is approximately level and the terrain rises into a steeply sloping ridge on the W1/2. A paved road is located on the ridge on the extreme west part of the tract.

The practice was to dump the trash over the hill and set it afire. This was stopped by the Health Department about 1968, and trenches were dug on the level land, but no records were kept as to the location, consequently digging of any new trenches exposes buried trash.

Their present method of operation is piling the trash on the level ground and pushing dirt with a crawler tractor over the trash to form a terrace. The tractor was operating and it was noted that the trash was not compacted before it was covered with dirt. Roy said his department has an operator that tours the state giving instruction in the proper operation of sanitary landfill equipment and he would make arrangements for him to visit this site.

It is necessary that the trash be compacted to get proper utilization of the land and to cover the trash everyday to prevent any fires. The landfill burns frequently and the E.I.A. has issued 12 burning citations during 1973.

Roy stated that the E.I.A. could close a landfill, if it was located in a water course or for burning violations. But if the city operated this landfill in a proper manner there would not be justification for closing the site.

5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

However, it appears that the city will be running out of fill dirt to cover the trash since most of the ridge is covered with trash and the road would be under mined if the excavation continued.

Mr. Merkowski stated, that the State Highway Department plans to abandon this road because it is unsafe and a new road has been built to Elephant Butte Lake.

I called Pat McClernon, District Highway Engineer today, and he advised me, that the Highway Department had maintained the road, but it was a common use road that was not formalized. He said, they had abandoned the road because it was subject to flooding and a new road had been built to connect old Highway 85 with the Elephant Butte Lake area. He plans to post the road as being closed.

M. M. James
1/22/74

DISTRICT OFFICE
P. O. Box 1420
Las Cruces, New Mexico
88001

April 22, 1974

Mr. Charles Markosky
City Manager
City of Truth or Consequences
Truth or Consequences, New Mexico 87901

Dear Mr. Markosky:

We have read in the paper that the city plans to open their new sanitary landfill by May 15th.

When this site is in operation the old landfill site NM 037574 should be closed and rehabilitated.

The rubbish should be covered with a minimum of 2 feet of clean compacted soils, embankments properly sloped, be free of vermin, and in a sanitary condition. To prohibit future use of the site the access road should be barricaded and a sign posted directing the public to the new landfill site.

When the site is in compliance, a written relinquishment of the lease should be submitted to this office.

Sincerely yours,

W. K. Barker
District Manager

WJames:yav

NM 037574
R&PP Lease

DISTRICT OFFICE
P. O. Box 1420
Las Cruces, New Mexico
88001

December 16, 1974

Mr. Charles Markosky
City Manager
City of Truth or Consequences
Truth or Consequences, New Mexico 87901

Dear Mr. Markosky:

The examination of the landfill site with you and personnel of this office last week revealed the site has been properly closed. If the city would like to acquire the land as you indicated for a park and substation site, the landfill lease should be first relinquished and then a petition application may be filed.

Please refer to pages 8 & 9 of the attached brochure for instructions in preparing the application.

The land that will be used for park purposes may be acquired for $2.50 per acre and the land used for the substation site would be based on 50% of the appraised fair market value.

If you need any further assistance, please let me know.

Sincerely yours,

W. K. Barker
District Manager

Enclosures

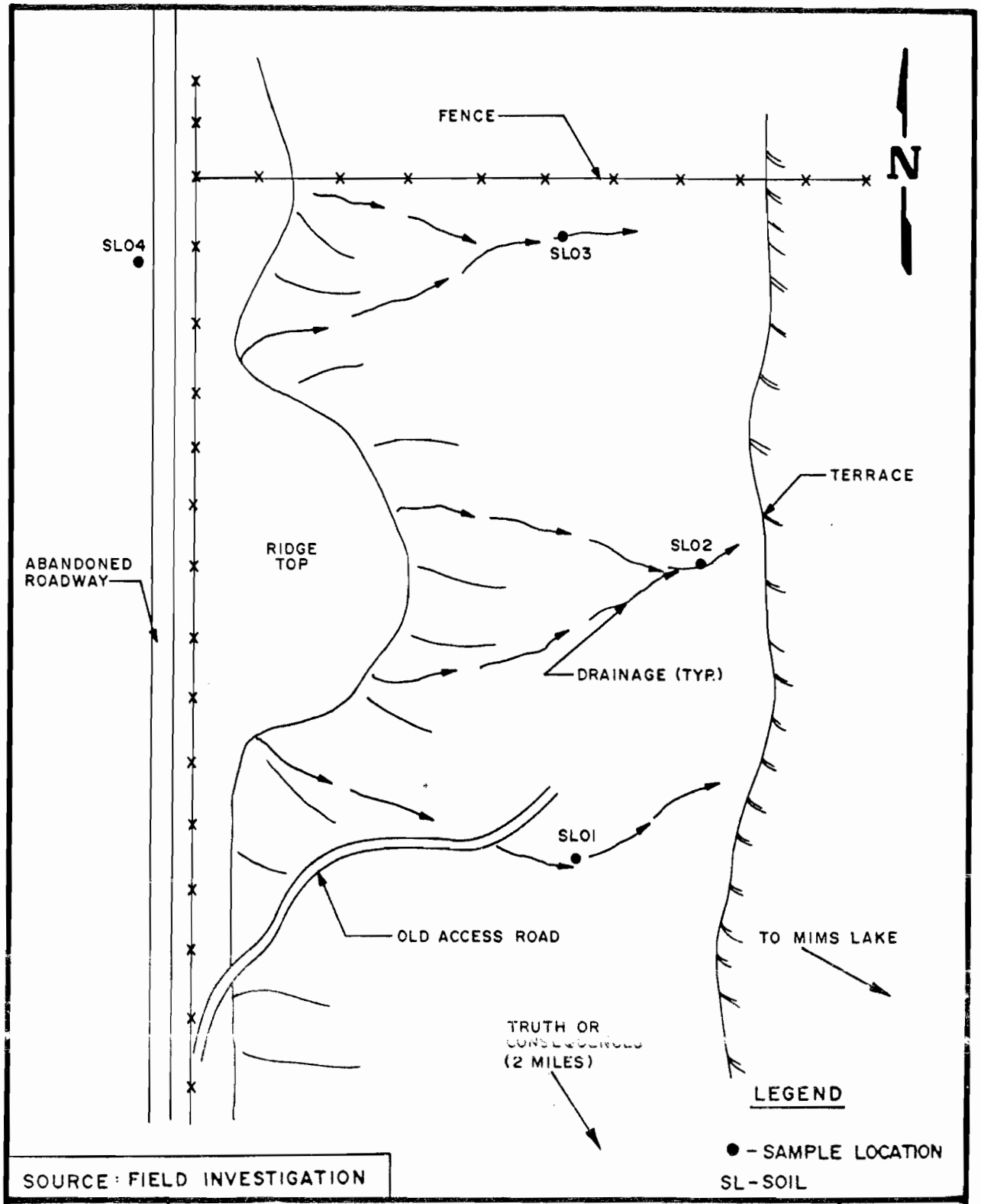
MMJames:is

Tele 894-2601

mmj

APPENDIX B

CCJM Preliminary Assessment Sample Location Map and Data Tables



SOURCE: FIELD INVESTIGATION

SCALE	BUREAU OF LAND MANAGEMENT	FIGURE
1" ≈ 80'	TRUTH OR CONSEQUENCES LANDFILL SITE	3
DATE	LAS CRUCES DISTRICT, NEW MEXICO	
JULY 1990	SITE MAP	

C.C.JOHNSON & MALHOTRA, P.C.

Attachment -- DATA SUMMARY TABLE

SITE NAME	Truth or Consequences Landfill Site, NM				
SAMPLING POINT	Trip Blank	South Drainage	East Drainage	North Drainage	Background W of LF
SAMPLE ID	HILPAQC01	TCLPASL01	TCLPASL02	TCLPASL03	TCLPASL04
CCN	338039	338069,338055	338070,338056	338071,338057	338072,338059
SAMPLING DATE	5/8/90	5/8/90	5/8/90	5/8/90	5/8/90
SAMPLE DEPTH	NA	Surficial	Surficial	Surficial	Surficial
SAMPLE MATRIX	WATER	SOIL	SOIL	SOIL	SOIL
ANALYTE					
INORGANIC ANALYTE	(ppb)	(ppm)	(ppm)	(ppm)	(ppm)
Antimony	NA	ND	ND	ND	ND
Arsenic	NA	0.76 JI	3.5	ND	ND
Beryllium	NA	0.31	1.2	0.58	0.29
Cadmium	NA	ND	2.5	ND	ND
Chromium	NA	7.9	23.2	8.6	3.7
Copper	NA	10.3	61.0	20.1	9.6
Lead	NA	6.0 JS	128 JS	24.4 JS	3.7 JS
Mercury	NA	ND	0.69 JS	ND	ND
Nickel	NA	11.1	17.6	9.9	ND
Selenium	NA	2 RS	2.1 RS	4 RS	2 RS
Silver	NA	ND	ND	ND	ND
Thallium	NA	ND	ND	ND	ND
Zinc	NA	29.3 JI	460 JI	118 JI	16.6 JI
Barium	NA	111	497	330	67.4
Iron	NA	8630	20100	9090	5400
Manganese	NA	226	724	331	142
Vanadium	NA	19.0	33.3	17.1	9.2
Aluminum	NA	6050	20800	7690	3410
Cobalt	NA	4.9	11.3	8.3	2.8
Magnesium	NA	3250 JI	9030 JI	3960 JI	1630 JI
Calcium	NA	13900	82300	34800	9060
Sodium	NA	86.5	255	149	53.3
Potassium	NA	2040	5630	3510	ND
Cyanide	NA	ND	ND	ND	ND
ORGANIC ANALYTES	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
VOLATILES					
Chloroform	ND	1 J	ND	ND	ND
Toluene	ND	1 J	ND	1 J	ND
2-Butanone	10 RC	ND	ND	ND	ND
SEMI-VOLATILES					
Di-n-butylphthalate	NA	ND	34 J	41 J	ND
Fluoranthene	NA	ND	62 J	ND	ND
Pyrene	NA	ND	52 JC	ND	ND
Benzo(a)anthracene	NA	ND	38 J	ND	ND
Chrysene	NA	ND	53 J	ND	ND
bis(2-ethylhexyl)phthalate	NA	ND	77 J	49 J	ND
Benzo(b)fluoronthene	NA	ND	110 JM	ND	ND
Benzo(k)fluoronthene	NA	ND	110 JMC	ND	ND
Benzo(a)pyrene	NA	ND	50 J	ND	ND
PCB/PESTICIDES					
4,4'-DDE	NA	ND	20	ND	ND
TENTATIVELY IDENTIFIED COMPOUNDS (TICs)					
Unknown Organics (est)	NA	ND	25370 JN	4440 JN	760 JN
Unknown Hydrocarbons (est)	NA	ND	7500 JN	830 JN	ND
OTHER					
pH	NA	NA	NA	NA	NA
Percent Solids	NA	99.4	97.0	99.0	99.6
Percent Moisture, Decanted	NA	NA	NA	NA	NA

KEY: NA - Not Analyzed
ND - Not Detected

Note: HILPAQC01 is a trip blank collected at HILL LF and used on the same day for the TCL Landfill. HILPAQC01 was analyzed for volatile organics only.

FOR DATA QUALIFIER EXPLANATIONS, SEE ATTACHED LIST

APPENDIX C

CCJM Monitoring Well Construction Diagrams

CCJM

Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Job No. A220-393

WELL NUMBER MW 1

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill

Loction: Truth or Consequences, New Mexico

Date Completed: August 2, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @ NA
After Completion 20.08' Below Top Of Casing
After N A Hours
Seepage N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 18.5'
Above Ground: 2.5'
Cap: J Plug

Screen/Type: PVC
Size: 2" x 10.0'
Slot: 10
Set @: 16' to 26'
Backfilled: 14.5' to 26'

Grout: Granular Bentonite
Hole Plug: Bentonite Pellets
Sand Pack: Clean Silica Sand

Protective Casing: 8" Diameter Cast Iron
Materials Cleaned: Steamed

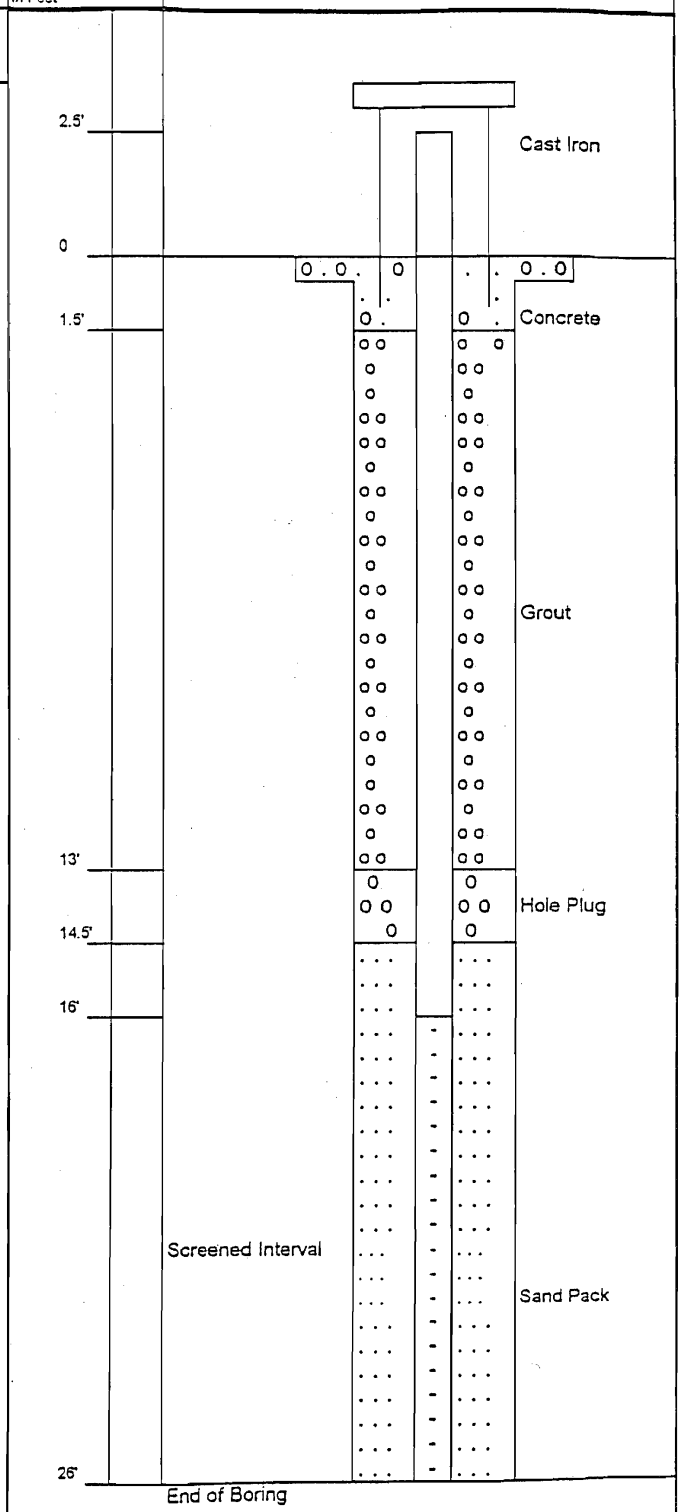
Development: August 4, 1994
Removed approximately 20 gallons.

Top Of Casing Elevation 4284.56'

REMARKS:

The location of this monitoring well was determined, August 1, 1994, by representatives of the Bureau of Land Managegment, State of New Mexico, and C.C. Johnson and Malhotra.

Well Construction Diagram



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Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Job No. A220-393

WELL NUMBER MW-2

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill

Loction: Truth or Consequences, New Mexico

Date Completed: August 2, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @ NA
After Completion 17.00' Below Top Of Casing
After N A Hours
Seepage N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 14.5'
Above Ground: 2.5'
Cap: J Plug

Screen/Type: PVC
Size: 2" x 10.0'
Slot: 10
Set @: 12' to 22'
Backfilled: 10.5' to 22'

Grout: Granular Bentonite
Hole Plug: Bentonite Pellets
Sand Pack: Clean Silica Sand

Protective Casing: 8" Diameter Cast Iron
Materials Cleaned: Steamed

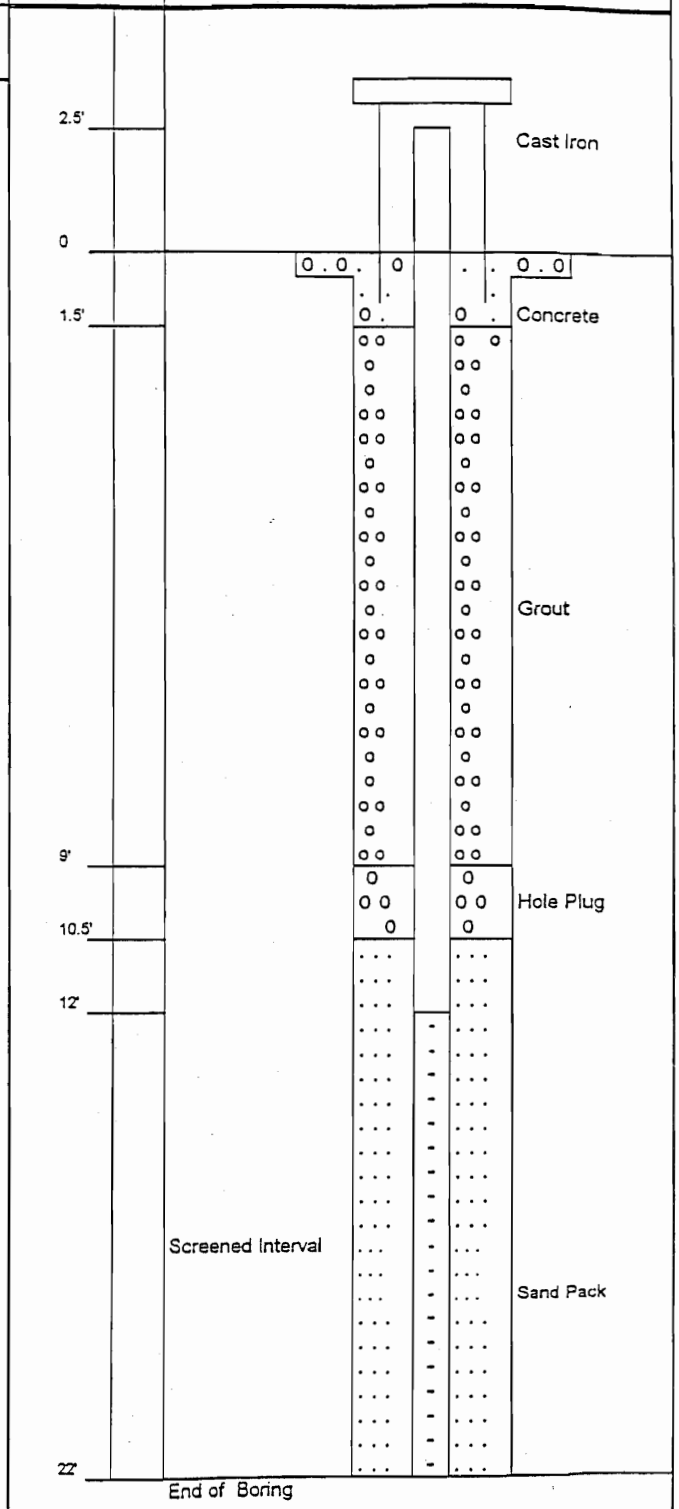
Development: August 4, 1994
Removed approximately 15 gallons.

Top Of Casing Elevation 4282.18

REMARKS:

The location of this monitoring well was determined, August 1, 1994, by representatives of the Bureau of Land Management, State of New Mexico, and C.C. Johnson and Malhotra.

Well Construction Diagram



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Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Job No. A220-393

WELL NUMBER MW-3

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill

Loction: Truth or Consequences, New Mexico

Date Completed: August 2, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @: NA
After Completion: 7.04' Below Top Of Casing
After N A Hours
Seepage: N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 6.5'
Above Ground: 2.5'
Cap: J Plug

Screen/Type: PVC
Size: 2" x 10.0'
Slot: 10
Set @: 5' to 15'
Backfilled: 3.5' to 15'

Grout: Granular Bentonite
Hole Plug: Bentonite Pellets
Sand Pack: Clean Silica Sand

Protective Casing: 8" Diameter Cast Iron
Materials Cleaned: Steamed

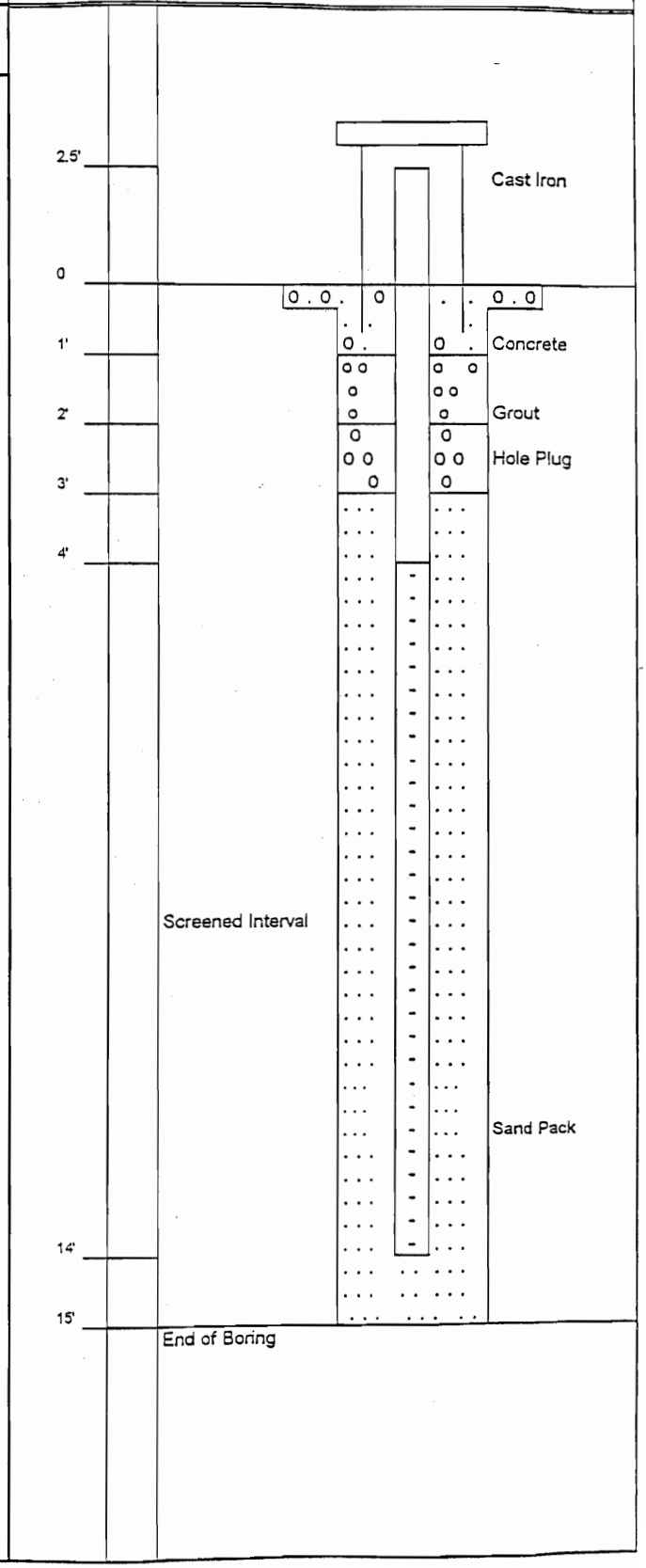
Development: August 5, 1994
Removed approximately 15 gallons.

Top Of Casing Elevation 4274.98

REMARKS:

The location of this monitoring well was determined on site, August 1,1994, by representatives of the Bureau of Land Management, State of New Mexico, and C. C. Johnson and Malhotra.

Well Construction Diagram



CCJM

Environmental Engineers & Scientists
12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Job No. A220-393

WELL NUMBER MW-4

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill
Loction: Truth or Consequences, New Mexico

Date Completed: August 4, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @ NA
After Completion 15.80' Below Top Of Casing
After N A Hours
Seepage N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 15.5'
Above Ground: 2.5'
Cap: J Plug

Screen/Type: PVC
Size: 2" x 10.0'
Slot: 10
Set @: 13' to 23'
Backfilled: 11.5' to 23'

Grout: Granular Bentonite
Hole Plug: Bentonite Pellets
Sand Pack: Clean Silica Sand

Protective Casing: 8" Diameter Cast Iron
Materials Cleaned: Steamed

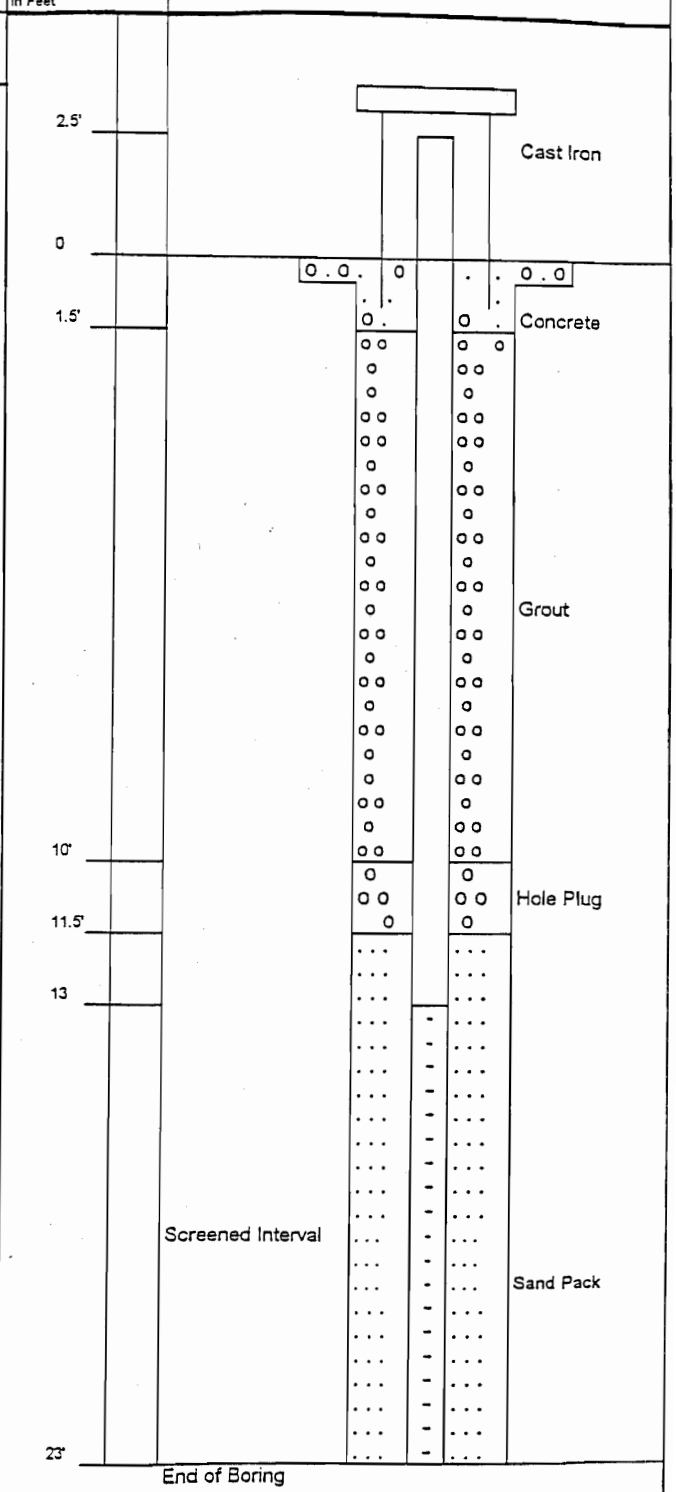
Development: August 4, 1994
Removed approximately 15 gallons.

Top Of Casing Elevation 4283.92

REMARKS:

The installation and location of this monitoring well was determined August 4, 1994, by representatives of the Bureau of Land Management.

Well Construction Diagram



CCJM

Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Well Point Construction Diagram

Job No. A220-393

WELL NUMBER WP-1

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill

Loction: Truth or Consequences, New Mexico

Date Completed: August 3, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @ NA
After Completion 19.50' Below Ground Surface
After N A Hours
Seepage N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type 2" Schedule 40 PVC
Length 20'
Above Ground 2'
Cap J Plug

Screen/Type PVC
Size 2" x 5'
Slot 10
Set @ 18' to 23'
Backfilled 19' to 23'

Grout NA
Hole Plug NA
Sand Pack Clean Silica Sand

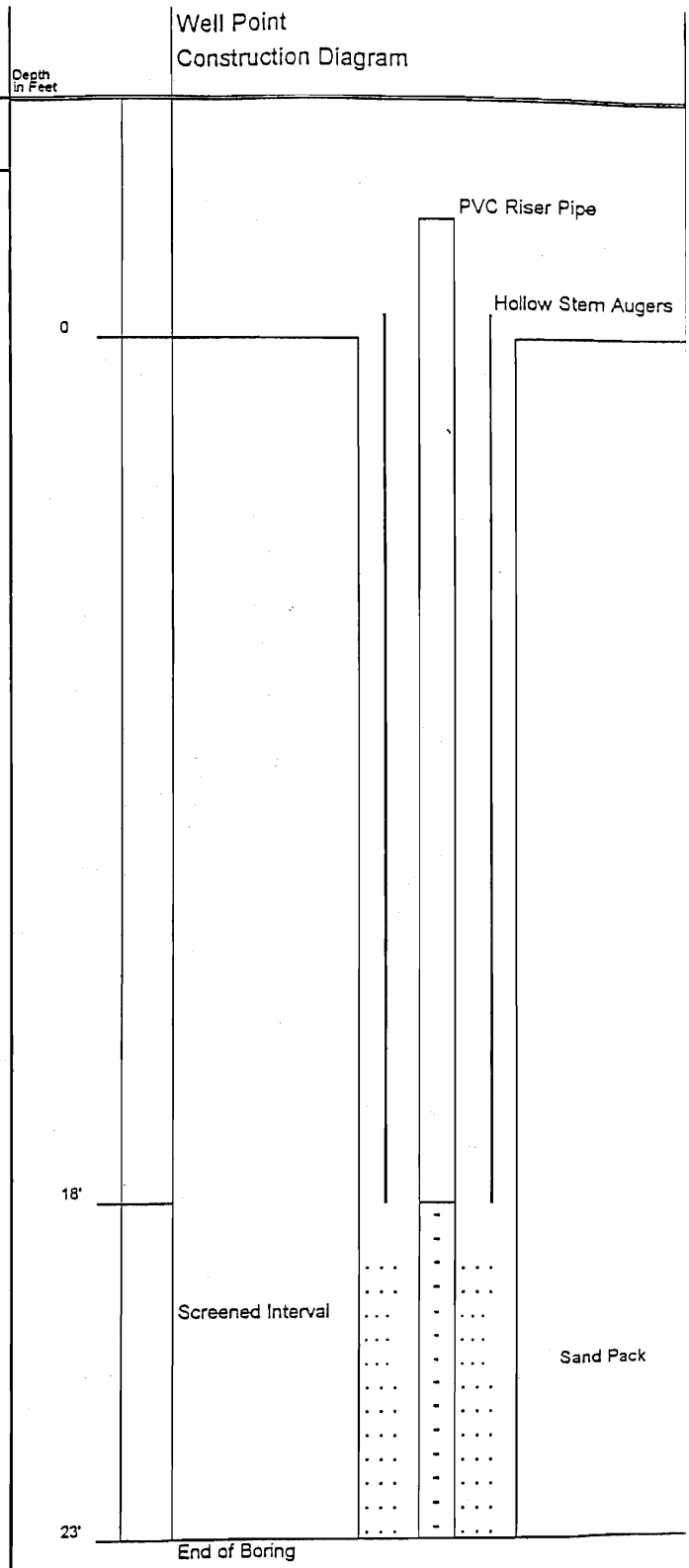
Protective Casing NA
Materials Cleaned Steamed

Development August 3, 1994
Removed approximately 10 gallons.

Ground Surface Elevation 4285.54

REMARKS:
The location of this well point was determined by representatives of C.C. Johnson & Malhotra, based on field discussions, August 1, 1994, with representatives of the Bureau of Land Management and the State of New Mexico.

The hollow stem augers were left in place above the well screen, to protect the screen from soil collapse, during ground water sampling.



CCJM

Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Well Point Construction Diagram

Job No. A220-393

WELL NUMBER WP-2

Project	Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill
Loction	Truth or Consequences, New Mexico
Date Completed	August 3, 1994
Hydrogeologist	Brad Sharp
Driller & Rig Type	Precision Engineering, CME 75
Boring Method	4.25" Hollow stem augers

GROUNDWATER:

Encountered @	NA
After Completion	20.00' Below Ground Surface
After N A Hours	
Seepage	N A
Boring Caved at:	N A

MONITOR WELL DATA

Pipe/Type	2" Schedule 40 PVC		
Length	19'		
Above Ground	2'		
Cap	J Plug		
Screen/Type	PVC		
Size	2" x 5'		
Slot	10		
Set @	17'	to	22'
Backfilled	18'	to	22'
Grout	NA		
Hole Plug	NA		
Sand Pack	Clean Silica Sand		
Protective Casing	NA		
Materials Cleaned	Steamed		
Development	August 3, 1994		

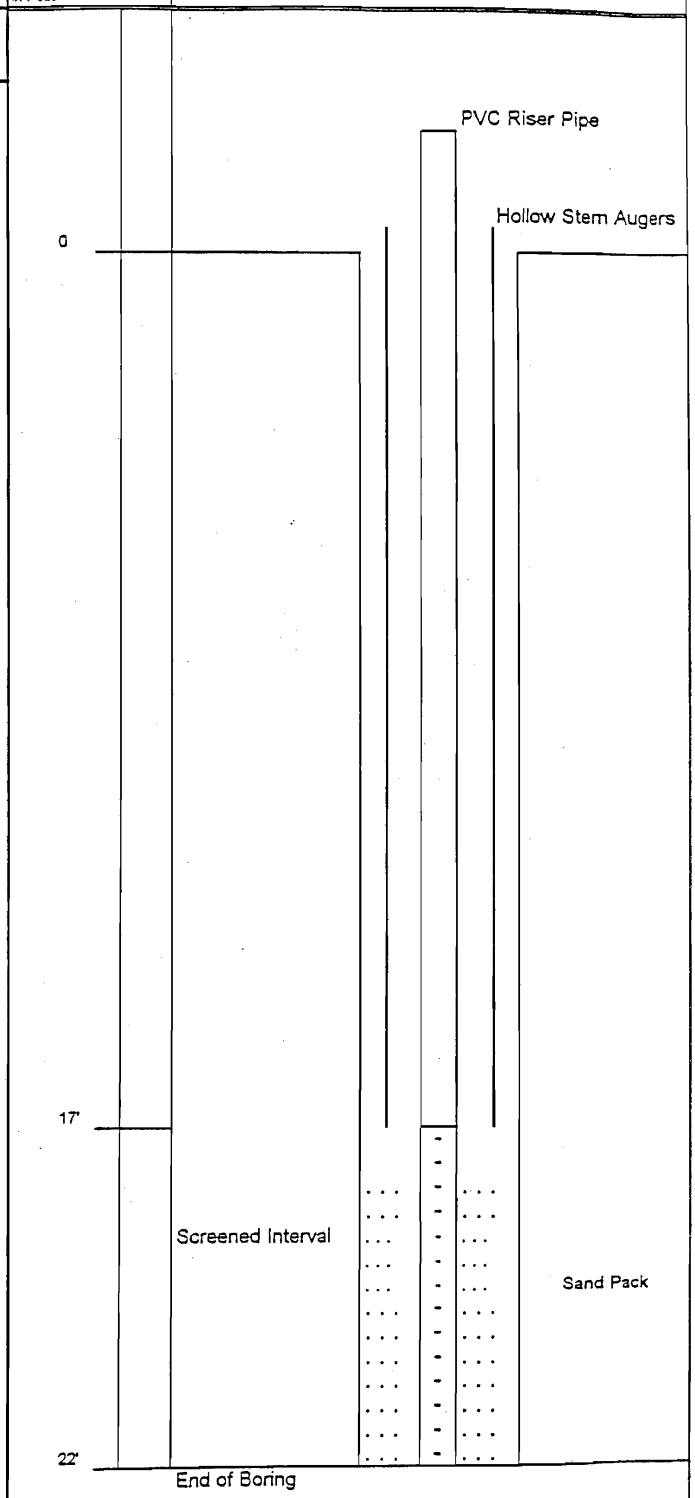
Removed approximately 10 gallons.

Ground Surface Elevation 4281.16

REMARKS:

The location of this well point was determined by representatives of C.C. Johnson & Malhotra, based on field discussions August 1, 1994, with representatives of the Bureau of Land Management and the State of New Mexico.

The hollow stem augers were left in place above the well screen, to protect the screen from soil collapse, during ground water sampling.



CCJM

Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Well Point Construction Diagram

Job No. A220-393

WELL NUMBER WP-3

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill
Loction: Truth or Consequences, New Mexico

Date Completed: August 3, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @: NA
After Completion: 31.50' Below Ground Surface
After N A Hours
Seepage: N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 31'
Above Ground: 2'
Cap: J Plug

Screen/Type: PVC
Size: 2" x 5'
Slot: 10
Set @: 29' to 34'
Backfilled: 30' to 34'

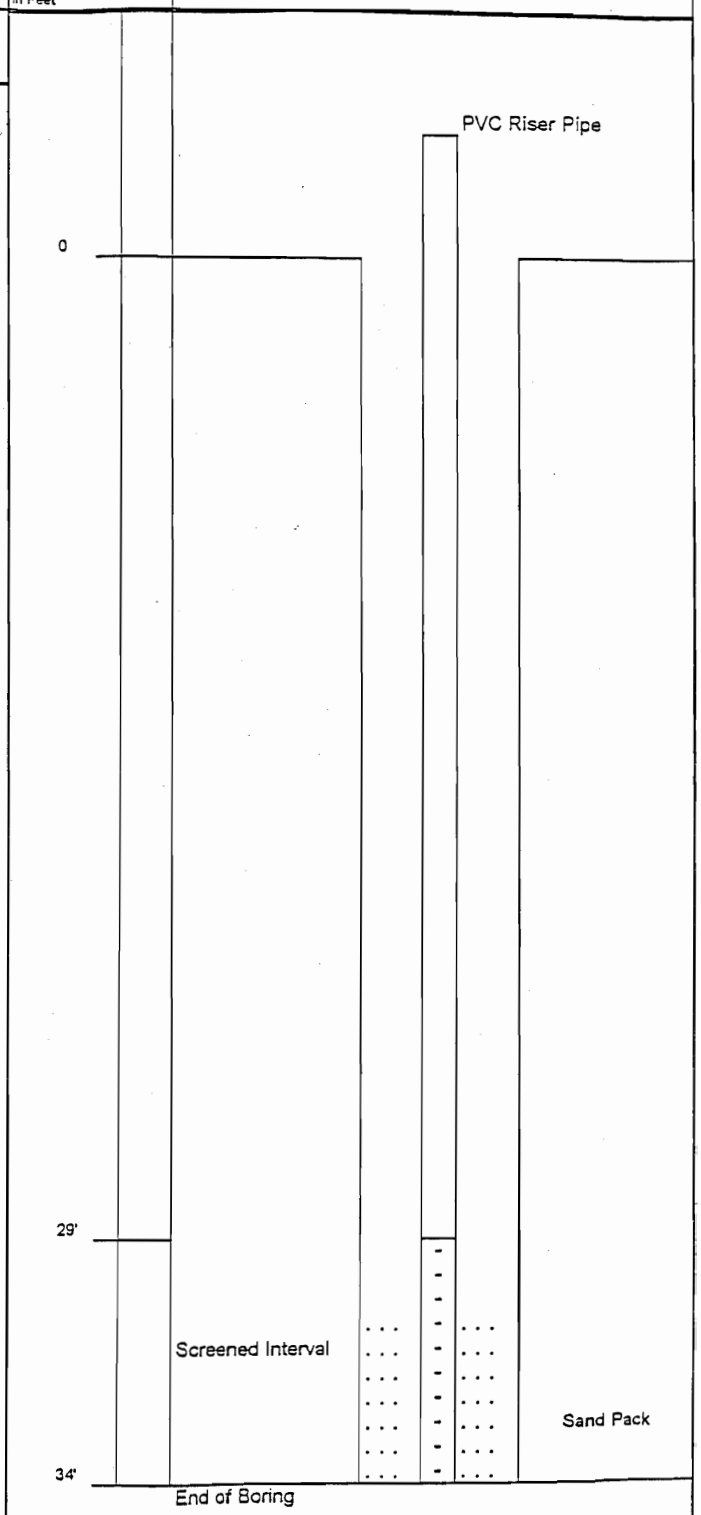
Grout: NA
Hole Plug: NA
Sand Pack: Clean Silica Sand

Protective Casing: NA
Materials Cleaned: Steamed

Development: August 3, 1994
Removed approximately 15 gallons.

Ground Surface Elevation: 4287.72

REMARKS:
The location of this well point was determined by representatives of C.C. Johnson & Malhotra, based on field discussions, August 1, 1994, with representatives of the Bureau of Land Management and the State of New Mexico.



CCJM

Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Well Point Construction Diagram

Job No. A220-393

WELL NUMBER WP-4

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill

Loction: Truth or Consequences, New Mexico

Date Completed: August 3, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @: NA
After Completion: 4.30' Below Ground Surface
After N A Hours
Seepage: N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 5'
Above Ground: 2'
Cap: NA

Screen/Type: PVC
Size: 2" x 5'
Slot: 10
Set @: 3' to 8'
Backfilled: 4' to 8'

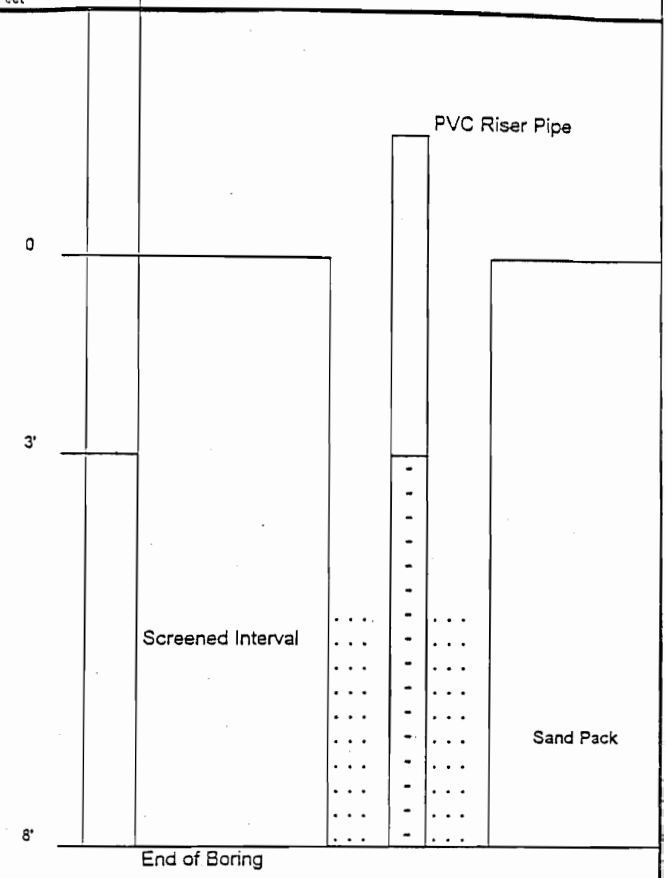
Grout: NA
Hole Plug: NA
Sand Pack: Clean Silica Sand

Protective Casing: NA
Materials Cleaned: Steamed

Development: August 3, 1994
Removed approximately 20 gallons.

Ground Surface Elevation: 4272.73

REMARKS:
The location of this well point was determined by representatives of C.C. Johnson & Malhotra, based on field discussions with representatives of the Bureau of Land Management and the State of New Mexico on August 1, 1994.



Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Job No. A220-393

WELL NUMBER WP-5

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill
Loction: Truth or Consequences, New Mexico

Date Completed: August 4, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @: NA
After Completion: 5.90' Below Ground Surface
After N A Hours
Seepage: N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 7'
Above Ground: 2'
Cap: NA

Screen/Type: PVC
Size: 2" x 5'
Slot: 10
Set @: 5' to 10'
Backfilled: 6' to 10'

Grout: NA
Hole Plug: NA
Sand Pack: Clean Silica Sand

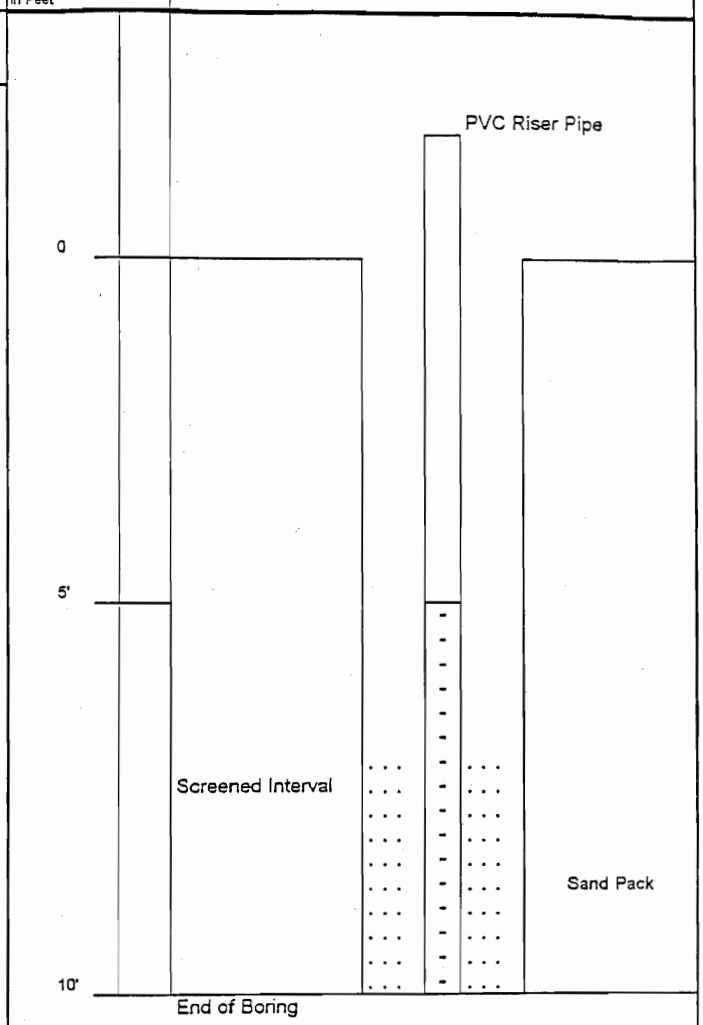
Protective Casing: NA
Materials Cleaned: Steamed

Development: August 4, 1994
Removed approximately 15 gallons.

Ground Surface Elevation 4274.74

REMARKS:
The location of this well point was determined by representatives of C.C. Johnson & Malhotra, based on field discussions with representatives of the Bureau of Land Management and the State of New Mexico on August 1, 1994.

Construction Diagram



Environmental Engineers & Scientists

12567 West Cedar Drive, Suite 220
Lakewood, CO. 80228
(303) 987-2928 FAX (303) 987-3516

Job No. A220-393

WELL NUMBER WP-6

Project: Bureau of Land Management Contract No. AA852-CTO-0026, Truth or Consequences Landfill

Loction: Truth or Consequences, New Mexico

Date Completed: August 4, 1994
Hydrogeologist: Brad Sharp
Driller & Rig Type: Precision Engineering, CME 75
Boring Method: 4.25" Hollow stem augers

GROUNDWATER:
Encountered @: NA
After Completion: 8.50' Below Ground Surface
After N A Hours
Seepage: N A
Boring Caved at: N A

MONITOR WELL DATA
Pipe/Type: 2" Schedule 40 PVC
Length: 7'
Above Ground: 2'
Cap: NA

Screen/Type: PVC
Size: 2" x 5'
Slot: 10
Set @: 5' to 10'
Backfilled: 6' to 10'

Grout: NA
Hole Plug: NA
Sand Pack: Clean Silica Sand

Protective Casing: NA
Materials Cleaned: Steamed

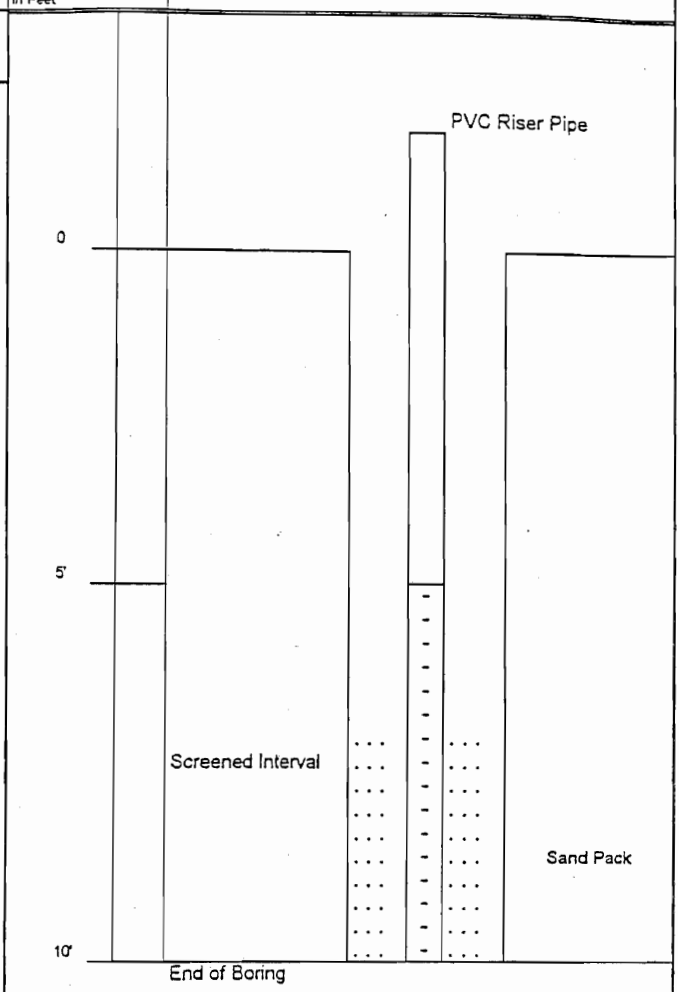
Development: August 4, 1994
Removed approximately 15 gallons.

Ground Surface Elevation 4275.54

REMARKS:

The installation and location of this well point was determined, at the site, by representatives of the Bureau of Land Management. on, August 4, 1994.

Well Point Construction Diagram



APPENDIX D

CCJM Phase I and Phase II Site Investigation Data Tables

ATTACHMENT 4

Table 1
Truth or Consequences Landfill
Ground Water Sample Results – Inorganics
(ppb, μg/L)

Sample Location	Conner Residence (Background)		Bunch Residence		
Sample ID Well Depth Sample Matrix	TOC–SI–GW01 62 ft. Water	SQL	TOC–SI–GW02 NA Water	SQL	MCL
Collection Date	2/10/94		2/10/94		
Aluminum	ND		ND		NP
Antimony	ND		ND		6
Arsenic	[2.6]		1.4 J–I		50
Barium	[38.7]		[115]		2,000
Beryllium	ND		ND		4
Cadmium	ND		ND		5
Calcium	75,200		114,000		NP
Chromium	ND		ND		100
Cobalt	ND		ND		NP
Copper	29.1		ND		NP
Cyanide	ND		ND		200
Iron	[39.4]		178		NP
Lead	1.2 J–S		ND		NP
Magnesium	8,330		12,700		NP
Manganese	ND		ND		NP
Mercury	ND		ND		2
Nickel	ND		ND		100
Potassium	9,880		6,950		NP
Selenium	2.0 J–I		1.2 J–I		50
Silver	ND		ND		NP
Sodium	93,100		187,000		NP
Thallium	R–S		R–S		2
Vanadium	[10.7]		ND		NP
Zinc	149		23.8		NP
pH	7.65		7.49		
Conductivity (mS/cm)	1,122		1,900		
Temperature (°F)	68.4		60.2		

NA – Not Available.
NP – Not Promulgated.
ND – Not Detected (Above Instrument Detection Limit).
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance are established.

ATTACHMENT 4

Table 2
Truth or Consequences Landfill
Sediment Sample Results– Inorganics
(ppm, mg/Kg)

Sample Location	Background		Base of Bench Top		Lower Terrace Feature		Northeast of Lower Terrace Feature		Southern Drainage		Southern Drainage PPE #2	
Sample ID	TOC–SI–SD01		TOC–SI–SD02		TOC–SI–SD03		TOC–SI–SD04		TOC–SI–SD05		TOC–SI–SD06	
Sample Depth	0–6"		0–6"		0–6"		0–6"		0–6"		0–6"	
Sample Matrix	Sediment	SQL	Sediment	SQL	Sediment	SQL	Sediment	SQL	Sediment	SQL	Sediment	SQL
Collection Date	2/08/94		2/08/94		2/08/94		2/08/94		2/09/94		2/08/94	
Aluminum	9,410		17,000		6,180		5,930		8,350		3,980	
Antimony	R–SL		R–SL		R–SL		R–SL		R–SL		R–SL	
Arsenic	2.8		[4.8]		1.5		1.6		2.3		1.7	
Barium	157		475		131		104		208		122	
Beryllium	0.57		0.96		ND		ND		ND		ND	
Cadmium	ND	0.51	2.2*	0.53	ND		ND		ND		ND	
Calcium	37,100		71,700		19,700		27,200		32,200		15,500	
Chromium	11.9 J–S		30.9 J–S		9.9 J–S		7.9 J–S		10.3 J–S		7.2 J–S	
Cobalt	6.3		10.2		5.5		[5.1]		6.1		[4.1]	
Copper	14.1 J–SD		61.6* J–SD		9.2 J–SD		8.8 J–SD		13.3 J–SD		11.4 J–SD	
Cyanide	2.9 J–HC		6.7 J–HC		[0.17] J–HC		[0.24] J–HC		[0.15] J–HC		[0.10] J–HC	
Iron	10,700 J–D		16,800		9160 J–D		8,410 J–D		10,900 J–I		8,450 J–D	
Lead	11.7		145*		16.0 J–I		12.5		23.0		35.9*	
Magnesium	5,240		7,900		3,880		5,480		4,710		2,020	
Manganese	315		699		314		274		409		222	
Mercury	ND	0.10	0.92*	0.11	ND		ND		ND		ND	
Nickel	12.0		18.1		9.0		8.4		10.5		5.9	
Potassium	2,760		5,510		2,720		2,970		3,790		1,060	
Selenium	ND		ND		ND		ND		ND		ND	
Silver	ND		ND		ND		ND		ND		ND	
Sodium	ND		[234]		[230]		6,090		ND		ND	
Thallium	[0.22]		[0.56]		ND		ND		[0.31]		[0.35]	
Vanadium	16.8		22.1		15.5		13.3		15.3		11.4	
Zinc	39.1		519*		65.2		47.5		80.8		78.0	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected Above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance established.

ATTACHMENT 4

Table 2A
Truth or Consequences Landfill
Sediment Sample Results – Inorganics
(ppm, mg/Kg)

Sample Location	Background		Wetland Area PPE #1	
Sample ID	TOC–SI–SD07		TOC–SI–SD08	
Sample Depth	0–6"		0–6"	
Sample Matrix	Sediment	SQL	Sediment	SQL
Collection Date	2/10/94		2/09/94	
Aluminum	6,010		10,700	
Antimony	R–SL		R–SL	
Arsenic	4.7		2.5	
Barium	251		169	
Beryllium	ND		ND	
Cadmium	ND		ND	
Calcium	20,500		60,000	
Chromium	5.9 J–S		11.8 J–S	
Cobalt	[4.8]		8.5	
Copper	7.8 J–SD		15.6 J–SD	
Cyanide	ND		ND	
Iron	11,800 J–D		10,200 J–D	
Lead	9.9		18.0 J–I	
Magnesium	2,360		8,990	
Manganese	163		510*	
Mercury	ND		ND	
Nickel	7.7		14.9	
Potassium	1,160		4,700	
Selenium	[0.24] J–SI		ND	
Silver	ND		ND	
Sodium	[492]		7,250	
Thallium	ND		ND	
Vanadium	17.7		16.8	
Zinc	33.8		58.2	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected Above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance established.

ATTACHMENT 4

Table 3
Truth or Consequences Landfill
Waste Source Sample Results – Inorganics
(ppm, mg/Kg)

Sample Location	Background		Near Southern Drainage		Steep Bench Slope		Northeast of Lower Terrace Feature		Steep Bench Slope		Steep Bench Slope		Steep Bench Slope		Soil Exposure Pathway Hazardous Substance Benchmarks
Sample ID	TOC–SI–SL01		TOC–SI–WS01		TOC–SI–WS02		TOC–SI–WS03		TOC–SI–WS04		TOC–SI–WS05		TOC–SI–WS06		
Sample Depth	0–6"		0–6"		0–6"		0–6"		0–6"		0–6"		0–6"		
Sample Matrix	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	
Collection Date	2/08/94		2/08/94		2/09/94		2/10/94		2/09/94		2/09/94		2/09/94		
Aluminum	11,000		12,400		11,400		8,490		11,300		7,200		6,950		NP
Antimony	R–SL		R–SL		R–SL		R–SL		R–SL		R–SL		R–SL		230
Arsenic	2.6		5.2		[4.1]		1.9		1.4		2.3		2.4		0.33
Barium	170		426		226		155		339		128		133		41,000
Beryllium	0.65		0.57		0.51		ND		1.2		ND		ND		0.14
Cadmium	ND	0.52	6.9*	0.51	3.1*	0.50	ND		2.5*	0.51	ND		ND		290
Calcium	60,200		38,600		43,600		38,200		44,300		40,200		39,100		NP
Chromium	11.4 J–S		52.6* J–S		32.4 J–S		10.0 J–S		67.9* J–S		11.4 J–S		11.2 J–S		2,900
Cobalt	7.5		6.4		7.5		6.7		6.7		5.9		5.7		NP
Copper	15.8 J–SD		132* J–SD		79.4* J–SD		10.2 J–SD		111* J–SD		21.7 J–SD		17.7 J–SD		NP
Cyanide	[0.12] J–HC		[0.45]* J–HC		0.62* J–HC		ND		2.4* J–HC		ND		ND		12,000
Iron	9,980 J–D		15,000 J–D		21,300 J–D		9360 J–D		16,700 J–D		11,000 J–D		11,400 J–D		NP
Lead	10.9		569*		238*		3.4 J–I		305*		42.0* J–I		68.7*		NP
Magnesium	6,470		3,920		6,420		7,260		4,680		6,200		5,930		NP
Manganese	287		616		491		326		625		303		269		58,000
Mercury	ND	0.10	0.12*	0.10	ND		ND		ND		ND		ND		170
Nickel	13.0		16.2		18.0		11.3		14.6		11.9		10.8		12,000
Potassium	2,020		4,650		2,900		3,580		4,700		1,840		1,960		NP
Selenium	ND	1.0	ND		[0.13] J–SI	0.10	ND		ND		ND		ND		2,900
Silver	ND	1.0	1.7* J–S	1.0	1.3* J–S	1.0	ND		1.1* J–S	1.0	ND		ND		2,900
Sodium	ND		2,060		1,680		7,050		1,460		[336]		[341]		NP
Thallium	ND	0.21	[0.45]*	0.20	ND		ND		[0.59]*	0.20	ND		ND		NP
Vanadium	14.7		16.5		20.0		15.3		23.3		17.5		17.9		NP
Zinc	40.5		3,030*		647*		37.7		1,540*		117		111		120,000

ND – Not Detected (Above Instrument Detection Limit)
NP – Not Promulgated
[ ] – Detected Above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Significance above background and observed contamination of CERCLA hazardous substance established.

ATTACHMENT 4

Table 4
Truth or Consequence Landfill
Surface Water Sample Results – Inorganics
(ppb, μg/L)

Sample Location	Background		Wetland Area PPE #1		Ambient Water Quality Criteria
Sample ID Sample Depth Sample Matrix	TOC–SI–SW01 Surface Water	SQL	TOC–SI–SW02 Surface Water	SQL	
Collection Date	2/10/94		2/09/94		
Aluminum	655		1,470		NP
Antimony	ND		ND		NP
Arsenic	[2.9]		7.6 J–I		190
Barium	[58.7]		[58.5]		NP
Beryllium	ND		ND		NP
Cadmium	ND		ND		1.1
Calcium	124,000		481,000		NP
Chromium	ND		ND		NP
Cobalt	ND		ND		NP
Copper	ND		ND		12
Cyanide	ND		ND		5.2
Iron	311		893		1,000
Lead	ND	1.1	[1.3]* J–SI	1.1	NP
Magnesium	19,600		149,000		NP
Manganese	32.6		330*		NP
Mercury	ND		ND		0.12
Nickel	ND		ND		160
Potassium	[3,700]		101,000		NP
Selenium	7.3		ND		36
Silver	ND		ND		0.12
Sodium	397,000		ND		NP
Thallium	ND		ND		NP
Vanadium	ND		ND		NP
Zinc	ND		ND		110
pH	7.79		7.7		
Conductivity (mS/cm)	1,200		NA		
Temperature (°F)	55.7		65.7		

NA – Not Available
NP – Not Promulgated
ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance established.

ATTACHMENT 4

Table 5
Truth or Consequences Landfill
Subsurface Soil Sample Results – Inorganics
(ppm, mg/Kg)

Sample Location	Background		Bench Top next to sign post		Near Southern Drainage	
Sample ID	TOC–SI–SS01		TOC–SI–SS02		TOC–SI–SS04	
Sample Depth	> 2 ft.		> 2 ft.		> 2 ft.	
Sample Matrix	Soil	SQL	Soil	SQL	Soil	SQL
Collection Date	2/09/94		2/09/94		2/09/94	
Aluminum	9,350		3,800		10,000	
Antimony	R–SL		R–SL		R–SL	
Arsenic	3.3		1.3		6.0	
Barium	147		139		439	
Beryllium	0.60		ND		0.55	
Cadmium	ND	0.53	ND		3.8*	0.52
Calcium	73,200		2,170		41,700	
Chromium	9.1 J–S		6.5 J–S		47.8* J–S	
Cobalt	6.3		[3.0]		7.1	
Copper	10.6 J–SD		66.1* J–SD		85.0* J–SD	
Cyanide	ND	0.11	0.62* J–HD	0.10	0.54* J–HD	0.11
Iron	7,730 J–D		4340 J–D		28,700* J–D	
Lead	10.5		45.6*		472*	
Magnesium	6,120		2,030		3,410	
Manganese	231		331		785*	2.1
Mercury	ND		ND		ND	
Nickel	11.3		63.4*		16.0	
Potassium	1,270		1,870		4,270	
Selenium	ND	1.1	[0.15] J–SI	0.10	ND	
Silver	ND	1.1	ND		2.2* J–S	1.0
Sodium	[120]		[407]		2,080	
Thallium	ND	0.21	[0.22]*	0.21	[0.49]* J–I	0.21
Vanadium	13.1		7.6		16.1	
Zinc	31.2		592*		2,430*	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected Above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Significance above background of CERCLA hazardous substance established.

ATTACHMENT 4

Table 6
Truth or Consequences Landfill
Quality Assurance/Quality Control Sample Results– Inorganics
(ppb, μg/L)

Sample Type	Rinsate Blank		Rinsate Blank	
Sample ID	TOC–SI–QC01	SQL	TOC–SI–QC03	SQL
Sample Matrix	Water		Water	
Collection Date	2/08/94		2/10/94	
Aluminum	ND		ND	
Antimony	ND		ND	
Arsenic	[1.1]		ND	
Barium	ND		ND	
Beryllium	ND		ND	
Cadmium	ND		ND	
Calcium	ND		ND	
Chromium	ND		ND	
Cobalt	ND		ND	
Copper	ND		ND	
Cyanide	ND		ND	
Iron	ND		ND	
Lead	ND		ND	
Magnesium	ND		ND	
Manganese	ND		ND	
Mercury	ND		ND	
Nickel	ND		ND	
Potassium	ND		ND	
Selenium	ND		ND	
Silver	ND		ND	
Sodium	ND		ND	
Thallium	ND		R–S	
Vanadium	ND		ND	
Zinc	ND		ND	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.

ATTACHMENT 4

Table 7
Truth or Consequences Landfill
Ground Water Sample Results– Organics
(ppb, μg/L)

Sample Location	Conner Residence (Background)		Bunch Residence	
Sample ID	TOC–SI–GW01	SQL	TOC–SI–GW02	SQL
Sample Depth	62 ft.		NA	
Sample Matrix	Water		Water	
Collection Date	2/10/94		2/10/94	
Volatile Organics	ND		ND	
Semivolatile Organics	ND		ND	
Pesticides/PCB's	ND		ND	

ND – Not Detected (Above Instrument Detection Limits)
NA – Not Available

ATTACHMENT 4

Table 8
Truth or Consequences Landfill
Surface Water Sample Results– Organics
(ppb/μg/L)

Sample Location	Background		Wetland Area PPE #1	
Sample ID	TOC–SI–SW01		TOC–SI–SW02	
Sample Depth	Surface		Surface	
Sample Matrix	Water	SQL	Water	SQL
Collection Date	2/10/94		2/09/94	
Volatile Organics	ND		ND	
Semivolatile Organics	ND		ND	
Pesticides/PCB's	ND		ND	

ND – Not Detected (Above Instrument Detection Limits)

ATTACHMENT 4

Table 9
Truth or Consequences Landfill
Sediment Sample Results– Organics
(ppb, μg/Kg)

Sample Location	Background		Base of Bench Top		Lower Terrace Feature		Northeast of Lower Terrace Feature		Southern Drainage		Southern Drainage PPE #2	
Sample ID #	TOC–SI–SD01		TOC–SI–SD02		TOC–SI–SD03		TOC–SI–SD04		TOC–SI–SD05		TOC–SI–SD06	
Sample Depth	0–6"		0–6"		0–6"		0–6"		0–6"		0–6"	
Sample Matrix	Sediment	SQL	Sediment	SQL	Sediment	SQL	Sediment	SQL	Sediment	SQL	Sediment	SQL
Collection Date	2/08/94		2/08/94		2/08/94		2/08/94		2/09/94		2/08/94	
Volatile Organics												
Methylene Chloride	[6]		16 J–I		[8]		[3]		[3]		[6]	
Trichloroethene	ND	10	[4] J–I	11	[3]	10	ND		[4]	10	ND	
Dibromochloromethane	ND	10	[6] J–IN	11	[6]	10	ND		[6]	10	[4] J–N	10
Tetrachloroethene	[4]		13* J–I		10		ND		11		[6]	
Toluene	[4]		30* J–I		17*		ND		19*		[5]	
Benzene	ND	10	[4] J–I	11	ND		ND		ND		ND	
Ethylbenzene	ND	10	[4] J–I	11	[5]	10	ND		[4]	10	ND	
Xylene (total)	ND	10	13* J–I	11	15*	10	ND		13*	10	ND	
Semivolatile Organics	ND		ND		ND		ND		ND		ND	
Pesticides/PCB's												
Dieldrin	ND	3.3	4.5*	3.5	ND		ND		ND		ND	
4,4'–DDE	ND	3.3	21* J–P	3.5	ND		ND		ND		ND	
4,4'–DDT	ND	3.3	6.3*	3.5	ND		ND		ND		ND	
Endrin Aldehyde	ND	3.3	3.6 J–P	3.5	ND		ND		ND		ND	
alpha–Chlordane	ND	1.7	4.4* J–P	1.8	ND		ND		ND		ND	
gamma–Chlordane	ND	1.7	4.6* J–P	1.8	ND		ND		ND		ND	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected Above the Instrument Detection Limit and below the Contract Required Detection Limit
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance established.

ATTACHMENT 4

Table 9A
Truth or Consequences Landfill
Sediment Sample Results– Organics
(ppb, μg/Kg)

Sample Location	Background		Wetland Area PPE #1	
Sample ID	TOC–SI–SD07		TOC–SI–SD08	
Sample Depth	0–6"		0–6"	
Sample Matrix	Sediment	SQL	Sediment	SQL
Collection Date	2/10/94		2/09/94	
Volatile Organics				
Methylene chloride	[5]		ND	
Semivolatile Organics	ND		ND	
Pesticides/PCB's	ND		ND	

ND – Not Detected (Above Instrument Detection Limits)
[ ] – Detected above Instrument Detection Limit and below Contract Required Quantitation Limit.

ATTACHMENT 4

Table 10
Truth or Consequences Landfill
Waste Source Sample Results – Organics
(ppb, µg/Kg)

Sample Location	Background		Near Southern Drainage		Steep Bench Slope		Northeast of Lower Terrace Feature		Steep Bench Slope		Steep Bench Slope		Steep Bench Slope		Soil Exposure Pathway Hazardous Substance Benchmarks (mg/kg, ppm)
Sample ID	TOC–SI–SL01		TOC–SI–WS01		TOC–SI–WS02		TOC–SI–WS03		TOC–SI–WS04		TOC–SI–WS05		TOC–SI–WS06		
Sample Depth	0–6"		0–6"		0–6"		0–6"		0–6"		0–6"		0–6"		
Sample Matrix	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	Soil	SQL	
Collection Date	2/08/94		2/08/94		2/09/94		2/10/94		2/09/94		2/09/94		2/09/94		
Volatile Organics															
Acetone	ND	10	193* J–BSI	10	ND		ND		101* J–BS	10	ND		ND		58,000
Methylene Chloride	[5]		37* J–SI		16*		ND		23* J–S		13		12		78
2–Butanone	ND	10	ND		[3]	10	ND		ND		[7]	10	[6]	10	NP
Dibromochloromethane	ND	10	11* J–SIN	10	[6] J–N	10	ND		[7] J–SIN	10	12* J–N	10	10 J–N	10	6.9
Benzene	ND	10	[7] J–SIN	10	[5] J–N	10	ND		[9] J–SIN	10	[8] J–N	10	[5] J–N	10	20
2–Hexanone	ND	10	[5] J–SI	10	ND		ND		ND		ND		ND		NP
4–Methyl–2–pentanone	ND	10	[6] J–SI	10	ND		ND		[4] J–SI	10	ND		ND		NP
Tetrachloroethene	ND	10	25* J–SI	10	10	10	ND		16* J–SI	10	20*	10	16*	10	5,800
Toluene	ND	10	14* J–SI	10	23*	10	ND		51* J–SI	10	62*	10	43*	10	120,000
Trichloroethene	ND	10	[8] J–SI	10	[4]	10	ND		[7] J–SI	10	[8]	10	[5]	10	NP
Ethylbenzene	ND	10	ND		ND		ND		[5] J–SI	10	10	10	[7]	10	58,000
Xylene (total)	ND	10	ND		[9]	10	ND		15* J–SI	10	32*	10	22*	10	120,000
Semivolatile Organics															
Fluoranthene	ND	340	ND		[100]	670	ND		[190]	340	ND		ND		NP
Pyrene	ND	340	ND		[100]	670	ND		[140]	340	ND		ND		17,000
Benzo(a)anthracene	ND	340	ND		[70]	670	ND		ND		ND		ND		NP
Chrysene	ND	340	ND		[100]	670	ND		ND		ND		ND		NP
Benzo(b)fluoranthene	ND	840	ND		[200]	1,680	ND		[200]	850	ND		ND		NP
Benzo(k)fluoranthene	ND	340	ND		[50]	670	ND		[50]	340	ND		ND		NP
Benzo(a)pyrene	ND	840	ND		[100]	1,680	ND		[90]	850	ND		ND		0.08
Phenanthrene	ND	340	ND		ND		ND		[78]	340	ND		ND		NP
Pesticides/PCB's															
4,4'–DDE	ND	3.4	30* J–P	3.3	6.9*	3.3	ND		13* J–P	3.3	ND		ND		1.7
4,4'–DDT	ND	3.4	37*	3.3	[3.0]	3.3	ND		5.7*	3.3	[2.7]	3.3	[2.7]	3.3	1.7
alpha–Chlordane	ND	1.8	17* J–P	1.7	3.1*	1.7	ND		2.0*	1.7	ND		ND		0.45
gamma–Chlordane	ND	1.8	14* J–P	1.7	2.5*	1.7	ND		2.2* J–P	1.7	ND		ND		0.45
Aroclor–1248	ND	34	90* J–C	33	ND		ND		ND		ND		ND		0.076
Aroclor–1254	ND	34	97* J–C	33	ND		ND		ND		ND		ND		0.076

ND – Not Detected (Above Instrument Detection Limits)
NP – Not Promulgated
[ ] – Detected Above the Instrument Detection Limit and below the Contract Required Quantitation Limit
* – Significance above background and observed contamination of CERCLA hazardous substance established.

ATTACHMENT 4

Table 11
Truth or Consequences Landfill
Subsurface Soil Sample Results– Organics
(ppb, μg/Kg)

Sample Location	Background		Bench Top next to sign post		Near Southern Drainage	
Sample ID	TOC–SI–SS01		TOC–SI–SS02		TOC–SI–SS04	
Sample Depth	> 2 ft.		> 2 ft.		> 2 ft.	
Sample Matrix	Soil	SQL	Soil	SQL	Soil	SQL
Collection Date	2/09/94		2/09/94		2/09/94	
Volatile Organics						
Methylene chloride	ND	11	[4]	10	14* J–I	10
Tetrachlorethene	ND	11	[6]	10	[5] J–I	10
Toluene	ND	11	12*	10	16* J–I	10
2–Butanone	ND	11	ND		[4] J–I	10
Semivolatile Organics	ND		ND		ND	
Pesticides/PCB's						
alpha–BHC	ND	1.8	ND		[0.83] J–SN	1.8
beta–BHC	ND	1.8	4.9*	1.8	2.1 J–PS	1.8
Dieldrin	ND	3.5	4.0*	3.5	5.3* J–PS	3.4
4,4'–DDE	ND	3.5	30* J–P	3.5	37* J–PQS	3.4
4,4'–DDD	ND	3.5	[3.4]	3.5	[1.9] J–PS	3.4
4,4'–DDT	ND	3.5	5.9* J–P	3.5	37* J–S	3.4
alpha–Chlordane	ND	1.8	9.1* J–P	1.8	9.4* J–PS	1.8
gamma–Chlordane	ND	1.8	10* J–P	1.8	11* J–PS	1.8

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Quantitation Limit.
* – Significance above background of CERCLA hazardous substance established.

ATTACHMENT 4

Table 12
Truth or Consequences Landfill
Quality Assurance/Quality Control Sample Results – Organics
(ppb, μg/Kg)

Sample Type	Rinsate Blank	Field Blank	Rinsate Blank	Field Blank	Lab Blank
Sample ID	TOC–SI–QC01	TOC–SI–QC02	TOC–SI–QC03	TOC–SI–QC04	TRIP BLANK
Sample Matrix	Water	Water	Water	Water	Water
Collection Date	2/08/94	2/08/94	2/10/94	2/10/94	2/08/94
Volatile Organics					
Chloroform	[2]	[2]	[2]	[3]	ND
Semivolatile Organics	ND	NA	ND	NA	NA
Pesticides/PCB's	ND	NA	ND	NA	NA

NA – Not Analyzed
ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instument Detection Limit and below the Contract Required Quantitation Limit.

ATTACHMENT 5

Table 1
Truth or Consequences Landfill
Monitoring Well Ground Water Sample Results – Inorganics
Total Metals
(ppb, μg/L)

Sample Location (See Attachment #3)	N = 5271.5286 E = 5629.1804	N = 5370.7767 E = 5268.8225	N = 6023.1271 E = 5522.4344 (Background)	N = 5256.3484 E = 5395.8333	N = 6023.1271 E = 5522.4344 (Background Duplicate)
Sample ID	TC2–SI–MW01	TC2–SI–MW02	TC2–SI–MW03	TC2–SI–MW04	TC2–SI–MW05
Water Table Depth	20.08 FT	17.00 FT	7.04 FT	15.80 FT	7.04 FT
Sample Matrix	Water	Water	Water	Water	Water
Collection Date	8/4/94	8/4/94	8/5/94	8/5/94	8/5/94
Aluminum	135,000	133,000	279,000	61,800	229,000
Antimony	45.0	46.2	36.1	36.2	34.0
Arsenic	14.4	19.2	20.8	[6.2]	17.1
Barium	1,470	1,780	2,570	712	3,890
Beryllium	6.9	7.3	13.6	[3.5]	11.9
Cadmium	ND	ND	ND	ND	ND
Calcium	474,000	675,000	548,000	335,000	517,000
Chromium	95.4	94.1	201	47.8	151
Cobalt	69.3	69.2	128	[33.4]	108
Copper	89.0	92.6	167	43.6	163
Cyanide	31.9	ND	ND	ND	ND
Iron	92,900	97,900	196,000	42,100	156,000
Lead	56.1	48.7	93.4	22.7	176
Magnesium	91,900	82,300	136,000	66,100	116,000
Manganese	3,590	3,660	5,770	1,280	5,220
Mercury	ND	ND	0.23	ND	ND
Nickel	117	99.4	213	67.0	171
Potassium	47,600	38,000	61,700	33,200	52,800
Selenium	R–S	R–S	R–S	R–S	R–S
Silver	ND	ND	ND	ND	132
Sodium	234,000	183,000	269,000	277,000	268,000
Thallium	R–S	R–S	R–S	R–S	R–S
Vanadium	187	180	367	87.8	293
Zinc	284	305	605	147	529
pH	5.38	5.34	5.59	5.38	5.59
Conductivity (mS/cm)	2,190	1,960	1,880	2,540	1,880
Temperature (°C)	29.5	27.0	23.8	27.0	23.8

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.

ATTACHMENT 5

Table 1A
Truth or Consequences Landfill
Well Point Ground Water Sample Results – Inorganics
Total Metals
(ppb, μg/L)

Sample Location (See Attachment #3)	N = 5528.4756 E = 5248.0561	N = 5723.1188 E = 5264.6636	N = 5284.1593 E = 5062.3104	N = 6182.3833 E = 5598.2004	N = 5799.2668 E = 5662.4848	N = 5550.8612 E = 5691.3226
Sample ID	TC2–SI–WP01	TC2–SI–WP02	TC2–SI–WP03	TC2–SI–WP04	TC2–SI–WP05	TC2–SI–WP06
Water Table Depth	19.50 FT	20.0 FT	31.50 FT	4.3 FT	5.9 FT	8.5 FT
Sample Matrix	Water	Water	Water	Water	Water	Water
Collection Date	8/3/94	8/3/94	8/3/94	8/3/94	8/4/94	8/4/94
Aluminum	3240	5,270	66,300	16,600	145,000	19800
Antimony	R–S	R–S	R–S	R–S	52.0	R–S
Arsenic	ND	ND	[5.2]	ND	27.8	[3.0]
Barium	223	262	852	294	1,780	450
Beryllium	ND	ND	[3.8]	ND	9.4	ND
Cadmium	ND	ND	ND	ND	ND	ND
Calcium	251,000	144,000	205,000	162,000	648,000	255,000
Chromium	ND	ND	53.3	18.1	100	27.2
Cobalt	ND	ND	[41.4]	ND	94.0	ND
Copper	ND	ND	41.8	[10.9]	109	ND
Cyanide	ND	ND	ND	ND	11.0	ND
Iron	2,490	3,780	63,200	10,500	99,200	12,700
Lead	ND	ND	44.8	4.6	55.8	5.7
Magnesium	62,400	17,600	33,300	31,700	121,000	43,100
Manganese	1,450	189	1,760	1,040	10,100	733
Mercury	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	44.5	115	ND
Potassium	33,700	7,670	20,500	19,100	26,700	19,200
Selenium	R–S	R–S	R–S	R–S	R–S	R–S
Silver	ND	ND	ND	ND	ND	ND
Sodium	269,000	126,000	137,000	448,000	571,000	347,000
Thallium	R–S	R–S	R–S	R–S	R–S	R–S
Vanadium	[7.8]	[14.5]	87.4	[26.5]	201	[34.9]
Zinc	25.3	24.7	182	49.5	315	61.9
pH	4.96	5.37	5.58	5.67	5.21	5.63
Conductivity (mS/cm)	2,780	1,220	1,280	2,760	3,750	2,270
Temperature (°C)	26.2	29.1	32.2	31.0	37.5	35.5

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.

ATTACHMENT 5

Table 2
Truth or Consequences Landfill
Monitoring Well Ground Water Sample Results – Inorganics
Dissolved Metals
(ppb, μg/L)

Sample Location (See Attachment #3)	N = 5271.5286 E = 5629.1804		N = 5370.7767 E = 5268.8225		N = 6023.1271 E = 5522.4344 (Background)		N = 5256.3484 E = 5395.8333		N = 6023.1271 E = 5522.4344 (Background Duplicate)		MCL
Sample ID	TC2–SI–MW01		TC2–SI–MW02		TC2–SI–MW03		TC2–SI–MW04		TC2–SI–MW05		
Water Table Depth	20.08 FT		17.00 FT		7.04 FT		15.80 FT		7.04 FT		
Sample Matrix	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	
Collection Date	8/4/94		8/4/94		8/5/94		8/5/94		8/5/94		
Aluminum	ND		ND		1,380 J–D		465 J–D		575 J–D		NP
Antimony	ND		ND		ND		ND		ND		6
Arsenic	ND		ND		[3.2]		ND		ND		50
Barium	[102]		[145]		[110]		[82.9]		[116]		2000
Beryllium	ND		ND		ND		ND		ND		4
Cadmium	ND		ND		ND	3.4	ND		ND	3.4	5
Calcium	181,000		210,000		83,400		217,000		83,500		NP
Chromium	ND		ND		ND		ND		ND		100
Cobalt	ND		ND		ND		ND		ND		NP
Copper	ND		ND		ND		ND		ND		NP
Iron	ND		ND		658 J–D		220 J–D		270 J–D		NP
Lead	R–S		R–S		R–S		R–S		R–S		NP
Magnesium	43,500		30,000		24,800		44,400		24,900		NP
Manganese	39.8 J–I		143*		16.7		19.1 J–I		17.9		NP
Mercury	ND		ND		ND		ND		ND		2
Nickel	ND		ND		ND		ND		ND		100
Potassium	36,200		11,200		7,220		23,400		9,020		NP
Selenium	ND		ND		ND		ND		ND		50
Silver	ND		ND		ND		ND		ND		NP
Sodium	290,000		210,000		328,000		300,000		322,000		NP
Thallium	R–S		R–S		R–S		R–S		R–S		2
Vanadium	[11.2]		ND		[18.5]		ND		[16.6]		NP
Zinc	[4.0]*	2.6	[4.8]* J–I	2.6	ND	2.6	ND		ND	2.6	NP
pH	5.38		5.34		5.59		5.38		5.59		
Conductivity (mS/cm)	2,190		1,960		1,880		2,540		1,880		
Temperature (°C)	29.5		27.0		23.8		27.0		23.8		

NP – Not Promulgated
ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance is established.

ATTACHMENT 5

Table 2A
Truth or Consequences Landfill
Well Point Ground Water Sample Results – Inorganics
Dissolved Metals
(ppb, µg/L)

Sample Location	N = 6023.3329 E = 5484.8526 (Background)		N = 6023.3329 E = 5484.8526 (Background Duplicate)		N = 5528.4756 E = 5248.0561		N = 5723.1188 E = 5264.6636		N = 5284.1593 E = 5062.3104		N = 6182.3833 E = 5598.2004		N = 5799.2668 E = 5662.4848		N = 5550.8612 E = 5691.3226		
Sample ID	TC2–SI–MW03		TC2–SI–MW05		TC2–SI–WP01		TC2–SI–WP02		TC2–SI–WP03		TC2–SI–WP04		TC2–SI–WP05		TC2–SI–WP06		MCL
Water Table Depth	7.04 FT		7.04 FT		19.50 FT		20.0 FT		31.50 FT		4.3 FT		5.9 FT		8.5 FT		
Sample Matrix	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	
Collection Date	8/5/94		8/5/94		8/3/94		8/3/94		8/3/94		8/3/94		8/4/94		8/4/94		
Aluminum	1,380 J–D		575 J–D		ND		ND		ND		ND		ND		ND		NP
Antimony	ND		ND		ND		ND		ND		ND		ND		ND		6
Arsenic	[3.2]		ND		ND		ND		ND		ND		16.2*		ND		50
Barium	[110]		[116]		[184]		[153]		[98.5]		[140]		[132]		[97.9]		2000
Beryllium	ND		ND		ND		ND		ND		ND		ND		ND		4
Cadmium	ND	3.4	ND	3.4	ND		ND		ND		[3.4] J–I	3.4	ND		ND		5
Calcium	83,400		83,500		258,000		139,000		137,000		157,000		284,000		138,000		NP
Chromium	ND		ND		ND		ND		ND		ND		ND		ND		100
Cobalt	ND	4.1	ND	4.1	ND		ND		ND		ND		[9.4] J–I	4.1	ND		NP
Copper	ND		ND		ND		ND		ND		ND		ND		ND		NP
Iron	658 J–D		270 J–D		ND		ND		ND		ND		ND		ND		NP
Lead	R–S		R–S		R–S		R–S		R–S		R–S		R–S		R–S		NP
Magnesium	24,800		24,900		65,200		17,700		15,100		29,800		71,600		15,000		NP
Manganese	16.7		17.9		1,470*		66.8*		19.1 J–I		870*		7,110*		19.1 J–I		NP
Mercury	ND		ND		ND		ND		ND		ND		ND		ND		2
Nickel	ND		ND		ND		ND		ND		ND		ND		ND		100
Potassium	7,220		9,020		34,200		5,540		6,590		15,600		ND		6,210		NP
Selenium	ND		ND		ND		ND		ND		ND		ND		ND		50
Silver	ND		ND		ND		ND		ND		ND		ND		ND		NP
Sodium	628,000		322,000		284,000		137,000		148,000		510,000		679,000		145,000		NP
Thallium	R–S		R–S		R–S		R–S		R–S		R–S		R–S		R–S		2
Vanadium	[18.5]		[16.6]		ND		ND		ND		ND		ND		ND		NP
Zinc	ND	2.6	ND	2.6	[16.1]* J–I	2.6	[5.6]* J–I	2.6	ND		[2.9]* J–I	2.6	[3.7]* J–I	2.6	[2.7]* J–I	2.6	NP
pH	5.59		5.59		4.96		5.37		5.58		5.67		5.21		5.63		
Conductivity (mS/cm)	1,880		1,880		2,780		1,220		1,280		2,760		3,750		2,270		
Temperature (°C)	23.8		23.8		26.2		29.1		32.2		31.0		37.5		35.5		

NP – Not Promulgated
ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance is established.

ATTACHMENT 5

Table 3
Truth or Consequences Landfill
Monitoring Well Ground Water Sample Results – Organics
(ppb, μg/L)

Sample Location (See Attachment #3)	N = 5271.5286 E = 5629.1804		N = 5370.7767 E = 5268.8225		N = 6023.1271 E = 5522.4344 (Background)		N = 5256.3484 E = 5395.8333		N = 6023.1271 E = 5522.4344 (Background Duplicate)		MCL
Sample ID	TC2–SI–MW01		TC2–SI–MW02		TC2–SI–MW03		TC2–SI–MW04		TC2–SI–MW05		
Water Table Depth	20.08 FT		17.00 FT		7.04 FT		15.80 FT		7.04 FT		
Sample Matrix	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	
Collection Date	8/4/94		8/4/94		8/5/94		8/5/94		8/5/94		
Volatile Organics											
Acetone	ND		[4]	10	[7]	10	[4]	10	ND	10	NP
Semivolatile Organics											
Di–n–Butylphthalate	[1]	10	ND		ND	10	ND		[1]	10	NP
bis(2–Ethylhexyl)phthalate	[2]	10	[8]	10	[1]	10	[2]	10	[5]	10	6
2–Methylnapthalene	ND		[1]	10	ND	10	ND		ND	10	NP
Pesticides/PCB's	ND		ND		ND		ND		ND		

NP – Not Promulgated
ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Quantitation Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance established.

ATTACHMENT 5

Table 3A
Truth or Consequences Landfill
Well Point Ground Water Sample Results – Organics*
(ppb, µg/L)

Sample Location (See Attachment #3)	N = 6023.1271 E = 5484.8526 (Background)		N = 6023.1271 E = 5484.8526 (Background Duplicate)		N = 5528.4756 E = 5248.0561		N = 5723.1188 E = 5264.6636		N = 5284.1593 E = 5062.3104		N = 6182.3833 E = 5598.2004		N = 5799.2668 E = 5662.4848		N = 5550.8612 E = 5691.3226		MCL
Sample ID	TC2–SI–MW03		TC2–SI–MW05		TC2–SI–WP01		TC2–SI–WP02		TC2–SI–WP03		TC2–SI–WP04		TC2–SI–WP05		TC2–SI–WP06		
Water Table Depth	7.04 FT		7.04 FT		19.50 FT		20.0 FT		31.50 FT		4.3 FT		5.9 FT		8.5 FT		
Sample Matrix	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	Water	SQL	
Collection Date	8/5/94		8/5/94		8/3/94		8/3/94		8/3/94		8/3/94		8/4/94		8/4/94		
Volatile Organics																	
Methylene Chloride	[4] J–B	10	ND	10	ND		ND		ND		ND		ND		ND		5
Acetone	[7]	10	ND	10	ND		ND		ND		ND		ND		13	10	NP
1,2–Dichloroethene	ND	10	ND		ND		[1]	10	ND		ND		ND		ND		70
Trichloroethene	ND	10	ND		ND		[9]	10	[2]	10	ND		ND		ND		5
Xylene (total)	ND	10	ND		ND		ND		ND		ND		ND		[1]	10	10,000
Semivolatile Organics																	
Phenol	ND	10	ND	10	ND		ND		ND		ND		[2]	10	[2]	10	NP
Di–n–Butylphthalate	ND	10	[1]	10	ND		ND		[1]	10	[1]	10	ND		ND		NP
bis(2–Ethylhexyl)phthalate	[1]	10	[5]	10	ND		[2]	10	[1]	10	[3]	10	ND		ND		6
Pesticides/PCB's																	
Alpha–chlordane	ND	0.05	ND	0.05	ND		0.0066 J–P	0.05	ND		ND		ND		ND		2

NP – Not Promulgated
ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Quantitation Limit.
* – Attribution by chemical analysis, significance above background, and observed release of CERCLA hazardous substance established.

Table 4
Truth or Consequences Landfill SI (Phase II Data)
Hardness Differential/Anion–Cation Balance

Sample	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Aluminum (mg/L)	Manganese (mg/L)	Alkalinity (mg/L)	Hardness (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	hardness based on Mg+Ca	difference in hardness	%
TC2–SI–MW01	181	43.5	290	36.2	ND	39.8	270	625	178	486	ND	1920	631.09	–6.09	1.0
TC2–SI–MW02	210	30	210	11.2	ND	143	257	636	265	409	0.102	1750	647.91	–11.91	1.8
TC2–SI–MW03	83.4	24.8	328	7.2	1380	16.7	286	303	223	337	ND	1250	310.3762	–7.3762	2.4
TC2–SI–MW04	217	44.4	300	23.4	465	19.1	288	710	268	499	ND	2050	724.6882	–14.6882	2.0
TC2–SI–MW05	83.5	24.9	322	9	575	17.9	402	1020	359	1250	ND	3890	311.0377	708.9623	227.9
TC2–SI–WP01	258	65.2	284	34.2	ND	1470	403	942	200	610	ND	3110	912.7196	29.2804	3.2
TC2–SI–WP02	139	17.7	137	5.5	ND	66.8	243	409	126	218	ND	1180	419.9716	–10.9716	2.6
TC2–SI–WP03	137	15.1	148	6.6	ND	19.1	149	425	123	297	0.125	1510	404.2708	20.7292	5.1
TC2–SI–WP04	157	29.8	510	15.6	ND	870	358	493	305	569	0.095	2280	514.7454	–21.7454	4.2
TC2–SI–WP05	284	71.6	679	2.6	ND	7110	284	312	230	348	0.08	1260	1003.997	–691.9968	68.9
TC2–SI–WP06	138	15	145	6.2	ND	19.1	342	780	228	603	21.6	2460	406.356	373.644	91.9

Note – Sample TC2–SI–MW05 is the field duplicate of sample TC2–SI–MW03.

Sample	Calcium (meq/L)	Magnesium (meq/L)	Sodium (meq/L)	Potassium (meq/L)	Aluminum (meq/L)	Manganese (meq/L)	Alkalinity[a] (meq/L)	Sulfate (meq/L)	Chloride (meq/L)	Nitrate (mg/L)	Sum of Anions[b]	Sum of Cations[c]	Anions–Cations	% Diff vs. anions
TC2–SI–MW01	9.032	3.580	12.614	0.926			5.395	3.706	13.708	0.000	22.809	26.152	–3.342	14.7
TC2–SI–MW02	10.479	2.469	9.134	0.286			5.135	5.517	11.536	0.003	22.192	22.369	–0.176	0.8
TC2–SI–MW03	4.162	2.041	14.267	0.184			5.715	4.643	9.506	0.000	19.863	20.654	–0.791	4.0
TC2–SI–MW04	10.828	3.654	13.049	0.598			5.755	5.580	14.075	0.000	25.409	28.130	–2.720	10.7
TC2–SI–MW05	4.167	2.049	14.006	0.230			8.033	7.474	35.258	0.000	50.765	20.452	30.313	59.7
TC2–SI–WP01	12.874	5.365	12.353	0.875			8.053	4.164	17.206	0.000	29.423	31.467	–2.045	7.0
TC2–SI–WP02	6.936	1.456	5.959	0.141			4.856	2.623	6.149	0.000	13.628	14.492	–0.865	6.3
TC2–SI–WP03	6.836	1.243	6.438	0.169			2.977	2.561	8.377	0.004	13.919	14.685	–0.766	5.5
TC2–SI–WP04	7.834	2.452	22.184	0.399			7.154	6.350	16.049	0.003	29.556	32.869	–3.313	11.2
TC2–SI–WP05	14.172	5.892	29.535	0.066			5.675	4.788	9.816	0.003	20.282	49.665	–29.383	144.9
TC2–SI–WP06	6.886	1.234	6.307	0.159			6.834	4.747	17.008	0.697	29.286	14.586	14.700	50.2

[a] Alkalinity as CO_3^{2-}
[b] Anions include Alkalinity, Sulfate, Chloride and Nitrate
[c] Cations include Calcium, Magnesium, Sodium and Potassium

Attachment 5

Table 4A
Truth or Consequences Landfill SI (Phase II Data)
Wet Chemistry Results
Quality Control/Quality Assurance Sample Results

Sample	Alkalinity (mg/L)	TDS (mg/L)	Hardness (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Nitrate (mg/L)
TC2–SI–QC01	BRL	BRL	BRL	BRL	BRL	BRL
TC2–SI–QC03	BRL	BRL	BRL	BRL	BRL	BRL

BRL – Below Reporting Limit

ATTACHMENT 5

Table 5
Truth or Consequences Landfill
Quality Assurance/Quality Control Sample Results– Inorganics
Total Metals
(ppb, μg/L)

Sample Type	Rinsate Blank		Rinsate Blank	
Sample ID	TC2–SI–QC01	SQL	TC2–SI–QC03	SQL
Sample Matrix	Water		Water	
Collection Date	8/4/94		8/5/94	
Aluminum	ND		ND	
Antimony	R–S		R–S	
Arsenic	ND		ND	
Barium	ND		ND	
Beryllium	ND		ND	
Cadmium	ND		ND	
Calcium	[118]		[40.1]	
Chromium	ND		ND	
Cobalt	ND		ND	
Copper	ND		ND	
Cyanide	ND		ND	
Iron	ND		ND	
Lead	ND		ND	
Magnesium	ND		ND	
Manganese	ND		ND	
Mercury	ND		ND	
Nickel	ND		ND	
Potassium	ND		ND	
Selenium	R–S		R–S	
Silver	ND		ND	
Sodium	234,000		[366]	
Thallium	R–S		R–S	
Vanadium	ND		ND	
Zinc	[7.9]		[6.5]	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.

ATTACHMENT 5

Table 5A
Truth or Consequences Landfill
Quality Assurance/Quality Control Sample Results– Inorganics
Dissolved Metals
(ppb, μg/L)

Sample Type	Rinsate Blank		Rinsate Blank	
Sample ID	TC2–SI–QC01	SQL	TC2–SI–QC03	SQL
Sample Matrix	Water		Water	
Collection Date	8/4/94		8/5/94	
Aluminum	ND		ND	
Antimony	ND		ND	
Arsenic	ND		ND	
Barium	ND		ND	
Beryllium	ND		ND	
Cadmium	ND		ND	
Calcium	[47.9]		[154]	
Chromium	ND		ND	
Cobalt	ND		ND	
Copper	ND		ND	
Iron	ND		ND	
Lead	R–S		R–S	
Magnesium	ND		ND	
Manganese	ND		ND	
Mercury	ND		ND	
Nickel	ND		ND	
Potassium	ND		ND	
Selenium	ND		ND	
Silver	ND		ND	
Sodium	229,000		ND	
Thallium	R–S		R–S	
Vanadium	ND		ND	
Zinc	ND		[12.5]	

ND – Not Detected (Above Instrument Detection Limit)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Detection Limit.

ATTACHMENT 5

Table 6
Truth or Consequences Landfill
Quality Assurance/Quality Control Sample Results – Organics
(ppb, μg/Kg)

Sample Type	Rinsate Blank	Trip Blank	Rinsate Blank	Trip Blank
Sample ID	TC2–SI–QC01	TC2–SI–QC02	TC2–SI–QC03	TC2–SI–QC04
Sample Matrix	Water	Water	Water	Water
Collection Date	8/4/94	8/4/94	8/5/94	8/5/94
Volatile Organics				
Acetone	[7] J–CB	[8] J–C	[6] J–C	ND
Methylene Chloride	12 J–B	15 J–B	16 J–B	ND
Bromodichloromethane	[1]	[1]	ND	ND
Trichloroethene	[2]	ND	ND	ND
Dibromochloromethane	[1]	[1]	ND	ND
Semivolatile Organics				
Phenol	[2]	NA	[1]	NA
Di–n–butylphthalate	[1]	NA	ND	NA
bis(2–Ethylhexyl)phthalate	[2]	NA	ND	NA
Pesticides/PCB's	ND	NA	ND	NA

NA – Not Analyzed
ND – Not Detected (Above Instrument Detection Limits)
[ ] – Detected above the Instrument Detection Limit and below the Contract Required Quantitation Limit.

BASCOR Environmental, Inc.
consulting engineers and scientists

February 26, 2007

Mr. Chris Whitman
Ground Water Quality Bureau
New Mexico Environment Department
1170 Solano Drive, Suite M
Las Cruces, New Mexico 88001

Re: Amendment to Closure Plan for the Former Truth or Consequences Landfill
Elephant Butte, New Mexico

Dear Mr. Whitman:

On behalf of the City of Truth or Consequences, BASCOR Environmental, Inc. (BEI) is submitting this letter that amends the August 2006 Closure Plan that was approved by the New Mexico Environment Department (NMED). This information was discussed during the February 22, 2007 meeting in Las Cruces between the Bureau of Land Management (BLM), NMED, and BEI.

SITE CLEARING

Clearing of the site will begin when approval from the BLM is received to place imported soil (as an erosion control measure). When the site is sufficiently cleared, the hydrogeologic investigation (monitoring well installation and sampling) will begin.

MONITORING WELL INSTALLATION

The Closure Plan calls for the installation of new monitoring wells to supplement the existing well network (wells MW-1 through MW-4). One upgradient well (MW-5) and two downgradient wells (MW-6 and MW-7) will be installed. Based on a recent sampling event by NMED, BEI understands that wells MW-2 and MW-3 may be damaged. Therefore, BEI will also install replacement wells at both locations. Figure 1 shows the proposed locations of all monitoring wells. Table 1 summarizes the existing well construction data.

Each monitoring well will be constructed using threaded 2” diameter Schedule 40 polyvinyl chloride (PVC) screen and riser pipe. The screens will be 10 feet long with 0.010-inch slots. All wells will be finished at the surface with an aboveground protective casing and concrete pad. The total depth of each well will depend on field conditions. BEI will attempt to install each well screen so that it straddles the estimated groundwater elevation. Typical well construction details are shown in Figure 2 (enclosed).

If the wells are affected by future driving range construction (imported fill), their elevations will be adjusted by attaching a section of PVC riser pipe onto the existing pipe with a pipe coupling. A new or modified protective casing will also be installed as required.

MONITORING WELL DEVELOPMENT AND SAMPLING

At least 24 hours after well installation, the water level in each well will be measured using an electronic meter. The wells will then be developed using a disposable bailer to remove fines generated from drilling.

After development, each well will be sampled for the following parameters:

- Volatile organic compounds (USEPA Method 8020 or 8260);
- Semi-volatile organic compounds (USEPA Method 8270);
- Polychlorinated biphenyls (USEPA Method 8080);
- Pesticides (USEPA Method 8080)
- RCRA Metals (USEPA Method 6000 and 7000 series).

The low-flow sampling method described in the Closure Plan will be followed.

SCHEDULE

The estimated schedule for completing various Closure Plan tasks is shown below:

Task or Event	Date
Clear/Grub Site for Well Installation	Early March 2007
Begin Well Installation	Early to Mid-March 2007
Begin Driving Range Construction	Early to Mid-March 2007
Develop and Sample Wells	Mid-March 2007
Laboratory Data Available	Early April 2007
Submit Landfill Cover Design to NMED	April-May 2007

SUMMARY

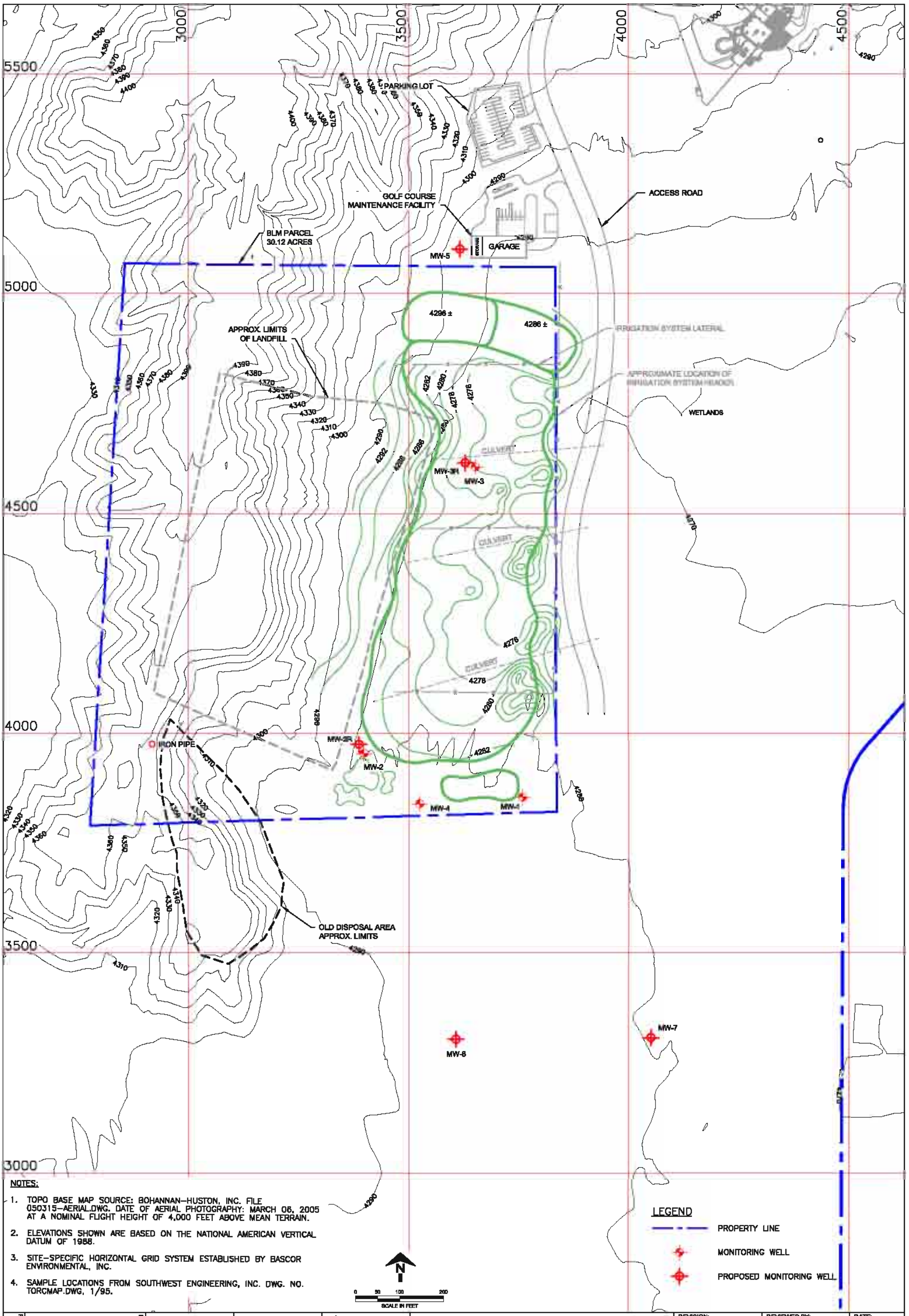
We appreciate your continued assistance in moving this project forward. If you have any questions regarding this letter, please feel free to contact me.

Sincerely,
BASCOR Environmental, Inc.

John C. Tanaka, P.E.
Senior Engineer

Enclosures

cc: Jaime Aguilera, City of T or C
Angel Mayes, BLM
David Jevons, BLM
Jim Jacobs, Mesa Construction
Jack Whitt, Turtleback Mountain Partners



NOTES:

1. TOPO BASE MAP SOURCE: BOHANNAN–HUSTON, INC. FILE 050315–AERIAL.DWG. DATE OF AERIAL PHOTOGRAPHY: MARCH 06, 2005 AT A NOMINAL FLIGHT HEIGHT OF 4,000 FEET ABOVE MEAN TERRAIN.
2. ELEVATIONS SHOWN ARE BASED ON THE NATIONAL AMERICAN VERTICAL DATUM OF 1988.
3. SITE–SPECIFIC HORIZONTAL GRID SYSTEM ESTABLISHED BY BASCOR ENVIRONMENTAL, INC.
4. SAMPLE LOCATIONS FROM SOUTHWEST ENGINEERING, INC. DWG. NO. TORCMAP.DWG, 1/95.

FIGURE: 1

ENGINEER SEAL:

Socorro Engineering, Inc.
200 School of Mines - P.O. Box F
Socorro, Nm 87801
505-835-0804

BASCOR Environmental, Inc.
consulting engineers & scientists
800 W. Central Road, Suite 104N
Mt. Prospect, IL 60056
847-577-7680
www.bascor.com

City of Truth or Consequences
505 Sims Street
Truth or Consequences, NM 87901

FORMER T OR C LANDFILL
Elephant Butte, New Mexico

MONITORING WELL LOCATION MAP

REVISION:	REVIEWED BY:	DATE:
ORIGINAL	J.TANAKA	2-22-07

PROJECT NUMBER: 307A

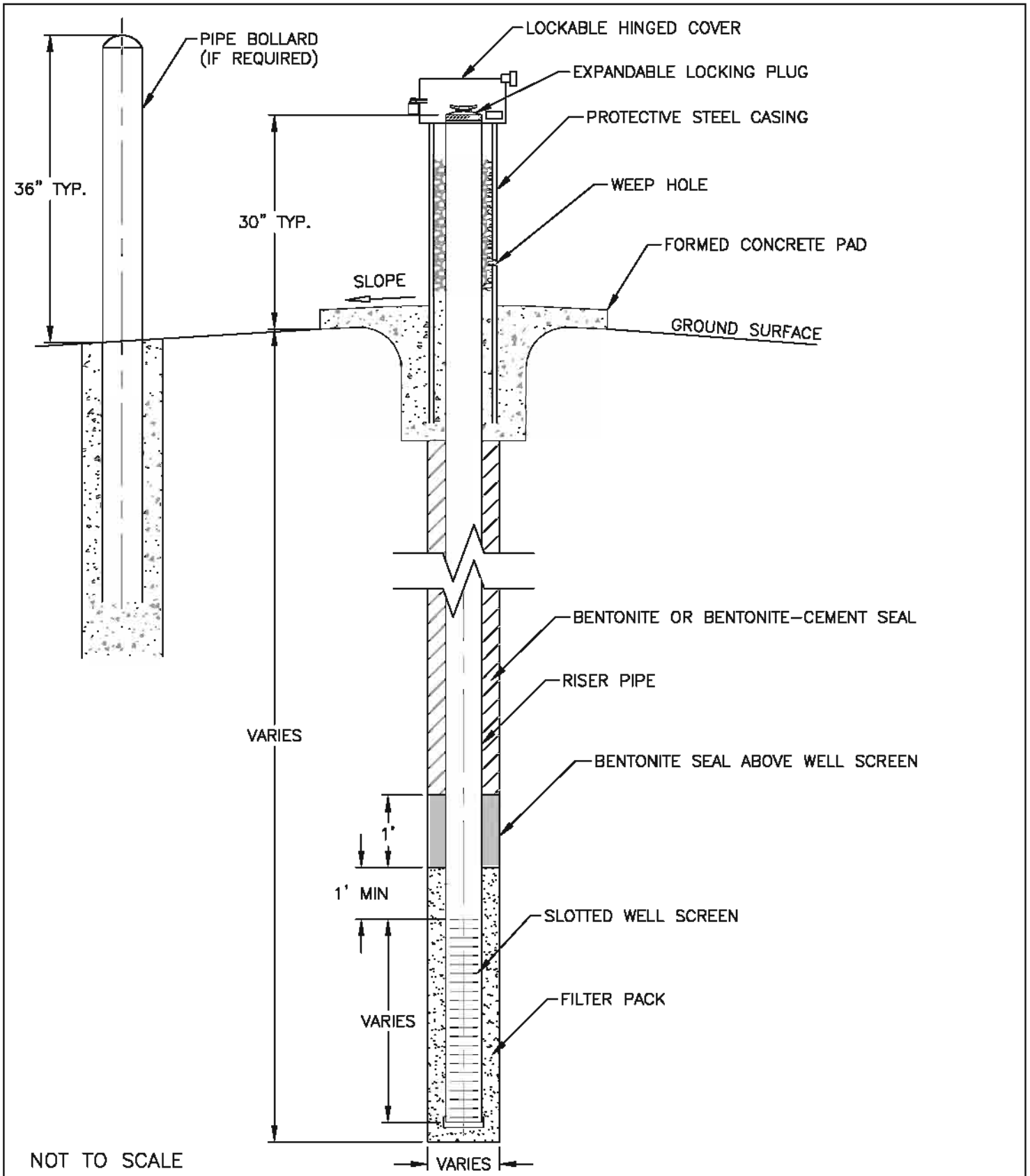
DRAWN BY: J.TANAKA
DRAWING PATH: \\SERVER1\DATA\DRAWINGS\TB2637\ACLOSURE PLAN
DRAWING NAME: WELL LOCATION MAP.DWG

Table 1

Well Construction Data
Former T or C Landfill, Elephant Butte, NM

Well I.D.	Date Installed	Materials	Diameter (inches)	Total Depth (ft bls)	Screened Interval (ft bls)	Slot Size (inches)
MW-1	8/2/1994	PVC	2	26	16-26	0.010
MW-2	8/2/1994	PVC	2	22	12-22	0.010
MW-3	8/2/1994	PVC	2	15	4-14	0.010
MW-4	8/4/1994	PVC	2	23	13-23	0.010

Notes:
ft bls = feet below land surface.
All wells installed by C.C. Johnson & Malhotra for BLM.
Monitoring wells MW-2 and MW-3 were determined to be damaged during a sampling event conducted by NMED.



BASCOR Environmental, Inc.
consulting engineers and scientists

800 W. Central Rd.
Suite 104N
Mt. Prospect, IL 60056
(847) 577-1980

FORMER T OR C LANDFILL
ELEPHANT BUTTE, NM

TYPICAL MONITORING WELL CONSTRUCTION DETAIL

DRAWN	CHECKED	APPROVED	DATE
J.TANAKA	J.TANAKA	S.SENN	2-22-07

FILENAME: \\SERVER1\DATA\DRAWINGS\TB06307A\CLOSURE PLAN\MON WELL DETAIL.DWG

FIGURE 2

Limited Site Investigation Report

Former Truth of Consequences Landfill

Country Club Road

Elephant Butte, Sierra County, NM

August 21, 2013

Terracon Project No. 68137008

Prepared for:

BASCOR Environmental, Inc.

Mesquite, Nevada

Prepared by:

Terracon Consultants, Inc.

Las Cruces, New Mexico

Offices Nationwide
Employee-Owned
Established in 1965
terracon.com
Terracon
Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

Terracon

August 21, 2013

BASCOR Environmental, Inc.
952 Blazing Star Crossing Street
Mesquite, Nevada 89034

Attn: Mr. Samuel J. Senn, P.E., Project Manager
M: (847) 812 0409
E: sam.senn@bascor.com

Re: Limited Site Investigation
Former Truth or Consequences Landfill
Country Club Road
Elephant Butte, Sierra County, NM
Terracon Project No. 68137008

Dear Mr. Senn:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Limited Site Investigation (LSI) report for the above-referenced site. This investigation was performed in accordance with Terracon Proposal No. P6813-080E, dated March 28, 2013.

We appreciate the opportunity to perform these services for BASCOR Environmental, Inc. Please contact Kyle Williams at (575) 527-1700 or John Sallman at (913) 577-0403 if you have questions regarding the information provided in the report.

Sincerely,
Terracon

Prepared By:

J. Kyle Williams
Project Manager

Reviewed By:

John B. Sallman, P.G.
Senior Principal

Enclosure

TABLE OF CONTENTS

Page No.

1.0 INTRODUCTION 1

2.0 FIELD ACTIVITIES 3

2.1 Landfill Cap Assessment 3
2.1.1 Landfill Cap Boring Lithology 3
2.1.2 Test Pit Lithology 5
2.2 Vapor Points 6
2.2.1 Vapor Point Installation 6
2.2.2 Vapor Point Lithology 7
2.2.3 Soil Gas Sampling 7
2.3 Monitoring Wells 8
2.3.1 Installation 8
2.3.2 Monitoring Well Lithology 9
2.3.3 Groundwater Sampling 9
2.4 Survey 10
2.5 Groundwater Potentiometric Surface 11

3.0 LABORATORY ANALYTICAL METHODS 12

3.1 Landfill Cap Samples 12
3.2 Soil Gas Samples 12
3.3 Groundwater Samples 12

4.0 DATA EVALUATION 13

4.1 Landfill Cap 13
4.1.1 Geotechnical Analyses 13
4.2 Soil Gas Samples 13
4.3 Groundwater Samples 14

5.0 FINDINGS AND RECOMMENDATIONS 15

LIST OF APPENDICES

Appendix A: Exhibit 1 – Topographic Map
Exhibit 2 – Site Plan
Exhibit 3 – Potentiometric Surface Map
Exhibit 4 – Landfill Cap Thickness Map

Appendix B: Boring Logs
Surveyor's Report
New Mexico Office of the State Engineer Documentation

Appendix C: Laboratory Analytical Reports

LIMITED SITE INVESTIGATION

FORMER TRUTH OR CONSEQUENCES LANDFILL
COUNTRY CLUB ROAD
ELEPHANT BUTTE, SIERRA COUNTY, NEW MEXICO
Terracon Project No. 68137008
August 21, 2013

1.0 INTRODUCTION

1.1 Site Description

Site Name	Former Truth or Consequences Landfill
Site Location/Address	Country Club Road, Elephant Butte, New Mexico
General Site Description	The property is a 30.12-acre site located in Lot 3, Section 22, Township 3 South, Range 4 West, NMPM. The western portion of the property includes the former Truth or Consequences Landfill.

Appendix A includes four figures; Exhibit 1 is topographic map depicting the location of the site; Exhibit 2 is a site plan depicting the site boundaries, pertinent site features, and sampling locations; Exhibit 3 is a potentiometric surface map showing the orientation of the uppermost groundwater surface, and; Exhibit 4 shows the landfill cap thickness (isopach) map.

1.2 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted a Limited Site Investigation (LSI) at the Former Truth or Consequences Landfill on Country Club Road in Elephant Butte, New Mexico (site). Terracon's LSI was performed in accordance with Terracon Proposal No. P6813-080E dated March 28, 2013 as approved by BASCOR Environmental, Inc. on April 29, 2013.

The objectives of the LSI include the following:

- Evaluate the composition and thickness of the existing landfill cap. Ten soil borings and three test pits were installed to determine the cap thickness. Composite soil samples were collected from five of the borings and the three test pits for analyses of Atterberg Limits, moisture content, and gradation, and the three test pit samples were analyzed for hydraulic conductivity.

- Evaluate the landfill gasses generated by buried waste. Four vapor points were installed immediately beneath the landfill cap. A vapor sample was collected from each vapor point and analyzed for volatile organic compounds (VOCs) and methane.

- Install three new monitoring wells downgradient of the landfill waste to assess impacts to groundwater beneath the site. Groundwater samples were collected from the new monitoring wells and two existing wells for laboratory analyses. These samples were analyzed for VOCs, semivolatile organic compounds (SVOCs), RCRA metals, Major ions, nitrate-nitrogen, pesticides and herbicides (above relevant laboratory reporting limits) in the groundwater as a result of potential leaching from the landfill waste.

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally-accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as set forth in our proposal and were not intended to be in strict conformance with ASTM E1903-11.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.5 Reliance

This report has been prepared for the exclusive use of BASCOR Environmental, Inc. the Bureau of Land Management; and the City of Truth or Consequences, NM. Any of the named entities above can convey this report to an affiliate, related entity, subsidiary, lender, title insurer, regulatory or municipal agency, or the current property owner(s) and their agents, but use or reliance by any other party is prohibited without the written authorization of BASCOR Environmental, Inc. and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms,

conditions and limitations stated in the proposal, LSI report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

Terracon's field activities were conducted during May, June and July 2013, by Mr. Kyle Williams, geologist and a Terracon environmental scientist. Drilling services were performed by a State of New Mexico licensed well driller using a truck-mounted hollow stem auger (HSA) drilling rig (CME-75) under the supervision of a Terracon environmental scientist.

Soil samples were collected continuously during drilling operations and observed to document soil lithology, color, moisture content and sensory evidence of impairment. Soil boring activities and collected soil samples were field-screened using a photoionization detector (PID –Mini-RAE 2000) to indicate the presence of VOCs. Soil samples were collected using two-foot split-spoon samplers. Drilling equipment was cleaned using a high-pressure washer prior to beginning the project. Non-dedicated sampling equipment was cleaned using an Alconox® wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

2.1 Landfill Cap Assessment

Terracon's landfill cap assessment activities were conducted on May 17 and July 16, 2013. Terracon advanced a total of ten soil borings using a hollow-stem auger drill rig within the landfill cap on May 17, 2013. These borings were installed to evaluate the thickness of the existing cap, lithology of the cap material, and to collect soil samples for analyses. The landfill cap soil borings were advanced to the depth at which waste was encountered or to a maximum depth of 10 feet below ground surface (bgs), whichever occurred first.

Three test pits were installed on July 16, 2013 using a backhoe to evaluate landfill cap thickness, lithology of cap material, and to collect soil samples for laboratory analyses. These test pits were excavated to a depth from 4.5 to 5 feet bgs. The sidewall of each test pit was examined to evaluate material types and thicknesses.

The locations of the soil borings (CAP-1 through CAP-10) and test pits (TP-N, TP-C and TP-S) are shown on Exhibit 2 in Appendix A. Composite soil samples were collected from five of the borings (CAP-1, CAP-3, CAP-5, CAP-6 and CAP-9) and the three test pits for the geotechnical laboratory analyses described in Section 3.

2.1.1 Landfill Cap Boring Lithology

The soil lithology encountered during installation of the landfill cap borings consisted of the following:

Landfill Cap Boring Lithology

Boring Location	Depth Interval (feet bgs)	Description	Depth to Waste (feet bgs)
CAP-1	0 - 1.5	Sand	7.0
	1.5 - 4.0	gravelly Sand	
	4.0 - 7.0	Clay	
	7.0	Waste, domestic	
CAP-2	0 - 1.0	Sand	8.0
	1.0 - 3.5	gravelly Sand	
	3.5 - 5.5	Clay	
	5.5 - 8.0	gravelly sandy Clay	
	8.0	Waste, domestic	
CAP-3	0 - 0.5	Sand	7.5
	0.5 - 3.5	gravelly Sand	
	3.5 - 6.0	Clay	
	6.0 - 7.5	gravelly Sand	
	7.5	Waste, domestic	
CAP-4	0 - 1.5	Sand	No waste encountered.
	1.5 - 7.5	sandy Clay	
	7.5 - 10.0	gravelly sandy Clay	
CAP-5	0 - 1.0	Sand	No waste encountered - Auger refusal at 5 feet bgs.
	1.0 - 3.0	gravelly Sand	
	3.0 - 5.0	Clay	
	5.0	Gravels, Boulders, auger refusal	
CAP-6	0 - 0.5	Sand	7.0
	0.5 - 3.5	gravelly Sand	
	3.5 - 5.0	Clay	
	5.0 - 7.0	gravelly sandy Clay	
	7.0	Waste, domestic	
CAP-7	0 - 3.0	sandy Clay	No waste encountered.
	3.0 - 5.5	gravelly Sand	
	5.5 - 10.0	sandy Clay	
CAP-8	0 - 1.0	cobble/boulder Sand	7.5
	1.0 - 4.5	Sand	
	4.5 - 7.5	Clay	
	7.5	Waste, domestic	

Boring Location	Depth Interval (feet bgs)	Description	Depth to Waste (feet bgs)
CAP-9	0 - 1.5	Sand	8.0
	1.5 - 3.0	gravelly Sand	
	3.0 - 6.5	Clay, soft	
	6.5 - 8.0	Clay, stiff	
	8.0	Waste, domestic	
CAP-10	0 - 3.5	Sand	No waste encountered.
	3.5 - 5.0	Clay, soft	
	5.0 - 6.0	gravelly Sand	
	6.0 - 10.0	Sand	

The landfill cap material observed in borings CAP-1, -2, -3, -5, -6, -8, -9 and -10 generally consisted of sand and gravelly sand from the ground surface to depths ranging between 3.0 and 4.5 feet bgs. The sand unit overlies a greenish-gray to brown clay ranging in thickness between 1.5 and 5 feet. The clay unit was soft to hard, moist and well compacted. Waste was encountered beneath the clay unit in borings CAP-1, -8 and -9. Beneath the clay unit in borings CAP-2, -3 and -6, a mixed sediment unit that ranged in thickness from 1.5 to 2.5 feet and consisting of gravel, sand, silt and clay overlies waste. No waste was encountered in CAP-10 at the total depth of 10 feet bgs.

The observed lithology in borings CAP-4 and -7 consisted of sands and gravelly sandy clays that appeared to be natural sedimentary units. No waste was encountered at a depth of 10 feet bgs in these two borings.

2.1.2 Test Pit Lithology

The soil lithology encountered during installation of the test pits consisted of the following:

Test Pit Lithology

Boring Location	Depth Interval (feet bgs)	Description	Depth to Waste (feet bgs)
TP-N	0 - 1.5	Sand	No waste encountered
	1.5 – 2.0	gravelly Sand	
	2.0 – 4.0	Clay	
	4.0 – 4.5	gravelly Sand	
TP-C	0 – 0.5	Sand	No waste encountered
	0.5 - 3.0	gravelly Sand	
	3.0 – 5.0	Clay	
	5.0 – 5.5	gravelly Sand	
TP-S	0 - 0.5	Sand	No waste encountered
	0.5 - 2.8	gravelly Sand	
	2.8 - 5.0	Clay	

The landfill cap material observed in the test pits was similar to material observed in the soil borings. Generally, the cap material consisted of sand and gravelly sand from the ground surface to depths ranging between 2.0 and 3.0 feet bgs. The sand unit overlies a greenish-gray to brown clay ranging in thickness between 2.0 and 3.0 feet. The clay unit was soft to hard, moist and well compacted. Beneath the clay unit in TP-N and TP-C there was a mixed sediment unit consisting of gravel, sand, silt and clay. No waste was encountered in the test pits.

2.2 Vapor Points

2.2.1 Vapor Point Installation

Terracon installed four flush-mount soil gas probes (vapor points, VP-1, VP-2, VP-3 and VP-4) on May 17, 2013. These vapor points were installed using the drive hammer mounted on the hollow-stem auger drill at the locations shown on Exhibit 2 in Appendix A. The drive hammer pushed a 2" diameter split-spoon sampler through landfill cap material into the waste. Landfill cap material was collected continuously from the ground surface down into landfill waste material.

Each probe includes a 6" long by 0.25" diameter soil gas implant of stainless steel mesh connected to 0.25" diameter polyethylene tubing to the surface, with installed valve. Surface completions consist of a flush mount well vault set in a concrete pad.

Vapor points were constructed as follows:

- Landfill cap material was continuously sampled to determine cap thickness and depth to uppermost waste material,
- The soil gas implant was connected to polyethylene tubing and lowered into the borehole to a depth corresponding to 4" below the top of waste material. A 0.25" valve was installed on the polyethylene tubing at the ground surface. Each implant is screened across the cap/waste interface,
- Addition of pre-sieved 20/40 grade silica sand for annular sand pack around the implant from the bottom of the boring to approximately 1 foot above the top of the implant,
- Placement of 1 foot of hydrated bentonite pellets above the sand pack,
- Addition of bentonite hole plug to the surface, and
- Installation of an 8-inch diameter, circular, bolt-down, steel, monitoring well cover with a locking well cap inset in a flush-mount, concrete well pad.

2.2.2 Vapor Point Lithology

The general soil lithology encountered during vapor point soil sample collection consisted of the following:

- Gravelly and silty Sand – from ground surface to a depth of 2.1 to 5.8 feet below grade surface (bgs).
- Clay – underlying the surface sand ranging in thickness from 2.0 to 3.4 feet.
- Medium-grained Sand – underlying the clay in VP-1, VP-2 and VP-4 ranging in thickness from 1.7 to 2.0 feet,
- Domestic waste underlies the clay unit in VP-3, and the medium-grained sand in VP-1, VP-2 and VP-4.

Organic vapors were not detected using the PID during installation of the vapor points with the exception of the 0 to 2 foot sample from VP-2, measured at 3.7 parts per million (ppm). These readings and detailed lithologic descriptions are presented on the soil boring logs included in Appendix B.

2.2.3 Soil Gas Sampling

Following installation of the vapor points, Terracon collected one soil gas sample from each of the four vapor points on May 21, 2013. Soil gas samples were collected in laboratory-provided Tedlar bags using a PID connected to the vapor point valve. PID readings were allowed to stabilize for a minimum of one minute prior to sample collection. Soil gas samples were placed in black plastic bags for overnight shipment to the analytical laboratory (TestAmerica of Phoenix, AZ) and analyzed as described in Section 3.

Terracon performed a second round of PID readings and soil gas sample collection on June 25, 2013. Soil gas sampling was performed in the manner described above. Soil gas samples were collected from VP-3 and VP-4 for laboratory analyses. The Client delivered these two samples to the analytical laboratory. The recorded PID readings collected during soil gas sampling events reflect the peak and average values measured while purging soil gas and collecting the sample. PID measurements for the May 21, 2013 and June 25, 2013 soil gas sampling events are as follows:

Vapor Point PID Readings

Vapor Point	May 21, 2013		June 25, 2013	
	Average (ppm)	Peak (ppm)	Average (ppm)	Peak (ppm)
VP-1	0.0	0.0	4.2	6.1
VP-2	0.0	0.0	6.2	9.0
VP-3	1,230	2,100	273	423
VP-4	560	1,050	85	196

2.3 Monitoring Wells

2.3.1 Installation

Terracon installed three flush-mount 2" PVC monitor wells (MW-8, MW-9 and MW-10) on May 15 and 16, 2013. These monitoring wells were installed using a hollow-stem auger drill at the locations shown on Exhibit 2 in Appendix A. Monitoring wells include a 15-foot by 2", 0.010 slot PVC well screen generally placed with 5 feet of screened interval above the uppermost groundwater to allow for seasonal fluctuations. Surface completions include a water-tight cap installed within a flush mount well vault set in a concrete pad.

Monitoring wells were constructed as follows.

- Installation of 15 feet of 2-inch diameter, 0.010-inch machine slotted polyvinyl chloride (PVC) well screen with a threaded bottom cap
- Installation of 2-inch diameter, threaded, flush-joint PVC riser pipe to surface
- Addition of pre-sieved 20/40 grade silica sand for annular sand pack around the well screen from the bottom of the boring to approximately 2 feet above the top of the well screen
- Placement of 2 feet of hydrated bentonite pellets above the sand pack
- Addition of bentonite hole plug to the surface
- Installation of an 8-inch diameter, circular, bolt-down, steel, monitoring well cover with a locking well cap inset in a flush-mount, concrete well pad

The monitoring well construction details are presented on the soil boring logs for these monitoring wells, which are included in Appendix B. Soil cuttings were dispersed on the ground surface surrounding each soil boring, as directed by the New Mexico Environment Department Ground Water Quality Bureau.

Monitoring well development was performed on May 20, 2013 by surging and removing groundwater with a new, disposable, polypropylene bailer until the groundwater was relatively free of fine-grained sediment. Approximately 15 gallons of groundwater were removed from monitoring well MW-8, approximately 30 gallons of groundwater were removed from monitoring well MW-9, and approximately 30 gallons of groundwater were removed from monitoring well MW-10 during development activities. Development groundwater was stored temporarily on-site in DOT-approved 55-gallon drums pending the results of the laboratory analyses. The drums were labeled with the apparent contents of the drum and the initial collection date.

2.3.2 Monitoring Well Lithology

The general soil lithology encountered during installation of monitoring wells MW-8 and MW-9 was similar. From the ground surface to depths within one foot of observed groundwater, the lithology consisted of alternating units of sand, gravelly sand, silty and clayey sand, sandy clay and clay. Groundwater was observed in borings for MW-8 and MW-9 at an approximate depth of 20 feet bgs. These lithologic units appear to be reworked, and 3 inches of burned material was observed in the MW-9 boring at a depth of 18.5 feet bgs. Groundwater was present in sandy clay and clay units encountered below 20 feet bgs in these borings.

The lithology of the boring for MW-10 consisted of alternating, distinct layers of sands and clays that exhibited laminations and striations typically observed in natural, undisturbed deposits. These units are typical of overbank/floodplain deposits associated with fluvial systems. Groundwater was observed at approximately 14 feet bgs within the boring.

Organic vapors were not detected using the PID during installation of the monitoring wells. These readings and detailed lithologic descriptions are presented on the soil boring logs included in Appendix B.

2.3.3 Groundwater Sampling

Following development of the monitoring wells and prior to groundwater sample collection, each well was purged with a new disposable bailer or low-flow sampling equipment. Each monitoring well was purged of a minimum of three well casing volumes of groundwater, until the monitoring well formation fails to recharge, (i.e., well runs dry) or consistent values (i.e., less than 10% variance between consecutive readings) were obtained for pH, temperature and conductivity.

Subsequent to sufficient recharge, one groundwater sample was collected from each monitoring well utilizing a new, disposable, polypropylene bailer or the low flow sampling equipment. Groundwater samples were collected into laboratory-prepared glassware containing the appropriate preservative, labeled, logged on the chain-of-custody (COC) form, and placed on ice in sample coolers. The sample coolers were secured with a custody seal and shipped to the selected analytical laboratory.

The May 21 and 28 groundwater samples were shipped via overnight courier to TestAmerica of Phoenix, Arizona. The laboratory experienced internal problems with their workload and data reporting systems, and although all samples were analyzed within method holding times, submission of the laboratory reports exceeded the standard turnaround of 7 to 10 working days. Therefore, the June 25, 2013 groundwater samples were submitted to Pace Analytical of Allen, Texas, who was able to meet standard analytical and reporting turnaround times.

<u>May 21, 2013 Groundwater Sampling</u>

Monitoring wells MW-8, MW-9 and MW-10 were sampled on May 21, 2013. The samples were received at the laboratory (TestAmerica of Phoenix, AZ) on May 22, 2013. The MW-8 sample

containers for SVOC analyses were broken during shipment, and SVOC analysis was not performed.

May 28, 2013 Groundwater Sampling

Terracon attempted to sample groundwater from existing monitoring wells MW-2R, MW-3R, and MW-5 on May 28, 2013. MW-3R held sufficient groundwater for proper purging and sampling activities to be performed. This sample was received by the analytical laboratory (TestAmerica of Phoenix, AZ) on May 29, 2013.

Groundwater samples were not collected from MW-2R and MW-5 on May 28, 2013. Depth to water and total depth measurements at monitoring well MW-2R indicated that there was 0.14 feet of water in this well. Following purging of this water (and approximately 6" of sediment within in the well), recovery was observed for two hours, and MW-2R did not recharge. The well casing in monitoring well MW-5 was found to be offset at a depth of 5 feet below ground. Although the depth to water and total depth measurements indicated that there was sufficient water in the well for sampling activities, the casing offset prevented the bailer from being lowered into the well beyond the 5' depth.

June 25, 2013 Groundwater Sampling

Terracon performed another round of groundwater sampling on June 25, 2013. MW-8 was purged and sampled using a new, disposable bailer. The groundwater sample from MW-8 was submitted for SVOC analyses only.

Low flow sampling methods using a peristaltic pump and new dedicated tubing were used in sampling activities performed at MW-2R and MW-5. MW-2R was observed to contain 0.36 feet of water, and following the initial purge, did not recover sufficiently for sample collection. MW-5 was purged and sampled using a peristaltic pump and new tubing. One well volume was purged from MW-5, and the well was observed to recover at a rate of approximately 1 foot per 30 minutes. Low flow purge methods were then employed, and the well was sampled once the field parameters of temperature, pH and conductivity stabilized to within 10% between subsequent readings. The groundwater samples collected from MW-5 and MW-8 were received by the analytical laboratory (Pace Analytical of Allen, TX) on June 26, 2013.

2.4 Survey

Terracon retained the services of a New Mexico licensed surveyor to locate and survey the monitoring wells and vapor points. David M. Senn of Senn & Associates (NM license no. 12129) surveyed the wells and vapor points on May 25, 2013. The monitoring wells were surveyed to the measuring point for each well, the northernmost point of the top of well casing. The vapor points were surveyed to the center of the vault cap. The complete surveyors report is provided in Appendix B. Monitoring well and vapor point survey information provided by Senn and Associates are as follows:

Monitoring Well and Vapor Point Survey

Point	Northing	Easting	Elevation	Latitude	Longitude
MW-8	4,514.398	3,532.114	4,283.34	N33°09'47.69"	W107°13'55.65"
MW-9	4,266.657	3,472.298	4,284.37	N33°09'45.23"	W107°13'56.36"
MW-10	4,314.465	3,875.208	4,272.87	N33°09'45.71"	W107°13'51.62"
VP-1	4,596.746	3,511.670	4,287.70	N33°09'48.50"	W107°13'55.90"
VP-2	4,418.924	3,470.992	4,287.39	N33°09'46.74"	W107°13'56.37"
VP-3	4,297.225	3,454.337	4,287.01	N33°09'45.54"	W107°13'56.57"
VP-4	4,058.199	3,395.362	4,287.36	N33°09'43.17"	W107°13'57.26"

2.5 Groundwater Potentiometric Surface

Groundwater was encountered during the advancement of soil borings MW-8, MW-9 and MW-10 at approximate depths of 20.5 feet bgs, 20.0 feet bgs, and 14.0 feet bgs, respectively. Groundwater was encountered in a sandy clay unit in MW-8 and MW-9, and in a clay unit in MW-10. Following well development activities, the depth to groundwater in the wells as measured on May 21, 2013 were 21.01, 23.21 and 11.85 feet below the established measuring point (MP) of each well, respectively. Established MPs were the northernmost portion of the top of the 2-inch diameter well casing at each well.

The groundwater flow direction and the depth to shallow groundwater will likely vary depending upon seasonal variations in rainfall and depth to the soil/bedrock interface. The groundwater flow direction was determined for the date of groundwater sampling by first measuring the depth to groundwater below the MP in each monitoring well at the start of well purging activities, and calculating the groundwater elevation using the well survey data detailed in Section 2.4, below. The MP at each well is the northernmost portion of the top of the 2" diameter well casing. Elevations of the measuring point and groundwater level in each well as measured on May 21, 2013 are as follows:

Monitoring Well and Groundwater Elevation Data

Monitoring Well	Measuring Point Elevation	Depth to Groundwater In feet below TOC[1]	Groundwater Elevation
MW-8	4,283.34	21.01	4,262.33
MW-9	4,284.37	23.21	4,261.16
MW-10	4,272.87	11.85	4,261.02

1- Depth to groundwater in each well was measured from the MP at each well, and is in feet below top of casing (TOC).

The calculated elevations of the groundwater surface as measured at the start of groundwater sampling activities show a relative difference in elevation of 1.31 feet between MW-8 and MW-10. The elevation of groundwater in these monitoring wells was plotted and groundwater contours were developed as shown on Exhibit 3, Potentiometric Surface Map provided in

Appendix A. On May 21, 2013 the uppermost groundwater flow direction was approximately S 11° E at an approximate gradient of 0.005 (feet/feet).

3.0 LABORATORY ANALYTICAL METHODS

3.1 Landfill Cap Samples

Terracon collected composite samples from soil borings CAP-1, CAP-3, CAP-5, CAP-6 and CAP-9 and test pits TP-N, TP-C and TP-S. The samples were analyzed for Atterberg Limits, moisture content, and gradation. Additionally, the three test pit samples were analyzed for hydraulic conductivity by ASTM D 5084–03 Method C Test with Increasing Tailwater Level. At the Client's direction, compaction for the test pit samples were; TP-N, compacted to 85% of modified Proctor; TP-C, 89% of modified Proctor, and; TP-S, 87% of modified Proctor.

3.2 Soil Gas Samples

Soil gas samples collected from vapor points VP-1 through VP-4 were analyzed for VOCs and methane using the following methods:

Soil Gas Analytical Methods

Analysis	Sample Type	Laboratory Method
VOCs	Soil gas	SW-846 Method 8260B
Methane	Soil gas	EPA3C/ASTMD1946 - Fixed Gases

The executed chain-of-custody forms and laboratory data packages are provided in Appendix C.

3.3 Groundwater Samples

Groundwater samples collected from monitoring wells MW-3R, MW-5, MW-8, MW-9 and MW-10 were analyzed for VOCs, SVOCs, RCRA 8 metals, major ions, NO_3-N, pesticides and herbicides using the following methods:

Groundwater Analytical Methods

Analysis	Sample Type	Laboratory Method
VOCs	Water	SW-846 Method 8260B
SVOCs	Water	SW-846 Method 8270C
RCRA metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se)	Water	SW-846 Method 6010/7471
Chloride, Sulfate, Nitrate	Water	SW-846 Method 300.0
Calcium, Magnesium, Sodium	Water	SW-846 Method 200.7 Rev 4.4
Alkalinity	Water	SW-846 Method 2320B
Pesticides	Water	SW-846 Method 8081A

Analysis	Sample Type	Laboratory Method
Herbicides	Water	SW-846 Method 8151A

The executed chain-of-custody forms and laboratory data packages are provided in Appendix C.

4.0 DATA EVALUATION

4.1 Landfill Cap

4.1.1 Geotechnical Analyses

Specific conditions encountered at the boring locations are indicated on the individual grain size distribution graphs included in Appendix C of this report. Based on the results of the analyses, soil conditions at the boring locations are as follows:

Landfill Cap Borings

Boring	Grain Size Distribution			In-situ Moisture	Liquid Limit	Plasticity Index
	Gravel	Sand	Silt/Clay			
CAP-1	7%	73%	20%	6.3%	NV	NP
CAP-3	12%	70%	18%	5.9%	NV	NP
CAP-5	6%	69%	25%	6.3%	NV	NP
CAP-6	3%	64%	33%	9.02%	NV	NP
CAP-9	19%	61%	20%	5.2%	NV	NP

Specific conditions encountered at the test pits are indicated on the individual grain size distribution graphs and hydraulic conductivity worksheets included in Appendix C of this report. Based on the results of the analyses, soil conditions at the test pits are as follows:

Test Pits

Test Pit	Grain Size Distribution			In-situ Moisture	Liquid Limit	Plasticity Index	Hydraulic Conductivity (cm/sec)
	Gravel	Sand	Silt/Clay				
TP-N	11%	29%	60%	8.1%	24	7	1.8×10^{-7}
TP-C	12%	48%	40%	5.8%	20	3	1.4×10^{-4}
TP-S	17%	54%	29%	6.0%	21	4	1.8×10^{-6}

4.2 Soil Gas Samples

The soil gas samples collected on May 21, 2013 from VP-1, VP-2, VP-3 and VP-4 were analyzed for VOCs and methane by TestAmerica of Phoenix, AZ as detailed in Section 3.2. VOCs and methane were not detected in the soil gas samples above laboratory reporting limits.

The soil gas samples collected on June 25, 2013 from VP-3 and VP-4 were analyzed for VOCs and methane by Hall Environmental Analysis Laboratory of Albuquerque, NM. The VOC

compound dichlorodifloromethane was detected in the VP-3 and VP-4 samples above laboratory reporting limits at concentrations of 0.47 micrograms per liter (ug/l) and 0.86 ug/l, respectively. The VOC compound trichlorofloromethane was detected in the VP-3 sample above laboratory reporting limits at a concentration of 0.17 ug/L. Methane was not detected in the June 25, 2013 samples collected from VP-3 and VP-4 above the laboratory reporting limit.

4.3 Groundwater Samples

The groundwater samples collected from monitoring wells MW-3R, MW-5, MW-8, MW-9 and MW-10 did not exhibit VOC, SVOC, pesticide or herbicide concentrations above the laboratory reporting limits with the following exception; the MW-8 groundwater sample contained the VOC 4-Isopropyltoluene at 0.97 micrograms per liter. Groundwater samples collected from the monitoring wells during this investigation did not exhibit the RCRA metals arsenic, cadmium, selenium and silver above the relevant laboratory reporting limits.

Constituents at concentrations above relevant laboratory reporting limits are summarized below. These constituents are compared with their respective NMED regulatory limit. Regulatory limits for these constituents are found in *20.6.2.3103 NMAC, STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS, Part A. Human Health Standards*.

Summary of Detections in Groundwater Samples

Analyte	NMED Standard	Units	MW-3R	MW-5	MW-8	MW-9	MW-10
Detected RCRA Metals							
Barium	1.0	mg/l	*ND*	0.13	0.11	0.22	**1.1**
Chromium	0.05	mg/l	*ND*	0.0087	*ND*	0.01	**0.13**
Mercury	0.002	mg/l	*ND*	0.000055J	*ND*	*ND*	*ND*
Lead	0.05	mg/l	*ND*	0.0091	*ND*	*ND*	**0.073**
Anions and General Chemistry							
Nitrate	10.0	mg/l	*ND*	0.54	8.5	*ND*	2
Chloride	250.0	mg/l	170	159	**710**	**290**	**380**
Sulfate	600.0	mg/l	180	120	220	140	260
Calcium	NE	mg/l	170	80.6	270	170	370
Magnesium	NE	mg/l	*ND*	8	54	47	100
Sodium	NE	mg/l	180	163	250	260	290
Alkalinity	NE	mg/l	300	210	270	310	310
Bicarbonate Alkalinity	NE	mg/l	300	210	270	310	310

NE – Standard not established.
ND – Not detected.

5.0 FINDINGS

The findings of this investigation are as follows:

- The objectives of the LSI were to evaluate the following:
  - The thickness, composition and physical characteristics of the existing landfill cap,
  - The presence of VOCs and methane above relevant laboratory reporting limits in soil gas generated by landfill waste.
  - The presence of VOCs, SVOCs, RCRA metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se), Chloride, Sulfate, Nitrate, Calcium, Magnesium, Sodium, Alkalinity, Pesticides and Herbicides above relevant laboratory reporting limits in groundwater.
- Based on review of the observed lithology encountered in the soil borings CAP-1 through CAP-10 and test pits TP-N, TP-C and TP-S, the landfill cap consists of a gravelly and silty sand unit overlying a clay unit and initial waste cover material consisting of mixed sand and silt with minor amounts of gravel.
  - The uppermost gravelly and silty sand is from 2.0 to 4.5 feet thick,
  - The clay unit is from 1.5 to 5.0 feet thick, and
  - Initial waste cover material is from 0.2 to 2.0 feet thick.
- Laboratory analyses of soil samples from the test pits indicate that the hydraulic conductivity of the landfill cap material ranges from 1.8×10^{-7} to 1.4×10^{-4} cm/sec.
- Based on review of the analytical results from soil gas samples collected during this LSI, the landfill waste pile does not appear to be generating VOCs and methane in gaseous form at this time.
- Based on review of the analytical results from groundwater samples collected during this LSI, groundwater at the site appears to contain chloride at concentrations exceeding applicable NMED Human Health Standard of 250 mg/l. The new downgradient monitoring well MW-10 contained barium, chromium and lead in excess of the NMED Human Health Standards of 0.05 mg/l for these metals.

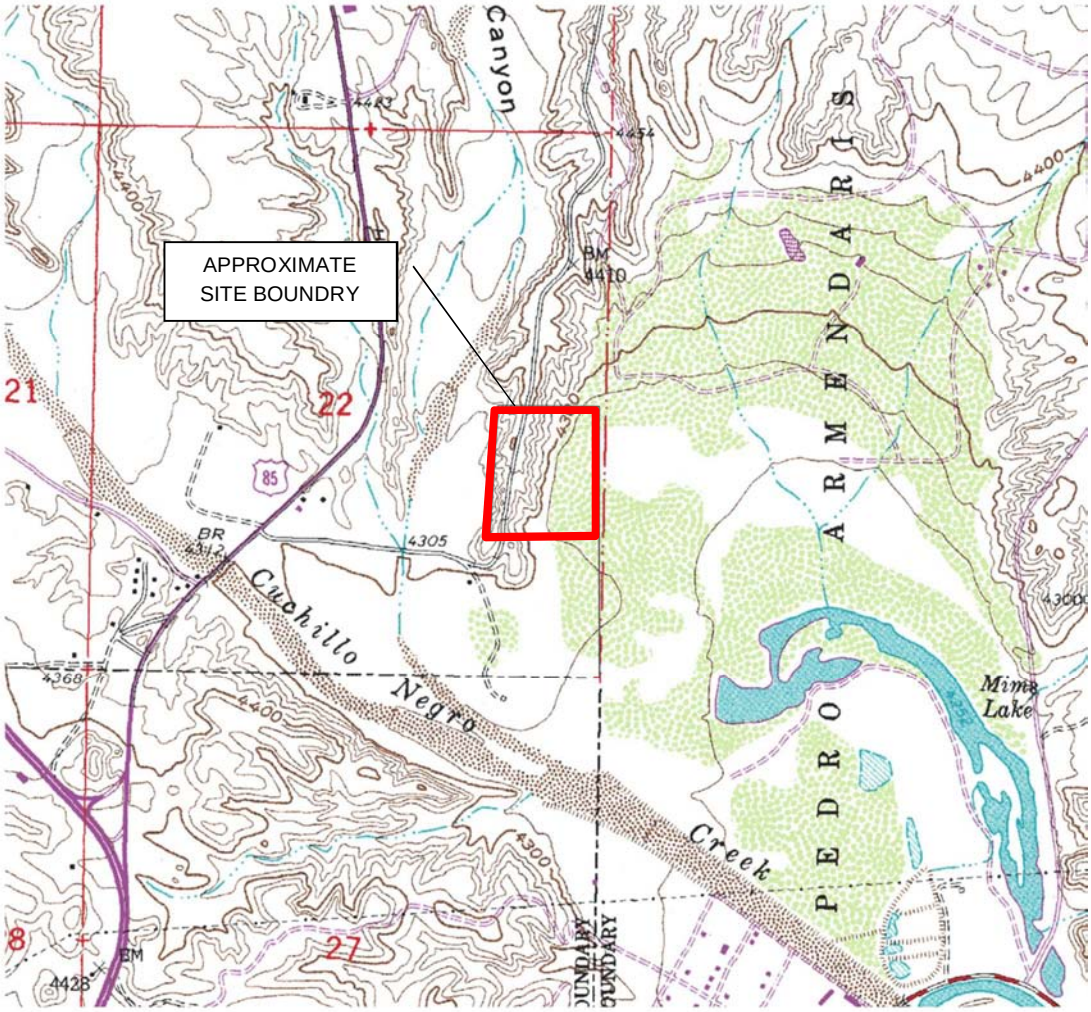
- If soils or groundwater located on the site are to be disturbed during future excavations or construction activities, proper procedures should be followed with respect to worker health and safety; and any affected soil or groundwater encountered should be properly characterized, treated and/or disposed in accordance with applicable local, state or federal regulations.

- If the monitoring wells installed during this investigation are not expected to be used in the future, they should by plugged and abandoned in accordance with state regulations and guidance.

APPENDIX A

Exhibit 1 – Topographic Map
Exhibit 2 – Site Plan
Exhibit 3 – Potentiometric Surface Map
Exhibit 4 – Landfill Cap Thickness Map

*



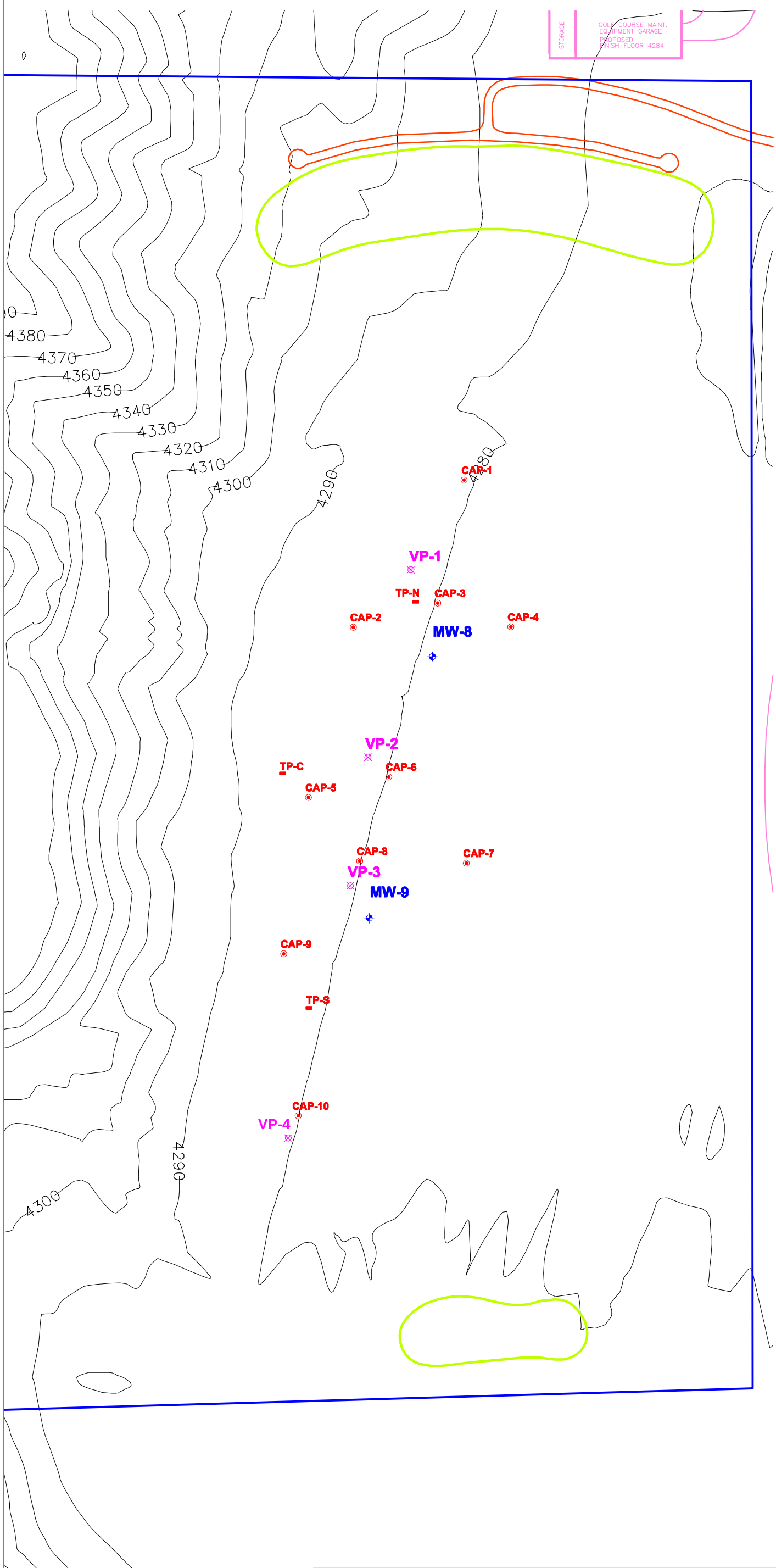
N

USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP

ELEPHANT BUTTE, NEW MEXICO, 1958

(QUADRANGLES)

Project Mgr	JKW	Project No	68137008	Terracon	TOPOGRAPHIC MAP	EXHIBIT
Approved by	JBS	Scale	1" = 2000'		Former Truth of Consequences Landfill	1
Checked by	JBS	Date	07/15/13	1640 Hickory Loop, Suite 105 Las Cruces, NM 88005	Country Club Road	
Drawn by	JKW	File No.	Exhibit 1	Ph: 575-527-1700 Fax: 575-527-1092	Elephant Butte, NM	



LEGEND

- MW-10 - Monitoring Well
- VP-1 - Vapor Point
- CAP-3 - Landfill Cap Boring
- TP-C - Landfill Cap Test Pit

N

0 100 200

SCALE IN FEET

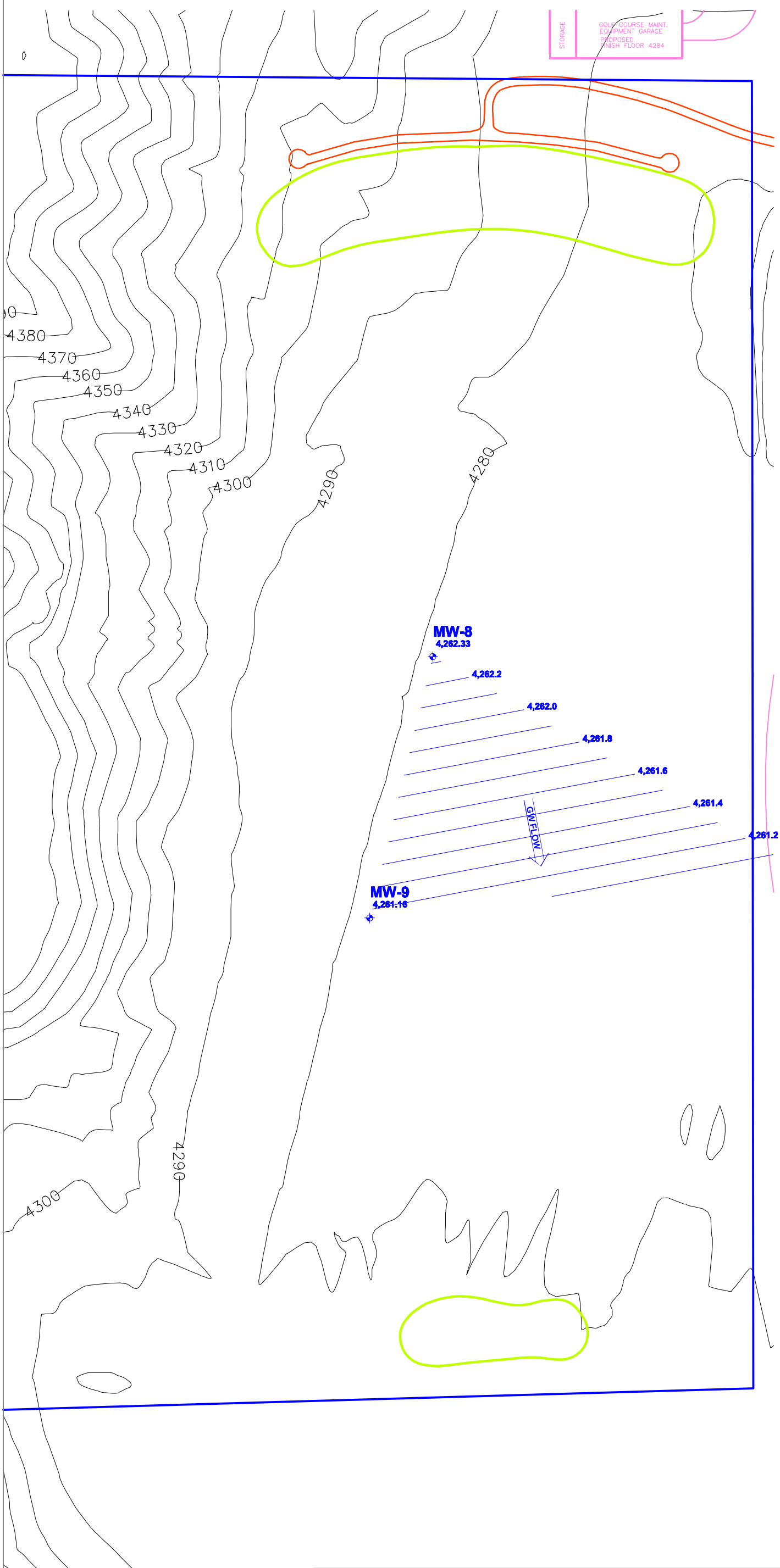
DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	JKW
Checked By:	JBS
Approved By:	JBS
Drawn By:	JKW
Scale:	1"=100'
Date:	07/19/13
Project No:	68137008
File Name:	

Terracon
Consulting Engineers and Scientists
1640 Hickory Loop, Suite 105 Las Cruces, NM 88005
(575) 527-1700 (575) 527-1092

SITE PLAN
BASCOR Environmental, Inc.
FORMER TRUTH OR CONSEQUENCES LANDFILL
Country Club Road
Elephant Butte, NM

EXHIBIT
2



LEGEND

MW-10 - Monitoring Well
4,261.02 - Groundwater Elevation

4,261.6 Groundwater Elevation Contour

GW FLOW
Groundwater Flow Direction S 11° E
at Gradient of 0.005
As Measured May 21, 2013

N

0 100 200
SCALE IN FEET

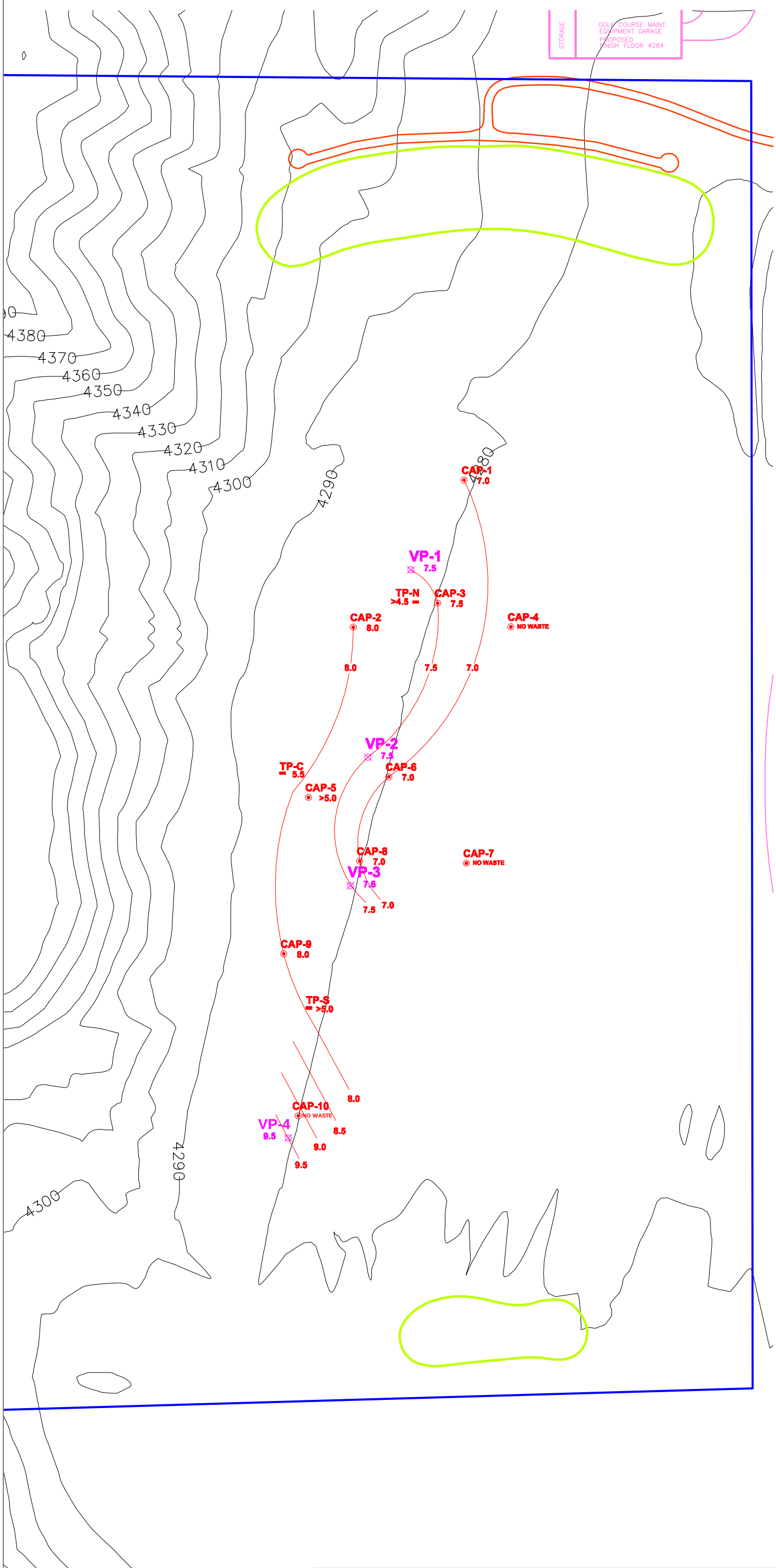
DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	JKW
Checked By:	JBS
Approved By:	JBS
Drawn By:	JKW
Scale:	1"=100'
Date:	07/19/13
Project No:	68137008
File Name:	

Terracon
Consulting Engineers and Scientists
1640 Hickory Loop, Suite 105 Las Cruces, NM 88005
(575) 527-1700 (575) 527-1092

GROUNDWATER CONTOUR MAP
BASCOR Environmental, Inc.
FORMER TRUTH OR CONSEQUENCES LANDFILL
Country Club Road
Elephant Butte, NM

EXHIBIT
3



VP-1 - Vapor Point
7.5 - Cap Thickness

CAP-3 - Landfill Cap Boring
7.5 - Cap Thickness

TP-C - Landfill Cap Test Pit
>5.5 - Cap Thickness

7.0 Landfill Cap Thickness Contour

N

0 100 200

SCALE IN FEET

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	JKW
Checked By:	JBS
Approved By:	JBS
Drawn By:	JKW
Scale:	1"=100'
Date:	07/19/13
Project No:	68137008
File Name:	

Terracon
Consulting Engineers and Scientists
1640 Hickory Loop, Suite 105 Las Cruces, NM 88005
(575) 527-1700 (575) 527-1092

LANDFILL CAP THICKNESS MAP
BASCOR Environmental, Inc.
FORMER TRUTH OR CONSEQUENCES LANDFILL
Country Club Road
Elephant Butte, NM

EXHIBIT
4

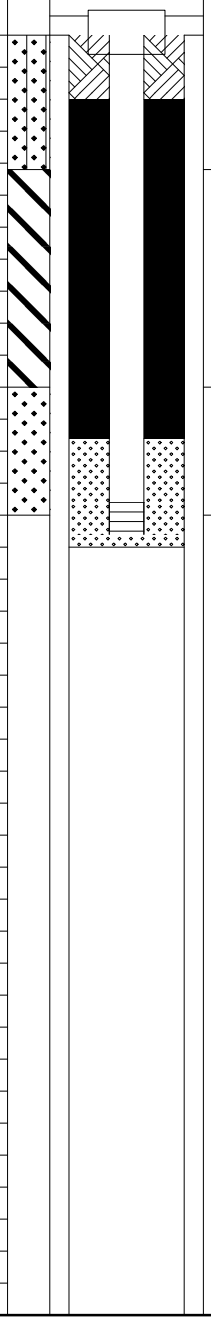
APPENDIX B

Boring Logs
Surveyor's Report
New Mexico Office of the State Engineer Documentation

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: VP-1
TOTAL DEPTH: 8.0'
TOP OF CASING: 4287.70
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Direct Push
BORE HOLE DIAMETER: 2"
SCREEN: Diam. 0.25" Length 6" Slot Size SS Mesh
CASING: Diam. 0.25" Length 7' 4" Type Polyethylene
DATE DRILLED: 5-17-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0.0		0.0		SILTY SAND, light brown, loose, dry, no odor - 3" thick gravel layer at 1'
2			2.0	2.1	
	0.0				CLAY, gray, moist, medium hard, no odor
4			4.0		
	0.0			5.5	
6			6.0		SAND, fine-medium grained, moist, with gravel, no odor
	0.0			7.5	
8			8.0		WASTE BOTTOM OF BORING at 8.0 FEET
10					NOTE: 6"x 0.25" SS mesh screen placed from 7' 4" to 7' 10" below ground
12					
14					
16					
18					
20					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

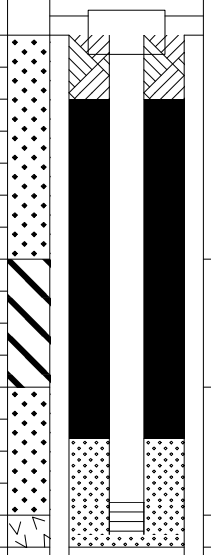
Terracon

MWL20 68137008.GPJ 7/15/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: VP-2
TOTAL DEPTH: 8.0'
TOP OF CASING: 4287.39
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Direct Push
BORE HOLE DIAMETER: 2"
SCREEN: Diam. 0.25" Length 6" Slot Size SS Mesh
CASING: Diam. 0.25" Length 7' 4" Type Polyethylene
DATE DRILLED: 5-17-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	3.7		0.0		SAND, fine-medium grained, light brown, loose, dry, no odor
2			2.0		- with 15% gravel (2")
	0.0			3.5	
4			4.0		CLAY, gray, moist, no odor
	0.0			5.5	
6			6.0		SAND, medium-grained dark brown, loose, moist, with 10% gravel, no odor
	0.0			7.5	
8			8.0	8.0	WASTE
10					NOTE: 6"x 0.25" SS mesh screen placed from 7' 4" to 7' 10" below ground
12					
14					
16					
18					
20					

REMARKS:

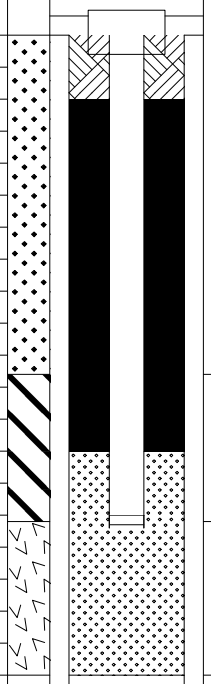
THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: VP-3
TOTAL DEPTH: 10.0'
TOP OF CASING: 4287.01
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Direct Push
BORE HOLE DIAMETER: 2"
SCREEN: Diam. 0.25" Length 6" Slot Size SS Mesh
CASING: Diam. 0.25" Length 7' 7" Type Polyethylene
DATE DRILLED: 5-17-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0.0		0.0		SAND, fine-medium grained, light brown, loose, dry, no odor
2			2.0		
	0.0				
4			4.0		
	0.0			5.3	
6			6.0		CLAY, gray, moist, no odor
	0.0			7.6	
8			8.0		WASTE
	0.0				
10			10.0	10.0	
					BOTTOM OF BORING at 10.0 FEET
12					NOTE: 6"x 0.25" SS mesh screen placed from 7' 7" to 8' 1" below ground
14					
16					
18					
20					

REMARKS:

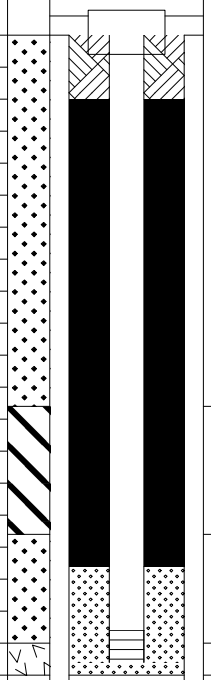
THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: VP-4
TOTAL DEPTH: 10.0'
TOP OF CASING: 4287.36
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Direct Push
BORE HOLE DIAMETER: 2"
SCREEN: Diam. 0.25" Length 6" Slot Size SS Mesh
CASING: Diam. 0.25" Length 9' 4" Type Polyethylene
DATE DRILLED: 5-17-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0.0		0.0		SAND, fine-medium grained, light brown, loose, dry, no odor
2			2.0		
	0.0				
4			4.0		
	0.0				
6			6.0	5.8	
					CLAY, brown, moist, no odor
	0.0				
8			8.0	7.8	
					SAND, brown, loose, moist, no odor
	0.0			9.5	
10			10.0	10.0	WASTE
					BOTTOM OF BORING at 10.0 FEET
12					NOTE: 6"x 0.25" SS mesh screen placed from 9' 4" to 9' 10" below ground
14					
16					
18					
20					

REMARKS:

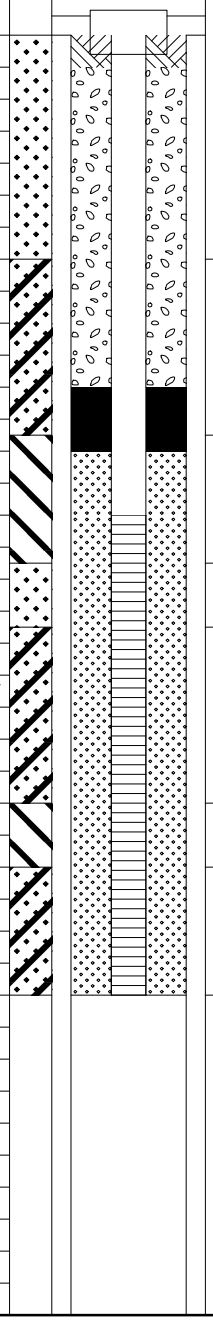
THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: MW- 8
TOTAL DEPTH: 30.0'
TOP OF CASING: 4283.34
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER: 7 1/4"
SCREEN: Diam. 2.0" Length 15.0' Slot Size 0.010"
CASING: Diam. 2.0" Length 15.0' Type PVC
DATE DRILLED: 5-15-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0.0	X	1.0, 2.5		SAND, fine to medium, brown, 2" caliche, dry, no odor
	0.0	X	3.5, 5.0		
5			6.0	7.0	
	0.0	X	7.5		SANDY CLAY, dark brown, soft, moist, no odor
	0.0	X	8.5, 10.0		
10			11.0		
	0.0	X	12.5	12.5	
	0.0	X	13.5, 15.0		CLAY, dark brown, moist, soft, no odor
15			16.0	16.5	
	0.0	X	17.5, 18.5	18.5	SAND, fine-medium, dark brown, loose, moist
20	0.0	X	20.0		SANDY CLAY, dark brown, soft, moist, no odor
	0.0	X	21.0, 22.5		
			23.5	24.0	
25	0.0	X	25.0		CLAY, dark brown, soft, saturated, no odor
			26.0	26.0	
	0.0	X	27.5		SANDY CLAY, brown, soft, saturated with 15% gravel
			28.5		
30	0.0	X	30.0	30.0	
					BOTTOM OF BORING at 30.0 FEET
35					
40					

REMARKS:

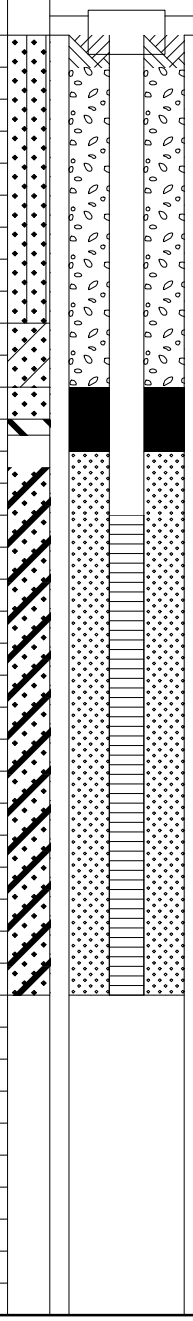
THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: MW- 9
TOTAL DEPTH: 30.0'
TOP OF CASING: 4284.37
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER: 7 1/4"
SCREEN: Diam. 2.0" Length 15.0' Slot Size 0.010"
CASING: Diam. 2.0" Length 15.0' Type PVC
DATE DRILLED: 5-16-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					SILTY SAND, fine-medium, light brown, moist, no odor
			3.5		
5	0.0	X	5.0		
			6.0		
	0.0	X	7.5		
			8.5		
				9.0	
10	0.0	X	10.0		CLAYEY SAND, dark brown, loose, moist, no odor
			11.0	11.0	
				12.0	SAND, medium-fine, loose, moist, no odor
	0.0	X	12.5	12.5	CLAY, red-brown, medium hard, moist, no odor
			13.5		SANDY CLAY, dark brown, moist, no odor
15	0.0	X	15.0		
			16.0		
	0.0	X	17.5		
			18.5		- SANDY CLAY, with 3" burned material at 18.5', black, saturated
20 ▽	0.0	X	20.0		
25					
30				30.0	
					BOTTOM OF BORING at 30.0 FEET
35					
40					

REMARKS:

THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

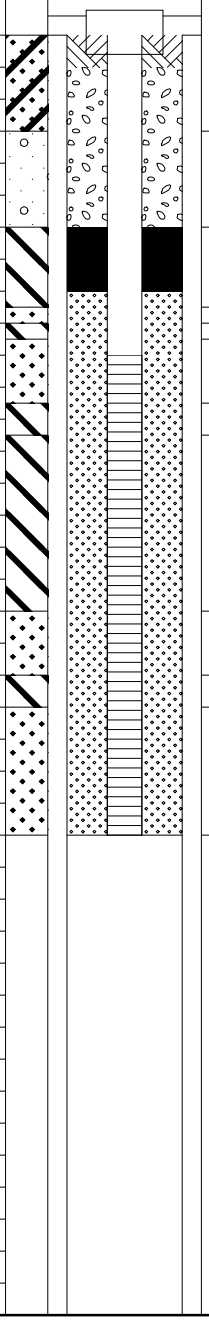
Terracon

MWL40 68137008.GPJ 7/15/13

SOIL BORING / MONITORING WELL LOG

PROJECT: Former Truth or Consequences Landfill
PROJECT NUMBER: 68137008
CLIENT: BASCOR Environmental, Inc.
BORING / WELL NUMBER: MW-10
TOTAL DEPTH: 25.0'
TOP OF CASING: 4272.87
FIELD PERSONNEL: K. Williams

DRILLING COMPANY: Enviro-Drill
DRILLER: K. Saenz
DRILLING METHOD: Hollow Stem Auger
BORE HOLE DIAMETER: 7 1/4"
SCREEN: Diam. 2.0" Length 15.0' Slot Size 0.010"
CASING: Diam. 2.0" Length 10.0' Type PVC
DATE DRILLED: 5-16-13



DEPTH (FT)	PID	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM
0					
	0.0	X	1.0, 2.5	3.0	SANDY CLAY, dark brown, moist, no odor
	0.0	X	3.5, 5.0	6.0	Gravelly SAND, brown, loose, moist, no odor
5					
	0.0	X	7.5	8.5	CLAY, light brown, soft, moist, no odor
	0.0	X	10.0, 11.0	9.0	SAND, dark brown, loose, moist, no odor
10				9.5	CLAY, brown, soft, moist, no odor
				11.5	SAND, dark brown, loose, moist
	0.0	X	12.5	12.5	CLAY, brown,soft, wet-saturated
	0.0	X	13.5, 15.0	18.0	CLAY, brown, soft, saturated, no odor
15					
				20.0	SAND, fine grained, brown, loose, saturated, no odor
20				21.0	CLAY, brown, soft, saturated, no odor
				25.0	SAND, fine grained, brown, loose, saturated, no odor
25					BOTTOM OF BORING at 25.0 FEET
30					
35					
40					

REMARKS:

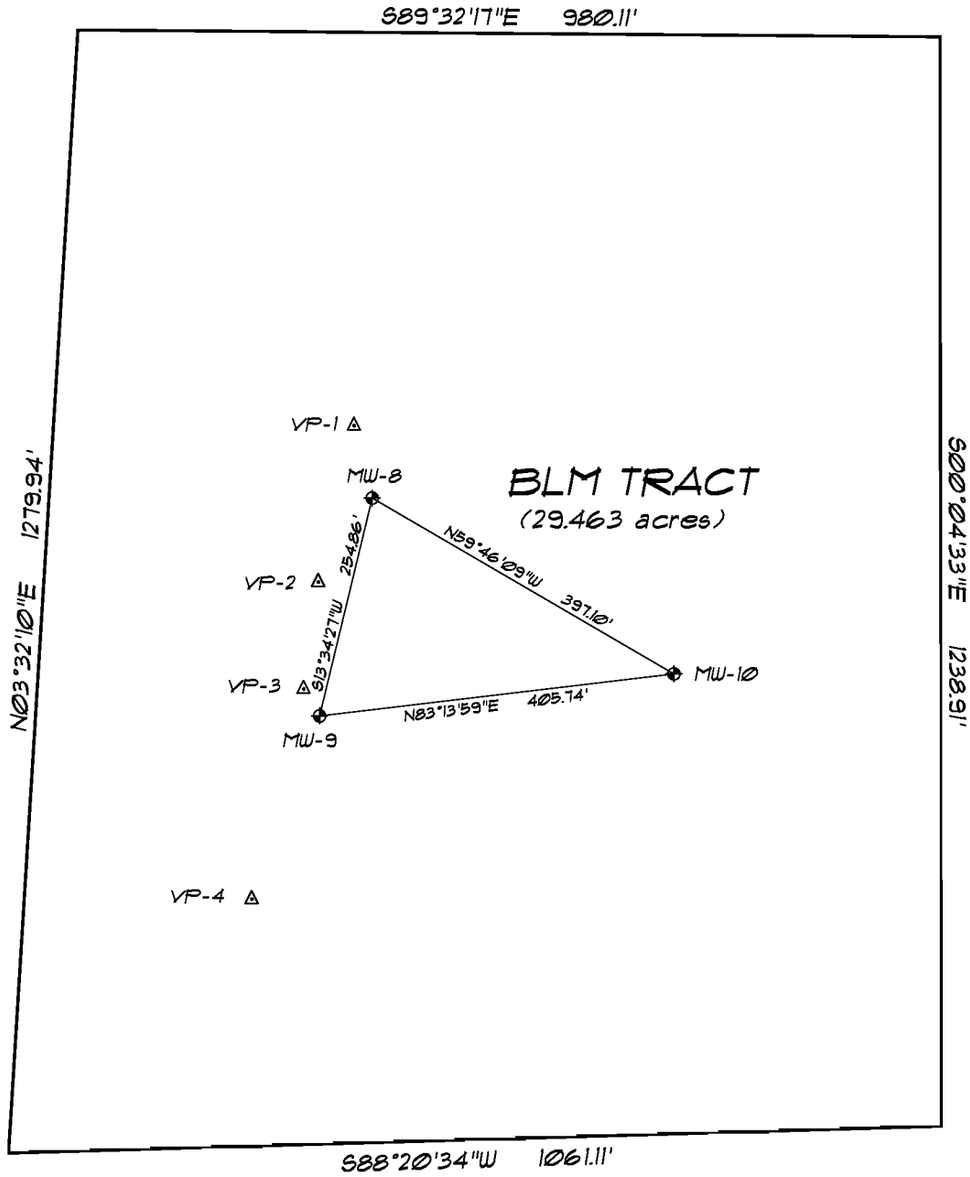
THIS LOG SHOULD NOT BE USED SEPARATELY FROM THE ORIGINAL REPORT.

Terracon

MWL40 68137008.GPJ 7/15/13

PLAT OF

the location of Monitoring Wells and Vapor Points
within the BLM Tract in Section 22,
Township 13 South, Range 4 West, N.M.P.M.,
in the City of Elephant Butte, Sierra County, New Mexico



Notes:

Monitoring Well elevations taken from top of casing, (2" PVC)
Vapor Point elevations taken from center of vault casing
Elevation datum is NAVD 1988

◆ = Monitoring Well

△ = Vapor Point

Point	Northing	Easting	Elevation	Latitude	Longitude
MW-8	4514.398	3532.114	4283.34	N33°09'47.69"	W107°13'55.65"
MW-9	4266.657	3472.298	4284.37	N33°09'45.23"	W107°13'56.36"
MW-10	4314.465	3875.208	4272.87	N33°09'45.71"	W107°13'51.62"
VP-1	4596.746	3511.670	4287.70	N33°09'48.50"	W107°13'55.90"
VP-2	4418.924	3470.992	4287.39	N33°09'46.74"	W107°13'56.37"
VP-3	4297.225	3454.337	4287.01	N33°09'45.54"	W107°13'56.57"
VP-4	4058.199	3395.362	4287.36	N33°09'43.17"	W107°13'57.26"

NORTH

GRAPHIC SCALE

0 100 200 400

(IN FEET)

1 inch = 200 ft.

May 25, 2013

Senn & Associates

Professional Land Surveying

P.O. Box 629 Elephant Butte, New Mexico 87935

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

DISTRICT I

SCOTT A. VERHINES, P.E.
NEW MEXICO STATE ENGINEER

5550 San Antonio Drive, N.E.
Albuquerque, NM 87109 (505) 383-4000

MAY 14, 2013

File: **RG-94009**
Trn_no: 527656

City of Truth or Consequences
Bureau of Land Management
c/o Terracon Consultants, Inc.
Kyle Williams, Agent
1640 Hickory Loop, Suite 105
Las Cruces, New Mexico 88005

Re: **Monitoring Well Permit for POD 1 (MW-8) and POD 2 (MW-9) and POD 3 (MW-10)**

Greetings:

Enclosed is your copy of the Monitoring Well Permit numbered above, which has been approved. In accordance with the Conditions of Approval, the wells can only be used for monitoring purposes only unless and until a permit for a specific use has been issued by the State Engineer.

If a discussion is needed, please call us.

Sincerely,

Joey Fields
Water Resource Specialist
NMOSE, District 1

4-19650
ok $1500

File No. RG-94009

NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And / Or Recovery	☐ Geo-Thermal
☐ Exploratory	☐ Construction Site De-Watering	☐ Other (Describe):
■ Monitoring	☐ Mineral De-Watering	

A separate permit will be required to apply water to beneficial use.

☐ Temporary Request - Requested Start Date: Requested End Date:

Plugging Plan of Operations Submitted? ☐ Yes ■ No

1. APPLICANT(S)

Name: **City of Truth or Consequences**	Name: **Bureau of Land Management**
Contact or Agent: check here if Agent ■ **Kyle Williams, Terracon Consultants, Inc.**	Contact or Agent: check here if Agent ☐
Mailing Address: **1640 Hickory Loop, Suite 105**	Mailing Address:
City: **Las Cruces**	City:
State: **NM** Zip Code: **88005**	State: Zip Code:
Phone: **(575) 649-1210** ☐ Home ■ Cell Phone (Work): **(575) 527-1700**	Phone: ☐ Home ☐ Cell Phone (Work):
E-mail (optional): **jkwilliams@terracon.com** JAFUENTES@TORCNM.ORG	E-mail (optional):

RECEIVED
MAY 2 2013
STATE ENGINEER OFFICE
LAS CRUCES, NM

FOR OSE INTERNAL USE

Application for Permit, Form wr-07, Rev 4/12/12

File Number: RG-94009	Trn Number: 527656
Trans Description (optional): MONITORING WELLS	
Sub-Basin:	
PCW/LOG Due Date: MAY 14, 2014	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
RG-94009			
MW-8 POD 1	n33d 9' 47.6"	w107d 13' 57.6"	NE1/4 SE1/4 Sec 22, T13S, R4W
MW-9 POD 2	n33d 9' 44.6"	w107d 13' 57.9"	NE1/4 SE1/4 Sec 22, T13S, R4W
MW-10 POD 3	n33d 9' 45.0"	w107d 13' 51.5"	NE1/4 SE1/4 Sec 22, T13S, R4W

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many** ____

Other description relating well to common landmarks, streets, or other:

Well is on land owned by: **Bureau Of Land Management**

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ■ No
If yes, how many 3

Approximate depth of well (feet): **25.00**	Outside diameter of well casing (inches): **2.00**
Driller Name: **Rodney Hammer**	Driller License Number: **WD-1186**

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Three 2" PVC groundwater monitoring wells to be installed to approximately 25' bgs at the former Truth or Consequences landfill on Bureau of Land Management property. Duration of planned monitoring is undetermined at this time. Wells will be constructed with 10'-15' of 0.010" mill-slot screen, filter pack to 2' above screened interval, 2' bentonite seal above filter pack, bentonite chips to surface, and permanent flush-mount surface completions. These monitoring well will be installed as directed by the New Mexico Environment Department Ground Water Quality Bureau, and in accordance with the NMED guidelines for monitoring well installation. The May 2, 2013 NMED approval letter of the City of Truth or Consequences Work Plan is attached.

FOR OSE INTERNAL USE

File Number: RG-94009	Trn Number: 527656

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: ☐ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Geo-Thermal:** ☐ Include a description of the geothermal heat exchange project, ☐ The amount of water to be diverted and re-injected for the project, ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), **Kyle Williams, Terracon Consultants, Inc.**
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

■ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 14th day of MAY 20 2013, for the State Engineer,

SCOTT A. VERHINES, P.E., State Engineer

By: Signature Print

Title: JOEY FIELDS, WATER RESOURCE SPECIALIST
Print

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number: RG-94009	Trn Number: 527656

NEW MEXICO OFFICE OF THE STATE ENGINEER
PERMIT FOR A MONITORING WELL
CONDITIONS OF APPROVAL

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the following conditions of approval:

Permittees: City of Truth or Consequences
Bureau of Land Management
c/o Terracon Consultants, Inc.
Kyle Williams, Agent
1640 Hickory Loop, Suite 105
Las Cruces, New Mexico 88005

Permit Number: RG-94009

Application File Date: May 2, 2013

Monitoring Well Locations: Well RG-94009 POD 1 (MW-8) is located on land owned by BLM at a point where Latitude=33d 09m 47.6s N and Longitude=107d 13m 57.6s W, in the NE1/4 SE1/4, Section 22, T 13 S, R 4 W, NMPM, Sierra County.

Well RG-94009 POD 2 (MW-9) is located on land owned by BLM at a point where Latitude=33d 09m 44.6s N and Longitude=107d 13m 57.9s W, in the NE1/4 SE1/4, Section 22, T 13 S, R 4 W, NMPM, Sierra County.

Well RG-94009 POD 3 (MW-10) is located on land owned by BLM at a point where Latitude=33d 9m 45s N and Longitude=107d 13m 51.5s W, in the NE1/4 SE1/4, Section 22, T 13 S, R 4 W, NMPM, Sierra County.

1. No water shall be appropriated and beneficially used under this permit.

2. The wells shall be plugged upon completion of the permitted use, and plugging reports shall be filed with the State Engineer within 10 days.

3. The wells shall be drilled by a driller licensed in accordance with 19.27.4 NMAC.

4. A complete and properly executed Well Record(s) on the form provided by the State Engineer shall be filed in accordance with Subsection K of 19.27.4.29 NMAC. Monitoring wells RG-94009 POD 1, RG-94009 POD 2 and RG-94009 POD 3 must be completed and the Well Records filed on or before May 14, 2014.

5. If artesian water is encountered, the permittee and driller shall comply with Subsection C of 19.27.4.31 NMAC.

6. Water shall be used from wells RG-94009 POD 1, RG-94009 POD 2 and RG-94009 POD 3 for monitoring purposes only, unless and until a permit for a specific use has been issued by the State Engineer.

Witness my hand and seal this 14th day of May, 2013.

Scott a. Verhines, P.E., New Mexico State Engineer

By: _____
Joey Fields, Albuquerque, NMOSE, District 1

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): MW-8 POD 1	OSE FILE NUMBER(S): RG 94009
WELL OWNER NAME(S): CITY OF TRUTH OR CONSEQUENCES/BUREAU OF LAND MANAGEMENT	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 1640 HICKORY LOOP, SUITE 105	CITY: LAS CRUCES STATE: NM ZIP: 88005

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	107D	13'	57.6"	N
LONGITUDE	N33D	9'	47.6'	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE1/4 SE1/4 SEC22, T13S, R42

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 1186	RODNEY HAMMER	ENVIRO-DRILL, INC.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
5-15-13	5-16-13	30'	30'	20'

STATIC WATER LEVEL IN COMPLETED WELL (FT): 20'

COMPLETED WELL IS: ( ) ARTESIAN ( ) DRY HOLE (X) SHALLOW (UNCONFINED)

DRILLING FLUID: ( ) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL (X) OTHER – SPECIFY: HSA

DEPTH (feet bgl) FROM	TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
30	15	7"	PVC	flushthread	2"	sch. 40	.010
15	0	7"	PVC	↓	↓	↓	riser

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
30	13	7"	10-20 silica sand	4	tremie
13	1	↓	bentonite chips	3	↓
1	0	↓	concrete		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	20	20	fine sand, silty brown	◯ Y ☒ N	
20	27	7	sandy clay	☒ Y ◯ N	NA
27	30	3	sandy clay with gravel	◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ◯ PUMP ◯ AIR LIFT ◯ BAILER ◯ OTHER – SPECIFY: monitor well

TOTAL ESTIMATED WELL YIELD (gpm): N/A

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Rodney Hammer — Rodney Hammer — 6-7-13

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-9 POD 2	RG 94009
WELL OWNER NAME(S): CITY OF TRUTH OR CONSEQUENCES/BUREAU OF LAND MANAGEMENT	PHONE (OPTIONAL)
WELL OWNER MAILING ADDRESS: 1640 HICKORY LOOP, SUITE 105	CITY: LAS CRUCES; STATE: NM; ZIP: 88005

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	107D	13'	57.9"	N
LONGITUDE	N33D	9'	44.6"	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE1/4 SE1/4 SEC22, T13S, R4W

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 1186	RODNEY HAMMER	ENVIRO-DRILL, INC.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
5-15-13	5-16-13	30'	30'	23'

COMPLETED WELL IS: ( ) ARTESIAN ( ) DRY HOLE (X) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 23'

DRILLING FLUID: ( ) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL (X) OTHER – SPECIFY: HSA

DEPTH (feet bgl) FROM	TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
30	15	7"	PVC	flushthread	2"	sch 40	.010
15	0	↓	↓	↓	↓	↓	riser

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
30	13	7"	10-20 Silica sand	4	tremie
13	1	↓	bentonite chips	3	↓
1	0	↓	Concrete		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES **(attach supplemental sheets to fully describe all units)**	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	20	20	silty sand, brown	◯ Y ☒ N	
20	30	10	sandy clay, brown, some gravel	☒ Y ◯ N	NA
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
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				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	
				◯ Y ◯ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ◯ PUMP ◯ AIR LIFT ◯ BAILER ◯ OTHER – SPECIFY: monitor well

TOTAL ESTIMATED WELL YIELD (gpm): N/A

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Rodney Hammer — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

6-7-13 — DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-10 POD 3	RG 94009
WELL OWNER NAME(S): CITY OF TRUTH OR CONSEQUENCES/BUREAU OF LAND MANAGEMENT	PHONE (OPTIONAL)
WELL OWNER MAILING ADDRESS: 1640 HICKORY LOOP, SUITE 105	CITY: LAS CRUCES; STATE: NM; ZIP: 88005

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	107D	13'	51.5"	N
LONGITUDE	N33D	9'	45.0"	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE1/4 SE1/4 SEC22, T13S, R4W

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 1186	RODNEY HAMMER	ENVIRO-DRILL, INC.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
5-15-13	5-16-13	25'	25'	15'

COMPLETED WELL IS: ( ) ARTESIAN ( ) DRY HOLE (X) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 15'

DRILLING FLUID: ( ) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ( ) ROTARY ( ) HAMMER ( ) CABLE TOOL (X) OTHER – SPECIFY: HSA

DEPTH (feet bgl) FROM	TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
25	10	7"	PVC	flush thread	2"	sch. 40	.010
10	0	↓	↓	↓	↓	↓	riser

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
25	8	7"	10-20 silica sand	4	tremie
8	1	7"	bentonite chips	2.5	tremie
1	0	7"	concrete		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	10	10	sandy clay, dark brown	( ) Y (X) N	
10	25	15	fine grain sand, brown tokan	(X) Y ( ) N	N/A
				( ) Y ( ) N	
				( ) Y ( ) N	
				( ) Y ( ) N	
				( ) Y ( ) N	
				( ) Y ( ) N	
				( ) Y ( ) N	
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				( ) Y ( ) N	
				( ) Y ( ) N	
				( ) Y ( ) N	
				( ) Y ( ) N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ( ) PUMP ( ) AIR LIFT ( ) BAILER ( ) OTHER – SPECIFY: monitor well

TOTAL ESTIMATED WELL YIELD (gpm): N/A

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

[signature] Rodney Hammer — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

6-7-13 — DATE

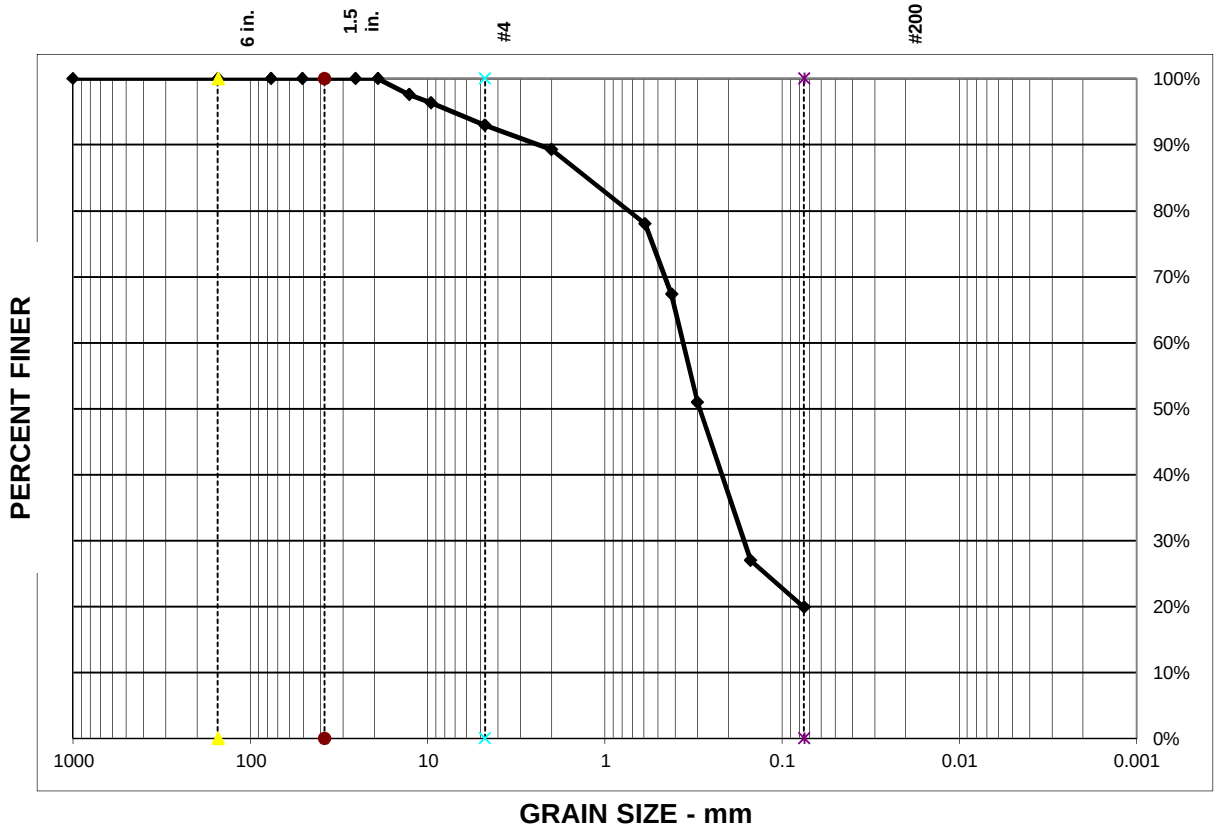
FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

APPENDIX C

Laboratory Data Sheets

GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

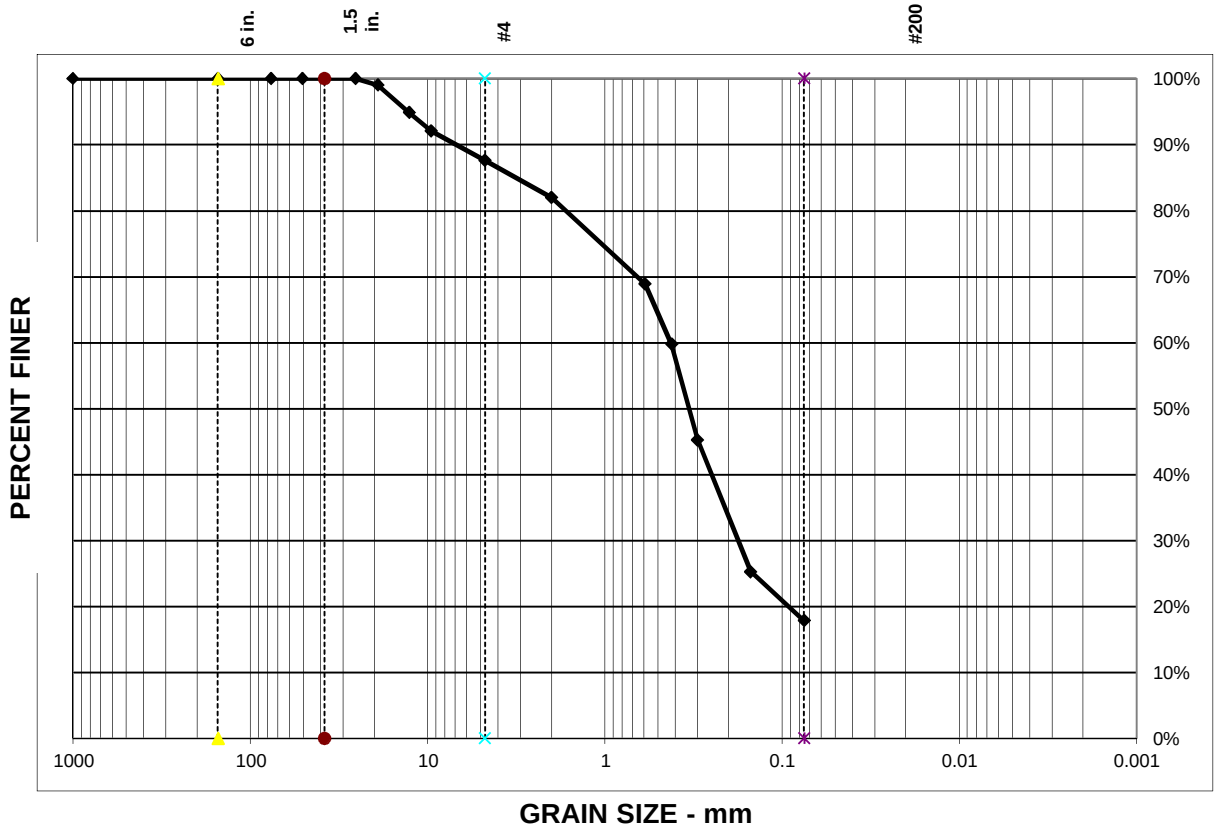
Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	100%	96%	93%	89%	67%	27%	19.9%
Specification								

% GRAVEL =	7%	**D_{85} =** 1.3	**D_{15} =**
% SAND =	73%	**D_{60} =** 0.4	**D_{10} =**
% SILT & CLAY =	20%	**D_{50} =** 0.3	**C_U =**
		D_{30} = 0.2	**C_C =**

Project Name: Former Truth or Consequences Landfill
Project No.: 68137008
Sample Location: CAP-1
Liquid Limit: NV Plasticity Index: NP
Insitu Moisture (%) 6.3
USCS Classification: SM
Material Description: Silty Sand

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

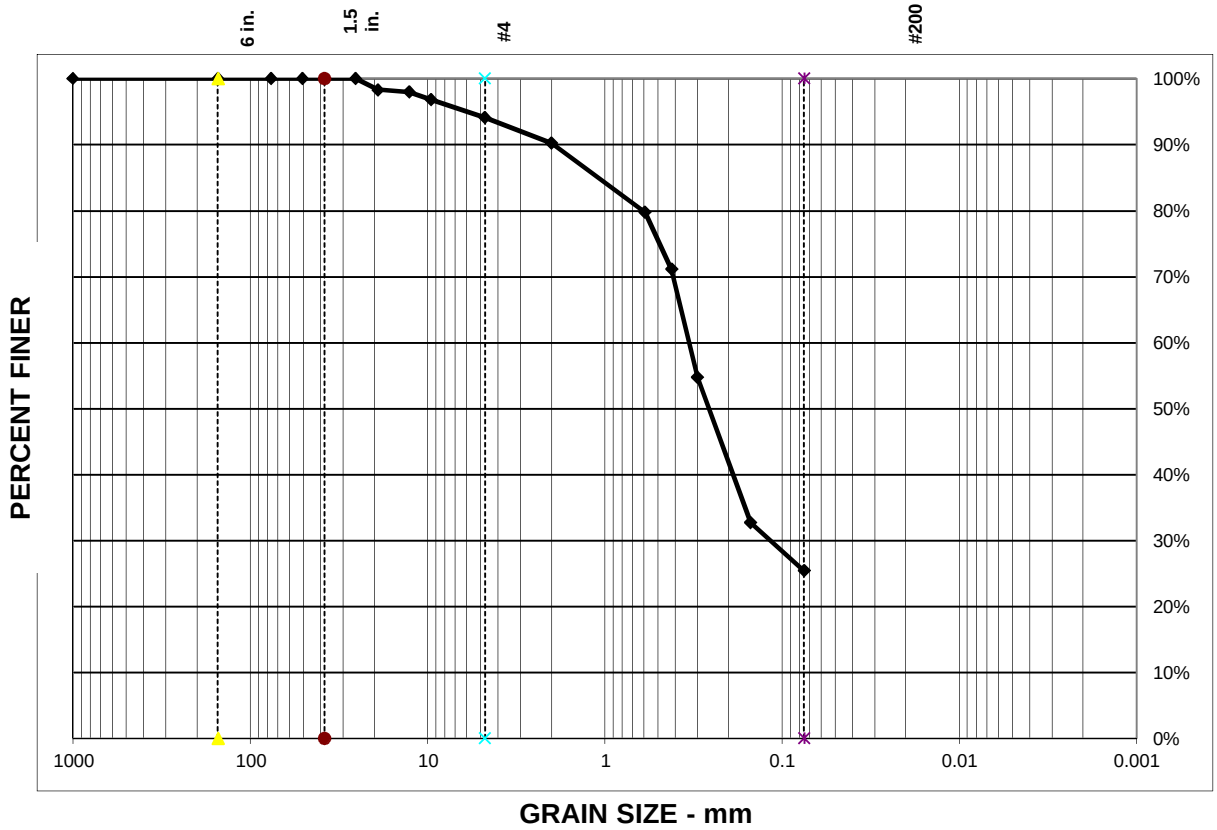
Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	99%	92%	88%	82%	60%	25%	17.9%
Specification								

% GRAVEL =	12%	**D_{85} =** 3.2	**D_{15} =**
% SAND =	70%	**D_{60} =** 0.4	**D_{10} =**
% SILT & CLAY =	18%	**D_{50} =** 0.3	**C_U =**
		D_{30} = 0.2	**C_C =**

Project Name: Former Truth or Consequences Landfill
Project No.: 68137008
Sample Location: CAP-3
Liquid Limit: NV Plasticity Index: NP
Insitu Moisture (%) 5.9
USCS Classification: SM
Material Description: Silty Sand

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	98%	97%	94%	90%	71%	33%	25.4%
Specification								

% GRAVEL = 6%
% SAND = 69%
% SILT & CLAY = 25%

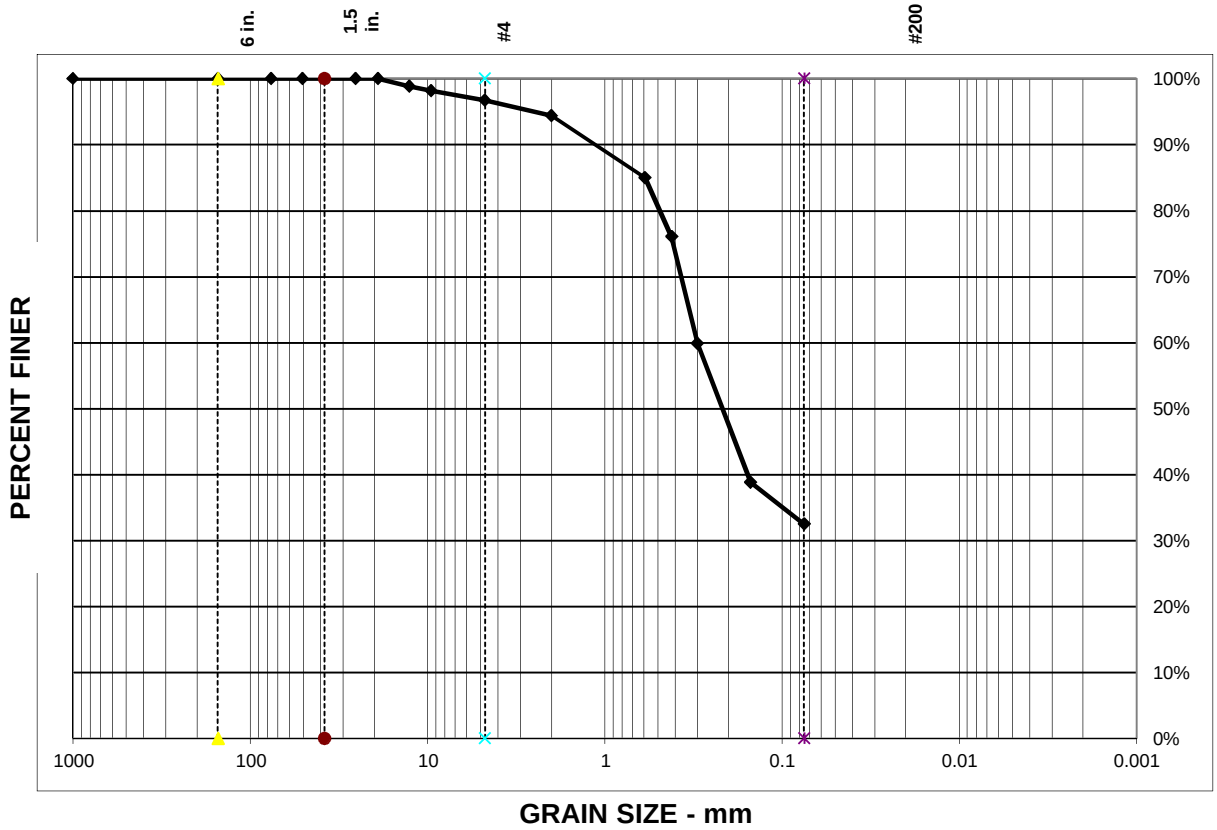
D_{85} = 1.1
D_{60} = 0.3
D_{50} = 0.3
D_{30} = 0.1

D_{15} =
D_{10} =
C_U =
C_C =

Project Name: Former Truth or Consequences Landfill
Project No.: 68137008
Sample Location: CAP-5
Liquid Limit: NV Plasticity Index: NP
Insitu Moisture (%) 6.3
USCS Classification: SM
Material Description: Silty Sand

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

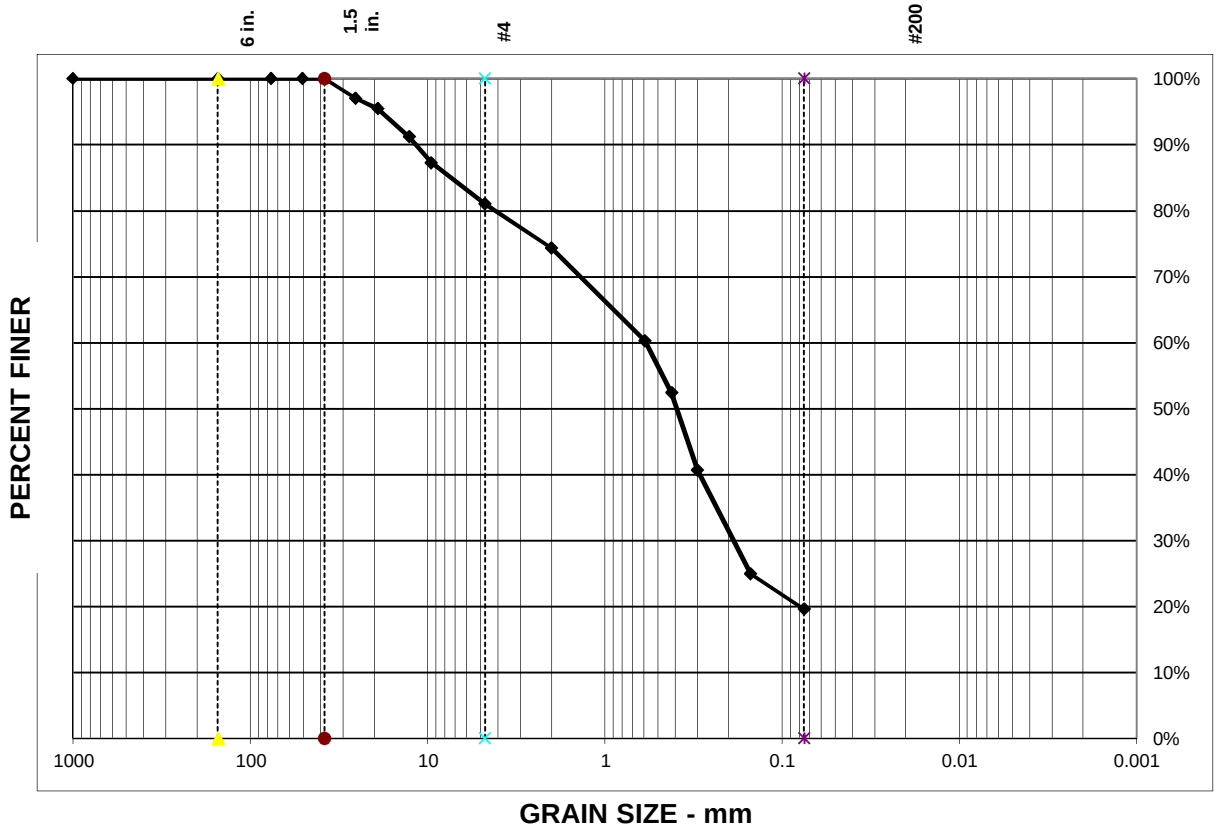
Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	100%	98%	97%	94%	76%	39%	32.6%
Specification								

% GRAVEL =	3%	**D_{85} =** 0.6	**D_{15} =**
% SAND =	64%	**D_{60} =** 0.3	**D_{10} =**
% SILT & CLAY =	33%	**D_{50} =** 0.2	**C_U =**
		D_{30} =	**C_C =**

Project Name: Former Truth or Consequences Landfill
Project No.: 68137008
Sample Location: CAP-6
Liquid Limit: NV Plasticity Index: NP
Insitu Moisture (%) 9.02
USCS Classification: SM
Material Description: Silty Sand

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

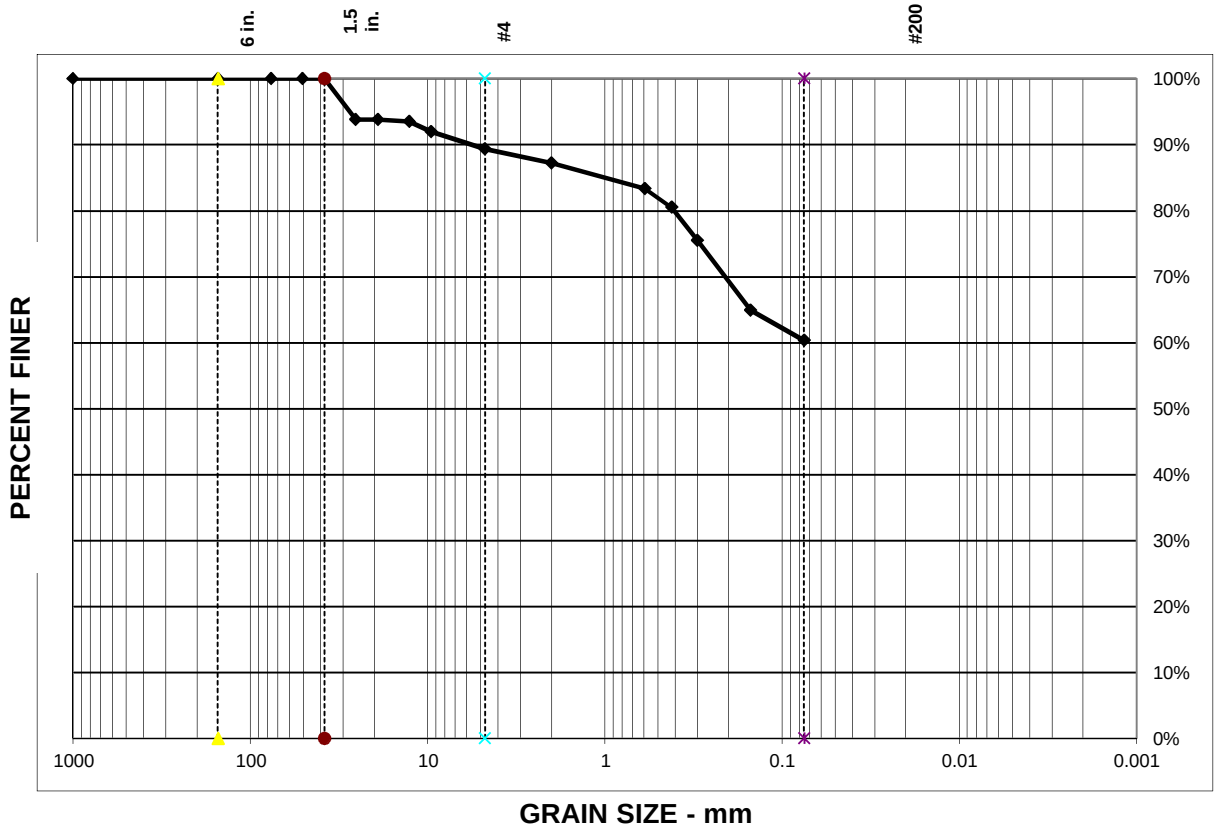
Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	95%	87%	81%	74%	52%	25%	19.6%
Specification								

% GRAVEL =	19%	**D_{85} =** 7.4	**D_{15} =**
% SAND =	61%	**D_{60} =** 0.6	**D_{10} =**
% SILT & CLAY =	20%	**D_{50} =** 0.4	**C_U =**
		D_{30} = 0.2	**C_C =**

Project Name: Former Truth or Consequences Landfill
Project No.: 68137008
Sample Location: CAP-9
Liquid Limit: NV Plasticity Index: NP
Insitu Moisture (%) 5.2
USCS Classification: SM
Material Description: Silty Sand with Gravel

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	94%	92%	89%	87%	81%	65%	60.4%
Specification								

% GRAVEL =	11%	**D_{85} =** 1.0	**D_{15} =**
% SAND =	29%	**D_{60} =**	**D_{10} =**
% SILT & CLAY =	60%	**D_{50} =**	**C_U =**
		D_{30} =	**C_C =**

Project Name: Former T or C Landfill
Project No.: 68137008
Sample Location: TP-N
Liquid Limit: 24 Plasticity Index: 7
Insitu Moisture (%) 8.1
USCS Classification: CL-ML
Material Description: Sandy Silty Clay

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

MEASUREMENT OF HYDRAULIC CONDUCTIVITY OF SATURATED POROUS MATERIALS
USING A FLEXIBLE WALL PERMEAMETER
ASTM D 5084 - 03 METHOD C TEST WITH INCREASING TAILWATER LEVEL
FLUID: DEAIRED TAP WATER WITH 0.005 N CaSO4

PROJECT NAME:	FORMER T OR C LANDFILL	PROJECT NUMBER:	68137008
LOCATION:		DATE:	7/31/2013
		PANEL IDENTIFICATION:	Lenexa Perm Board
SAMPLE ID:	TP-N 1.0 - 4.0 feet	BURETTE AREA:	0.312 cm^2
SAMPLE DESCR.:		BURETTE INCREMENT LENGTH:	1.000 cm
		VOLUME PER INCREMENT:	0.312 cm^3

INITIAL

MOISTURE%		DENSITY			
W & T, g	99.30	WET WT, g	188.8		
D & T, g	92.27	DIA, in	2.002	5.09	cm
T, g	32.89	HT, in	2.021	5.13	cm
		AREA		20.31	cm^2
MOIST-		DENSITY:	113.1	PCF WET	
URE, %	**11.8**	DENSITY:	**101.1**	PCF DRY	

ADDITIONAL DATA

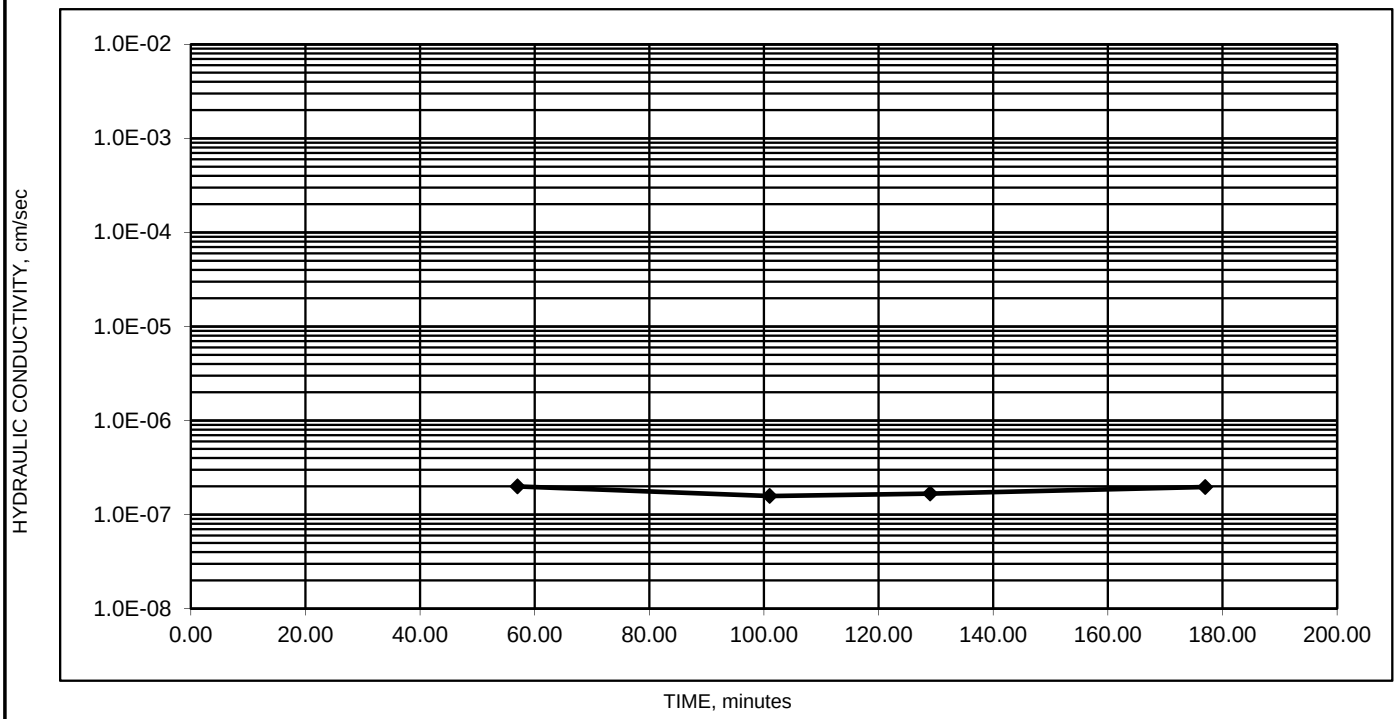
SPECIFIC GRAVITY:	2.70	RECOMPACTED?:	YES
SPECIFIC GRAVITY:	ASSUMED	PROCTOR, pcf:	119.0
POROSITY, %:	40.0	OPTIMUM, %:	12.0
SATURATION, %:	47.9	COMPACTION, %:	85.0
VOID RATIO:	0.67	OVER OPTIMUM, %:	-0.2

SATURATION:	LATERAL PRESS.:	104.0	psi	BACK PRESSURE (=UPPER=LOWER):	100.0	psi
DURING TEST:	LATERAL PRESS.:	104.0	psi	H2: 100.0 psi	H1: 100.0	psi
				BIAS PRESSURE (=H1-H2)	0.0	psi

H1 VALUE	H2 VALUE	ELAPSED TIME, min	DELTA H cm	Ln H1/H2	HYD CON k, cm/sec	OUT FLOW cm^3	IN FLOW cm^3	OUT/IN RATIO	HYD GRAD	% FROM MEAN k	TEMP.: C	TEMP. CORR.:
9.7	62.6	0.00	52.9									
10.2	62.1	57.00	51.9	0.019085	2.00E-07	0.16	0.16	1.00	10.1	11	24.2	0.906
10.5	61.8	101.00	51.3	0.011628	1.58E-07	0.09	0.09	1.00	10.0	12	24.1	0.908
10.7	61.6	129.00	50.9	0.007828	1.67E-07	0.06	0.06	1.00	9.9	7	24.0	0.910
11.1	61.2	177.00	50.1	0.015842	1.97E-07	0.12	0.12	1.00	9.8	9	24.2	0.906

HYDRAULIC CONDUCTIVITY (k_{20}) = **AVERAGE 1.8E-07 cm/sec**

MAXIMUM	1.0E-03 TO	1.0E-04	2	0.75<	20	% < 25 AT
HYDRAULIC	1.0E-04 TO	1.0E-05	5	RATIO	MAX	> 1.0E-8
GRADIENT	1.0E-05 TO	1.0E-06	10	<1.25	HYDRAULIC	OR
	1.0E-06 TO	1.0E-07	20		GRADIENT	% < 50 AT
	less than	1.0E-07	30		ALLOWED	< 1.0E-8



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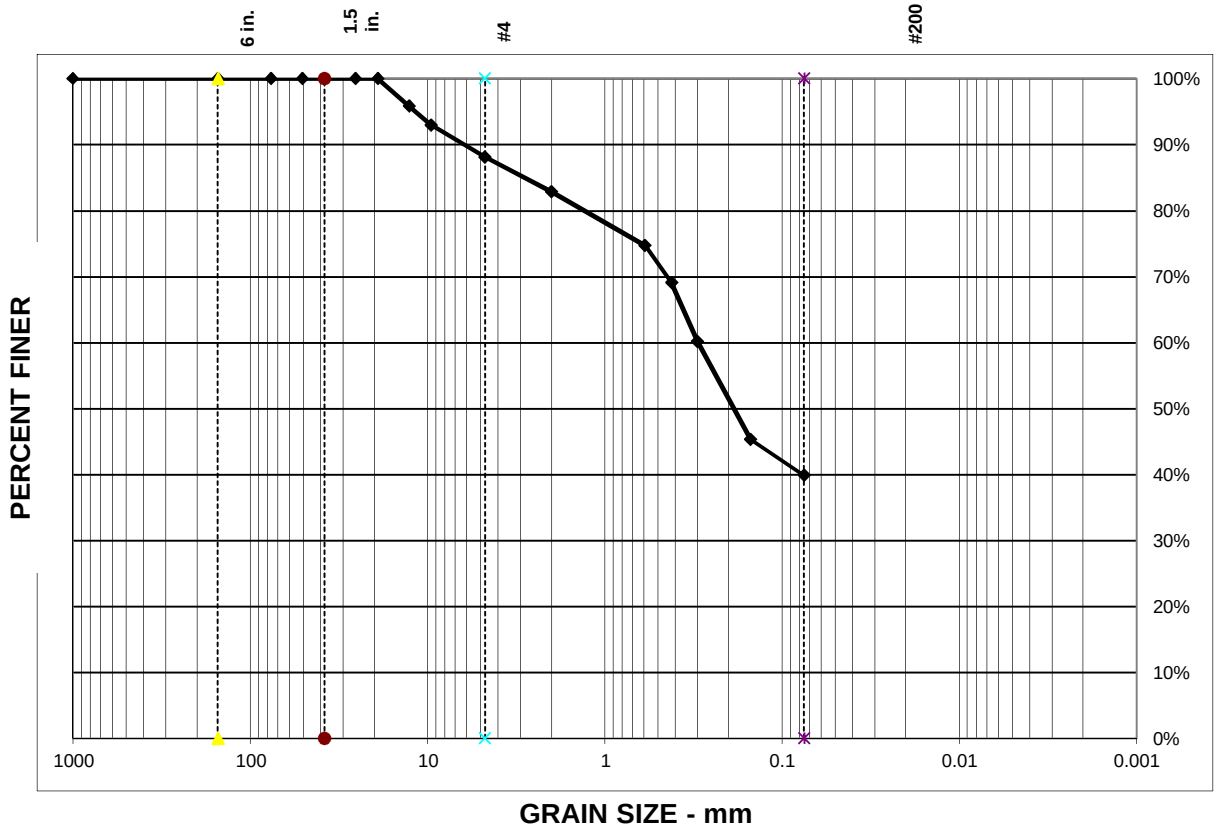
GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	100%	93%	88%	83%	69%	45%	39.9%
Specification								

% GRAVEL =	12%	**D_{85} =** 2.9	**D_{15} =**
% SAND =	48%	**D_{60} =** 0.3	**D_{10} =**
% SILT & CLAY =	40%	**D_{50} =** 0.2	**C_U =**
		D_{30} =	**C_C =**

Project Name: Former T or C Landfill
Project No.: 68137008
Sample Location: TP-C
Liquid Limit: 20 Plasticity Index: 3
Insitu Moisture (%) 5.8
USCS Classification: SM
Material Description: Silty Sand with Gravel

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

MEASUREMENT OF HYDRAULIC CONDUCTIVITY OF SATURATED POROUS MATERIALS
USING A FLEXIBLE WALL PERMEAMETER
ASTM D 5084 - 03 METHOD C TEST WITH INCREASING TAILWATER LEVEL
FLUID: DEAIRED TAP WATER WITH 0.005 N CaSO4

PROJECT NAME:	FORMER T OR C LANDFILL	PROJECT NUMBER:	68137008
LOCATION:		DATE:	7/31/2013
		PANEL IDENTIFICATION:	Lenexa Perm Board
SAMPLE ID:	TP-C 1.0 - 4.0 feet	BURETTE AREA:	0.312 cm^2
SAMPLE DESCR.:		BURETTE INCREMENT LENGTH:	1.000 cm
		VOLUME PER INCREMENT:	0.312 cm^3

INITIAL

MOISTURE%		DENSITY			
W & T, g	94.80	WET WT, g	201.6		
D & T, g	88.67	DIA, in	2.003	5.09	cm
T, g	33.77	HT, in	2.021	5.13	cm
		AREA		20.33	cm^2
MOIST-		DENSITY:	120.6	PCF WET	
URE, %	**11.2**	DENSITY:	**108.5**	PCF DRY	

ADDITIONAL DATA

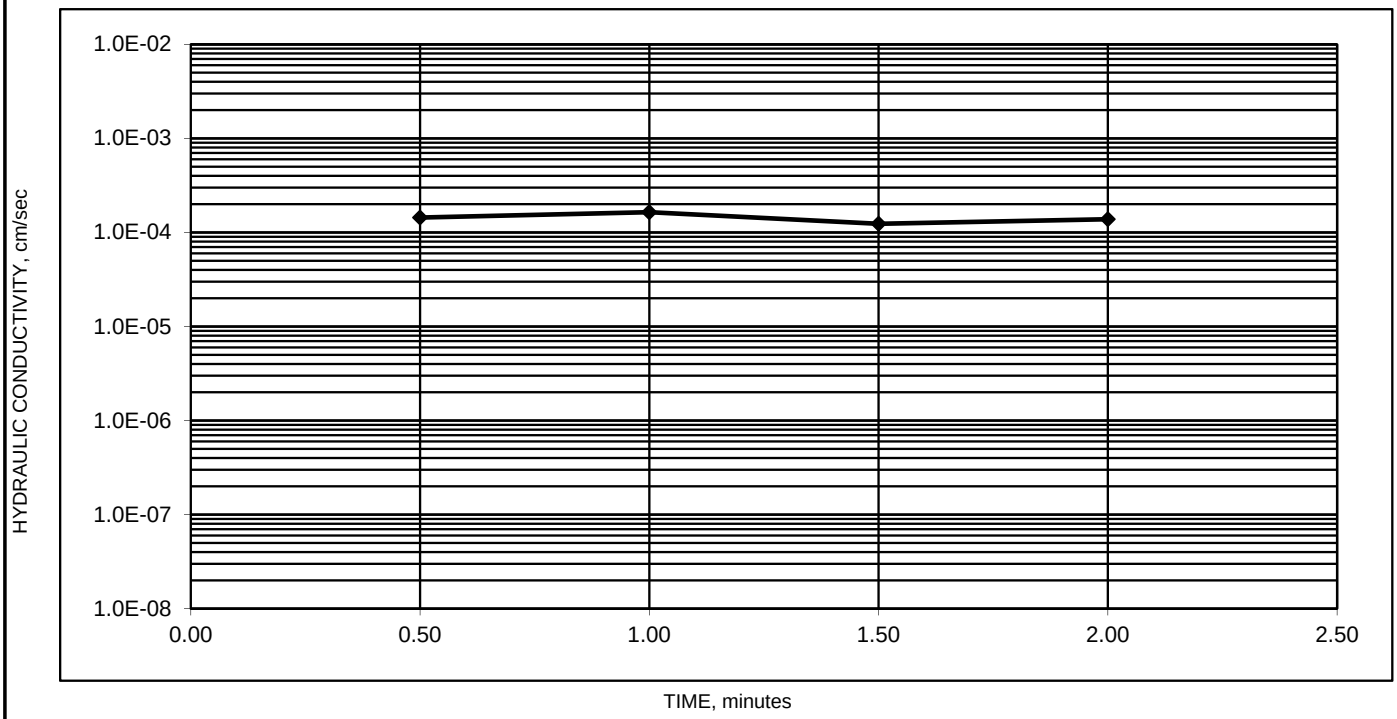
SPECIFIC GRAVITY:	2.70	RECOMPACTED?:	YES
SPECIFIC GRAVITY:	ASSUMED	PROCTOR, pcf:	122.6
POROSITY, %:	35.6	OPTIMUM, %:	10.8
SATURATION, %:	54.4	COMPACTION, %:	88.5
VOID RATIO:	0.55	OVER OPTIMUM, %:	0.4

SATURATION:	LATERAL PRESS.:	104.0	psi	BACK PRESSURE (=UPPER=LOWER):	100.0	psi
DURING TEST:	LATERAL PRESS.:	104.0	psi	H2: 100.0 psi	H1: 100.0	psi
				BIAS PRESSURE (=H1-H2)	0.0	psi

H1 VALUE	H2 VALUE	ELAPSED TIME, min	DELTA H cm	Ln H1/H2	HYD CON k, cm/sec	OUT FLOW cm^3	IN FLOW cm^3	OUT/IN RATIO	HYD GRAD	% FROM MEAN k	TEMP.: C	TEMP. CORR.:
25.7	30.9	0.00	5.2									
26.0	30.6	0.50	4.6	0.122602	1.44E-04	0.09	0.09	1.00	0.9	1	24.8	0.893
26.3	30.3	1.00	4.0	0.139762	1.64E-04	0.09	0.09	1.00	0.8	15	24.8	0.893
26.5	30.1	1.50	3.6	0.105361	1.24E-04	0.06	0.06	1.00	0.7	13	24.8	0.893
26.7	29.9	2.00	3.2	0.117783	1.38E-04	0.06	0.06	1.00	0.6	3	24.8	0.893

HYDRAULIC CONDUCTIVITY (k_{20}) = AVERAGE 1.4E-04 cm/sec

MAXIMUM	1.0E-03 TO	1.0E-04	2	0.75<	2	% < 25 AT
HYDRAULIC	1.0E-04 TO	1.0E-05	5	RATIO	MAX	> 1.0E-8
GRADIENT	1.0E-05 TO	1.0E-06	10	<1.25	HYDRAULIC	OR
	1.0E-06 TO	1.0E-07	20		GRADIENT	% < 50 AT
	less than	1.0E-07	30		ALLOWED	< 1.0E-8



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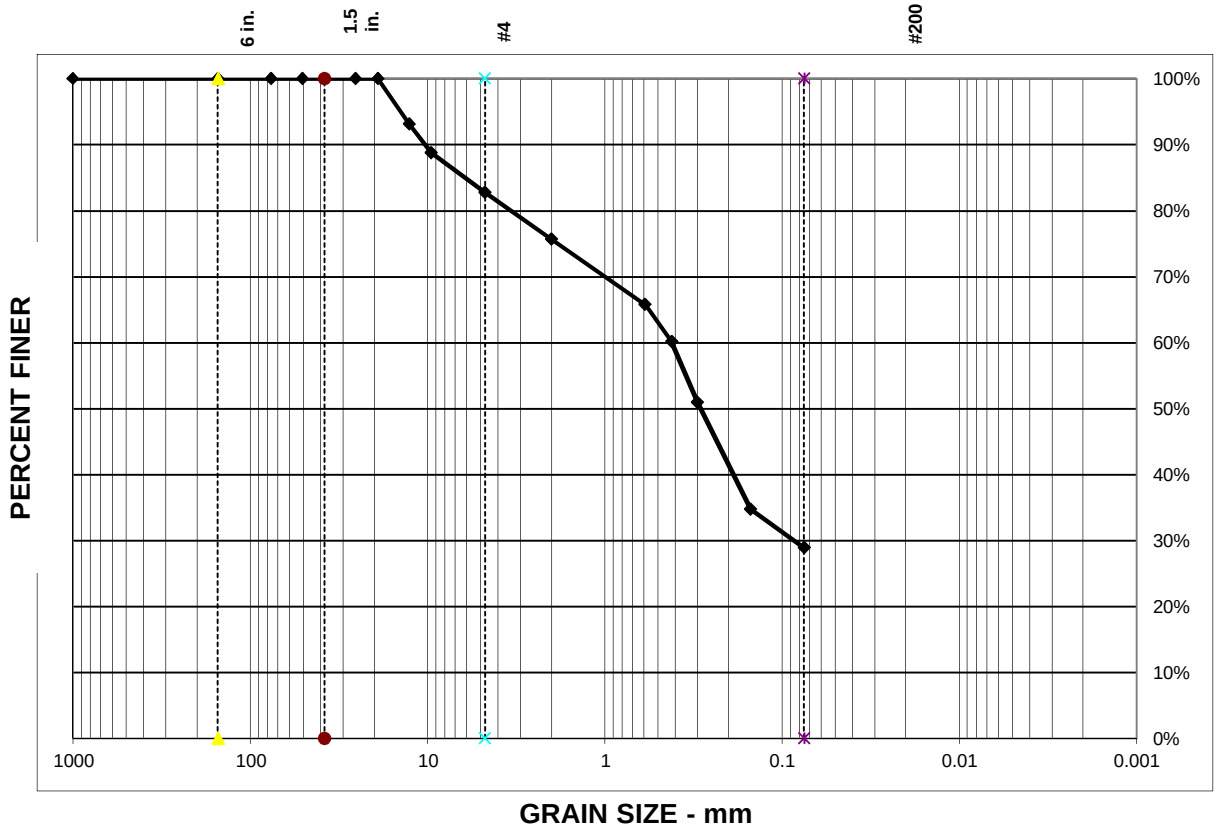
GRAIN SIZE DISTRIBUTION GRAPH



TEST SUMMARY

Sieve Size	1 1/2"	3/4"	3/8"	#4	#10	#40	#100	#200
% Passing (Cumulative)	100%	100%	89%	83%	76%	60%	35%	28.9%
Specification								

% GRAVEL =	17%	**D_{85} =** 6.2	**D_{15} =**
% SAND =	54%	**D_{60} =** 0.4	**D_{10} =**
% SILT & CLAY =	29%	**D_{50} =** 0.3	**C_U =**
		D_{30} = 0.1	**C_C =**

Project Name: Former T or C Landfill
Project No.: 68137008
Sample Location: TP-S
Liquid Limit: 21 Plasticity Index: 4
Insitu Moisture (%) 6.0
USCS Classification: SC-SM
Material Description: Clayey Sand with Gravel

TERRACON
1640 Hickory Loop, Suite 105
Las Cruces, NM 88005
(575) 527-1700

MEASUREMENT OF HYDRAULIC CONDUCTIVITY OF SATURATED POROUS MATERIALS
USING A FLEXIBLE WALL PERMEAMETER
ASTM D 5084 - 03 METHOD C TEST WITH INCREASING TAILWATER LEVEL
FLUID: DEAIRED TAP WATER WITH 0.005 N CaSO4

PROJECT NAME:	FORMER T OR C LANDFILL	PROJECT NUMBER:	68137008
LOCATION:		DATE:	7/31/2013
		PANEL IDENTIFICATION:	Lenexa Perm Board
SAMPLE ID:	TP-S 1.0 - 4.0 feet	BURETTE AREA:	0.312 cm^2
SAMPLE DESCR.:		BURETTE INCREMENT LENGTH:	1.000 cm
		VOLUME PER INCREMENT:	0.312 cm^3

INITIAL

MOISTURE%		DENSITY			
W & T, g	100.22	WET WT, g	199.3		
D & T, g	94.84	DIA, in	2.003	5.09	cm
T, g	34.62	HT, in	2.020	5.13	cm
		AREA		20.33	cm^2
MOIST-		DENSITY:	119.3	PCF WET	
URE, %	**8.9**	DENSITY:	**109.5**	PCF DRY	

ADDITIONAL DATA

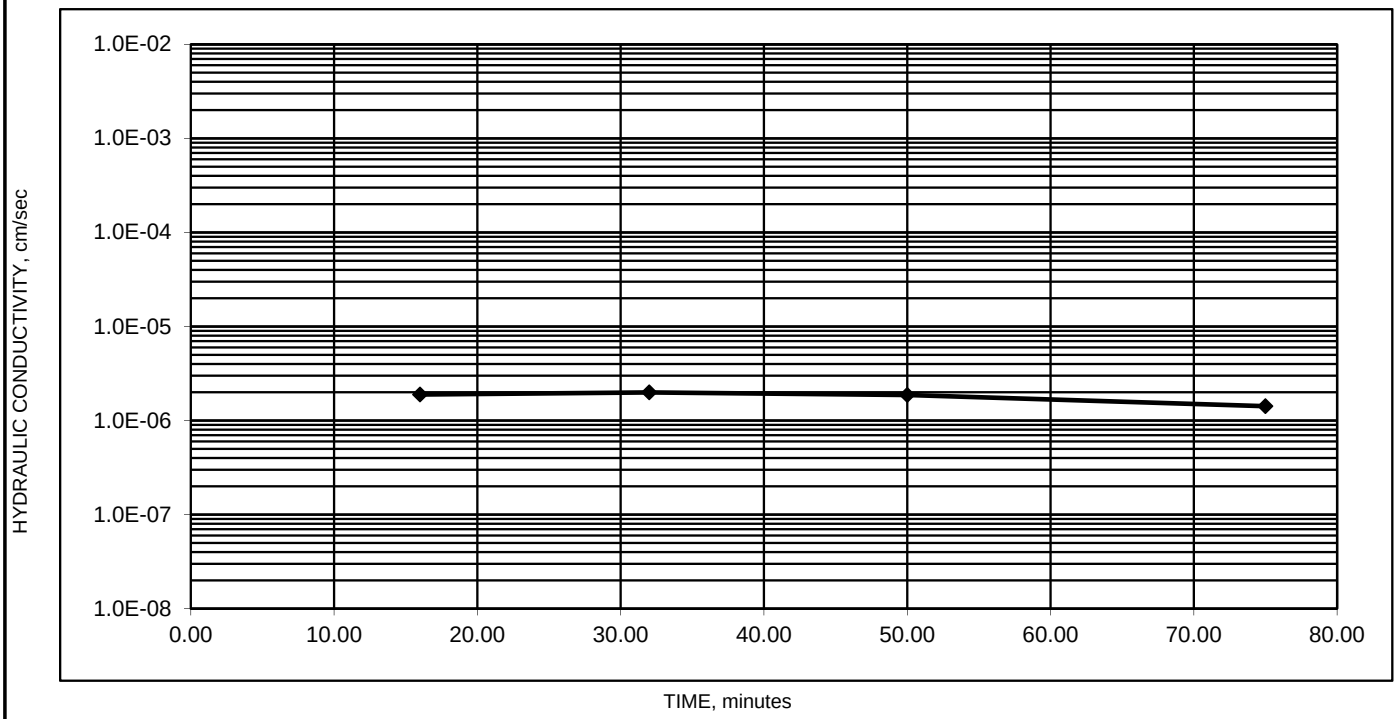
SPECIFIC GRAVITY:	2.70	RECOMPACTED?:	YES
SPECIFIC GRAVITY:	ASSUMED	PROCTOR, pcf:	126.3
POROSITY, %:	35.0	OPTIMUM, %:	8.8
SATURATION, %:	44.7	COMPACTION, %:	86.7
VOID RATIO:	0.54	OVER OPTIMUM, %:	0.1

SATURATION:	LATERAL PRESS.:	104.0 psi	BACK PRESSURE (=UPPER=LOWER):	100.0 psi	
DURING TEST:	LATERAL PRESS.:	104.0 psi	H2: 100.0 psi	H1: 100.0 psi	
			BIAS PRESSURE (=H1-H2)	0.0 psi	

H1 VALUE	H2 VALUE	ELAPSED TIME, min	DELTA H cm	Ln H1/H2	HYD CON k, cm/sec	OUT FLOW cm^3	IN FLOW cm^3	OUT/IN RATIO	HYD GRAD	% FROM MEAN k	TEMP.: C	TEMP. CORR.:
28.8	45.0	0.00	16.2									
29.2	44.6	16.00	15.4	0.050644	1.89E-06	0.12	0.12	1.00	3.0	5	24.0	0.910
29.6	44.2	32.00	14.6	0.053346	1.99E-06	0.12	0.12	1.00	2.8	11	24.0	0.910
30.0	43.8	50.00	13.8	0.056353	1.87E-06	0.12	0.12	1.00	2.7	4	24.0	0.910
30.4	43.4	75.00	13.0	0.059719	1.42E-06	0.12	0.12	1.00	2.5	21	24.2	0.906

HYDRAULIC CONDUCTIVITY (k_{20}) = AVERAGE 1.8E-06 cm/sec

MAXIMUM	1.0E-03 TO	1.0E-04	2	0.75<	10	% < 25 AT
HYDRAULIC	1.0E-04 TO	1.0E-05	5	RATIO	MAX	> 1.0E-8
GRADIENT	1.0E-05 TO	1.0E-06	10	<1.25	HYDRAULIC	OR
	1.0E-06 TO	1.0E-07	20		GRADIENT	% < 50 AT
	less than	1.0E-07	30		ALLOWED	< 1.0E-8



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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-3276-1
Client Project/Site: 68137008

For:
Terracon Consulting Eng & Scientists
1640 Kickory Loop
Suite 105
Las Cruces, New Mexico 88005

Attn: Mr. Kyle Willaims

Authorized for release by:
6/11/2013 7:16:37 PM

Carlene McCutcheon, Customer Service Manager
carlene.mccutcheon@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Sample Summary 5
Detection Summary 6
Client Sample Results 7
Surrogate Summary 19
QC Sample Results 21
QC Association Summary 46
Lab Chronicle 50
Certification Summary 52
Method Summary 53
Chain of Custody 54
Receipt Checklists 55

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
N1	See case narrative.
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.

GC Semi VOA

Qualifier	Qualifier Description
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample,
Q9	Insufficent sample received to meet method QC requirements.

Air - GC VOA

Qualifier	Qualifier Description
H1	Sample analysis performed past holding time.

Metals

Qualifier	Qualifier Description
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-3276-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-3276-1

Comments
No additional comments.

Receipt
The samples were received on 5/22/2013 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

Except:

One or more containers for the following sample(s) was received broken or leaking: 1, 1L Amber Glass (Method 8270).

GC/MS VOA
Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6158 was outside control criteria for Vinyl Acetate. There was no hits for Vinyl Acetate in any samples, the data has been qualified with a N1 and reported.

Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6270 was outside control criteria for Vinyl Acetate. The data have been qualified with a N1 and reported.

No other analytical or quality issues were noted.

HPLC
No analytical or quality issues were noted.

GC Semi VOA
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5586 for the following samples:MW-8 (550-3276-1).

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5582. The LCS/LCSD were flagged with Q9 data qualifier.MW-8 (550-3276-1)

No other analytical or quality issues were noted.

Metals
Method(s) 200.7 Rev 4.4: Sample 550-3276-e-1-a was run at multiple dilutions with varying concentrations. The sample digest had a small amount of red sediment that may have resulted in varying results.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Industrial Hygiene
No analytical or quality issues were noted.

Organic Prep
Method(s) 8151A: No additional sample containers were submitted to perform a matrix spike / matrix spike duplicate (MS/MSD) or a sample duplicate.

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-3276-1	MW-8	Water	05/21/13 08:15	05/22/13 09:20
550-3276-2	Trip Blank	Water	05/21/13 08:15	05/22/13 09:20
550-3276-3	VP-1	Air	05/21/13 11:05	05/22/13 09:20
550-3276-4	VP-2	Air	05/21/13 11:15	05/22/13 09:20
550-3276-5	VP-3	Air	05/21/13 11:30	05/22/13 09:20
550-3276-6	VP-4	Air	05/21/13 11:45	05/22/13 09:20

Detection Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: MW-8 — Lab Sample ID: 550-3276-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
4-Isopropyltoluene	0.97		0.50		ug/L	1		8260B	Total/NA
Nitrate as N	8.5		0.20		mg/L	1		300.0	Total/NA
Nitrite as N	0.23		0.20		mg/L	1		300.0	Total/NA
Chloride	710		20		mg/L	10		300.0	Total/NA
Sulfate	220		20		mg/L	10		300.0	Total/NA
Barium	0.11		0.10		mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	270		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	54		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	250		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Alkalinity as CaCO3	270		6.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	270		6.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 550-3276-2

No Detections.

Client Sample ID: VP-1 — Lab Sample ID: 550-3276-3

No Detections.

Client Sample ID: VP-2 — Lab Sample ID: 550-3276-4

No Detections.

Client Sample ID: VP-3 — Lab Sample ID: 550-3276-5

No Detections.

Client Sample ID: VP-4 — Lab Sample ID: 550-3276-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: MW-8
Date Collected: 05/21/13 08:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3276-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 14:39	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/02/13 14:39	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 14:39	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/02/13 14:39	1
1,1-Dichloroethane	ND		0.50		ug/L			06/02/13 14:39	1
1,1-Dichloroethene	ND		0.50		ug/L			06/02/13 14:39	1
1,1-Dichloropropene	ND		0.50		ug/L			06/02/13 14:39	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/13 14:39	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/02/13 14:39	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/13 14:39	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/02/13 14:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/02/13 14:39	1
Ethylene Dibromide	ND		0.50		ug/L			06/02/13 14:39	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/02/13 14:39	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/13 14:39	1
1,2-Dichloropropane	ND		0.50		ug/L			06/02/13 14:39	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/02/13 14:39	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/02/13 14:39	1
1,3-Dichloropropane	ND		0.50		ug/L			06/02/13 14:39	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/02/13 14:39	1
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 14:39	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 14:39	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 14:39	1
2-Hexanone	ND		5.0		ug/L			06/02/13 14:39	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 14:39	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 14:39	1
Acetone	ND	R6	10		ug/L			06/02/13 14:39	1
Benzene	ND		0.50		ug/L			06/02/13 14:39	1
Bromobenzene	ND		0.50		ug/L			06/02/13 14:39	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 14:39	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 14:39	1
Bromoform	ND		1.0		ug/L			06/02/13 14:39	1
Bromomethane	ND		1.0		ug/L			06/02/13 14:39	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 14:39	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 14:39	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 14:39	1
Chloroethane	ND		1.0		ug/L			06/02/13 14:39	1
Chloroform	ND		0.50		ug/L			06/02/13 14:39	1
Chloromethane	ND		1.0		ug/L			06/02/13 14:39	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 14:39	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 14:39	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 14:39	1
Dibromomethane	ND		0.50		ug/L			06/02/13 14:39	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 14:39	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 14:39	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 14:39	1
Iodomethane	ND		2.5		ug/L			06/02/13 14:39	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 14:39	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/02/13 14:39	1

Client Sample ID: MW-8

Date Collected: 05/21/13 08:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3276-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	ug/L			06/02/13 14:39	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 14:39	1
Naphthalene	ND		2.5	ug/L			06/02/13 14:39	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 14:39	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 14:39	1
o-Xylene	ND		0.50	ug/L			06/02/13 14:39	1
4-Isopropyltoluene	**0.97**		0.50	ug/L			06/02/13 14:39	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 14:39	1
Styrene	ND		0.50	ug/L			06/02/13 14:39	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 14:39	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 14:39	1
Toluene	ND		0.50	ug/L			06/02/13 14:39	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 14:39	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 14:39	1
Trichloroethene	ND		0.50	ug/L			06/02/13 14:39	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 14:39	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 14:39	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 14:39	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*111*		*70 - 130*		*06/02/13 14:39*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*06/02/13 14:39*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*06/02/13 14:39*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Methoxychlor	ND		0.10	ug/L		05/23/13 11:05	06/10/13 21:44	1
Toxaphene	ND		1.0	ug/L		05/23/13 11:05	06/10/13 21:44	1
delta-BHC	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Dieldrin	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Endosulfan I	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Endosulfan II	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Endosulfan sulfate	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Endrin	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Endrin aldehyde	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
gamma-BHC (Lindane)	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Heptachlor	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
4,4'-DDD	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
4,4'-DDE	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
4,4'-DDT	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Aldrin	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
alpha-BHC	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
beta-BHC	ND		0.052	ug/L		05/23/13 11:05	06/10/13 21:44	1
Chlordane (technical)	ND		0.52	ug/L		05/23/13 11:05	06/10/13 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 132*	*05/23/13 11:05*	*06/10/13 21:44*	*1*
DCB Decachlorobiphenyl (Surr)	*21*		*10 - 103*	*05/23/13 11:05*	*06/10/13 21:44*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: MW-8

Date Collected: 05/21/13 08:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3276-1

Matrix: Water

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
Silvex (2,4,5-TP)	ND		0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
2,4-D	ND	V1	0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
2,4-DB	ND	V1	0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
Dicamba	ND		0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
Dichlorprop	ND		0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
Dinoseb	ND		0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1
Pentachlorophenol	ND		0.50	ug/L		05/23/13 10:06	06/06/13 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*89*		*10 - 140*	*05/23/13 10:06*	*06/06/13 00:35*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**8.5**		0.20	mg/L			05/23/13 02:05	1
Nitrite as N	**0.23**		0.20	mg/L			05/23/13 02:05	1
Chloride	**710**		20	mg/L			05/28/13 21:10	10
Sulfate	**220**		20	mg/L			05/28/13 21:10	10

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	mg/L		05/29/13 13:05	06/06/13 12:18	1
Barium	**0.11**		0.10	mg/L		05/29/13 13:05	06/06/13 12:18	1
Cadmium	ND		0.0010	mg/L		05/29/13 13:05	06/06/13 12:18	1
Calcium	**270**		2.0	mg/L		05/29/13 13:05	06/06/13 12:18	1
Chromium	ND		0.010	mg/L		05/29/13 13:05	06/06/13 12:18	1
Lead	ND		0.015	mg/L		05/29/13 13:05	06/06/13 12:18	1
Magnesium	**54**		2.0	mg/L		05/29/13 13:05	06/06/13 12:18	1
Selenium	ND		0.10	mg/L		05/29/13 13:05	06/06/13 12:18	1
Silver	ND		0.010	mg/L		05/29/13 13:05	06/06/13 12:18	1
Sodium	**250**		2.0	mg/L		05/29/13 13:05	06/06/13 12:18	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		05/30/13 17:12	05/31/13 10:27	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**270**		6.0	mg/L			05/30/13 18:42	1
Bicarbonate Alkalinity as CaCO3	**270**		6.0	mg/L			05/30/13 18:42	1
Carbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 18:42	1
Alkalinity, Phenolphthalein	ND		6.0	mg/L			05/30/13 18:42	1
Hydroxide Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 18:42	1
Cyanide, Total	ND		0.050	mg/L		05/29/13 12:40	05/29/13 17:20	1

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: Trip Blank
Date Collected: 05/21/13 08:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3276-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			06/02/13 11:25	1
1,1,1-Trichloroethane	ND		0.50	ug/L			06/02/13 11:25	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			06/02/13 11:25	1
1,1,2-Trichloroethane	ND		0.50	ug/L			06/02/13 11:25	1
1,1-Dichloroethane	ND		0.50	ug/L			06/02/13 11:25	1
1,1-Dichloroethene	ND		0.50	ug/L			06/02/13 11:25	1
1,1-Dichloropropene	ND		0.50	ug/L			06/02/13 11:25	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			06/02/13 11:25	1
1,2,3-Trichloropropane	ND		2.0	ug/L			06/02/13 11:25	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			06/02/13 11:25	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			06/02/13 11:25	1
Ethylene Dibromide	ND		0.50	ug/L			06/02/13 11:25	1
1,2-Dichlorobenzene	ND		0.50	ug/L			06/02/13 11:25	1
1,2-Dichloroethane	ND		0.50	ug/L			06/02/13 11:25	1
1,2-Dichloropropane	ND		0.50	ug/L			06/02/13 11:25	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/02/13 11:25	1
1,3-Dichloropropane	ND		0.50	ug/L			06/02/13 11:25	1
1,4-Dichlorobenzene	ND		0.50	ug/L			06/02/13 11:25	1
2,2-Dichloropropane	ND		1.0	ug/L			06/02/13 11:25	1
2-Butanone (MEK)	ND		5.0	ug/L			06/02/13 11:25	1
2-Chlorotoluene	ND		0.50	ug/L			06/02/13 11:25	1
2-Hexanone	ND		5.0	ug/L			06/02/13 11:25	1
4-Chlorotoluene	ND		0.50	ug/L			06/02/13 11:25	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	ug/L			06/02/13 11:25	1
Acetone	ND	R6	10	ug/L			06/02/13 11:25	1
Benzene	ND		0.50	ug/L			06/02/13 11:25	1
Bromobenzene	ND		0.50	ug/L			06/02/13 11:25	1
Chlorobromomethane	ND		0.50	ug/L			06/02/13 11:25	1
Dichlorobromomethane	ND		0.50	ug/L			06/02/13 11:25	1
Bromoform	ND		1.0	ug/L			06/02/13 11:25	1
Bromomethane	ND		1.0	ug/L			06/02/13 11:25	1
Carbon disulfide	ND		1.0	ug/L			06/02/13 11:25	1
Carbon tetrachloride	ND		0.50	ug/L			06/02/13 11:25	1
Chlorobenzene	ND		0.50	ug/L			06/02/13 11:25	1
Chloroethane	ND		1.0	ug/L			06/02/13 11:25	1
Chloroform	ND		0.50	ug/L			06/02/13 11:25	1
Chloromethane	ND		1.0	ug/L			06/02/13 11:25	1
cis-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 11:25	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 11:25	1
Chlorodibromomethane	ND		0.50	ug/L			06/02/13 11:25	1
Dibromomethane	ND		0.50	ug/L			06/02/13 11:25	1
Dichlorodifluoromethane	ND		0.50	ug/L			06/02/13 11:25	1
Ethylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
Hexachlorobutadiene	ND		1.0	ug/L			06/02/13 11:25	1
Iodomethane	ND		2.5	ug/L			06/02/13 11:25	1
Isopropylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
m-Xylene & p-Xylene	ND		1.0	ug/L			06/02/13 11:25	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-3276-2

Date Collected: 05/21/13 08:15
Matrix: Water
Date Received: 05/22/13 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	ug/L			06/02/13 11:25	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 11:25	1
Naphthalene	ND		2.5	ug/L			06/02/13 11:25	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
o-Xylene	ND		0.50	ug/L			06/02/13 11:25	1
4-Isopropyltoluene	ND		0.50	ug/L			06/02/13 11:25	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
Styrene	ND		0.50	ug/L			06/02/13 11:25	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 11:25	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 11:25	1
Toluene	ND		0.50	ug/L			06/02/13 11:25	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 11:25	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 11:25	1
Trichloroethene	ND		0.50	ug/L			06/02/13 11:25	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 11:25	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 11:25	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 11:25	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 11:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*112*		*70 - 130*		*06/02/13 11:25*	*1*
Toluene-d8 (Surr)	*112*		*70 - 130*		*06/02/13 11:25*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*06/02/13 11:25*	*1*

Client Sample ID: VP-1

Lab Sample ID: 550-3276-3

Date Collected: 05/21/13 11:05
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	mg/m3			05/23/13 11:59	1
1,1,1-Trichloroethane	ND		2.0	mg/m3			05/23/13 11:59	1
1,1,2,2-Tetrachloroethane	ND		2.0	mg/m3			05/23/13 11:59	1
1,1,2-Trichloroethane	ND		2.0	mg/m3			05/23/13 11:59	1
1,1-Dichloroethane	ND		2.0	mg/m3			05/23/13 11:59	1
1,1-Dichloroethene	ND		5.0	mg/m3			05/23/13 11:59	1
1,1-Dichloropropene	ND		2.0	mg/m3			05/23/13 11:59	1
1,2,3-Trichlorobenzene	ND		5.0	mg/m3			05/23/13 11:59	1
1,2,3-Trichloropropane	ND		10	mg/m3			05/23/13 11:59	1
1,2,4-Trichlorobenzene	ND		5.0	mg/m3			05/23/13 11:59	1
1,2,4-Trimethylbenzene	ND		2.0	mg/m3			05/23/13 11:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0	mg/m3			05/23/13 11:59	1
Ethylene Dibromide	ND		2.0	mg/m3			05/23/13 11:59	1
1,2-Dichlorobenzene	ND		2.0	mg/m3			05/23/13 11:59	1
1,2-Dichloroethane	ND		2.0	mg/m3			05/23/13 11:59	1
1,2-Dichloropropane	ND		2.0	mg/m3			05/23/13 11:59	1
1,3,5-Trimethylbenzene	ND		2.0	mg/m3			05/23/13 11:59	1
1,3-Dichlorobenzene	ND		2.0	mg/m3			05/23/13 11:59	1

Client Sample ID: VP-1

Lab Sample ID: 550-3276-3

Date Collected: 05/21/13 11:05
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		2.0		mg/m3			05/23/13 11:59	1
1,4-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 11:59	1
2,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 11:59	1
2-Butanone (MEK)	ND		10		mg/m3			05/23/13 11:59	1
2-Chlorotoluene	ND		5.0		mg/m3			05/23/13 11:59	1
2-Hexanone	ND		10		mg/m3			05/23/13 11:59	1
4-Chlorotoluene	ND		5.0		mg/m3			05/23/13 11:59	1
4-Methyl-2-pentanone (MIBK)	ND		10		mg/m3			05/23/13 11:59	1
Acetone	ND		20		mg/m3			05/23/13 11:59	1
Benzene	ND		2.0		mg/m3			05/23/13 11:59	1
Bromobenzene	ND		5.0		mg/m3			05/23/13 11:59	1
Chlorobromomethane	ND		5.0		mg/m3			05/23/13 11:59	1
Dichlorobromomethane	ND		2.0		mg/m3			05/23/13 11:59	1
Bromoform	ND		5.0		mg/m3			05/23/13 11:59	1
Bromomethane	ND		5.0		mg/m3			05/23/13 11:59	1
Carbon disulfide	ND		5.0		mg/m3			05/23/13 11:59	1
Carbon tetrachloride	ND		5.0		mg/m3			05/23/13 11:59	1
Chlorobenzene	ND		2.0		mg/m3			05/23/13 11:59	1
Chloroethane	ND		5.0		mg/m3			05/23/13 11:59	1
Chloroform	ND		2.0		mg/m3			05/23/13 11:59	1
Chloromethane	ND		5.0		mg/m3			05/23/13 11:59	1
cis-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 11:59	1
cis-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 11:59	1
Dibromomethane	ND		2.0		mg/m3			05/23/13 11:59	1
Chlorodibromomethane	ND		2.0		mg/m3			05/23/13 11:59	1
Dichlorodifluoromethane	ND		5.0		mg/m3			05/23/13 11:59	1
Ethylbenzene	ND		2.0		mg/m3			05/23/13 11:59	1
Hexachlorobutadiene	ND		5.0		mg/m3			05/23/13 11:59	1
Isopropylbenzene	ND		2.0		mg/m3			05/23/13 11:59	1
m-Xylene & p-Xylene	ND		5.0		mg/m3			05/23/13 11:59	1
Methyl tert-butyl ether	ND		1.0		mg/m3			05/23/13 11:59	1
Methylene Chloride	ND		5.0		mg/m3			05/23/13 11:59	1
Naphthalene	ND		5.0		mg/m3			05/23/13 11:59	1
n-Butylbenzene	ND		5.0		mg/m3			05/23/13 11:59	1
N-Propylbenzene	ND		2.0		mg/m3			05/23/13 11:59	1
o-Xylene	ND		5.0		mg/m3			05/23/13 11:59	1
4-Isopropyltoluene	ND		2.0		mg/m3			05/23/13 11:59	1
sec-Butylbenzene	ND		5.0		mg/m3			05/23/13 11:59	1
Styrene	ND		2.0		mg/m3			05/23/13 11:59	1
tert-Butylbenzene	ND		5.0		mg/m3			05/23/13 11:59	1
Tetrachloroethene	ND		2.0		mg/m3			05/23/13 11:59	1
Toluene	ND		2.0		mg/m3			05/23/13 11:59	1
trans-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 11:59	1
trans-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 11:59	1
Trichloroethene	ND		2.0		mg/m3			05/23/13 11:59	1
Trichlorofluoromethane	ND		5.0		mg/m3			05/23/13 11:59	1
Vinyl acetate	ND		25		mg/m3			05/23/13 11:59	1
Vinyl chloride	ND		5.0		mg/m3			05/23/13 11:59	1

Client Sample ID: VP-1

Lab Sample ID: 550-3276-3

Date Collected: 05/21/13 11:05
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		10		mg/m3			05/23/13 11:59	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
n-Hexane (TIC)	*ND*		*mg/m3*			*110-54-3*		*05/23/13 11:59*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*110*		*70 - 130*		*05/23/13 11:59*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*05/23/13 11:59*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*05/23/13 11:59*	*1*

Method: EPA3C/ASTMD1946 - Fixed Gases

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND	H1	10		ppm v/v			05/30/13 12:35	1

Client Sample ID: VP-2

Lab Sample ID: 550-3276-4

Date Collected: 05/21/13 11:15
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		mg/m3			05/23/13 12:32	1
1,1,1-Trichloroethane	ND		2.0		mg/m3			05/23/13 12:32	1
1,1,2,2-Tetrachloroethane	ND		2.0		mg/m3			05/23/13 12:32	1
1,1,2-Trichloroethane	ND		2.0		mg/m3			05/23/13 12:32	1
1,1-Dichloroethane	ND		2.0		mg/m3			05/23/13 12:32	1
1,1-Dichloroethene	ND		5.0		mg/m3			05/23/13 12:32	1
1,1-Dichloropropene	ND		2.0		mg/m3			05/23/13 12:32	1
1,2,3-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 12:32	1
1,2,3-Trichloropropane	ND		10		mg/m3			05/23/13 12:32	1
1,2,4-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 12:32	1
1,2,4-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 12:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0		mg/m3			05/23/13 12:32	1
Ethylene Dibromide	ND		2.0		mg/m3			05/23/13 12:32	1
1,2-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 12:32	1
1,2-Dichloroethane	ND		2.0		mg/m3			05/23/13 12:32	1
1,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 12:32	1
1,3,5-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 12:32	1
1,3-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 12:32	1
1,3-Dichloropropane	ND		2.0		mg/m3			05/23/13 12:32	1
1,4-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 12:32	1
2,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 12:32	1
2-Butanone (MEK)	ND		10		mg/m3			05/23/13 12:32	1
2-Chlorotoluene	ND		5.0		mg/m3			05/23/13 12:32	1
2-Hexanone	ND		10		mg/m3			05/23/13 12:32	1
4-Chlorotoluene	ND		5.0		mg/m3			05/23/13 12:32	1
4-Methyl-2-pentanone (MIBK)	ND		10		mg/m3			05/23/13 12:32	1
Acetone	ND		20		mg/m3			05/23/13 12:32	1
Benzene	ND		2.0		mg/m3			05/23/13 12:32	1

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: VP-2

Lab Sample ID: 550-3276-4

Date Collected: 05/21/13 11:15
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		5.0		mg/m3			05/23/13 12:32	1
Chlorobromomethane	ND		5.0		mg/m3			05/23/13 12:32	1
Dichlorobromomethane	ND		2.0		mg/m3			05/23/13 12:32	1
Bromoform	ND		5.0		mg/m3			05/23/13 12:32	1
Bromomethane	ND		5.0		mg/m3			05/23/13 12:32	1
Carbon disulfide	ND		5.0		mg/m3			05/23/13 12:32	1
Carbon tetrachloride	ND		5.0		mg/m3			05/23/13 12:32	1
Chlorobenzene	ND		2.0		mg/m3			05/23/13 12:32	1
Chloroethane	ND		5.0		mg/m3			05/23/13 12:32	1
Chloroform	ND		2.0		mg/m3			05/23/13 12:32	1
Chloromethane	ND		5.0		mg/m3			05/23/13 12:32	1
cis-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 12:32	1
cis-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 12:32	1
Dibromomethane	ND		2.0		mg/m3			05/23/13 12:32	1
Chlorodibromomethane	ND		2.0		mg/m3			05/23/13 12:32	1
Dichlorodifluoromethane	ND		5.0		mg/m3			05/23/13 12:32	1
Ethylbenzene	ND		2.0		mg/m3			05/23/13 12:32	1
Hexachlorobutadiene	ND		5.0		mg/m3			05/23/13 12:32	1
Isopropylbenzene	ND		2.0		mg/m3			05/23/13 12:32	1
m-Xylene & p-Xylene	ND		5.0		mg/m3			05/23/13 12:32	1
Methyl tert-butyl ether	ND		1.0		mg/m3			05/23/13 12:32	1
Methylene Chloride	ND		5.0		mg/m3			05/23/13 12:32	1
Naphthalene	ND		5.0		mg/m3			05/23/13 12:32	1
n-Butylbenzene	ND		5.0		mg/m3			05/23/13 12:32	1
N-Propylbenzene	ND		2.0		mg/m3			05/23/13 12:32	1
o-Xylene	ND		5.0		mg/m3			05/23/13 12:32	1
4-Isopropyltoluene	ND		2.0		mg/m3			05/23/13 12:32	1
sec-Butylbenzene	ND		5.0		mg/m3			05/23/13 12:32	1
Styrene	ND		2.0		mg/m3			05/23/13 12:32	1
tert-Butylbenzene	ND		5.0		mg/m3			05/23/13 12:32	1
Tetrachloroethene	ND		2.0		mg/m3			05/23/13 12:32	1
Toluene	ND		2.0		mg/m3			05/23/13 12:32	1
trans-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 12:32	1
trans-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 12:32	1
Trichloroethene	ND		2.0		mg/m3			05/23/13 12:32	1
Trichlorofluoromethane	ND		5.0		mg/m3			05/23/13 12:32	1
Vinyl acetate	ND		25		mg/m3			05/23/13 12:32	1
Vinyl chloride	ND		5.0		mg/m3			05/23/13 12:32	1
Xylenes, Total	ND		10		mg/m3			05/23/13 12:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
n-Hexane (TIC)	*ND*		*mg/m3*			*110-54-3*		*05/23/13 12:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*05/23/13 12:32*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/23/13 12:32*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/23/13 12:32*	*1*

Client Sample ID: VP-2

Lab Sample ID: 550-3276-4

Date Collected: 05/21/13 11:15
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: EPA3C/ASTMD1946 - Fixed Gases

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		10		ppm v/v			05/30/13 13:53	1

Client Sample ID: VP-3

Lab Sample ID: 550-3276-5

Date Collected: 05/21/13 11:30
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		mg/m3			05/23/13 13:04	1
1,1,1-Trichloroethane	ND		2.0		mg/m3			05/23/13 13:04	1
1,1,2,2-Tetrachloroethane	ND		2.0		mg/m3			05/23/13 13:04	1
1,1,2-Trichloroethane	ND		2.0		mg/m3			05/23/13 13:04	1
1,1-Dichloroethane	ND		2.0		mg/m3			05/23/13 13:04	1
1,1-Dichloroethene	ND		5.0		mg/m3			05/23/13 13:04	1
1,1-Dichloropropene	ND		2.0		mg/m3			05/23/13 13:04	1
1,2,3-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 13:04	1
1,2,3-Trichloropropane	ND		10		mg/m3			05/23/13 13:04	1
1,2,4-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 13:04	1
1,2,4-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 13:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0		mg/m3			05/23/13 13:04	1
Ethylene Dibromide	ND		2.0		mg/m3			05/23/13 13:04	1
1,2-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 13:04	1
1,2-Dichloroethane	ND		2.0		mg/m3			05/23/13 13:04	1
1,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 13:04	1
1,3,5-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 13:04	1
1,3-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 13:04	1
1,3-Dichloropropane	ND		2.0		mg/m3			05/23/13 13:04	1
1,4-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 13:04	1
2,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 13:04	1
2-Butanone (MEK)	ND		10		mg/m3			05/23/13 13:04	1
2-Chlorotoluene	ND		5.0		mg/m3			05/23/13 13:04	1
2-Hexanone	ND		10		mg/m3			05/23/13 13:04	1
4-Chlorotoluene	ND		5.0		mg/m3			05/23/13 13:04	1
4-Methyl-2-pentanone (MIBK)	ND		10		mg/m3			05/23/13 13:04	1
Acetone	ND		20		mg/m3			05/23/13 13:04	1
Benzene	ND		2.0		mg/m3			05/23/13 13:04	1
Bromobenzene	ND		5.0		mg/m3			05/23/13 13:04	1
Chlorobromomethane	ND		5.0		mg/m3			05/23/13 13:04	1
Dichlorobromomethane	ND		2.0		mg/m3			05/23/13 13:04	1
Bromoform	ND		5.0		mg/m3			05/23/13 13:04	1
Bromomethane	ND		5.0		mg/m3			05/23/13 13:04	1
Carbon disulfide	ND		5.0		mg/m3			05/23/13 13:04	1
Carbon tetrachloride	ND		5.0		mg/m3			05/23/13 13:04	1
Chlorobenzene	ND		2.0		mg/m3			05/23/13 13:04	1
Chloroethane	ND		5.0		mg/m3			05/23/13 13:04	1
Chloroform	ND		2.0		mg/m3			05/23/13 13:04	1
Chloromethane	ND		5.0		mg/m3			05/23/13 13:04	1
cis-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 13:04	1

Client Sample ID: VP-3

Lab Sample ID: 550-3276-5

Date Collected: 05/21/13 11:30
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 13:04	1
Dibromomethane	ND		2.0		mg/m3			05/23/13 13:04	1
Chlorodibromomethane	ND		2.0		mg/m3			05/23/13 13:04	1
Dichlorodifluoromethane	ND		5.0		mg/m3			05/23/13 13:04	1
Ethylbenzene	ND		2.0		mg/m3			05/23/13 13:04	1
Hexachlorobutadiene	ND		5.0		mg/m3			05/23/13 13:04	1
Isopropylbenzene	ND		2.0		mg/m3			05/23/13 13:04	1
m-Xylene & p-Xylene	ND		5.0		mg/m3			05/23/13 13:04	1
Methyl tert-butyl ether	ND		1.0		mg/m3			05/23/13 13:04	1
Methylene Chloride	ND		5.0		mg/m3			05/23/13 13:04	1
Naphthalene	ND		5.0		mg/m3			05/23/13 13:04	1
n-Butylbenzene	ND		5.0		mg/m3			05/23/13 13:04	1
N-Propylbenzene	ND		2.0		mg/m3			05/23/13 13:04	1
o-Xylene	ND		5.0		mg/m3			05/23/13 13:04	1
4-Isopropyltoluene	ND		2.0		mg/m3			05/23/13 13:04	1
sec-Butylbenzene	ND		5.0		mg/m3			05/23/13 13:04	1
Styrene	ND		2.0		mg/m3			05/23/13 13:04	1
tert-Butylbenzene	ND		5.0		mg/m3			05/23/13 13:04	1
Tetrachloroethene	ND		2.0		mg/m3			05/23/13 13:04	1
Toluene	ND		2.0		mg/m3			05/23/13 13:04	1
trans-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 13:04	1
trans-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 13:04	1
Trichloroethene	ND		2.0		mg/m3			05/23/13 13:04	1
Trichlorofluoromethane	ND		5.0		mg/m3			05/23/13 13:04	1
Vinyl acetate	ND		25		mg/m3			05/23/13 13:04	1
Vinyl chloride	ND		5.0		mg/m3			05/23/13 13:04	1
Xylenes, Total	ND		10		mg/m3			05/23/13 13:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
n-Hexane (TIC)	*ND*		*mg/m3*			*110-54-3*		*05/23/13 13:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*05/23/13 13:04*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*05/23/13 13:04*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*05/23/13 13:04*	*1*

Method: EPA3C/ASTMD1946 - Fixed Gases

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		10		ppm v/v			05/30/13 14:31	1

Client Sample ID: VP-4

Lab Sample ID: 550-3276-6

Date Collected: 05/21/13 11:45
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		mg/m3			05/23/13 13:36	1
1,1,1-Trichloroethane	ND		2.0		mg/m3			05/23/13 13:36	1

Client Sample ID: VP-4

Lab Sample ID: 550-3276-6

Date Collected: 05/21/13 11:45
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.0		mg/m3			05/23/13 13:36	1
1,1,2-Trichloroethane	ND		2.0		mg/m3			05/23/13 13:36	1
1,1-Dichloroethane	ND		2.0		mg/m3			05/23/13 13:36	1
1,1-Dichloroethene	ND		5.0		mg/m3			05/23/13 13:36	1
1,1-Dichloropropene	ND		2.0		mg/m3			05/23/13 13:36	1
1,2,3-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 13:36	1
1,2,3-Trichloropropane	ND		10		mg/m3			05/23/13 13:36	1
1,2,4-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 13:36	1
1,2,4-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 13:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0		mg/m3			05/23/13 13:36	1
Ethylene Dibromide	ND		2.0		mg/m3			05/23/13 13:36	1
1,2-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 13:36	1
1,2-Dichloroethane	ND		2.0		mg/m3			05/23/13 13:36	1
1,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 13:36	1
1,3,5-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 13:36	1
1,3-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 13:36	1
1,3-Dichloropropane	ND		2.0		mg/m3			05/23/13 13:36	1
1,4-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 13:36	1
2,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 13:36	1
2-Butanone (MEK)	ND		10		mg/m3			05/23/13 13:36	1
2-Chlorotoluene	ND		5.0		mg/m3			05/23/13 13:36	1
2-Hexanone	ND		10		mg/m3			05/23/13 13:36	1
4-Chlorotoluene	ND		5.0		mg/m3			05/23/13 13:36	1
4-Methyl-2-pentanone (MIBK)	ND		10		mg/m3			05/23/13 13:36	1
Acetone	ND		20		mg/m3			05/23/13 13:36	1
Benzene	ND		2.0		mg/m3			05/23/13 13:36	1
Bromobenzene	ND		5.0		mg/m3			05/23/13 13:36	1
Chlorobromomethane	ND		5.0		mg/m3			05/23/13 13:36	1
Dichlorobromomethane	ND		2.0		mg/m3			05/23/13 13:36	1
Bromoform	ND		5.0		mg/m3			05/23/13 13:36	1
Bromomethane	ND		5.0		mg/m3			05/23/13 13:36	1
Carbon disulfide	ND		5.0		mg/m3			05/23/13 13:36	1
Carbon tetrachloride	ND		5.0		mg/m3			05/23/13 13:36	1
Chlorobenzene	ND		2.0		mg/m3			05/23/13 13:36	1
Chloroethane	ND		5.0		mg/m3			05/23/13 13:36	1
Chloroform	ND		2.0		mg/m3			05/23/13 13:36	1
Chloromethane	ND		5.0		mg/m3			05/23/13 13:36	1
cis-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 13:36	1
cis-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 13:36	1
Dibromomethane	ND		2.0		mg/m3			05/23/13 13:36	1
Chlorodibromomethane	ND		2.0		mg/m3			05/23/13 13:36	1
Dichlorodifluoromethane	ND		5.0		mg/m3			05/23/13 13:36	1
Ethylbenzene	ND		2.0		mg/m3			05/23/13 13:36	1
Hexachlorobutadiene	ND		5.0		mg/m3			05/23/13 13:36	1
Isopropylbenzene	ND		2.0		mg/m3			05/23/13 13:36	1
m-Xylene & p-Xylene	ND		5.0		mg/m3			05/23/13 13:36	1
Methyl tert-butyl ether	ND		1.0		mg/m3			05/23/13 13:36	1
Methylene Chloride	ND		5.0		mg/m3			05/23/13 13:36	1

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: VP-4

Lab Sample ID: 550-3276-6

Date Collected: 05/21/13 11:45
Matrix: Air
Date Received: 05/22/13 09:20
Sample Container: Tedlar Bag 1L

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.0		mg/m3			05/23/13 13:36	1
n-Butylbenzene	ND		5.0		mg/m3			05/23/13 13:36	1
N-Propylbenzene	ND		2.0		mg/m3			05/23/13 13:36	1
o-Xylene	ND		5.0		mg/m3			05/23/13 13:36	1
4-Isopropyltoluene	ND		2.0		mg/m3			05/23/13 13:36	1
sec-Butylbenzene	ND		5.0		mg/m3			05/23/13 13:36	1
Styrene	ND		2.0		mg/m3			05/23/13 13:36	1
tert-Butylbenzene	ND		5.0		mg/m3			05/23/13 13:36	1
Tetrachloroethene	ND		2.0		mg/m3			05/23/13 13:36	1
Toluene	ND		2.0		mg/m3			05/23/13 13:36	1
trans-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 13:36	1
trans-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 13:36	1
Trichloroethene	ND		2.0		mg/m3			05/23/13 13:36	1
Trichlorofluoromethane	ND		5.0		mg/m3			05/23/13 13:36	1
Vinyl acetate	ND		25		mg/m3			05/23/13 13:36	1
Vinyl chloride	ND		5.0		mg/m3			05/23/13 13:36	1
Xylenes, Total	ND		10		mg/m3			05/23/13 13:36	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
n-Hexane (TIC)	*ND*		*mg/m3*			*110-54-3*		*05/23/13 13:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*05/23/13 13:36*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*05/23/13 13:36*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*05/23/13 13:36*	*1*

Method: EPA3C/ASTMD1946 - Fixed Gases

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		10		ppm v/v			05/30/13 15:06	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-3276-3	VP-1	110	106	102
550-3276-4	VP-2	105	104	100
550-3276-5	VP-3	108	103	100
550-3276-6	VP-4	109	104	101
550-3391-A-4 DU	Duplicate	107	105	103
LCS 550-5663/9	Lab Control Sample	92	101	95
LCSD 550-5663/10	Lab Control Sample Dup	103	108	99
MB 550-5663/11	Method Blank	108	105	102

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-3224-A-1 MS	Matrix Spike	107	112	109
550-3224-A-1 MSD	Matrix Spike Duplicate	114	111	111
550-3276-1	MW-8	111	107	108
550-3276-2	Trip Blank	112	112	105
LCS 550-6270/4	Lab Control Sample	107	111	111
LCSD 550-6270/5	Lab Control Sample Dup	108	113	108
MB 550-6270/6	Method Blank	106	109	103

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB2
Lab Sample ID	Client Sample ID	(10-132)	(10-103)
550-3276-1	MW-8	68	21
LCS 550-5586/2-A	Lab Control Sample	72	40
LCSD 550-5586/3-A	Lab Control Sample Dup	69	44
MB 550-5586/1-A	Method Blank	72	39

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl (Surr)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**DCPA1 (10-140)**							
550-3276-1	MW-8	89							
LCS 550-5582/2-A	Lab Control Sample	79							
LCSD 550-5582/3-A	Lab Control Sample Dup	102							
MB 550-5582/1-A	Method Blank	78							

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-5663/11
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		mg/m3			05/23/13 11:27	1
1,1,1-Trichloroethane	ND		2.0		mg/m3			05/23/13 11:27	1
1,1,2,2-Tetrachloroethane	ND		2.0		mg/m3			05/23/13 11:27	1
1,1,2-Trichloroethane	ND		2.0		mg/m3			05/23/13 11:27	1
1,1-Dichloroethane	ND		2.0		mg/m3			05/23/13 11:27	1
1,1-Dichloroethene	ND		5.0		mg/m3			05/23/13 11:27	1
1,1-Dichloropropene	ND		2.0		mg/m3			05/23/13 11:27	1
1,2,3-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 11:27	1
1,2,3-Trichloropropane	ND		10		mg/m3			05/23/13 11:27	1
1,2,4-Trichlorobenzene	ND		5.0		mg/m3			05/23/13 11:27	1
1,2,4-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 11:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0		mg/m3			05/23/13 11:27	1
Ethylene Dibromide	ND		2.0		mg/m3			05/23/13 11:27	1
1,2-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 11:27	1
1,2-Dichloroethane	ND		2.0		mg/m3			05/23/13 11:27	1
1,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 11:27	1
1,3,5-Trimethylbenzene	ND		2.0		mg/m3			05/23/13 11:27	1
1,3-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 11:27	1
1,3-Dichloropropane	ND		2.0		mg/m3			05/23/13 11:27	1
1,4-Dichlorobenzene	ND		2.0		mg/m3			05/23/13 11:27	1
2,2-Dichloropropane	ND		2.0		mg/m3			05/23/13 11:27	1
2-Butanone (MEK)	ND		10		mg/m3			05/23/13 11:27	1
2-Chlorotoluene	ND		5.0		mg/m3			05/23/13 11:27	1
2-Hexanone	ND		10		mg/m3			05/23/13 11:27	1
4-Chlorotoluene	ND		5.0		mg/m3			05/23/13 11:27	1
4-Methyl-2-pentanone (MIBK)	ND		10		mg/m3			05/23/13 11:27	1
Acetone	ND		20		mg/m3			05/23/13 11:27	1
Benzene	ND		2.0		mg/m3			05/23/13 11:27	1
Bromobenzene	ND		5.0		mg/m3			05/23/13 11:27	1
Chlorobromomethane	ND		5.0		mg/m3			05/23/13 11:27	1
Dichlorobromomethane	ND		2.0		mg/m3			05/23/13 11:27	1
Bromoform	ND		5.0		mg/m3			05/23/13 11:27	1
Bromomethane	ND		5.0		mg/m3			05/23/13 11:27	1
Carbon disulfide	ND		5.0		mg/m3			05/23/13 11:27	1
Carbon tetrachloride	ND		5.0		mg/m3			05/23/13 11:27	1
Chlorobenzene	ND		2.0		mg/m3			05/23/13 11:27	1
Chloroethane	ND		5.0		mg/m3			05/23/13 11:27	1
Chloroform	ND		2.0		mg/m3			05/23/13 11:27	1
Chloromethane	ND		5.0		mg/m3			05/23/13 11:27	1
cis-1,2-Dichloroethene	ND		2.0		mg/m3			05/23/13 11:27	1
cis-1,3-Dichloropropene	ND		2.0		mg/m3			05/23/13 11:27	1
Dibromomethane	ND		2.0		mg/m3			05/23/13 11:27	1
Chlorodibromomethane	ND		2.0		mg/m3			05/23/13 11:27	1
Dichlorodifluoromethane	ND		5.0		mg/m3			05/23/13 11:27	1
Ethylbenzene	ND		2.0		mg/m3			05/23/13 11:27	1
Hexachlorobutadiene	ND		5.0		mg/m3			05/23/13 11:27	1
Isopropylbenzene	ND		2.0		mg/m3			05/23/13 11:27	1
m-Xylene & p-Xylene	ND		5.0		mg/m3			05/23/13 11:27	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-5663/11
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	mg/m3			05/23/13 11:27	1
Methylene Chloride	ND		5.0	mg/m3			05/23/13 11:27	1
Naphthalene	ND		5.0	mg/m3			05/23/13 11:27	1
n-Butylbenzene	ND		5.0	mg/m3			05/23/13 11:27	1
N-Propylbenzene	ND		2.0	mg/m3			05/23/13 11:27	1
o-Xylene	ND		5.0	mg/m3			05/23/13 11:27	1
4-Isopropyltoluene	ND		2.0	mg/m3			05/23/13 11:27	1
sec-Butylbenzene	ND		5.0	mg/m3			05/23/13 11:27	1
Styrene	ND		2.0	mg/m3			05/23/13 11:27	1
tert-Butylbenzene	ND		5.0	mg/m3			05/23/13 11:27	1
Tetrachloroethene	ND		2.0	mg/m3			05/23/13 11:27	1
Toluene	ND		2.0	mg/m3			05/23/13 11:27	1
trans-1,2-Dichloroethene	ND		2.0	mg/m3			05/23/13 11:27	1
trans-1,3-Dichloropropene	ND		2.0	mg/m3			05/23/13 11:27	1
Trichloroethene	ND		2.0	mg/m3			05/23/13 11:27	1
Trichlorofluoromethane	ND		5.0	mg/m3			05/23/13 11:27	1
Vinyl acetate	ND		25	mg/m3			05/23/13 11:27	1
Vinyl chloride	ND		5.0	mg/m3			05/23/13 11:27	1
Xylenes, Total	ND		10	mg/m3			05/23/13 11:27	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
n-Hexane (TIC)	*ND*		*mg/m3*			*110-54-3*		*05/23/13 11:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*05/23/13 11:27*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*05/23/13 11:27*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*05/23/13 11:27*	*1*

Lab Sample ID: LCS 550-5663/9
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	26.6		mg/m3		106	70 - 130
1,1,1-Trichloroethane	25.0	25.1		mg/m3		101	71 - 131
1,1,2,2-Tetrachloroethane	25.0	29.3		mg/m3		117	70 - 130
1,1,2-Trichloroethane	25.0	26.8		mg/m3		107	70 - 130
1,1-Dichloroethane	25.0	23.3		mg/m3		93	70 - 130
1,1-Dichloroethene	25.0	25.3		mg/m3		101	63 - 131
1,1-Dichloropropene	25.0	23.4		mg/m3		93	70 - 130
1,2,3-Trichlorobenzene	25.0	31.8		mg/m3		127	79 - 139
1,2,3-Trichloropropane	25.0	30.1		mg/m3		120	70 - 130
1,2,4-Trichlorobenzene	25.0	30.5		mg/m3		122	80 - 137
1,2,4-Trimethylbenzene	25.0	28.1		mg/m3		112	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	30.8		mg/m3		123	63 - 146
Ethylene Dibromide	25.0	26.9		mg/m3		107	70 - 130
1,2-Dichlorobenzene	25.0	28.7		mg/m3		115	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-5663/9
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	25.0	24.4		mg/m3		98	66 - 139
1,2-Dichloropropane	25.0	23.8		mg/m3		95	70 - 130
1,3,5-Trimethylbenzene	25.0	28.6		mg/m3		114	70 - 130
1,3-Dichlorobenzene	25.0	29.0		mg/m3		116	70 - 130
1,3-Dichloropropane	25.0	25.7		mg/m3		103	70 - 130
1,4-Dichlorobenzene	25.0	28.5		mg/m3		114	70 - 130
2,2-Dichloropropane	25.0	25.7		mg/m3		103	69 - 139
2-Butanone (MEK)	25.0	22.8		mg/m3		91	53 - 150
2-Chlorotoluene	25.0	27.4		mg/m3		109	70 - 130
2-Hexanone	25.0	27.3		mg/m3		109	55 - 150
4-Chlorotoluene	25.0	27.7		mg/m3		111	70 - 130
4-Methyl-2-pentanone (MIBK)	25.0	27.7		mg/m3		111	64 - 142
Acetone	25.0	ND		mg/m3		70	38 - 150
Benzene	25.0	24.8		mg/m3		99	70 - 130
Bromobenzene	25.0	28.0		mg/m3		112	70 - 130
Chlorobromomethane	25.0	23.4		mg/m3		94	70 - 130
Dichlorobromomethane	25.0	24.7		mg/m3		99	70 - 130
Bromoform	25.0	27.7		mg/m3		111	69 - 129
Bromomethane	25.0	26.7		mg/m3		107	57 - 138
Carbon disulfide	25.0	26.2		mg/m3		105	64 - 145
Carbon tetrachloride	25.0	27.0		mg/m3		108	70 - 143
Chlorobenzene	25.0	26.4		mg/m3		106	70 - 130
Chloroethane	25.0	25.3		mg/m3		101	66 - 131
Chloroform	25.0	23.3		mg/m3		93	70 - 130
Chloromethane	25.0	24.2		mg/m3		97	56 - 129
cis-1,2-Dichloroethene	25.0	24.4		mg/m3		97	70 - 130
cis-1,3-Dichloropropene	25.0	25.5		mg/m3		102	70 - 130
Dibromomethane	25.0	24.9		mg/m3		100	70 - 130
Chlorodibromomethane	25.0	26.1		mg/m3		104	70 - 130
Dichlorodifluoromethane	25.0	21.2		mg/m3		85	46 - 144
Ethylbenzene	25.0	27.7		mg/m3		111	70 - 130
Hexachlorobutadiene	25.0	34.6		mg/m3		138	76 - 145
Isopropylbenzene	25.0	31.2		mg/m3		125	88 - 141
m-Xylene & p-Xylene	25.0	27.3		mg/m3		109	70 - 130
Methyl tert-butyl ether	25.0	24.7		mg/m3		99	70 - 130
Methylene Chloride	25.0	21.4		mg/m3		86	63 - 128
Naphthalene	25.0	32.7		mg/m3		131	78 - 143
n-Butylbenzene	25.0	30.0		mg/m3		120	70 - 130
N-Propylbenzene	25.0	29.4		mg/m3		118	70 - 130
o-Xylene	25.0	27.4		mg/m3		110	70 - 130
4-Isopropyltoluene	25.0	29.0		mg/m3		116	70 - 130
sec-Butylbenzene	25.0	30.1		mg/m3		120	70 - 130
Styrene	25.0	27.0		mg/m3		108	70 - 130
tert-Butylbenzene	25.0	29.7		mg/m3		119	70 - 130
Tetrachloroethene	25.0	28.4		mg/m3		114	70 - 130
Toluene	25.0	25.8		mg/m3		103	70 - 130
trans-1,2-Dichloroethene	25.0	24.3		mg/m3		97	69 - 127
trans-1,3-Dichloropropene	25.0	25.5		mg/m3		102	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-5663/9
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	25.0	25.9		mg/m3		104	70 - 130
Trichlorofluoromethane	25.0	30.6		mg/m3		122	69 - 150
Vinyl acetate	25.0	32.8		mg/m3		131	67 - 148
Vinyl chloride	25.0	28.4		mg/m3		114	65 - 137
Xylenes, Total	50.0	54.7		mg/m3		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*92*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 550-5663/10
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	25.6		mg/m3		102	70 - 130	4	20
1,1,1-Trichloroethane	25.0	24.0		mg/m3		96	71 - 131	5	20
1,1,2,2-Tetrachloroethane	25.0	27.7		mg/m3		111	70 - 130	6	20
1,1,2-Trichloroethane	25.0	26.7		mg/m3		107	70 - 130	0	20
1,1-Dichloroethane	25.0	22.5		mg/m3		90	70 - 130	4	20
1,1-Dichloroethene	25.0	24.1		mg/m3		97	63 - 131	5	22
1,1-Dichloropropene	25.0	21.2		mg/m3		85	70 - 130	10	20
1,2,3-Trichlorobenzene	25.0	29.5		mg/m3		118	79 - 139	8	20
1,2,3-Trichloropropane	25.0	27.0		mg/m3		108	70 - 130	11	20
1,2,4-Trichlorobenzene	25.0	28.8		mg/m3		115	80 - 137	6	20
1,2,4-Trimethylbenzene	25.0	26.2		mg/m3		105	70 - 130	7	20
1,2-Dibromo-3-Chloropropane	25.0	28.5		mg/m3		114	63 - 146	8	22
Ethylene Dibromide	25.0	25.3		mg/m3		101	70 - 130	6	20
1,2-Dichlorobenzene	25.0	27.2		mg/m3		109	70 - 130	5	20
1,2-Dichloroethane	25.0	24.9		mg/m3		100	66 - 139	2	20
1,2-Dichloropropane	25.0	23.8		mg/m3		95	70 - 130	0	20
1,3,5-Trimethylbenzene	25.0	26.2		mg/m3		105	70 - 130	9	20
1,3-Dichlorobenzene	25.0	26.8		mg/m3		107	70 - 130	8	20
1,3-Dichloropropane	25.0	24.3		mg/m3		97	70 - 130	5	20
1,4-Dichlorobenzene	25.0	27.0		mg/m3		108	70 - 130	5	20
2,2-Dichloropropane	25.0	22.5		mg/m3		90	69 - 139	13	20
2-Butanone (MEK)	25.0	26.2		mg/m3		105	53 - 150	14	35
2-Chlorotoluene	25.0	25.4		mg/m3		102	70 - 130	7	20
2-Hexanone	25.0	28.0		mg/m3		112	55 - 150	3	35
4-Chlorotoluene	25.0	25.5		mg/m3		102	70 - 130	8	20
4-Methyl-2-pentanone (MIBK)	25.0	27.6		mg/m3		111	64 - 142	0	25
Acetone	25.0	22.3		mg/m3		89	38 - 150	24	35
Benzene	25.0	23.4		mg/m3		94	70 - 130	5	20
Bromobenzene	25.0	26.4		mg/m3		106	70 - 130	6	20
Chlorobromomethane	25.0	23.8		mg/m3		95	70 - 130	2	20
Dichlorobromomethane	25.0	25.4		mg/m3		101	70 - 130	3	20
Bromoform	25.0	26.3		mg/m3		105	69 - 129	5	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-5663/10
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane			25.0	26.3		mg/m3		105	57 - 138	2	20
Carbon disulfide			25.0	25.1		mg/m3		100	64 - 145	4	33
Carbon tetrachloride			25.0	23.6		mg/m3		94	70 - 143	13	20
Chlorobenzene			25.0	25.0		mg/m3		100	70 - 130	6	20
Chloroethane			25.0	23.6		mg/m3		94	66 - 131	7	20
Chloroform			25.0	23.0		mg/m3		92	70 - 130	1	20
Chloromethane			25.0	23.7		mg/m3		95	56 - 129	2	20
cis-1,2-Dichloroethene			25.0	24.0		mg/m3		96	70 - 130	1	20
cis-1,3-Dichloropropene			25.0	24.5		mg/m3		98	70 - 130	4	20
Dibromomethane			25.0	25.1		mg/m3		100	70 - 130	1	20
Chlorodibromomethane			25.0	25.1		mg/m3		101	70 - 130	4	20
Dichlorodifluoromethane			25.0	20.0		mg/m3		80	46 - 144	6	23
Ethylbenzene			25.0	25.2		mg/m3		101	70 - 130	10	20
Hexachlorobutadiene			25.0	29.6		mg/m3		118	76 - 145	16	20
Isopropylbenzene			25.0	28.0		mg/m3		112	88 - 141	11	20
m-Xylene & p-Xylene			25.0	25.1		mg/m3		100	70 - 130	8	20
Methyl tert-butyl ether			25.0	25.0		mg/m3		100	70 - 130	1	20
Methylene Chloride			25.0	21.0		mg/m3		84	63 - 128	2	21
Naphthalene			25.0	29.7		mg/m3		119	78 - 143	10	20
n-Butylbenzene			25.0	26.9		mg/m3		108	70 - 130	11	20
N-Propylbenzene			25.0	26.4		mg/m3		105	70 - 130	11	20
o-Xylene			25.0	25.4		mg/m3		102	70 - 130	8	20
4-Isopropyltoluene			25.0	25.6		mg/m3		102	70 - 130	12	20
sec-Butylbenzene			25.0	26.0		mg/m3		104	70 - 130	14	20
Styrene			25.0	25.9		mg/m3		104	70 - 130	4	20
tert-Butylbenzene			25.0	26.4		mg/m3		106	70 - 130	12	20
Tetrachloroethene			25.0	24.7		mg/m3		99	70 - 130	14	20
Toluene			25.0	24.8		mg/m3		99	70 - 130	4	20
trans-1,2-Dichloroethene			25.0	23.8		mg/m3		95	69 - 127	2	20
trans-1,3-Dichloropropene			25.0	25.4		mg/m3		101	70 - 130	1	20
Trichloroethene			25.0	25.0		mg/m3		100	70 - 130	4	20
Trichlorofluoromethane			25.0	28.2		mg/m3		113	69 - 150	8	22
Vinyl acetate			25.0	35.3		mg/m3		141	67 - 148	7	22
Vinyl chloride			25.0	26.6		mg/m3		106	65 - 137	6	20
Xylenes, Total			50.0	50.5		mg/m3		101	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 550-3391-A-4 DU
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,1,1,2-Tetrachloroethane				ND		mg/m3					20
1,1,1-Trichloroethane				ND		mg/m3					20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3391-A-4 DU
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,1,2,2-Tetrachloroethane				ND		mg/m3					20
1,1,2-Trichloroethane				ND		mg/m3					20
1,1-Dichloroethane				ND		mg/m3					20
1,1-Dichloroethene				ND		mg/m3					20
1,1-Dichloropropene				ND		mg/m3					20
1,2,3-Trichlorobenzene				ND		mg/m3					20
1,2,3-Trichloropropane				ND		mg/m3					20
1,2,4-Trichlorobenzene				ND		mg/m3					20
1,2,4-Trimethylbenzene				ND		mg/m3					20
1,2-Dibromo-3-Chloropropane				ND		mg/m3					20
Ethylene Dibromide				ND		mg/m3					20
1,2-Dichlorobenzene				ND		mg/m3					20
1,2-Dichloroethane				ND		mg/m3					20
1,2-Dichloropropane				ND		mg/m3					20
1,3,5-Trimethylbenzene				ND		mg/m3					20
1,3-Dichlorobenzene				ND		mg/m3					20
1,3-Dichloropropane				ND		mg/m3					20
1,4-Dichlorobenzene				ND		mg/m3					20
2,2-Dichloropropane				ND		mg/m3					20
2-Butanone (MEK)				ND		mg/m3					20
2-Chlorotoluene				ND		mg/m3					20
2-Hexanone				ND		mg/m3					20
4-Chlorotoluene				ND		mg/m3					20
4-Methyl-2-pentanone (MIBK)				ND		mg/m3					20
Acetone				ND		mg/m3					20
Benzene				ND		mg/m3					20
Bromobenzene				ND		mg/m3					20
Chlorobromomethane				ND		mg/m3					20
Dichlorobromomethane				ND		mg/m3					20
Bromoform				ND		mg/m3					20
Bromomethane				ND		mg/m3					20
Carbon disulfide				ND		mg/m3					20
Carbon tetrachloride				ND		mg/m3					20
Chlorobenzene				ND		mg/m3					20
Chloroethane				ND		mg/m3					20
Chloroform				ND		mg/m3					20
Chloromethane				ND		mg/m3					20
cis-1,2-Dichloroethene				ND		mg/m3					20
cis-1,3-Dichloropropene				ND		mg/m3					20
Dibromomethane				ND		mg/m3					20
Chlorodibromomethane				ND		mg/m3					20
Dichlorodifluoromethane				ND		mg/m3					20
Ethylbenzene				ND		mg/m3					20
Hexachlorobutadiene				ND		mg/m3					20
Isopropylbenzene				ND		mg/m3					20
m-Xylene & p-Xylene				ND		mg/m3					20
Methyl tert-butyl ether				ND		mg/m3					20
Methylene Chloride				ND		mg/m3					20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3391-A-4 DU
Matrix: Air
Analysis Batch: 5663

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Naphthalene				ND		mg/m3					20
n-Butylbenzene				ND		mg/m3					20
N-Propylbenzene				ND		mg/m3					20
o-Xylene				ND		mg/m3					20
4-Isopropyltoluene				ND		mg/m3					20
sec-Butylbenzene				ND		mg/m3					20
Styrene				ND		mg/m3					20
tert-Butylbenzene				ND		mg/m3					20
Tetrachloroethene				ND		mg/m3					20
Toluene				ND		mg/m3					20
trans-1,2-Dichloroethene				ND		mg/m3					20
trans-1,3-Dichloropropene				ND		mg/m3					20
Trichloroethene				ND		mg/m3					20
Trichlorofluoromethane				ND		mg/m3					20
Vinyl acetate				ND		mg/m3					20
Vinyl chloride				ND		mg/m3					20
Xylenes, Total	Missing Input			ND		mg/m3					20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/13 09:49	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/02/13 09:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/13 09:49	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/02/13 09:49	1
Ethylene Dibromide	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichloropropane	ND		0.50		ug/L			06/02/13 09:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,3-Dichloropropane	ND		0.50		ug/L			06/02/13 09:49	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 09:49	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 09:49	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 09:49	1
2-Hexanone	ND		5.0		ug/L			06/02/13 09:49	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 09:49	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 09:49	1
Acetone	ND		10		ug/L			06/02/13 09:49	1
Benzene	ND		0.50		ug/L			06/02/13 09:49	1
Bromobenzene	ND		0.50		ug/L			06/02/13 09:49	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Bromoform	ND		1.0		ug/L			06/02/13 09:49	1
Bromomethane	ND		1.0		ug/L			06/02/13 09:49	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 09:49	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 09:49	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
Chloroethane	ND		1.0		ug/L			06/02/13 09:49	1
Chloroform	ND		0.50		ug/L			06/02/13 09:49	1
Chloromethane	ND		1.0		ug/L			06/02/13 09:49	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dibromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 09:49	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 09:49	1
Iodomethane	ND		2.5		ug/L			06/02/13 09:49	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/02/13 09:49	1
Methylene Chloride	ND		1.0		ug/L			06/02/13 09:49	1
Methyl tert-butyl ether	ND		0.50		ug/L			06/02/13 09:49	1
Naphthalene	ND		2.5		ug/L			06/02/13 09:49	1
n-Butylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
N-Propylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
o-Xylene	ND		0.50		ug/L			06/02/13 09:49	1
4-Isopropyltoluene	ND		0.50		ug/L			06/02/13 09:49	1
sec-Butylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
Styrene	ND		0.50		ug/L			06/02/13 09:49	1
tert-Butylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
Tetrachloroethene	ND		0.50		ug/L			06/02/13 09:49	1
Toluene	ND		0.50		ug/L			06/02/13 09:49	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
Trichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
Trichlorofluoromethane	ND		0.50		ug/L			06/02/13 09:49	1
Vinyl acetate	ND	N1	2.0		ug/L			06/02/13 09:49	1
Vinyl chloride	ND		0.50		ug/L			06/02/13 09:49	1
Xylenes, Total	ND		1.5		ug/L			06/02/13 09:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		70 - 130		06/02/13 09:49	1
Toluene-d8 (Surr)	109		70 - 130		06/02/13 09:49	1
4-Bromofluorobenzene (Surr)	103		70 - 130		06/02/13 09:49	1

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	23.0		ug/L		92	70 - 130
1,1,1-Trichloroethane	25.0	22.7		ug/L		91	71 - 131
1,1,2,2-Tetrachloroethane	25.0	21.7		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	21.2		ug/L		85	70 - 130
1,1-Dichloroethane	25.0	22.2		ug/L		89	70 - 130
1,1-Dichloroethene	25.0	24.7		ug/L		99	63 - 131
1,1-Dichloropropene	25.0	21.6		ug/L		87	70 - 130
1,2,3-Trichlorobenzene	25.0	23.6		ug/L		94	79 - 139
1,2,3-Trichloropropane	25.0	21.9		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		98	80 - 137
1,2,4-Trimethylbenzene	25.0	23.9		ug/L		96	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	20.3		ug/L		81	63 - 146
Ethylene Dibromide	25.0	22.7		ug/L		91	70 - 130
1,2-Dichlorobenzene	25.0	23.4		ug/L		93	70 - 130
1,2-Dichloroethane	25.0	21.5		ug/L		86	66 - 139
1,2-Dichloropropane	25.0	22.4		ug/L		90	70 - 130
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130
1,3-Dichlorobenzene	25.0	23.6		ug/L		95	70 - 130
1,3-Dichloropropane	25.0	21.6		ug/L		86	70 - 130
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	70 - 130
2,2-Dichloropropane	25.0	21.8		ug/L		87	69 - 139
2-Butanone (MEK)	25.0	24.1		ug/L		97	53 - 150
2-Chlorotoluene	25.0	23.6		ug/L		95	70 - 130
2-Hexanone	25.0	25.4		ug/L		102	55 - 150
4-Chlorotoluene	25.0	23.8		ug/L		95	70 - 130
4-Methyl-2-pentanone (MIBK)	25.0	23.2		ug/L		93	64 - 142
Acetone	25.0	26.9		ug/L		108	38 - 150
Benzene	25.0	23.6		ug/L		94	70 - 130
Bromobenzene	25.0	23.0		ug/L		92	70 - 130
Chlorobromomethane	25.0	21.1		ug/L		84	70 - 130
Dichlorobromomethane	25.0	21.4		ug/L		86	70 - 130
Bromoform	25.0	20.5		ug/L		82	69 - 129
Bromomethane	25.0	24.7		ug/L		99	57 - 138
Carbon disulfide	25.0	22.7		ug/L		91	64 - 145
Carbon tetrachloride	25.0	23.3		ug/L		93	70 - 143
Chlorobenzene	25.0	23.0		ug/L		92	70 - 130
Chloroethane	25.0	22.5		ug/L		90	66 - 131
Chloroform	25.0	22.1		ug/L		88	70 - 130
Chloromethane	25.0	22.8		ug/L		91	56 - 129

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
cis-1,3-Dichloropropene	25.0	22.7		ug/L		91	70 - 130
Chlorodibromomethane	25.0	21.9		ug/L		88	70 - 130
Dibromomethane	25.0	21.5		ug/L		86	70 - 130
Dichlorodifluoromethane	25.0	20.3		ug/L		81	46 - 144
Ethylbenzene	25.0	24.4		ug/L		98	70 - 130
Hexachlorobutadiene	25.0	25.4		ug/L		102	76 - 145
Iodomethane	25.0	24.6		ug/L		99	70 - 130
Isopropylbenzene	25.0	26.9		ug/L		107	88 - 141
m-Xylene & p-Xylene	25.0	23.1		ug/L		92	70 - 130
Methylene Chloride	25.0	21.2		ug/L		85	63 - 128
Methyl tert-butyl ether	25.0	20.0		ug/L		80	70 - 130
Naphthalene	25.0	23.4		ug/L		94	78 - 143
n-Butylbenzene	25.0	25.0		ug/L		100	70 - 130
N-Propylbenzene	25.0	25.4		ug/L		102	70 - 130
o-Xylene	25.0	24.0		ug/L		96	70 - 130
4-Isopropyltoluene	25.0	23.5		ug/L		94	70 - 130
sec-Butylbenzene	25.0	24.8		ug/L		99	70 - 130
Styrene	25.0	23.5		ug/L		94	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	24.0		ug/L		96	70 - 130
trans-1,2-Dichloroethene	25.0	24.3		ug/L		97	69 - 127
trans-1,3-Dichloropropene	25.0	22.0		ug/L		88	70 - 130
Trichloroethene	25.0	22.5		ug/L		90	70 - 130
Trichlorofluoromethane	25.0	28.5		ug/L		114	69 - 150
Vinyl acetate	25.0	34.8	N1	ug/L		139	67 - 148
Vinyl chloride	25.0	23.1		ug/L		92	65 - 137
Xylenes, Total	50.0	47.1		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	22.5		ug/L		90	70 - 130	2	20
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	71 - 131	2	20
1,1,2,2-Tetrachloroethane	25.0	21.1		ug/L		85	70 - 130	3	20
1,1,2-Trichloroethane	25.0	21.5		ug/L		86	70 - 130	1	20
1,1-Dichloroethane	25.0	22.9		ug/L		91	70 - 130	3	20
1,1-Dichloroethene	25.0	24.8		ug/L		99	63 - 131	1	22
1,1-Dichloropropene	25.0	22.2		ug/L		89	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	24.2		ug/L		97	79 - 139	3	20
1,2,3-Trichloropropane	25.0	20.5		ug/L		82	70 - 130	6	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	25.0	24.8		ug/L		99	80 - 137	1	20
1,2,4-Trimethylbenzene	25.0	23.6		ug/L		94	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	19.1		ug/L		76	63 - 146	6	22
Ethylene Dibromide	25.0	21.7		ug/L		87	70 - 130	5	20
1,2-Dichlorobenzene	25.0	23.0		ug/L		92	70 - 130	1	20
1,2-Dichloroethane	25.0	21.8		ug/L		87	66 - 139	1	20
1,2-Dichloropropane	25.0	22.6		ug/L		91	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	23.8		ug/L		95	70 - 130	2	20
1,3-Dichlorobenzene	25.0	22.7		ug/L		91	70 - 130	4	20
1,3-Dichloropropane	25.0	20.0		ug/L		80	70 - 130	7	20
1,4-Dichlorobenzene	25.0	23.1		ug/L		92	70 - 130	3	20
2,2-Dichloropropane	25.0	21.4		ug/L		86	69 - 139	2	20
2-Butanone (MEK)	25.0	17.0		ug/L		68	53 - 150	34	35
2-Chlorotoluene	25.0	22.6		ug/L		90	70 - 130	4	20
2-Hexanone	25.0	17.8		ug/L		71	55 - 150	35	35
4-Chlorotoluene	25.0	23.2		ug/L		93	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	25.0	21.2		ug/L		85	64 - 142	9	25
Acetone	25.0	13.2	R6	ug/L		53	38 - 150	68	35
Benzene	25.0	23.7		ug/L		95	70 - 130	0	20
Bromobenzene	25.0	21.8		ug/L		87	70 - 130	5	20
Chlorobromomethane	25.0	21.5		ug/L		86	70 - 130	2	20
Dichlorobromomethane	25.0	22.0		ug/L		88	70 - 130	3	20
Bromoform	25.0	19.2		ug/L		77	69 - 129	7	20
Bromomethane	25.0	25.3		ug/L		101	57 - 138	2	20
Carbon disulfide	25.0	23.4		ug/L		94	64 - 145	3	33
Carbon tetrachloride	25.0	23.4		ug/L		94	70 - 143	1	20
Chlorobenzene	25.0	22.1		ug/L		88	70 - 130	4	20
Chloroethane	25.0	22.8		ug/L		91	66 - 131	1	20
Chloroform	25.0	22.9		ug/L		91	70 - 130	4	20
Chloromethane	25.0	22.4		ug/L		90	56 - 129	2	20
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130	0	20
cis-1,3-Dichloropropene	25.0	21.6		ug/L		87	70 - 130	5	20
Chlorodibromomethane	25.0	21.7		ug/L		87	70 - 130	1	20
Dibromomethane	25.0	22.3		ug/L		89	70 - 130	4	20
Dichlorodifluoromethane	25.0	20.4		ug/L		82	46 - 144	1	23
Ethylbenzene	25.0	23.3		ug/L		93	70 - 130	5	20
Hexachlorobutadiene	25.0	25.2		ug/L		101	76 - 145	1	20
Iodomethane	25.0	24.6		ug/L		99	70 - 130	0	20
Isopropylbenzene	25.0	25.9		ug/L		104	88 - 141	4	20
m-Xylene & p-Xylene	25.0	22.1		ug/L		88	70 - 130	5	20
Methylene Chloride	25.0	21.7		ug/L		87	63 - 128	2	21
Methyl tert-butyl ether	25.0	20.2		ug/L		81	70 - 130	1	20
Naphthalene	25.0	23.1		ug/L		92	78 - 143	1	20
n-Butylbenzene	25.0	24.5		ug/L		98	70 - 130	2	20
N-Propylbenzene	25.0	24.9		ug/L		99	70 - 130	2	20
o-Xylene	25.0	23.5		ug/L		94	70 - 130	2	20
4-Isopropyltoluene	25.0	23.4		ug/L		94	70 - 130	0	20
sec-Butylbenzene	25.0	24.5		ug/L		98	70 - 130	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Styrene	25.0	23.0		ug/L		92	70 - 130	2	20
Tetrachloroethene	25.0	23.4		ug/L		94	70 - 130	3	20
Toluene	25.0	23.8		ug/L		95	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	69 - 127	2	20
trans-1,3-Dichloropropene	25.0	22.4		ug/L		89	70 - 130	1	20
Trichloroethene	25.0	23.8		ug/L		95	70 - 130	6	20
Trichlorofluoromethane	25.0	28.3		ug/L		113	69 - 150	1	22
Vinyl acetate	25.0	34.7	N1	ug/L		139	67 - 148	0	22
Vinyl chloride	25.0	23.4		ug/L		93	65 - 137	1	20
Xylenes, Total	50.0	45.6		ug/L		91	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*113*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	22.8		ug/L		91	70 - 130
1,1,1-Trichloroethane	ND		25.0	22.9		ug/L		92	64 - 138
1,1,2,2-Tetrachloroethane	ND		25.0	20.2		ug/L		81	63 - 137
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	63 - 132
1,1-Dichloroethane	ND		25.0	22.2		ug/L		89	62 - 130
1,1-Dichloroethene	ND		25.0	24.6		ug/L		98	57 - 137
1,1-Dichloropropene	ND		25.0	21.0		ug/L		84	64 - 134
1,2,3-Trichlorobenzene	ND		25.0	23.2		ug/L		93	74 - 139
1,2,3-Trichloropropane	ND		25.0	18.6		ug/L		74	68 - 130
1,2,4-Trichlorobenzene	ND		25.0	23.8		ug/L		95	74 - 138
1,2,4-Trimethylbenzene	ND		25.0	22.9		ug/L		92	63 - 135
1,2-Dibromo-3-Chloropropane	ND		25.0	18.3		ug/L		73	53 - 145
Ethylene Dibromide	ND		25.0	21.1		ug/L		84	70 - 130
1,2-Dichlorobenzene	ND		25.0	22.6		ug/L		90	70 - 130
1,2-Dichloroethane	ND		25.0	21.8		ug/L		87	54 - 147
1,2-Dichloropropane	ND		25.0	22.4		ug/L		90	68 - 126
1,3,5-Trimethylbenzene	ND		25.0	23.6		ug/L		94	66 - 137
1,3-Dichlorobenzene	ND		25.0	22.8		ug/L		91	70 - 130
1,3-Dichloropropane	ND		25.0	20.5		ug/L		82	68 - 129
1,4-Dichlorobenzene	ND		25.0	23.0		ug/L		92	70 - 130
2,2-Dichloropropane	ND		25.0	21.5		ug/L		86	60 - 146
2-Butanone (MEK)	ND		25.0	14.7		ug/L		59	31 - 143
2-Chlorotoluene	ND		25.0	22.6		ug/L		91	71 - 131
2-Hexanone	ND		25.0	15.3		ug/L		61	40 - 142
4-Chlorotoluene	ND		25.0	22.8		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	ND		25.0	18.9		ug/L		76	52 - 143
Acetone	ND	R6	25.0	12.0		ug/L		48	29 - 139

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	23.5		ug/L		94	68 - 131
Bromobenzene	ND		25.0	22.6		ug/L		90	70 - 130
Chlorobromomethane	ND		25.0	21.8		ug/L		87	64 - 132
Dichlorobromomethane	28		25.0	47.5		ug/L		80	63 - 138
Bromoform	5.6		25.0	24.2		ug/L		75	60 - 128
Bromomethane	ND		25.0	25.9		ug/L		104	47 - 144
Carbon disulfide	ND		25.0	22.7		ug/L		91	45 - 150
Carbon tetrachloride	ND		25.0	22.3		ug/L		89	65 - 147
Chlorobenzene	ND		25.0	22.2		ug/L		89	70 - 130
Chloroethane	ND		25.0	22.6		ug/L		90	57 - 139
Chloroform	17		25.0	38.8		ug/L		87	63 - 131
Chloromethane	ND		25.0	23.1		ug/L		92	47 - 134
cis-1,2-Dichloroethene	ND		25.0	23.5		ug/L		94	65 - 127
cis-1,3-Dichloropropene	ND		25.0	22.2		ug/L		89	63 - 135
Chlorodibromomethane	30		25.0	50.0		ug/L		82	65 - 134
Dibromomethane	ND		25.0	21.0		ug/L		84	66 - 136
Dichlorodifluoromethane	ND		25.0	20.3		ug/L		81	40 - 148
Ethylbenzene	ND		25.0	23.3		ug/L		93	74 - 134
Hexachlorobutadiene	ND		25.0	24.1		ug/L		97	69 - 150
Iodomethane	ND		25.0	24.6		ug/L		98	53 - 150
Isopropylbenzene	ND		25.0	25.6		ug/L		102	80 - 146
m-Xylene & p-Xylene	ND		25.0	22.6		ug/L		90	58 - 138
Methylene Chloride	ND		25.0	21.7		ug/L		87	55 - 133
Methyl tert-butyl ether	ND		25.0	19.9		ug/L		80	67 - 138
Naphthalene	ND		25.0	21.2		ug/L		85	67 - 146
n-Butylbenzene	ND		25.0	23.5		ug/L		94	69 - 140
N-Propylbenzene	ND		25.0	24.3		ug/L		97	74 - 140
o-Xylene	ND		25.0	23.3		ug/L		93	66 - 137
4-Isopropyltoluene	ND		25.0	22.8		ug/L		91	70 - 133
sec-Butylbenzene	ND		25.0	24.2		ug/L		97	72 - 136
Styrene	ND		25.0	22.9		ug/L		91	43 - 144
Tetrachloroethene	ND		25.0	23.3		ug/L		93	67 - 131
Toluene	ND		25.0	23.2		ug/L		93	65 - 138
trans-1,2-Dichloroethene	ND		25.0	23.4		ug/L		94	62 - 131
trans-1,3-Dichloropropene	ND		25.0	21.4		ug/L		86	58 - 136
Trichloroethene	ND		25.0	22.1		ug/L		88	66 - 132
Trichlorofluoromethane	ND		25.0	27.8		ug/L		111	62 - 150
Vinyl acetate	ND	N1	25.0	32.3	N1	ug/L		129	47 - 150
Vinyl chloride	ND		25.0	22.5		ug/L		90	55 - 146
Xylenes, Total	ND		50.0	45.9		ug/L		92	68 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	22.5		ug/L		90	70 - 130	1	30
1,1,1-Trichloroethane	ND		25.0	23.1		ug/L		92	64 - 138	1	35
1,1,2,2-Tetrachloroethane	ND		25.0	20.2		ug/L		81	63 - 137	0	32
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	63 - 132	0	35
1,1-Dichloroethane	ND		25.0	22.8		ug/L		91	62 - 130	2	34
1,1-Dichloroethene	ND		25.0	24.6		ug/L		98	57 - 137	0	35
1,1-Dichloropropene	ND		25.0	21.4		ug/L		86	64 - 134	2	34
1,2,3-Trichlorobenzene	ND		25.0	22.5		ug/L		90	74 - 139	3	26
1,2,3-Trichloropropane	ND		25.0	19.5		ug/L		78	68 - 130	4	32
1,2,4-Trichlorobenzene	ND		25.0	23.5		ug/L		94	74 - 138	2	26
1,2,4-Trimethylbenzene	ND		25.0	22.5		ug/L		90	63 - 135	2	31
1,2-Dibromo-3-Chloropropane	ND		25.0	18.4		ug/L		74	53 - 145	0	35
Ethylene Dibromide	ND		25.0	21.9		ug/L		88	70 - 130	4	33
1,2-Dichlorobenzene	ND		25.0	22.4		ug/L		90	70 - 130	1	27
1,2-Dichloroethane	ND		25.0	22.3		ug/L		89	54 - 147	2	35
1,2-Dichloropropane	ND		25.0	23.2		ug/L		93	68 - 126	3	32
1,3,5-Trimethylbenzene	ND		25.0	23.0		ug/L		92	66 - 137	3	30
1,3-Dichlorobenzene	ND		25.0	22.7		ug/L		91	70 - 130	0	28
1,3-Dichloropropane	ND		25.0	21.2		ug/L		85	68 - 129	3	33
1,4-Dichlorobenzene	ND		25.0	22.6		ug/L		90	70 - 130	2	26
2,2-Dichloropropane	ND		25.0	21.8		ug/L		87	60 - 146	2	35
2-Butanone (MEK)	ND		25.0	16.7		ug/L		67	31 - 143	12	35
2-Chlorotoluene	ND		25.0	22.5		ug/L		90	71 - 131	0	29
2-Hexanone	ND		25.0	17.6		ug/L		70	40 - 142	14	35
4-Chlorotoluene	ND		25.0	22.5		ug/L		90	70 - 130	1	28
4-Methyl-2-pentanone (MIBK)	ND		25.0	21.1		ug/L		84	52 - 143	11	35
Acetone	ND	R6	25.0	11.0		ug/L		44	29 - 139	8	35
Benzene	ND		25.0	23.8		ug/L		95	68 - 131	2	32
Bromobenzene	ND		25.0	22.9		ug/L		92	70 - 130	1	28
Chlorobromomethane	ND		25.0	22.2		ug/L		89	64 - 132	2	35
Dichlorobromomethane	28		25.0	48.8		ug/L		85	63 - 138	3	31
Bromoform	5.6		25.0	25.2		ug/L		79	60 - 128	4	31
Bromomethane	ND		25.0	26.2		ug/L		105	47 - 144	1	35
Carbon disulfide	ND		25.0	23.0		ug/L		92	45 - 150	1	35
Carbon tetrachloride	ND		25.0	23.2		ug/L		93	65 - 147	4	35
Chlorobenzene	ND		25.0	22.8		ug/L		91	70 - 130	2	30
Chloroethane	ND		25.0	22.6		ug/L		91	57 - 139	0	35
Chloroform	17		25.0	39.0		ug/L		88	63 - 131	0	33
Chloromethane	ND		25.0	23.9		ug/L		96	47 - 134	3	35
cis-1,2-Dichloroethene	ND		25.0	23.9		ug/L		96	65 - 127	2	34
cis-1,3-Dichloropropene	ND		25.0	22.6		ug/L		90	63 - 135	2	35
Chlorodibromomethane	30		25.0	51.0		ug/L		86	65 - 134	2	33
Dibromomethane	ND		25.0	22.6		ug/L		91	66 - 136	8	35
Dichlorodifluoromethane	ND		25.0	21.1		ug/L		85	40 - 148	4	35
Ethylbenzene	ND		25.0	23.5		ug/L		94	74 - 134	1	32
Hexachlorobutadiene	ND		25.0	23.0		ug/L		92	69 - 150	5	32
Iodomethane	ND		25.0	25.5		ug/L		102	53 - 150	4	35
Isopropylbenzene	ND		25.0	25.3		ug/L		101	80 - 146	1	32

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene	ND		25.0	22.4		ug/L		90	58 - 138	1	29
Methylene Chloride	ND		25.0	23.1		ug/L		93	55 - 133	6	35
Methyl tert-butyl ether	ND		25.0	20.3		ug/L		81	67 - 138	2	21
Naphthalene	ND		25.0	21.5		ug/L		86	67 - 146	1	29
n-Butylbenzene	ND		25.0	22.7		ug/L		91	69 - 140	4	32
N-Propylbenzene	ND		25.0	23.9		ug/L		96	74 - 140	2	32
o-Xylene	ND		25.0	23.1		ug/L		93	66 - 137	1	26
4-Isopropyltoluene	ND		25.0	22.1		ug/L		88	70 - 133	3	32
sec-Butylbenzene	ND		25.0	23.5		ug/L		94	72 - 136	3	33
Styrene	ND		25.0	23.1		ug/L		92	43 - 144	1	35
Tetrachloroethene	ND		25.0	23.1		ug/L		92	67 - 131	1	31
Toluene	ND		25.0	23.8		ug/L		95	65 - 138	3	33
trans-1,2-Dichloroethene	ND		25.0	24.5		ug/L		98	62 - 131	5	35
trans-1,3-Dichloropropene	ND		25.0	22.0		ug/L		88	58 - 136	2	35
Trichloroethene	ND		25.0	22.9		ug/L		91	66 - 132	3	29
Trichlorofluoromethane	ND		25.0	27.4		ug/L		110	62 - 150	2	35
Vinyl acetate	ND	N1	25.0	33.6	N1	ug/L		134	47 - 150	4	35
Vinyl chloride	ND		25.0	23.2		ug/L		93	55 - 146	3	35
Xylenes, Total	ND		50.0	45.5		ug/L		91	68 - 131	1	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*114*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 550-5586/1-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5586

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Methoxychlor	ND		0.10	ug/L		05/23/13 11:05	06/10/13 20:07	1
Toxaphene	ND		1.0	ug/L		05/23/13 11:05	06/10/13 20:07	1
delta-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Dieldrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan I	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan II	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan sulfate	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endrin aldehyde	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
gamma-BHC (Lindane)	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Heptachlor	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDD	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDE	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDT	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Aldrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 550-5586/1-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5586

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
beta-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Chlordane (technical)	ND		0.50	ug/L		05/23/13 11:05	06/10/13 20:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 132*	*05/23/13 11:05*	*06/10/13 20:07*	*1*
DCB Decachlorobiphenyl (Surr)	*39*		*10 - 103*	*05/23/13 11:05*	*06/10/13 20:07*	*1*

Lab Sample ID: LCS 550-5586/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor epoxide	1.00	0.965		ug/L		96	69 - 118
Methoxychlor	1.00	0.958		ug/L		96	61 - 128
delta-BHC	1.00	0.996		ug/L		100	68 - 118
Dieldrin	1.00	0.964		ug/L		96	69 - 120
Endosulfan I	1.00	0.962		ug/L		96	68 - 122
Endosulfan II	1.00	0.965		ug/L		97	70 - 121
Endosulfan sulfate	1.00	0.997		ug/L		100	69 - 123
Endrin	1.00	0.976		ug/L		98	67 - 122
Endrin aldehyde	1.00	0.988		ug/L		99	69 - 121
gamma-BHC (Lindane)	1.00	0.974		ug/L		97	70 - 119
Heptachlor	1.00	0.873		ug/L		87	51 - 124
4,4'-DDD	1.00	0.975		ug/L		97	65 - 122
4,4'-DDE	1.00	0.908		ug/L		91	58 - 119
4,4'-DDT	1.00	0.908		ug/L		91	61 - 126
Aldrin	1.00	0.769		ug/L		77	43 - 120
alpha-BHC	1.00	1.00		ug/L		100	70 - 117
beta-BHC	1.00	0.986		ug/L		99	70 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*72*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*40*		*10 - 103*

Lab Sample ID: LCSD 550-5586/3-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	1.00	0.940		ug/L		94	69 - 118	3	29
Methoxychlor	1.00	0.924		ug/L		92	61 - 128	4	32
delta-BHC	1.00	0.971		ug/L		97	68 - 118	3	28
Dieldrin	1.00	0.940		ug/L		94	69 - 120	2	30
Endosulfan I	1.00	0.939		ug/L		94	68 - 122	2	30
Endosulfan II	1.00	0.940		ug/L		94	70 - 121	3	30
Endosulfan sulfate	1.00	0.968		ug/L		97	69 - 123	3	30
Endrin	1.00	0.951		ug/L		95	67 - 122	3	35

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 550-5586/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6944 — **Prep Batch: 5586**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Endrin aldehyde	1.00	0.964		ug/L		96	69 - 121	2	30
gamma-BHC (Lindane)	1.00	0.955		ug/L		95	70 - 119	2	28
Heptachlor	1.00	0.847		ug/L		85	51 - 124	3	33
4,4'-DDD	1.00	0.964		ug/L		96	65 - 122	1	33
4,4'-DDE	1.00	0.896		ug/L		90	58 - 119	1	35
4,4'-DDT	1.00	0.897		ug/L		90	61 - 126	1	35
Aldrin	1.00	0.747		ug/L		75	43 - 120	3	33
alpha-BHC	1.00	0.994		ug/L		99	70 - 117	1	28
beta-BHC	1.00	0.964		ug/L		96	70 - 117	2	28

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*69*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*44*		*10 - 103*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 550-5582/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Silvex (2,4,5-TP)	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
2,4-D	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
2,4-DB	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dicamba	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dichlorprop	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dinoseb	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Pentachlorophenol	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*78*		*10 - 140*	*05/23/13 10:06*	*06/05/13 22:07*	*1*

Lab Sample ID: LCS 550-5582/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	1.76	Q9 V1	ug/L		88	38 - 119
Silvex (2,4,5-TP)	2.00	1.76	Q9	ug/L		88	10 - 150
2,4-D	2.00	1.87	Q9 V1	ug/L		93	10 - 131
2,4-DB	2.00	1.23	Q9 V1	ug/L		62	10 - 144
Dicamba	2.00	1.54	Q9	ug/L		77	14 - 125
Dichlorprop	2.00	1.44	Q9	ug/L		72	15 - 150
Dinoseb	2.00	0.731	Q9	ug/L		37	10 - 133
Pentachlorophenol	2.00	1.74	Q9	ug/L		87	20 - 141

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 550-5582/2-A
Matrix: Water
Analysis Batch: 6597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5582

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	79		10 - 140

Lab Sample ID: LCSD 550-5582/3-A
Matrix: Water
Analysis Batch: 6597

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5582

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	2.00	2.16	Q9 V1	ug/L		108	38 - 119	21	35
Silvex (2,4,5-TP)	2.00	2.17	Q9	ug/L		108	10 - 150	21	35
2,4-D	2.00	2.45	Q9 V1	ug/L		123	10 - 131	27	35
2,4-DB	2.00	1.57	Q9 V1	ug/L		78	10 - 144	24	35
Dicamba	2.00	1.93	Q9	ug/L		96	14 - 125	23	35
Dichlorprop	2.00	1.79	Q9	ug/L		90	15 - 150	22	35
Dinoseb	2.00	0.858	Q9	ug/L		43	10 - 133	16	35
Pentachlorophenol	2.00	2.12	Q9	ug/L		106	20 - 141	20	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	102		10 - 140

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-5615/2
Matrix: Water
Analysis Batch: 5615

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	mg/L			05/22/13 13:48	1
Nitrite as N	ND		0.20	mg/L			05/22/13 13:48	1
Chloride	ND		2.0	mg/L			05/22/13 13:48	1
Sulfate	ND		2.0	mg/L			05/22/13 13:48	1

Lab Sample ID: LCS 550-5615/5
Matrix: Water
Analysis Batch: 5615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	4.00	4.02		mg/L		100	90 - 110
Nitrite as N	4.00	4.14		mg/L		103	90 - 110
Nitrate Nitrite as N	8.00	8.16		mg/L		102	90 - 110
Chloride	20.0	20.2		mg/L		101	90 - 110
Sulfate	20.0	20.1		mg/L		100	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 550-5615/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.00	4.13		mg/L		103	90 - 110	3	20
Nitrite as N	4.00	4.16		mg/L		104	90 - 110	1	20
Nitrate Nitrite as N	8.00	8.29		mg/L		104	90 - 110	2	20
Chloride	20.0	20.3		mg/L		101	90 - 110	0	20
Sulfate	20.0	20.1		mg/L		101	90 - 110	0	20

Lab Sample ID: 550-3279-B-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	ND		4.00	4.23		mg/L		102	80 - 120
Nitrite as N	ND		4.00	4.09		mg/L		102	80 - 120
Nitrate Nitrite as N	ND		8.00	8.32		mg/L		104	80 - 120
Chloride	25		20.0	45.5		mg/L		104	80 - 120
Sulfate	50		20.0	69.1		mg/L		98	80 - 120

Lab Sample ID: 550-3279-B-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	ND		4.00	4.29		mg/L		103	80 - 120	1	20
Nitrite as N	ND		4.00	4.31		mg/L		108	80 - 120	5	20
Nitrate Nitrite as N	ND		8.00	8.60		mg/L		108	80 - 120	3	20
Chloride	25		20.0	45.6		mg/L		105	80 - 120	0	20
Sulfate	50		20.0	69.2		mg/L		98	80 - 120	0	20

Lab Sample ID: MB 550-5834/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	mg/L			05/28/13 12:55	1
Nitrite as N	ND		0.20	mg/L			05/28/13 12:55	1
Chloride	ND		2.0	mg/L			05/28/13 12:55	1
Sulfate	ND		2.0	mg/L			05/28/13 12:55	1

Lab Sample ID: LCS 550-5834/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	4.00	4.12		mg/L		103	90 - 110
Nitrite as N	4.00	4.02		mg/L		100	90 - 110
Nitrate Nitrite as N	8.00	8.14		mg/L		102	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Sulfate	20.0	20.2		mg/L		101	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 550-5834/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.00	4.12		mg/L		103	90 - 110	0	20
Nitrite as N	4.00	4.02		mg/L		101	90 - 110	0	20
Nitrate Nitrite as N	8.00	8.14		mg/L		102	90 - 110	0	20
Chloride	20.0	20.3		mg/L		101	90 - 110	0	20
Sulfate	20.0	20.2		mg/L		101	90 - 110	0	20

Lab Sample ID: 550-3318-B-3 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		20.0	33.7		mg/L		107	80 - 120
Sulfate	21		20.0	42.3		mg/L		106	80 - 120

Lab Sample ID: 550-3318-B-3 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		20.0	34.1		mg/L		108	80 - 120	1	20
Sulfate	21		20.0	42.7		mg/L		108	80 - 120	1	20

Method: EPA3C/ASTMD1946 - Fixed Gases

Lab Sample ID: MB 550-6043/3 — **Client Sample ID: Method Blank**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 6043

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		10	ppm v/v			05/30/13 10:08	1

Lab Sample ID: LCS 550-6043/4 — **Client Sample ID: Lab Control Sample**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 6043

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane	2000	2100		ppm v/v		105	80 - 120

Lab Sample ID: LCSD 550-6043/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 6043

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane	2000	1880		ppm v/v		94	80 - 120	11	20

Method: EPA3C/ASTMD1946 - Fixed Gases (Continued)

Lab Sample ID: 550-3276-6 DU — **Client Sample ID: VP-4**
Matrix: Air — **Prep Type: Total/NA**
Analysis Batch: 6043

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Methane	ND			ND		ppm v/v				NC	10

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-5962/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10		mg/L		05/29/13 13:05	06/03/13 20:52	1
Barium	ND		0.10		mg/L		05/29/13 13:05	06/03/13 20:52	1
Cadmium	ND		0.0010		mg/L		05/29/13 13:05	06/03/13 20:52	1
Calcium	ND		2.0		mg/L		05/29/13 13:05	06/03/13 20:52	1
Chromium	ND		0.010		mg/L		05/29/13 13:05	06/03/13 20:52	1
Lead	ND		0.015		mg/L		05/29/13 13:05	06/03/13 20:52	1
Magnesium	ND		2.0		mg/L		05/29/13 13:05	06/03/13 20:52	1
Selenium	ND		0.10		mg/L		05/29/13 13:05	06/03/13 20:52	1
Silver	ND		0.010		mg/L		05/29/13 13:05	06/03/13 20:52	1

Lab Sample ID: MB 550-5962/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		2.0		mg/L		05/29/13 13:05	06/05/13 11:08	1

Lab Sample ID: LCS 550-5962/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			1.00	0.959		mg/L		96	85 - 115		
Barium			1.00	0.969		mg/L		97	85 - 115		
Cadmium			1.00	0.955		mg/L		96	85 - 115		
Calcium			21.0	20.4		mg/L		97	85 - 115		
Chromium			1.00	0.990		mg/L		99	85 - 115		
Lead			1.00	0.956		mg/L		96	85 - 115		
Magnesium			21.0	20.6		mg/L		98	85 - 115		
Selenium			1.00	0.938		mg/L		94	85 - 115		
Silver			0.0750	0.0694		mg/L		93	85 - 115		

Lab Sample ID: LCS 550-5962/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sodium			20.0	19.1		mg/L		95	85 - 115		

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 550-5962/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	0.999		mg/L		100	85 - 115	4	20
Barium	1.00	1.01		mg/L		101	85 - 115	4	20
Cadmium	1.00	0.995		mg/L		99	85 - 115	4	20
Calcium	21.0	21.6		mg/L		103	85 - 115	6	20
Chromium	1.00	1.03		mg/L		103	85 - 115	4	20
Lead	1.00	0.994		mg/L		99	85 - 115	4	20
Magnesium	21.0	21.2		mg/L		101	85 - 115	3	20
Selenium	1.00	0.974		mg/L		97	85 - 115	4	20
Silver	0.0750	0.0710		mg/L		95	85 - 115	2	20

Lab Sample ID: LCSD 550-5962/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	20.0	19.6		mg/L		98	85 - 115	3	20

Lab Sample ID: 550-3226-C-2-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	1.01		mg/L		99	70 - 130
Barium	ND		1.00	1.03		mg/L		98	70 - 130
Cadmium	ND		1.00	0.989		mg/L		99	70 - 130
Calcium	39		21.0	59.8		mg/L		101	70 - 130
Chromium	0.019		1.00	1.03		mg/L		101	70 - 130
Lead	ND		1.00	0.971		mg/L		97	70 - 130
Magnesium	18		21.0	38.7		mg/L		97	70 - 130
Selenium	ND		1.00	0.981		mg/L		98	70 - 130
Silver	ND		0.0750	0.0709		mg/L		95	70 - 130

Lab Sample ID: 550-3226-C-2-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	130	M3	20.0	143	M3	mg/L		69	70 - 130

Lab Sample ID: 550-3226-C-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.00		mg/L		98	70 - 130	1	20
Barium	ND		1.00	1.02		mg/L		96	70 - 130	2	20
Cadmium	ND		1.00	0.977		mg/L		98	70 - 130	1	20
Calcium	39		21.0	59.0		mg/L		97	70 - 130	1	20
Chromium	0.019		1.00	1.01		mg/L		99	70 - 130	1	20

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 550-3226-C-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		1.00	0.967		mg/L		97	70 - 130	0	20
Magnesium	18		21.0	38.8		mg/L		97	70 - 130	0	20
Selenium	ND		1.00	0.975		mg/L		97	70 - 130	1	20
Silver	ND		0.0750	0.0710		mg/L		95	70 - 130	0	20

Lab Sample ID: 550-3226-C-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	130	M3	20.0	145	M3	mg/L		81	70 - 130	2	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 550-6123/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020		mg/L		05/30/13 17:12	05/31/13 10:00	1

Lab Sample ID: LCS 550-6123/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			0.0100	0.0107		mg/L		107	85 - 115		

Lab Sample ID: LCSD 550-6123/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			0.0100	0.0106		mg/L		106	85 - 115	1	20

Lab Sample ID: 550-3367-F-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	ND		0.0100	0.0107		mg/L		107	70 - 130		

Lab Sample ID: 550-3367-F-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		0.0100	0.0107		mg/L		107	70 - 130	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-6194/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		6.0		mg/L			05/30/13 17:43	1
Bicarbonate Alkalinity as CaCO3	ND		6.0		mg/L			05/30/13 17:43	1
Carbonate Alkalinity as CaCO3	ND		6.0		mg/L			05/30/13 17:43	1
Alkalinity, Phenolphthalein	ND		6.0		mg/L			05/30/13 17:43	1
Hydroxide Alkalinity as CaCO3	ND		6.0		mg/L			05/30/13 17:43	1

Lab Sample ID: LCS 550-6194/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity as CaCO3			250	251		mg/L		100	90 - 110		

Lab Sample ID: LCSD 550-6194/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3			250	249		mg/L		99	90 - 110	1	20

Lab Sample ID: 550-3261-F-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	310			302		mg/L				1	20
Bicarbonate Alkalinity as CaCO3	310			302		mg/L				1	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20
Alkalinity, Phenolphthalein	ND			ND		mg/L				NC	20
Hydroxide Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Lab Sample ID: 550-3424-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	120			119		mg/L				0.9	20
Bicarbonate Alkalinity as CaCO3	120			119		mg/L				0.9	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20
Alkalinity, Phenolphthalein	ND			ND		mg/L				NC	20
Hydroxide Alkalinity as CaCO3	ND			ND		mg/L				NC	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 550-5984/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.050		mg/L		05/29/13 12:40	05/29/13 17:20	1

Lab Sample ID: LCS 550-5984/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.106		mg/L		106	90 - 110		

Lab Sample ID: LCSD 550-5984/19-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total			0.100	0.105		mg/L		105	90 - 110	0	20

Lab Sample ID: 550-3169-C-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		0.100	0.106		mg/L		106	80 - 120		

Lab Sample ID: 550-3169-C-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.100	0.101		mg/L		101	80 - 120	5	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

GC/MS VOA

Analysis Batch: 5663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-3	VP-1	Total/NA	Air	8260B	
550-3276-4	VP-2	Total/NA	Air	8260B	
550-3276-5	VP-3	Total/NA	Air	8260B	
550-3276-6	VP-4	Total/NA	Air	8260B	
550-3391-A-4 DU	Duplicate	Total/NA	Air	8260B	
LCS 550-5663/9	Lab Control Sample	Total/NA	Air	8260B	
LCSD 550-5663/10	Lab Control Sample Dup	Total/NA	Air	8260B	
MB 550-5663/11	Method Blank	Total/NA	Air	8260B	

Analysis Batch: 6270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3224-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-3224-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
550-3276-1	MW-8	Total/NA	Water	8260B	
550-3276-2	Trip Blank	Total/NA	Water	8260B	
LCS 550-6270/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-6270/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-6270/6	Method Blank	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 5582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	8151A	
LCS 550-5582/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 550-5582/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 550-5582/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 5586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	3510C	
LCS 550-5586/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-5586/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-5586/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 6597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	8151A	5582
LCS 550-5582/2-A	Lab Control Sample	Total/NA	Water	8151A	5582
LCSD 550-5582/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	5582
MB 550-5582/1-A	Method Blank	Total/NA	Water	8151A	5582

Analysis Batch: 6944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	8081A	5586
LCS 550-5586/2-A	Lab Control Sample	Total/NA	Water	8081A	5586
LCSD 550-5586/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	5586
MB 550-5586/1-A	Method Blank	Total/NA	Water	8081A	5586

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

HPLC/IC

Analysis Batch: 5615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	300.0	
550-3279-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-3279-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-5615/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-5615/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-5615/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 5834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	300.0	
550-3318-B-3 MS	Matrix Spike	Total/NA	Water	300.0	
550-3318-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-5834/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-5834/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-5834/2	Method Blank	Total/NA	Water	300.0	

Air - GC VOA

Analysis Batch: 6043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-3	VP-1	Total/NA	Air	EPA3C/ASTMD1946	
550-3276-4	VP-2	Total/NA	Air	EPA3C/ASTMD1946	
550-3276-5	VP-3	Total/NA	Air	EPA3C/ASTMD1946	
550-3276-6	VP-4	Total/NA	Air	EPA3C/ASTMD1946	
550-3276-6 DU	VP-4	Total/NA	Air	EPA3C/ASTMD1946	
LCS 550-6043/4	Lab Control Sample	Total/NA	Air	EPA3C/ASTMD1946	
LCSD 550-6043/5	Lab Control Sample Dup	Total/NA	Air	EPA3C/ASTMD1946	
MB 550-6043/3	Method Blank	Total/NA	Air	EPA3C/ASTMD1946	

Metals

Prep Batch: 5962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3226-C-2-A MS	Matrix Spike	Total/NA	Water	200.7	
550-3226-C-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	
550-3276-1	MW-8	Total/NA	Water	200.7	
LCS 550-5962/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-5962/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
MB 550-5962/1-A	Method Blank	Total/NA	Water	200.7	

Prep Batch: 6123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	245.1	
550-3367-F-1-C MS	Matrix Spike	Total/NA	Water	245.1	

Metals (Continued)

Prep Batch: 6123 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3367-F-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
LCS 550-6123/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 550-6123/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
MB 550-6123/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 6186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	245.1	6123
550-3367-F-1-C MS	Matrix Spike	Total/NA	Water	245.1	6123
550-3367-F-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	6123
LCS 550-6123/2-A	Lab Control Sample	Total/NA	Water	245.1	6123
LCSD 550-6123/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	6123
MB 550-6123/1-A	Method Blank	Total/NA	Water	245.1	6123

Analysis Batch: 6437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3226-C-2-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	5962
550-3226-C-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	5962
LCS 550-5962/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	5962
LCSD 550-5962/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	5962
MB 550-5962/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	5962

Analysis Batch: 6645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3226-C-2-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	5962
550-3226-C-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	5962
LCS 550-5962/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	5962
LCSD 550-5962/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	5962
MB 550-5962/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	5962

Analysis Batch: 6713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3276-1	MW-8	Total/NA	Water	200.7 Rev 4.4	5962

General Chemistry

Prep Batch: 5984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3169-C-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN C	
550-3169-C-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN C	
550-3276-1	MW-8	Total/NA	Water	SM 4500 CN C	
LCS 550-5984/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	
LCSD 550-5984/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN C	
MB 550-5984/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 5994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3169-C-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	5984
550-3169-C-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	5984
550-3276-1	MW-8	Total/NA	Water	SM 4500 CN E	5984

General Chemistry (Continued)

Analysis Batch: 5994 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-5984/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	5984
LCSD 550-5984/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN E	5984
MB 550-5984/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	5984

Analysis Batch: 6194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-F-1 DU	Duplicate	Total/NA	Water	SM 2320B	
550-3276-1	MW-8	Total/NA	Water	SM 2320B	
550-3424-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 550-6194/6	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-6194/20	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-6194/7	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: MW-8 — Lab Sample ID: 550-3276-1

Date Collected: 05/21/13 08:15 — **Matrix: Water**
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6270	06/02/13 14:39	KD	TAL PHX
Total/NA	Prep	8151A			5582	05/23/13 10:06	KA	TAL PHX
Total/NA	Analysis	8151A		1	6597	06/06/13 00:35	CL	TAL PHX
Total/NA	Prep	3510C			5586	05/23/13 11:05	KA	TAL PHX
Total/NA	Analysis	8081A		1	6944	06/10/13 21:44	AT	TAL PHX
Total/NA	Analysis	300.0		1	5615	05/23/13 02:05	KLH	TAL PHX
Total/NA	Analysis	300.0		10	5834	05/28/13 21:10	KLH	TAL PHX
Total/NA	Prep	245.1			6123	05/30/13 17:12	AJC	TAL PHX
Total/NA	Analysis	245.1		1	6186	05/31/13 10:27	AJC	TAL PHX
Total/NA	Prep	200.7			5962	05/29/13 13:05	JRC	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	6713	06/06/13 12:18	HK	TAL PHX
Total/NA	Prep	SM 4500 CN C			5984	05/29/13 12:40	TS	TAL PHX
Total/NA	Analysis	SM 4500 CN E		1	5994	05/29/13 17:20	TS	TAL PHX
Total/NA	Analysis	SM 2320B		1	6194	05/30/13 18:42	DS	TAL PHX

Client Sample ID: Trip Blank — Lab Sample ID: 550-3276-2

Date Collected: 05/21/13 08:15 — **Matrix: Water**
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6270	06/02/13 11:25	KD	TAL PHX

Client Sample ID: VP-1 — Lab Sample ID: 550-3276-3

Date Collected: 05/21/13 11:05 — **Matrix: Air**
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5663	05/23/13 11:59		TAL PHX
Total/NA	Analysis	EPA3C/ASTMD1946		1	6043	05/30/13 12:35	ZN	TAL PHX

Client Sample ID: VP-2 — Lab Sample ID: 550-3276-4

Date Collected: 05/21/13 11:15 — **Matrix: Air**
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5663	05/23/13 12:32		TAL PHX
Total/NA	Analysis	EPA3C/ASTMD1946		1	6043	05/30/13 13:53	ZN	TAL PHX

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Client Sample ID: VP-3

Lab Sample ID: 550-3276-5

Date Collected: 05/21/13 11:30
Matrix: Air
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5663	05/23/13 13:04		TAL PHX
Total/NA	Analysis	EPA3C/ASTMD1946		1	6043	05/30/13 14:31	ZN	TAL PHX

Client Sample ID: VP-4

Lab Sample ID: 550-3276-6

Date Collected: 05/21/13 11:45
Matrix: Air
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5663	05/23/13 13:36		TAL PHX
Total/NA	Analysis	EPA3C/ASTMD1946		1	6043	05/30/13 15:06	ZN	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Laboratory: TestAmerica Phoenix

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA	IHLAP		154268	07-01-13
Arizona	State Program	9	AZ0728	06-09-14
California	NELAP	9	01109CA	11-30-13
Nevada	State Program	9	AZ01030	07-31-13
New York	NELAP	2	11898	04-01-14
Oregon	NELAP	10	AZ100001	03-09-14
USDA	Federal		P330-09-00024	06-09-15

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3276-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
8081A	Organochlorine Pesticides (GC)	SW846	TAL PHX
8151A	Herbicides (GC)	SW846	TAL PHX
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
EPA3C/ASTMD1946	Fixed Gases	EPA	TAL PHX
200.7 Rev 4.4	Metals (ICP)	40CFR136A	TAL PHX
245.1	Mercury (CVAA)	EPA	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 CN E	Cyanide, Total	SM	TAL PHX

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater ", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[X] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (6
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

550-3276 Chain of Custody

Page 1 of 1

Client Name/Address: Terracon, 1640 Hickory Loop Suite 105, Las Cruces, NM 88005

Project/PO Number: 68137008

Project Manager: Kyle Williams

Phone Number: (575) 527-1700

Sampler: K. Williams

Fax Number: 527-1092

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260B	8270	metals	NO_2-NO_3	Cyanide	8081	8151	Fixed Gas		Special Instructions: 550-3276
MW-8	Water	various	10	5-21-13	0815	various	X	X	X	X	X	X	X			
VP-1	vapor	tedlar	1	5-21-13	1105	no	X							X		
VP-2	vapor	tedlar	1	5-21-13	1115	no	X							X		
VP-3	vapor	tedlar	1	5-21-13	1130	no	X							X		
VP-4	vapor	tedlar	1	5-21-13	1145	no	X							X		

Relinquished By:	Date/Time:	Received By:	Date/Time:
K. Williams	5-21-13 / 14:30		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time: FEDEX	Received in Lab By:	Date/Time: 0920

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 550-3276-1

Login Number: 3276

List Source: TestAmerica Phoenix

List Number: 1

Creator: DeShazo, Brittany

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-3275-1
TestAmerica Sample Delivery Group: 68137008
Client Project/Site: Terracon-Las Cruces

For:
Terracon Consulting Eng & Scientists
1640 Kickory Loop
Suite 105
Las Cruces, New Mexico 88005

Attn: Mr. Kyle Willaims

Authorized for release by:
6/11/2013 7:03:43 PM

Carlene McCutcheon, Customer Service Manager
carlene.mccutcheon@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Sample Summary 5
Detection Summary 6
Client Sample Results 7
Surrogate Summary 14
QC Sample Results 16
QC Association Summary 39
Lab Chronicle 43
Certification Summary 44
Method Summary 45
Chain of Custody 46
Receipt Checklists 47

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
N1	See case narrative.
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.

GC/MS Semi VOA

Qualifier	Qualifier Description
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
Q9	Insufficent sample received to meet method QC requirements.

GC Semi VOA

Qualifier	Qualifier Description
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample,
Q9	Insufficent sample received to meet method QC requirements.

HPLC/IC

Qualifier	Qualifier Description
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.

Metals

Qualifier	Qualifier Description
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-3275-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-3275-1

Comments
No additional comments.

Receipt
The samples were received on 5/22/2013 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

GC/MS VOA
Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6158 was outside control criteria for Vinyl Acetate. There was no hits for Vinyl Acetate in any samples, the data has been qualified with a N1 and reported.

Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6270 was outside control criteria for Vinyl Acetate. The data have been qualified with a N1 and reported.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5628. MW-9 (550-3275-1)

No other analytical or quality issues were noted.

HPLC
No analytical or quality issues were noted.

GC Semi VOA -8081A
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5586 for the following samples:MW-9 (550-3275-1).

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5582. The LCS/LCSD were flagged with Q9 data qualifier.MW-9 (550-3275-1)

No other analytical or quality issues were noted.

Metals
Method(s) 200.7 Rev 4.4: Sample 550-3275 was run with multiple dilutions with varying results. The sample had a small amount of red sediment in the sample digestion tube which may have resulted in varying concentrations for required analytes.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
Method(s) 8151A: No additional sample containers were submitted to perform a matrix spike / matrix spike duplicate (MS/MSD) or a sample duplicate.

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-3275-1	MW-9	Water	05/21/13 09:15	05/22/13 09:20
550-3275-2	Trip Blank	Water	05/21/13 09:15	05/22/13 09:20

Detection Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: MW-9 — Lab Sample ID: 550-3275-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	290		20		mg/L	10		300.0	Total/NA
Sulfate	140		20		mg/L	10		300.0	Total/NA
Barium	0.22		0.10		mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	170		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	0.010		0.010		mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	47		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	260		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Alkalinity as CaCO3	310		6.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	310		6.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 550-3275-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: MW-9

Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3275-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 14:07	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/02/13 14:07	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 14:07	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/02/13 14:07	1
1,1-Dichloroethane	ND		0.50		ug/L			06/02/13 14:07	1
1,1-Dichloroethene	ND		0.50		ug/L			06/02/13 14:07	1
1,1-Dichloropropene	ND		0.50		ug/L			06/02/13 14:07	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/13 14:07	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/02/13 14:07	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/13 14:07	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/02/13 14:07	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/02/13 14:07	1
Ethylene Dibromide	ND		0.50		ug/L			06/02/13 14:07	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/02/13 14:07	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/13 14:07	1
1,2-Dichloropropane	ND		0.50		ug/L			06/02/13 14:07	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/02/13 14:07	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/02/13 14:07	1
1,3-Dichloropropane	ND		0.50		ug/L			06/02/13 14:07	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/02/13 14:07	1
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 14:07	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 14:07	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 14:07	1
2-Hexanone	ND		5.0		ug/L			06/02/13 14:07	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 14:07	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 14:07	1
Acetone	ND	R6	10		ug/L			06/02/13 14:07	1
Benzene	ND		0.50		ug/L			06/02/13 14:07	1
Bromobenzene	ND		0.50		ug/L			06/02/13 14:07	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 14:07	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 14:07	1
Bromoform	ND		1.0		ug/L			06/02/13 14:07	1
Bromomethane	ND		1.0		ug/L			06/02/13 14:07	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 14:07	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 14:07	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 14:07	1
Chloroethane	ND		1.0		ug/L			06/02/13 14:07	1
Chloroform	ND		0.50		ug/L			06/02/13 14:07	1
Chloromethane	ND		1.0		ug/L			06/02/13 14:07	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 14:07	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 14:07	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 14:07	1
Dibromomethane	ND		0.50		ug/L			06/02/13 14:07	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 14:07	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 14:07	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 14:07	1
Iodomethane	ND		2.5		ug/L			06/02/13 14:07	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 14:07	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/02/13 14:07	1

Client Sample ID: MW-9

Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3275-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	ug/L			06/02/13 14:07	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 14:07	1
Naphthalene	ND		2.5	ug/L			06/02/13 14:07	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 14:07	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 14:07	1
o-Xylene	ND		0.50	ug/L			06/02/13 14:07	1
4-Isopropyltoluene	ND		0.50	ug/L			06/02/13 14:07	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 14:07	1
Styrene	ND		0.50	ug/L			06/02/13 14:07	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 14:07	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 14:07	1
Toluene	ND		0.50	ug/L			06/02/13 14:07	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 14:07	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 14:07	1
Trichloroethene	ND		0.50	ug/L			06/02/13 14:07	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 14:07	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 14:07	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 14:07	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*112*		*70 - 130*		*06/02/13 14:07*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*06/02/13 14:07*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*06/02/13 14:07*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
1,2-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
1,2-Diphenylhydrazine	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
1,3-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
1,4-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,4,5-Trichlorophenol	ND		21	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,4,6-Trichlorophenol	ND		21	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,4-Dichlorophenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,4-Dimethylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,4-Dinitrophenol	ND		52	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,4-Dinitrotoluene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2,6-Dinitrotoluene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2-Chloronaphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2-Chlorophenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2-Methylnaphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2-Methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
2-Nitrophenol	ND		15	ug/L		05/23/13 14:39	06/03/13 21:37	1
3 & 4 Methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
3,3'-Dichlorobenzidine	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
3-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
4,6-Dinitro-2-methylphenol	ND		52	ug/L		05/23/13 14:39	06/03/13 21:37	1
4-Bromophenyl phenyl ether	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: MW-9

Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3275-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
4-Chloroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
4-Chlorophenyl phenyl ether	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
4-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
4-Nitrophenol	ND	L5	26	ug/L		05/23/13 14:39	06/03/13 21:37	1
Acenaphthene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Acenaphthylene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzo[a]anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzo[a]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzo[b]fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzo[g,h,i]perylene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzo[k]fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzoic acid	ND		26	ug/L		05/23/13 14:39	06/03/13 21:37	1
Benzyl alcohol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Bis(2-chloroethoxy)methane	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Bis(2-chloroethyl)ether	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
bis (2-chloroisopropyl) ether	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Bis(2-ethylhexyl) phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Butyl benzyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Chrysene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Dibenz(a,h)anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Dibenzofuran	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Diethyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Dimethyl phthalate	ND		21	ug/L		05/23/13 14:39	06/03/13 21:37	1
Di-n-butyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Di-n-octyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Fluorene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Hexachlorobutadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Hexachlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Hexachlorocyclopentadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Hexachloroethane	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Indeno[1,2,3-cd]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Isophorone	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Naphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Nitrobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
N-Nitrosodiphenylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Pentachlorophenol	ND		52	ug/L		05/23/13 14:39	06/03/13 21:37	1
Phenanthrene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Phenol	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1
Pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*45*		*10 - 78*	*05/23/13 14:39*	*06/03/13 21:37*	*1*
Nitrobenzene-d5 (Surr)	*67*		*22 - 116*	*05/23/13 14:39*	*06/03/13 21:37*	*1*
2-Fluorobiphenyl (Surr)	*72*		*40 - 91*	*05/23/13 14:39*	*06/03/13 21:37*	*1*
2,4,6-Tribromophenol (Surr)	*93*		*14 - 122*	*05/23/13 14:39*	*06/03/13 21:37*	*1*
p-Terphenyl-d14 (Surr)	*41*		*10 - 117*	*05/23/13 14:39*	*06/03/13 21:37*	*1*

Client Sample ID: MW-9

Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3275-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	*28*		*10 - 51*	*05/23/13 14:39*	*06/03/13 21:37*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Methoxychlor	ND		0.11	ug/L		05/23/13 11:05	06/10/13 21:24	1
Toxaphene	ND		1.1	ug/L		05/23/13 11:05	06/10/13 21:24	1
delta-BHC	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Dieldrin	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Endosulfan I	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Endosulfan II	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Endosulfan sulfate	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Endrin	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Endrin aldehyde	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
gamma-BHC (Lindane)	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Heptachlor	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
4,4'-DDD	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
4,4'-DDE	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
4,4'-DDT	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Aldrin	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
alpha-BHC	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
beta-BHC	ND		0.056	ug/L		05/23/13 11:05	06/10/13 21:24	1
Chlordane (technical)	ND		0.56	ug/L		05/23/13 11:05	06/10/13 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*81*		*10 - 132*	*05/23/13 11:05*	*06/10/13 21:24*	*1*
DCB Decachlorobiphenyl (Surr)	*21*		*10 - 103*	*05/23/13 11:05*	*06/10/13 21:24*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
Silvex (2,4,5-TP)	ND		0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
2,4-D	ND	V1	0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
2,4-DB	ND	V1	0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
Dicamba	ND		0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
Dichlorprop	ND		0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
Dinoseb	ND		0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1
Pentachlorophenol	ND		0.53	ug/L		05/23/13 10:06	06/06/13 00:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	*84*		*10 - 140*	*05/23/13 10:06*	*06/06/13 00:14*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	mg/L			05/23/13 01:37	1
Nitrite as N	ND		0.20	mg/L			05/23/13 01:37	1
Chloride	**290**		20	mg/L			05/30/13 16:38	10
Sulfate	**140**		20	mg/L			05/30/13 16:38	10

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: MW-9

Lab Sample ID: 550-3275-1

Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	mg/L		05/29/13 13:05	06/06/13 12:16	1
Barium	**0.22**		0.10	mg/L		05/29/13 13:05	06/06/13 12:16	1
Cadmium	ND		0.0010	mg/L		05/29/13 13:05	06/06/13 12:16	1
Calcium	**170**		2.0	mg/L		05/29/13 13:05	06/06/13 12:16	1
Chromium	**0.010**		0.010	mg/L		05/29/13 13:05	06/06/13 12:16	1
Lead	ND		0.015	mg/L		05/29/13 13:05	06/06/13 12:16	1
Magnesium	**47**		2.0	mg/L		05/29/13 13:05	06/06/13 12:16	1
Selenium	ND		0.10	mg/L		05/29/13 13:05	06/06/13 12:16	1
Silver	ND		0.010	mg/L		05/29/13 13:05	06/06/13 12:16	1
Sodium	**260**		2.0	mg/L		05/29/13 13:05	06/05/13 11:30	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		05/30/13 17:12	05/31/13 10:26	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**310**		6.0	mg/L			05/30/13 18:30	1
Bicarbonate Alkalinity as CaCO3	**310**		6.0	mg/L			05/30/13 18:30	1
Carbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 18:30	1
Alkalinity, Phenolphthalein	ND		6.0	mg/L			05/30/13 18:30	1
Hydroxide Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 18:30	1
Cyanide, Total	ND		0.050	mg/L		05/29/13 12:40	05/29/13 17:20	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-3275-2

Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			06/02/13 10:53	1
1,1,1-Trichloroethane	ND		0.50	ug/L			06/02/13 10:53	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			06/02/13 10:53	1
1,1,2-Trichloroethane	ND		0.50	ug/L			06/02/13 10:53	1
1,1-Dichloroethane	ND		0.50	ug/L			06/02/13 10:53	1
1,1-Dichloroethene	ND		0.50	ug/L			06/02/13 10:53	1
1,1-Dichloropropene	ND		0.50	ug/L			06/02/13 10:53	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			06/02/13 10:53	1
1,2,3-Trichloropropane	ND		2.0	ug/L			06/02/13 10:53	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			06/02/13 10:53	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			06/02/13 10:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			06/02/13 10:53	1
Ethylene Dibromide	ND		0.50	ug/L			06/02/13 10:53	1
1,2-Dichlorobenzene	ND		0.50	ug/L			06/02/13 10:53	1
1,2-Dichloroethane	ND		0.50	ug/L			06/02/13 10:53	1
1,2-Dichloropropane	ND		0.50	ug/L			06/02/13 10:53	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/02/13 10:53	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/02/13 10:53	1
1,3-Dichloropropane	ND		0.50	ug/L			06/02/13 10:53	1
1,4-Dichlorobenzene	ND		0.50	ug/L			06/02/13 10:53	1

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: Trip Blank
Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3275-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 10:53	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 10:53	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 10:53	1
2-Hexanone	ND		5.0		ug/L			06/02/13 10:53	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 10:53	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 10:53	1
Acetone	ND	R6	10		ug/L			06/02/13 10:53	1
Benzene	ND		0.50		ug/L			06/02/13 10:53	1
Bromobenzene	ND		0.50		ug/L			06/02/13 10:53	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 10:53	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 10:53	1
Bromoform	ND		1.0		ug/L			06/02/13 10:53	1
Bromomethane	ND		1.0		ug/L			06/02/13 10:53	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 10:53	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 10:53	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 10:53	1
Chloroethane	ND		1.0		ug/L			06/02/13 10:53	1
Chloroform	ND		0.50		ug/L			06/02/13 10:53	1
Chloromethane	ND		1.0		ug/L			06/02/13 10:53	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 10:53	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 10:53	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 10:53	1
Dibromomethane	ND		0.50		ug/L			06/02/13 10:53	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 10:53	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 10:53	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 10:53	1
Iodomethane	ND		2.5		ug/L			06/02/13 10:53	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 10:53	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/02/13 10:53	1
Methylene Chloride	ND		1.0		ug/L			06/02/13 10:53	1
Methyl tert-butyl ether	ND		0.50		ug/L			06/02/13 10:53	1
Naphthalene	ND		2.5		ug/L			06/02/13 10:53	1
n-Butylbenzene	ND		0.50		ug/L			06/02/13 10:53	1
N-Propylbenzene	ND		0.50		ug/L			06/02/13 10:53	1
o-Xylene	ND		0.50		ug/L			06/02/13 10:53	1
4-Isopropyltoluene	ND		0.50		ug/L			06/02/13 10:53	1
sec-Butylbenzene	ND		0.50		ug/L			06/02/13 10:53	1
Styrene	ND		0.50		ug/L			06/02/13 10:53	1
tert-Butylbenzene	ND		0.50		ug/L			06/02/13 10:53	1
Tetrachloroethene	ND		0.50		ug/L			06/02/13 10:53	1
Toluene	ND		0.50		ug/L			06/02/13 10:53	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 10:53	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 10:53	1
Trichloroethene	ND		0.50		ug/L			06/02/13 10:53	1
Trichlorofluoromethane	ND		0.50		ug/L			06/02/13 10:53	1
Vinyl acetate	ND	N1	2.0		ug/L			06/02/13 10:53	1
Vinyl chloride	ND		0.50		ug/L			06/02/13 10:53	1
Xylenes, Total	ND		1.5		ug/L			06/02/13 10:53	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: Trip Blank
Date Collected: 05/21/13 09:15
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3275-2
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		70 - 130		06/02/13 10:53	1
Toluene-d8 (Surr)	111		70 - 130		06/02/13 10:53	1
4-Bromofluorobenzene (Surr)	107		70 - 130		06/02/13 10:53	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-3224-A-1 MS	Matrix Spike	107	112	109
550-3224-A-1 MSD	Matrix Spike Duplicate	114	111	111
550-3275-1	MW-9	112	109	107
550-3275-2	Trip Blank	111	111	107
LCS 550-6270/4	Lab Control Sample	107	111	111
LCSD 550-6270/5	Lab Control Sample Dup	108	113	108
MB 550-6270/6	Method Blank	106	109	103

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	NBZ	FBP	TBP	TPH	PHL
Lab Sample ID	Client Sample ID	(10-78)	(22-116)	(40-91)	(14-122)	(10-117)	(10-51)
550-3275-1	MW-9	45	67	72	93	41	28
LCS 550-5628/2-A	Lab Control Sample	43	72	75	89	66	30
LCSD 550-5628/3-A	Lab Control Sample Dup	46	78	73	91	43	33
MB 550-5628/1-A	Method Blank	46	73	71	80	47	30

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
TPH = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB2
Lab Sample ID	Client Sample ID	(10-132)	(10-103)
550-3275-1	MW-9	81	21
LCS 550-5586/2-A	Lab Control Sample	72	40
LCSD 550-5586/3-A	Lab Control Sample Dup	69	44
MB 550-5586/1-A	Method Blank	72	39

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl (Surr)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**DCPA1 (10-140)**							
550-3275-1	MW-9	84							
LCS 550-5582/2-A	Lab Control Sample	79							
LCSD 550-5582/3-A	Lab Control Sample Dup	102							
MB 550-5582/1-A	Method Blank	78							

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/13 09:49	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/02/13 09:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/13 09:49	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/02/13 09:49	1
Ethylene Dibromide	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichloropropane	ND		0.50		ug/L			06/02/13 09:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,3-Dichloropropane	ND		0.50		ug/L			06/02/13 09:49	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 09:49	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 09:49	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 09:49	1
2-Hexanone	ND		5.0		ug/L			06/02/13 09:49	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 09:49	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 09:49	1
Acetone	ND		10		ug/L			06/02/13 09:49	1
Benzene	ND		0.50		ug/L			06/02/13 09:49	1
Bromobenzene	ND		0.50		ug/L			06/02/13 09:49	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Bromoform	ND		1.0		ug/L			06/02/13 09:49	1
Bromomethane	ND		1.0		ug/L			06/02/13 09:49	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 09:49	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 09:49	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
Chloroethane	ND		1.0		ug/L			06/02/13 09:49	1
Chloroform	ND		0.50		ug/L			06/02/13 09:49	1
Chloromethane	ND		1.0		ug/L			06/02/13 09:49	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dibromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 09:49	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 09:49	1
Iodomethane	ND		2.5		ug/L			06/02/13 09:49	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 09:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		1.0	ug/L			06/02/13 09:49	1
Methylene Chloride	ND		1.0	ug/L			06/02/13 09:49	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 09:49	1
Naphthalene	ND		2.5	ug/L			06/02/13 09:49	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
o-Xylene	ND		0.50	ug/L			06/02/13 09:49	1
4-Isopropyltoluene	ND		0.50	ug/L			06/02/13 09:49	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
Styrene	ND		0.50	ug/L			06/02/13 09:49	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 09:49	1
Toluene	ND		0.50	ug/L			06/02/13 09:49	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 09:49	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 09:49	1
Trichloroethene	ND		0.50	ug/L			06/02/13 09:49	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 09:49	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 09:49	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 09:49	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 09:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*06/02/13 09:49*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*06/02/13 09:49*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*06/02/13 09:49*	*1*

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	23.0		ug/L		92	70 - 130
1,1,1-Trichloroethane	25.0	22.7		ug/L		91	71 - 131
1,1,2,2-Tetrachloroethane	25.0	21.7		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	21.2		ug/L		85	70 - 130
1,1-Dichloroethane	25.0	22.2		ug/L		89	70 - 130
1,1-Dichloroethene	25.0	24.7		ug/L		99	63 - 131
1,1-Dichloropropene	25.0	21.6		ug/L		87	70 - 130
1,2,3-Trichlorobenzene	25.0	23.6		ug/L		94	79 - 139
1,2,3-Trichloropropane	25.0	21.9		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		98	80 - 137
1,2,4-Trimethylbenzene	25.0	23.9		ug/L		96	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	20.3		ug/L		81	63 - 146
Ethylene Dibromide	25.0	22.7		ug/L		91	70 - 130
1,2-Dichlorobenzene	25.0	23.4		ug/L		93	70 - 130
1,2-Dichloroethane	25.0	21.5		ug/L		86	66 - 139
1,2-Dichloropropane	25.0	22.4		ug/L		90	70 - 130
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	23.6		ug/L		95	70 - 130
1,3-Dichloropropane	25.0	21.6		ug/L		86	70 - 130
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	70 - 130
2,2-Dichloropropane	25.0	21.8		ug/L		87	69 - 139
2-Butanone (MEK)	25.0	24.1		ug/L		97	53 - 150
2-Chlorotoluene	25.0	23.6		ug/L		95	70 - 130
2-Hexanone	25.0	25.4		ug/L		102	55 - 150
4-Chlorotoluene	25.0	23.8		ug/L		95	70 - 130
4-Methyl-2-pentanone (MIBK)	25.0	23.2		ug/L		93	64 - 142
Acetone	25.0	26.9		ug/L		108	38 - 150
Benzene	25.0	23.6		ug/L		94	70 - 130
Bromobenzene	25.0	23.0		ug/L		92	70 - 130
Chlorobromomethane	25.0	21.1		ug/L		84	70 - 130
Dichlorobromomethane	25.0	21.4		ug/L		86	70 - 130
Bromoform	25.0	20.5		ug/L		82	69 - 129
Bromomethane	25.0	24.7		ug/L		99	57 - 138
Carbon disulfide	25.0	22.7		ug/L		91	64 - 145
Carbon tetrachloride	25.0	23.3		ug/L		93	70 - 143
Chlorobenzene	25.0	23.0		ug/L		92	70 - 130
Chloroethane	25.0	22.5		ug/L		90	66 - 131
Chloroform	25.0	22.1		ug/L		88	70 - 130
Chloromethane	25.0	22.8		ug/L		91	56 - 129
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
cis-1,3-Dichloropropene	25.0	22.7		ug/L		91	70 - 130
Chlorodibromomethane	25.0	21.9		ug/L		88	70 - 130
Dibromomethane	25.0	21.5		ug/L		86	70 - 130
Dichlorodifluoromethane	25.0	20.3		ug/L		81	46 - 144
Ethylbenzene	25.0	24.4		ug/L		98	70 - 130
Hexachlorobutadiene	25.0	25.4		ug/L		102	76 - 145
Iodomethane	25.0	24.6		ug/L		99	70 - 130
Isopropylbenzene	25.0	26.9		ug/L		107	88 - 141
m-Xylene & p-Xylene	25.0	23.1		ug/L		92	70 - 130
Methylene Chloride	25.0	21.2		ug/L		85	63 - 128
Methyl tert-butyl ether	25.0	20.0		ug/L		80	70 - 130
Naphthalene	25.0	23.4		ug/L		94	78 - 143
n-Butylbenzene	25.0	25.0		ug/L		100	70 - 130
N-Propylbenzene	25.0	25.4		ug/L		102	70 - 130
o-Xylene	25.0	24.0		ug/L		96	70 - 130
4-Isopropyltoluene	25.0	23.5		ug/L		94	70 - 130
sec-Butylbenzene	25.0	24.8		ug/L		99	70 - 130
Styrene	25.0	23.5		ug/L		94	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	24.0		ug/L		96	70 - 130
trans-1,2-Dichloroethene	25.0	24.3		ug/L		97	69 - 127
trans-1,3-Dichloropropene	25.0	22.0		ug/L		88	70 - 130
Trichloroethene	25.0	22.5		ug/L		90	70 - 130
Trichlorofluoromethane	25.0	28.5		ug/L		114	69 - 150
Vinyl acetate	25.0	34.8	N1	ug/L		139	67 - 148

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	25.0	23.1		ug/L		92	65 - 137
Xylenes, Total	50.0	47.1		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	22.5		ug/L		90	70 - 130	2	20
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	71 - 131	2	20
1,1,2,2-Tetrachloroethane	25.0	21.1		ug/L		85	70 - 130	3	20
1,1,2-Trichloroethane	25.0	21.5		ug/L		86	70 - 130	1	20
1,1-Dichloroethane	25.0	22.9		ug/L		91	70 - 130	3	20
1,1-Dichloroethene	25.0	24.8		ug/L		99	63 - 131	1	22
1,1-Dichloropropene	25.0	22.2		ug/L		89	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	24.2		ug/L		97	79 - 139	3	20
1,2,3-Trichloropropane	25.0	20.5		ug/L		82	70 - 130	6	20
1,2,4-Trichlorobenzene	25.0	24.8		ug/L		99	80 - 137	1	20
1,2,4-Trimethylbenzene	25.0	23.6		ug/L		94	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	19.1		ug/L		76	63 - 146	6	22
Ethylene Dibromide	25.0	21.7		ug/L		87	70 - 130	5	20
1,2-Dichlorobenzene	25.0	23.0		ug/L		92	70 - 130	1	20
1,2-Dichloroethane	25.0	21.8		ug/L		87	66 - 139	1	20
1,2-Dichloropropane	25.0	22.6		ug/L		91	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	23.8		ug/L		95	70 - 130	2	20
1,3-Dichlorobenzene	25.0	22.7		ug/L		91	70 - 130	4	20
1,3-Dichloropropane	25.0	20.0		ug/L		80	70 - 130	7	20
1,4-Dichlorobenzene	25.0	23.1		ug/L		92	70 - 130	3	20
2,2-Dichloropropane	25.0	21.4		ug/L		86	69 - 139	2	20
2-Butanone (MEK)	25.0	17.0		ug/L		68	53 - 150	34	35
2-Chlorotoluene	25.0	22.6		ug/L		90	70 - 130	4	20
2-Hexanone	25.0	17.8		ug/L		71	55 - 150	35	35
4-Chlorotoluene	25.0	23.2		ug/L		93	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	25.0	21.2		ug/L		85	64 - 142	9	25
Acetone	25.0	13.2	R6	ug/L		53	38 - 150	68	35
Benzene	25.0	23.7		ug/L		95	70 - 130	0	20
Bromobenzene	25.0	21.8		ug/L		87	70 - 130	5	20
Chlorobromomethane	25.0	21.5		ug/L		86	70 - 130	2	20
Dichlorobromomethane	25.0	22.0		ug/L		88	70 - 130	3	20
Bromoform	25.0	19.2		ug/L		77	69 - 129	7	20
Bromomethane	25.0	25.3		ug/L		101	57 - 138	2	20
Carbon disulfide	25.0	23.4		ug/L		94	64 - 145	3	33
Carbon tetrachloride	25.0	23.4		ug/L		94	70 - 143	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	25.0	22.1		ug/L		88	70 - 130	4	20
Chloroethane	25.0	22.8		ug/L		91	66 - 131	1	20
Chloroform	25.0	22.9		ug/L		91	70 - 130	4	20
Chloromethane	25.0	22.4		ug/L		90	56 - 129	2	20
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130	0	20
cis-1,3-Dichloropropene	25.0	21.6		ug/L		87	70 - 130	5	20
Chlorodibromomethane	25.0	21.7		ug/L		87	70 - 130	1	20
Dibromomethane	25.0	22.3		ug/L		89	70 - 130	4	20
Dichlorodifluoromethane	25.0	20.4		ug/L		82	46 - 144	1	23
Ethylbenzene	25.0	23.3		ug/L		93	70 - 130	5	20
Hexachlorobutadiene	25.0	25.2		ug/L		101	76 - 145	1	20
Iodomethane	25.0	24.6		ug/L		99	70 - 130	0	20
Isopropylbenzene	25.0	25.9		ug/L		104	88 - 141	4	20
m-Xylene & p-Xylene	25.0	22.1		ug/L		88	70 - 130	5	20
Methylene Chloride	25.0	21.7		ug/L		87	63 - 128	2	21
Methyl tert-butyl ether	25.0	20.2		ug/L		81	70 - 130	1	20
Naphthalene	25.0	23.1		ug/L		92	78 - 143	1	20
n-Butylbenzene	25.0	24.5		ug/L		98	70 - 130	2	20
N-Propylbenzene	25.0	24.9		ug/L		99	70 - 130	2	20
o-Xylene	25.0	23.5		ug/L		94	70 - 130	2	20
4-Isopropyltoluene	25.0	23.4		ug/L		94	70 - 130	0	20
sec-Butylbenzene	25.0	24.5		ug/L		98	70 - 130	1	20
Styrene	25.0	23.0		ug/L		92	70 - 130	2	20
Tetrachloroethene	25.0	23.4		ug/L		94	70 - 130	3	20
Toluene	25.0	23.8		ug/L		95	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	69 - 127	2	20
trans-1,3-Dichloropropene	25.0	22.4		ug/L		89	70 - 130	1	20
Trichloroethene	25.0	23.8		ug/L		95	70 - 130	6	20
Trichlorofluoromethane	25.0	28.3		ug/L		113	69 - 150	1	22
Vinyl acetate	25.0	34.7	N1	ug/L		139	67 - 148	0	22
Vinyl chloride	25.0	23.4		ug/L		93	65 - 137	1	20
Xylenes, Total	50.0	45.6		ug/L		91	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*113*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	22.8		ug/L		91	70 - 130
1,1,1-Trichloroethane	ND		25.0	22.9		ug/L		92	64 - 138
1,1,2,2-Tetrachloroethane	ND		25.0	20.2		ug/L		81	63 - 137
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	63 - 132
1,1-Dichloroethane	ND		25.0	22.2		ug/L		89	62 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		25.0	24.6		ug/L		98	57 - 137
1,1-Dichloropropene	ND		25.0	21.0		ug/L		84	64 - 134
1,2,3-Trichlorobenzene	ND		25.0	23.2		ug/L		93	74 - 139
1,2,3-Trichloropropane	ND		25.0	18.6		ug/L		74	68 - 130
1,2,4-Trichlorobenzene	ND		25.0	23.8		ug/L		95	74 - 138
1,2,4-Trimethylbenzene	ND		25.0	22.9		ug/L		92	63 - 135
1,2-Dibromo-3-Chloropropane	ND		25.0	18.3		ug/L		73	53 - 145
Ethylene Dibromide	ND		25.0	21.1		ug/L		84	70 - 130
1,2-Dichlorobenzene	ND		25.0	22.6		ug/L		90	70 - 130
1,2-Dichloroethane	ND		25.0	21.8		ug/L		87	54 - 147
1,2-Dichloropropane	ND		25.0	22.4		ug/L		90	68 - 126
1,3,5-Trimethylbenzene	ND		25.0	23.6		ug/L		94	66 - 137
1,3-Dichlorobenzene	ND		25.0	22.8		ug/L		91	70 - 130
1,3-Dichloropropane	ND		25.0	20.5		ug/L		82	68 - 129
1,4-Dichlorobenzene	ND		25.0	23.0		ug/L		92	70 - 130
2,2-Dichloropropane	ND		25.0	21.5		ug/L		86	60 - 146
2-Butanone (MEK)	ND		25.0	14.7		ug/L		59	31 - 143
2-Chlorotoluene	ND		25.0	22.6		ug/L		91	71 - 131
2-Hexanone	ND		25.0	15.3		ug/L		61	40 - 142
4-Chlorotoluene	ND		25.0	22.8		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	ND		25.0	18.9		ug/L		76	52 - 143
Acetone	ND	R6	25.0	12.0		ug/L		48	29 - 139
Benzene	ND		25.0	23.5		ug/L		94	68 - 131
Bromobenzene	ND		25.0	22.6		ug/L		90	70 - 130
Chlorobromomethane	ND		25.0	21.8		ug/L		87	64 - 132
Dichlorobromomethane	28		25.0	47.5		ug/L		80	63 - 138
Bromoform	5.6		25.0	24.2		ug/L		75	60 - 128
Bromomethane	ND		25.0	25.9		ug/L		104	47 - 144
Carbon disulfide	ND		25.0	22.7		ug/L		91	45 - 150
Carbon tetrachloride	ND		25.0	22.3		ug/L		89	65 - 147
Chlorobenzene	ND		25.0	22.2		ug/L		89	70 - 130
Chloroethane	ND		25.0	22.6		ug/L		90	57 - 139
Chloroform	17		25.0	38.8		ug/L		87	63 - 131
Chloromethane	ND		25.0	23.1		ug/L		92	47 - 134
cis-1,2-Dichloroethene	ND		25.0	23.5		ug/L		94	65 - 127
cis-1,3-Dichloropropene	ND		25.0	22.2		ug/L		89	63 - 135
Chlorodibromomethane	30		25.0	50.0		ug/L		82	65 - 134
Dibromomethane	ND		25.0	21.0		ug/L		84	66 - 136
Dichlorodifluoromethane	ND		25.0	20.3		ug/L		81	40 - 148
Ethylbenzene	ND		25.0	23.3		ug/L		93	74 - 134
Hexachlorobutadiene	ND		25.0	24.1		ug/L		97	69 - 150
Iodomethane	ND		25.0	24.6		ug/L		98	53 - 150
Isopropylbenzene	ND		25.0	25.6		ug/L		102	80 - 146
m-Xylene & p-Xylene	ND		25.0	22.6		ug/L		90	58 - 138
Methylene Chloride	ND		25.0	21.7		ug/L		87	55 - 133
Methyl tert-butyl ether	ND		25.0	19.9		ug/L		80	67 - 138
Naphthalene	ND		25.0	21.2		ug/L		85	67 - 146
n-Butylbenzene	ND		25.0	23.5		ug/L		94	69 - 140

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	ND		25.0	24.3		ug/L		97	74 - 140
o-Xylene	ND		25.0	23.3		ug/L		93	66 - 137
4-Isopropyltoluene	ND		25.0	22.8		ug/L		91	70 - 133
sec-Butylbenzene	ND		25.0	24.2		ug/L		97	72 - 136
Styrene	ND		25.0	22.9		ug/L		91	43 - 144
Tetrachloroethene	ND		25.0	23.3		ug/L		93	67 - 131
Toluene	ND		25.0	23.2		ug/L		93	65 - 138
trans-1,2-Dichloroethene	ND		25.0	23.4		ug/L		94	62 - 131
trans-1,3-Dichloropropene	ND		25.0	21.4		ug/L		86	58 - 136
Trichloroethene	ND		25.0	22.1		ug/L		88	66 - 132
Trichlorofluoromethane	ND		25.0	27.8		ug/L		111	62 - 150
Vinyl acetate	ND	N1	25.0	32.3	N1	ug/L		129	47 - 150
Vinyl chloride	ND		25.0	22.5		ug/L		90	55 - 146
Xylenes, Total	ND		50.0	45.9		ug/L		92	68 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	22.5		ug/L		90	70 - 130	1	30
1,1,1-Trichloroethane	ND		25.0	23.1		ug/L		92	64 - 138	1	35
1,1,2,2-Tetrachloroethane	ND		25.0	20.2		ug/L		81	63 - 137	0	32
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	63 - 132	0	35
1,1-Dichloroethane	ND		25.0	22.8		ug/L		91	62 - 130	2	34
1,1-Dichloroethene	ND		25.0	24.6		ug/L		98	57 - 137	0	35
1,1-Dichloropropene	ND		25.0	21.4		ug/L		86	64 - 134	2	34
1,2,3-Trichlorobenzene	ND		25.0	22.5		ug/L		90	74 - 139	3	26
1,2,3-Trichloropropane	ND		25.0	19.5		ug/L		78	68 - 130	4	32
1,2,4-Trichlorobenzene	ND		25.0	23.5		ug/L		94	74 - 138	2	26
1,2,4-Trimethylbenzene	ND		25.0	22.5		ug/L		90	63 - 135	2	31
1,2-Dibromo-3-Chloropropane	ND		25.0	18.4		ug/L		74	53 - 145	0	35
Ethylene Dibromide	ND		25.0	21.9		ug/L		88	70 - 130	4	33
1,2-Dichlorobenzene	ND		25.0	22.4		ug/L		90	70 - 130	1	27
1,2-Dichloroethane	ND		25.0	22.3		ug/L		89	54 - 147	2	35
1,2-Dichloropropane	ND		25.0	23.2		ug/L		93	68 - 126	3	32
1,3,5-Trimethylbenzene	ND		25.0	23.0		ug/L		92	66 - 137	3	30
1,3-Dichlorobenzene	ND		25.0	22.7		ug/L		91	70 - 130	0	28
1,3-Dichloropropane	ND		25.0	21.2		ug/L		85	68 - 129	3	33
1,4-Dichlorobenzene	ND		25.0	22.6		ug/L		90	70 - 130	2	26
2,2-Dichloropropane	ND		25.0	21.8		ug/L		87	60 - 146	2	35
2-Butanone (MEK)	ND		25.0	16.7		ug/L		67	31 - 143	12	35
2-Chlorotoluene	ND		25.0	22.5		ug/L		90	71 - 131	0	29

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	ND		25.0	17.6		ug/L		70	40 - 142	14	35
4-Chlorotoluene	ND		25.0	22.5		ug/L		90	70 - 130	1	28
4-Methyl-2-pentanone (MIBK)	ND		25.0	21.1		ug/L		84	52 - 143	11	35
Acetone	ND	R6	25.0	11.0		ug/L		44	29 - 139	8	35
Benzene	ND		25.0	23.8		ug/L		95	68 - 131	2	32
Bromobenzene	ND		25.0	22.9		ug/L		92	70 - 130	1	28
Chlorobromomethane	ND		25.0	22.2		ug/L		89	64 - 132	2	35
Dichlorobromomethane	28		25.0	48.8		ug/L		85	63 - 138	3	31
Bromoform	5.6		25.0	25.2		ug/L		79	60 - 128	4	31
Bromomethane	ND		25.0	26.2		ug/L		105	47 - 144	1	35
Carbon disulfide	ND		25.0	23.0		ug/L		92	45 - 150	1	35
Carbon tetrachloride	ND		25.0	23.2		ug/L		93	65 - 147	4	35
Chlorobenzene	ND		25.0	22.8		ug/L		91	70 - 130	2	30
Chloroethane	ND		25.0	22.6		ug/L		91	57 - 139	0	35
Chloroform	17		25.0	39.0		ug/L		88	63 - 131	0	33
Chloromethane	ND		25.0	23.9		ug/L		96	47 - 134	3	35
cis-1,2-Dichloroethene	ND		25.0	23.9		ug/L		96	65 - 127	2	34
cis-1,3-Dichloropropene	ND		25.0	22.6		ug/L		90	63 - 135	2	35
Chlorodibromomethane	30		25.0	51.0		ug/L		86	65 - 134	2	33
Dibromomethane	ND		25.0	22.6		ug/L		91	66 - 136	8	35
Dichlorodifluoromethane	ND		25.0	21.1		ug/L		85	40 - 148	4	35
Ethylbenzene	ND		25.0	23.5		ug/L		94	74 - 134	1	32
Hexachlorobutadiene	ND		25.0	23.0		ug/L		92	69 - 150	5	32
Iodomethane	ND		25.0	25.5		ug/L		102	53 - 150	4	35
Isopropylbenzene	ND		25.0	25.3		ug/L		101	80 - 146	1	32
m-Xylene & p-Xylene	ND		25.0	22.4		ug/L		90	58 - 138	1	29
Methylene Chloride	ND		25.0	23.1		ug/L		93	55 - 133	6	35
Methyl tert-butyl ether	ND		25.0	20.3		ug/L		81	67 - 138	2	21
Naphthalene	ND		25.0	21.5		ug/L		86	67 - 146	1	29
n-Butylbenzene	ND		25.0	22.7		ug/L		91	69 - 140	4	32
N-Propylbenzene	ND		25.0	23.9		ug/L		96	74 - 140	2	32
o-Xylene	ND		25.0	23.1		ug/L		93	66 - 137	1	26
4-Isopropyltoluene	ND		25.0	22.1		ug/L		88	70 - 133	3	32
sec-Butylbenzene	ND		25.0	23.5		ug/L		94	72 - 136	3	33
Styrene	ND		25.0	23.1		ug/L		92	43 - 144	1	35
Tetrachloroethene	ND		25.0	23.1		ug/L		92	67 - 131	1	31
Toluene	ND		25.0	23.8		ug/L		95	65 - 138	3	33
trans-1,2-Dichloroethene	ND		25.0	24.5		ug/L		98	62 - 131	5	35
trans-1,3-Dichloropropene	ND		25.0	22.0		ug/L		88	58 - 136	2	35
Trichloroethene	ND		25.0	22.9		ug/L		91	66 - 132	3	29
Trichlorofluoromethane	ND		25.0	27.4		ug/L		110	62 - 150	2	35
Vinyl acetate	ND	N1	25.0	33.6	N1	ug/L		134	47 - 150	4	35
Vinyl chloride	ND		25.0	23.2		ug/L		93	55 - 146	3	35
Xylenes, Total	ND		50.0	45.5		ug/L		91	68 - 131	1	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*114*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-5628/1-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5628

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
1,2-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
1,2-Diphenylhydrazine	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
1,3-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
1,4-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4,5-Trichlorophenol	ND		20	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4,6-Trichlorophenol	ND		20	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dichlorophenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dimethylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dinitrophenol	ND		50	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dinitrotoluene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2,6-Dinitrotoluene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Chloronaphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Chlorophenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Methylnaphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Nitrophenol	ND		15	ug/L		05/23/13 14:39	06/03/13 13:53	1
3 & 4 Methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
3,3'-Dichlorobenzidine	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
3-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
4,6-Dinitro-2-methylphenol	ND		50	ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Bromophenyl phenyl ether	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Chloro-3-methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Chloroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Chlorophenyl phenyl ether	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Nitrophenol	ND	L5	25	ug/L		05/23/13 14:39	06/03/13 13:53	1
Acenaphthene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Acenaphthylene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[a]anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[a]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[b]fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[g,h,i]perylene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[k]fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzoic acid	ND		25	ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzyl alcohol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Bis(2-chloroethoxy)methane	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-5628/1-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5628

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
bis (2-chloroisopropyl) ether	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Bis(2-ethylhexyl) phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Butyl benzyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Chrysene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Dibenz(a,h)anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Dibenzofuran	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Diethyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Dimethyl phthalate	ND		20	ug/L		05/23/13 14:39	06/03/13 13:53	1
Di-n-butyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Di-n-octyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Fluorene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachlorobutadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachlorocyclopentadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachloroethane	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Indeno[1,2,3-cd]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Isophorone	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Naphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Nitrobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
N-Nitrosodiphenylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Pentachlorophenol	ND		50	ug/L		05/23/13 14:39	06/03/13 13:53	1
Phenanthrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Phenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*46*		*10 - 78*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
Nitrobenzene-d5 (Surr)	*73*		*22 - 116*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
2-Fluorobiphenyl (Surr)	*71*		*40 - 91*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
2,4,6-Tribromophenol (Surr)	*80*		*14 - 122*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
p-Terphenyl-d14 (Surr)	*47*		*10 - 117*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
Phenol-d5 (Surr)	*30*		*10 - 51*	*05/23/13 14:39*	*06/03/13 13:53*	*1*

Lab Sample ID: LCS 550-5628/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	120	90.8	Q9	ug/L		76	41 - 92
1,2-Dichlorobenzene	80.0	63.8	Q9	ug/L		80	35 - 94
1,2-Diphenylhydrazine	80.0	56.1	Q9	ug/L		70	60 - 108
1,3-Dichlorobenzene	80.0	62.4	Q9	ug/L		78	30 - 92
1,4-Dichlorobenzene	80.0	63.0	Q9	ug/L		79	32 - 93
2,4,5-Trichlorophenol	80.0	66.2	Q9	ug/L		83	59 - 114
2,4,6-Trichlorophenol	80.0	67.6	Q9	ug/L		85	58 - 109

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-5628/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dichlorophenol	80.0	63.1	Q9	ug/L		79	58 - 105
2,4-Dimethylphenol	80.0	57.7	Q9	ug/L		72	52 - 96
2,4-Dinitrophenol	120	77.8	Q9	ug/L		65	28 - 123
2,4-Dinitrotoluene	80.0	67.6	Q9	ug/L		84	64 - 117
2,6-Dinitrotoluene	80.0	67.3	Q9	ug/L		84	63 - 111
2-Chloronaphthalene	120	84.7	Q9	ug/L		71	57 - 96
2-Chlorophenol	80.0	58.6	Q9	ug/L		73	55 - 98
2-Methylnaphthalene	80.0	64.9	Q9	ug/L		81	51 - 100
2-Methylphenol	80.0	52.6	Q9	ug/L		66	51 - 92
2-Nitroaniline	80.0	65.2	Q9	ug/L		81	60 - 118
2-Nitrophenol	80.0	61.9	Q9	ug/L		77	55 - 112
3 & 4 Methylphenol	80.0	54.2	Q9	ug/L		68	46 - 89
3,3'-Dichlorobenzidine	80.0	63.1	Q9	ug/L		79	46 - 109
3-Nitroaniline	80.0	62.1	Q9	ug/L		78	51 - 115
4,6-Dinitro-2-methylphenol	120	84.0	Q9	ug/L		70	53 - 121
4-Bromophenyl phenyl ether	80.0	68.5	Q9	ug/L		86	60 - 109
4-Chloro-3-methylphenol	80.0	65.2	Q9	ug/L		81	60 - 108
4-Chloroaniline	80.0	60.0	Q9	ug/L		75	25 - 116
4-Chlorophenyl phenyl ether	80.0	69.4	Q9	ug/L		87	60 - 109
4-Nitroaniline	80.0	65.0	Q9	ug/L		81	49 - 128
4-Nitrophenol	120	109	L5 Q9	ug/L		91	21 - 61
Acenaphthene	80.0	64.4	Q9	ug/L		81	47 - 145
Acenaphthylene	80.0	65.9	Q9	ug/L		82	59 - 102
Anthracene	80.0	65.6	Q9	ug/L		82	62 - 109
Benzo[a]anthracene	80.0	63.3	Q9	ug/L		79	61 - 109
Benzo[a]pyrene	80.0	62.3	Q9	ug/L		78	61 - 106
Benzo[b]fluoranthene	80.0	55.5	Q9	ug/L		69	53 - 105
Benzo[g,h,i]perylene	80.0	77.2	Q9	ug/L		96	55 - 120
Benzo[k]fluoranthene	80.0	64.9	Q9	ug/L		81	61 - 114
Benzoic acid	200	68.0	Q9	ug/L		34	10 - 49
Benzyl alcohol	80.0	72.4	Q9	ug/L		91	50 - 98
Bis(2-chloroethoxy)methane	80.0	65.2	Q9	ug/L		82	60 - 105
Bis(2-chloroethyl)ether	80.0	54.1	Q9	ug/L		68	56 - 102
bis (2-chloroisopropyl) ether	80.0	62.4	Q9	ug/L		78	55 - 103
Bis(2-ethylhexyl) phthalate	80.0	60.4	Q9	ug/L		76	63 - 113
Butyl benzyl phthalate	80.0	59.8	Q9	ug/L		75	61 - 110
Chrysene	80.0	66.5	Q9	ug/L		83	63 - 111
Dibenz(a,h)anthracene	80.0	72.5	Q9	ug/L		91	57 - 119
Dibenzofuran	80.0	65.4	Q9	ug/L		82	62 - 105
Diethyl phthalate	80.0	67.4	Q9	ug/L		84	63 - 111
Dimethyl phthalate	120	93.6	Q9	ug/L		78	64 - 103
Di-n-butyl phthalate	80.0	63.2	Q9	ug/L		79	64 - 111
Di-n-octyl phthalate	80.0	55.6	Q9	ug/L		69	51 - 122
Fluoranthene	80.0	65.8	Q9	ug/L		82	65 - 115
Fluorene	80.0	66.6	Q9	ug/L		83	63 - 112
Hexachlorobutadiene	80.0	64.1	Q9	ug/L		80	22 - 89
Hexachlorobenzene	80.0	68.6	Q9	ug/L		86	61 - 111
Hexachlorocyclopentadiene	80.0	49.9	Q9	ug/L		62	17 - 73

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-5628/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6295 — **Prep Batch: 5628**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachloroethane	120	89.3	Q9	ug/L		74	26 - 81
Indeno[1,2,3-cd]pyrene	80.0	74.2	Q9	ug/L		93	58 - 120
Isophorone	80.0	60.7	Q9	ug/L		76	47 - 100
Naphthalene	80.0	62.7	Q9	ug/L		78	52 - 100
Nitrobenzene	80.0	60.6	Q9	ug/L		76	57 - 107
N-Nitrosodi-n-propylamine	80.0	64.7	Q9	ug/L		81	57 - 108
N-Nitrosodiphenylamine	80.0	56.0	Q9	ug/L		70	50 - 100
Pentachlorophenol	120	85.0	Q9	ug/L		71	43 - 116
Phenanthrene	80.0	65.5	Q9	ug/L		82	64 - 110
Phenol	80.0	33.2	Q9	ug/L		42	22 - 59
Pyrene	80.0	63.7	Q9	ug/L		80	64 - 109

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*43*		*10 - 78*
Nitrobenzene-d5 (Surr)	*72*		*22 - 116*
2-Fluorobiphenyl (Surr)	*75*		*40 - 91*
2,4,6-Tribromophenol (Surr)	*89*		*14 - 122*
p-Terphenyl-d14 (Surr)	*66*		*10 - 117*
Phenol-d5 (Surr)	*30*		*10 - 51*

Lab Sample ID: LCSD 550-5628/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6295 — **Prep Batch: 5628**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	120	86.2	Q9	ug/L		72	41 - 92	5	23
1,2-Dichlorobenzene	80.0	56.8	Q9	ug/L		71	35 - 94	12	25
1,2-Diphenylhydrazine	80.0	57.4	Q9	ug/L		72	60 - 108	2	20
1,3-Dichlorobenzene	80.0	55.6	Q9	ug/L		70	30 - 92	11	30
1,4-Dichlorobenzene	80.0	55.4	Q9	ug/L		69	32 - 93	13	28
2,4,5-Trichlorophenol	80.0	69.3	Q9	ug/L		87	59 - 114	5	20
2,4,6-Trichlorophenol	80.0	67.9	Q9	ug/L		85	58 - 109	0	20
2,4-Dichlorophenol	80.0	64.4	Q9	ug/L		80	58 - 105	2	20
2,4-Dimethylphenol	80.0	60.4	Q9	ug/L		75	52 - 96	5	20
2,4-Dinitrophenol	120	68.5	Q9	ug/L		57	28 - 123	13	35
2,4-Dinitrotoluene	80.0	68.7	Q9	ug/L		86	64 - 117	2	21
2,6-Dinitrotoluene	80.0	67.8	Q9	ug/L		85	63 - 111	1	20
2-Chloronaphthalene	120	80.2	Q9	ug/L		67	57 - 96	6	21
2-Chlorophenol	80.0	60.7	Q9	ug/L		76	55 - 98	3	20
2-Methylnaphthalene	80.0	56.7	Q9	ug/L		71	51 - 100	13	20
2-Methylphenol	80.0	58.2	Q9	ug/L		73	51 - 92	10	23
2-Nitroaniline	80.0	63.3	Q9	ug/L		79	60 - 118	3	35
2-Nitrophenol	80.0	65.8	Q9	ug/L		82	55 - 112	6	20
3 & 4 Methylphenol	80.0	52.0	Q9	ug/L		65	46 - 89	4	22
3,3'-Dichlorobenzidine	80.0	66.6	Q9	ug/L		83	46 - 109	5	20
3-Nitroaniline	80.0	62.3	Q9	ug/L		78	51 - 115	0	35
4,6-Dinitro-2-methylphenol	120	88.4	Q9	ug/L		74	53 - 121	5	20
4-Bromophenyl phenyl ether	80.0	68.8	Q9	ug/L		86	60 - 109	0	20

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-5628/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloro-3-methylphenol	80.0	62.3	Q9	ug/L		78	60 - 108	4	20
4-Chloroaniline	80.0	59.8	Q9	ug/L		75	25 - 116	0	35
4-Chlorophenyl phenyl ether	80.0	67.5	Q9	ug/L		84	60 - 109	3	20
4-Nitroaniline	80.0	62.1	Q9	ug/L		78	49 - 128	5	35
4-Nitrophenol	120	111	L5 Q9	ug/L		93	21 - 61	1	27
Acenaphthene	80.0	64.2	Q9	ug/L		80	47 - 145	0	20
Acenaphthylene	80.0	65.4	Q9	ug/L		82	59 - 102	1	20
Anthracene	80.0	63.4	Q9	ug/L		79	62 - 109	3	20
Benzo[a]anthracene	80.0	63.6	Q9	ug/L		80	61 - 109	1	20
Benzo[a]pyrene	80.0	63.8	Q9	ug/L		80	61 - 106	2	21
Benzo[b]fluoranthene	80.0	58.0	Q9	ug/L		72	53 - 105	4	23
Benzo[g,h,i]perylene	80.0	78.8	Q9	ug/L		98	55 - 120	2	27
Benzo[k]fluoranthene	80.0	65.1	Q9	ug/L		81	61 - 114	0	26
Benzoic acid	200	83.3	Q9	ug/L		42	10 - 49	20	35
Benzyl alcohol	80.0	77.5	Q9	ug/L		97	50 - 98	7	29
Bis(2-chloroethoxy)methane	80.0	65.4	Q9	ug/L		82	60 - 105	0	21
Bis(2-chloroethyl)ether	80.0	56.1	Q9	ug/L		70	56 - 102	4	21
bis (2-chloroisopropyl) ether	80.0	61.2	Q9	ug/L		76	55 - 103	2	20
Bis(2-ethylhexyl) phthalate	80.0	60.7	Q9	ug/L		76	63 - 113	0	20
Butyl benzyl phthalate	80.0	59.7	Q9	ug/L		75	61 - 110	0	20
Chrysene	80.0	66.9	Q9	ug/L		84	63 - 111	1	20
Dibenz(a,h)anthracene	80.0	74.3	Q9	ug/L		93	57 - 119	3	26
Dibenzofuran	80.0	65.0	Q9	ug/L		81	62 - 105	1	20
Diethyl phthalate	80.0	67.8	Q9	ug/L		85	63 - 111	1	21
Dimethyl phthalate	120	96.8	Q9	ug/L		81	64 - 103	3	20
Di-n-butyl phthalate	80.0	63.8	Q9	ug/L		80	64 - 111	1	20
Di-n-octyl phthalate	80.0	57.5	Q9	ug/L		72	51 - 122	3	22
Fluoranthene	80.0	66.6	Q9	ug/L		83	65 - 115	1	20
Fluorene	80.0	66.0	Q9	ug/L		82	63 - 112	1	20
Hexachlorobutadiene	80.0	53.3	Q9	ug/L		67	22 - 89	18	34
Hexachlorobenzene	80.0	71.6	Q9	ug/L		89	61 - 111	4	20
Hexachlorocyclopentadiene	80.0	46.0	Q9	ug/L		58	17 - 73	8	32
Hexachloroethane	120	78.0	Q9	ug/L		65	26 - 81	14	31
Indeno[1,2,3-cd]pyrene	80.0	75.2	Q9	ug/L		94	58 - 120	1	25
Isophorone	80.0	62.6	Q9	ug/L		78	47 - 100	3	20
Naphthalene	80.0	61.2	Q9	ug/L		76	52 - 100	2	20
Nitrobenzene	80.0	65.8	Q9	ug/L		82	57 - 107	8	20
N-Nitrosodi-n-propylamine	80.0	63.9	Q9	ug/L		80	57 - 108	1	22
N-Nitrosodiphenylamine	80.0	58.1	Q9	ug/L		73	50 - 100	4	20
Pentachlorophenol	120	90.5	Q9	ug/L		75	43 - 116	6	20
Phenanthrene	80.0	65.1	Q9	ug/L		81	64 - 110	1	20
Phenol	80.0	36.8	Q9	ug/L		46	22 - 59	10	30
Pyrene	80.0	64.3	Q9	ug/L		80	64 - 109	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*46*		*10 - 78*
Nitrobenzene-d5 (Surr)	*78*		*22 - 116*
2-Fluorobiphenyl (Surr)	*73*		*40 - 91*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-5628/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5628

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*91*		*14 - 122*
p-Terphenyl-d14 (Surr)	*43*		*10 - 117*
Phenol-d5 (Surr)	*33*		*10 - 51*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 550-5586/1-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5586

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Methoxychlor	ND		0.10	ug/L		05/23/13 11:05	06/10/13 20:07	1
Toxaphene	ND		1.0	ug/L		05/23/13 11:05	06/10/13 20:07	1
delta-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Dieldrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan I	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan II	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan sulfate	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endrin aldehyde	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
gamma-BHC (Lindane)	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Heptachlor	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDD	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDE	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDT	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Aldrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
alpha-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
beta-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Chlordane (technical)	ND		0.50	ug/L		05/23/13 11:05	06/10/13 20:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 132*	*05/23/13 11:05*	*06/10/13 20:07*	*1*
DCB Decachlorobiphenyl (Surr)	*39*		*10 - 103*	*05/23/13 11:05*	*06/10/13 20:07*	*1*

Lab Sample ID: LCS 550-5586/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor epoxide	1.00	0.965		ug/L		96	69 - 118
Methoxychlor	1.00	0.958		ug/L		96	61 - 128
delta-BHC	1.00	0.996		ug/L		100	68 - 118
Dieldrin	1.00	0.964		ug/L		96	69 - 120
Endosulfan I	1.00	0.962		ug/L		96	68 - 122
Endosulfan II	1.00	0.965		ug/L		97	70 - 121
Endosulfan sulfate	1.00	0.997		ug/L		100	69 - 123

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 550-5586/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	1.00	0.976		ug/L		98	67 - 122
Endrin aldehyde	1.00	0.988		ug/L		99	69 - 121
gamma-BHC (Lindane)	1.00	0.974		ug/L		97	70 - 119
Heptachlor	1.00	0.873		ug/L		87	51 - 124
4,4'-DDD	1.00	0.975		ug/L		97	65 - 122
4,4'-DDE	1.00	0.908		ug/L		91	58 - 119
4,4'-DDT	1.00	0.908		ug/L		91	61 - 126
Aldrin	1.00	0.769		ug/L		77	43 - 120
alpha-BHC	1.00	1.00		ug/L		100	70 - 117
beta-BHC	1.00	0.986		ug/L		99	70 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*72*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*40*		*10 - 103*

Lab Sample ID: LCSD 550-5586/3-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	1.00	0.940		ug/L		94	69 - 118	3	29
Methoxychlor	1.00	0.924		ug/L		92	61 - 128	4	32
delta-BHC	1.00	0.971		ug/L		97	68 - 118	3	28
Dieldrin	1.00	0.940		ug/L		94	69 - 120	2	30
Endosulfan I	1.00	0.939		ug/L		94	68 - 122	2	30
Endosulfan II	1.00	0.940		ug/L		94	70 - 121	3	30
Endosulfan sulfate	1.00	0.968		ug/L		97	69 - 123	3	30
Endrin	1.00	0.951		ug/L		95	67 - 122	3	35
Endrin aldehyde	1.00	0.964		ug/L		96	69 - 121	2	30
gamma-BHC (Lindane)	1.00	0.955		ug/L		95	70 - 119	2	28
Heptachlor	1.00	0.847		ug/L		85	51 - 124	3	33
4,4'-DDD	1.00	0.964		ug/L		96	65 - 122	1	33
4,4'-DDE	1.00	0.896		ug/L		90	58 - 119	1	35
4,4'-DDT	1.00	0.897		ug/L		90	61 - 126	1	35
Aldrin	1.00	0.747		ug/L		75	43 - 120	3	33
alpha-BHC	1.00	0.994		ug/L		99	70 - 117	1	28
beta-BHC	1.00	0.964		ug/L		96	70 - 117	2	28

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*69*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*44*		*10 - 103*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 550-5582/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Silvex (2,4,5-TP)	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
2,4-D	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
2,4-DB	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dicamba	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dichlorprop	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dinoseb	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Pentachlorophenol	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*78*		*10 - 140*	*05/23/13 10:06*	*06/05/13 22:07*	*1*

Lab Sample ID: LCS 550-5582/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	1.76	Q9 V1	ug/L		88	38 - 119
Silvex (2,4,5-TP)	2.00	1.76	Q9	ug/L		88	10 - 150
2,4-D	2.00	1.87	Q9 V1	ug/L		93	10 - 131
2,4-DB	2.00	1.23	Q9 V1	ug/L		62	10 - 144
Dicamba	2.00	1.54	Q9	ug/L		77	14 - 125
Dichlorprop	2.00	1.44	Q9	ug/L		72	15 - 150
Dinoseb	2.00	0.731	Q9	ug/L		37	10 - 133
Pentachlorophenol	2.00	1.74	Q9	ug/L		87	20 - 141

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*79*		*10 - 140*

Lab Sample ID: LCSD 550-5582/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	2.00	2.16	Q9 V1	ug/L		108	38 - 119	21	35
Silvex (2,4,5-TP)	2.00	2.17	Q9	ug/L		108	10 - 150	21	35
2,4-D	2.00	2.45	Q9 V1	ug/L		123	10 - 131	27	35
2,4-DB	2.00	1.57	Q9 V1	ug/L		78	10 - 144	24	35
Dicamba	2.00	1.93	Q9	ug/L		96	14 - 125	23	35
Dichlorprop	2.00	1.79	Q9	ug/L		90	15 - 150	22	35
Dinoseb	2.00	0.858	Q9	ug/L		43	10 - 133	16	35
Pentachlorophenol	2.00	2.12	Q9	ug/L		106	20 - 141	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*102*		*10 - 140*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-5615/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			05/22/13 13:48	1
Nitrite as N	ND		0.20		mg/L			05/22/13 13:48	1

Lab Sample ID: LCS 550-5615/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			4.00	4.02		mg/L		100	90 - 110		
Nitrite as N			4.00	4.14		mg/L		103	90 - 110		
Nitrate Nitrite as N			8.00	8.16		mg/L		102	90 - 110		

Lab Sample ID: LCSD 550-5615/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			4.00	4.13		mg/L		103	90 - 110	3	20
Nitrite as N			4.00	4.16		mg/L		104	90 - 110	1	20
Nitrate Nitrite as N			8.00	8.29		mg/L		104	90 - 110	2	20

Lab Sample ID: 550-3279-B-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	ND		4.00	4.23		mg/L		102	80 - 120		
Nitrite as N	ND		4.00	4.09		mg/L		102	80 - 120		
Nitrate Nitrite as N	ND		8.00	8.32		mg/L		104	80 - 120		

Lab Sample ID: 550-3279-B-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	ND		4.00	4.29		mg/L		103	80 - 120	1	20
Nitrite as N	ND		4.00	4.31		mg/L		108	80 - 120	5	20
Nitrate Nitrite as N	ND		8.00	8.60		mg/L		108	80 - 120	3	20

Lab Sample ID: MB 550-6103/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6103

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			05/30/13 14:48	1
Nitrite as N	ND		0.20		mg/L			05/30/13 14:48	1
Chloride	ND		2.0		mg/L			05/30/13 14:48	1
Sulfate	ND		2.0		mg/L			05/30/13 14:48	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 550-6103/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6103

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	4.00	4.12		mg/L		103	90 - 110
Nitrite as N	4.00	4.03		mg/L		101	90 - 110
Nitrate Nitrite as N	8.00	8.15		mg/L		102	90 - 110
Chloride	20.0	20.3		mg/L		101	90 - 110
Sulfate	20.0	20.2		mg/L		101	90 - 110

Lab Sample ID: LCSD 550-6103/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6103

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.00	4.13		mg/L		103	90 - 110	0	20
Nitrite as N	4.00	4.04		mg/L		101	90 - 110	0	20
Nitrate Nitrite as N	8.00	8.17		mg/L		102	90 - 110	0	20
Chloride	20.0	20.3		mg/L		102	90 - 110	0	20
Sulfate	20.0	20.3		mg/L		101	90 - 110	0	20

Lab Sample ID: 550-3771-A-7 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6103

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	3.1		4.00	7.32		mg/L		106	80 - 120
Nitrite as N	ND		4.00	3.90		mg/L		98	80 - 120
Nitrate Nitrite as N	3.1		8.00	11.2		mg/L		102	80 - 120
Chloride	80	M3	20.0	95.5	M3	mg/L		76	80 - 120
Sulfate	65		20.0	82.4		mg/L		88	80 - 120

Lab Sample ID: 550-3771-A-7 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6103

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	3.1		4.00	7.42		mg/L		109	80 - 120	1	20
Nitrite as N	ND		4.00	3.98		mg/L		99	80 - 120	2	20
Nitrate Nitrite as N	3.1		8.00	11.4		mg/L		104	80 - 120	2	20
Chloride	80	M3	20.0	95.9	M3	mg/L		78	80 - 120	0	20
Sulfate	65		20.0	82.8		mg/L		90	80 - 120	0	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-5962/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	mg/L		05/29/13 13:05	06/03/13 20:52	1
Barium	ND		0.10	mg/L		05/29/13 13:05	06/03/13 20:52	1
Cadmium	ND		0.0010	mg/L		05/29/13 13:05	06/03/13 20:52	1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: MB 550-5962/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		2.0	mg/L		05/29/13 13:05	06/03/13 20:52	1
Chromium	ND		0.010	mg/L		05/29/13 13:05	06/03/13 20:52	1
Lead	ND		0.015	mg/L		05/29/13 13:05	06/03/13 20:52	1
Magnesium	ND		2.0	mg/L		05/29/13 13:05	06/03/13 20:52	1
Selenium	ND		0.10	mg/L		05/29/13 13:05	06/03/13 20:52	1
Silver	ND		0.010	mg/L		05/29/13 13:05	06/03/13 20:52	1

Lab Sample ID: MB 550-5962/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		2.0	mg/L		05/29/13 13:05	06/05/13 11:08	1

Lab Sample ID: LCS 550-5962/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.959		mg/L		96	85 - 115
Barium	1.00	0.969		mg/L		97	85 - 115
Cadmium	1.00	0.955		mg/L		96	85 - 115
Calcium	21.0	20.4		mg/L		97	85 - 115
Chromium	1.00	0.990		mg/L		99	85 - 115
Lead	1.00	0.956		mg/L		96	85 - 115
Magnesium	21.0	20.6		mg/L		98	85 - 115
Selenium	1.00	0.938		mg/L		94	85 - 115
Silver	0.0750	0.0694		mg/L		93	85 - 115

Lab Sample ID: LCS 550-5962/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	20.0	19.1		mg/L		95	85 - 115

Lab Sample ID: LCSD 550-5962/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	0.999		mg/L		100	85 - 115	4	20
Barium	1.00	1.01		mg/L		101	85 - 115	4	20
Cadmium	1.00	0.995		mg/L		99	85 - 115	4	20
Calcium	21.0	21.6		mg/L		103	85 - 115	6	20
Chromium	1.00	1.03		mg/L		103	85 - 115	4	20
Lead	1.00	0.994		mg/L		99	85 - 115	4	20
Magnesium	21.0	21.2		mg/L		101	85 - 115	3	20
Selenium	1.00	0.974		mg/L		97	85 - 115	4	20

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 550-5962/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver			0.0750	0.0710		mg/L		95	85 - 115	2	20

Lab Sample ID: LCSD 550-5962/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium			20.0	19.6		mg/L		98	85 - 115	3	20

Lab Sample ID: 550-3226-C-2-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	ND		1.00	1.01		mg/L		99	70 - 130		
Barium	ND		1.00	1.03		mg/L		98	70 - 130		
Cadmium	ND		1.00	0.989		mg/L		99	70 - 130		
Calcium	39		21.0	59.8		mg/L		101	70 - 130		
Chromium	0.019		1.00	1.03		mg/L		101	70 - 130		
Lead	ND		1.00	0.971		mg/L		97	70 - 130		
Magnesium	18		21.0	38.7		mg/L		97	70 - 130		
Selenium	ND		1.00	0.981		mg/L		98	70 - 130		
Silver	ND		0.0750	0.0709		mg/L		95	70 - 130		

Lab Sample ID: 550-3226-C-2-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sodium	130	M3	20.0	143	M3	mg/L		69	70 - 130		

Lab Sample ID: 550-3226-C-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6437 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.00		mg/L		98	70 - 130	1	20
Barium	ND		1.00	1.02		mg/L		96	70 - 130	2	20
Cadmium	ND		1.00	0.977		mg/L		98	70 - 130	1	20
Calcium	39		21.0	59.0		mg/L		97	70 - 130	1	20
Chromium	0.019		1.00	1.01		mg/L		99	70 - 130	1	20
Lead	ND		1.00	0.967		mg/L		97	70 - 130	0	20
Magnesium	18		21.0	38.8		mg/L		97	70 - 130	0	20
Selenium	ND		1.00	0.975		mg/L		97	70 - 130	1	20
Silver	ND		0.0750	0.0710		mg/L		95	70 - 130	0	20

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 550-3226-C-2-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6645 — **Prep Batch: 5962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	130	M3	20.0	145	M3	mg/L		81	70 - 130	2	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 550-6123/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		05/30/13 17:12	05/31/13 10:00	1

Lab Sample ID: LCS 550-6123/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	0.0100	0.0107		mg/L		107	85 - 115

Lab Sample ID: LCSD 550-6123/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	0.0100	0.0106		mg/L		106	85 - 115	1	20

Lab Sample ID: 550-3367-F-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	ND		0.0100	0.0107		mg/L		107	70 - 130

Lab Sample ID: 550-3367-F-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		0.0100	0.0107		mg/L		107	70 - 130	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-6194/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1
Bicarbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1
Carbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 550-6194/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Phenolphthalein	ND		6.0		mg/L			05/30/13 17:43	1
Hydroxide Alkalinity as CaCO3	ND		6.0		mg/L			05/30/13 17:43	1

Lab Sample ID: LCS 550-6194/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity as CaCO3			250	251		mg/L		100	90 - 110		

Lab Sample ID: LCSD 550-6194/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3			250	249		mg/L		99	90 - 110	1	20

Lab Sample ID: 550-3261-F-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	310			302		mg/L				1	20
Bicarbonate Alkalinity as CaCO3	310			302		mg/L				1	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20
Alkalinity, Phenolphthalein	ND			ND		mg/L				NC	20
Hydroxide Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Lab Sample ID: 550-3424-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	120			119		mg/L				0.9	20
Bicarbonate Alkalinity as CaCO3	120			119		mg/L				0.9	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20
Alkalinity, Phenolphthalein	ND			ND		mg/L				NC	20
Hydroxide Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 550-5984/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.050		mg/L		05/29/13 12:40	05/29/13 17:20	1

Method: SM 4500 CN E - Cyanide, Total (Continued)

Lab Sample ID: LCS 550-5984/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.106		mg/L		106	90 - 110		

Lab Sample ID: LCSD 550-5984/19-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total			0.100	0.105		mg/L		105	90 - 110	0	20

Lab Sample ID: 550-3169-C-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		0.100	0.106		mg/L		106	80 - 120		

Lab Sample ID: 550-3169-C-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.100	0.101		mg/L		101	80 - 120	5	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

GC/MS VOA

Analysis Batch: 6270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3224-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-3224-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
550-3275-1	MW-9	Total/NA	Water	8260B	
550-3275-2	Trip Blank	Total/NA	Water	8260B	
LCS 550-6270/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-6270/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-6270/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 5628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	3510C	
LCS 550-5628/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-5628/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-5628/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 6295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	8270C	5628
LCS 550-5628/2-A	Lab Control Sample	Total/NA	Water	8270C	5628
LCSD 550-5628/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	5628
MB 550-5628/1-A	Method Blank	Total/NA	Water	8270C	5628

GC Semi VOA

Prep Batch: 5582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	8151A	
LCS 550-5582/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 550-5582/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 550-5582/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 5586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	3510C	
LCS 550-5586/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-5586/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-5586/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 6597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	8151A	5582
LCS 550-5582/2-A	Lab Control Sample	Total/NA	Water	8151A	5582
LCSD 550-5582/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	5582
MB 550-5582/1-A	Method Blank	Total/NA	Water	8151A	5582

Analysis Batch: 6944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	8081A	5586

GC Semi VOA (Continued)

Analysis Batch: 6944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-5586/2-A	Lab Control Sample	Total/NA	Water	8081A	5586
LCSD 550-5586/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	5586
MB 550-5586/1-A	Method Blank	Total/NA	Water	8081A	5586

HPLC/IC

Analysis Batch: 5615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	300.0	
550-3279-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-3279-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-5615/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-5615/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-5615/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 6103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	300.0	
550-3771-A-7 MS	Matrix Spike	Total/NA	Water	300.0	
550-3771-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-6103/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-6103/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-6103/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 5962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3226-C-2-A MS	Matrix Spike	Total/NA	Water	200.7	
550-3226-C-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	
550-3275-1	MW-9	Total/NA	Water	200.7	
LCS 550-5962/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-5962/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
MB 550-5962/1-A	Method Blank	Total/NA	Water	200.7	

Prep Batch: 6123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	245.1	
550-3367-F-1-C MS	Matrix Spike	Total/NA	Water	245.1	
550-3367-F-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
LCS 550-6123/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 550-6123/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
MB 550-6123/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 6186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	245.1	6123
550-3367-F-1-C MS	Matrix Spike	Total/NA	Water	245.1	6123
550-3367-F-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	6123
LCS 550-6123/2-A	Lab Control Sample	Total/NA	Water	245.1	6123

Metals (Continued)

Analysis Batch: 6186 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 550-6123/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	6123
MB 550-6123/1-A	Method Blank	Total/NA	Water	245.1	6123

Analysis Batch: 6437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3226-C-2-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	5962
550-3226-C-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	5962
LCS 550-5962/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	5962
LCSD 550-5962/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	5962
MB 550-5962/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	5962

Analysis Batch: 6645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3226-C-2-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	5962
550-3226-C-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	5962
550-3275-1	MW-9	Total/NA	Water	200.7 Rev 4.4	5962
LCS 550-5962/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	5962
LCSD 550-5962/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	5962
MB 550-5962/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	5962

Analysis Batch: 6713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3275-1	MW-9	Total/NA	Water	200.7 Rev 4.4	5962

General Chemistry

Prep Batch: 5984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3169-C-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN C	
550-3169-C-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN C	
550-3275-1	MW-9	Total/NA	Water	SM 4500 CN C	
LCS 550-5984/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	
LCSD 550-5984/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN C	
MB 550-5984/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 5994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3169-C-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	5984
550-3169-C-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	5984
550-3275-1	MW-9	Total/NA	Water	SM 4500 CN E	5984
LCS 550-5984/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	5984
LCSD 550-5984/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN E	5984
MB 550-5984/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	5984

Analysis Batch: 6194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-F-1 DU	Duplicate	Total/NA	Water	SM 2320B	
550-3275-1	MW-9	Total/NA	Water	SM 2320B	
550-3424-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 550-6194/6	Lab Control Sample	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 6194 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 550-6194/20	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-6194/7	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Client Sample ID: MW-9

Lab Sample ID: 550-3275-1
Date Collected: 05/21/13 09:15
Matrix: Water
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6270	06/02/13 14:07	KD	TAL PHX
Total/NA	Prep	3510C			5628	05/23/13 14:39	KA	TAL PHX
Total/NA	Analysis	8270C		1	6295	06/03/13 21:37	CL	TAL PHX
Total/NA	Prep	8151A			5582	05/23/13 10:06	KA	TAL PHX
Total/NA	Analysis	8151A		1	6597	06/06/13 00:14	CL	TAL PHX
Total/NA	Prep	3510C			5586	05/23/13 11:05	KA	TAL PHX
Total/NA	Analysis	8081A		1	6944	06/10/13 21:24	AT	TAL PHX
Total/NA	Analysis	300.0		1	5615	05/23/13 01:37	KLH	TAL PHX
Total/NA	Analysis	300.0		10	6103	05/30/13 16:38	KLH	TAL PHX
Total/NA	Prep	245.1			6123	05/30/13 17:12	AJC	TAL PHX
Total/NA	Analysis	245.1		1	6186	05/31/13 10:26	AJC	TAL PHX
Total/NA	Prep	200.7			5962	05/29/13 13:05	JRC	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	6645	06/05/13 11:30	HK	TAL PHX
Total/NA	Prep	200.7			5962	05/29/13 13:05	JRC	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	6713	06/06/13 12:16	HK	TAL PHX
Total/NA	Prep	SM 4500 CN C			5984	05/29/13 12:40	TS	TAL PHX
Total/NA	Analysis	SM 4500 CN E		1	5994	05/29/13 17:20	TS	TAL PHX
Total/NA	Analysis	SM 2320B		1	6194	05/30/13 18:30	DS	TAL PHX

Client Sample ID: Trip Blank

Lab Sample ID: 550-3275-2
Date Collected: 05/21/13 09:15
Matrix: Water
Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6270	06/02/13 10:53	KD	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Laboratory: TestAmerica Phoenix

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA	IHLAP		154268	07-01-13
Arizona	State Program	9	AZ0728	06-09-14
California	NELAP	9	01109CA	11-30-13
Nevada	State Program	9	AZ01030	07-31-13
New York	NELAP	2	11898	04-01-14
Oregon	NELAP	10	AZ100001	03-09-14
USDA	Federal		P330-09-00024	06-09-15

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon-Las Cruces

TestAmerica Job ID: 550-3275-1
SDG: 68137008

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PHX
8081A	Organochlorine Pesticides (GC)	SW846	TAL PHX
8151A	Herbicides (GC)	SW846	TAL PHX
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
200.7 Rev 4.4	Metals (ICP)	40CFR136A	TAL PHX
245.1	Mercury (CVAA)	EPA	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 CN E	Cyanide, Total	SM	TAL PHX

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater ", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[X] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (6
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

550-3275 Chain of Custody

Page ____ of ____

Client Name/Address: Terracon, 1640 Hickory Loop Suite 105, Las Cruces, NM 88005

Project/PO Number: 68137008

Project Manager: Kyle Williams

Phone Number: (575) 527-1700

Sampler: K. Williams

Fax Number: 527-1092

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260B	8270	metals	NO_2-NO_3	Cyanide	8081	8151	~~Fixed Gas~~		Special Instructions
																550-3275
MW-9	water	various	13	5-21-13	0915	various	X	X	X	X	X	X	X			

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
[signature]	5-21-13 / 14:30			same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time: FEDEX	Received in Lab By: [signature]	Date/Time: 5/22/13 1920	Sample Integrity: (Check) intact 1 on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 550-3275-1
SDG Number: 68137008

Login Number: 3275
List Number: 1
Creator: DeShazo, Brittany

List Source: TestAmerica Phoenix

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-3261-1
Client Project/Site: 68137008

For:
Terracon Consulting Eng & Scientists
1640 Kickory Loop
Suite 105
Las Cruces, New Mexico 88005

Attn: Mr. Kyle Willaims

Authorized for release by:
6/11/2013 4:15:43 PM

Carlene McCutcheon, Customer Service Manager
carlene.mccutcheon@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Sample Summary 5
Detection Summary 6
Client Sample Results 7
Surrogate Summary 14
QC Sample Results 16
QC Association Summary 38
Lab Chronicle 41
Certification Summary 42
Method Summary 43
Chain of Custody 44
Receipt Checklists 45

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
N1	See case narrative.
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.

GC/MS Semi VOA

Qualifier	Qualifier Description
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
Q9	Insufficent sample received to meet method QC requirements.

GC Semi VOA

Qualifier	Qualifier Description
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample,
Q9	Insufficent sample received to meet method QC requirements.

Metals

Qualifier	Qualifier Description
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-3261-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-3261-1

Comments
No additional comments.

Receipt
The samples were received on 5/22/2013 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

GC/MS VOA
Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6158 was outside control criteria for Vinyl Acetate. There was no hits for Vinyl Acetate in any samples, the data has been qualified with a N1 and reported.

Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6270 was outside control criteria for Vinyl Acetate. The data have been qualified with a N1 and reported.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5628. MW-10 (550-3261-1)

No other analytical or quality issues were noted.

HPLC
No analytical or quality issues were noted.

GC Semi VOA
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5586 for the following samples:MW-10 (550-3261-1).

Method(s) 8151A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 5582. The LCS/LCSD were flagged with Q9 data qualifier.MW-10 (550-3261-1)

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-3261-1	MW-10	Water	05/21/13 10:30	05/22/13 09:20
550-3261-2	Trip Blank	Water	05/21/13 10:30	05/22/13 09:20

Detection Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Client Sample ID: MW-10 — Lab Sample ID: 550-3261-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.0		0.20		mg/L	1		300.0	Total/NA
Chloride	380		20		mg/L	10		300.0	Total/NA
Sulfate	260		20		mg/L	10		300.0	Total/NA
Barium	1.1		0.10		mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	370		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	0.13		0.010		mg/L	1		200.7 Rev 4.4	Total/NA
Lead	0.073		0.015		mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	100		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	290		2.0		mg/L	1		200.7 Rev 4.4	Total/NA
Alkalinity as CaCO3	310		6.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	310		6.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 550-3261-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Client Sample ID: MW-10

Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3261-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 13:35	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/02/13 13:35	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 13:35	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/02/13 13:35	1
1,1-Dichloroethane	ND		0.50		ug/L			06/02/13 13:35	1
1,1-Dichloroethene	ND		0.50		ug/L			06/02/13 13:35	1
1,1-Dichloropropene	ND		0.50		ug/L			06/02/13 13:35	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/13 13:35	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/02/13 13:35	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/13 13:35	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/02/13 13:35	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/02/13 13:35	1
Ethylene Dibromide	ND		0.50		ug/L			06/02/13 13:35	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/02/13 13:35	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/13 13:35	1
1,2-Dichloropropane	ND		0.50		ug/L			06/02/13 13:35	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/02/13 13:35	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/02/13 13:35	1
1,3-Dichloropropane	ND		0.50		ug/L			06/02/13 13:35	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/02/13 13:35	1
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 13:35	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 13:35	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 13:35	1
2-Hexanone	ND		5.0		ug/L			06/02/13 13:35	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 13:35	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 13:35	1
Acetone	ND	R6	10		ug/L			06/02/13 13:35	1
Benzene	ND		0.50		ug/L			06/02/13 13:35	1
Bromobenzene	ND		0.50		ug/L			06/02/13 13:35	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 13:35	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 13:35	1
Bromoform	ND		1.0		ug/L			06/02/13 13:35	1
Bromomethane	ND		1.0		ug/L			06/02/13 13:35	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 13:35	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 13:35	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 13:35	1
Chloroethane	ND		1.0		ug/L			06/02/13 13:35	1
Chloroform	ND		0.50		ug/L			06/02/13 13:35	1
Chloromethane	ND		1.0		ug/L			06/02/13 13:35	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 13:35	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 13:35	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 13:35	1
Dibromomethane	ND		0.50		ug/L			06/02/13 13:35	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 13:35	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 13:35	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 13:35	1
Iodomethane	ND		2.5		ug/L			06/02/13 13:35	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 13:35	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/02/13 13:35	1

Client Sample ID: MW-10

Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3261-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	ug/L			06/02/13 13:35	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 13:35	1
Naphthalene	ND		2.5	ug/L			06/02/13 13:35	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 13:35	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 13:35	1
o-Xylene	ND		0.50	ug/L			06/02/13 13:35	1
4-Isopropyltoluene	ND		0.50	ug/L			06/02/13 13:35	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 13:35	1
Styrene	ND		0.50	ug/L			06/02/13 13:35	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 13:35	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 13:35	1
Toluene	ND		0.50	ug/L			06/02/13 13:35	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 13:35	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 13:35	1
Trichloroethene	ND		0.50	ug/L			06/02/13 13:35	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 13:35	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 13:35	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 13:35	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*06/02/13 13:35*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*06/02/13 13:35*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*06/02/13 13:35*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
1,2-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
1,2-Diphenylhydrazine	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
1,3-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
1,4-Dichlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,4,5-Trichlorophenol	ND		21	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,4,6-Trichlorophenol	ND		21	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,4-Dichlorophenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,4-Dimethylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,4-Dinitrophenol	ND		52	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,4-Dinitrotoluene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2,6-Dinitrotoluene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2-Chloronaphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2-Chlorophenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2-Methylnaphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2-Methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
2-Nitrophenol	ND		15	ug/L		05/23/13 14:39	06/03/13 19:53	1
3 & 4 Methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
3,3'-Dichlorobenzidine	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
3-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
4,6-Dinitro-2-methylphenol	ND		52	ug/L		05/23/13 14:39	06/03/13 19:53	1
4-Bromophenyl phenyl ether	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1

Client Sample ID: MW-10
Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3261-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
4-Chloroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
4-Chlorophenyl phenyl ether	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
4-Nitroaniline	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
4-Nitrophenol	ND	L5	26	ug/L		05/23/13 14:39	06/03/13 19:53	1
Acenaphthene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Acenaphthylene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzo[a]anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzo[a]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzo[b]fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzo[g,h,i]perylene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzo[k]fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzoic acid	ND		26	ug/L		05/23/13 14:39	06/03/13 19:53	1
Benzyl alcohol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Bis(2-chloroethoxy)methane	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Bis(2-chloroethyl)ether	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
bis (2-chloroisopropyl) ether	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Bis(2-ethylhexyl) phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Butyl benzyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Chrysene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Dibenz(a,h)anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Dibenzofuran	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Diethyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Dimethyl phthalate	ND		21	ug/L		05/23/13 14:39	06/03/13 19:53	1
Di-n-butyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Di-n-octyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Fluorene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Hexachlorobutadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Hexachlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Hexachlorocyclopentadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Hexachloroethane	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Indeno[1,2,3-cd]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Isophorone	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Naphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Nitrobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
N-Nitrosodiphenylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Pentachlorophenol	ND		52	ug/L		05/23/13 14:39	06/03/13 19:53	1
Phenanthrene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Phenol	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1
Pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*46*		*10 - 78*	*05/23/13 14:39*	*06/03/13 19:53*	*1*
Nitrobenzene-d5 (Surr)	*78*		*22 - 116*	*05/23/13 14:39*	*06/03/13 19:53*	*1*
2-Fluorobiphenyl (Surr)	*76*		*40 - 91*	*05/23/13 14:39*	*06/03/13 19:53*	*1*
2,4,6-Tribromophenol (Surr)	*92*		*14 - 122*	*05/23/13 14:39*	*06/03/13 19:53*	*1*
p-Terphenyl-d14 (Surr)	*42*		*10 - 117*	*05/23/13 14:39*	*06/03/13 19:53*	*1*

Client Sample ID: MW-10

Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3261-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	*31*		*10 - 51*	*05/23/13 14:39*	*06/03/13 19:53*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Methoxychlor	ND		0.11	ug/L		05/23/13 11:05	06/10/13 21:05	1
Toxaphene	ND		1.1	ug/L		05/23/13 11:05	06/10/13 21:05	1
delta-BHC	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Dieldrin	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Endosulfan I	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Endosulfan II	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Endosulfan sulfate	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Endrin	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Endrin aldehyde	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
gamma-BHC (Lindane)	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Heptachlor	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
4,4'-DDD	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
4,4'-DDE	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
4,4'-DDT	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Aldrin	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
alpha-BHC	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
beta-BHC	ND		0.054	ug/L		05/23/13 11:05	06/10/13 21:05	1
Chlordane (technical)	ND		0.54	ug/L		05/23/13 11:05	06/10/13 21:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*67*		*10 - 132*	*05/23/13 11:05*	*06/10/13 21:05*	*1*
DCB Decachlorobiphenyl (Surr)	*18*		*10 - 103*	*05/23/13 11:05*	*06/10/13 21:05*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
Silvex (2,4,5-TP)	ND		0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
2,4-D	ND	V1	0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
2,4-DB	ND	V1	0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
Dicamba	ND		0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
Dichlorprop	ND		0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
Dinoseb	ND		0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1
Pentachlorophenol	ND		0.52	ug/L		05/23/13 10:06	06/05/13 23:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	*78*		*10 - 140*	*05/23/13 10:06*	*06/05/13 23:53*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**2.0**		0.20	mg/L			05/22/13 22:20	1
Nitrite as N	ND		0.20	mg/L			05/22/13 22:20	1
Chloride	**380**		20	mg/L			05/28/13 20:51	10
Sulfate	**260**		20	mg/L			05/28/13 20:51	10

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Client Sample ID: MW-10

Lab Sample ID: 550-3261-1
Matrix: Water

Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	mg/L		05/30/13 12:41	06/05/13 16:43	1
Barium	**1.1**		0.10	mg/L		05/30/13 12:41	06/05/13 16:43	1
Cadmium	ND		0.0010	mg/L		05/30/13 12:41	06/05/13 16:43	1
Calcium	**370**		2.0	mg/L		05/30/13 12:41	06/05/13 16:43	1
Chromium	**0.13**		0.010	mg/L		05/30/13 12:41	06/05/13 16:43	1
Lead	**0.073**		0.015	mg/L		05/30/13 12:41	06/05/13 16:43	1
Magnesium	**100**		2.0	mg/L		05/30/13 12:41	06/05/13 16:43	1
Selenium	ND		0.10	mg/L		05/30/13 12:41	06/05/13 16:43	1
Silver	ND		0.010	mg/L		05/30/13 12:41	06/05/13 16:43	1
Sodium	**290**		2.0	mg/L		05/30/13 12:41	06/05/13 16:43	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		05/30/13 17:12	05/31/13 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**310**		6.0	mg/L			05/30/13 17:54	1
Bicarbonate Alkalinity as CaCO3	**310**		6.0	mg/L			05/30/13 17:54	1
Carbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:54	1
Alkalinity, Phenolphthalein	ND		6.0	mg/L			05/30/13 17:54	1
Hydroxide Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:54	1
Cyanide, Total	ND		0.050	mg/L		05/29/13 12:40	05/29/13 17:20	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-3261-2
Matrix: Water

Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			06/02/13 10:21	1
1,1,1-Trichloroethane	ND		0.50	ug/L			06/02/13 10:21	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			06/02/13 10:21	1
1,1,2-Trichloroethane	ND		0.50	ug/L			06/02/13 10:21	1
1,1-Dichloroethane	ND		0.50	ug/L			06/02/13 10:21	1
1,1-Dichloroethene	ND		0.50	ug/L			06/02/13 10:21	1
1,1-Dichloropropene	ND		0.50	ug/L			06/02/13 10:21	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			06/02/13 10:21	1
1,2,3-Trichloropropane	ND		2.0	ug/L			06/02/13 10:21	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			06/02/13 10:21	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			06/02/13 10:21	1
Ethylene Dibromide	ND		0.50	ug/L			06/02/13 10:21	1
1,2-Dichlorobenzene	ND		0.50	ug/L			06/02/13 10:21	1
1,2-Dichloroethane	ND		0.50	ug/L			06/02/13 10:21	1
1,2-Dichloropropane	ND		0.50	ug/L			06/02/13 10:21	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/02/13 10:21	1
1,3-Dichloropropane	ND		0.50	ug/L			06/02/13 10:21	1
1,4-Dichlorobenzene	ND		0.50	ug/L			06/02/13 10:21	1

Client Sample ID: Trip Blank
Date Collected: 05/21/13 10:30
Date Received: 05/22/13 09:20

Lab Sample ID: 550-3261-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	ug/L			06/02/13 10:21	1
2-Butanone (MEK)	ND		5.0	ug/L			06/02/13 10:21	1
2-Chlorotoluene	ND		0.50	ug/L			06/02/13 10:21	1
2-Hexanone	ND		5.0	ug/L			06/02/13 10:21	1
4-Chlorotoluene	ND		0.50	ug/L			06/02/13 10:21	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	ug/L			06/02/13 10:21	1
Acetone	ND	R6	10	ug/L			06/02/13 10:21	1
Benzene	ND		0.50	ug/L			06/02/13 10:21	1
Bromobenzene	ND		0.50	ug/L			06/02/13 10:21	1
Chlorobromomethane	ND		0.50	ug/L			06/02/13 10:21	1
Dichlorobromomethane	ND		0.50	ug/L			06/02/13 10:21	1
Bromoform	ND		1.0	ug/L			06/02/13 10:21	1
Bromomethane	ND		1.0	ug/L			06/02/13 10:21	1
Carbon disulfide	ND		1.0	ug/L			06/02/13 10:21	1
Carbon tetrachloride	ND		0.50	ug/L			06/02/13 10:21	1
Chlorobenzene	ND		0.50	ug/L			06/02/13 10:21	1
Chloroethane	ND		1.0	ug/L			06/02/13 10:21	1
Chloroform	ND		0.50	ug/L			06/02/13 10:21	1
Chloromethane	ND		1.0	ug/L			06/02/13 10:21	1
cis-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 10:21	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 10:21	1
Chlorodibromomethane	ND		0.50	ug/L			06/02/13 10:21	1
Dibromomethane	ND		0.50	ug/L			06/02/13 10:21	1
Dichlorodifluoromethane	ND		0.50	ug/L			06/02/13 10:21	1
Ethylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
Hexachlorobutadiene	ND		1.0	ug/L			06/02/13 10:21	1
Iodomethane	ND		2.5	ug/L			06/02/13 10:21	1
Isopropylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
m-Xylene & p-Xylene	ND		1.0	ug/L			06/02/13 10:21	1
Methylene Chloride	ND		1.0	ug/L			06/02/13 10:21	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 10:21	1
Naphthalene	ND		2.5	ug/L			06/02/13 10:21	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
o-Xylene	ND		0.50	ug/L			06/02/13 10:21	1
4-Isopropyltoluene	ND		0.50	ug/L			06/02/13 10:21	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
Styrene	ND		0.50	ug/L			06/02/13 10:21	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 10:21	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 10:21	1
Toluene	ND		0.50	ug/L			06/02/13 10:21	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 10:21	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 10:21	1
Trichloroethene	ND		0.50	ug/L			06/02/13 10:21	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 10:21	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 10:21	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 10:21	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 10:21	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Client Sample ID: Trip Blank

Lab Sample ID: 550-3261-2

Date Collected: 05/21/13 10:30

Matrix: Water

Date Received: 05/22/13 09:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	108		70 - 130		06/02/13 10:21	1
Toluene-d8 (Surr)	112		70 - 130		06/02/13 10:21	1
4-Bromofluorobenzene (Surr)	109		70 - 130		06/02/13 10:21	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-3224-A-1 MS	Matrix Spike	107	112	109
550-3224-A-1 MSD	Matrix Spike Duplicate	114	111	111
550-3261-1	MW-10	109	109	105
550-3261-2	Trip Blank	108	112	109
LCS 550-6270/4	Lab Control Sample	107	111	111
LCSD 550-6270/5	Lab Control Sample Dup	108	113	108
MB 550-6270/6	Method Blank	106	109	103

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	NBZ	FBP	TBP	TPH	PHL
Lab Sample ID	Client Sample ID	(10-78)	(22-116)	(40-91)	(14-122)	(10-117)	(10-51)
550-3261-1	MW-10	46	78	76	92	42	31
LCS 550-5628/2-A	Lab Control Sample	43	72	75	89	66	30
LCSD 550-5628/3-A	Lab Control Sample Dup	46	78	73	91	43	33
MB 550-5628/1-A	Method Blank	46	73	71	80	47	30

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
TPH = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB2
Lab Sample ID	Client Sample ID	(10-132)	(10-103)
550-3261-1	MW-10	67	18
LCS 550-5586/2-A	Lab Control Sample	72	40
LCSD 550-5586/3-A	Lab Control Sample Dup	69	44
MB 550-5586/1-A	Method Blank	72	39

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl (Surr)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**DCPA1 (10-140)**							
550-3261-1	MW-10	78							
LCS 550-5582/2-A	Lab Control Sample	79							
LCSD 550-5582/3-A	Lab Control Sample Dup	102							
MB 550-5582/1-A	Method Blank	78							

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
1,1-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/02/13 09:49	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/02/13 09:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/02/13 09:49	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/02/13 09:49	1
Ethylene Dibromide	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichloroethane	ND		0.50		ug/L			06/02/13 09:49	1
1,2-Dichloropropane	ND		0.50		ug/L			06/02/13 09:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
1,3-Dichloropropane	ND		0.50		ug/L			06/02/13 09:49	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
2,2-Dichloropropane	ND		1.0		ug/L			06/02/13 09:49	1
2-Butanone (MEK)	ND		5.0		ug/L			06/02/13 09:49	1
2-Chlorotoluene	ND		0.50		ug/L			06/02/13 09:49	1
2-Hexanone	ND		5.0		ug/L			06/02/13 09:49	1
4-Chlorotoluene	ND		0.50		ug/L			06/02/13 09:49	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/02/13 09:49	1
Acetone	ND		10		ug/L			06/02/13 09:49	1
Benzene	ND		0.50		ug/L			06/02/13 09:49	1
Bromobenzene	ND		0.50		ug/L			06/02/13 09:49	1
Chlorobromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dichlorobromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Bromoform	ND		1.0		ug/L			06/02/13 09:49	1
Bromomethane	ND		1.0		ug/L			06/02/13 09:49	1
Carbon disulfide	ND		1.0		ug/L			06/02/13 09:49	1
Carbon tetrachloride	ND		0.50		ug/L			06/02/13 09:49	1
Chlorobenzene	ND		0.50		ug/L			06/02/13 09:49	1
Chloroethane	ND		1.0		ug/L			06/02/13 09:49	1
Chloroform	ND		0.50		ug/L			06/02/13 09:49	1
Chloromethane	ND		1.0		ug/L			06/02/13 09:49	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/02/13 09:49	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/02/13 09:49	1
Chlorodibromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dibromomethane	ND		0.50		ug/L			06/02/13 09:49	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/02/13 09:49	1
Ethylbenzene	ND		0.50		ug/L			06/02/13 09:49	1
Hexachlorobutadiene	ND		1.0		ug/L			06/02/13 09:49	1
Iodomethane	ND		2.5		ug/L			06/02/13 09:49	1
Isopropylbenzene	ND		0.50		ug/L			06/02/13 09:49	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-6270/6
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		1.0	ug/L			06/02/13 09:49	1
Methylene Chloride	ND		1.0	ug/L			06/02/13 09:49	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/02/13 09:49	1
Naphthalene	ND		2.5	ug/L			06/02/13 09:49	1
n-Butylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
N-Propylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
o-Xylene	ND		0.50	ug/L			06/02/13 09:49	1
4-Isopropyltoluene	ND		0.50	ug/L			06/02/13 09:49	1
sec-Butylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
Styrene	ND		0.50	ug/L			06/02/13 09:49	1
tert-Butylbenzene	ND		0.50	ug/L			06/02/13 09:49	1
Tetrachloroethene	ND		0.50	ug/L			06/02/13 09:49	1
Toluene	ND		0.50	ug/L			06/02/13 09:49	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/02/13 09:49	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/02/13 09:49	1
Trichloroethene	ND		0.50	ug/L			06/02/13 09:49	1
Trichlorofluoromethane	ND		0.50	ug/L			06/02/13 09:49	1
Vinyl acetate	ND	N1	2.0	ug/L			06/02/13 09:49	1
Vinyl chloride	ND		0.50	ug/L			06/02/13 09:49	1
Xylenes, Total	ND		1.5	ug/L			06/02/13 09:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*06/02/13 09:49*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*06/02/13 09:49*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*06/02/13 09:49*	*1*

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	23.0		ug/L		92	70 - 130
1,1,1-Trichloroethane	25.0	22.7		ug/L		91	71 - 131
1,1,2,2-Tetrachloroethane	25.0	21.7		ug/L		87	70 - 130
1,1,2-Trichloroethane	25.0	21.2		ug/L		85	70 - 130
1,1-Dichloroethane	25.0	22.2		ug/L		89	70 - 130
1,1-Dichloroethene	25.0	24.7		ug/L		99	63 - 131
1,1-Dichloropropene	25.0	21.6		ug/L		87	70 - 130
1,2,3-Trichlorobenzene	25.0	23.6		ug/L		94	79 - 139
1,2,3-Trichloropropane	25.0	21.9		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		98	80 - 137
1,2,4-Trimethylbenzene	25.0	23.9		ug/L		96	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	20.3		ug/L		81	63 - 146
Ethylene Dibromide	25.0	22.7		ug/L		91	70 - 130
1,2-Dichlorobenzene	25.0	23.4		ug/L		93	70 - 130
1,2-Dichloroethane	25.0	21.5		ug/L		86	66 - 139
1,2-Dichloropropane	25.0	22.4		ug/L		90	70 - 130
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	23.6		ug/L		95	70 - 130
1,3-Dichloropropane	25.0	21.6		ug/L		86	70 - 130
1,4-Dichlorobenzene	25.0	23.8		ug/L		95	70 - 130
2,2-Dichloropropane	25.0	21.8		ug/L		87	69 - 139
2-Butanone (MEK)	25.0	24.1		ug/L		97	53 - 150
2-Chlorotoluene	25.0	23.6		ug/L		95	70 - 130
2-Hexanone	25.0	25.4		ug/L		102	55 - 150
4-Chlorotoluene	25.0	23.8		ug/L		95	70 - 130
4-Methyl-2-pentanone (MIBK)	25.0	23.2		ug/L		93	64 - 142
Acetone	25.0	26.9		ug/L		108	38 - 150
Benzene	25.0	23.6		ug/L		94	70 - 130
Bromobenzene	25.0	23.0		ug/L		92	70 - 130
Chlorobromomethane	25.0	21.1		ug/L		84	70 - 130
Dichlorobromomethane	25.0	21.4		ug/L		86	70 - 130
Bromoform	25.0	20.5		ug/L		82	69 - 129
Bromomethane	25.0	24.7		ug/L		99	57 - 138
Carbon disulfide	25.0	22.7		ug/L		91	64 - 145
Carbon tetrachloride	25.0	23.3		ug/L		93	70 - 143
Chlorobenzene	25.0	23.0		ug/L		92	70 - 130
Chloroethane	25.0	22.5		ug/L		90	66 - 131
Chloroform	25.0	22.1		ug/L		88	70 - 130
Chloromethane	25.0	22.8		ug/L		91	56 - 129
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
cis-1,3-Dichloropropene	25.0	22.7		ug/L		91	70 - 130
Chlorodibromomethane	25.0	21.9		ug/L		88	70 - 130
Dibromomethane	25.0	21.5		ug/L		86	70 - 130
Dichlorodifluoromethane	25.0	20.3		ug/L		81	46 - 144
Ethylbenzene	25.0	24.4		ug/L		98	70 - 130
Hexachlorobutadiene	25.0	25.4		ug/L		102	76 - 145
Iodomethane	25.0	24.6		ug/L		99	70 - 130
Isopropylbenzene	25.0	26.9		ug/L		107	88 - 141
m-Xylene & p-Xylene	25.0	23.1		ug/L		92	70 - 130
Methylene Chloride	25.0	21.2		ug/L		85	63 - 128
Methyl tert-butyl ether	25.0	20.0		ug/L		80	70 - 130
Naphthalene	25.0	23.4		ug/L		94	78 - 143
n-Butylbenzene	25.0	25.0		ug/L		100	70 - 130
N-Propylbenzene	25.0	25.4		ug/L		102	70 - 130
o-Xylene	25.0	24.0		ug/L		96	70 - 130
4-Isopropyltoluene	25.0	23.5		ug/L		94	70 - 130
sec-Butylbenzene	25.0	24.8		ug/L		99	70 - 130
Styrene	25.0	23.5		ug/L		94	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	24.0		ug/L		96	70 - 130
trans-1,2-Dichloroethene	25.0	24.3		ug/L		97	69 - 127
trans-1,3-Dichloropropene	25.0	22.0		ug/L		88	70 - 130
Trichloroethene	25.0	22.5		ug/L		90	70 - 130
Trichlorofluoromethane	25.0	28.5		ug/L		114	69 - 150
Vinyl acetate	25.0	34.8	N1	ug/L		139	67 - 148

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6270/4
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	25.0	23.1		ug/L		92	65 - 137
Xylenes, Total	50.0	47.1		ug/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	22.5		ug/L		90	70 - 130	2	20
1,1,1-Trichloroethane	25.0	23.2		ug/L		93	71 - 131	2	20
1,1,2,2-Tetrachloroethane	25.0	21.1		ug/L		85	70 - 130	3	20
1,1,2-Trichloroethane	25.0	21.5		ug/L		86	70 - 130	1	20
1,1-Dichloroethane	25.0	22.9		ug/L		91	70 - 130	3	20
1,1-Dichloroethene	25.0	24.8		ug/L		99	63 - 131	1	22
1,1-Dichloropropene	25.0	22.2		ug/L		89	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	24.2		ug/L		97	79 - 139	3	20
1,2,3-Trichloropropane	25.0	20.5		ug/L		82	70 - 130	6	20
1,2,4-Trichlorobenzene	25.0	24.8		ug/L		99	80 - 137	1	20
1,2,4-Trimethylbenzene	25.0	23.6		ug/L		94	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	19.1		ug/L		76	63 - 146	6	22
Ethylene Dibromide	25.0	21.7		ug/L		87	70 - 130	5	20
1,2-Dichlorobenzene	25.0	23.0		ug/L		92	70 - 130	1	20
1,2-Dichloroethane	25.0	21.8		ug/L		87	66 - 139	1	20
1,2-Dichloropropane	25.0	22.6		ug/L		91	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	23.8		ug/L		95	70 - 130	2	20
1,3-Dichlorobenzene	25.0	22.7		ug/L		91	70 - 130	4	20
1,3-Dichloropropane	25.0	20.0		ug/L		80	70 - 130	7	20
1,4-Dichlorobenzene	25.0	23.1		ug/L		92	70 - 130	3	20
2,2-Dichloropropane	25.0	21.4		ug/L		86	69 - 139	2	20
2-Butanone (MEK)	25.0	17.0		ug/L		68	53 - 150	34	35
2-Chlorotoluene	25.0	22.6		ug/L		90	70 - 130	4	20
2-Hexanone	25.0	17.8		ug/L		71	55 - 150	35	35
4-Chlorotoluene	25.0	23.2		ug/L		93	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	25.0	21.2		ug/L		85	64 - 142	9	25
Acetone	25.0	13.2	R6	ug/L		53	38 - 150	68	35
Benzene	25.0	23.7		ug/L		95	70 - 130	0	20
Bromobenzene	25.0	21.8		ug/L		87	70 - 130	5	20
Chlorobromomethane	25.0	21.5		ug/L		86	70 - 130	2	20
Dichlorobromomethane	25.0	22.0		ug/L		88	70 - 130	3	20
Bromoform	25.0	19.2		ug/L		77	69 - 129	7	20
Bromomethane	25.0	25.3		ug/L		101	57 - 138	2	20
Carbon disulfide	25.0	23.4		ug/L		94	64 - 145	3	33
Carbon tetrachloride	25.0	23.4		ug/L		94	70 - 143	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6270/5
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	25.0	22.1		ug/L		88	70 - 130	4	20
Chloroethane	25.0	22.8		ug/L		91	66 - 131	1	20
Chloroform	25.0	22.9		ug/L		91	70 - 130	4	20
Chloromethane	25.0	22.4		ug/L		90	56 - 129	2	20
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	70 - 130	0	20
cis-1,3-Dichloropropene	25.0	21.6		ug/L		87	70 - 130	5	20
Chlorodibromomethane	25.0	21.7		ug/L		87	70 - 130	1	20
Dibromomethane	25.0	22.3		ug/L		89	70 - 130	4	20
Dichlorodifluoromethane	25.0	20.4		ug/L		82	46 - 144	1	23
Ethylbenzene	25.0	23.3		ug/L		93	70 - 130	5	20
Hexachlorobutadiene	25.0	25.2		ug/L		101	76 - 145	1	20
Iodomethane	25.0	24.6		ug/L		99	70 - 130	0	20
Isopropylbenzene	25.0	25.9		ug/L		104	88 - 141	4	20
m-Xylene & p-Xylene	25.0	22.1		ug/L		88	70 - 130	5	20
Methylene Chloride	25.0	21.7		ug/L		87	63 - 128	2	21
Methyl tert-butyl ether	25.0	20.2		ug/L		81	70 - 130	1	20
Naphthalene	25.0	23.1		ug/L		92	78 - 143	1	20
n-Butylbenzene	25.0	24.5		ug/L		98	70 - 130	2	20
N-Propylbenzene	25.0	24.9		ug/L		99	70 - 130	2	20
o-Xylene	25.0	23.5		ug/L		94	70 - 130	2	20
4-Isopropyltoluene	25.0	23.4		ug/L		94	70 - 130	0	20
sec-Butylbenzene	25.0	24.5		ug/L		98	70 - 130	1	20
Styrene	25.0	23.0		ug/L		92	70 - 130	2	20
Tetrachloroethene	25.0	23.4		ug/L		94	70 - 130	3	20
Toluene	25.0	23.8		ug/L		95	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	69 - 127	2	20
trans-1,3-Dichloropropene	25.0	22.4		ug/L		89	70 - 130	1	20
Trichloroethene	25.0	23.8		ug/L		95	70 - 130	6	20
Trichlorofluoromethane	25.0	28.3		ug/L		113	69 - 150	1	22
Vinyl acetate	25.0	34.7	N1	ug/L		139	67 - 148	0	22
Vinyl chloride	25.0	23.4		ug/L		93	65 - 137	1	20
Xylenes, Total	50.0	45.6		ug/L		91	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*113*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	22.8		ug/L		91	70 - 130
1,1,1-Trichloroethane	ND		25.0	22.9		ug/L		92	64 - 138
1,1,2,2-Tetrachloroethane	ND		25.0	20.2		ug/L		81	63 - 137
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	63 - 132
1,1-Dichloroethane	ND		25.0	22.2		ug/L		89	62 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		25.0	24.6		ug/L		98	57 - 137
1,1-Dichloropropene	ND		25.0	21.0		ug/L		84	64 - 134
1,2,3-Trichlorobenzene	ND		25.0	23.2		ug/L		93	74 - 139
1,2,3-Trichloropropane	ND		25.0	18.6		ug/L		74	68 - 130
1,2,4-Trichlorobenzene	ND		25.0	23.8		ug/L		95	74 - 138
1,2,4-Trimethylbenzene	ND		25.0	22.9		ug/L		92	63 - 135
1,2-Dibromo-3-Chloropropane	ND		25.0	18.3		ug/L		73	53 - 145
Ethylene Dibromide	ND		25.0	21.1		ug/L		84	70 - 130
1,2-Dichlorobenzene	ND		25.0	22.6		ug/L		90	70 - 130
1,2-Dichloroethane	ND		25.0	21.8		ug/L		87	54 - 147
1,2-Dichloropropane	ND		25.0	22.4		ug/L		90	68 - 126
1,3,5-Trimethylbenzene	ND		25.0	23.6		ug/L		94	66 - 137
1,3-Dichlorobenzene	ND		25.0	22.8		ug/L		91	70 - 130
1,3-Dichloropropane	ND		25.0	20.5		ug/L		82	68 - 129
1,4-Dichlorobenzene	ND		25.0	23.0		ug/L		92	70 - 130
2,2-Dichloropropane	ND		25.0	21.5		ug/L		86	60 - 146
2-Butanone (MEK)	ND		25.0	14.7		ug/L		59	31 - 143
2-Chlorotoluene	ND		25.0	22.6		ug/L		91	71 - 131
2-Hexanone	ND		25.0	15.3		ug/L		61	40 - 142
4-Chlorotoluene	ND		25.0	22.8		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	ND		25.0	18.9		ug/L		76	52 - 143
Acetone	ND	R6	25.0	12.0		ug/L		48	29 - 139
Benzene	ND		25.0	23.5		ug/L		94	68 - 131
Bromobenzene	ND		25.0	22.6		ug/L		90	70 - 130
Chlorobromomethane	ND		25.0	21.8		ug/L		87	64 - 132
Dichlorobromomethane	28		25.0	47.5		ug/L		80	63 - 138
Bromoform	5.6		25.0	24.2		ug/L		75	60 - 128
Bromomethane	ND		25.0	25.9		ug/L		104	47 - 144
Carbon disulfide	ND		25.0	22.7		ug/L		91	45 - 150
Carbon tetrachloride	ND		25.0	22.3		ug/L		89	65 - 147
Chlorobenzene	ND		25.0	22.2		ug/L		89	70 - 130
Chloroethane	ND		25.0	22.6		ug/L		90	57 - 139
Chloroform	17		25.0	38.8		ug/L		87	63 - 131
Chloromethane	ND		25.0	23.1		ug/L		92	47 - 134
cis-1,2-Dichloroethene	ND		25.0	23.5		ug/L		94	65 - 127
cis-1,3-Dichloropropene	ND		25.0	22.2		ug/L		89	63 - 135
Chlorodibromomethane	30		25.0	50.0		ug/L		82	65 - 134
Dibromomethane	ND		25.0	21.0		ug/L		84	66 - 136
Dichlorodifluoromethane	ND		25.0	20.3		ug/L		81	40 - 148
Ethylbenzene	ND		25.0	23.3		ug/L		93	74 - 134
Hexachlorobutadiene	ND		25.0	24.1		ug/L		97	69 - 150
Iodomethane	ND		25.0	24.6		ug/L		98	53 - 150
Isopropylbenzene	ND		25.0	25.6		ug/L		102	80 - 146
m-Xylene & p-Xylene	ND		25.0	22.6		ug/L		90	58 - 138
Methylene Chloride	ND		25.0	21.7		ug/L		87	55 - 133
Methyl tert-butyl ether	ND		25.0	19.9		ug/L		80	67 - 138
Naphthalene	ND		25.0	21.2		ug/L		85	67 - 146
n-Butylbenzene	ND		25.0	23.5		ug/L		94	69 - 140

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MS
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	ND		25.0	24.3		ug/L		97	74 - 140
o-Xylene	ND		25.0	23.3		ug/L		93	66 - 137
4-Isopropyltoluene	ND		25.0	22.8		ug/L		91	70 - 133
sec-Butylbenzene	ND		25.0	24.2		ug/L		97	72 - 136
Styrene	ND		25.0	22.9		ug/L		91	43 - 144
Tetrachloroethene	ND		25.0	23.3		ug/L		93	67 - 131
Toluene	ND		25.0	23.2		ug/L		93	65 - 138
trans-1,2-Dichloroethene	ND		25.0	23.4		ug/L		94	62 - 131
trans-1,3-Dichloropropene	ND		25.0	21.4		ug/L		86	58 - 136
Trichloroethene	ND		25.0	22.1		ug/L		88	66 - 132
Trichlorofluoromethane	ND		25.0	27.8		ug/L		111	62 - 150
Vinyl acetate	ND	N1	25.0	32.3	N1	ug/L		129	47 - 150
Vinyl chloride	ND		25.0	22.5		ug/L		90	55 - 146
Xylenes, Total	ND		50.0	45.9		ug/L		92	68 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	22.5		ug/L		90	70 - 130	1	30
1,1,1-Trichloroethane	ND		25.0	23.1		ug/L		92	64 - 138	1	35
1,1,2,2-Tetrachloroethane	ND		25.0	20.2		ug/L		81	63 - 137	0	32
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	63 - 132	0	35
1,1-Dichloroethane	ND		25.0	22.8		ug/L		91	62 - 130	2	34
1,1-Dichloroethene	ND		25.0	24.6		ug/L		98	57 - 137	0	35
1,1-Dichloropropene	ND		25.0	21.4		ug/L		86	64 - 134	2	34
1,2,3-Trichlorobenzene	ND		25.0	22.5		ug/L		90	74 - 139	3	26
1,2,3-Trichloropropane	ND		25.0	19.5		ug/L		78	68 - 130	4	32
1,2,4-Trichlorobenzene	ND		25.0	23.5		ug/L		94	74 - 138	2	26
1,2,4-Trimethylbenzene	ND		25.0	22.5		ug/L		90	63 - 135	2	31
1,2-Dibromo-3-Chloropropane	ND		25.0	18.4		ug/L		74	53 - 145	0	35
Ethylene Dibromide	ND		25.0	21.9		ug/L		88	70 - 130	4	33
1,2-Dichlorobenzene	ND		25.0	22.4		ug/L		90	70 - 130	1	27
1,2-Dichloroethane	ND		25.0	22.3		ug/L		89	54 - 147	2	35
1,2-Dichloropropane	ND		25.0	23.2		ug/L		93	68 - 126	3	32
1,3,5-Trimethylbenzene	ND		25.0	23.0		ug/L		92	66 - 137	3	30
1,3-Dichlorobenzene	ND		25.0	22.7		ug/L		91	70 - 130	0	28
1,3-Dichloropropane	ND		25.0	21.2		ug/L		85	68 - 129	3	33
1,4-Dichlorobenzene	ND		25.0	22.6		ug/L		90	70 - 130	2	26
2,2-Dichloropropane	ND		25.0	21.8		ug/L		87	60 - 146	2	35
2-Butanone (MEK)	ND		25.0	16.7		ug/L		67	31 - 143	12	35
2-Chlorotoluene	ND		25.0	22.5		ug/L		90	71 - 131	0	29

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	ND		25.0	17.6		ug/L		70	40 - 142	14	35
4-Chlorotoluene	ND		25.0	22.5		ug/L		90	70 - 130	1	28
4-Methyl-2-pentanone (MIBK)	ND		25.0	21.1		ug/L		84	52 - 143	11	35
Acetone	ND	R6	25.0	11.0		ug/L		44	29 - 139	8	35
Benzene	ND		25.0	23.8		ug/L		95	68 - 131	2	32
Bromobenzene	ND		25.0	22.9		ug/L		92	70 - 130	1	28
Chlorobromomethane	ND		25.0	22.2		ug/L		89	64 - 132	2	35
Dichlorobromomethane	28		25.0	48.8		ug/L		85	63 - 138	3	31
Bromoform	5.6		25.0	25.2		ug/L		79	60 - 128	4	31
Bromomethane	ND		25.0	26.2		ug/L		105	47 - 144	1	35
Carbon disulfide	ND		25.0	23.0		ug/L		92	45 - 150	1	35
Carbon tetrachloride	ND		25.0	23.2		ug/L		93	65 - 147	4	35
Chlorobenzene	ND		25.0	22.8		ug/L		91	70 - 130	2	30
Chloroethane	ND		25.0	22.6		ug/L		91	57 - 139	0	35
Chloroform	17		25.0	39.0		ug/L		88	63 - 131	0	33
Chloromethane	ND		25.0	23.9		ug/L		96	47 - 134	3	35
cis-1,2-Dichloroethene	ND		25.0	23.9		ug/L		96	65 - 127	2	34
cis-1,3-Dichloropropene	ND		25.0	22.6		ug/L		90	63 - 135	2	35
Chlorodibromomethane	30		25.0	51.0		ug/L		86	65 - 134	2	33
Dibromomethane	ND		25.0	22.6		ug/L		91	66 - 136	8	35
Dichlorodifluoromethane	ND		25.0	21.1		ug/L		85	40 - 148	4	35
Ethylbenzene	ND		25.0	23.5		ug/L		94	74 - 134	1	32
Hexachlorobutadiene	ND		25.0	23.0		ug/L		92	69 - 150	5	32
Iodomethane	ND		25.0	25.5		ug/L		102	53 - 150	4	35
Isopropylbenzene	ND		25.0	25.3		ug/L		101	80 - 146	1	32
m-Xylene & p-Xylene	ND		25.0	22.4		ug/L		90	58 - 138	1	29
Methylene Chloride	ND		25.0	23.1		ug/L		93	55 - 133	6	35
Methyl tert-butyl ether	ND		25.0	20.3		ug/L		81	67 - 138	2	21
Naphthalene	ND		25.0	21.5		ug/L		86	67 - 146	1	29
n-Butylbenzene	ND		25.0	22.7		ug/L		91	69 - 140	4	32
N-Propylbenzene	ND		25.0	23.9		ug/L		96	74 - 140	2	32
o-Xylene	ND		25.0	23.1		ug/L		93	66 - 137	1	26
4-Isopropyltoluene	ND		25.0	22.1		ug/L		88	70 - 133	3	32
sec-Butylbenzene	ND		25.0	23.5		ug/L		94	72 - 136	3	33
Styrene	ND		25.0	23.1		ug/L		92	43 - 144	1	35
Tetrachloroethene	ND		25.0	23.1		ug/L		92	67 - 131	1	31
Toluene	ND		25.0	23.8		ug/L		95	65 - 138	3	33
trans-1,2-Dichloroethene	ND		25.0	24.5		ug/L		98	62 - 131	5	35
trans-1,3-Dichloropropene	ND		25.0	22.0		ug/L		88	58 - 136	2	35
Trichloroethene	ND		25.0	22.9		ug/L		91	66 - 132	3	29
Trichlorofluoromethane	ND		25.0	27.4		ug/L		110	62 - 150	2	35
Vinyl acetate	ND	N1	25.0	33.6	N1	ug/L		134	47 - 150	4	35
Vinyl chloride	ND		25.0	23.2		ug/L		93	55 - 146	3	35
Xylenes, Total	ND		50.0	45.5		ug/L		91	68 - 131	1	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*114*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3224-A-1 MSD
Matrix: Water
Analysis Batch: 6270

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-5628/1-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5628

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
1,2-Dichlorobenzene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
1,2-Diphenylhydrazine	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
1,3-Dichlorobenzene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
1,4-Dichlorobenzene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4,5-Trichlorophenol	ND		20		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4,6-Trichlorophenol	ND		20		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dichlorophenol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dimethylphenol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dinitrophenol	ND		50		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,4-Dinitrotoluene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2,6-Dinitrotoluene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Chloronaphthalene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Chlorophenol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Methylnaphthalene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Methylphenol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Nitroaniline	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
2-Nitrophenol	ND		15		ug/L		05/23/13 14:39	06/03/13 13:53	1
3 & 4 Methylphenol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
3,3'-Dichlorobenzidine	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
3-Nitroaniline	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
4,6-Dinitro-2-methylphenol	ND		50		ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Bromophenyl phenyl ether	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Chloro-3-methylphenol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Chloroaniline	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Chlorophenyl phenyl ether	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Nitroaniline	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
4-Nitrophenol	ND		25		ug/L		05/23/13 14:39	06/03/13 13:53	1
Acenaphthene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Acenaphthylene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Anthracene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[a]anthracene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[a]pyrene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[b]fluoranthene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[g,h,i]perylene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzo[k]fluoranthene	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzoic acid	ND		25		ug/L		05/23/13 14:39	06/03/13 13:53	1
Benzyl alcohol	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1
Bis(2-chloroethoxy)methane	ND		10		ug/L		05/23/13 14:39	06/03/13 13:53	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-5628/1-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5628

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
bis (2-chloroisopropyl) ether	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Bis(2-ethylhexyl) phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Butyl benzyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Chrysene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Dibenz(a,h)anthracene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Dibenzofuran	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Diethyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Dimethyl phthalate	ND		20	ug/L		05/23/13 14:39	06/03/13 13:53	1
Di-n-butyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Di-n-octyl phthalate	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Fluoranthene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Fluorene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachlorobutadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachlorobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachlorocyclopentadiene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Hexachloroethane	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Indeno[1,2,3-cd]pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Isophorone	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Naphthalene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Nitrobenzene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
N-Nitrosodiphenylamine	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Pentachlorophenol	ND		50	ug/L		05/23/13 14:39	06/03/13 13:53	1
Phenanthrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Phenol	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1
Pyrene	ND		10	ug/L		05/23/13 14:39	06/03/13 13:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*46*		*10 - 78*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
Nitrobenzene-d5 (Surr)	*73*		*22 - 116*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
2-Fluorobiphenyl (Surr)	*71*		*40 - 91*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
2,4,6-Tribromophenol (Surr)	*80*		*14 - 122*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
p-Terphenyl-d14 (Surr)	*47*		*10 - 117*	*05/23/13 14:39*	*06/03/13 13:53*	*1*
Phenol-d5 (Surr)	*30*		*10 - 51*	*05/23/13 14:39*	*06/03/13 13:53*	*1*

Lab Sample ID: LCS 550-5628/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	120	90.8	Q9	ug/L		76	41 - 92
1,2-Dichlorobenzene	80.0	63.8	Q9	ug/L		80	35 - 94
1,2-Diphenylhydrazine	80.0	56.1	Q9	ug/L		70	60 - 108
1,3-Dichlorobenzene	80.0	62.4	Q9	ug/L		78	30 - 92
1,4-Dichlorobenzene	80.0	63.0	Q9	ug/L		79	32 - 93
2,4,5-Trichlorophenol	80.0	66.2	Q9	ug/L		83	59 - 114
2,4,6-Trichlorophenol	80.0	67.6	Q9	ug/L		85	58 - 109

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-5628/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dichlorophenol	80.0	63.1	Q9	ug/L		79	58 - 105
2,4-Dimethylphenol	80.0	57.7	Q9	ug/L		72	52 - 96
2,4-Dinitrophenol	120	77.8	Q9	ug/L		65	28 - 123
2,4-Dinitrotoluene	80.0	67.6	Q9	ug/L		84	64 - 117
2,6-Dinitrotoluene	80.0	67.3	Q9	ug/L		84	63 - 111
2-Chloronaphthalene	120	84.7	Q9	ug/L		71	57 - 96
2-Chlorophenol	80.0	58.6	Q9	ug/L		73	55 - 98
2-Methylnaphthalene	80.0	64.9	Q9	ug/L		81	51 - 100
2-Methylphenol	80.0	52.6	Q9	ug/L		66	51 - 92
2-Nitroaniline	80.0	65.2	Q9	ug/L		81	60 - 118
2-Nitrophenol	80.0	61.9	Q9	ug/L		77	55 - 112
3 & 4 Methylphenol	80.0	54.2	Q9	ug/L		68	46 - 89
3,3'-Dichlorobenzidine	80.0	63.1	Q9	ug/L		79	46 - 109
3-Nitroaniline	80.0	62.1	Q9	ug/L		78	51 - 115
4,6-Dinitro-2-methylphenol	120	84.0	Q9	ug/L		70	53 - 121
4-Bromophenyl phenyl ether	80.0	68.5	Q9	ug/L		86	60 - 109
4-Chloro-3-methylphenol	80.0	65.2	Q9	ug/L		81	60 - 108
4-Chloroaniline	80.0	60.0	Q9	ug/L		75	25 - 116
4-Chlorophenyl phenyl ether	80.0	69.4	Q9	ug/L		87	60 - 109
4-Nitroaniline	80.0	65.0	Q9	ug/L		81	49 - 128
4-Nitrophenol	120	109	L5 Q9	ug/L		91	21 - 61
Acenaphthene	80.0	64.4	Q9	ug/L		81	47 - 145
Acenaphthylene	80.0	65.9	Q9	ug/L		82	59 - 102
Anthracene	80.0	65.6	Q9	ug/L		82	62 - 109
Benzo[a]anthracene	80.0	63.3	Q9	ug/L		79	61 - 109
Benzo[a]pyrene	80.0	62.3	Q9	ug/L		78	61 - 106
Benzo[b]fluoranthene	80.0	55.5	Q9	ug/L		69	53 - 105
Benzo[g,h,i]perylene	80.0	77.2	Q9	ug/L		96	55 - 120
Benzo[k]fluoranthene	80.0	64.9	Q9	ug/L		81	61 - 114
Benzoic acid	200	68.0	Q9	ug/L		34	10 - 49
Benzyl alcohol	80.0	72.4	Q9	ug/L		91	50 - 98
Bis(2-chloroethoxy)methane	80.0	65.2	Q9	ug/L		82	60 - 105
Bis(2-chloroethyl)ether	80.0	54.1	Q9	ug/L		68	56 - 102
bis (2-chloroisopropyl) ether	80.0	62.4	Q9	ug/L		78	55 - 103
Bis(2-ethylhexyl) phthalate	80.0	60.4	Q9	ug/L		76	63 - 113
Butyl benzyl phthalate	80.0	59.8	Q9	ug/L		75	61 - 110
Chrysene	80.0	66.5	Q9	ug/L		83	63 - 111
Dibenz(a,h)anthracene	80.0	72.5	Q9	ug/L		91	57 - 119
Dibenzofuran	80.0	65.4	Q9	ug/L		82	62 - 105
Diethyl phthalate	80.0	67.4	Q9	ug/L		84	63 - 111
Dimethyl phthalate	120	93.6	Q9	ug/L		78	64 - 103
Di-n-butyl phthalate	80.0	63.2	Q9	ug/L		79	64 - 111
Di-n-octyl phthalate	80.0	55.6	Q9	ug/L		69	51 - 122
Fluoranthene	80.0	65.8	Q9	ug/L		82	65 - 115
Fluorene	80.0	66.6	Q9	ug/L		83	63 - 112
Hexachlorobutadiene	80.0	64.1	Q9	ug/L		80	22 - 89
Hexachlorobenzene	80.0	68.6	Q9	ug/L		86	61 - 111
Hexachlorocyclopentadiene	80.0	49.9	Q9	ug/L		62	17 - 73

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-5628/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachloroethane	120	89.3	Q9	ug/L		74	26 - 81
Indeno[1,2,3-cd]pyrene	80.0	74.2	Q9	ug/L		93	58 - 120
Isophorone	80.0	60.7	Q9	ug/L		76	47 - 100
Naphthalene	80.0	62.7	Q9	ug/L		78	52 - 100
Nitrobenzene	80.0	60.6	Q9	ug/L		76	57 - 107
N-Nitrosodi-n-propylamine	80.0	64.7	Q9	ug/L		81	57 - 108
N-Nitrosodiphenylamine	80.0	56.0	Q9	ug/L		70	50 - 100
Pentachlorophenol	120	85.0	Q9	ug/L		71	43 - 116
Phenanthrene	80.0	65.5	Q9	ug/L		82	64 - 110
Phenol	80.0	33.2	Q9	ug/L		42	22 - 59
Pyrene	80.0	63.7	Q9	ug/L		80	64 - 109

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*43*		*10 - 78*
Nitrobenzene-d5 (Surr)	*72*		*22 - 116*
2-Fluorobiphenyl (Surr)	*75*		*40 - 91*
2,4,6-Tribromophenol (Surr)	*89*		*14 - 122*
p-Terphenyl-d14 (Surr)	*66*		*10 - 117*
Phenol-d5 (Surr)	*30*		*10 - 51*

Lab Sample ID: LCSD 550-5628/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	120	86.2	Q9	ug/L		72	41 - 92	5	23
1,2-Dichlorobenzene	80.0	56.8	Q9	ug/L		71	35 - 94	12	25
1,2-Diphenylhydrazine	80.0	57.4	Q9	ug/L		72	60 - 108	2	20
1,3-Dichlorobenzene	80.0	55.6	Q9	ug/L		70	30 - 92	11	30
1,4-Dichlorobenzene	80.0	55.4	Q9	ug/L		69	32 - 93	13	28
2,4,5-Trichlorophenol	80.0	69.3	Q9	ug/L		87	59 - 114	5	20
2,4,6-Trichlorophenol	80.0	67.9	Q9	ug/L		85	58 - 109	0	20
2,4-Dichlorophenol	80.0	64.4	Q9	ug/L		80	58 - 105	2	20
2,4-Dimethylphenol	80.0	60.4	Q9	ug/L		75	52 - 96	5	20
2,4-Dinitrophenol	120	68.5	Q9	ug/L		57	28 - 123	13	35
2,4-Dinitrotoluene	80.0	68.7	Q9	ug/L		86	64 - 117	2	21
2,6-Dinitrotoluene	80.0	67.8	Q9	ug/L		85	63 - 111	1	20
2-Chloronaphthalene	120	80.2	Q9	ug/L		67	57 - 96	6	21
2-Chlorophenol	80.0	60.7	Q9	ug/L		76	55 - 98	3	20
2-Methylnaphthalene	80.0	56.7	Q9	ug/L		71	51 - 100	13	20
2-Methylphenol	80.0	58.2	Q9	ug/L		73	51 - 92	10	23
2-Nitroaniline	80.0	63.3	Q9	ug/L		79	60 - 118	3	35
2-Nitrophenol	80.0	65.8	Q9	ug/L		82	55 - 112	6	20
3 & 4 Methylphenol	80.0	52.0	Q9	ug/L		65	46 - 89	4	22
3,3'-Dichlorobenzidine	80.0	66.6	Q9	ug/L		83	46 - 109	5	20
3-Nitroaniline	80.0	62.3	Q9	ug/L		78	51 - 115	0	35
4,6-Dinitro-2-methylphenol	120	88.4	Q9	ug/L		74	53 - 121	5	20
4-Bromophenyl phenyl ether	80.0	68.8	Q9	ug/L		86	60 - 109	0	20

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-5628/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5628

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloro-3-methylphenol	80.0	62.3	Q9	ug/L		78	60 - 108	4	20
4-Chloroaniline	80.0	59.8	Q9	ug/L		75	25 - 116	0	35
4-Chlorophenyl phenyl ether	80.0	67.5	Q9	ug/L		84	60 - 109	3	20
4-Nitroaniline	80.0	62.1	Q9	ug/L		78	49 - 128	5	35
4-Nitrophenol	120	111	L5 Q9	ug/L		93	21 - 61	1	27
Acenaphthene	80.0	64.2	Q9	ug/L		80	47 - 145	0	20
Acenaphthylene	80.0	65.4	Q9	ug/L		82	59 - 102	1	20
Anthracene	80.0	63.4	Q9	ug/L		79	62 - 109	3	20
Benzo[a]anthracene	80.0	63.6	Q9	ug/L		80	61 - 109	1	20
Benzo[a]pyrene	80.0	63.8	Q9	ug/L		80	61 - 106	2	21
Benzo[b]fluoranthene	80.0	58.0	Q9	ug/L		72	53 - 105	4	23
Benzo[g,h,i]perylene	80.0	78.8	Q9	ug/L		98	55 - 120	2	27
Benzo[k]fluoranthene	80.0	65.1	Q9	ug/L		81	61 - 114	0	26
Benzoic acid	200	83.3	Q9	ug/L		42	10 - 49	20	35
Benzyl alcohol	80.0	77.5	Q9	ug/L		97	50 - 98	7	29
Bis(2-chloroethoxy)methane	80.0	65.4	Q9	ug/L		82	60 - 105	0	21
Bis(2-chloroethyl)ether	80.0	56.1	Q9	ug/L		70	56 - 102	4	21
bis (2-chloroisopropyl) ether	80.0	61.2	Q9	ug/L		76	55 - 103	2	20
Bis(2-ethylhexyl) phthalate	80.0	60.7	Q9	ug/L		76	63 - 113	0	20
Butyl benzyl phthalate	80.0	59.7	Q9	ug/L		75	61 - 110	0	20
Chrysene	80.0	66.9	Q9	ug/L		84	63 - 111	1	20
Dibenz(a,h)anthracene	80.0	74.3	Q9	ug/L		93	57 - 119	3	26
Dibenzofuran	80.0	65.0	Q9	ug/L		81	62 - 105	1	20
Diethyl phthalate	80.0	67.8	Q9	ug/L		85	63 - 111	1	21
Dimethyl phthalate	120	96.8	Q9	ug/L		81	64 - 103	3	20
Di-n-butyl phthalate	80.0	63.8	Q9	ug/L		80	64 - 111	1	20
Di-n-octyl phthalate	80.0	57.5	Q9	ug/L		72	51 - 122	3	22
Fluoranthene	80.0	66.6	Q9	ug/L		83	65 - 115	1	20
Fluorene	80.0	66.0	Q9	ug/L		82	63 - 112	1	20
Hexachlorobutadiene	80.0	53.3	Q9	ug/L		67	22 - 89	18	34
Hexachlorobenzene	80.0	71.6	Q9	ug/L		89	61 - 111	4	20
Hexachlorocyclopentadiene	80.0	46.0	Q9	ug/L		58	17 - 73	8	32
Hexachloroethane	120	78.0	Q9	ug/L		65	26 - 81	14	31
Indeno[1,2,3-cd]pyrene	80.0	75.2	Q9	ug/L		94	58 - 120	1	25
Isophorone	80.0	62.6	Q9	ug/L		78	47 - 100	3	20
Naphthalene	80.0	61.2	Q9	ug/L		76	52 - 100	2	20
Nitrobenzene	80.0	65.8	Q9	ug/L		82	57 - 107	8	20
N-Nitrosodi-n-propylamine	80.0	63.9	Q9	ug/L		80	57 - 108	1	22
N-Nitrosodiphenylamine	80.0	58.1	Q9	ug/L		73	50 - 100	4	20
Pentachlorophenol	120	90.5	Q9	ug/L		75	43 - 116	6	20
Phenanthrene	80.0	65.1	Q9	ug/L		81	64 - 110	1	20
Phenol	80.0	36.8	Q9	ug/L		46	22 - 59	10	30
Pyrene	80.0	64.3	Q9	ug/L		80	64 - 109	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*46*		*10 - 78*
Nitrobenzene-d5 (Surr)	*78*		*22 - 116*
2-Fluorobiphenyl (Surr)	*73*		*40 - 91*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-5628/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5628

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*91*		*14 - 122*
p-Terphenyl-d14 (Surr)	*43*		*10 - 117*
Phenol-d5 (Surr)	*33*		*10 - 51*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 550-5586/1-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5586

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Methoxychlor	ND		0.10	ug/L		05/23/13 11:05	06/10/13 20:07	1
Toxaphene	ND		1.0	ug/L		05/23/13 11:05	06/10/13 20:07	1
delta-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Dieldrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan I	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan II	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endosulfan sulfate	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Endrin aldehyde	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
gamma-BHC (Lindane)	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Heptachlor	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDD	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDE	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
4,4'-DDT	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Aldrin	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
alpha-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
beta-BHC	ND		0.050	ug/L		05/23/13 11:05	06/10/13 20:07	1
Chlordane (technical)	ND		0.50	ug/L		05/23/13 11:05	06/10/13 20:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 132*	*05/23/13 11:05*	*06/10/13 20:07*	*1*
DCB Decachlorobiphenyl (Surr)	*39*		*10 - 103*	*05/23/13 11:05*	*06/10/13 20:07*	*1*

Lab Sample ID: LCS 550-5586/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor epoxide	1.00	0.965		ug/L		96	69 - 118
Methoxychlor	1.00	0.958		ug/L		96	61 - 128
delta-BHC	1.00	0.996		ug/L		100	68 - 118
Dieldrin	1.00	0.964		ug/L		96	69 - 120
Endosulfan I	1.00	0.962		ug/L		96	68 - 122
Endosulfan II	1.00	0.965		ug/L		97	70 - 121
Endosulfan sulfate	1.00	0.997		ug/L		100	69 - 123

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 550-5586/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	1.00	0.976		ug/L		98	67 - 122
Endrin aldehyde	1.00	0.988		ug/L		99	69 - 121
gamma-BHC (Lindane)	1.00	0.974		ug/L		97	70 - 119
Heptachlor	1.00	0.873		ug/L		87	51 - 124
4,4'-DDD	1.00	0.975		ug/L		97	65 - 122
4,4'-DDE	1.00	0.908		ug/L		91	58 - 119
4,4'-DDT	1.00	0.908		ug/L		91	61 - 126
Aldrin	1.00	0.769		ug/L		77	43 - 120
alpha-BHC	1.00	1.00		ug/L		100	70 - 117
beta-BHC	1.00	0.986		ug/L		99	70 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*72*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*40*		*10 - 103*

Lab Sample ID: LCSD 550-5586/3-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5586

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	1.00	0.940		ug/L		94	69 - 118	3	29
Methoxychlor	1.00	0.924		ug/L		92	61 - 128	4	32
delta-BHC	1.00	0.971		ug/L		97	68 - 118	3	28
Dieldrin	1.00	0.940		ug/L		94	69 - 120	2	30
Endosulfan I	1.00	0.939		ug/L		94	68 - 122	2	30
Endosulfan II	1.00	0.940		ug/L		94	70 - 121	3	30
Endosulfan sulfate	1.00	0.968		ug/L		97	69 - 123	3	30
Endrin	1.00	0.951		ug/L		95	67 - 122	3	35
Endrin aldehyde	1.00	0.964		ug/L		96	69 - 121	2	30
gamma-BHC (Lindane)	1.00	0.955		ug/L		95	70 - 119	2	28
Heptachlor	1.00	0.847		ug/L		85	51 - 124	3	33
4,4'-DDD	1.00	0.964		ug/L		96	65 - 122	1	33
4,4'-DDE	1.00	0.896		ug/L		90	58 - 119	1	35
4,4'-DDT	1.00	0.897		ug/L		90	61 - 126	1	35
Aldrin	1.00	0.747		ug/L		75	43 - 120	3	33
alpha-BHC	1.00	0.994		ug/L		99	70 - 117	1	28
beta-BHC	1.00	0.964		ug/L		96	70 - 117	2	28

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*69*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*44*		*10 - 103*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 550-5582/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Silvex (2,4,5-TP)	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
2,4-D	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
2,4-DB	ND	V1	0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dicamba	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dichlorprop	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Dinoseb	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1
Pentachlorophenol	ND		0.50	ug/L		05/23/13 10:06	06/05/13 22:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*78*		*10 - 140*	*05/23/13 10:06*	*06/05/13 22:07*	*1*

Lab Sample ID: LCS 550-5582/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	1.76	Q9 V1	ug/L		88	38 - 119
Silvex (2,4,5-TP)	2.00	1.76	Q9	ug/L		88	10 - 150
2,4-D	2.00	1.87	Q9 V1	ug/L		93	10 - 131
2,4-DB	2.00	1.23	Q9 V1	ug/L		62	10 - 144
Dicamba	2.00	1.54	Q9	ug/L		77	14 - 125
Dichlorprop	2.00	1.44	Q9	ug/L		72	15 - 150
Dinoseb	2.00	0.731	Q9	ug/L		37	10 - 133
Pentachlorophenol	2.00	1.74	Q9	ug/L		87	20 - 141

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*79*		*10 - 140*

Lab Sample ID: LCSD 550-5582/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6597 — **Prep Batch: 5582**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	2.00	2.16	Q9 V1	ug/L		108	38 - 119	21	35
Silvex (2,4,5-TP)	2.00	2.17	Q9	ug/L		108	10 - 150	21	35
2,4-D	2.00	2.45	Q9 V1	ug/L		123	10 - 131	27	35
2,4-DB	2.00	1.57	Q9 V1	ug/L		78	10 - 144	24	35
Dicamba	2.00	1.93	Q9	ug/L		96	14 - 125	23	35
Dichlorprop	2.00	1.79	Q9	ug/L		90	15 - 150	22	35
Dinoseb	2.00	0.858	Q9	ug/L		43	10 - 133	16	35
Pentachlorophenol	2.00	2.12	Q9	ug/L		106	20 - 141	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*102*		*10 - 140*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-5615/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			05/22/13 13:48	1
Nitrite as N	ND		0.20		mg/L			05/22/13 13:48	1

Lab Sample ID: LCS 550-5615/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			4.00	4.02		mg/L		100	90 - 110		
Nitrite as N			4.00	4.14		mg/L		103	90 - 110		
Nitrate Nitrite as N			8.00	8.16		mg/L		102	90 - 110		

Lab Sample ID: LCSD 550-5615/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			4.00	4.13		mg/L		103	90 - 110	3	20
Nitrite as N			4.00	4.16		mg/L		104	90 - 110	1	20
Nitrate Nitrite as N			8.00	8.29		mg/L		104	90 - 110	2	20

Lab Sample ID: 550-3279-B-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	ND		4.00	4.23		mg/L		102	80 - 120		
Nitrite as N	ND		4.00	4.09		mg/L		102	80 - 120		
Nitrate Nitrite as N	ND		8.00	8.32		mg/L		104	80 - 120		

Lab Sample ID: 550-3279-B-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5615

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	ND		4.00	4.29		mg/L		103	80 - 120	1	20
Nitrite as N	ND		4.00	4.31		mg/L		108	80 - 120	5	20
Nitrate Nitrite as N	ND		8.00	8.60		mg/L		108	80 - 120	3	20

Lab Sample ID: MB 550-5834/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			05/28/13 12:55	1
Nitrite as N	ND		0.20		mg/L			05/28/13 12:55	1
Chloride	ND		2.0		mg/L			05/28/13 12:55	1
Sulfate	ND		2.0		mg/L			05/28/13 12:55	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 550-5834/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	4.00	4.12		mg/L		103	90 - 110
Nitrite as N	4.00	4.02		mg/L		100	90 - 110
Nitrate Nitrite as N	8.00	8.14		mg/L		102	90 - 110
Chloride	20.0	20.3		mg/L		102	90 - 110
Sulfate	20.0	20.2		mg/L		101	90 - 110

Lab Sample ID: LCSD 550-5834/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.00	4.12		mg/L		103	90 - 110	0	20
Nitrite as N	4.00	4.02		mg/L		101	90 - 110	0	20
Nitrate Nitrite as N	8.00	8.14		mg/L		102	90 - 110	0	20
Chloride	20.0	20.3		mg/L		101	90 - 110	0	20
Sulfate	20.0	20.2		mg/L		101	90 - 110	0	20

Lab Sample ID: 550-3318-B-3 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		20.0	33.7		mg/L		107	80 - 120
Sulfate	21		20.0	42.3		mg/L		106	80 - 120

Lab Sample ID: 550-3318-B-3 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		20.0	34.1		mg/L		108	80 - 120	1	20
Sulfate	21		20.0	42.7		mg/L		108	80 - 120	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-6072/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6648 — **Prep Batch: 6072**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	mg/L		05/30/13 12:41	06/05/13 16:26	1
Barium	ND		0.10	mg/L		05/30/13 12:41	06/05/13 16:26	1
Cadmium	ND		0.0010	mg/L		05/30/13 12:41	06/05/13 16:26	1
Calcium	ND		2.0	mg/L		05/30/13 12:41	06/05/13 16:26	1
Chromium	ND		0.010	mg/L		05/30/13 12:41	06/05/13 16:26	1
Lead	ND		0.015	mg/L		05/30/13 12:41	06/05/13 16:26	1
Magnesium	ND		2.0	mg/L		05/30/13 12:41	06/05/13 16:26	1
Selenium	ND		0.10	mg/L		05/30/13 12:41	06/05/13 16:26	1
Silver	ND		0.010	mg/L		05/30/13 12:41	06/05/13 16:26	1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: MB 550-6072/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6648 — **Prep Batch: 6072**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		2.0		mg/L		05/30/13 12:41	06/05/13 16:26	1

Lab Sample ID: LCS 550-6072/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6648 — **Prep Batch: 6072**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.975		mg/L		97	85 - 115
Barium	1.00	0.984		mg/L		98	85 - 115
Cadmium	1.00	0.996		mg/L		100	85 - 115
Calcium	21.0	20.9		mg/L		100	85 - 115
Chromium	1.00	0.988		mg/L		99	85 - 115
Lead	1.00	0.971		mg/L		97	85 - 115
Magnesium	21.0	20.7		mg/L		99	85 - 115
Selenium	1.00	0.976		mg/L		98	85 - 115
Silver	0.0750	0.0724		mg/L		96	85 - 115
Sodium	20.0	19.4		mg/L		97	85 - 115

Lab Sample ID: LCSD 550-6072/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6648 — **Prep Batch: 6072**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	0.989		mg/L		99	85 - 115	1	20
Barium	1.00	0.989		mg/L		99	85 - 115	1	20
Cadmium	1.00	1.00		mg/L		100	85 - 115	1	20
Calcium	21.0	21.2		mg/L		101	85 - 115	2	20
Chromium	1.00	1.00		mg/L		100	85 - 115	1	20
Lead	1.00	0.981		mg/L		98	85 - 115	1	20
Magnesium	21.0	21.2		mg/L		101	85 - 115	2	20
Selenium	1.00	0.982		mg/L		98	85 - 115	1	20
Silver	0.0750	0.0725		mg/L		97	85 - 115	0	20
Sodium	20.0	19.7		mg/L		99	85 - 115	2	20

Lab Sample ID: 550-3397-B-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6648 — **Prep Batch: 6072**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.4		1.00	3.31		mg/L		92	70 - 130
Barium	ND		1.00	0.987		mg/L		97	70 - 130
Cadmium	ND		1.00	1.00		mg/L		100	70 - 130
Calcium	220	M3	21.0	231	M3	mg/L		63	70 - 130
Chromium	ND		1.00	0.983		mg/L		98	70 - 130
Lead	ND		1.00	0.983		mg/L		98	70 - 130
Magnesium	80		21.0	99.0		mg/L		90	70 - 130
Selenium	ND		1.00	1.01		mg/L		100	70 - 130
Silver	ND		0.0750	0.0734		mg/L		98	70 - 130
Sodium	90		20.0	109	M3	mg/L		96	70 - 130

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 550-3397-B-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6648 — **Prep Batch: 6072**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	2.4		1.00	3.37		mg/L		98	70 - 130	2	20
Barium	ND		1.00	0.995		mg/L		98	70 - 130	1	20
Cadmium	ND		1.00	1.02		mg/L		102	70 - 130	1	20
Calcium	220	M3	21.0	232	M3	mg/L		67	70 - 130	0	20
Chromium	ND		1.00	0.990		mg/L		99	70 - 130	1	20
Lead	ND		1.00	1.01		mg/L		101	70 - 130	2	20
Magnesium	80		21.0	98.7		mg/L		88	70 - 130	0	20
Selenium	ND		1.00	1.03		mg/L		102	70 - 130	2	20
Silver	ND		0.0750	0.0735		mg/L		98	70 - 130	0	20
Sodium	90		20.0	108	M3	mg/L		90	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 550-6123/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020		mg/L		05/30/13 17:12	05/31/13 10:00	1

Lab Sample ID: LCS 550-6123/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			0.0100	0.0107		mg/L		107	85 - 115		

Lab Sample ID: LCSD 550-6123/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			0.0100	0.0106		mg/L		106	85 - 115	1	20

Lab Sample ID: 550-3367-F-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	ND		0.0100	0.0107		mg/L		107	70 - 130		

Lab Sample ID: 550-3367-F-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6186 — **Prep Batch: 6123**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		0.0100	0.0107		mg/L		107	70 - 130	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-6194/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1
Bicarbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1
Carbonate Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1
Alkalinity, Phenolphthalein	ND		6.0	mg/L			05/30/13 17:43	1
Hydroxide Alkalinity as CaCO3	ND		6.0	mg/L			05/30/13 17:43	1

Lab Sample ID: LCS 550-6194/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	250	251		mg/L		100	90 - 110

Lab Sample ID: LCSD 550-6194/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3	250	249		mg/L		99	90 - 110	1	20

Lab Sample ID: 550-3261-1 DU — **Client Sample ID: MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	310		302		mg/L		1	20
Bicarbonate Alkalinity as CaCO3	310		302		mg/L		1	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20
Alkalinity, Phenolphthalein	ND		ND		mg/L		NC	20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/L		NC	20

Lab Sample ID: 550-3424-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6194

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	120		119		mg/L		0.9	20
Bicarbonate Alkalinity as CaCO3	120		119		mg/L		0.9	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20
Alkalinity, Phenolphthalein	ND		ND		mg/L		NC	20
Hydroxide Alkalinity as CaCO3	ND		ND		mg/L		NC	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 550-5984/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.050		mg/L		05/29/13 12:40	05/29/13 17:20	1

Lab Sample ID: LCS 550-5984/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.106		mg/L		106	90 - 110		

Lab Sample ID: LCSD 550-5984/19-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total			0.100	0.105		mg/L		105	90 - 110	0	20

Lab Sample ID: 550-3169-C-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		0.100	0.106		mg/L		106	80 - 120		

Lab Sample ID: 550-3169-C-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 5994 — **Prep Batch: 5984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.100	0.101		mg/L		101	80 - 120	5	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

GC/MS VOA

Analysis Batch: 6270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3224-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-3224-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
550-3261-1	MW-10	Total/NA	Water	8260B	
550-3261-2	Trip Blank	Total/NA	Water	8260B	
LCS 550-6270/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-6270/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-6270/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 5628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	3510C	
LCS 550-5628/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-5628/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-5628/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 6295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	8270C	5628
LCS 550-5628/2-A	Lab Control Sample	Total/NA	Water	8270C	5628
LCSD 550-5628/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	5628
MB 550-5628/1-A	Method Blank	Total/NA	Water	8270C	5628

GC Semi VOA

Prep Batch: 5582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	8151A	
LCS 550-5582/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 550-5582/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 550-5582/1-A	Method Blank	Total/NA	Water	8151A	

Prep Batch: 5586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	3510C	
LCS 550-5586/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-5586/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-5586/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 6597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	8151A	5582
LCS 550-5582/2-A	Lab Control Sample	Total/NA	Water	8151A	5582
LCSD 550-5582/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	5582
MB 550-5582/1-A	Method Blank	Total/NA	Water	8151A	5582

Analysis Batch: 6944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	8081A	5586

GC Semi VOA (Continued)

Analysis Batch: 6944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-5586/2-A	Lab Control Sample	Total/NA	Water	8081A	5586
LCSD 550-5586/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	5586
MB 550-5586/1-A	Method Blank	Total/NA	Water	8081A	5586

HPLC/IC

Analysis Batch: 5615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	300.0	
550-3279-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-3279-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-5615/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-5615/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-5615/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 5834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	300.0	
550-3318-B-3 MS	Matrix Spike	Total/NA	Water	300.0	
550-3318-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-5834/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-5834/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-5834/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 6072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	200.7	
550-3397-B-1-A MS	Matrix Spike	Total/NA	Water	200.7	
550-3397-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	
LCS 550-6072/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-6072/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
MB 550-6072/1-A	Method Blank	Total/NA	Water	200.7	

Prep Batch: 6123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	245.1	
550-3367-F-1-C MS	Matrix Spike	Total/NA	Water	245.1	
550-3367-F-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
LCS 550-6123/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 550-6123/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
MB 550-6123/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 6186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	245.1	6123
550-3367-F-1-C MS	Matrix Spike	Total/NA	Water	245.1	6123
550-3367-F-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	6123
LCS 550-6123/2-A	Lab Control Sample	Total/NA	Water	245.1	6123

Metals (Continued)

Analysis Batch: 6186 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 550-6123/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	6123
MB 550-6123/1-A	Method Blank	Total/NA	Water	245.1	6123

Analysis Batch: 6648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	200.7 Rev 4.4	6072
550-3397-B-1-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	6072
550-3397-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	6072
LCS 550-6072/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	6072
LCSD 550-6072/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	6072
MB 550-6072/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	6072

General Chemistry

Prep Batch: 5984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3169-C-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN C	
550-3169-C-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN C	
550-3261-1	MW-10	Total/NA	Water	SM 4500 CN C	
LCS 550-5984/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	
LCSD 550-5984/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN C	
MB 550-5984/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 5994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3169-C-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	5984
550-3169-C-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	5984
550-3261-1	MW-10	Total/NA	Water	SM 4500 CN E	5984
LCS 550-5984/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	5984
LCSD 550-5984/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN E	5984
MB 550-5984/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	5984

Analysis Batch: 6194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3261-1	MW-10	Total/NA	Water	SM 2320B	
550-3261-1 DU	MW-10	Total/NA	Water	SM 2320B	
550-3424-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 550-6194/6	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-6194/20	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-6194/7	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Client Sample ID: MW-10

Lab Sample ID: 550-3261-1

Date Collected: 05/21/13 10:30

Matrix: Water

Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6270	06/02/13 13:35	KD	TAL PHX
Total/NA	Prep	3510C			5628	05/23/13 14:39	KA	TAL PHX
Total/NA	Analysis	8270C		1	6295	06/03/13 19:53	CL	TAL PHX
Total/NA	Prep	8151A			5582	05/23/13 10:06	KA	TAL PHX
Total/NA	Analysis	8151A		1	6597	06/05/13 23:53	CL	TAL PHX
Total/NA	Prep	3510C			5586	05/23/13 11:05	KA	TAL PHX
Total/NA	Analysis	8081A		1	6944	06/10/13 21:05	AT	TAL PHX
Total/NA	Analysis	300.0		1	5615	05/22/13 22:20	KLH	TAL PHX
Total/NA	Analysis	300.0		10	5834	05/28/13 20:51	KLH	TAL PHX
Total/NA	Prep	245.1			6123	05/30/13 17:12	AJC	TAL PHX
Total/NA	Analysis	245.1		1	6186	05/31/13 10:21	AJC	TAL PHX
Total/NA	Prep	200.7			6072	05/30/13 12:41	JRC	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	6648	06/05/13 16:43	CT	TAL PHX
Total/NA	Prep	SM 4500 CN C			5984	05/29/13 12:40	TS	TAL PHX
Total/NA	Analysis	SM 4500 CN E		1	5994	05/29/13 17:20	TS	TAL PHX
Total/NA	Analysis	SM 2320B		1	6194	05/30/13 17:54	DS	TAL PHX

Client Sample ID: Trip Blank

Lab Sample ID: 550-3261-2

Date Collected: 05/21/13 10:30

Matrix: Water

Date Received: 05/22/13 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6270	06/02/13 10:21	KD	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Laboratory: TestAmerica Phoenix

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA	IHLAP		154268	07-01-13
Arizona	State Program	9	AZ0728	06-09-14
California	NELAP	9	01109CA	11-30-13
Nevada	State Program	9	AZ01030	07-31-13
New York	NELAP	2	11898	04-01-14
Oregon	NELAP	10	AZ100001	03-09-14
USDA	Federal		P330-09-00024	06-09-15

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3261-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PHX
8081A	Organochlorine Pesticides (GC)	SW846	TAL PHX
8151A	Herbicides (GC)	SW846	TAL PHX
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
200.7 Rev 4.4	Metals (ICP)	40CFR136A	TAL PHX
245.1	Mercury (CVAA)	EPA	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 CN E	Cyanide, Total	SM	TAL PHX

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater ", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[X] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (60
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-38
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

550-3261 Chain of Custody

6/11/2013

Page 44 of 45

Client Name/Address: Terracon, 1640 Hickory Loop, Suite 105, Las Cruces, NM 88005

Project/PO Number: 68137008

Project Manager: Kyle Williams

Phone Number: (575) 527-1700

Sampler: K. Williams

Fax Number: 527-1092

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260B	8270	metals	NO_2-NO_3	Cyanide	8081	8151			Special Instructions
																550-3261
MW-10	water	Various	13	5-21-13	10:30	Various	X	X	X	X	X	X	X			

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
K. Williams	5-21-13 / 14:30			same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time: FEDEX	Received in Lab By:	Date/Time: 5/22/13 0930	Sample Integrity: (Check) intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 550-3261-1

Login Number: 3261

List Source: TestAmerica Phoenix

List Number: 1

Creator: DeShazo, Brittany

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-3662-1
Client Project/Site: 68137008

For:
Terracon Consulting Eng & Scientists
1640 Kickory Loop
Suite 105
Las Cruces, New Mexico 88005

Attn: Mr. Kyle Willaims

Authorized for release by:
6/12/2013 5:32:05 PM

Carlene McCutcheon, Customer Service Manager
carlene.mccutcheon@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Sample Summary 6
Detection Summary 7
Client Sample Results 8
Surrogate Summary 15
QC Sample Results 17
QC Association Summary 40
Lab Chronicle 43
Certification Summary 44
Method Summary 45
Chain of Custody 46
Receipt Checklists 47

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
S10	Surrogate recovery was above laboratory and method acceptance limits. See case narrative.
N1	See case narrative.

GC/MS Semi VOA

Qualifier	Qualifier Description
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
Q9	Insufficent sample received to meet method QC requirements.

GC Semi VOA

Qualifier	Qualifier Description
H4	Sample was extracted past required extraction holding time, but analyzed within analysis HT.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample,
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.
Q9	Insufficent sample received to meet method QC requirements.

HPLC/IC

Qualifier	Qualifier Description
E2	Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to sample matrix.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.
M1	Matrix spike recovery was high, the associated blank spike recovery was acceptable.

Metals

Qualifier	Qualifier Description
D1	Sample required dilution due to matrix.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-3662-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-3662-1

Comments
No additional comments.

Receipt
The samples were received on 5/29/2013 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

GC/MS VOA
Method(s) 8260B: The initial calibration verification (ICV) for analytical batch 6302 was outside control criteria for Vinyl Acetate and Butadiene. There where no hits for Vinyl Acetate and/or Butadiene in any samples, the data has been qualified and reported.Data was flagged N1.

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) along with the MS/ MSD for batch 6534 recovered high for the following analyte; Vinly Acetate. Vinyl Acetate was biased high in the LCS/LCSD/MS and MSD but not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The surrogate dibromofluoromethane recovered above laboratory acceptance limits in the MS All associated QC and samples had acceptable recoveries for the surrogates. Data flagged wtih S10 qualifier.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 6050. The LSC/LCSD were flagged with Q9 data qualifier.MW-3R (550-3662-1)

No other analytical or quality issues were noted.

HPLC
No analytical or quality issues were noted.

GC Semi VOA
Method(s) 3510C: The following sample(s) was diluted due to the nature of the sample matrix: 550-3738-1. As such, surrogate and spike recoveries were diluted out and are not reported for the following sample:MW-3R (550-3662-1)

Method(s) 8151A: The following sample(s) was prepared outside of preparation holding time but analyzed within analysis holding time. Sampled on 5/28/13 and extracted on 6/05/13. No analyte detected. LCS/LCSD were flagged with Q9 data qualifier.: MW-3R (550-3662-1).

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Organic Prep
Method(s) 3510C, 8270: No additional sample containers were submitted to perform a matrix spike / matrix spike duplicate (MS/MSD) or a

Job ID: 550-3662-1 (Continued)

Laboratory: TestAmerica Phoenix (Continued)

sample duplicate.

Method(s) 8151A: No additional sample containers were submitted to perform a matrix spike / matrix spike duplicate (MS/MSD) or a sample duplicate.

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-3662-1	MW-3R	Water	05/28/13 08:00	05/29/13 09:35
550-3662-2	Trip Blank	Water	05/28/13 08:00	05/29/13 09:35

Detection Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: MW-3R — Lab Sample ID: 550-3662-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	170		20		mg/L	10		300.0	Total/NA
Sulfate	180		2.0		mg/L	1		300.0	Total/NA
Calcium	170	D1	40		mg/L	20		200.7 Rev 4.4	Total/NA
Sodium	180	D1	40		mg/L	20		200.7 Rev 4.4	Total/NA
Alkalinity as CaCO3	300		6.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	300		6.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 550-3662-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: MW-3R

Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Lab Sample ID: 550-3662-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/05/13 11:09	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/05/13 11:09	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/05/13 11:09	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/05/13 11:09	1
1,1-Dichloroethane	ND		0.50		ug/L			06/05/13 11:09	1
1,1-Dichloroethene	ND		0.50		ug/L			06/05/13 11:09	1
1,1-Dichloropropene	ND		0.50		ug/L			06/05/13 11:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/05/13 11:09	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/05/13 11:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/05/13 11:09	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/05/13 11:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/05/13 11:09	1
Ethylene Dibromide	ND		0.50		ug/L			06/05/13 11:09	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/05/13 11:09	1
1,2-Dichloroethane	ND		0.50		ug/L			06/05/13 11:09	1
1,2-Dichloropropane	ND		0.50		ug/L			06/05/13 11:09	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/05/13 11:09	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/05/13 11:09	1
1,3-Dichloropropane	ND		0.50		ug/L			06/05/13 11:09	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/05/13 11:09	1
2,2-Dichloropropane	ND		1.0		ug/L			06/05/13 11:09	1
2-Butanone (MEK)	ND		5.0		ug/L			06/05/13 11:09	1
2-Chlorotoluene	ND		0.50		ug/L			06/05/13 11:09	1
2-Hexanone	ND		5.0		ug/L			06/05/13 11:09	1
4-Chlorotoluene	ND		0.50		ug/L			06/05/13 11:09	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/05/13 11:09	1
Acetone	ND	L5	10		ug/L			06/05/13 11:09	1
Benzene	ND		0.50		ug/L			06/05/13 11:09	1
Bromobenzene	ND		0.50		ug/L			06/05/13 11:09	1
Chlorobromomethane	ND		0.50		ug/L			06/05/13 11:09	1
Dichlorobromomethane	ND		0.50		ug/L			06/05/13 11:09	1
Bromoform	ND		1.0		ug/L			06/05/13 11:09	1
Bromomethane	ND		1.0		ug/L			06/05/13 11:09	1
Carbon disulfide	ND		1.0		ug/L			06/05/13 11:09	1
Carbon tetrachloride	ND		0.50		ug/L			06/05/13 11:09	1
Chlorobenzene	ND		0.50		ug/L			06/05/13 11:09	1
Chloroethane	ND		1.0		ug/L			06/05/13 11:09	1
Chloroform	ND		0.50		ug/L			06/05/13 11:09	1
Chloromethane	ND		1.0		ug/L			06/05/13 11:09	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/05/13 11:09	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/05/13 11:09	1
Chlorodibromomethane	ND		0.50		ug/L			06/05/13 11:09	1
Dibromomethane	ND		0.50		ug/L			06/05/13 11:09	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/05/13 11:09	1
Ethylbenzene	ND		0.50		ug/L			06/05/13 11:09	1
Hexachlorobutadiene	ND		1.0		ug/L			06/05/13 11:09	1
Iodomethane	ND		2.5		ug/L			06/05/13 11:09	1
Isopropylbenzene	ND		0.50		ug/L			06/05/13 11:09	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/05/13 11:09	1

Client Sample ID: MW-3R
Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Lab Sample ID: 550-3662-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		1.0	ug/L			06/05/13 11:09	1
Methyl tert-butyl ether	ND		0.50	ug/L			06/05/13 11:09	1
Naphthalene	ND		2.5	ug/L			06/05/13 11:09	1
n-Butylbenzene	ND		0.50	ug/L			06/05/13 11:09	1
N-Propylbenzene	ND		0.50	ug/L			06/05/13 11:09	1
o-Xylene	ND		0.50	ug/L			06/05/13 11:09	1
4-Isopropyltoluene	ND		0.50	ug/L			06/05/13 11:09	1
sec-Butylbenzene	ND		0.50	ug/L			06/05/13 11:09	1
Styrene	ND		0.50	ug/L			06/05/13 11:09	1
tert-Butylbenzene	ND		0.50	ug/L			06/05/13 11:09	1
Tetrachloroethene	ND		0.50	ug/L			06/05/13 11:09	1
Toluene	ND		0.50	ug/L			06/05/13 11:09	1
trans-1,2-Dichloroethene	ND		0.50	ug/L			06/05/13 11:09	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			06/05/13 11:09	1
Trichloroethene	ND		0.50	ug/L			06/05/13 11:09	1
Trichlorofluoromethane	ND		0.50	ug/L			06/05/13 11:09	1
Vinyl acetate	ND	L5	2.0	ug/L			06/05/13 11:09	1
Vinyl chloride	ND		0.50	ug/L			06/05/13 11:09	1
Xylenes, Total	ND		1.5	ug/L			06/05/13 11:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*126*		*70 - 130*		*06/05/13 11:09*	*1*
Toluene-d8 (Surr)	*121*		*70 - 130*		*06/05/13 11:09*	*1*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*		*06/05/13 11:09*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
1,2-Dichlorobenzene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
1,2-Diphenylhydrazine	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
1,3-Dichlorobenzene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
1,4-Dichlorobenzene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,4,5-Trichlorophenol	ND		22	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,4,6-Trichlorophenol	ND		22	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,4-Dichlorophenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,4-Dimethylphenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,4-Dinitrophenol	ND		55	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,4-Dinitrotoluene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2,6-Dinitrotoluene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2-Chloronaphthalene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2-Chlorophenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2-Methylnaphthalene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2-Methylphenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2-Nitroaniline	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
2-Nitrophenol	ND		16	ug/L		05/30/13 10:07	06/03/13 22:18	1
3 & 4 Methylphenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
3,3'-Dichlorobenzidine	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
3-Nitroaniline	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
4,6-Dinitro-2-methylphenol	ND		55	ug/L		05/30/13 10:07	06/03/13 22:18	1
4-Bromophenyl phenyl ether	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: MW-3R
Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Lab Sample ID: 550-3662-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
4-Chloroaniline	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
4-Chlorophenyl phenyl ether	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
4-Nitroaniline	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
4-Nitrophenol	ND	L5	27	ug/L		05/30/13 10:07	06/03/13 22:18	1
Acenaphthene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Acenaphthylene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Anthracene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzo[a]anthracene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzo[a]pyrene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzo[b]fluoranthene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzo[g,h,i]perylene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzo[k]fluoranthene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzoic acid	ND		27	ug/L		05/30/13 10:07	06/03/13 22:18	1
Benzyl alcohol	ND	L5	11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Bis(2-chloroethoxy)methane	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Bis(2-chloroethyl)ether	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
bis (2-chloroisopropyl) ether	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Bis(2-ethylhexyl) phthalate	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Butyl benzyl phthalate	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Chrysene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Dibenz(a,h)anthracene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Dibenzofuran	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Diethyl phthalate	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Dimethyl phthalate	ND		22	ug/L		05/30/13 10:07	06/03/13 22:18	1
Di-n-butyl phthalate	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Di-n-octyl phthalate	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Fluoranthene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Fluorene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Hexachlorobutadiene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Hexachlorobenzene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Hexachlorocyclopentadiene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Hexachloroethane	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Indeno[1,2,3-cd]pyrene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Isophorone	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Naphthalene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Nitrobenzene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
N-Nitrosodi-n-propylamine	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
N-Nitrosodiphenylamine	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Pentachlorophenol	ND		55	ug/L		05/30/13 10:07	06/03/13 22:18	1
Phenanthrene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Phenol	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1
Pyrene	ND		11	ug/L		05/30/13 10:07	06/03/13 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*53*		*10 - 78*	*05/30/13 10:07*	*06/03/13 22:18*	*1*
Nitrobenzene-d5 (Surr)	*76*		*22 - 116*	*05/30/13 10:07*	*06/03/13 22:18*	*1*
2-Fluorobiphenyl (Surr)	*67*		*40 - 91*	*05/30/13 10:07*	*06/03/13 22:18*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*14 - 122*	*05/30/13 10:07*	*06/03/13 22:18*	*1*
p-Terphenyl-d14 (Surr)	*36*		*10 - 117*	*05/30/13 10:07*	*06/03/13 22:18*	*1*

Client Sample ID: MW-3R

Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Lab Sample ID: 550-3662-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	*32*		*10 - 51*	*05/30/13 10:07*	*06/03/13 22:18*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Methoxychlor	ND		0.10	ug/L		06/03/13 17:00	06/10/13 19:47	1
Toxaphene	ND		1.0	ug/L		06/03/13 17:00	06/10/13 19:47	1
delta-BHC	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Dieldrin	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Endosulfan I	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Endosulfan II	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Endosulfan sulfate	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Endrin	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Endrin aldehyde	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
gamma-BHC (Lindane)	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Heptachlor	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
4,4'-DDD	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
4,4'-DDE	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
4,4'-DDT	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Aldrin	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
alpha-BHC	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
beta-BHC	ND		0.051	ug/L		06/03/13 17:00	06/10/13 19:47	1
Chlordane (technical)	ND		0.51	ug/L		06/03/13 17:00	06/10/13 19:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*78*		*10 - 132*	*06/03/13 17:00*	*06/10/13 19:47*	*1*
DCB Decachlorobiphenyl (Surr)	*46*		*10 - 103*	*06/03/13 17:00*	*06/10/13 19:47*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	H4 V1	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
Silvex (2,4,5-TP)	ND	H4	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
2,4-D	ND	H4 V1	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
2,4-DB	ND	H4 V1	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
Dicamba	ND	H4	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
Dichlorprop	ND	H4	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
Dinoseb	ND	H4 R6	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1
Pentachlorophenol	ND	H4	0.54	ug/L		06/05/13 14:45	06/07/13 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	*94*		*10 - 140*	*06/05/13 14:45*	*06/07/13 13:59*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	mg/L			05/29/13 18:40	1
Nitrite as N	ND		0.20	mg/L			05/29/13 18:40	1
Chloride	**170**		20	mg/L			06/04/13 23:59	10
Sulfate	**180**		2.0	mg/L			05/29/13 18:40	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: MW-3R

Lab Sample ID: 550-3662-1
Matrix: Water

Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	D1	2.0	mg/L		06/03/13 19:16	06/07/13 15:01	20
Barium	ND	D1	2.0	mg/L		06/03/13 19:16	06/07/13 15:01	20
Cadmium	ND	D1	0.020	mg/L		06/03/13 19:16	06/07/13 15:01	20
Calcium	**170**	**D1**	40	mg/L		06/03/13 19:16	06/07/13 15:01	20
Chromium	ND	D1	0.20	mg/L		06/03/13 19:16	06/07/13 15:01	20
Lead	ND	D1	0.30	mg/L		06/03/13 19:16	06/07/13 15:01	20
Magnesium	ND	D1	40	mg/L		06/03/13 19:16	06/07/13 15:01	20
Selenium	ND	D1	2.0	mg/L		06/03/13 19:16	06/09/13 14:42	20
Silver	ND	D1	0.20	mg/L		06/03/13 19:16	06/07/13 15:01	20
Sodium	**180**	**D1**	40	mg/L		06/03/13 19:16	06/07/13 15:01	20

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		06/05/13 10:17	06/05/13 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**300**		6.0	mg/L			06/03/13 15:51	1
Bicarbonate Alkalinity as CaCO3	**300**		6.0	mg/L			06/03/13 15:51	1
Carbonate Alkalinity as CaCO3	ND		6.0	mg/L			06/03/13 15:51	1
Alkalinity, Phenolphthalein	ND		6.0	mg/L			06/03/13 15:51	1
Hydroxide Alkalinity as CaCO3	ND		6.0	mg/L			06/03/13 15:51	1
Cyanide, Total	ND		0.050	mg/L		06/04/13 12:45	06/06/13 13:50	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-3662-2
Matrix: Water

Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			06/05/13 09:34	1
1,1,1-Trichloroethane	ND		0.50	ug/L			06/05/13 09:34	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			06/05/13 09:34	1
1,1,2-Trichloroethane	ND		0.50	ug/L			06/05/13 09:34	1
1,1-Dichloroethane	ND		0.50	ug/L			06/05/13 09:34	1
1,1-Dichloroethene	ND		0.50	ug/L			06/05/13 09:34	1
1,1-Dichloropropene	ND		0.50	ug/L			06/05/13 09:34	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			06/05/13 09:34	1
1,2,3-Trichloropropane	ND		2.0	ug/L			06/05/13 09:34	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			06/05/13 09:34	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			06/05/13 09:34	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			06/05/13 09:34	1
Ethylene Dibromide	ND		0.50	ug/L			06/05/13 09:34	1
1,2-Dichlorobenzene	ND		0.50	ug/L			06/05/13 09:34	1
1,2-Dichloroethane	ND		0.50	ug/L			06/05/13 09:34	1
1,2-Dichloropropane	ND		0.50	ug/L			06/05/13 09:34	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			06/05/13 09:34	1
1,3-Dichlorobenzene	ND		0.50	ug/L			06/05/13 09:34	1
1,3-Dichloropropane	ND		0.50	ug/L			06/05/13 09:34	1
1,4-Dichlorobenzene	ND		0.50	ug/L			06/05/13 09:34	1

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: Trip Blank
Date Collected: 05/28/13 08:00
Date Received: 05/29/13 09:35

Lab Sample ID: 550-3662-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0		ug/L			06/05/13 09:34	1
2-Butanone (MEK)	ND		5.0		ug/L			06/05/13 09:34	1
2-Chlorotoluene	ND		0.50		ug/L			06/05/13 09:34	1
2-Hexanone	ND		5.0		ug/L			06/05/13 09:34	1
4-Chlorotoluene	ND		0.50		ug/L			06/05/13 09:34	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/05/13 09:34	1
Acetone	ND	L5	10		ug/L			06/05/13 09:34	1
Benzene	ND		0.50		ug/L			06/05/13 09:34	1
Bromobenzene	ND		0.50		ug/L			06/05/13 09:34	1
Chlorobromomethane	ND		0.50		ug/L			06/05/13 09:34	1
Dichlorobromomethane	ND		0.50		ug/L			06/05/13 09:34	1
Bromoform	ND		1.0		ug/L			06/05/13 09:34	1
Bromomethane	ND		1.0		ug/L			06/05/13 09:34	1
Carbon disulfide	ND		1.0		ug/L			06/05/13 09:34	1
Carbon tetrachloride	ND		0.50		ug/L			06/05/13 09:34	1
Chlorobenzene	ND		0.50		ug/L			06/05/13 09:34	1
Chloroethane	ND		1.0		ug/L			06/05/13 09:34	1
Chloroform	ND		0.50		ug/L			06/05/13 09:34	1
Chloromethane	ND		1.0		ug/L			06/05/13 09:34	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/05/13 09:34	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/05/13 09:34	1
Chlorodibromomethane	ND		0.50		ug/L			06/05/13 09:34	1
Dibromomethane	ND		0.50		ug/L			06/05/13 09:34	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/05/13 09:34	1
Ethylbenzene	ND		0.50		ug/L			06/05/13 09:34	1
Hexachlorobutadiene	ND		1.0		ug/L			06/05/13 09:34	1
Iodomethane	ND		2.5		ug/L			06/05/13 09:34	1
Isopropylbenzene	ND		0.50		ug/L			06/05/13 09:34	1
m-Xylene & p-Xylene	ND		1.0		ug/L			06/05/13 09:34	1
Methylene Chloride	ND		1.0		ug/L			06/05/13 09:34	1
Methyl tert-butyl ether	ND		0.50		ug/L			06/05/13 09:34	1
Naphthalene	ND		2.5		ug/L			06/05/13 09:34	1
n-Butylbenzene	ND		0.50		ug/L			06/05/13 09:34	1
N-Propylbenzene	ND		0.50		ug/L			06/05/13 09:34	1
o-Xylene	ND		0.50		ug/L			06/05/13 09:34	1
4-Isopropyltoluene	ND		0.50		ug/L			06/05/13 09:34	1
sec-Butylbenzene	ND		0.50		ug/L			06/05/13 09:34	1
Styrene	ND		0.50		ug/L			06/05/13 09:34	1
tert-Butylbenzene	ND		0.50		ug/L			06/05/13 09:34	1
Tetrachloroethene	ND		0.50		ug/L			06/05/13 09:34	1
Toluene	ND		0.50		ug/L			06/05/13 09:34	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/05/13 09:34	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/05/13 09:34	1
Trichloroethene	ND		0.50		ug/L			06/05/13 09:34	1
Trichlorofluoromethane	ND		0.50		ug/L			06/05/13 09:34	1
Vinyl acetate	ND	L5	2.0		ug/L			06/05/13 09:34	1
Vinyl chloride	ND		0.50		ug/L			06/05/13 09:34	1
Xylenes, Total	ND		1.5		ug/L			06/05/13 09:34	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: Trip Blank

Lab Sample ID: 550-3662-2

Date Collected: 05/28/13 08:00

Matrix: Water

Date Received: 05/29/13 09:35

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	124		70 - 130		06/05/13 09:34	1
Toluene-d8 (Surr)	123		70 - 130		06/05/13 09:34	1
4-Bromofluorobenzene (Surr)	117		70 - 130		06/05/13 09:34	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-3662-1	MW-3R	126	121	115
550-3662-2	Trip Blank	124	123	117
550-3882-A-1 MS	Matrix Spike	132 S10	128	123
550-3882-A-1 MSD	Matrix Spike Duplicate	129	126	122
LCS 550-6534/4	Lab Control Sample	120	121	119
LCSD 550-6534/5	Lab Control Sample Dup	117	120	115
MB 550-6534/6	Method Blank	118	119	117

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	NBZ	FBP	TBP	TPH	PHL
Lab Sample ID	Client Sample ID	(10-78)	(22-116)	(40-91)	(14-122)	(10-117)	(10-51)
550-3662-1	MW-3R	53	76	67	76	36	32
LCS 550-6050/2-A	Lab Control Sample	52	80	76	98	42	34
LCSD 550-6050/3-A	Lab Control Sample Dup	49	81	70	96	37	32
MB 550-6050/1-A	Method Blank	41	67	62	80	46	25

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
TPH = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB2
Lab Sample ID	Client Sample ID	(10-132)	(10-103)
550-3662-1	MW-3R	78	46
LCS 550-6370/2-A	Lab Control Sample	79	50
LCSD 550-6370/3-A	Lab Control Sample Dup	71	42
MB 550-6370/1-A	Method Blank	83	46

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl (Surr)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**DCPA1 (10-140)**							
550-3662-1	MW-3R	94							
LCS 550-6599/2-A	Lab Control Sample	100							
LCSD 550-6599/3-A	Lab Control Sample Dup	95							
MB 550-6599/1-A	Method Blank	92							

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-6534/6
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			06/05/13 08:30	1
1,1,1-Trichloroethane	ND		0.50		ug/L			06/05/13 08:30	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			06/05/13 08:30	1
1,1,2-Trichloroethane	ND		0.50		ug/L			06/05/13 08:30	1
1,1-Dichloroethane	ND		0.50		ug/L			06/05/13 08:30	1
1,1-Dichloroethene	ND		0.50		ug/L			06/05/13 08:30	1
1,1-Dichloropropene	ND		0.50		ug/L			06/05/13 08:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/05/13 08:30	1
1,2,3-Trichloropropane	ND		2.0		ug/L			06/05/13 08:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/05/13 08:30	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			06/05/13 08:30	1
Ethylene Dibromide	ND		0.50		ug/L			06/05/13 08:30	1
1,2-Dichlorobenzene	ND		0.50		ug/L			06/05/13 08:30	1
1,2-Dichloroethane	ND		0.50		ug/L			06/05/13 08:30	1
1,2-Dichloropropane	ND		0.50		ug/L			06/05/13 08:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
1,3-Dichlorobenzene	ND		0.50		ug/L			06/05/13 08:30	1
1,3-Dichloropropane	ND		0.50		ug/L			06/05/13 08:30	1
1,4-Dichlorobenzene	ND		0.50		ug/L			06/05/13 08:30	1
2,2-Dichloropropane	ND		1.0		ug/L			06/05/13 08:30	1
2-Butanone (MEK)	ND		5.0		ug/L			06/05/13 08:30	1
2-Chlorotoluene	ND		0.50		ug/L			06/05/13 08:30	1
2-Hexanone	ND		5.0		ug/L			06/05/13 08:30	1
4-Chlorotoluene	ND		0.50		ug/L			06/05/13 08:30	1
4-Methyl-2-pentanone (MIBK)	ND		2.5		ug/L			06/05/13 08:30	1
Acetone	ND		10		ug/L			06/05/13 08:30	1
Benzene	ND		0.50		ug/L			06/05/13 08:30	1
Bromobenzene	ND		0.50		ug/L			06/05/13 08:30	1
Chlorobromomethane	ND		0.50		ug/L			06/05/13 08:30	1
Dichlorobromomethane	ND		0.50		ug/L			06/05/13 08:30	1
Bromoform	ND		1.0		ug/L			06/05/13 08:30	1
Bromomethane	ND		1.0		ug/L			06/05/13 08:30	1
Carbon disulfide	ND		1.0		ug/L			06/05/13 08:30	1
Carbon tetrachloride	ND		0.50		ug/L			06/05/13 08:30	1
Chlorobenzene	ND		0.50		ug/L			06/05/13 08:30	1
Chloroethane	ND		1.0		ug/L			06/05/13 08:30	1
Chloroform	ND		0.50		ug/L			06/05/13 08:30	1
Chloromethane	ND		1.0		ug/L			06/05/13 08:30	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			06/05/13 08:30	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			06/05/13 08:30	1
Chlorodibromomethane	ND		0.50		ug/L			06/05/13 08:30	1
Dibromomethane	ND		0.50		ug/L			06/05/13 08:30	1
Dichlorodifluoromethane	ND		0.50		ug/L			06/05/13 08:30	1
Ethylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
Hexachlorobutadiene	ND		1.0		ug/L			06/05/13 08:30	1
Iodomethane	ND		2.5		ug/L			06/05/13 08:30	1
Isopropylbenzene	ND		0.50		ug/L			06/05/13 08:30	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-6534/6
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		1.0		ug/L			06/05/13 08:30	1
Methylene Chloride	ND		1.0		ug/L			06/05/13 08:30	1
Methyl tert-butyl ether	ND		0.50		ug/L			06/05/13 08:30	1
Naphthalene	ND		2.5		ug/L			06/05/13 08:30	1
n-Butylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
N-Propylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
o-Xylene	ND		0.50		ug/L			06/05/13 08:30	1
4-Isopropyltoluene	ND		0.50		ug/L			06/05/13 08:30	1
sec-Butylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
Styrene	ND		0.50		ug/L			06/05/13 08:30	1
tert-Butylbenzene	ND		0.50		ug/L			06/05/13 08:30	1
Tetrachloroethene	ND		0.50		ug/L			06/05/13 08:30	1
Toluene	ND		0.50		ug/L			06/05/13 08:30	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			06/05/13 08:30	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			06/05/13 08:30	1
Trichloroethene	ND		0.50		ug/L			06/05/13 08:30	1
Trichlorofluoromethane	ND		0.50		ug/L			06/05/13 08:30	1
Vinyl acetate	ND		2.0		ug/L			06/05/13 08:30	1
Vinyl chloride	ND		0.50		ug/L			06/05/13 08:30	1
Xylenes, Total	ND		1.5		ug/L			06/05/13 08:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*70 - 130*		*06/05/13 08:30*	*1*
Toluene-d8 (Surr)	*119*		*70 - 130*		*06/05/13 08:30*	*1*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*		*06/05/13 08:30*	*1*

Lab Sample ID: LCS 550-6534/4
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	27.3		ug/L		109	70 - 130
1,1,1-Trichloroethane	25.0	29.0		ug/L		116	71 - 131
1,1,2,2-Tetrachloroethane	25.0	29.1		ug/L		116	70 - 130
1,1,2-Trichloroethane	25.0	28.7		ug/L		115	70 - 130
1,1-Dichloroethane	25.0	27.8		ug/L		111	70 - 130
1,1-Dichloroethene	25.0	30.1		ug/L		120	63 - 131
1,1-Dichloropropene	25.0	26.6		ug/L		106	70 - 130
1,2,3-Trichlorobenzene	25.0	27.5		ug/L		110	79 - 139
1,2,3-Trichloropropane	25.0	29.9		ug/L		120	70 - 130
1,2,4-Trichlorobenzene	25.0	27.6		ug/L		110	80 - 137
1,2,4-Trimethylbenzene	25.0	29.1		ug/L		116	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.9		ug/L		116	63 - 146
Ethylene Dibromide	25.0	28.4		ug/L		114	70 - 130
1,2-Dichlorobenzene	25.0	27.5		ug/L		110	70 - 130
1,2-Dichloroethane	25.0	28.4		ug/L		114	66 - 139
1,2-Dichloropropane	25.0	27.2		ug/L		109	70 - 130
1,3,5-Trimethylbenzene	25.0	29.4		ug/L		118	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6534/4
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	28.3		ug/L		113	70 - 130
1,3-Dichloropropane	25.0	27.6		ug/L		110	70 - 130
1,4-Dichlorobenzene	25.0	27.7		ug/L		111	70 - 130
2,2-Dichloropropane	25.0	28.6		ug/L		114	69 - 139
2-Butanone (MEK)	25.0	37.2		ug/L		149	53 - 150
2-Chlorotoluene	25.0	28.3		ug/L		113	70 - 130
2-Hexanone	25.0	32.2		ug/L		129	55 - 150
4-Chlorotoluene	25.0	28.8		ug/L		115	70 - 130
4-Methyl-2-pentanone (MIBK)	25.0	30.6		ug/L		122	64 - 142
Acetone	25.0	38.4	L5	ug/L		154	38 - 150
Benzene	25.0	28.7		ug/L		115	70 - 130
Bromobenzene	25.0	28.0		ug/L		112	70 - 130
Chlorobromomethane	25.0	27.9		ug/L		112	70 - 130
Dichlorobromomethane	25.0	27.4		ug/L		110	70 - 130
Bromoform	25.0	28.8		ug/L		115	69 - 129
Bromomethane	25.0	31.4		ug/L		126	57 - 138
Carbon disulfide	25.0	31.3		ug/L		125	64 - 145
Carbon tetrachloride	25.0	29.2		ug/L		117	70 - 143
Chlorobenzene	25.0	28.0		ug/L		112	70 - 130
Chloroethane	25.0	27.7		ug/L		111	66 - 131
Chloroform	25.0	28.8		ug/L		115	70 - 130
Chloromethane	25.0	28.3		ug/L		113	56 - 129
cis-1,2-Dichloroethene	25.0	29.2		ug/L		117	70 - 130
cis-1,3-Dichloropropene	25.0	27.9		ug/L		112	70 - 130
Chlorodibromomethane	25.0	28.0		ug/L		112	70 - 130
Dibromomethane	25.0	27.9		ug/L		112	70 - 130
Dichlorodifluoromethane	25.0	25.0		ug/L		100	46 - 144
Ethylbenzene	25.0	29.1		ug/L		116	70 - 130
Hexachlorobutadiene	25.0	28.2		ug/L		113	76 - 145
Iodomethane	25.0	32.3		ug/L		129	70 - 130
Isopropylbenzene	25.0	32.0		ug/L		128	88 - 141
m-Xylene & p-Xylene	25.0	28.2		ug/L		113	70 - 130
Methylene Chloride	25.0	28.5		ug/L		114	63 - 128
Methyl tert-butyl ether	25.0	26.7		ug/L		107	70 - 130
Naphthalene	25.0	28.3		ug/L		113	78 - 143
n-Butylbenzene	25.0	29.8		ug/L		119	70 - 130
N-Propylbenzene	25.0	30.3		ug/L		121	70 - 130
o-Xylene	25.0	29.2		ug/L		117	70 - 130
4-Isopropyltoluene	25.0	27.4		ug/L		110	70 - 130
sec-Butylbenzene	25.0	29.8		ug/L		119	70 - 130
Styrene	25.0	29.8		ug/L		119	70 - 130
Tetrachloroethene	25.0	27.4		ug/L		110	70 - 130
Toluene	25.0	29.4		ug/L		118	70 - 130
trans-1,2-Dichloroethene	25.0	29.5		ug/L		118	69 - 127
trans-1,3-Dichloropropene	25.0	29.1		ug/L		116	70 - 130
Trichloroethene	25.0	26.9		ug/L		107	70 - 130
Trichlorofluoromethane	25.0	33.8		ug/L		135	69 - 150
Vinyl acetate	25.0	48.4	L5	ug/L		194	67 - 148

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6534/4
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	25.0	29.0		ug/L		116	65 - 137
Xylenes, Total	50.0	57.4		ug/L		115	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*120*		*70 - 130*
Toluene-d8 (Surr)	*121*		*70 - 130*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*

Lab Sample ID: LCSD 550-6534/5
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	27.4		ug/L		110	70 - 130	0	20
1,1,1-Trichloroethane	25.0	28.4		ug/L		114	71 - 131	2	20
1,1,2,2-Tetrachloroethane	25.0	28.1		ug/L		112	70 - 130	4	20
1,1,2-Trichloroethane	25.0	27.8		ug/L		111	70 - 130	3	20
1,1-Dichloroethane	25.0	26.6		ug/L		106	70 - 130	4	20
1,1-Dichloroethene	25.0	28.4		ug/L		114	63 - 131	6	22
1,1-Dichloropropene	25.0	25.7		ug/L		103	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	28.5		ug/L		114	79 - 139	4	20
1,2,3-Trichloropropane	25.0	28.1		ug/L		112	70 - 130	6	20
1,2,4-Trichlorobenzene	25.0	28.2		ug/L		113	80 - 137	2	20
1,2,4-Trimethylbenzene	25.0	28.3		ug/L		113	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	25.0	30.4		ug/L		122	63 - 146	5	22
Ethylene Dibromide	25.0	27.4		ug/L		110	70 - 130	4	20
1,2-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130	2	20
1,2-Dichloroethane	25.0	27.8		ug/L		111	66 - 139	2	20
1,2-Dichloropropane	25.0	27.2		ug/L		109	70 - 130	0	20
1,3,5-Trimethylbenzene	25.0	28.9		ug/L		116	70 - 130	2	20
1,3-Dichlorobenzene	25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichloropropane	25.0	26.6		ug/L		106	70 - 130	4	20
1,4-Dichlorobenzene	25.0	27.3		ug/L		109	70 - 130	1	20
2,2-Dichloropropane	25.0	27.3		ug/L		109	69 - 139	4	20
2-Butanone (MEK)	25.0	34.7		ug/L		139	53 - 150	7	35
2-Chlorotoluene	25.0	27.6		ug/L		111	70 - 130	2	20
2-Hexanone	25.0	33.1		ug/L		132	55 - 150	3	35
4-Chlorotoluene	25.0	28.0		ug/L		112	70 - 130	3	20
4-Methyl-2-pentanone (MIBK)	25.0	30.0		ug/L		120	64 - 142	2	25
Acetone	25.0	37.7	L5	ug/L		151	38 - 150	2	35
Benzene	25.0	27.8		ug/L		111	70 - 130	3	20
Bromobenzene	25.0	27.1		ug/L		108	70 - 130	3	20
Chlorobromomethane	25.0	27.2		ug/L		109	70 - 130	3	20
Dichlorobromomethane	25.0	27.2		ug/L		109	70 - 130	1	20
Bromoform	25.0	26.9		ug/L		108	69 - 129	7	20
Bromomethane	25.0	31.2		ug/L		125	57 - 138	1	20
Carbon disulfide	25.0	29.7		ug/L		119	64 - 145	5	33
Carbon tetrachloride	25.0	28.9		ug/L		116	70 - 143	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6534/5
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	25.0	27.0		ug/L		108	70 - 130	4	20
Chloroethane	25.0	26.3		ug/L		105	66 - 131	5	20
Chloroform	25.0	27.9		ug/L		112	70 - 130	3	20
Chloromethane	25.0	26.8		ug/L		107	56 - 129	5	20
cis-1,2-Dichloroethene	25.0	28.2		ug/L		113	70 - 130	4	20
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	70 - 130	5	20
Chlorodibromomethane	25.0	27.2		ug/L		109	70 - 130	3	20
Dibromomethane	25.0	26.9		ug/L		108	70 - 130	4	20
Dichlorodifluoromethane	25.0	23.2		ug/L		93	46 - 144	7	23
Ethylbenzene	25.0	28.2		ug/L		113	70 - 130	3	20
Hexachlorobutadiene	25.0	28.9		ug/L		115	76 - 145	2	20
Iodomethane	25.0	31.7		ug/L		127	70 - 130	2	20
Isopropylbenzene	25.0	31.4		ug/L		125	88 - 141	2	20
m-Xylene & p-Xylene	25.0	27.1		ug/L		109	70 - 130	4	20
Methylene Chloride	25.0	26.2		ug/L		105	63 - 128	8	21
Methyl tert-butyl ether	25.0	25.0		ug/L		100	70 - 130	6	20
Naphthalene	25.0	29.0		ug/L		116	78 - 143	2	20
n-Butylbenzene	25.0	29.3		ug/L		117	70 - 130	2	20
N-Propylbenzene	25.0	29.8		ug/L		119	70 - 130	2	20
o-Xylene	25.0	28.7		ug/L		115	70 - 130	2	20
4-Isopropyltoluene	25.0	26.2		ug/L		105	70 - 130	5	20
sec-Butylbenzene	25.0	29.1		ug/L		116	70 - 130	2	20
Styrene	25.0	29.2		ug/L		117	70 - 130	2	20
Tetrachloroethene	25.0	26.3		ug/L		105	70 - 130	4	20
Toluene	25.0	29.6		ug/L		118	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	29.0		ug/L		116	69 - 127	2	20
trans-1,3-Dichloropropene	25.0	28.3		ug/L		113	70 - 130	2	20
Trichloroethene	25.0	26.7		ug/L		107	70 - 130	1	20
Trichlorofluoromethane	25.0	32.7		ug/L		131	69 - 150	3	22
Vinyl acetate	25.0	46.3	L5	ug/L		185	67 - 148	4	22
Vinyl chloride	25.0	28.1		ug/L		112	65 - 137	3	20
Xylenes, Total	50.0	55.8		ug/L		112	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*117*		*70 - 130*
Toluene-d8 (Surr)	*120*		*70 - 130*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: 550-3882-A-1 MS
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	25.8		ug/L		103	70 - 130
1,1,1-Trichloroethane	ND		25.0	26.0		ug/L		104	64 - 138
1,1,2,2-Tetrachloroethane	ND		25.0	25.5		ug/L		102	63 - 137
1,1,2-Trichloroethane	ND		25.0	26.1		ug/L		105	63 - 132
1,1-Dichloroethane	ND		25.0	25.1		ug/L		100	62 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3882-A-1 MS
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	57 - 137
1,1-Dichloropropene	ND		25.0	22.6		ug/L		91	64 - 134
1,2,3-Trichlorobenzene	ND		25.0	25.9		ug/L		103	74 - 139
1,2,3-Trichloropropane	ND		25.0	25.8		ug/L		103	68 - 130
1,2,4-Trichlorobenzene	ND		25.0	25.0		ug/L		100	74 - 138
1,2,4-Trimethylbenzene	ND		25.0	25.6		ug/L		102	63 - 135
1,2-Dibromo-3-Chloropropane	ND		25.0	24.3		ug/L		97	53 - 145
Ethylene Dibromide	ND		25.0	25.6		ug/L		102	70 - 130
1,2-Dichlorobenzene	ND		25.0	24.8		ug/L		99	70 - 130
1,2-Dichloroethane	ND		25.0	27.0		ug/L		108	54 - 147
1,2-Dichloropropane	ND		25.0	24.4		ug/L		97	68 - 126
1,3,5-Trimethylbenzene	ND		25.0	25.2		ug/L		101	66 - 137
1,3-Dichlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	25.6		ug/L		102	68 - 129
1,4-Dichlorobenzene	ND		25.0	24.6		ug/L		99	70 - 130
2,2-Dichloropropane	ND		25.0	23.8		ug/L		95	60 - 146
2-Butanone (MEK)	ND	M2	25.0	23.5		ug/L		94	31 - 143
2-Chlorotoluene	ND		25.0	24.4		ug/L		98	71 - 131
2-Hexanone	ND		25.0	21.4		ug/L		86	40 - 142
4-Chlorotoluene	ND		25.0	25.5		ug/L		102	70 - 130
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.1		ug/L		108	52 - 143
Acetone	ND	L5	25.0	16.4		ug/L		65	29 - 139
Benzene	ND		25.0	25.9		ug/L		103	68 - 131
Bromobenzene	ND		25.0	25.1		ug/L		100	70 - 130
Chlorobromomethane	ND		25.0	26.0		ug/L		104	64 - 132
Dichlorobromomethane	ND		25.0	25.9		ug/L		103	63 - 138
Bromoform	ND		25.0	24.7		ug/L		99	60 - 128
Bromomethane	ND		25.0	24.0		ug/L		96	47 - 144
Carbon disulfide	ND		25.0	27.8		ug/L		111	45 - 150
Carbon tetrachloride	ND		25.0	24.9		ug/L		100	65 - 147
Chlorobenzene	ND		25.0	25.1		ug/L		100	70 - 130
Chloroethane	ND		25.0	26.0		ug/L		104	57 - 139
Chloroform	ND		25.0	27.2		ug/L		109	63 - 131
Chloromethane	ND		25.0	22.8		ug/L		91	47 - 134
cis-1,2-Dichloroethene	ND		25.0	26.4		ug/L		106	65 - 127
cis-1,3-Dichloropropene	ND		25.0	24.4		ug/L		97	63 - 135
Chlorodibromomethane	ND		25.0	26.1		ug/L		104	65 - 134
Dibromomethane	ND		25.0	25.5		ug/L		102	66 - 136
Dichlorodifluoromethane	ND		25.0	20.4		ug/L		81	40 - 148
Ethylbenzene	ND		25.0	26.3		ug/L		105	74 - 134
Hexachlorobutadiene	ND		25.0	25.0		ug/L		100	69 - 150
Iodomethane	ND		25.0	29.7		ug/L		119	53 - 150
Isopropylbenzene	ND		25.0	27.3		ug/L		109	80 - 146
m-Xylene & p-Xylene	ND		25.0	25.4		ug/L		101	58 - 138
Methylene Chloride	ND		25.0	28.6		ug/L		115	55 - 133
Methyl tert-butyl ether	ND		25.0	24.0		ug/L		96	67 - 138
Naphthalene	ND		25.0	24.9		ug/L		100	67 - 146
n-Butylbenzene	ND		25.0	25.0		ug/L		100	69 - 140

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3882-A-1 MS
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	ND		25.0	26.7		ug/L		107	74 - 140
o-Xylene	ND		25.0	27.1		ug/L		109	66 - 137
4-Isopropyltoluene	ND		25.0	23.0		ug/L		92	70 - 133
sec-Butylbenzene	ND		25.0	25.7		ug/L		103	72 - 136
Styrene	ND		25.0	26.2		ug/L		105	43 - 144
Tetrachloroethene	ND		25.0	23.1		ug/L		92	67 - 131
Toluene	ND		25.0	26.5		ug/L		106	65 - 138
trans-1,2-Dichloroethene	ND		25.0	26.3		ug/L		105	62 - 131
trans-1,3-Dichloropropene	ND		25.0	25.4		ug/L		102	58 - 136
Trichloroethene	ND		25.0	23.1		ug/L		93	66 - 132
Trichlorofluoromethane	ND		25.0	29.4		ug/L		118	62 - 150
Vinyl acetate	ND	L5 N1	25.0	40.7	N1	ug/L		163	47 - 150
Vinyl chloride	ND		25.0	22.0		ug/L		88	55 - 146
Xylenes, Total	ND		50.0	52.5		ug/L		105	68 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*132*	*S10*	*70 - 130*
Toluene-d8 (Surr)	*128*		*70 - 130*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: 550-3882-A-1 MSD
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	26.4		ug/L		106	70 - 130	2	30
1,1,1-Trichloroethane	ND		25.0	27.6		ug/L		110	64 - 138	6	35
1,1,2,2-Tetrachloroethane	ND		25.0	26.5		ug/L		106	63 - 137	4	32
1,1,2-Trichloroethane	ND		25.0	27.6		ug/L		111	63 - 132	6	35
1,1-Dichloroethane	ND		25.0	25.5		ug/L		102	62 - 130	1	34
1,1-Dichloroethene	ND		25.0	27.1		ug/L		108	57 - 137	6	35
1,1-Dichloropropene	ND		25.0	24.9		ug/L		99	64 - 134	9	34
1,2,3-Trichlorobenzene	ND		25.0	28.3		ug/L		113	74 - 139	9	26
1,2,3-Trichloropropane	ND		25.0	26.8		ug/L		107	68 - 130	4	32
1,2,4-Trichlorobenzene	ND		25.0	27.6		ug/L		111	74 - 138	10	26
1,2,4-Trimethylbenzene	ND		25.0	27.3		ug/L		109	63 - 135	7	31
1,2-Dibromo-3-Chloropropane	ND		25.0	26.9		ug/L		108	53 - 145	10	35
Ethylene Dibromide	ND		25.0	26.6		ug/L		106	70 - 130	4	33
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	6	27
1,2-Dichloroethane	ND		25.0	27.3		ug/L		109	54 - 147	1	35
1,2-Dichloropropane	ND		25.0	25.9		ug/L		104	68 - 126	6	32
1,3,5-Trimethylbenzene	ND		25.0	27.2		ug/L		109	66 - 137	7	30
1,3-Dichlorobenzene	ND		25.0	26.7		ug/L		107	70 - 130	6	28
1,3-Dichloropropane	ND		25.0	26.8		ug/L		107	68 - 129	5	33
1,4-Dichlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130	7	26
2,2-Dichloropropane	ND		25.0	24.6		ug/L		99	60 - 146	4	35
2-Butanone (MEK)	ND	M2	25.0	21.8		ug/L		87	31 - 143	NC	35
2-Chlorotoluene	ND		25.0	26.8		ug/L		107	71 - 131	9	29

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3882-A-1 MSD
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	ND		25.0	22.5		ug/L		90	40 - 142	5	35
4-Chlorotoluene	ND		25.0	26.9		ug/L		108	70 - 130	5	28
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.8		ug/L		111	52 - 143	3	35
Acetone	ND	L5	25.0	15.4		ug/L		62	29 - 139	6	35
Benzene	ND		25.0	27.4		ug/L		110	68 - 131	6	32
Bromobenzene	ND		25.0	26.4		ug/L		106	70 - 130	5	28
Chlorobromomethane	ND		25.0	26.8		ug/L		107	64 - 132	3	35
Dichlorobromomethane	ND		25.0	26.4		ug/L		106	63 - 138	2	31
Bromoform	ND		25.0	25.4		ug/L		102	60 - 128	3	31
Bromomethane	ND		25.0	25.2		ug/L		101	47 - 144	5	35
Carbon disulfide	ND		25.0	29.7		ug/L		119	45 - 150	7	35
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	65 - 147	6	35
Chlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130	5	30
Chloroethane	ND		25.0	26.2		ug/L		105	57 - 139	1	35
Chloroform	ND		25.0	27.8		ug/L		111	63 - 131	2	33
Chloromethane	ND		25.0	23.0		ug/L		92	47 - 134	1	35
cis-1,2-Dichloroethene	ND		25.0	27.6		ug/L		111	65 - 127	4	34
cis-1,3-Dichloropropene	ND		25.0	25.4		ug/L		102	63 - 135	4	35
Chlorodibromomethane	ND		25.0	26.7		ug/L		107	65 - 134	2	33
Dibromomethane	ND		25.0	26.3		ug/L		105	66 - 136	3	35
Dichlorodifluoromethane	ND		25.0	21.0		ug/L		84	40 - 148	3	35
Ethylbenzene	ND		25.0	27.5		ug/L		110	74 - 134	4	32
Hexachlorobutadiene	ND		25.0	28.3		ug/L		113	69 - 150	12	32
Iodomethane	ND		25.0	30.6		ug/L		122	53 - 150	3	35
Isopropylbenzene	ND		25.0	29.2		ug/L		117	80 - 146	7	32
m-Xylene & p-Xylene	ND		25.0	26.2		ug/L		105	58 - 138	3	29
Methylene Chloride	ND		25.0	29.1		ug/L		117	55 - 133	2	35
Methyl tert-butyl ether	ND		25.0	24.6		ug/L		98	67 - 138	2	21
Naphthalene	ND		25.0	27.8		ug/L		111	67 - 146	11	29
n-Butylbenzene	ND		25.0	27.5		ug/L		110	69 - 140	10	32
N-Propylbenzene	ND		25.0	27.7		ug/L		111	74 - 140	4	32
o-Xylene	ND		25.0	27.9		ug/L		112	66 - 137	3	26
4-Isopropyltoluene	ND		25.0	25.1		ug/L		100	70 - 133	9	32
sec-Butylbenzene	ND		25.0	27.2		ug/L		109	72 - 136	6	33
Styrene	ND		25.0	27.9		ug/L		112	43 - 144	6	35
Tetrachloroethene	ND		25.0	24.6		ug/L		98	67 - 131	6	31
Toluene	ND		25.0	28.5		ug/L		114	65 - 138	7	33
trans-1,2-Dichloroethene	ND		25.0	27.5		ug/L		110	62 - 131	5	35
trans-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	58 - 136	2	35
Trichloroethene	ND		25.0	24.6		ug/L		98	66 - 132	6	29
Trichlorofluoromethane	ND		25.0	31.6		ug/L		126	62 - 150	7	35
Vinyl acetate	ND	L5 N1	25.0	43.8	N1	ug/L		175	47 - 150	7	35
Vinyl chloride	ND		25.0	23.7		ug/L		95	55 - 146	7	35
Xylenes, Total	ND		50.0	54.1		ug/L		108	68 - 131	3	31

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*129*		*70 - 130*
Toluene-d8 (Surr)	*126*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 550-3882-A-1 MSD
Matrix: Water
Analysis Batch: 6534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-6050/1-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6050

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
1,2-Dichlorobenzene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
1,2-Diphenylhydrazine	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
1,3-Dichlorobenzene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
1,4-Dichlorobenzene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,4,5-Trichlorophenol	ND		20	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,4,6-Trichlorophenol	ND		20	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,4-Dichlorophenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,4-Dimethylphenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,4-Dinitrophenol	ND		50	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,4-Dinitrotoluene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2,6-Dinitrotoluene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2-Chloronaphthalene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2-Chlorophenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2-Methylnaphthalene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2-Methylphenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2-Nitroaniline	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
2-Nitrophenol	ND		15	ug/L		05/30/13 10:07	06/03/13 14:55	1
3 & 4 Methylphenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
3,3'-Dichlorobenzidine	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
3-Nitroaniline	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
4,6-Dinitro-2-methylphenol	ND		50	ug/L		05/30/13 10:07	06/03/13 14:55	1
4-Bromophenyl phenyl ether	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
4-Chloro-3-methylphenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
4-Chloroaniline	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
4-Chlorophenyl phenyl ether	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
4-Nitroaniline	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
4-Nitrophenol	ND		25	ug/L		05/30/13 10:07	06/03/13 14:55	1
Acenaphthene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Acenaphthylene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Anthracene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzo[a]anthracene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzo[a]pyrene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzo[b]fluoranthene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzo[g,h,i]perylene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzo[k]fluoranthene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzoic acid	ND		25	ug/L		05/30/13 10:07	06/03/13 14:55	1
Benzyl alcohol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Bis(2-chloroethoxy)methane	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-6050/1-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6050

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
bis (2-chloroisopropyl) ether	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Bis(2-ethylhexyl) phthalate	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Butyl benzyl phthalate	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Chrysene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Dibenz(a,h)anthracene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Dibenzofuran	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Diethyl phthalate	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Dimethyl phthalate	ND		20	ug/L		05/30/13 10:07	06/03/13 14:55	1
Di-n-butyl phthalate	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Di-n-octyl phthalate	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Fluoranthene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Fluorene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Hexachlorobutadiene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Hexachlorobenzene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Hexachlorocyclopentadiene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Hexachloroethane	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Indeno[1,2,3-cd]pyrene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Isophorone	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Naphthalene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Nitrobenzene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
N-Nitrosodiphenylamine	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Pentachlorophenol	ND		50	ug/L		05/30/13 10:07	06/03/13 14:55	1
Phenanthrene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Phenol	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1
Pyrene	ND		10	ug/L		05/30/13 10:07	06/03/13 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*41*		*10 - 78*	*05/30/13 10:07*	*06/03/13 14:55*	*1*
Nitrobenzene-d5 (Surr)	*67*		*22 - 116*	*05/30/13 10:07*	*06/03/13 14:55*	*1*
2-Fluorobiphenyl (Surr)	*62*		*40 - 91*	*05/30/13 10:07*	*06/03/13 14:55*	*1*
2,4,6-Tribromophenol (Surr)	*80*		*14 - 122*	*05/30/13 10:07*	*06/03/13 14:55*	*1*
p-Terphenyl-d14 (Surr)	*46*		*10 - 117*	*05/30/13 10:07*	*06/03/13 14:55*	*1*
Phenol-d5 (Surr)	*25*		*10 - 51*	*05/30/13 10:07*	*06/03/13 14:55*	*1*

Lab Sample ID: LCS 550-6050/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6050

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	120	85.8	Q9	ug/L		71	41 - 92
1,2-Dichlorobenzene	80.0	53.7	Q9	ug/L		67	35 - 94
1,2-Diphenylhydrazine	80.0	60.5	Q9	ug/L		76	60 - 108
1,3-Dichlorobenzene	80.0	51.5	Q9	ug/L		64	30 - 92
1,4-Dichlorobenzene	80.0	52.1	Q9	ug/L		65	32 - 93
2,4,5-Trichlorophenol	80.0	70.1	Q9	ug/L		88	59 - 114
2,4,6-Trichlorophenol	80.0	72.2	Q9	ug/L		90	58 - 109

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6050/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6050

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dichlorophenol	80.0	65.6	Q9	ug/L		82	58 - 105
2,4-Dimethylphenol	80.0	65.0	Q9	ug/L		81	52 - 96
2,4-Dinitrophenol	120	79.6	Q9	ug/L		66	28 - 123
2,4-Dinitrotoluene	80.0	72.7	Q9	ug/L		91	64 - 117
2,6-Dinitrotoluene	80.0	72.8	Q9	ug/L		91	63 - 111
2-Chloronaphthalene	120	85.7	Q9	ug/L		71	57 - 96
2-Chlorophenol	80.0	63.9	Q9	ug/L		80	55 - 98
2-Methylnaphthalene	80.0	58.2	Q9	ug/L		73	51 - 100
2-Methylphenol	80.0	60.2	Q9	ug/L		75	51 - 92
2-Nitroaniline	80.0	65.5	Q9	ug/L		82	60 - 118
2-Nitrophenol	80.0	67.4	Q9	ug/L		84	55 - 112
3 & 4 Methylphenol	80.0	56.2	Q9	ug/L		70	46 - 89
3,3'-Dichlorobenzidine	80.0	70.3	Q9	ug/L		88	46 - 109
3-Nitroaniline	80.0	68.2	Q9	ug/L		85	51 - 115
4,6-Dinitro-2-methylphenol	120	92.5	Q9	ug/L		77	53 - 121
4-Bromophenyl phenyl ether	80.0	73.5	Q9	ug/L		92	60 - 109
4-Chloro-3-methylphenol	80.0	70.5	Q9	ug/L		88	60 - 108
4-Chloroaniline	80.0	65.0	Q9	ug/L		81	25 - 116
4-Chlorophenyl phenyl ether	80.0	73.9	Q9	ug/L		92	60 - 109
4-Nitroaniline	80.0	69.3	Q9	ug/L		87	49 - 128
4-Nitrophenol	120	121	L5 Q9	ug/L		101	21 - 61
Acenaphthene	80.0	68.4	Q9	ug/L		85	47 - 145
Acenaphthylene	80.0	69.2	Q9	ug/L		86	59 - 102
Anthracene	80.0	71.0	Q9	ug/L		89	62 - 109
Benzo[a]anthracene	80.0	68.5	Q9	ug/L		86	61 - 109
Benzo[a]pyrene	80.0	66.9	Q9	ug/L		84	61 - 106
Benzo[b]fluoranthene	80.0	59.3	Q9	ug/L		74	53 - 105
Benzo[g,h,i]perylene	80.0	83.7	Q9	ug/L		105	55 - 120
Benzo[k]fluoranthene	80.0	71.3	Q9	ug/L		89	61 - 114
Benzoic acid	200	79.5	Q9	ug/L		40	10 - 49
Benzyl alcohol	80.0	81.4	L5 Q9	ug/L		102	50 - 98
Bis(2-chloroethoxy)methane	80.0	68.0	Q9	ug/L		85	60 - 105
Bis(2-chloroethyl)ether	80.0	58.6	Q9	ug/L		73	56 - 102
bis (2-chloroisopropyl) ether	80.0	62.3	Q9	ug/L		78	55 - 103
Bis(2-ethylhexyl) phthalate	80.0	65.0	Q9	ug/L		81	63 - 113
Butyl benzyl phthalate	80.0	64.1	Q9	ug/L		80	61 - 110
Chrysene	80.0	71.6	Q9	ug/L		90	63 - 111
Dibenz(a,h)anthracene	80.0	79.4	Q9	ug/L		99	57 - 119
Dibenzofuran	80.0	70.4	Q9	ug/L		88	62 - 105
Diethyl phthalate	80.0	72.1	Q9	ug/L		90	63 - 111
Dimethyl phthalate	120	104	Q9	ug/L		87	64 - 103
Di-n-butyl phthalate	80.0	67.5	Q9	ug/L		84	64 - 111
Di-n-octyl phthalate	80.0	60.6	Q9	ug/L		76	51 - 122
Fluoranthene	80.0	70.3	Q9	ug/L		88	65 - 115
Fluorene	80.0	71.3	Q9	ug/L		89	63 - 112
Hexachlorobutadiene	80.0	54.0	Q9	ug/L		67	22 - 89
Hexachlorobenzene	80.0	74.2	Q9	ug/L		93	61 - 111
Hexachlorocyclopentadiene	80.0	48.4	Q9	ug/L		61	17 - 73

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-6050/2-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6050

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachloroethane	120	77.1	Q9	ug/L		64	26 - 81
Indeno[1,2,3-cd]pyrene	80.0	80.4	Q9	ug/L		101	58 - 120
Isophorone	80.0	65.4	Q9	ug/L		82	47 - 100
Naphthalene	80.0	61.0	Q9	ug/L		76	52 - 100
Nitrobenzene	80.0	64.7	Q9	ug/L		81	57 - 107
N-Nitrosodi-n-propylamine	80.0	68.9	Q9	ug/L		86	57 - 108
N-Nitrosodiphenylamine	80.0	61.8	Q9	ug/L		77	50 - 100
Pentachlorophenol	120	95.3	Q9	ug/L		79	43 - 116
Phenanthrene	80.0	69.8	Q9	ug/L		87	64 - 110
Phenol	80.0	37.0	Q9	ug/L		46	22 - 59
Pyrene	80.0	69.2	Q9	ug/L		86	64 - 109

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*52*		*10 - 78*
Nitrobenzene-d5 (Surr)	*80*		*22 - 116*
2-Fluorobiphenyl (Surr)	*76*		*40 - 91*
2,4,6-Tribromophenol (Surr)	*98*		*14 - 122*
p-Terphenyl-d14 (Surr)	*42*		*10 - 117*
Phenol-d5 (Surr)	*34*		*10 - 51*

Lab Sample ID: LCSD 550-6050/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6050

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	120	80.9	Q9	ug/L		67	41 - 92	6	23
1,2-Dichlorobenzene	80.0	50.7	Q9	ug/L		63	35 - 94	6	25
1,2-Diphenylhydrazine	80.0	58.2	Q9	ug/L		73	60 - 108	4	20
1,3-Dichlorobenzene	80.0	47.7	Q9	ug/L		60	30 - 92	8	30
1,4-Dichlorobenzene	80.0	50.5	Q9	ug/L		63	32 - 93	3	28
2,4,5-Trichlorophenol	80.0	70.6	Q9	ug/L		88	59 - 114	1	20
2,4,6-Trichlorophenol	80.0	69.7	Q9	ug/L		87	58 - 109	4	20
2,4-Dichlorophenol	80.0	64.7	Q9	ug/L		81	58 - 105	1	20
2,4-Dimethylphenol	80.0	64.1	Q9	ug/L		80	52 - 96	1	20
2,4-Dinitrophenol	120	82.4	Q9	ug/L		69	28 - 123	3	35
2,4-Dinitrotoluene	80.0	71.0	Q9	ug/L		89	64 - 117	2	21
2,6-Dinitrotoluene	80.0	70.4	Q9	ug/L		88	63 - 111	3	20
2-Chloronaphthalene	120	80.7	Q9	ug/L		67	57 - 96	6	21
2-Chlorophenol	80.0	62.5	Q9	ug/L		78	55 - 98	2	20
2-Methylnaphthalene	80.0	58.8	Q9	ug/L		74	51 - 100	1	20
2-Methylphenol	80.0	58.4	Q9	ug/L		73	51 - 92	3	23
2-Nitroaniline	80.0	64.7	Q9	ug/L		81	60 - 118	1	35
2-Nitrophenol	80.0	66.4	Q9	ug/L		83	55 - 112	2	20
3 & 4 Methylphenol	80.0	53.5	Q9	ug/L		67	46 - 89	5	22
3,3'-Dichlorobenzidine	80.0	69.4	Q9	ug/L		87	46 - 109	1	20
3-Nitroaniline	80.0	66.0	Q9	ug/L		82	51 - 115	3	35
4,6-Dinitro-2-methylphenol	120	92.9	Q9	ug/L		77	53 - 121	0	20
4-Bromophenyl phenyl ether	80.0	72.1	Q9	ug/L		90	60 - 109	2	20

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6050/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6050

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloro-3-methylphenol	80.0	70.8	Q9	ug/L		89	60 - 108	0	20
4-Chloroaniline	80.0	66.5	Q9	ug/L		83	25 - 116	2	35
4-Chlorophenyl phenyl ether	80.0	70.9	Q9	ug/L		89	60 - 109	4	20
4-Nitroaniline	80.0	66.9	Q9	ug/L		84	49 - 128	3	35
4-Nitrophenol	120	119	L5 Q9	ug/L		99	21 - 61	1	27
Acenaphthene	80.0	65.8	Q9	ug/L		82	47 - 145	4	20
Acenaphthylene	80.0	66.8	Q9	ug/L		83	59 - 102	3	20
Anthracene	80.0	63.9	Q9	ug/L		80	62 - 109	11	20
Benzo[a]anthracene	80.0	65.9	Q9	ug/L		82	61 - 109	4	20
Benzo[a]pyrene	80.0	65.2	Q9	ug/L		82	61 - 106	3	21
Benzo[b]fluoranthene	80.0	58.2	Q9	ug/L		73	53 - 105	2	23
Benzo[g,h,i]perylene	80.0	81.0	Q9	ug/L		101	55 - 120	3	27
Benzo[k]fluoranthene	80.0	68.9	Q9	ug/L		86	61 - 114	3	26
Benzoic acid	200	80.2	Q9	ug/L		40	10 - 49	1	35
Benzyl alcohol	80.0	78.8	Q9	ug/L		98	50 - 98	3	29
Bis(2-chloroethoxy)methane	80.0	67.8	Q9	ug/L		85	60 - 105	0	21
Bis(2-chloroethyl)ether	80.0	53.7	Q9	ug/L		67	56 - 102	9	21
bis (2-chloroisopropyl) ether	80.0	61.6	Q9	ug/L		77	55 - 103	1	20
Bis(2-ethylhexyl) phthalate	80.0	63.4	Q9	ug/L		79	63 - 113	2	20
Butyl benzyl phthalate	80.0	61.6	Q9	ug/L		77	61 - 110	4	20
Chrysene	80.0	68.7	Q9	ug/L		86	63 - 111	4	20
Dibenz(a,h)anthracene	80.0	75.9	Q9	ug/L		95	57 - 119	5	26
Dibenzofuran	80.0	67.7	Q9	ug/L		85	62 - 105	4	20
Diethyl phthalate	80.0	70.9	Q9	ug/L		89	63 - 111	2	21
Dimethyl phthalate	120	101	Q9	ug/L		85	64 - 103	3	20
Di-n-butyl phthalate	80.0	64.8	Q9	ug/L		81	64 - 111	4	20
Di-n-octyl phthalate	80.0	58.9	Q9	ug/L		74	51 - 122	3	22
Fluoranthene	80.0	67.2	Q9	ug/L		84	65 - 115	4	20
Fluorene	80.0	69.3	Q9	ug/L		87	63 - 112	3	20
Hexachlorobutadiene	80.0	50.1	Q9	ug/L		63	22 - 89	7	34
Hexachlorobenzene	80.0	71.9	Q9	ug/L		90	61 - 111	3	20
Hexachlorocyclopentadiene	80.0	45.3	Q9	ug/L		57	17 - 73	7	32
Hexachloroethane	120	68.0	Q9	ug/L		57	26 - 81	13	31
Indeno[1,2,3-cd]pyrene	80.0	77.2	Q9	ug/L		96	58 - 120	4	25
Isophorone	80.0	62.0	Q9	ug/L		78	47 - 100	5	20
Naphthalene	80.0	58.1	Q9	ug/L		73	52 - 100	5	20
Nitrobenzene	80.0	66.5	Q9	ug/L		83	57 - 107	3	20
N-Nitrosodi-n-propylamine	80.0	64.4	Q9	ug/L		80	57 - 108	7	22
N-Nitrosodiphenylamine	80.0	59.9	Q9	ug/L		75	50 - 100	3	20
Pentachlorophenol	120	94.9	Q9	ug/L		79	43 - 116	0	20
Phenanthrene	80.0	67.9	Q9	ug/L		85	64 - 110	3	20
Phenol	80.0	34.7	Q9	ug/L		43	22 - 59	6	30
Pyrene	80.0	66.2	Q9	ug/L		83	64 - 109	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*49*		*10 - 78*
Nitrobenzene-d5 (Surr)	*81*		*22 - 116*
2-Fluorobiphenyl (Surr)	*70*		*40 - 91*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-6050/3-A
Matrix: Water
Analysis Batch: 6295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6050

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*96*		*14 - 122*
p-Terphenyl-d14 (Surr)	*37*		*10 - 117*
Phenol-d5 (Surr)	*32*		*10 - 51*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 550-6370/1-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6370

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Methoxychlor	ND		0.10	ug/L		06/03/13 17:00	06/10/13 18:49	1
Toxaphene	ND		1.0	ug/L		06/03/13 17:00	06/10/13 18:49	1
delta-BHC	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Dieldrin	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Endosulfan I	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Endosulfan II	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Endosulfan sulfate	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Endrin	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Endrin aldehyde	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
gamma-BHC (Lindane)	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Heptachlor	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
4,4'-DDD	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
4,4'-DDE	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
4,4'-DDT	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Aldrin	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
alpha-BHC	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
beta-BHC	ND		0.050	ug/L		06/03/13 17:00	06/10/13 18:49	1
Chlordane (technical)	ND		0.50	ug/L		06/03/13 17:00	06/10/13 18:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*10 - 132*	*06/03/13 17:00*	*06/10/13 18:49*	*1*
DCB Decachlorobiphenyl (Surr)	*46*		*10 - 103*	*06/03/13 17:00*	*06/10/13 18:49*	*1*

Lab Sample ID: LCS 550-6370/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor epoxide	1.00	0.915		ug/L		92	69 - 118
Methoxychlor	1.00	0.927		ug/L		93	61 - 128
delta-BHC	1.00	0.926		ug/L		93	68 - 118
Dieldrin	1.00	0.917		ug/L		92	69 - 120
Endosulfan I	1.00	0.911		ug/L		91	68 - 122
Endosulfan II	1.00	0.915		ug/L		92	70 - 121
Endosulfan sulfate	1.00	0.939		ug/L		94	69 - 123

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 550-6370/2-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Endrin	1.00	0.923		ug/L		92	67 - 122
Endrin aldehyde	1.00	0.934		ug/L		93	69 - 121
gamma-BHC (Lindane)	1.00	0.902		ug/L		90	70 - 119
Heptachlor	1.00	0.925		ug/L		92	51 - 124
4,4'-DDD	1.00	0.904		ug/L		90	65 - 122
4,4'-DDE	1.00	0.871		ug/L		87	58 - 119
4,4'-DDT	1.00	0.863		ug/L		86	61 - 126
Aldrin	1.00	0.879		ug/L		88	43 - 120
alpha-BHC	1.00	0.919		ug/L		92	70 - 117
beta-BHC	1.00	0.915		ug/L		91	70 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*79*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*50*		*10 - 103*

Lab Sample ID: LCSD 550-6370/3-A
Matrix: Water
Analysis Batch: 6944

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6370

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Heptachlor epoxide	1.00	0.841		ug/L		84	69 - 118	8	29
Methoxychlor	1.00	0.842		ug/L		84	61 - 128	10	32
delta-BHC	1.00	0.862		ug/L		86	68 - 118	7	28
Dieldrin	1.00	0.842		ug/L		84	69 - 120	9	30
Endosulfan I	1.00	0.837		ug/L		84	68 - 122	8	30
Endosulfan II	1.00	0.842		ug/L		84	70 - 121	8	30
Endosulfan sulfate	1.00	0.869		ug/L		87	69 - 123	8	30
Endrin	1.00	0.849		ug/L		85	67 - 122	8	35
Endrin aldehyde	1.00	0.868		ug/L		87	69 - 121	7	30
gamma-BHC (Lindane)	1.00	0.846		ug/L		85	70 - 119	6	28
Heptachlor	1.00	0.860		ug/L		86	51 - 124	7	33
4,4'-DDD	1.00	0.831		ug/L		83	65 - 122	8	33
4,4'-DDE	1.00	0.800		ug/L		80	58 - 119	8	35
4,4'-DDT	1.00	0.798		ug/L		80	61 - 126	8	35
Aldrin	1.00	0.811		ug/L		81	43 - 120	8	33
alpha-BHC	1.00	0.884		ug/L		88	70 - 117	4	28
beta-BHC	1.00	0.865		ug/L		87	70 - 117	6	28

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*71*		*10 - 132*
DCB Decachlorobiphenyl (Surr)	*42*		*10 - 103*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 550-6599/1-A
Matrix: Water
Analysis Batch: 6797

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6599

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND	V1	0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
Silvex (2,4,5-TP)	ND		0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
2,4-D	ND	V1	0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
2,4-DB	ND	V1	0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
Dicamba	ND		0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
Dichlorprop	ND		0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
Dinoseb	ND		0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1
Pentachlorophenol	ND		0.50	ug/L		06/05/13 14:45	06/07/13 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*92*		*10 - 140*	*06/05/13 14:45*	*06/07/13 12:56*	*1*

Lab Sample ID: LCS 550-6599/2-A
Matrix: Water
Analysis Batch: 6797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6599

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	2.00	2.02	Q9 V1	ug/L		101	38 - 119
Silvex (2,4,5-TP)	2.00	1.92	Q9	ug/L		96	10 - 150
2,4-D	2.00	2.04	Q9 V1	ug/L		102	10 - 131
2,4-DB	2.00	1.06	Q9 V1	ug/L		53	10 - 144
Dicamba	2.00	1.74	Q9	ug/L		87	14 - 125
Dichlorprop	2.00	1.89	Q9	ug/L		94	15 - 150
Dinoseb	2.00	0.547	Q9	ug/L		27	10 - 133
Pentachlorophenol	2.00	1.92	Q9	ug/L		96	20 - 141

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*100*		*10 - 140*

Lab Sample ID: LCSD 550-6599/3-A
Matrix: Water
Analysis Batch: 6797

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6599

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	2.00	2.09	Q9 V1	ug/L		104	38 - 119	3	35
Silvex (2,4,5-TP)	2.00	1.96	Q9	ug/L		98	10 - 150	2	35
2,4-D	2.00	2.10	Q9 V1	ug/L		105	10 - 131	3	35
2,4-DB	2.00	1.15	Q9 V1	ug/L		58	10 - 144	8	35
Dicamba	2.00	1.80	Q9	ug/L		90	14 - 125	3	35
Dichlorprop	2.00	1.98	Q9	ug/L		99	15 - 150	5	35
Dinoseb	2.00	0.914	Q9 R6	ug/L		46	10 - 133	50	35
Pentachlorophenol	2.00	1.97	Q9	ug/L		98	20 - 141	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*95*		*10 - 140*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-6053/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6053

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	mg/L			05/29/13 14:40	1
Nitrite as N	ND		0.20	mg/L			05/29/13 14:40	1
Chloride	ND		2.0	mg/L			05/29/13 14:40	1
Sulfate	ND		2.0	mg/L			05/29/13 14:40	1

Lab Sample ID: LCS 550-6053/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	4.00	4.01		mg/L		100	90 - 110
Nitrite as N	4.00	4.09		mg/L		102	90 - 110
Chloride	20.0	20.2		mg/L		101	90 - 110
Sulfate	20.0	20.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 550-6053/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6053

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.00	4.04		mg/L		101	90 - 110	1	20
Nitrite as N	4.00	4.12		mg/L		103	90 - 110	1	20
Chloride	20.0	20.3		mg/L		101	90 - 110	0	20
Sulfate	20.0	20.1		mg/L		101	90 - 110	0	20

Lab Sample ID: 550-3648-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	17		4.00	20.3	E2 M3	mg/L		93	80 - 120
Nitrite as N	ND		4.00	4.07		mg/L		102	80 - 120
Chloride	390	E2 M3	20.0	390	E2 M3	mg/L		-3	80 - 120
Sulfate	250	E2 M3	20.0	264	E2 M3	mg/L		48	80 - 120

Lab Sample ID: 550-3648-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6053

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	17		4.00	20.2	E2 M3	mg/L		91	80 - 120	1	20
Nitrite as N	ND		4.00	4.09		mg/L		102	80 - 120	1	20
Chloride	390	E2 M3	20.0	390	E2 M3	mg/L		-3	80 - 120	0	20
Sulfate	250	E2 M3	20.0	263	E2 M3	mg/L		47	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 550-6488/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6488

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20		mg/L			06/04/13 18:10	1
Nitrite as N	ND		0.20		mg/L			06/04/13 18:10	1
Chloride	ND		2.0		mg/L			06/04/13 18:10	1
Sulfate	ND		2.0		mg/L			06/04/13 18:10	1

Lab Sample ID: LCS 550-6488/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6488

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			4.00	4.12		mg/L		103	90 - 110		
Nitrite as N			4.00	4.04		mg/L		101	90 - 110		
Chloride			20.0	20.2		mg/L		101	90 - 110		
Sulfate			20.0	20.2		mg/L		101	90 - 110		

Lab Sample ID: LCSD 550-6488/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6488

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			4.00	4.13		mg/L		103	90 - 110	0	20
Nitrite as N			4.00	4.05		mg/L		101	90 - 110	0	20
Chloride			20.0	20.3		mg/L		101	90 - 110	0	20
Sulfate			20.0	20.2		mg/L		101	90 - 110	0	20

Lab Sample ID: 550-3984-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6488

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	3.7	M1	4.00	8.99	M1	mg/L		131	80 - 120		
Nitrite as N	ND		4.00	3.24		mg/L		81	80 - 120		
Chloride	41		20.0	62.1		mg/L		104	80 - 120		
Sulfate	7.3		20.0	28.7		mg/L		107	80 - 120		

Lab Sample ID: 550-3984-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6488

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	3.7	M1	4.00	8.99	M1	mg/L		131	80 - 120	0	20
Nitrite as N	ND		4.00	3.28		mg/L		82	80 - 120	1	20
Chloride	41		20.0	62.1		mg/L		104	80 - 120	0	20
Sulfate	7.3		20.0	28.8		mg/L		107	80 - 120	0	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-6390/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6847 — **Prep Batch: 6390**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.10	mg/L		06/03/13 19:16	06/07/13 14:40	1
Barium	ND		0.10	mg/L		06/03/13 19:16	06/07/13 14:40	1
Cadmium	ND		0.0010	mg/L		06/03/13 19:16	06/07/13 14:40	1
Calcium	ND		2.0	mg/L		06/03/13 19:16	06/07/13 14:40	1
Chromium	ND		0.010	mg/L		06/03/13 19:16	06/07/13 14:40	1
Lead	ND		0.015	mg/L		06/03/13 19:16	06/07/13 14:40	1
Magnesium	ND		2.0	mg/L		06/03/13 19:16	06/07/13 14:40	1
Silver	ND		0.010	mg/L		06/03/13 19:16	06/07/13 14:40	1
Sodium	ND		2.0	mg/L		06/03/13 19:16	06/07/13 14:40	1

Lab Sample ID: MB 550-6390/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6964 — **Prep Batch: 6390**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.10	mg/L		06/03/13 19:16	06/09/13 14:23	1

Lab Sample ID: LCS 550-6390/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6847 — **Prep Batch: 6390**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.02		mg/L		102	85 - 115
Barium	1.00	1.02		mg/L		102	85 - 115
Cadmium	1.00	0.995		mg/L		99	85 - 115
Calcium	21.0	21.3		mg/L		101	85 - 115
Chromium	1.00	1.03		mg/L		103	85 - 115
Lead	1.00	0.992		mg/L		99	85 - 115
Magnesium	21.0	20.3		mg/L		97	85 - 115
Silver	0.0750	0.0735		mg/L		98	85 - 115
Sodium	20.0	18.8		mg/L		94	85 - 115

Lab Sample ID: LCS 550-6390/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6964 — **Prep Batch: 6390**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	1.00	1.04		mg/L		104	85 - 115

Lab Sample ID: LCSD 550-6390/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6847 — **Prep Batch: 6390**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.02		mg/L		102	85 - 115	0	20
Barium	1.00	1.02		mg/L		102	85 - 115	0	20
Cadmium	1.00	0.989		mg/L		99	85 - 115	1	20
Calcium	21.0	21.4		mg/L		102	85 - 115	1	20
Chromium	1.00	1.02		mg/L		102	85 - 115	0	20

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 550-6390/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6847 — **Prep Batch: 6390**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1.00	0.987		mg/L		99	85 - 115	1	20
Magnesium	21.0	20.5		mg/L		98	85 - 115	1	20
Silver	0.0750	0.0735		mg/L		98	85 - 115	0	20
Sodium	20.0	19.0		mg/L		95	85 - 115	1	20

Lab Sample ID: LCSD 550-6390/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6964 — **Prep Batch: 6390**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	1.00	1.03		mg/L		103	85 - 115	1	20

Lab Sample ID: 550-3689-B-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6847 — **Prep Batch: 6390**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1.00	0.993		mg/L		99	70 - 130
Barium	ND		1.00	1.06		mg/L		98	70 - 130
Cadmium	ND		1.00	0.968		mg/L		97	70 - 130
Calcium	39		21.0	56.5		mg/L		82	70 - 130
Chromium	ND		1.00	0.995		mg/L		99	70 - 130
Lead	ND		1.00	0.964		mg/L		96	70 - 130
Magnesium	8.1		21.0	27.2		mg/L		91	70 - 130
Silver	ND		0.0750	0.0713		mg/L		95	70 - 130
Sodium	41		20.0	56.0		mg/L		75	70 - 130

Lab Sample ID: 550-3689-B-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6964 — **Prep Batch: 6390**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	ND		1.00	1.02		mg/L		102	70 - 130

Lab Sample ID: 550-3689-B-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6847 — **Prep Batch: 6390**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.02		mg/L		102	70 - 130	3	20
Barium	ND		1.00	1.08		mg/L		100	70 - 130	2	20
Cadmium	ND		1.00	0.979		mg/L		98	70 - 130	1	20
Calcium	39		21.0	59.4		mg/L		96	70 - 130	5	20
Chromium	ND		1.00	1.01		mg/L		101	70 - 130	2	20
Lead	ND		1.00	0.979		mg/L		98	70 - 130	2	20
Magnesium	8.1		21.0	28.4		mg/L		97	70 - 130	4	20
Silver	ND		0.0750	0.0728		mg/L		97	70 - 130	2	20
Sodium	41		20.0	59.6		mg/L		93	70 - 130	6	20

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 550-3689-B-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6964 — **Prep Batch: 6390**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	ND		1.00	1.03		mg/L		103	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 550-6557/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6634 — **Prep Batch: 6557**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020		mg/L		06/05/13 10:17	06/05/13 14:31	1

Lab Sample ID: LCS 550-6557/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6634 — **Prep Batch: 6557**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			0.0100	0.0113		mg/L		113	85 - 115		

Lab Sample ID: LCSD 550-6557/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6634 — **Prep Batch: 6557**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			0.0100	0.0109		mg/L		109	85 - 115	3	20

Lab Sample ID: 550-3952-A-4-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6634 — **Prep Batch: 6557**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	ND		0.0100	0.0106		mg/L		106	70 - 130		

Lab Sample ID: 550-3952-A-4-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6634 — **Prep Batch: 6557**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		0.0100	0.0108		mg/L		108	70 - 130	2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-6456/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6456

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		6.0		mg/L			06/03/13 12:21	1
Bicarbonate Alkalinity as CaCO3	ND		6.0		mg/L			06/03/13 12:21	1
Carbonate Alkalinity as CaCO3	ND		6.0		mg/L			06/03/13 12:21	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 550-6456/7
Matrix: Water
Analysis Batch: 6456

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Phenolphthalein	ND		6.0		mg/L			06/03/13 12:21	1
Hydroxide Alkalinity as CaCO3	ND		6.0		mg/L			06/03/13 12:21	1

Lab Sample ID: LCS 550-6456/6
Matrix: Water
Analysis Batch: 6456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity as CaCO3			250	250		mg/L		100	90 - 110		

Lab Sample ID: LCSD 550-6456/20
Matrix: Water
Analysis Batch: 6456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3			250	251		mg/L		100	90 - 110	0	20

Lab Sample ID: 550-3677-A-1 DU
Matrix: Water
Analysis Batch: 6456

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	340			340		mg/L				1	20
Bicarbonate Alkalinity as CaCO3	340			340		mg/L				1	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20
Alkalinity, Phenolphthalein	ND			ND		mg/L				NC	20
Hydroxide Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 550-6458/1-A
Matrix: Water
Analysis Batch: 6983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6458

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.050		mg/L		06/04/13 12:45	06/06/13 13:50	1

Lab Sample ID: LCS 550-6458/2-A
Matrix: Water
Analysis Batch: 6983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6458

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.100	0.102		mg/L		102	90 - 110		

Method: SM 4500 CN E - Cyanide, Total (Continued)

Lab Sample ID: LCSD 550-6458/19-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6983 — **Prep Batch: 6458**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total			0.100	0.102		mg/L		102	90 - 110	0	20

Lab Sample ID: 550-3742-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6983 — **Prep Batch: 6458**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total	ND		0.100	0.134		mg/L		105	80 - 120		

Lab Sample ID: 550-3742-A-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 6983 — **Prep Batch: 6458**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND		0.100	0.121		mg/L		93	80 - 120	10	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

GC/MS VOA

Analysis Batch: 6534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	8260B	
550-3662-2	Trip Blank	Total/NA	Water	8260B	
550-3882-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-3882-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 550-6534/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-6534/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-6534/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 6050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	3510C	
LCS 550-6050/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-6050/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-6050/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 6295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	8270C	6050
LCS 550-6050/2-A	Lab Control Sample	Total/NA	Water	8270C	6050
LCSD 550-6050/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	6050
MB 550-6050/1-A	Method Blank	Total/NA	Water	8270C	6050

GC Semi VOA

Prep Batch: 6370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	3510C	
LCS 550-6370/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-6370/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-6370/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 6599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	8151A	
LCS 550-6599/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 550-6599/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
MB 550-6599/1-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 6797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	8151A	6599
LCS 550-6599/2-A	Lab Control Sample	Total/NA	Water	8151A	6599
LCSD 550-6599/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	6599
MB 550-6599/1-A	Method Blank	Total/NA	Water	8151A	6599

Analysis Batch: 6944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	8081A	6370

GC Semi VOA (Continued)

Analysis Batch: 6944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-6370/2-A	Lab Control Sample	Total/NA	Water	8081A	6370
LCSD 550-6370/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	6370
MB 550-6370/1-A	Method Blank	Total/NA	Water	8081A	6370

HPLC/IC

Analysis Batch: 6053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3648-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-3648-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
550-3662-1	MW-3R	Total/NA	Water	300.0	
LCS 550-6053/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-6053/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-6053/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 6488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	300.0	
550-3984-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
550-3984-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-6488/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-6488/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-6488/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 6390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	200.7	
550-3689-B-1-A MS	Matrix Spike	Total/NA	Water	200.7	
550-3689-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	
LCS 550-6390/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-6390/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
MB 550-6390/1-A	Method Blank	Total/NA	Water	200.7	

Prep Batch: 6557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	245.1	
550-3952-A-4-B MS	Matrix Spike	Total/NA	Water	245.1	
550-3952-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	
LCS 550-6557/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 550-6557/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
MB 550-6557/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 6634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	245.1	6557
550-3952-A-4-B MS	Matrix Spike	Total/NA	Water	245.1	6557
550-3952-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	6557
LCS 550-6557/2-A	Lab Control Sample	Total/NA	Water	245.1	6557

Metals (Continued)

Analysis Batch: 6634 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 550-6557/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	6557
MB 550-6557/1-A	Method Blank	Total/NA	Water	245.1	6557

Analysis Batch: 6847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	200.7 Rev 4.4	6390
550-3689-B-1-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	6390
550-3689-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	6390
LCS 550-6390/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	6390
LCSD 550-6390/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	6390
MB 550-6390/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	6390

Analysis Batch: 6964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	200.7 Rev 4.4	6390
550-3689-B-1-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	6390
550-3689-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	6390
LCS 550-6390/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	6390
LCSD 550-6390/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	6390
MB 550-6390/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	6390

General Chemistry

Analysis Batch: 6456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	SM 2320B	
550-3677-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 550-6456/6	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-6456/20	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-6456/7	Method Blank	Total/NA	Water	SM 2320B	

Prep Batch: 6458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	SM 4500 CN C	
550-3742-A-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN C	
550-3742-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN C	
LCS 550-6458/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN C	
LCSD 550-6458/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN C	
MB 550-6458/1-A	Method Blank	Total/NA	Water	SM 4500 CN C	

Analysis Batch: 6983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-3662-1	MW-3R	Total/NA	Water	SM 4500 CN E	6458
550-3742-A-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 CN E	6458
550-3742-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 CN E	6458
LCS 550-6458/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	6458
LCSD 550-6458/19-A	Lab Control Sample Dup	Total/NA	Water	SM 4500 CN E	6458
MB 550-6458/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	6458

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Client Sample ID: MW-3R

Lab Sample ID: 550-3662-1

Date Collected: 05/28/13 08:00

Matrix: Water

Date Received: 05/29/13 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6534	06/05/13 11:09	BB	TAL PHX
Total/NA	Prep	3510C			6050	05/30/13 10:07	RLB	TAL PHX
Total/NA	Analysis	8270C		1	6295	06/03/13 22:18	CL	TAL PHX
Total/NA	Prep	8151A			6599	06/05/13 14:45	KA	TAL PHX
Total/NA	Analysis	8151A		1	6797	06/07/13 13:59	CL	TAL PHX
Total/NA	Prep	3510C			6370	06/03/13 17:00	KA	TAL PHX
Total/NA	Analysis	8081A		1	6944	06/10/13 19:47	AT	TAL PHX
Total/NA	Analysis	300.0		1	6053	05/29/13 18:40	LS	TAL PHX
Total/NA	Analysis	300.0		10	6488	06/04/13 23:59	KLH	TAL PHX
Total/NA	Prep	245.1			6557	06/05/13 10:17	AJC	TAL PHX
Total/NA	Analysis	245.1		1	6634	06/05/13 14:56	AJC	TAL PHX
Total/NA	Prep	200.7			6390	06/03/13 19:16	GO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		20	6847	06/07/13 15:01	CT	TAL PHX
Total/NA	Prep	200.7			6390	06/03/13 19:16	GO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		20	6964	06/09/13 14:42	CT	TAL PHX
Total/NA	Analysis	SM 2320B		1	6456	06/03/13 15:51	DS	TAL PHX
Total/NA	Prep	SM 4500 CN C			6458	06/04/13 12:45	TS	TAL PHX
Total/NA	Analysis	SM 4500 CN E		1	6983	06/06/13 13:50	TS	TAL PHX

Client Sample ID: Trip Blank

Lab Sample ID: 550-3662-2

Date Collected: 05/28/13 08:00

Matrix: Water

Date Received: 05/29/13 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6534	06/05/13 09:34	BB	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Laboratory: TestAmerica Phoenix

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA	IHLAP		154268	07-01-13
Arizona	State Program	9	AZ0728	06-09-14
California	NELAP	9	01109CA	11-30-13
Nevada	State Program	9	AZ01030	07-31-13
New York	NELAP	2	11898	04-01-14
Oregon	NELAP	10	AZ100001	03-09-14
USDA	Federal		P330-09-00024	06-09-15

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: 68137008

TestAmerica Job ID: 550-3662-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PHX
8081A	Organochlorine Pesticides (GC)	SW846	TAL PHX
8151A	Herbicides (GC)	SW846	TAL PHX
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
200.7 Rev 4.4	Metals (ICP)	40CFR136A	TAL PHX
245.1	Mercury (CVAA)	EPA	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 CN E	Cyanide, Total	SM	TAL PHX

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater ", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

550-3662

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[X] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FA
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 8
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

550-3662 Chain of Custody

Page 1 of 1

6/12/2013

Client Name/Address: Terracon, 1640 Hickory Loop Suite 105, Las Cruces, NM 88005

Project/PO Number: 68137008

Project Manager: Kyle Williams

Phone Number: 575.527.1706

Sampler: 1

Fax Number: 527.1092

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260	8270	Metals	NO2 NO3	Cn	8081	8151			Special Instructions
MW-3R	water	Various	13	5-28-13	0800	Various	X	X	X	X	X	X	X			-01
																-02

Relinquished By: [signature] Date/Time: 5-28-13 / Received By: Date/Time:

Relinquished By: Date/Time: Received By: Date/Time:

Relinquished By: FEDEX Date/Time: 5/29/13 0935 Received in Lab By: Date/Time: 5/29/13 0935

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

3.0°C

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 550-3662-1

Login Number: 3662

List Source: TestAmerica Phoenix

List Number: 1

Creator: Gravlin, Andrea

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Pace Analytical Services, Inc.
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

July 08, 2013

Kyle Williams
Terracon
1640 Hickory Loop Suite 105
Las Cruces, NM 88005

RE: Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

Dear Kyle Williams:
Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Shelly Connelly

Shelly Connelly

shelly.connelly@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project:	68137008/Former TorC Landfill
Pace Project No.:	756352

Dallas Certification IDs

400 West Bethany Dr Suite 190 75013 Allen TX 75013
Texas Certification #: T104704232-12-4
Kansas Certification #: E-10388
Arkansas Certification #: 88-0647
Oklahoma Certification #: 2012-080
Louisiana Certification #: 02007

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SAMPLE SUMMARY

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

Lab ID	Sample ID	Matrix	Date Collected	Date Received
756352001	**MW-8**	Water	06/25/13 09:50	06/26/13 08:55

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SAMPLE ANALYTE COUNT

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

Lab ID	Sample ID	Method	Analysts	Analytes Reported
756352001	**MW-8**	EPA 8270	XLY	74

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

Sample: MW-8 **Lab ID: 756352001** Collected: 06/25/13 09:50 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Acenaphthene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	83-32-9	
Acenaphthylene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	208-96-8	
Anthracene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	120-12-7	
Benzo(a)anthracene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	56-55-3	
Benzo(a)pyrene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	50-32-8	
Benzo(b)fluoranthene	ND	mg/L	0.010	0.0048	2	06/28/13 09:25	07/01/13 15:51	205-99-2	
Benzo(g,h,i)perylene	ND	mg/L	0.010	0.0047	2	06/28/13 09:25	07/01/13 15:51	191-24-2	
Benzo(k)fluoranthene	ND	mg/L	0.010	0.0050	2	06/28/13 09:25	07/01/13 15:51	207-08-9	
Benzoic acid	ND	mg/L	0.040	0.020	2	06/28/13 09:25	07/01/13 15:51	65-85-0	
Benzyl alcohol	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	100-51-6	
4-Bromophenylphenyl ether	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	101-55-3	
Butylbenzylphthalate	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	85-68-7	
Carbazole	ND	mg/L	0.0060	0.0045	2	06/28/13 09:25	07/01/13 15:51	86-74-8	
4-Chloro-3-methylphenol	ND	mg/L	0.0060	0.0045	2	06/28/13 09:25	07/01/13 15:51	59-50-7	
4-Chloroaniline	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	106-47-8	
bis(2-Chloroethoxy)methane	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	111-91-1	
bis(2-Chloroethyl) ether	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	111-44-4	
bis(2-Chloroisopropyl) ether	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	108-60-1	
2-Chloronaphthalene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	91-58-7	
2-Chlorophenol	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	95-57-8	
4-Chlorophenylphenyl ether	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	7005-72-3	
Chrysene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	218-01-9	
Dibenz(a,h)anthracene	ND	mg/L	0.0060	0.0045	2	06/28/13 09:25	07/01/13 15:51	53-70-3	
Dibenzofuran	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	132-64-9	
1,2-Dichlorobenzene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	95-50-1	
1,3-Dichlorobenzene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	541-73-1	
1,4-Dichlorobenzene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	106-46-7	
3,3'-Dichlorobenzidine	ND	mg/L	0.0060	0.0044	2	06/28/13 09:25	07/01/13 15:51	91-94-1	
2,4-Dichlorophenol	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	120-83-2	
Diethylphthalate	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	84-66-2	
7,12-Dimethylbenz(a)anthracene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	57-97-6	
2,4-Dimethylphenol	ND	mg/L	0.010	0.0051	2	06/28/13 09:25	07/01/13 15:51	105-67-9	
Dimethylphthalate	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	131-11-3	
Di-n-butylphthalate	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	84-74-2	
4,6-Dinitro-2-methylphenol	ND	mg/L	0.0060	0.0050	2	06/28/13 09:25	07/01/13 15:51	534-52-1	
2,4-Dinitrophenol	ND	mg/L	0.0060	0.0054	2	06/28/13 09:25	07/01/13 15:51	51-28-5	
2,4-Dinitrotoluene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	121-14-2	
2,6-Dinitrotoluene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	606-20-2	
Di-n-octylphthalate	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	117-81-7	
Fluoranthene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	206-44-0	
Fluorene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	86-73-7	
Hexachloro-1,3-butadiene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	87-68-3	
Hexachlorobenzene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	118-74-1	
Hexachlorocyclopentadiene	ND	mg/L	0.0060	0.0045	2	06/28/13 09:25	07/01/13 15:51	77-47-4	
Hexachloroethane	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	67-72-1	

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

Sample: MW-8 **Lab ID: 756352001** Collected: 06/25/13 09:50 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Indeno(1,2,3-cd)pyrene	ND	mg/L	0.0060	0.0049	2	06/28/13 09:25	07/01/13 15:51	193-39-5	
Isophorone	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	78-59-1	
2-Methylnaphthalene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	91-57-6	
2-Methylphenol(o-Cresol)	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	95-48-7	
Naphthalene	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	91-20-3	
2-Nitroaniline	ND	mg/L	0.0060	0.0041	2	06/28/13 09:25	07/01/13 15:51	88-74-4	
3-Nitroaniline	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	99-09-2	
4-Nitroaniline	ND	mg/L	0.0060	0.0049	2	06/28/13 09:25	07/01/13 15:51	100-01-6	
Nitrobenzene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	98-95-3	
2-Nitrophenol	ND	mg/L	0.0060	0.0059	2	06/28/13 09:25	07/01/13 15:51	88-75-5	
4-Nitrophenol	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	100-02-7	
N-Nitrosodimethylamine	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	62-75-9	
N-Nitroso-di-n-propylamine	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	621-64-7	
N-Nitrosodiphenylamine	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	86-30-6	
Pentachlorophenol	ND	mg/L	0.010	0.0047	2	06/28/13 09:25	07/01/13 15:51	87-86-5	
Phenanthrene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	85-01-8	
Phenol	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	108-95-2	
Pyrene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	129-00-0	
Pyridine	ND	mg/L	0.0060	0.0040	2	06/28/13 09:25	07/01/13 15:51	110-86-1	
1,2,4-Trichlorobenzene	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	120-82-1	
2,4,5-Trichlorophenol	ND	mg/L	0.0060	0.0042	2	06/28/13 09:25	07/01/13 15:51	95-95-4	
2,4,6-Trichlorophenol	ND	mg/L	0.010	0.0040	2	06/28/13 09:25	07/01/13 15:51	88-06-2	
Surrogates									
2-Fluorobiphenyl (S)	67	%.	10-140		2	06/28/13 09:25	07/01/13 15:51	321-60-8	
p-Terphenyl-d14 (S)	103	%.	10-140		2	06/28/13 09:25	07/01/13 15:51	1718-51-0	
2,4,6-Tribromophenol (S)	53	%.	10-140		2	06/28/13 09:25	07/01/13 15:51	118-79-6	
2-Fluorophenol (S)	33	%.	10-140		2	06/28/13 09:25	07/01/13 15:51	367-12-4	
Phenol-d6 (S)	26	%.	10-140		2	06/28/13 09:25	07/01/13 15:51	13127-88-3	
Nitrobenzene-d5 (S)	78	%.	10-140		2	06/28/13 09:25	07/01/13 15:51	4165-60-0	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

QC Batch: OEXT/2107 | Analysis Method: EPA 8270
QC Batch Method: EPA 3510 | Analysis Description: 8270 Water MSSV
Associated Lab Samples: 756352001

METHOD BLANK: 29154 | Matrix: Water
Associated Lab Samples: 756352001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	mg/L	ND	0.010	07/01/13 14:24	
1,2-Dichlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
1,3-Dichlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
1,4-Dichlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
2,4,5-Trichlorophenol	mg/L	ND	0.0060	07/01/13 14:24	
2,4,6-Trichlorophenol	mg/L	ND	0.010	07/01/13 14:24	
2,4-Dichlorophenol	mg/L	ND	0.0060	07/01/13 14:24	
2,4-Dimethylphenol	mg/L	ND	0.010	07/01/13 14:24	
2,4-Dinitrophenol	mg/L	ND	0.0060	07/01/13 14:24	
2,4-Dinitrotoluene	mg/L	ND	0.0060	07/01/13 14:24	
2,6-Dinitrotoluene	mg/L	ND	0.0060	07/01/13 14:24	
2-Chloronaphthalene	mg/L	ND	0.0060	07/01/13 14:24	
2-Chlorophenol	mg/L	ND	0.0060	07/01/13 14:24	
2-Methylnaphthalene	mg/L	ND	0.0060	07/01/13 14:24	
2-Methylphenol(o-Cresol)	mg/L	ND	0.0060	07/01/13 14:24	
2-Nitroaniline	mg/L	ND	0.0060	07/01/13 14:24	
2-Nitrophenol	mg/L	ND	0.0060	07/01/13 14:24	
3,3'-Dichlorobenzidine	mg/L	ND	0.0060	07/01/13 14:24	
3-Nitroaniline	mg/L	ND	0.0060	07/01/13 14:24	
4,6-Dinitro-2-methylphenol	mg/L	ND	0.0060	07/01/13 14:24	
4-Bromophenylphenyl ether	mg/L	ND	0.0060	07/01/13 14:24	
4-Chloro-3-methylphenol	mg/L	ND	0.0060	07/01/13 14:24	
4-Chloroaniline	mg/L	ND	0.0060	07/01/13 14:24	
4-Chlorophenylphenyl ether	mg/L	ND	0.0060	07/01/13 14:24	
4-Nitroaniline	mg/L	ND	0.0060	07/01/13 14:24	
4-Nitrophenol	mg/L	ND	0.010	07/01/13 14:24	
7,12-Dimethylbenz(a)anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Acenaphthene	mg/L	ND	0.010	07/01/13 14:24	
Acenaphthylene	mg/L	ND	0.0060	07/01/13 14:24	
Anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Benzo(a)anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Benzo(a)pyrene	mg/L	ND	0.0060	07/01/13 14:24	
Benzo(b)fluoranthene	mg/L	ND	0.010	07/01/13 14:24	
Benzo(g,h,i)perylene	mg/L	ND	0.010	07/01/13 14:24	
Benzo(k)fluoranthene	mg/L	ND	0.010	07/01/13 14:24	
Benzoic acid	mg/L	ND	0.040	07/01/13 14:24	
Benzyl alcohol	mg/L	ND	0.010	07/01/13 14:24	
bis(2-Chloroethoxy)methane	mg/L	ND	0.010	07/01/13 14:24	
bis(2-Chloroethyl) ether	mg/L	ND	0.0060	07/01/13 14:24	
bis(2-Chloroisopropyl) ether	mg/L	ND	0.0060	07/01/13 14:24	
bis(2-Ethylhexyl)phthalate	mg/L	ND	0.0060	07/01/13 14:24	
Butylbenzylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Carbazole	mg/L	ND	0.0060	07/01/13 14:24	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

METHOD BLANK: 29154 Matrix: Water

Associated Lab Samples: 756352001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chrysene	mg/L	ND	0.0060	07/01/13 14:24	
Di-n-butylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Di-n-octylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Dibenz(a,h)anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Dibenzofuran	mg/L	ND	0.0060	07/01/13 14:24	
Diethylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Dimethylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Fluoranthene	mg/L	ND	0.010	07/01/13 14:24	
Fluorene	mg/L	ND	0.0060	07/01/13 14:24	
Hexachloro-1,3-butadiene	mg/L	ND	0.010	07/01/13 14:24	
Hexachlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
Hexachlorocyclopentadiene	mg/L	ND	0.0060	07/01/13 14:24	
Hexachloroethane	mg/L	ND	0.0060	07/01/13 14:24	
Indeno(1,2,3-cd)pyrene	mg/L	ND	0.0060	07/01/13 14:24	
Isophorone	mg/L	ND	0.010	07/01/13 14:24	
N-Nitroso-di-n-propylamine	mg/L	ND	0.010	07/01/13 14:24	
N-Nitrosodimethylamine	mg/L	ND	0.0060	07/01/13 14:24	
N-Nitrosodiphenylamine	mg/L	ND	0.0060	07/01/13 14:24	
Naphthalene	mg/L	ND	0.0060	07/01/13 14:24	
Nitrobenzene	mg/L	ND	0.010	07/01/13 14:24	
Pentachlorophenol	mg/L	ND	0.010	07/01/13 14:24	
Phenanthrene	mg/L	ND	0.010	07/01/13 14:24	
Phenol	mg/L	ND	0.0060	07/01/13 14:24	
Pyrene	mg/L	ND	0.010	07/01/13 14:24	
Pyridine	mg/L	ND	0.0060	07/01/13 14:24	
2,4,6-Tribromophenol (S)	%.	42	10-140	07/01/13 14:24	
2-Fluorobiphenyl (S)	%.	54	10-140	07/01/13 14:24	
2-Fluorophenol (S)	%.	30	10-140	07/01/13 14:24	
Nitrobenzene-d5 (S)	%.	57	10-140	07/01/13 14:24	
p-Terphenyl-d14 (S)	%.	86	10-140	07/01/13 14:24	
Phenol-d6 (S)	%.	25	10-140	07/01/13 14:24	

LABORATORY CONTROL SAMPLE: 29155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	mg/L	.1	0.073	73	40-140	
1,2-Dichlorobenzene	mg/L	.1	0.061	61	10-140	
1,3-Dichlorobenzene	mg/L	.1	0.060	60	10-140	
1,4-Dichlorobenzene	mg/L	.1	0.059	59	10-140	
2,4,5-Trichlorophenol	mg/L	.1	0.079	79	40-140	
2,4,6-Trichlorophenol	mg/L	.1	0.073	73	40-140	
2,4-Dichlorophenol	mg/L	.1	0.083	83	40-140	
2,4-Dimethylphenol	mg/L	.1	0.065	65	40-140	
2,4-Dinitrophenol	mg/L	.1	0.079	79	10-140	
2,4-Dinitrotoluene	mg/L	.1	0.078	78	40-140	

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400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

LABORATORY CONTROL SAMPLE: 29155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,6-Dinitrotoluene	mg/L	.1	0.069	69	40-140	
2-Chloronaphthalene	mg/L	.1	0.072	72	40-140	
2-Chlorophenol	mg/L	.1	0.064	64	10-140	
2-Methylnaphthalene	mg/L	.1	0.074	74	40-140	
2-Methylphenol(o-Cresol)	mg/L	.1	0.058	58	10-140	
2-Nitroaniline	mg/L	.1	0.077	77	40-140	
2-Nitrophenol	mg/L	.1	0.070	70	40-140	
3,3'-Dichlorobenzidine	mg/L	.1	0.067	67	10-140	
3-Nitroaniline	mg/L	.1	0.063	63	40-140	
4,6-Dinitro-2-methylphenol	mg/L	.1	0.076	76	40-140	
4-Bromophenylphenyl ether	mg/L	.1	0.069	69	40-140	
4-Chloro-3-methylphenol	mg/L	.1	0.066	66	40-140	
4-Chloroaniline	mg/L	.1	0.060	60	40-140	
4-Chlorophenylphenyl ether	mg/L	.1	0.069	69	40-140	
4-Nitroaniline	mg/L	.1	0.069	69	40-140	
4-Nitrophenol	mg/L	.1	0.037	37	10-140	
7,12-Dimethylbenz(a)anthracene	mg/L	.1	0.071	71	40-140	
Acenaphthene	mg/L	.1	0.072	72	40-140	
Acenaphthylene	mg/L	.1	0.067	67	40-140	
Anthracene	mg/L	.1	0.077	77	40-140	
Benzo(a)anthracene	mg/L	.1	0.082	82	40-140	
Benzo(a)pyrene	mg/L	.1	0.080	80	40-140	
Benzo(b)fluoranthene	mg/L	.1	0.071	71	40-140	
Benzo(g,h,i)perylene	mg/L	.1	0.078	78	40-140	
Benzo(k)fluoranthene	mg/L	.1	0.086	86	40-140	
Benzoic acid	mg/L	.1	0.074	74	10-140	
Benzyl alcohol	mg/L	.1	0.044	44	10-140	
bis(2-Chloroethoxy)methane	mg/L	.1	0.073	73	40-140	
bis(2-Chloroethyl) ether	mg/L	.1	0.063	63	40-140	
bis(2-Chloroisopropyl) ether	mg/L	.1	0.058	58	10-140	
bis(2-Ethylhexyl)phthalate	mg/L	.1	0.069	69	40-140	
Butylbenzylphthalate	mg/L	.1	0.077	77	40-140	
Carbazole	mg/L	.1	0.071	71	40-140	
Chrysene	mg/L	.1	0.086	86	40-140	
Di-n-butylphthalate	mg/L	.1	0.076	76	40-140	
Di-n-octylphthalate	mg/L	.1	0.070	70	40-140	
Dibenz(a,h)anthracene	mg/L	.1	0.075	75	40-140	
Dibenzofuran	mg/L	.1	0.078	78	40-140	
Diethylphthalate	mg/L	.1	0.078	78	40-140	
Dimethylphthalate	mg/L	.1	0.080	80	40-140	
Fluoranthene	mg/L	.1	0.077	77	40-140	
Fluorene	mg/L	.1	0.067	67	40-140	
Hexachloro-1,3-butadiene	mg/L	.1	0.071	71	40-140	
Hexachlorobenzene	mg/L	.1	0.082	82	40-140	
Hexachlorocyclopentadiene	mg/L	.1	0.068	68	10-140	
Hexachloroethane	mg/L	.1	0.055	55	40-140	
Indeno(1,2,3-cd)pyrene	mg/L	.1	0.075	75	40-140	
Isophorone	mg/L	.1	0.073	73	40-140	

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(972)727-1123

QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

LABORATORY CONTROL SAMPLE: 29155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
N-Nitroso-di-n-propylamine	mg/L	.1	0.064	64	40-140	
N-Nitrosodimethylamine	mg/L	.1	0.036	36	10-140	
N-Nitrosodiphenylamine	mg/L	.1	0.091	91	40-140	
Naphthalene	mg/L	.1	0.069	69	40-140	
Nitrobenzene	mg/L	.1	0.068	68	40-140	
Pentachlorophenol	mg/L	.1	0.065	65	10-140	
Phenanthrene	mg/L	.1	0.073	73	40-140	
Phenol	mg/L	.1	0.029	29	10-140	
Pyrene	mg/L	.1	0.075	75	40-140	
Pyridine	mg/L	.1	0.025	25	10-140	
2,4,6-Tribromophenol (S)	%.			64	10-140	
2-Fluorobiphenyl (S)	%.			79	10-140	
2-Fluorophenol (S)	%.			38	10-140	
Nitrobenzene-d5 (S)	%.			78	10-140	
p-Terphenyl-d14 (S)	%.			97	10-140	
Phenol-d6 (S)	%.			31	10-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29470 29471

Parameter	Units	756366001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	mg/L	ND	.1	.1	0.094	0.077	94	77	40-140	20	40	
1,2-Dichlorobenzene	mg/L	ND	.1	.1	0.076	0.061	76	61	10-140	22	40	
1,3-Dichlorobenzene	mg/L	ND	.1	.1	0.072	0.058	72	58	10-140	21	40	
1,4-Dichlorobenzene	mg/L	ND	.1	.1	0.071	0.057	71	57	10-140	23	40	
2,4,5-Trichlorophenol	mg/L	ND	.1	.1	0.10	0.086	104	86	40-140	18	40	
2,4,6-Trichlorophenol	mg/L	ND	.1	.1	0.098	0.082	98	82	40-140	17	40	
2,4-Dichlorophenol	mg/L	ND	.1	.1	0.099	0.085	99	85	40-140	15	40	
2,4-Dimethylphenol	mg/L	ND	.1	.1	0.077	0.065	77	65	40-140	17	40	
2,4-Dinitrophenol	mg/L	ND	.1	.1	0.11	0.083	109	83	10-140	27	40	
2,4-Dinitrotoluene	mg/L	ND	.1	.1	0.10	0.088	102	88	40-140	15	40	
2,6-Dinitrotoluene	mg/L	ND	.1	.1	0.096	0.078	96	78	40-140	21	40	
2-Chloronaphthalene	mg/L	ND	.1	.1	0.10	0.084	102	84	40-140	20	40	
2-Chlorophenol	mg/L	ND	.1	.1	ND	ND	0	0	10-140		40	M1
2-Methylnaphthalene	mg/L	ND	.1	.1	0.098	0.082	98	82	40-140	18	40	
2-Methylphenol(o-Cresol)	mg/L	ND	.1	.1	0.056	0.050	56	50	10-140	10	40	
2-Nitroaniline	mg/L	ND	.1	.1	0.089	0.077	89	77	40-140	15	40	
2-Nitrophenol	mg/L	ND	.1	.1	0.088	0.073	88	73	40-140	18	40	
3,3'-Dichlorobenzidine	mg/L	ND	.1	.1	0.063	0.049	63	49	10-140	25	40	
3-Nitroaniline	mg/L	ND	.1	.1	0.060	0.053	60	53	40-140	12	40	
4,6-Dinitro-2-methylphenol	mg/L	ND	.1	.1	0.10	0.082	105	82	40-140	24	40	
4-Bromophenylphenyl ether	mg/L	ND	.1	.1	0.095	0.081	95	81	40-140	17	40	
4-Chloro-3-methylphenol	mg/L	ND	.1	.1	0.087	0.069	87	69	40-140	23	40	
4-Chloroaniline	mg/L	ND	.1	.1	0.059	0.052	59	52	10-140	12	40	
4-Chlorophenylphenyl ether	mg/L	ND	.1	.1	0.094	0.078	94	78	40-140	18	40	
4-Nitroaniline	mg/L	ND	.1	.1	0.057	0.050	57	50	40-140	13	40	
4-Nitrophenol	mg/L	ND	.1	.1	0.036	0.034	36	34	10-140	7	40	

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(972)727-1123

QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29470 29471

Parameter	Units	756366001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
7,12-Dimethylbenz(a)anthracene	mg/L	ND	.1	.1	0.098	0.078	98	78	40-140	22	40	
Acenaphthene	mg/L	ND	.1	.1	0.099	0.082	99	82	40-140	19	40	
Acenaphthylene	mg/L	ND	.1	.1	0.091	0.077	91	77	40-140	17	40	
Anthracene	mg/L	ND	.1	.1	0.11	0.090	109	90	40-140	19	40	
Benzo(a)anthracene	mg/L	ND	.1	.1	0.11	0.093	108	93	40-140	15	40	
Benzo(a)pyrene	mg/L	ND	.1	.1	0.11	0.091	111	91	40-140	19	40	
Benzo(b)fluoranthene	mg/L	ND	.1	.1	0.11	0.085	107	85	40-140	23	40	
Benzo(g,h,i)perylene	mg/L	ND	.1	.1	0.11	0.084	108	84	40-140	25	40	
Benzo(k)fluoranthene	mg/L	ND	.1	.1	0.11	0.096	111	96	40-140	15	40	
Benzoic acid	mg/L	ND	.1	.1	0.067	0.067	67	67	10-140	1	40	
Benzyl alcohol	mg/L	ND	.1	.1	0.058	0.053	58	53	10-140	8	40	
bis(2-Chloroethoxy)methane	mg/L	ND	.1	.1	0.091	0.078	91	78	40-140	15	40	
bis(2-Chloroethyl) ether	mg/L	ND	.1	.1	0.082	0.065	82	65	40-140	23	40	
bis(2-Chloroisopropyl) ether	mg/L	ND	.1	.1	0.065	0.054	65	54	40-140	18	40	
bis(2-Ethylhexyl)phthalate	mg/L	ND	.1	.1	0.10	0.082	98	80	40-140	20	40	
Butylbenzylphthalate	mg/L	ND	.1	.1	0.10	0.090	100	90	40-140	10	40	
Carbazole	mg/L	ND	.1	.1	0.095	0.076	95	76	40-140	22	40	
Chrysene	mg/L	ND	.1	.1	0.11	0.096	107	96	40-140	12	40	
Di-n-butylphthalate	mg/L	ND	.1	.1	0.11	0.088	110	88	40-140	23	40	
Di-n-octylphthalate	mg/L	ND	.1	.1	0.10	0.082	100	82	40-140	20	40	
Dibenz(a,h)anthracene	mg/L	ND	.1	.1	0.10	0.081	104	81	40-140	24	40	
Dibenzofuran	mg/L	ND	.1	.1	0.11	0.088	105	88	40-140	18	40	
Diethylphthalate	mg/L	ND	.1	.1	0.11	0.090	109	90	40-140	19	40	
Dimethylphthalate	mg/L	ND	.1	.1	0.11	0.094	109	94	40-140	15	40	
Fluoranthene	mg/L	ND	.1	.1	0.11	0.086	110	86	40-140	25	40	
Fluorene	mg/L	ND	.1	.1	0.090	0.076	90	76	40-140	16	40	
Hexachloro-1,3-butadiene	mg/L	ND	.1	.1	0.093	0.077	93	77	40-140	20	40	
Hexachlorobenzene	mg/L	ND	.1	.1	0.11	0.091	106	91	40-140	15	40	
Hexachlorocyclopentadiene	mg/L	ND	.1	.1	0.091	0.073	91	73	10-140	21	40	
Hexachloroethane	mg/L	ND	.1	.1	0.065	0.048	65	48	40-140	31	40	
Indeno(1,2,3-cd)pyrene	mg/L	ND	.1	.1	0.10	0.081	104	81	40-140	25	40	
Isophorone	mg/L	ND	.1	.1	0.091	0.077	91	77	40-140	16	40	
N-Nitroso-di-n-propylamine	mg/L	ND	.1	.1	0.069	0.060	69	60	40-140	14	40	
N-Nitrosodimethylamine	mg/L	ND	.1	.1	0.036	0.031	36	31	10-140	14	40	
N-Nitrosodiphenylamine	mg/L	ND	.1	.1	0.14	0.11	139	112	10-140	22	40	
Naphthalene	mg/L	ND	.1	.1	0.098	0.079	98	79	40-140	21	40	
Nitrobenzene	mg/L	ND	.1	.1	0.082	0.071	82	71	40-140	14	40	
Pentachlorophenol	mg/L	ND	.1	.1	0.089	0.068	89	68	10-140	26	40	
Phenanthrene	mg/L	ND	.1	.1	0.10	0.085	103	85	40-140	19	40	
Phenol	mg/L	ND	.1	.1	0.0059J	0.0047J	6	5	10-140		40	M1
Pyrene	mg/L	ND	.1	.1	0.11	0.084	106	84	40-140	23	40	
Pyridine	mg/L	ND	.1	.1	0.023	0.020	23	20	10-140	12	40	
2,4,6-Tribromophenol (S)	%.						80	65	10-140		40	
2-Fluorobiphenyl (S)	%.						90	76	10-140		40	
2-Fluorophenol (S)	%.						0	1	10-140		40	S0
Nitrobenzene-d5 (S)	%.						86	72	10-140		40	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29470 29471

Parameter	Units	756366001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
p-Terphenyl-d14 (S)	%.						116	103	10-140		40	
Phenol-d6 (S)	%.						9	8	10-140		40	S0

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QUALIFIERS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 68137008/Former TorC Landfill
Pace Project No.: 756352

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
756352001	**MW-8**	EPA 3510	OEXT/2107	EPA 8270	MSSV/1253

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

1658936

Section A Required Client Information:

Company: Terracon
Address: 1640 Hickory Loop Ste 103
Las Cruces, NM 88005
Email To: kwilliams@terracon.com
Phone: 575.527.1700 Fax: 575.527.1092
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Kyle Williams
Copy To:
Purchase Order No.: ~~68137008~~ KW
Project Name: Former Tor & Land Grill
Project Number: 68137008

Section C Invoice Information:

Attention: Debbie Daniels
Company Name: Terracon
Address: Las Cruces
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER NMED

Site Location STATE: NM

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N): N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): 8260	8270	8081	8151	Metals	Ions	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW 2R~~	~~WT~~						~~75~~	~~12~~			~~X~~	~~X~~												
2																									
3	MW-8	WT	G	6-25-13	0950			75	2	X									X						001
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

WO#: 756352
756352

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] Terracon	6-25-13	14:00	Kathy Williams / Pace	6/26/13	8:55 AM	2.4°	Y	Y	Y

SAMPLER NAME AND SIGNATURE: Kyle Williams
PRINT Name of SAMPLER: Kyle Williams
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 6-25-13

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Sample Condition Upon Receipt

Pace Analytical

Client Name: Terracon Las Cruces, NM Pace #: 756352

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Courier [ ] LSO [ ] Pace Other _____

Tracking #: 8017 7812 4038

Custody Seal on Cooler/Box Present: [X] yes [ ] no Seals intact: [X] yes [ ] no [ ] N/A

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [ ] Other _____

Thermometer Used (IR-01) IR-02 **Type of Ice:** (Wet) Blue None [X] Samples on ice, cooling process has begun

Cooler Temperature 2.4°C **Ice Visible in Sample Containers:** [X] yes [ ] no

(Corrected, if applicable)

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: 6/26/13

Sample Receiving		
Chain of Custody Present:	[X] Yes [ ] No [ ] N/A	1.
Chain of Custody Filled Out:	[X] Yes [ ] No [ ] N/A	2.
Chain of Custody Relinquished:	[X] Yes [ ] No [ ] N/A	3.
Sampler Name & Signature on COC:	[X] Yes [ ] No [ ] N/A	4.
Short Hold Time Analysis (<72hr):	[ ] Yes [X] No [ ] N/A	5.
Rush Turn Around Time Requested:	[ ] Yes [X] No [ ] N/A	6.
Containers Intact:	[X] Yes [ ] No [ ] N/A	7.
Sample Labels match COC: -Includes date/time/ID/Analysis	[X] Yes [ ] No [ ] N/A	8.
All containers needing acid/base pres. have been checked? exceptions: VOA, coliform, O&G All containers needing preservation are found to be in compliance with EPA recommendation.	[ ] Yes [ ] No [X] N/A [ ] Yes [ ] No [X] N/A	9. (Circle) HNO3 H2SO4 NaOH HCl If applicable see below. pH strip lot #: Potassium Iodide strip lot #: 31513 Lead Acetate strip lot #:
Headspace in VOA Vials (>6mm):	[ ] Yes [ ] No [X] N/A	10.
Trip Blank Present: Trip Blank Custody Seals Present	[ ] Yes [ ] No [X] N/A [ ] Yes [ ] No [X] N/A	11.
Samples Arrived within Hold Time:	[X] Yes [ ] No [ ] N/A	12.
Sufficient Volume:	[X] Yes [ ] No [ ] N/A	13.
Correct Containers Used:	[X] Yes [ ] No [ ] N/A	14.

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Mc **Date:** 6-26-13

Sample Container Count

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COC PAGE 1 of 1
COC ID# 1658936

Pace Project # 2563352

Sample Line Item	BP2N	AG1U	VG9U	VG9H	BP2S	BP1U	BP2U	BG1H	AG1S	BP20	SP5T	WGFU	WGKU			Comments
1		2														
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

Container Codes

DG9H	40mL HCL amber voa vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCL amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved **amber** vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	I	Wipe/Swab
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOh, Asc Acid plastic	VG9H	40mL HCL clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCL clear glass	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio. clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved **clear** vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear gla	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfate amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag
WGKU	8oz wide jar upreserved	SP5T	120mL Coliform Na Thiosulfate	SP5U	120mL Coliform unpreserved	GN	General unpreserved
Other	Other						

F-DAL-C-003 rev.00 11-5-2012

Pace Analytical Services, Inc.
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

July 08, 2013

Kyle Williams
Terracon
1640 Hickory Loop Suite 105
Las Cruces, NM 88005

RE: Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Dear Kyle Williams:
Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Shelly Connelly

Shelly Connelly

shelly.connelly@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project:	68137008/Former TorC Landfill
Pace Project No.:	756350

Dallas Certification IDs

400 West Bethany Dr Suite 190 75013 Allen TX 75013
Texas Certification #: T104704232-12-4
Kansas Certification #: E-10388
Arkansas Certification #: 88-0647
Oklahoma Certification #: 2012-080
Louisiana Certification #: 02007

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SAMPLE SUMMARY

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Lab ID	Sample ID	Matrix	Date Collected	Date Received
756350001	**MW-5**	Water	06/25/13 12:30	06/26/13 08:55

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SAMPLE ANALYTE COUNT

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Lab ID	Sample ID	Method	Analysts	Analytes Reported
756350001	**MW-5**	EPA 8081	TA	24
		EPA 8151	PMS	11
		EPA 6010	SPS	10
		EPA 7470	SPS	1
		EPA 8270	XLY	74
		EPA 5030B/8260	ZST	68
		SM 2320B	MCP	2
		EPA 9056A	MDG	2
		EPA 9056A	MDG	2

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Sample: MW-5 **Lab ID: 756350001** Collected: 06/25/13 12:30 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	309-00-2	
alpha-BHC	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	319-84-6	
beta-BHC	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	319-85-7	
delta-BHC	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	319-86-8	
gamma-BHC (Lindane)	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	58-89-9	
Chlordane (Technical)	ND	mg/L	0.00011	0.000057	1	07/01/13 08:23	07/03/13 13:07	57-74-9	
alpha-Chlordane	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	5103-71-9	
gamma-Chlordane	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	5103-74-2	
4,4'-DDD	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	72-54-8	
4,4'-DDE	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	72-55-9	
4,4'-DDT	ND	mg/L	0.000034	0.000011	1	07/01/13 08:23	07/03/13 13:07	50-29-3	
Dieldrin	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	60-57-1	
Endosulfan I	ND	mg/L	0.000057	0.000011	1	07/01/13 08:23	07/03/13 13:07	959-98-8	
Endosulfan II	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	33213-65-9	
Endosulfan sulfate	ND	mg/L	0.000057	0.000011	1	07/01/13 08:23	07/03/13 13:07	1031-07-8	
Endrin	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	72-20-8	
Endrin aldehyde	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	7421-93-4	
Endrin ketone	ND	mg/L	0.000057	0.000011	1	07/01/13 08:23	07/03/13 12:35	53494-70-5	
Heptachlor	ND	mg/L	0.000023	0.000011	1	07/01/13 08:23	07/03/13 13:07	76-44-8	
Heptachlor epoxide	ND	mg/L	0.000057	0.000011	1	07/01/13 08:23	07/03/13 13:07	1024-57-3	
Methoxychlor	ND	mg/L	0.000057	0.000011	1	07/01/13 08:23	07/03/13 13:07	72-43-5	
Toxaphene	ND	mg/L	0.0011	0.00057	1	07/01/13 08:23	07/03/13 13:07	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	93	%.	40-140		1	07/01/13 08:23	07/03/13 13:07	877-09-8	
Decachlorobiphenyl (S)	94	%.	40-140		1	07/01/13 08:23	07/03/13 13:07	2051-24-3	
8151 Chlorinated Herbicides	Analytical Method: EPA 8151 Preparation Method: EPA 8151								
2,4-D	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	94-75-7	
Dalapon	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	75-99-0	
2,4-DB	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	94-82-6	
Dicamba	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	1918-00-9	
Dichloroprop	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	120-36-5	M1
Dinoseb	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	88-85-7	
MCPA	ND	mg/L	0.0056	0.0056	1	07/01/13 09:00	07/05/13 22:35	94-74-6	
MCPP	ND	mg/L	0.0056	0.0056	1	07/01/13 09:00	07/05/13 22:35	7085-19-0	
2,4,5-T	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	93-76-5	
2,4,5-TP (Silvex)	ND	mg/L	0.000056	0.000056	1	07/01/13 09:00	07/05/13 22:35	93-72-1	
Surrogates									
2,4-DCAA (S)	134	%.	40-140		1	07/01/13 09:00	07/05/13 22:35	19719-28-9	
6010 Metals, Total	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	ND	mg/L	0.0050	0.0020	1	06/27/13 16:26	07/01/13 21:28	7440-38-2	
Barium	**0.13**	mg/L	0.0010	0.00080	1	06/27/13 16:26	07/01/13 21:28	7440-39-3	
Cadmium	ND	mg/L	0.0010	0.00050	1	06/27/13 16:26	07/01/13 21:28	7440-43-9	
Calcium	**80.6**	mg/L	1.0	0.50	1	06/27/13 16:26	07/01/13 21:28	7440-70-2	M1
Chromium	**0.0087**	mg/L	0.0050	0.0010	1	06/27/13 16:26	07/01/13 21:28	7440-47-3	

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Sample: MW-5 **Lab ID: 756350001** Collected: 06/25/13 12:30 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 Metals, Total	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**0.0091**	mg/L	0.0050	0.0020	1	06/27/13 16:26	07/01/13 21:28	7439-92-1	
Magnesium	**8.0**	mg/L	1.0	0.50	1	06/27/13 16:26	07/01/13 21:28	7439-95-4	
Selenium	ND	mg/L	0.010	0.0050	1	06/27/13 16:26	07/01/13 21:28	7782-49-2	
Silver	ND	mg/L	0.0020	0.0015	1	06/27/13 16:26	07/01/13 21:28	7440-22-4	
Sodium	**163**	mg/L	10.0	5.0	10	06/27/13 16:26	07/02/13 15:41	7440-23-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.000055J**	mg/L	0.00020	0.000053	1	06/27/13 13:02	06/27/13 16:04	7439-97-6	
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Acenaphthene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	83-32-9	
Acenaphthylene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	208-96-8	
Anthracene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	120-12-7	
Benzo(a)anthracene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	56-55-3	
Benzo(a)pyrene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	50-32-8	
Benzo(b)fluoranthene	ND	mg/L	0.012	0.0057	2	06/28/13 09:25	07/01/13 15:08	205-99-2	
Benzo(g,h,i)perylene	ND	mg/L	0.012	0.0055	2	06/28/13 09:25	07/01/13 15:08	191-24-2	
Benzo(k)fluoranthene	ND	mg/L	0.012	0.0059	2	06/28/13 09:25	07/01/13 15:08	207-08-9	
Benzoic acid	ND	mg/L	0.048	0.024	2	06/28/13 09:25	07/01/13 15:08	65-85-0	
Benzyl alcohol	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	100-51-6	
4-Bromophenylphenyl ether	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	101-55-3	
Butylbenzylphthalate	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	85-68-7	
Carbazole	ND	mg/L	0.0071	0.0053	2	06/28/13 09:25	07/01/13 15:08	86-74-8	
4-Chloro-3-methylphenol	ND	mg/L	0.0071	0.0053	2	06/28/13 09:25	07/01/13 15:08	59-50-7	
4-Chloroaniline	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	106-47-8	
bis(2-Chloroethoxy)methane	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	111-91-1	
bis(2-Chloroethyl) ether	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	111-44-4	
bis(2-Chloroisopropyl) ether	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	108-60-1	
2-Chloronaphthalene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	91-58-7	
2-Chlorophenol	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	95-57-8	
4-Chlorophenylphenyl ether	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	7005-72-3	
Chrysene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	218-01-9	
Dibenz(a,h)anthracene	ND	mg/L	0.0071	0.0053	2	06/28/13 09:25	07/01/13 15:08	53-70-3	
Dibenzofuran	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	132-64-9	
1,2-Dichlorobenzene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	95-50-1	
1,3-Dichlorobenzene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	541-73-1	
1,4-Dichlorobenzene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	106-46-7	
3,3'-Dichlorobenzidine	ND	mg/L	0.0071	0.0052	2	06/28/13 09:25	07/01/13 15:08	91-94-1	
2,4-Dichlorophenol	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	120-83-2	
Diethylphthalate	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	84-66-2	
7,12-Dimethylbenz(a)anthracene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	57-97-6	
2,4-Dimethylphenol	ND	mg/L	0.012	0.0061	2	06/28/13 09:25	07/01/13 15:08	105-67-9	
Dimethylphthalate	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	131-11-3	
Di-n-butylphthalate	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	84-74-2	
4,6-Dinitro-2-methylphenol	ND	mg/L	0.0071	0.0059	2	06/28/13 09:25	07/01/13 15:08	534-52-1	
2,4-Dinitrophenol	ND	mg/L	0.0071	0.0065	2	06/28/13 09:25	07/01/13 15:08	51-28-5	

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Sample: MW-5 **Lab ID: 756350001** Collected: 06/25/13 12:30 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dinitrotoluene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	121-14-2	
2,6-Dinitrotoluene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	606-20-2	
Di-n-octylphthalate	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	117-81-7	
Fluoranthene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	206-44-0	
Fluorene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	86-73-7	
Hexachloro-1,3-butadiene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	87-68-3	
Hexachlorobenzene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	118-74-1	
Hexachlorocyclopentadiene	ND	mg/L	0.0071	0.0053	2	06/28/13 09:25	07/01/13 15:08	77-47-4	
Hexachloroethane	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	mg/L	0.0071	0.0058	2	06/28/13 09:25	07/01/13 15:08	193-39-5	
Isophorone	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	78-59-1	
2-Methylnaphthalene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	91-57-6	
2-Methylphenol(o-Cresol)	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	95-48-7	
Naphthalene	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	91-20-3	
2-Nitroaniline	ND	mg/L	0.0071	0.0049	2	06/28/13 09:25	07/01/13 15:08	88-74-4	
3-Nitroaniline	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	99-09-2	
4-Nitroaniline	ND	mg/L	0.0071	0.0058	2	06/28/13 09:25	07/01/13 15:08	100-01-6	
Nitrobenzene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	98-95-3	
2-Nitrophenol	ND	mg/L	0.0071	0.0070	2	06/28/13 09:25	07/01/13 15:08	88-75-5	
4-Nitrophenol	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	100-02-7	
N-Nitrosodimethylamine	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	62-75-9	
N-Nitroso-di-n-propylamine	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	621-64-7	
N-Nitrosodiphenylamine	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	86-30-6	
Pentachlorophenol	ND	mg/L	0.012	0.0056	2	06/28/13 09:25	07/01/13 15:08	87-86-5	
Phenanthrene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	85-01-8	
Phenol	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	108-95-2	
Pyrene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	129-00-0	
Pyridine	ND	mg/L	0.0071	0.0048	2	06/28/13 09:25	07/01/13 15:08	110-86-1	
1,2,4-Trichlorobenzene	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	120-82-1	
2,4,5-Trichlorophenol	ND	mg/L	0.0071	0.0050	2	06/28/13 09:25	07/01/13 15:08	95-95-4	
2,4,6-Trichlorophenol	ND	mg/L	0.012	0.0048	2	06/28/13 09:25	07/01/13 15:08	88-06-2	
Surrogates									
2-Fluorobiphenyl (S)	52	%.	10-140		2	06/28/13 09:25	07/01/13 15:08	321-60-8	
p-Terphenyl-d14 (S)	106	%.	10-140		2	06/28/13 09:25	07/01/13 15:08	1718-51-0	
2,4,6-Tribromophenol (S)	53	%.	10-140		2	06/28/13 09:25	07/01/13 15:08	118-79-6	
2-Fluorophenol (S)	23	%.	10-140		2	06/28/13 09:25	07/01/13 15:08	367-12-4	
Phenol-d6 (S)	21	%.	10-140		2	06/28/13 09:25	07/01/13 15:08	13127-88-3	
Nitrobenzene-d5 (S)	56	%.	10-140		2	06/28/13 09:25	07/01/13 15:08	4165-60-0	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	mg/L	0.010	0.0050	1		07/01/13 11:25	67-64-1	
Benzene	ND	mg/L	0.0010	0.00052	1		07/01/13 11:25	71-43-2	
Bromobenzene	ND	mg/L	0.0030	0.0010	1		07/01/13 11:25	108-86-1	
Bromochloromethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	74-97-5	
Bromodichloromethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-27-4	

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Sample: MW-5 **Lab ID: 756350001** Collected: 06/25/13 12:30 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Bromoform	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-25-2	
Bromomethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	74-83-9	
2-Butanone (MEK)	ND	mg/L	0.010	0.0079	1		07/01/13 11:25	78-93-3	
n-Butylbenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	104-51-8	
sec-Butylbenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	135-98-8	
tert-Butylbenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	98-06-6	
Carbon disulfide	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-15-0	
Carbon tetrachloride	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	56-23-5	
Chlorobenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	108-90-7	
Chloroethane	ND	mg/L	0.0020	0.0015	1		07/01/13 11:25	75-00-3	
Chloroform	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	67-66-3	
Chloromethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	74-87-3	
2-Chlorotoluene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	95-49-8	
4-Chlorotoluene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/L	0.0020	0.0014	1		07/01/13 11:25	96-12-8	
Dibromochloromethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	106-93-4	
Dibromomethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	74-95-3	
1,2-Dichlorobenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	95-50-1	
1,3-Dichlorobenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	541-73-1	
1,4-Dichlorobenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	106-46-7	
Dichlorodifluoromethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-71-8	
1,1-Dichloroethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-34-3	
1,2-Dichloroethane	ND	mg/L	0.00050	0.00042	1		07/01/13 11:25	107-06-2	
1,2-Dichloroethene (Total)	ND	mg/L	0.0040	0.0020	1		07/01/13 11:25	540-59-0	
1,1-Dichloroethene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-35-4	
cis-1,2-Dichloroethene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	156-59-2	
trans-1,2-Dichloroethene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	156-60-5	
1,2-Dichloropropane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	78-87-5	
1,3-Dichloropropane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	142-28-9	
2,2-Dichloropropane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	594-20-7	
1,1-Dichloropropene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	563-58-6	
cis-1,3-Dichloropropene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	10061-02-6	
Ethylbenzene	ND	mg/L	0.0010	0.00043	1		07/01/13 11:25	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/L	0.0020	0.0011	1		07/01/13 11:25	87-68-3	
2-Hexanone	ND	mg/L	0.010	0.0050	1		07/01/13 11:25	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	98-82-8	
p-Isopropyltoluene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	99-87-6	
Methylene Chloride	ND	mg/L	0.0050	0.0025	1		07/01/13 11:25	75-09-2	M1,R1
4-Methyl-2-pentanone (MIBK)	ND	mg/L	0.010	0.0050	1		07/01/13 11:25	108-10-1	
Methyl-tert-butyl ether	ND	mg/L	0.0010	0.00047	1		07/01/13 11:25	1634-04-4	
Naphthalene	ND	mg/L	0.0050	0.0025	1		07/01/13 11:25	91-20-3	
n-Propylbenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	103-65-1	
Styrene	ND	mg/L	0.0030	0.0010	1		07/01/13 11:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	630-20-6	

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ANALYTICAL RESULTS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Sample: MW-5 **Lab ID: 756350001** Collected: 06/25/13 12:30 Received: 06/26/13 08:55 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
1,1,2,2-Tetrachloroethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	79-34-5	
Tetrachloroethene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	127-18-4	
Toluene	ND	mg/L	0.0010	0.00049	1		07/01/13 11:25	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	120-82-1	
1,1,1-Trichloroethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	71-55-6	
1,1,2-Trichloroethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	79-00-5	
Trichloroethene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	79-01-6	
Trichlorofluoromethane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-69-4	
1,2,3-Trichloropropane	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	108-67-8	
Vinyl chloride	ND	mg/L	0.0020	0.0010	1		07/01/13 11:25	75-01-4	
Xylene (Total)	ND	mg/L	0.0030	0.0014	1		07/01/13 11:25	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%.	70-130		1		07/01/13 11:25	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%.	70-130		1		07/01/13 11:25	17060-07-0	
Toluene-d8 (S)	99	%.	70-130		1		07/01/13 11:25	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**210**	mg/L	20.0	10.0	1		06/27/13 15:45		
Alkalinity,Bicarbonate (CaCO3)	**210**	mg/L	20.0	10.0	1		06/27/13 15:45		
9056 IC Anions	Analytical Method: EPA 9056A								
Chloride	**159**	mg/L	10.0	5.0	100		06/27/13 13:27	16887-00-6	
Sulfate	**120**	mg/L	10.0	5.0	100		06/27/13 13:27	14808-79-8	
9056 IC Anions 48hr	Analytical Method: EPA 9056A								
Nitrate as N	**0.54**	mg/L	0.10	0.050	1		06/27/13 09:31	14797-55-8	
Nitrite as N	ND	mg/L	0.10	0.050	1		06/26/13 16:45	14797-65-0	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: MERP/1205 | Analysis Method: EPA 7470
QC Batch Method: EPA 7470 | Analysis Description: 7470 Mercury
Associated Lab Samples: 756350001

METHOD BLANK: 28990 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	06/27/13 15:56	

LABORATORY CONTROL SAMPLE: 28991

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0025	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 28992 28993

Parameter	Units	756350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.000055J	.0025	.0025	0.0024	0.0024	92	96	70-130	4	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: MPRP/1464 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET
Associated Lab Samples: 756350001

METHOD BLANK: 29107 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	07/01/13 20:51	
Barium	mg/L	ND	0.0010	07/01/13 20:51	
Cadmium	mg/L	ND	0.0010	07/01/13 20:51	
Calcium	mg/L	ND	1.0	07/01/13 20:51	
Chromium	mg/L	ND	0.0050	07/01/13 20:51	
Lead	mg/L	ND	0.0050	07/01/13 20:51	
Magnesium	mg/L	ND	1.0	07/01/13 20:51	
Selenium	mg/L	ND	0.010	07/01/13 20:51	
Silver	mg/L	ND	0.0020	07/01/13 20:51	
Sodium	mg/L	ND	1.0	07/02/13 15:16	

LABORATORY CONTROL SAMPLE: 29108

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.97	97	80-120	
Barium	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	1	0.99	99	80-120	
Calcium	mg/L	10	9.9	99	80-120	
Chromium	mg/L	1	1.0	101	80-120	
Lead	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	10	9.6	96	80-120	
Selenium	mg/L	1	0.98	98	80-120	
Silver	mg/L	.5	0.49	98	80-120	
Sodium	mg/L	10	10.1	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29109 29110

Parameter	Units	756350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	1	1	1.0	1.0	102	104	75-125	2	20	
Barium	mg/L	0.13	1	1	1.2	1.2	104	106	75-125	2	20	
Cadmium	mg/L	ND	1	1	0.99	1.0	99	101	75-125	2	20	
Calcium	mg/L	80.6	10	10	86.1	86.8	55	62	75-125	1	20	M1
Chromium	mg/L	0.0087	1	1	0.99	1.0	98	100	75-125	2	20	
Lead	mg/L	0.0091	1	1	0.98	1.0	97	99	75-125	2	20	
Magnesium	mg/L	8.0	10	10	16.8	17.2	88	92	75-125	2	20	
Selenium	mg/L	ND	1	1	1.0	1.0	102	103	75-125	1	20	
Silver	mg/L	ND	.5	.5	0.49	0.51	99	101	75-125	3	20	
Sodium	mg/L	163	10	10	174	173	114	102	75-125	1	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: MSV/1386 | Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 | Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 756350001

METHOD BLANK: 29271 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/L	ND	0.0020	07/01/13 02:16	
1,1,1-Trichloroethane	mg/L	ND	0.0020	07/01/13 02:16	
1,1,2,2-Tetrachloroethane	mg/L	ND	0.0020	07/01/13 02:16	
1,1,2-Trichloroethane	mg/L	ND	0.0020	07/01/13 02:16	
1,1-Dichloroethane	mg/L	ND	0.0020	07/01/13 02:16	
1,1-Dichloroethene	mg/L	ND	0.0020	07/01/13 02:16	
1,1-Dichloropropene	mg/L	ND	0.0020	07/01/13 02:16	
1,2,3-Trichlorobenzene	mg/L	ND	0.0020	07/01/13 02:16	
1,2,3-Trichloropropane	mg/L	ND	0.0020	07/01/13 02:16	
1,2,4-Trichlorobenzene	mg/L	ND	0.0020	07/01/13 02:16	
1,2,4-Trimethylbenzene	mg/L	ND	0.0020	07/01/13 02:16	
1,2-Dibromo-3-chloropropane	mg/L	ND	0.0020	07/01/13 02:16	
1,2-Dibromoethane (EDB)	mg/L	ND	0.0020	07/01/13 02:16	
1,2-Dichlorobenzene	mg/L	ND	0.0020	07/01/13 02:16	
1,2-Dichloroethane	mg/L	ND	0.00050	07/01/13 02:16	
1,2-Dichloroethene (Total)	mg/L	ND	0.0040	07/01/13 02:16	
1,2-Dichloropropane	mg/L	ND	0.0020	07/01/13 02:16	
1,3,5-Trimethylbenzene	mg/L	ND	0.0020	07/01/13 02:16	
1,3-Dichlorobenzene	mg/L	ND	0.0020	07/01/13 02:16	
1,3-Dichloropropane	mg/L	ND	0.0020	07/01/13 02:16	
1,4-Dichlorobenzene	mg/L	ND	0.0020	07/01/13 02:16	
2,2-Dichloropropane	mg/L	ND	0.0020	07/01/13 02:16	
2-Butanone (MEK)	mg/L	ND	0.010	07/01/13 02:16	
2-Chlorotoluene	mg/L	ND	0.0020	07/01/13 02:16	
2-Hexanone	mg/L	ND	0.010	07/01/13 02:16	
4-Chlorotoluene	mg/L	ND	0.0020	07/01/13 02:16	
4-Methyl-2-pentanone (MIBK)	mg/L	ND	0.010	07/01/13 02:16	
Acetone	mg/L	ND	0.010	07/01/13 02:16	
Benzene	mg/L	ND	0.0010	07/01/13 02:16	
Bromobenzene	mg/L	ND	0.0030	07/01/13 02:16	
Bromochloromethane	mg/L	ND	0.0020	07/01/13 02:16	
Bromodichloromethane	mg/L	ND	0.0020	07/01/13 02:16	
Bromoform	mg/L	ND	0.0020	07/01/13 02:16	
Bromomethane	mg/L	ND	0.0020	07/01/13 02:16	
Carbon disulfide	mg/L	ND	0.0020	07/01/13 02:16	
Carbon tetrachloride	mg/L	ND	0.0020	07/01/13 02:16	
Chlorobenzene	mg/L	ND	0.0020	07/01/13 02:16	
Chloroethane	mg/L	ND	0.0020	07/01/13 02:16	
Chloroform	mg/L	ND	0.0020	07/01/13 02:16	
Chloromethane	mg/L	ND	0.0020	07/01/13 02:16	
cis-1,2-Dichloroethene	mg/L	ND	0.0020	07/01/13 02:16	
cis-1,3-Dichloropropene	mg/L	ND	0.0020	07/01/13 02:16	
Dibromochloromethane	mg/L	ND	0.0020	07/01/13 02:16	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

METHOD BLANK: 29271 Matrix: Water

Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	mg/L	ND	0.0020	07/01/13 02:16	
Dichlorodifluoromethane	mg/L	ND	0.0020	07/01/13 02:16	
Ethylbenzene	mg/L	ND	0.0010	07/01/13 02:16	
Hexachloro-1,3-butadiene	mg/L	ND	0.0020	07/01/13 02:16	
Isopropylbenzene (Cumene)	mg/L	ND	0.0020	07/01/13 02:16	
Methyl-tert-butyl ether	mg/L	ND	0.0010	07/01/13 02:16	
Methylene Chloride	mg/L	ND	0.0050	07/01/13 02:16	
n-Butylbenzene	mg/L	ND	0.0020	07/01/13 02:16	
n-Propylbenzene	mg/L	ND	0.0020	07/01/13 02:16	
Naphthalene	mg/L	ND	0.0050	07/01/13 02:16	
p-Isopropyltoluene	mg/L	ND	0.0020	07/01/13 02:16	
sec-Butylbenzene	mg/L	ND	0.0020	07/01/13 02:16	
Styrene	mg/L	ND	0.0030	07/01/13 02:16	
tert-Butylbenzene	mg/L	ND	0.0020	07/01/13 02:16	
Tetrachloroethene	mg/L	ND	0.0020	07/01/13 02:16	
Toluene	mg/L	ND	0.0010	07/01/13 02:16	
trans-1,2-Dichloroethene	mg/L	ND	0.0020	07/01/13 02:16	
trans-1,3-Dichloropropene	mg/L	ND	0.0020	07/01/13 02:16	
Trichloroethene	mg/L	ND	0.0020	07/01/13 02:16	
Trichlorofluoromethane	mg/L	ND	0.0020	07/01/13 02:16	
Vinyl chloride	mg/L	ND	0.0020	07/01/13 02:16	
Xylene (Total)	mg/L	ND	0.0030	07/01/13 02:16	
1,2-Dichloroethane-d4 (S)	%.	102	70-130	07/01/13 02:16	
4-Bromofluorobenzene (S)	%.	100	70-130	07/01/13 02:16	
Toluene-d8 (S)	%.	101	70-130	07/01/13 02:16	

LABORATORY CONTROL SAMPLE: 29272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/L	.02	0.022	109	70-130	
1,1,1-Trichloroethane	mg/L	.02	0.022	112	70-130	
1,1,2,2-Tetrachloroethane	mg/L	.02	0.019	95	70-130	
1,1,2-Trichloroethane	mg/L	.02	0.020	98	70-130	
1,1-Dichloroethane	mg/L	.02	0.022	109	70-130	
1,1-Dichloroethene	mg/L	.02	0.023	113	70-130	
1,1-Dichloropropene	mg/L	.02	0.017	85	70-130	
1,2,3-Trichlorobenzene	mg/L	.02	0.019	97	70-130	
1,2,3-Trichloropropane	mg/L	.02	0.018	89	70-130	
1,2,4-Trichlorobenzene	mg/L	.02	0.019	96	70-130	
1,2,4-Trimethylbenzene	mg/L	.02	0.021	107	70-130	
1,2-Dibromo-3-chloropropane	mg/L	.02	0.017	86	70-130	
1,2-Dibromoethane (EDB)	mg/L	.02	0.020	99	70-130	
1,2-Dichlorobenzene	mg/L	.02	0.020	102	70-130	
1,2-Dichloroethane	mg/L	.02	0.020	99	70-130	
1,2-Dichloroethene (Total)	mg/L	.04	0.043	107	70-130	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

LABORATORY CONTROL SAMPLE: 29272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	mg/L	.02	0.020	100	70-130	
1,3,5-Trimethylbenzene	mg/L	.02	0.021	107	70-130	
1,3-Dichlorobenzene	mg/L	.02	0.020	102	70-130	
1,3-Dichloropropane	mg/L	.02	0.020	99	70-130	
1,4-Dichlorobenzene	mg/L	.02	0.020	101	70-130	
2,2-Dichloropropane	mg/L	.02	0.023	114	70-130	
2-Butanone (MEK)	mg/L	.1	0.084	84	40-140	
2-Chlorotoluene	mg/L	.02	0.021	105	70-130	
2-Hexanone	mg/L	.1	0.097	97	40-140	
4-Chlorotoluene	mg/L	.02	0.021	104	70-130	
4-Methyl-2-pentanone (MIBK)	mg/L	.1	0.092	92	70-130	
Acetone	mg/L	.1	0.091	91	10-140	
Benzene	mg/L	.02	0.021	106	70-130	
Bromobenzene	mg/L	.02	0.020	102	70-130	
Bromochloromethane	mg/L	.02	0.021	103	70-130	
Bromodichloromethane	mg/L	.02	0.021	107	70-130	
Bromoform	mg/L	.02	0.021	103	70-130	
Bromomethane	mg/L	.02	0.022	112	70-130	
Carbon disulfide	mg/L	.02	0.022	112	70-130	
Carbon tetrachloride	mg/L	.02	0.024	120	70-130	
Chlorobenzene	mg/L	.02	0.021	106	70-130	
Chloroethane	mg/L	.02	0.025	126	70-130	
Chloroform	mg/L	.02	0.020	102	70-130	
Chloromethane	mg/L	.02	0.023	115	70-130	
cis-1,2-Dichloroethene	mg/L	.02	0.021	105	70-130	
cis-1,3-Dichloropropene	mg/L	.02	0.020	101	70-130	
Dibromochloromethane	mg/L	.02	0.020	99	70-130	
Dibromomethane	mg/L	.02	0.021	104	70-130	
Dichlorodifluoromethane	mg/L	.02	0.026	131	10-140	
Ethylbenzene	mg/L	.02	0.021	107	70-130	
Hexachloro-1,3-butadiene	mg/L	.02	0.022	108	70-130	
Isopropylbenzene (Cumene)	mg/L	.02	0.022	109	70-130	
Methyl-tert-butyl ether	mg/L	.02	0.019	96	70-130	
Methylene Chloride	mg/L	.02	0.019	94	70-130	
n-Butylbenzene	mg/L	.02	0.022	109	70-130	
n-Propylbenzene	mg/L	.02	0.022	109	70-130	
Naphthalene	mg/L	.02	0.019	93	70-130	
p-Isopropyltoluene	mg/L	.02	0.022	108	70-130	
sec-Butylbenzene	mg/L	.02	0.022	110	70-130	
Styrene	mg/L	.02	0.021	106	70-130	
tert-Butylbenzene	mg/L	.02	0.022	110	70-130	
Tetrachloroethene	mg/L	.02	0.023	113	70-130	
Toluene	mg/L	.02	0.022	111	70-130	
trans-1,2-Dichloroethene	mg/L	.02	0.022	110	70-130	
trans-1,3-Dichloropropene	mg/L	.02	0.020	98	70-130	
Trichloroethene	mg/L	.02	0.022	109	70-130	
Trichlorofluoromethane	mg/L	.02	0.024	121	70-130	
Vinyl chloride	mg/L	.02	0.022	111	70-130	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

LABORATORY CONTROL SAMPLE: 29272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	mg/L	.06	0.066	110	70-130	
1,2-Dichloroethane-d4 (S)	%.			102	70-130	
4-Bromofluorobenzene (S)	%.			97	70-130	
Toluene-d8 (S)	%.			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29273 29473

Parameter	Units	756350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	mg/L	ND	.02	.02	0.022	0.022	112	111	70-130	1	20	
1,1,1-Trichloroethane	mg/L	ND	.02	.02	0.024	0.024	121	119	70-130	1	20	
1,1,2,2-Tetrachloroethane	mg/L	ND	.02	.02	0.021	0.021	104	103	70-130	1	20	
1,1,2-Trichloroethane	mg/L	ND	.02	.02	0.021	0.021	104	105	70-130	1	20	
1,1-Dichloroethane	mg/L	ND	.02	.02	0.022	0.021	108	106	70-130	2	20	
1,1-Dichloroethene	mg/L	ND	.02	.02	0.023	0.023	116	116	70-130	0	20	
1,1-Dichloropropene	mg/L	ND	.02	.02	0.018	0.017	92	87	70-130	5	20	
1,2,3-Trichlorobenzene	mg/L	ND	.02	.02	0.022	0.021	110	107	70-130	3	20	
1,2,3-Trichloropropane	mg/L	ND	.02	.02	0.020	0.021	102	103	70-130	1	20	
1,2,4-Trichlorobenzene	mg/L	ND	.02	.02	0.022	0.022	111	109	70-130	1	20	
1,2,4-Trimethylbenzene	mg/L	ND	.02	.02	0.022	0.022	112	109	70-130	3	20	
1,2-Dibromo-3-chloropropane	mg/L	ND	.02	.02	0.021	0.022	103	112	70-130	8	20	
1,2-Dibromoethane (EDB)	mg/L	ND	.02	.02	0.021	0.021	103	105	70-130	2	20	
1,2-Dichlorobenzene	mg/L	ND	.02	.02	0.022	0.021	109	105	70-130	3	20	
1,2-Dichloroethane	mg/L	ND	.02	.02	0.021	0.022	104	108	70-130	3	20	
1,2-Dichloroethene (Total)	mg/L	ND	.04	.04	0.044	0.044	109	109	70-130	0	20	
1,2-Dichloropropane	mg/L	ND	.02	.02	0.021	0.020	105	102	70-130	3	20	
1,3,5-Trimethylbenzene	mg/L	ND	.02	.02	0.023	0.022	113	111	70-130	3	20	
1,3-Dichlorobenzene	mg/L	ND	.02	.02	0.022	0.022	109	109	70-130	0	20	
1,3-Dichloropropane	mg/L	ND	.02	.02	0.021	0.021	106	105	70-130	1	20	
1,4-Dichlorobenzene	mg/L	ND	.02	.02	0.022	0.021	108	107	70-130	1	20	
2,2-Dichloropropane	mg/L	ND	.02	.02	0.024	0.024	118	119	70-130	0	20	
2-Butanone (MEK)	mg/L	ND	.1	.1	0.10	0.11	104	114	40-140	8	20	
2-Chlorotoluene	mg/L	ND	.02	.02	0.022	0.022	109	108	70-130	1	20	
2-Hexanone	mg/L	ND	.1	.1	0.11	0.11	108	113	40-140	4	20	
4-Chlorotoluene	mg/L	ND	.02	.02	0.022	0.021	109	107	70-130	2	20	
4-Methyl-2-pentanone (MIBK)	mg/L	ND	.1	.1	0.10	0.11	101	106	70-130	4	20	
Acetone	mg/L	ND	.1	.1	0.11	0.11	110	114	10-140	3	20	
Benzene	mg/L	ND	.02	.02	0.022	0.021	109	106	70-130	3	20	
Bromobenzene	mg/L	ND	.02	.02	0.021	0.021	106	105	70-130	1	20	
Bromochloromethane	mg/L	ND	.02	.02	0.021	0.021	103	105	70-130	2	20	
Bromodichloromethane	mg/L	ND	.02	.02	0.022	0.022	111	109	70-130	2	20	
Bromoform	mg/L	ND	.02	.02	0.023	0.023	113	114	70-130	1	20	
Bromomethane	mg/L	ND	.02	.02	0.023	0.021	113	104	70-130	8	20	
Carbon disulfide	mg/L	ND	.02	.02	0.022	0.023	112	113	70-130	1	20	
Carbon tetrachloride	mg/L	ND	.02	.02	0.025	0.025	126	127	70-130	1	20	
Chlorobenzene	mg/L	ND	.02	.02	0.022	0.021	110	107	70-130	2	20	
Chloroethane	mg/L	ND	.02	.02	0.026	0.025	130	126	70-130	3	20	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29273 29473

Parameter	Units	756350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloroform	mg/L	ND	.02	.02	0.021	0.021	105	103	70-130	1	20	
Chloromethane	mg/L	ND	.02	.02	0.024	0.024	118	118	70-130	1	20	
cis-1,2-Dichloroethene	mg/L	ND	.02	.02	0.021	0.021	107	107	70-130	1	20	
cis-1,3-Dichloropropene	mg/L	ND	.02	.02	0.022	0.022	108	109	70-130	0	20	
Dibromochloromethane	mg/L	ND	.02	.02	0.022	0.022	108	110	70-130	1	20	
Dibromomethane	mg/L	ND	.02	.02	0.021	0.022	105	109	70-130	3	20	
Dichlorodifluoromethane	mg/L	ND	.02	.02	0.025	0.025	126	124	10-140	1	20	
Ethylbenzene	mg/L	ND	.02	.02	0.022	0.022	111	109	70-130	2	20	
Hexachloro-1,3-butadiene	mg/L	ND	.02	.02	0.024	0.024	119	120	70-130	1	20	
Isopropylbenzene (Cumene)	mg/L	ND	.02	.02	0.023	0.022	113	110	70-130	3	20	
Methyl-tert-butyl ether	mg/L	ND	.02	.02	0.021	0.020	103	102	70-130	0	20	
Methylene Chloride	mg/L	ND	.02	.02	0.028	0.021	141	103	70-130	31	20	M1,R1
n-Butylbenzene	mg/L	ND	.02	.02	0.024	0.024	121	118	70-130	3	20	
n-Propylbenzene	mg/L	ND	.02	.02	0.023	0.023	114	113	70-130	2	20	
Naphthalene	mg/L	ND	.02	.02	0.021	0.021	104	106	70-130	1	20	
p-Isopropyltoluene	mg/L	ND	.02	.02	0.023	0.023	117	114	70-130	2	20	
sec-Butylbenzene	mg/L	ND	.02	.02	0.023	0.023	114	114	70-130	0	20	
Styrene	mg/L	ND	.02	.02	0.021	0.021	107	106	70-130	1	20	
tert-Butylbenzene	mg/L	ND	.02	.02	0.023	0.022	114	111	70-130	3	20	
Tetrachloroethene	mg/L	ND	.02	.02	0.024	0.023	119	117	70-130	1	20	
Toluene	mg/L	ND	.02	.02	0.023	0.022	114	111	70-130	2	20	
trans-1,2-Dichloroethene	mg/L	ND	.02	.02	0.022	0.022	112	112	70-130	0	20	
trans-1,3-Dichloropropene	mg/L	ND	.02	.02	0.021	0.022	107	108	70-130	1	20	
Trichloroethene	mg/L	ND	.02	.02	0.023	0.023	115	113	70-130	2	20	
Trichlorofluoromethane	mg/L	ND	.02	.02	0.026	0.025	128	126	70-130	1	20	
Vinyl chloride	mg/L	ND	.02	.02	0.022	0.023	112	113	70-130	1	20	
Xylene (Total)	mg/L	ND	.06	.06	0.067	0.065	111	108	70-130	3	20	
1,2-Dichloroethane-d4 (S)	%.						105	107	70-130			
4-Bromofluorobenzene (S)	%.						100	100	70-130			
Toluene-d8 (S)	%.						99	100	70-130			

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: OEXT/2117 | Analysis Method: EPA 8081
QC Batch Method: EPA 3510 | Analysis Description: 8081 GCS Pesticides
Associated Lab Samples: 756350001

METHOD BLANK: 29344 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	mg/L	ND	0.000020	07/03/13 09:54	
4,4'-DDE	mg/L	ND	0.000020	07/03/13 09:54	
4,4'-DDT	mg/L	ND	0.000030	07/03/13 09:54	
Aldrin	mg/L	ND	0.000020	07/03/13 09:54	
alpha-BHC	mg/L	ND	0.000020	07/03/13 09:54	
alpha-Chlordane	mg/L	ND	0.000020	07/03/13 09:54	
beta-BHC	mg/L	ND	0.000020	07/03/13 09:54	
Chlordane (Technical)	mg/L	ND	0.00010	07/03/13 09:54	
delta-BHC	mg/L	ND	0.000020	07/03/13 09:54	
Dieldrin	mg/L	ND	0.000020	07/03/13 09:54	
Endosulfan I	mg/L	ND	0.000050	07/03/13 09:54	
Endosulfan II	mg/L	ND	0.000020	07/03/13 09:54	
Endosulfan sulfate	mg/L	ND	0.000050	07/03/13 09:54	
Endrin	mg/L	ND	0.000020	07/03/13 09:54	
Endrin aldehyde	mg/L	ND	0.000020	07/03/13 09:54	
Endrin ketone	mg/L	ND	0.000050	07/03/13 09:22	
gamma-BHC (Lindane)	mg/L	ND	0.000020	07/03/13 09:54	
gamma-Chlordane	mg/L	ND	0.000020	07/03/13 09:54	
Heptachlor	mg/L	ND	0.000020	07/03/13 09:54	
Heptachlor epoxide	mg/L	ND	0.000050	07/03/13 09:54	
Methoxychlor	mg/L	ND	0.000050	07/03/13 09:54	
Toxaphene	mg/L	ND	0.0010	07/03/13 09:54	
Decachlorobiphenyl (S)	%.	79	40-140	07/03/13 09:54	
Tetrachloro-m-xylene (S)	%.	83	40-140	07/03/13 09:54	

LABORATORY CONTROL SAMPLE: 29345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	mg/L	.001	0.0012	123	40-140	
4,4'-DDE	mg/L	.001	0.0012	120	40-140	
4,4'-DDT	mg/L	.001	0.0012	120	10-140	
Aldrin	mg/L	.001	0.0011	106	40-140	
alpha-BHC	mg/L	.001	0.0012	116	40-140	
alpha-Chlordane	mg/L	.001	0.0012	123	40-140	
beta-BHC	mg/L	.001	0.0012	125	40-140	
Chlordane (Technical)	mg/L		ND			
delta-BHC	mg/L	.001	0.0011	113	40-140	
Dieldrin	mg/L	.001	0.0012	116	40-140	
Endosulfan I	mg/L	.001	0.0011	110	40-140	
Endosulfan II	mg/L	.001	0.0010	104	40-140	
Endosulfan sulfate	mg/L	.001	0.0011	112	40-140	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

LABORATORY CONTROL SAMPLE: 29345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin	mg/L	.001	0.0013	129	40-140	
Endrin aldehyde	mg/L	.001	0.0011	112	40-140	
Endrin ketone	mg/L	.001	0.0011	113	40-140	
gamma-BHC (Lindane)	mg/L	.001	0.0012	116	40-140	
gamma-Chlordane	mg/L	.001	0.0012	119	40-140	
Heptachlor	mg/L	.001	0.0011	113	40-140	
Heptachlor epoxide	mg/L	.001	0.0011	111	40-140	
Methoxychlor	mg/L	.001	0.0013	130	10-140	
Toxaphene	mg/L		ND			
Decachlorobiphenyl (S)	%.			83	40-140	
Tetrachloro-m-xylene (S)	%.			83	40-140	

MATRIX SPIKE SAMPLE: 29346

Parameter	Units	756350001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	mg/L	ND	.0011	0.0014	126	40-140	
4,4'-DDE	mg/L	ND	.0011	0.0013	119	40-140	
4,4'-DDT	mg/L	ND	.0011	0.0014	119	40-140	
Aldrin	mg/L	ND	.0011	0.0012	103	40-140	
alpha-BHC	mg/L	ND	.0011	0.0012	108	40-140	
alpha-Chlordane	mg/L	ND	.0011	0.0014	123	40-140	
beta-BHC	mg/L	ND	.0011	0.0014	120	40-140	
Chlordane (Technical)	mg/L	ND		ND			
delta-BHC	mg/L	ND	.0011	0.0013	113	40-140	
Dieldrin	mg/L	ND	.0011	0.0013	115	40-140	
Endosulfan I	mg/L	ND	.0011	0.0012	110	40-140	
Endosulfan II	mg/L	ND	.0011	0.0012	103	40-140	
Endosulfan sulfate	mg/L	ND	.0011	0.0013	112	40-140	
Endrin	mg/L	ND	.0011	0.0015	131	40-140	
Endrin aldehyde	mg/L	ND	.0011	0.0013	111	40-140	
Endrin ketone	mg/L	ND	.0011	0.0014	121	40-140	
gamma-BHC (Lindane)	mg/L	ND	.0011	0.0013	114	40-140	
gamma-Chlordane	mg/L	ND	.0011	0.0013	117	40-140	
Heptachlor	mg/L	ND	.0011	0.0013	113	40-140	
Heptachlor epoxide	mg/L	ND	.0011	0.0012	110	40-140	
Methoxychlor	mg/L	ND	.0011	0.0015	129	40-140	
Toxaphene	mg/L	ND		ND			
Decachlorobiphenyl (S)	%.				81	40-140	
Tetrachloro-m-xylene (S)	%.				76	40-140	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: OEXT/2116 | Analysis Method: EPA 8151
QC Batch Method: EPA 8151 | Analysis Description: 8151A GCS Herbicides
Associated Lab Samples: 756350001

METHOD BLANK: 29330 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-T	mg/L	ND	0.000050	07/05/13 17:50	
2,4,5-TP (Silvex)	mg/L	ND	0.000050	07/05/13 17:50	
2,4-D	mg/L	ND	0.000050	07/05/13 17:50	
2,4-DB	mg/L	ND	0.000050	07/05/13 17:50	
Dalapon	mg/L	ND	0.000050	07/05/13 17:50	
Dicamba	mg/L	ND	0.000050	07/05/13 17:50	
Dichloroprop	mg/L	ND	0.000050	07/05/13 17:50	
Dinoseb	mg/L	ND	0.000050	07/05/13 17:50	
MCPA	mg/L	ND	0.0050	07/05/13 17:50	
MCPP	mg/L	ND	0.0050	07/05/13 17:50	
2,4-DCAA (S)	%.	91	40-140	07/05/13 17:50	

LABORATORY CONTROL SAMPLE: 29331

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-T	mg/L	.002	0.0018	90	10-140	
2,4,5-TP (Silvex)	mg/L	.002	0.0020	102	10-140	
2,4-D	mg/L	.002	0.0019	97	40-140	
2,4-DB	mg/L	.002	0.0022	110	40-140	
Dalapon	mg/L	.002	0.00090	45	10-140	
Dicamba	mg/L	.002	0.0017	87	40-140	
Dichloroprop	mg/L	.002	0.0021	107	40-140	
Dinoseb	mg/L	.002	0.0025	123	10-140	
MCPA	mg/L	.2	0.25	125	10-140	
MCPP	mg/L	.2	0.23	113	40-140	
2,4-DCAA (S)	%.			115	40-140	

MATRIX SPIKE SAMPLE: 29332

Parameter	Units	756350001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2,4,5-T	mg/L	ND	.0023	0.0021	93	10-140	
2,4,5-TP (Silvex)	mg/L	ND	.0023	0.0023	102	10-140	
2,4-D	mg/L	ND	.0023	0.0022	96	40-140	
2,4-DB	mg/L	ND	.0023	0.0021	90	40-140	
Dalapon	mg/L	ND	.0023	0.0012	53	10-140	
Dicamba	mg/L	ND	.0023	0.0025	108	40-140	
Dichloroprop	mg/L	ND	.0023	0.0033	143	40-140	M1
Dinoseb	mg/L	ND	.0023	0.0031	134	10-140	
MCPA	mg/L	ND	.23	0.30	131	10-140	
MCPP	mg/L	ND	.23	0.31	134	40-140	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

MATRIX SPIKE SAMPLE: 29332

Parameter	Units	756350001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2,4-DCAA (S)	%.				138	40-140	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: OEXT/2107 | Analysis Method: EPA 8270
QC Batch Method: EPA 3510 | Analysis Description: 8270 Water MSSV
Associated Lab Samples: 756350001

METHOD BLANK: 29154 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	mg/L	ND	0.010	07/01/13 14:24	
1,2-Dichlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
1,3-Dichlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
1,4-Dichlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
2,4,5-Trichlorophenol	mg/L	ND	0.0060	07/01/13 14:24	
2,4,6-Trichlorophenol	mg/L	ND	0.010	07/01/13 14:24	
2,4-Dichlorophenol	mg/L	ND	0.0060	07/01/13 14:24	
2,4-Dimethylphenol	mg/L	ND	0.010	07/01/13 14:24	
2,4-Dinitrophenol	mg/L	ND	0.0060	07/01/13 14:24	
2,4-Dinitrotoluene	mg/L	ND	0.0060	07/01/13 14:24	
2,6-Dinitrotoluene	mg/L	ND	0.0060	07/01/13 14:24	
2-Chloronaphthalene	mg/L	ND	0.0060	07/01/13 14:24	
2-Chlorophenol	mg/L	ND	0.0060	07/01/13 14:24	
2-Methylnaphthalene	mg/L	ND	0.0060	07/01/13 14:24	
2-Methylphenol(o-Cresol)	mg/L	ND	0.0060	07/01/13 14:24	
2-Nitroaniline	mg/L	ND	0.0060	07/01/13 14:24	
2-Nitrophenol	mg/L	ND	0.0060	07/01/13 14:24	
3,3'-Dichlorobenzidine	mg/L	ND	0.0060	07/01/13 14:24	
3-Nitroaniline	mg/L	ND	0.0060	07/01/13 14:24	
4,6-Dinitro-2-methylphenol	mg/L	ND	0.0060	07/01/13 14:24	
4-Bromophenylphenyl ether	mg/L	ND	0.0060	07/01/13 14:24	
4-Chloro-3-methylphenol	mg/L	ND	0.0060	07/01/13 14:24	
4-Chloroaniline	mg/L	ND	0.0060	07/01/13 14:24	
4-Chlorophenylphenyl ether	mg/L	ND	0.0060	07/01/13 14:24	
4-Nitroaniline	mg/L	ND	0.0060	07/01/13 14:24	
4-Nitrophenol	mg/L	ND	0.010	07/01/13 14:24	
7,12-Dimethylbenz(a)anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Acenaphthene	mg/L	ND	0.010	07/01/13 14:24	
Acenaphthylene	mg/L	ND	0.0060	07/01/13 14:24	
Anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Benzo(a)anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Benzo(a)pyrene	mg/L	ND	0.0060	07/01/13 14:24	
Benzo(b)fluoranthene	mg/L	ND	0.010	07/01/13 14:24	
Benzo(g,h,i)perylene	mg/L	ND	0.010	07/01/13 14:24	
Benzo(k)fluoranthene	mg/L	ND	0.010	07/01/13 14:24	
Benzoic acid	mg/L	ND	0.040	07/01/13 14:24	
Benzyl alcohol	mg/L	ND	0.010	07/01/13 14:24	
bis(2-Chloroethoxy)methane	mg/L	ND	0.010	07/01/13 14:24	
bis(2-Chloroethyl) ether	mg/L	ND	0.0060	07/01/13 14:24	
bis(2-Chloroisopropyl) ether	mg/L	ND	0.0060	07/01/13 14:24	
bis(2-Ethylhexyl)phthalate	mg/L	ND	0.0060	07/01/13 14:24	
Butylbenzylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Carbazole	mg/L	ND	0.0060	07/01/13 14:24	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

METHOD BLANK: 29154 Matrix: Water

Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chrysene	mg/L	ND	0.0060	07/01/13 14:24	
Di-n-butylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Di-n-octylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Dibenz(a,h)anthracene	mg/L	ND	0.0060	07/01/13 14:24	
Dibenzofuran	mg/L	ND	0.0060	07/01/13 14:24	
Diethylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Dimethylphthalate	mg/L	ND	0.0060	07/01/13 14:24	
Fluoranthene	mg/L	ND	0.010	07/01/13 14:24	
Fluorene	mg/L	ND	0.0060	07/01/13 14:24	
Hexachloro-1,3-butadiene	mg/L	ND	0.010	07/01/13 14:24	
Hexachlorobenzene	mg/L	ND	0.0060	07/01/13 14:24	
Hexachlorocyclopentadiene	mg/L	ND	0.0060	07/01/13 14:24	
Hexachloroethane	mg/L	ND	0.0060	07/01/13 14:24	
Indeno(1,2,3-cd)pyrene	mg/L	ND	0.0060	07/01/13 14:24	
Isophorone	mg/L	ND	0.010	07/01/13 14:24	
N-Nitroso-di-n-propylamine	mg/L	ND	0.010	07/01/13 14:24	
N-Nitrosodimethylamine	mg/L	ND	0.0060	07/01/13 14:24	
N-Nitrosodiphenylamine	mg/L	ND	0.0060	07/01/13 14:24	
Naphthalene	mg/L	ND	0.0060	07/01/13 14:24	
Nitrobenzene	mg/L	ND	0.010	07/01/13 14:24	
Pentachlorophenol	mg/L	ND	0.010	07/01/13 14:24	
Phenanthrene	mg/L	ND	0.010	07/01/13 14:24	
Phenol	mg/L	ND	0.0060	07/01/13 14:24	
Pyrene	mg/L	ND	0.010	07/01/13 14:24	
Pyridine	mg/L	ND	0.0060	07/01/13 14:24	
2,4,6-Tribromophenol (S)	%.	42	10-140	07/01/13 14:24	
2-Fluorobiphenyl (S)	%.	54	10-140	07/01/13 14:24	
2-Fluorophenol (S)	%.	30	10-140	07/01/13 14:24	
Nitrobenzene-d5 (S)	%.	57	10-140	07/01/13 14:24	
p-Terphenyl-d14 (S)	%.	86	10-140	07/01/13 14:24	
Phenol-d6 (S)	%.	25	10-140	07/01/13 14:24	

LABORATORY CONTROL SAMPLE: 29155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	mg/L	.1	0.073	73	40-140	
1,2-Dichlorobenzene	mg/L	.1	0.061	61	10-140	
1,3-Dichlorobenzene	mg/L	.1	0.060	60	10-140	
1,4-Dichlorobenzene	mg/L	.1	0.059	59	10-140	
2,4,5-Trichlorophenol	mg/L	.1	0.079	79	40-140	
2,4,6-Trichlorophenol	mg/L	.1	0.073	73	40-140	
2,4-Dichlorophenol	mg/L	.1	0.083	83	40-140	
2,4-Dimethylphenol	mg/L	.1	0.065	65	40-140	
2,4-Dinitrophenol	mg/L	.1	0.079	79	10-140	
2,4-Dinitrotoluene	mg/L	.1	0.078	78	40-140	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

LABORATORY CONTROL SAMPLE: 29155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,6-Dinitrotoluene	mg/L	.1	0.069	69	40-140	
2-Chloronaphthalene	mg/L	.1	0.072	72	40-140	
2-Chlorophenol	mg/L	.1	0.064	64	10-140	
2-Methylnaphthalene	mg/L	.1	0.074	74	40-140	
2-Methylphenol(o-Cresol)	mg/L	.1	0.058	58	10-140	
2-Nitroaniline	mg/L	.1	0.077	77	40-140	
2-Nitrophenol	mg/L	.1	0.070	70	40-140	
3,3'-Dichlorobenzidine	mg/L	.1	0.067	67	10-140	
3-Nitroaniline	mg/L	.1	0.063	63	40-140	
4,6-Dinitro-2-methylphenol	mg/L	.1	0.076	76	40-140	
4-Bromophenylphenyl ether	mg/L	.1	0.069	69	40-140	
4-Chloro-3-methylphenol	mg/L	.1	0.066	66	40-140	
4-Chloroaniline	mg/L	.1	0.060	60	40-140	
4-Chlorophenylphenyl ether	mg/L	.1	0.069	69	40-140	
4-Nitroaniline	mg/L	.1	0.069	69	40-140	
4-Nitrophenol	mg/L	.1	0.037	37	10-140	
7,12-Dimethylbenz(a)anthracene	mg/L	.1	0.071	71	40-140	
Acenaphthene	mg/L	.1	0.072	72	40-140	
Acenaphthylene	mg/L	.1	0.067	67	40-140	
Anthracene	mg/L	.1	0.077	77	40-140	
Benzo(a)anthracene	mg/L	.1	0.082	82	40-140	
Benzo(a)pyrene	mg/L	.1	0.080	80	40-140	
Benzo(b)fluoranthene	mg/L	.1	0.071	71	40-140	
Benzo(g,h,i)perylene	mg/L	.1	0.078	78	40-140	
Benzo(k)fluoranthene	mg/L	.1	0.086	86	40-140	
Benzoic acid	mg/L	.1	0.074	74	10-140	
Benzyl alcohol	mg/L	.1	0.044	44	10-140	
bis(2-Chloroethoxy)methane	mg/L	.1	0.073	73	40-140	
bis(2-Chloroethyl) ether	mg/L	.1	0.063	63	40-140	
bis(2-Chloroisopropyl) ether	mg/L	.1	0.058	58	10-140	
bis(2-Ethylhexyl)phthalate	mg/L	.1	0.069	69	40-140	
Butylbenzylphthalate	mg/L	.1	0.077	77	40-140	
Carbazole	mg/L	.1	0.071	71	40-140	
Chrysene	mg/L	.1	0.086	86	40-140	
Di-n-butylphthalate	mg/L	.1	0.076	76	40-140	
Di-n-octylphthalate	mg/L	.1	0.070	70	40-140	
Dibenz(a,h)anthracene	mg/L	.1	0.075	75	40-140	
Dibenzofuran	mg/L	.1	0.078	78	40-140	
Diethylphthalate	mg/L	.1	0.078	78	40-140	
Dimethylphthalate	mg/L	.1	0.080	80	40-140	
Fluoranthene	mg/L	.1	0.077	77	40-140	
Fluorene	mg/L	.1	0.067	67	40-140	
Hexachloro-1,3-butadiene	mg/L	.1	0.071	71	40-140	
Hexachlorobenzene	mg/L	.1	0.082	82	40-140	
Hexachlorocyclopentadiene	mg/L	.1	0.068	68	10-140	
Hexachloroethane	mg/L	.1	0.055	55	40-140	
Indeno(1,2,3-cd)pyrene	mg/L	.1	0.075	75	40-140	
Isophorone	mg/L	.1	0.073	73	40-140	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

LABORATORY CONTROL SAMPLE: 29155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
N-Nitroso-di-n-propylamine	mg/L	.1	0.064	64	40-140	
N-Nitrosodimethylamine	mg/L	.1	0.036	36	10-140	
N-Nitrosodiphenylamine	mg/L	.1	0.091	91	40-140	
Naphthalene	mg/L	.1	0.069	69	40-140	
Nitrobenzene	mg/L	.1	0.068	68	40-140	
Pentachlorophenol	mg/L	.1	0.065	65	10-140	
Phenanthrene	mg/L	.1	0.073	73	40-140	
Phenol	mg/L	.1	0.029	29	10-140	
Pyrene	mg/L	.1	0.075	75	40-140	
Pyridine	mg/L	.1	0.025	25	10-140	
2,4,6-Tribromophenol (S)	%.			64	10-140	
2-Fluorobiphenyl (S)	%.			79	10-140	
2-Fluorophenol (S)	%.			38	10-140	
Nitrobenzene-d5 (S)	%.			78	10-140	
p-Terphenyl-d14 (S)	%.			97	10-140	
Phenol-d6 (S)	%.			31	10-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29470 29471

Parameter	Units	756366001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	mg/L	ND	.1	.1	0.094	0.077	94	77	40-140	20	40	
1,2-Dichlorobenzene	mg/L	ND	.1	.1	0.076	0.061	76	61	10-140	22	40	
1,3-Dichlorobenzene	mg/L	ND	.1	.1	0.072	0.058	72	58	10-140	21	40	
1,4-Dichlorobenzene	mg/L	ND	.1	.1	0.071	0.057	71	57	10-140	23	40	
2,4,5-Trichlorophenol	mg/L	ND	.1	.1	0.10	0.086	104	86	40-140	18	40	
2,4,6-Trichlorophenol	mg/L	ND	.1	.1	0.098	0.082	98	82	40-140	17	40	
2,4-Dichlorophenol	mg/L	ND	.1	.1	0.099	0.085	99	85	40-140	15	40	
2,4-Dimethylphenol	mg/L	ND	.1	.1	0.077	0.065	77	65	40-140	17	40	
2,4-Dinitrophenol	mg/L	ND	.1	.1	0.11	0.083	109	83	10-140	27	40	
2,4-Dinitrotoluene	mg/L	ND	.1	.1	0.10	0.088	102	88	40-140	15	40	
2,6-Dinitrotoluene	mg/L	ND	.1	.1	0.096	0.078	96	78	40-140	21	40	
2-Chloronaphthalene	mg/L	ND	.1	.1	0.10	0.084	102	84	40-140	20	40	
2-Chlorophenol	mg/L	ND	.1	.1	ND	ND	0	0	10-140		40	M1
2-Methylnaphthalene	mg/L	ND	.1	.1	0.098	0.082	98	82	40-140	18	40	
2-Methylphenol(o-Cresol)	mg/L	ND	.1	.1	0.056	0.050	56	50	10-140	10	40	
2-Nitroaniline	mg/L	ND	.1	.1	0.089	0.077	89	77	40-140	15	40	
2-Nitrophenol	mg/L	ND	.1	.1	0.088	0.073	88	73	40-140	18	40	
3,3'-Dichlorobenzidine	mg/L	ND	.1	.1	0.063	0.049	63	49	10-140	25	40	
3-Nitroaniline	mg/L	ND	.1	.1	0.060	0.053	60	53	40-140	12	40	
4,6-Dinitro-2-methylphenol	mg/L	ND	.1	.1	0.10	0.082	105	82	40-140	24	40	
4-Bromophenylphenyl ether	mg/L	ND	.1	.1	0.095	0.081	95	81	40-140	17	40	
4-Chloro-3-methylphenol	mg/L	ND	.1	.1	0.087	0.069	87	69	40-140	23	40	
4-Chloroaniline	mg/L	ND	.1	.1	0.059	0.052	59	52	10-140	12	40	
4-Chlorophenylphenyl ether	mg/L	ND	.1	.1	0.094	0.078	94	78	40-140	18	40	
4-Nitroaniline	mg/L	ND	.1	.1	0.057	0.050	57	50	40-140	13	40	
4-Nitrophenol	mg/L	ND	.1	.1	0.036	0.034	36	34	10-140	7	40	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29470 29471

Parameter	Units	756366001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
7,12-Dimethylbenz(a)anthracene	mg/L	ND	.1	.1	0.098	0.078	98	78	40-140	22	40	
Acenaphthene	mg/L	ND	.1	.1	0.099	0.082	99	82	40-140	19	40	
Acenaphthylene	mg/L	ND	.1	.1	0.091	0.077	91	77	40-140	17	40	
Anthracene	mg/L	ND	.1	.1	0.11	0.090	109	90	40-140	19	40	
Benzo(a)anthracene	mg/L	ND	.1	.1	0.11	0.093	108	93	40-140	15	40	
Benzo(a)pyrene	mg/L	ND	.1	.1	0.11	0.091	111	91	40-140	19	40	
Benzo(b)fluoranthene	mg/L	ND	.1	.1	0.11	0.085	107	85	40-140	23	40	
Benzo(g,h,i)perylene	mg/L	ND	.1	.1	0.11	0.084	108	84	40-140	25	40	
Benzo(k)fluoranthene	mg/L	ND	.1	.1	0.11	0.096	111	96	40-140	15	40	
Benzoic acid	mg/L	ND	.1	.1	0.067	0.067	67	67	10-140	1	40	
Benzyl alcohol	mg/L	ND	.1	.1	0.058	0.053	58	53	10-140	8	40	
bis(2-Chloroethoxy)methane	mg/L	ND	.1	.1	0.091	0.078	91	78	40-140	15	40	
bis(2-Chloroethyl) ether	mg/L	ND	.1	.1	0.082	0.065	82	65	40-140	23	40	
bis(2-Chloroisopropyl) ether	mg/L	ND	.1	.1	0.065	0.054	65	54	40-140	18	40	
bis(2-Ethylhexyl)phthalate	mg/L	ND	.1	.1	0.10	0.082	98	80	40-140	20	40	
Butylbenzylphthalate	mg/L	ND	.1	.1	0.10	0.090	100	90	40-140	10	40	
Carbazole	mg/L	ND	.1	.1	0.095	0.076	95	76	40-140	22	40	
Chrysene	mg/L	ND	.1	.1	0.11	0.096	107	96	40-140	12	40	
Di-n-butylphthalate	mg/L	ND	.1	.1	0.11	0.088	110	88	40-140	23	40	
Di-n-octylphthalate	mg/L	ND	.1	.1	0.10	0.082	100	82	40-140	20	40	
Dibenz(a,h)anthracene	mg/L	ND	.1	.1	0.10	0.081	104	81	40-140	24	40	
Dibenzofuran	mg/L	ND	.1	.1	0.11	0.088	105	88	40-140	18	40	
Diethylphthalate	mg/L	ND	.1	.1	0.11	0.090	109	90	40-140	19	40	
Dimethylphthalate	mg/L	ND	.1	.1	0.11	0.094	109	94	40-140	15	40	
Fluoranthene	mg/L	ND	.1	.1	0.11	0.086	110	86	40-140	25	40	
Fluorene	mg/L	ND	.1	.1	0.090	0.076	90	76	40-140	16	40	
Hexachloro-1,3-butadiene	mg/L	ND	.1	.1	0.093	0.077	93	77	40-140	20	40	
Hexachlorobenzene	mg/L	ND	.1	.1	0.11	0.091	106	91	40-140	15	40	
Hexachlorocyclopentadiene	mg/L	ND	.1	.1	0.091	0.073	91	73	10-140	21	40	
Hexachloroethane	mg/L	ND	.1	.1	0.065	0.048	65	48	40-140	31	40	
Indeno(1,2,3-cd)pyrene	mg/L	ND	.1	.1	0.10	0.081	104	81	40-140	25	40	
Isophorone	mg/L	ND	.1	.1	0.091	0.077	91	77	40-140	16	40	
N-Nitroso-di-n-propylamine	mg/L	ND	.1	.1	0.069	0.060	69	60	40-140	14	40	
N-Nitrosodimethylamine	mg/L	ND	.1	.1	0.036	0.031	36	31	10-140	14	40	
N-Nitrosodiphenylamine	mg/L	ND	.1	.1	0.14	0.11	139	112	10-140	22	40	
Naphthalene	mg/L	ND	.1	.1	0.098	0.079	98	79	40-140	21	40	
Nitrobenzene	mg/L	ND	.1	.1	0.082	0.071	82	71	40-140	14	40	
Pentachlorophenol	mg/L	ND	.1	.1	0.089	0.068	89	68	10-140	26	40	
Phenanthrene	mg/L	ND	.1	.1	0.10	0.085	103	85	40-140	19	40	
Phenol	mg/L	ND	.1	.1	0.0059J	0.0047J	6	5	10-140		40	M1
Pyrene	mg/L	ND	.1	.1	0.11	0.084	106	84	40-140	23	40	
Pyridine	mg/L	ND	.1	.1	0.023	0.020	23	20	10-140	12	40	
2,4,6-Tribromophenol (S)	%.						80	65	10-140		40	
2-Fluorobiphenyl (S)	%.						90	76	10-140		40	
2-Fluorophenol (S)	%.						0	1	10-140		40	S0
Nitrobenzene-d5 (S)	%.						86	72	10-140		40	

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Pace Analytical Services, Inc.
400 West Bethany Drive - Suite 190
Allen, TX 75013
(972)727-1123

QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29470 29471

Parameter	Units	756366001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
p-Terphenyl-d14 (S)	%.						116	103	10-140		40	
Phenol-d6 (S)	%.						9	8	10-140		40	S0

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: WET/2139 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Associated Lab Samples: 756350001

METHOD BLANK: 29010 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	20.0	06/27/13 14:16	

LABORATORY CONTROL SAMPLE: 29011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	250	246	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29012 29013

Parameter	Units	756180002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	208	250	250	440	450	93	97	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29044 29045

Parameter	Units	756189001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	252	250	250	506	490	102	95	90-110	3	20	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: WETA/2477 | Analysis Method: EPA 9056A
QC Batch Method: EPA 9056A | Analysis Description: 9056 IC Anions
Associated Lab Samples: 756350001

METHOD BLANK: 29095 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	0.10	06/27/13 08:56	
Sulfate	mg/L	ND	0.10	06/27/13 08:56	

LABORATORY CONTROL SAMPLE: 29096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	92	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 29097 29098

Parameter	Units	756350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	159	500	500	652	620	99	92	80-120	5	15	
Sulfate	mg/L	120	500	500	600	605	96	97	80-120	1	15	

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QUALITY CONTROL DATA

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

QC Batch: WETA/2463 | Analysis Method: EPA 9056A
QC Batch Method: EPA 9056A | Analysis Description: 9056 IC Anions
Associated Lab Samples: 756350001

METHOD BLANK: 28798 | Matrix: Water
Associated Lab Samples: 756350001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.10	06/27/13 08:56	
Nitrite as N	mg/L	ND	0.10	06/26/13 16:09	

LABORATORY CONTROL SAMPLE: 28799

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	4.6	91	90-110	
Nitrite as N	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 28800 28801

Parameter	Units	756350001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.54	5.6	5.6	5.3	5.3	86	86	80-120	0	15	
Nitrite as N	mg/L	ND	5.6	5.6	5.2	5.2	94	94	80-120	0	15	

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QUALIFIERS

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 68137008/Former TorC Landfill
Pace Project No.: 756350

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
756350001	**MW-5**	EPA 3510	OEXT/2117	EPA 8081	GCSV/1620
756350001	**MW-5**	EPA 8151	OEXT/2116	EPA 8151	GCSV/1630
756350001	**MW-5**	EPA 3010	MPRP/1464	EPA 6010	ICP/1344
756350001	**MW-5**	EPA 7470	MERP/1205	EPA 7470	MERC/1200
756350001	**MW-5**	EPA 3510	OEXT/2107	EPA 8270	MSSV/1253
756350001	**MW-5**	EPA 5030B/8260	MSV/1386		
756350001	**MW-5**	SM 2320B	WET/2139		
756350001	**MW-5**	EPA 9056A	WETA/2477		
756350001	**MW-5**	EPA 9056A	WETA/2463		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1658935

Section A Required Client Information:

Company: Terracon
Address: 1640 Hickory Loop, Suite 105, Las Cruces, NM 88005
Email To: jkwilliams@terracon.com
Phone: 575.527.1750 Fax: 575.527.1092
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Kyle Williams
Copy To:
Purchase Order No.:
Project Name: Former Tonc Landfill
Project Number: 68137008

Section C Invoice Information:

Attention: Debbie Daniels
Company Name: Terracon
Address: Las Cruces
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER NMED

Site Location STATE: NM

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	8260	8270	8081	8151	Metals (RCRA 7 + Cu)	Major Ions (Cl, SO4, NO3, NO2, Bicarb)	pH	Lab Sat (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-5	WT	G	6-25-13	1230			15	12	X		X	X					X	X	X	X	X	X				001
2																											
3	~~MW-8~~	WT	G					15	2	X									X								
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

WO#: 756350
756350

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] Terracon	6-25-13	1400	Kathy Williams / Pace	6/26/13	855 AM	3.2°C	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kyle Williams
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 6-25-13

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Sample Condition Upon Receipt

Pace Analytical

Client Name: Terracon N.M. Pace #: 7561350

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Courier ☐ LSO ☐ Pace Other _____

Tracking #: 795793006725

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no ☐ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used IR-01 IR-02 **Type of Ice:** Wet Blue None ☒ Samples on ice, cooling process has begun

Cooler Temperature 3.2°C **Ice Visible in Sample Containers:** ☒ yes ☐ no
(Corrected, if applicable)

Temp should be above freezing to 6°C **Comments:**

Date and Initials of person examining contents: SM 6/26/13

Sample Receiving		
Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Short Hold Time Analysis (<72hr):	☒ Yes ☐ No ☐ N/A	5.
Rush Turn Around Time Requested:	☐ Yes ☒ No ☐ N/A	6.
Containers Intact:	☒ Yes ☐ No ☐ N/A	7.
Sample Labels match COC: -Includes date/time/ID/Analysis	☒ Yes ☐ No ☐ N/A	8.
All containers needing acid/base pres. have been checked? exceptions: VOA, coliform, O&G All containers needing preservation are found to be in compliance with EPA recommendation.	☒ Yes ☐ No ☐ N/A ☒ Yes ☐ No ☐ N/A	9. (Circle) HNO3 H2SO4 NaOH HCl If applicable see below. pH strip lot #: 10F0X3621A0326050 Potassium Iodide strip lot #: 31513 Lead Acetate strip lot #:
Headspace in VOA Vials (>6mm):	☐ Yes ☒ No ☐ N/A	10.
Trip Blank Present: Trip Blank Custody Seals Present	☐ Yes ☒ No ☐ N/A ☐ Yes ☒ No ☐ N/A	11.
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	12.
Sufficient Volume:	☒ Yes ☐ No ☐ N/A	13.
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	14.

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Amc **Date:** 6-26-13

Sample Container Count

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COC PAGE 1 of 1
COC ID# 1658935

Pace Project # 256350

Sample Line Item	BP2N	AG1U	VG9U	VG9H	BP2S	BP1U	BP2U	BG1H	AG1S	BP20	SP5T	WGFU	WGKU	DG9H		Comments
1	1	6			1		1							3		
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

Container Codes

DG9H	40mL HCL amber voa vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCL amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved **amber** vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	I	Wipe/Swab
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOh, Asc Acid plastic	VG9H	40mL HCL clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCL clear glass	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio. clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved **clear** vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear gla	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfate amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag
WGKU	8oz wide jar upreserved	SP5T	120mL Coliform Na Thiosulfate	SP5U	120mL Coliform unpreserved	GN	General unpreserved
Other	Other						

F-DAL-C-003 rev.00 11-5-2012

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 03, 2013

Samuel J. Senn

Bascor
952 Blazing Star Crossing St.
Mesquite, NV 89034
TEL: (847) 812-0409
FAX (847) 577-1982

RE: T or C Former Landfill OrderNo.: 1306A84

Dear Samuel J. Senn:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/25/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1306A84**
Date Reported: **7/3/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Bascor
Client Sample ID: VP-3
Project: T or C Former Landfill
Collection Date: 6/25/2013 7:45:00 AM
Lab ID: 1306A84-001
Matrix: AIR
Received Date: 6/25/2013 2:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DAM**	
Benzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Toluene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Ethylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Naphthalene	ND	0.20		µg/L	1	6/26/2013 12:45:42 PM	R11584
1-Methylnaphthalene	ND	0.40		µg/L	1	6/26/2013 12:45:42 PM	R11584
2-Methylnaphthalene	ND	0.40		µg/L	1	6/26/2013 12:45:42 PM	R11584
Acetone	ND	1.0		µg/L	1	6/26/2013 12:45:42 PM	R11584
Bromobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Bromodichloromethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Bromoform	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Bromomethane	ND	0.20		µg/L	1	6/26/2013 12:45:42 PM	R11584
2-Butanone	ND	1.0		µg/L	1	6/26/2013 12:45:42 PM	R11584
Carbon disulfide	ND	1.0		µg/L	1	6/26/2013 12:45:42 PM	R11584
Carbon tetrachloride	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Chlorobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Chloroethane	ND	0.20		µg/L	1	6/26/2013 12:45:42 PM	R11584
Chloroform	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Chloromethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
2-Chlorotoluene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
4-Chlorotoluene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
cis-1,2-DCE	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/26/2013 12:45:42 PM	R11584
Dibromochloromethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Dibromomethane	ND	0.20		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Dichlorodifluoromethane	0.47	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1-Dichloroethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1-Dichloroethene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2-Dichloropropane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,3-Dichloropropane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
2,2-Dichloropropane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1-Dichloropropene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Bascor
Client Sample ID: VP-3
Project: T or C Former Landfill
Collection Date: 6/25/2013 7:45:00 AM
Lab ID: 1306A84-001
Matrix: AIR
Received Date: 6/25/2013 2:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DAM**	
Hexachlorobutadiene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
2-Hexanone	ND	1.0		µg/L	1	6/26/2013 12:45:42 PM	R11584
Isopropylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
4-Isopropyltoluene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/26/2013 12:45:42 PM	R11584
Methylene chloride	ND	0.30		µg/L	1	6/26/2013 12:45:42 PM	R11584
n-Butylbenzene	ND	0.30		µg/L	1	6/26/2013 12:45:42 PM	R11584
n-Propylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
sec-Butylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Styrene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
tert-Butylbenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
trans-1,2-DCE	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Trichlorofluoromethane	0.17	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/26/2013 12:45:42 PM	R11584
Vinyl chloride	ND	0.10		µg/L	1	6/26/2013 12:45:42 PM	R11584
Xylenes, Total	ND	0.15		µg/L	1	6/26/2013 12:45:42 PM	R11584
Surr: 1,2-Dichloroethane-d4	90.0	70-130		%REC	1	6/26/2013 12:45:42 PM	R11584
Surr: 4-Bromofluorobenzene	90.9	70-130		%REC	1	6/26/2013 12:45:42 PM	R11584
Surr: Dibromofluoromethane	90.7	70-130		%REC	1	6/26/2013 12:45:42 PM	R11584
Surr: Toluene-d8	92.6	70-130		%REC	1	6/26/2013 12:45:42 PM	R11584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Bascor
Client Sample ID: VP-4
Project: T or C Former Landfill
Collection Date: 6/25/2013 8:10:00 AM
Lab ID: 1306A84-002
Matrix: AIR
Received Date: 6/25/2013 2:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DAM**	
Benzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Toluene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Ethylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Naphthalene	ND	0.20		µg/L	1	6/26/2013 1:20:36 PM	R11584
1-Methylnaphthalene	ND	0.40		µg/L	1	6/26/2013 1:20:36 PM	R11584
2-Methylnaphthalene	ND	0.40		µg/L	1	6/26/2013 1:20:36 PM	R11584
Acetone	ND	1.0		µg/L	1	6/26/2013 1:20:36 PM	R11584
Bromobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Bromodichloromethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Bromoform	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Bromomethane	ND	0.20		µg/L	1	6/26/2013 1:20:36 PM	R11584
2-Butanone	ND	1.0		µg/L	1	6/26/2013 1:20:36 PM	R11584
Carbon disulfide	ND	1.0		µg/L	1	6/26/2013 1:20:36 PM	R11584
Carbon tetrachloride	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Chlorobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Chloroethane	ND	0.20		µg/L	1	6/26/2013 1:20:36 PM	R11584
Chloroform	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Chloromethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
2-Chlorotoluene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
4-Chlorotoluene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
cis-1,2-DCE	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/26/2013 1:20:36 PM	R11584
Dibromochloromethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Dibromomethane	ND	0.20		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Dichlorodifluoromethane	0.86	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1-Dichloroethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1-Dichloroethene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2-Dichloropropane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,3-Dichloropropane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
2,2-Dichloropropane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1-Dichloropropene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Bascor
Client Sample ID: VP-4
Project: T or C Former Landfill
Collection Date: 6/25/2013 8:10:00 AM
Lab ID: 1306A84-002
Matrix: AIR
Received Date: 6/25/2013 2:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DAM**	
Hexachlorobutadiene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
2-Hexanone	ND	1.0		µg/L	1	6/26/2013 1:20:36 PM	R11584
Isopropylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
4-Isopropyltoluene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/26/2013 1:20:36 PM	R11584
Methylene chloride	ND	0.30		µg/L	1	6/26/2013 1:20:36 PM	R11584
n-Butylbenzene	ND	0.30		µg/L	1	6/26/2013 1:20:36 PM	R11584
n-Propylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
sec-Butylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Styrene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
tert-Butylbenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
trans-1,2-DCE	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Trichlorofluoromethane	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/26/2013 1:20:36 PM	R11584
Vinyl chloride	ND	0.10		µg/L	1	6/26/2013 1:20:36 PM	R11584
Xylenes, Total	ND	0.15		µg/L	1	6/26/2013 1:20:36 PM	R11584
Surr: 1,2-Dichloroethane-d4	89.1	70-130		%REC	1	6/26/2013 1:20:36 PM	R11584
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	1	6/26/2013 1:20:36 PM	R11584
Surr: Dibromofluoromethane	90.7	70-130		%REC	1	6/26/2013 1:20:36 PM	R11584
Surr: Toluene-d8	91.4	70-130		%REC	1	6/26/2013 1:20:36 PM	R11584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1306A84-001B; VP-3
Location:
Lab ID: G13060604-001

Report Date: 07/01/13
Collection Date: 06/25/13 07:45
Date Received: 06/27/13
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	13.336	Mol %		GPA 2261	06/28/13 15:02 / djb
Nitrogen	79.703	Mol %		GPA 2261	06/28/13 15:02 / djb
Carbon Dioxide	6.961	Mol %		GPA 2261	06/28/13 15:02 / djb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
Methane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
Ethane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
Propane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
Isobutane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
n-Butane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
Isopentane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
n-Pentane	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
Hexanes plus	< 0.001	Mol %		GPA 2261	06/28/13 15:02 / djb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM Isopentane	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM n-Pentane	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM Hexanes plus	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM Pentanes plus	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:02 / djb
GPM Total	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:02 / djb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	06/28/13 15:02 / djb
Calculation Temperature Base	60	°F		GPA 2261	06/28/13 15:02 / djb
Compressibility Factor, Z	0.99950	unitless		GPA 2261	06/28/13 15:02 / djb
Molecular Weight	29.66	unitless		GPA 2261	06/28/13 15:02 / djb
Pseudo-critical Pressure, psia	566	psia		GPA 2261	06/28/13 15:02 / djb
Pseudo-critical Temperature, deg R	257	deg R		GPA 2261	06/28/13 15:02 / djb
Specific Gravity (air=1.000)	1.027	unitless		GPA 2261	06/28/13 15:02 / djb
Gross BTU per cu ft @ std cond, dry	< 0.01	BTU/cu ft		GPA 2261	06/28/13 15:02 / djb
Gross BTU per cu ft @ std cond, wet	< 0.01	BTU/cu ft		GPA 2261	06/28/13 15:02 / djb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1306A84-002B; VP-4
Location:
Lab ID: G13060604-002

Report Date: 07/01/13
Collection Date: 06/25/13 08:10
Date Received: 06/27/13
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Oxygen	7.188	Mol %		GPA 2261	06/28/13 15:15 / djb
Nitrogen	81.501	Mol %		GPA 2261	06/28/13 15:15 / djb
Carbon Dioxide	11.312	Mol %		GPA 2261	06/28/13 15:15 / djb
Hydrogen Sulfide	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
Methane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
Ethane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
Propane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
Isobutane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
n-Butane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
Isopentane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
n-Pentane	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
Hexanes plus	< 0.001	Mol %		GPA 2261	06/28/13 15:15 / djb
GPM @ STD COND/1000 CU.FT., MOISTURE FREE GAS					
GPM Ethane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM Propane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM Isobutane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM n-Butane	< 0.0003	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM Isopentane	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM n-Pentane	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM Hexanes plus	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM Pentanes plus	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:15 / djb
GPM Total	< 0.0004	gal/MCF		GPA 2261	06/28/13 15:15 / djb
CALCULATED PROPERTIES					
Calculation Pressure Base	14.730	psia		GPA 2261	06/28/13 15:15 / djb
Calculation Temperature Base	60	°F		GPA 2261	06/28/13 15:15 / djb
Compressibility Factor, Z	0.99941	unitless		GPA 2261	06/28/13 15:15 / djb
Molecular Weight	30.11	unitless		GPA 2261	06/28/13 15:15 / djb
Pseudo-critical Pressure, psia	577	psia		GPA 2261	06/28/13 15:15 / djb
Pseudo-critical Temperature, deg R	268	deg R		GPA 2261	06/28/13 15:15 / djb
Specific Gravity (air=1.000)	1.043	unitless		GPA 2261	06/28/13 15:15 / djb
Gross BTU per cu ft @ std cond, dry	< 0.01	BTU/cu ft		GPA 2261	06/28/13 15:15 / djb
Gross BTU per cu ft @ std cond, wet	< 0.01	BTU/cu ft		GPA 2261	06/28/13 15:15 / djb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental **Report Date:** 07/01/13

Project: Not Indicated **Work Order:** G13060604

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: Varian GC_130628A	
Sample ID: ICV-1306271253	12	Initial Calibration Verification Standard							06/27/13 12:54	
Oxygen		0.487	Mol %	0.001	99	90	110			
Nitrogen		5.213	Mol %	0.001	100	90	110			
Carbon Dioxide		5.110	Mol %	0.001	102	90	110			
Hydrogen Sulfide		0.130	Mol %	0.001	126	90	150			
Methane		72.418	Mol %	0.001	99	90	110			
Ethane		5.133	Mol %	0.001	102	90	110			
Propane		5.110	Mol %	0.001	102	90	110			
Isobutane		2.025	Mol %	0.001	101	90	110			
n-Butane		2.013	Mol %	0.001	100	90	110			
Isopentane		1.017	Mol %	0.001	102	90	110			
n-Pentane		1.013	Mol %	0.001	101	90	110			
Hexanes plus		0.330	Mol %	0.001	109	90	120			
Method: GPA 2261									Batch: R204744	
Sample ID: LCS-1306271300	12	Laboratory Control Sample				Run: Varian GC_130628A			06/27/13 13:00	
Oxygen		0.998	Mol %	0.001	100	90	110			
Nitrogen		1.022	Mol %	0.001	102	90	110			
Carbon Dioxide		0.982	Mol %	0.001	98	90	110			
Hydrogen Sulfide		0.027	Mol %	0.001	107	80	120			
Methane		93.439	Mol %	0.001	100	90	110			
Ethane		1.006	Mol %	0.001	100	90	110			
Propane		0.983	Mol %	0.001	99	90	110			
Isobutane		0.500	Mol %	0.001	100	90	110			
n-Butane		0.493	Mol %	0.001	99	90	110			
Isopentane		0.199	Mol %	0.001	100	90	110			
n-Pentane		0.199	Mol %	0.001	100	90	110			
Hexanes plus		0.151	Mol %	0.001	101	80	120			
Sample ID: G13060604-001ADUP	12	Sample Duplicate				Run: Varian GC_130628A			06/28/13 15:06	
Oxygen		13.340	Mol %	0.001				0.0	10	
Nitrogen		79.714	Mol %	0.001				0.0	10	
Carbon Dioxide		6.946	Mol %	0.001				0.2	10	
Hydrogen Sulfide		< 0.001	Mol %	0.001					10	
Methane		< 0.001	Mol %	0.001					10	
Ethane		< 0.001	Mol %	0.001					10	
Propane		< 0.001	Mol %	0.001					10	
Isobutane		< 0.001	Mol %	0.001					10	
n-Butane		< 0.001	Mol %	0.001					10	
Isopentane		< 0.001	Mol %	0.001					10	
n-Pentane		< 0.001	Mol %	0.001					10	
Hexanes plus		< 0.001	Mol %	0.001					10	
Sample ID: G13060604-002ADUP	12	Sample Duplicate				Run: Varian GC_130628A			06/28/13 15:20	
Oxygen		7.202	Mol %	0.001				0.2	10	
Nitrogen		81.515	Mol %	0.001				0.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental **Report Date:** 07/01/13

Project: Not Indicated **Work Order:** G13060604

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Batch: R204744	
Sample ID: G13060604-002ADUP	12	Sample Duplicate				Run: Varian GC_130628A			06/28/13 15:20	
Carbon Dioxide		11.284	Mol %	0.001				0.2	10	
Hydrogen Sulfide		< 0.001	Mol %	0.001					10	
Methane		< 0.001	Mol %	0.001					10	
Ethane		< 0.001	Mol %	0.001					10	
Propane		< 0.001	Mol %	0.001					10	
Isobutane		< 0.001	Mol %	0.001					10	
n-Butane		< 0.001	Mol %	0.001					10	
Isopentane		< 0.001	Mol %	0.001					10	
n-Pentane		< 0.001	Mol %	0.001					10	
Hexanes plus		< 0.001	Mol %	0.001					10	
Sample ID: LCS-1306281536	12	Laboratory Control Sample				Run: Varian GC_130628A			06/28/13 15:37	
Oxygen		0.998800	Mol %	0.0010	100	90	110			
Nitrogen		1.03720	Mol %	0.0010	103	90	110			
Carbon Dioxide		0.982100	Mol %	0.0010	98	90	110			
Hydrogen Sulfide		0.0274000	Mol %	0.0010	110	80	120			
Methane		93.4462	Mol %	0.0010	100	90	110			
Ethane		1.00130	Mol %	0.0010	100	90	110			
Propane		0.978400	Mol %	0.0010	98	90	110			
Isobutane		0.495000	Mol %	0.0010	99	90	110			
n-Butane		0.488800	Mol %	0.0010	98	90	110			
Isopentane		0.196900	Mol %	0.0010	98	90	110			
n-Pentane		0.197000	Mol %	0.0010	99	90	110			
Hexanes plus		0.151000	Mol %	0.0010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BASCOR Work Order Number: 1306A84 RcptNo: 1

Received by/date: MG 06/25/13

Logged By: **Michelle Garcia** 6/25/2013 2:50:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 6/25/2013 4:24:48 PM Michelle Garcia

Reviewed By: TO 06/26/2013

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☐ NA ☑
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of 1687688

Section A Required Client Information:

Company: BASCOR
Address: 952 Blazing Star Crossing
Mesquite, NV 89034
Email To: Sam.Senn@bascor.com
Phone: 817-812-0509 Fax: 817-577-1982
Requested Due Date/TAT:

Section B Required Project Information:

Report To: BASCOR (Sam Senn)
Copy To:
Purchase Order No.: TB13 307L
Project Name: TOC Former landfill
Project Number: 307L

Section C Invoice Information:

Attention: Sam Senn
Company Name: BASCOR
Address: 952 Blazing Star Crossing
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☒ OTHER

Site Location STATE: NM

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	B260 (Volatiles)	Methane	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	VP-3	AR	G	06/25	0740	06/25	0745		1										X	X		13060A84-001
2																						-0
3	VP-4	AR	G	06/25	0800	06/25	0810		1										X	X		-002
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature] / Terracon	6-25-13	10:30	[signature] / BASCOR	6-25-13	10:30	
	[signature]	6-25-13	14:55	[signature]	06/25/13	1450	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Williams

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 06/25/13

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

CORRECTIVE ACTION PLAN FOR THE FORMER TRUTH OR CONSEQUENCES LANDFILL

Elephant Butte, New Mexico

Prepared for:

New Mexico Environment Department

City of Truth or Consequences, NM

Turtleback Mountain Partners

October 29, 2013

BASCOR Environmental, Inc.
consulting engineers and scientists

P.O. Box 669
Mt. Prospect, IL 60056-0669
Phone: (847) 577-1980

CONTENTS

1.0 INTRODUCTION 1-1
1.1 Property Ownership and Previous Site Use 1-2
1.2 Site Characteristics 1-3

2.0 PREVIOUS INVESTIGATIONS 2-1
2.1 Preliminary Assessment 2-1
2.2 Phase II Investigations 2-2
2.2.1 CCJM 2-2
2.2.2 New Mexico Environment Department 2-3
2.2.3 Off-Site Sampling - Souder, Miller & Associates 2-3
2.3 Landfill Inspection 2-3
2.4 Landfill Closure Plan 2-4
2.5 2007 Monitoring Well Installation and Sampling 2-4
2.6 2013 Limited Site Investigation 2-6
2.7 Summary 2-7
2.7.1 Groundwater Quality 2-7
2.7.2 Landfill Cover System 2-7

3.0 SAMPLING AND ANALYSIS PLAN 3-1
3.1 Groundwater 3-1
3.2 Vapor 3-3
3.3 Reporting 3-3

4.0 MAINTENANCE PLAN 4-1
4.1 Golf Course / Practice Facility Irrigation 4-1
4.2 Cover System 4-1

5.0 CONTINGENCY PLAN 5-1

6.0 REFERENCES 6-1

TABLES

2-1 Summary of Historical Groundwater Sampling Results
5-1 Potential Contingency Plan Response Actions

FIGURES

1-1 Site Location Map
1-2 Site Plan
2-1 Sample Location Map
2-2 Cap Boring and Cross-Section Locations
2-3 Clay Cap Plan and Thickness Cross-Section

APPENDICES

A NMED Closure Work Plan Approval
B BLM Closure Letter
C Quality Assurance Project Plan
D September 2013 Groundwater Sampling Report

CORRECTIVE ACTION PLAN FOR THE
FORMER TRUTH OR CONSEQUENCES LANDFILL
ELEPHANT BUTTE, NEW MEXICO

1.0 INTRODUCTION

BASCOR Environmental, Inc. (BEI) has prepared this Corrective Action Plan (CAP) on behalf of Turtleback Mountain Partners (TMP) and as a condition for completion of the patent of the 30 acre Bureau of Land Management (BLM) site to the City of Truth or Consequences New Mexico (T or C). The CAP is intended to document proposed corrective action activities related to previous irrigation implemented directly over approximately 2.75 acres of the former T or C landfill (all irrigation over the former landfill has been abandoned as of May 2013) located in Elephant Butte, New Mexico.

In 2007 the easternmost portion of the subject site located outside the former T or C landfill (approximately 10.7 acres) was developed into a golf course driving range/practice facility to supplement the Sierra del Rio golf course as a part of the Turtleback Mountain Resort. The driving range was inadvertently extended west over the 2.75 acres of the former landfill. A soil cover system was placed over the landfilled area as part of the closure process of the landfill agreed to by the BLM, New Mexico Environment Department (NMED), T or C and TMP, and reviewed by the NMED (Appendix A). The cover is intended to prevent direct contact with waste materials and to minimize leachate generated by precipitation from infiltrating through the waste. TMP placed irrigation directly over a portion of the landfill west of the approved driving range facility causing concerns with the NMED.

After the practice facility was operated for several seasons, it was discovered by the NMED that the irrigation system had been extended onto the former landfill area which had been previously reviewed by the NMED. To address concerns related to potential leachate generation caused by irrigation, the NMED requested a limited site investigation that included installation and sampling of groundwater monitoring wells and soil vapor monitoring points; and the completion of soil borings to evaluate the extent and thickness of the soil cover over the landfill. The results of the site investigation were documented in a Limited Site Investigation Report (Terracon, 2013).

This CAP describes additional long term monitoring activities designed to assess the potential environmental impacts from the previous irrigation of the driving range/practice facility on the site. The CAP includes the following elements:

- Sampling and Analysis Plan;
- Maintenance Plan; and
- Contingency Plan.

The site is currently regulated under Section 20.6.2.1203 of the New Mexico Water Quality Control Commission regulations (New Mexico Water Quality Act.).

1.1 PROPERTY OWNERSHIP AND PREVIOUS SITE USE

In March 1961, the City of T or C entered into a lease with BLM to use the site for solid waste disposal. The BLM leased the property pursuant to the Recreation and Public Purposes Act and assigned number NM 037574 to the lease. The site's use as a landfill pre-dates any State solid waste regulations, so the site is classified as "non-registered" by the New Mexico Environment Department (NMED).

Solid waste was disposed of at the site between 1961 and 1974. Based on available records, waste was typically disposed by dumping it from the east side of the elevated access road, allowing it to fall down the slopes, then burned. In about 1968, as a result of concerns raised by the Health Department, the City began to dispose of their waste on lower ground by pushing dirt over the waste with heavy machinery. By December 1974, use of the site as a landfill stopped, and an inspection by the BLM showed that the site was closed in accordance with the terms of the lease. The 1974 closure process included placement and compaction of an approximate 2' thick clay cap. The clay cap was verified by the LSI performed by Terracon (see Section 2.6). Proper closure of the landfill was also previously acknowledged by the BLM in 1974 (Appendix B).

1.2 SITE CHARACTERISTICS

The subject site occupies approximately 30 acres of land in Elephant Butte, Sierra County, New Mexico. Elephant Butte is located about 2 miles northeast of the City of T or C and the project site is located about 2.5 miles west of the Elephant Butte reservoir (Figure 1-1). In 2000, the population of Elephant Butte was 1,390.

A paved access road (New Mexico Highway 52, no longer maintained) runs north-south through the site, and now serves as an access road under the TMP Planned Unit Development (PUD) approved by the City of Elephant Butte, NM . Properties immediately adjacent to the BLM parcel were redeveloped as part of the Turtleback Mountain Resort (discussed further below). The site topography varies considerably. The eastern half of the site is relatively flat, then rises steeply (about 100 feet) to the west to a mesa through which the former landfill access road runs (Figure 1-2).

An area of solid waste disposal is present at the southwestern corner of the BLM parcel (Figure 1-2) that extends onto the adjacent parcel to the south. It is believed that this area was used primarily for “fly dumping” (no subsurface waste disposal).

2.0 PREVIOUS INVESTIGATIONS

Several environmental investigations and reports have been completed at the site to date to evaluate impacts to environmental media and to develop closure alternatives for the former landfill. This work is summarized below.

2.1 PRELIMINARY ASSESSMENT

In October 1990, C.C. Johnson & Malhotra, P.C. (CCJM) completed a Preliminary Assessment (PA) Report for the BLM (CCJM, 1990). The purpose of the PA was to assess whether site conditions posed a risk to human health and the environment. CCJM evaluated background information and collected four surface soil samples from the site. Three samples (SL01, SL02, and SL03) were from sediments (surface soil) in different drainage pathways leading from landfilled areas toward the eastern site boundary and one sample (SL04) was collected west of the access road to evaluate background conditions.

Each soil sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and metals. Two VOCs (chloroform and toluene) were detected in two of the soil samples (SL01 and SL03), but at concentrations below the analytical quantitation limit. Therefore, these values were flagged as estimated. Low concentrations (a maximum of 110 parts per billion) of several SVOCs were detected in two of the samples (SL02 and SL03). The pesticide 4,4'-DDE was the only compound detected above detection limits and was found only in sample SL02. No PCBs were detected in any of the samples. Background sample SL04 did not contain detectable concentrations of VOCs, SVOCs, PCBs, or pesticides. Detected compounds in soil were compared to generic Soil Screening Levels (SSLs) published by the NMED Hazardous Waste Bureau and Ground Water Quality Bureau [NMED, 2005] and the concentrations of all detected compounds in soil were below the residential SSLs.

2.2 PHASE II INVESTIGATIONS

2.2.1 CCJM

Based on their findings in the PA, CCJM recommended completion of additional site investigation activities. Between October 1993 and May 1994, CCJM completed the following site investigation activities on behalf of the BLM (CCJM, 1995):

- Collected and analyzed 2 samples of background soil;
- Collected and analyzed 8 samples of waste (WS01 through WS08);
- Installed 4 groundwater monitoring wells (MW01 through MW04);
- Installed 6 temporary well points (WP01 through WP06);
- Sampled and analyzed groundwater from monitoring wells and well points; and
- Completed a monitoring well and sample location elevation survey.

CCJM installed four 2-inch diameter monitoring wells at depths between 15 and 26 feet below land surface (ft bls).

During the SI, low concentrations of chemicals of concern (VOCs, SVOCs, pesticides, PCBs, and metals) were detected in environmental samples collected from surface and subsurface soil, sediment, and waste sources. With the exception of arsenic and lead detected at WS01, all sample concentrations were below the NMED SSLs. Sample WS01 was collected from a steep slope at the southeast corner of the landfill.

Groundwater samples were collected from monitoring wells and well points and analyzed for VOCs, SVOCs, pesticides, PCBs, and total and dissolved metals. Low concentrations of certain chemicals of concern were detected, but all were below their respective groundwater standards (20.6.2 NMAC, New Mexico Water Quality Control Commission Regulations).

During the Phase II investigation, CCJM collected water level data from the monitoring wells to assess the groundwater flow direction. Based on measurements made in three of the wells (no

level data was collected from well MW-4), CCJM determined that the groundwater flow direction was south-southeast.

2.2.2 New Mexico Environment Department

On November 13, 1997, NMED collected groundwater samples from the four monitoring wells installed by CCJM. Samples were submitted for analysis of VOCs, SVOCs, pesticides, PCBs, and metals. All samples were below their respective groundwater standards, with the exception of manganese detected in samples from BLM Well #3 and BLM Well #4.

2.2.3 Off-Site Sampling - Souder, Miller & Associates

In November 2004, Souder, Miller and Associates, on behalf of Tiger Run Investments, collected soil samples from 12 locations from an area south of the former T or C landfill property boundary that was used for solid waste disposal (fly dumping). Two samples (SS-1 and SS-2) were collected from within the former disposal area limits and the remaining samples (SS-3 through SS-12) were collected from the toe of the disposal area slopes. Samples were collected within 3 inches of the ground surface and submitted to a laboratory for analysis of VOCs, pesticides, PCBs, and total lead.

VOCs were not detected above laboratory detection limits in any of the samples, and 7 of the 12 samples did not contain pesticides or PCBs above laboratory detection limits. The samples also contained low concentrations of lead except for sample S-1, which contained 68,000 milligrams per kilogram (mg/kg) lead.

2.3 LANDFILL INSPECTION

In February 2006, BEI inspected the general condition of the former landfill and its cover system. Solid waste (mostly glass and metal) was visible over much of the surface of the landfill, although its origin could not be determined. Some material may be from fly dumping after the site was closed, and some could be from erosion of the soil cover. On the steep slopes, limited vegetative cover existed and erosion features (rills and gullies) were noted. On the relatively flat area proposed for the driving range, the density of vegetation was much greater, and some areas were impassable. No odors were noted during the inspection.

2.4 LANDFILL CLOSURE PLAN

In 2006, BEI and Turtleback Mountain Partners began discussions with NMED regarding final closure of the former T or C landfill, which led to the development of a Closure Plan (BEI, 2006). The closure plan tasks included the following:

- Clear vegetation from the site;
- Limited supplemental investigation activities to verify the extent of waste materials;
- Construction and maintenance of a soil cover system over the landfilled areas;
- Construction of a golf course driving range over areas not used for landfilling; and
- Groundwater monitoring.

In 2006, BEI supervised the excavation of 13 test pits across the site to investigate the extent of waste and delineate the eastern boundary of the landfill. Data collected from the investigation were used to design and construct the soil cover placed over the site during construction of the driving range/practice facility. The investigation tasks were documented in a Landfill Delineation Report (BEI, 2007).

2.5 2007 MONITORING WELL INSTALLATION AND SAMPLING

In March 2007, BEI completed groundwater monitoring activities at the site pursuant to the amended landfill Closure Plan (BEI, 2006). Five monitoring wells (MW-2R, MW-3R, MW-5, MW-6 & MW-7) were installed to a maximum depth of 25 ft bls (Figure 2-1). Well MW-6 was nearly dry when first measured, so it was not developed or sampled during this event. At the four other locations, samples were collected using a bailer or by low-flow techniques. Groundwater samples were collected for analysis of the following parameters:

- VOCs;
- SVOCs;
- Pesticides;

- Polychlorinated biphenyls (PCBs);
- RCRA metals (total, unfiltered);
- Total iron (unfiltered);
- Total manganese (unfiltered); and
- Nitrate + Nitrite.

No organic compounds (VOCs, SVOCs, pesticides, and PCBs) were detected above laboratory practical quantitation limits (PQLs) except for very low concentrations of bromoform and dibromochloromethane, detected in wells MW-5 and MW-7. However, the concentrations of these compounds were very low (just above PQLs). The only other compounds detected were barium, iron, manganese, and nitrate+nitrite.

Groundwater results were compared to available standards published at 20.6.2 NMAC. Only manganese was detected above its groundwater standard (at wells MW-2R, MW-5, and MW-7). (The NMED groundwater standard for manganese is based on aesthetics, not human health criteria.) However, well MW-5 is a background well, indicating that manganese could be naturally occurring, not a result of potential impacts caused by the former T or C landfill. Therefore, there is evidence to conclude that the landfill has not significantly impacted local groundwater quality. Also, well MW-3R did not contain manganese above the groundwater standard, and it was the only well sampled using low-flow techniques. Low-flow sampling generally results in lower turbidity and thus typically produces samples that are more representative of actual groundwater quality (especially for inorganic compounds such as manganese).

BEI used the water level measurements made just prior to groundwater sampling to create a groundwater potentiometric surface map. These data showed that the groundwater direction was to the southeast. BEI calculated the hydraulic gradient across the site to be approximately 0.01 ft/ft. Based on the March 2007 isocontour map, monitoring wells MW-1, MW-2, MW-2R, and MW-4 were hydraulically down gradient from the former T or C landfill and well MW-5 was hydraulically up gradient from the landfill.

A report on the results of the 2007 investigation was submitted to NMED (BEI, 2007).

2.6 2013 LIMITED SITE INVESTIGATION

Between May and June 2013, Terracon Consultants, Inc. (Terracon) under subcontract to BEI, conducted a limited site investigation at the site that consisted of the following tasks:

- Completed ten soil borings to evaluate the thickness of the soil cover over the landfill (Figure 2-2);
- Excavated three test pits excavated with a backhoe to evaluate the landfill cover thickness, examine the site lithology, and collect soil samples for laboratory analysis;
- Installed four vapor monitoring points and sampled them for laboratory analysis to evaluate the unsaturated zone above the landfill;
- Installed three groundwater monitoring wells and sampled them for laboratory analysis to supplement the existing network; and
- Conducted a survey to document the location and elevation of the new vapor monitoring points and groundwater monitoring wells.

The work was documented in a Limited Site Investigation Report (Terracon, 2013). In that report, Terracon concluded the following:

- The landfill cap consists of a gravelly and silty sand unit overlying a clay unit and initial waste cover material consisting of mixed sand and silt with minor amounts of gravel. The uppermost gravelly and silty sand is from 2.0 to 4.5 feet thick, the clay unit is from 1.5 to 5.0 feet thick, and initial waste cover material is from 0.2 to 2.0 feet thick.
- Laboratory analyses of soil samples from the test pits indicate that the hydraulic conductivity of the landfill cap material ranges from 1.8×10^{-7} to 1.4×10^{-4} cm/sec.
- Based on review of the analytical results from soil gas samples, the landfill waste pile does not appear to be generating VOCs and methane in gaseous form at this time.

- Based on review of the analytical results from groundwater samples, groundwater at the site appears to contain chloride at concentrations exceeding the applicable NMED Human Health Standard of 250 mg/l.

- The new down gradient monitoring well MW-10 contained barium, chromium and lead in excess of the NMED Human Health Standards of 0.05 mg/l for these metals.

2.7 SUMMARY

2.7.1 Groundwater Quality

Since 1995, several separate groundwater sampling events have been completed, which are summarized on Table 2-1. A review of Table 2-1 indicates that several classes of analytes are not a concern at the site, specifically VOCs, SVOCs, PCBs, pesticides, and selected metals. Also, herbicides were not detected in May-June 2013 (the first time that they had been sampled). Compounds detected to date above a NMED groundwater standard are barium (one sample), chromium (one sample), lead (one sample), manganese (three samples), and chloride (8 samples). Samples collected in 2007 and 2013 and analyzed for metals were not filtered, so these data could be biased high. Future sampling events for metals will use field filtration to evaluate the effect of suspended sediment on groundwater quality.

2.7.2 Landfill Cover System

During construction of the driving range/practice facility, a soil cover was placed over the landfilled area. The design criteria for the cover were:

- Infiltration layer: at least 18 inches thick with a hydraulic conductivity of less than 1×10^{-5} cm/sec.

- Erosion layer: at least 6 inches.

- Slope: no greater that 25%.

- Top of cover: 2-5% slope to prevent ponding and erosion (5% recommended).

Soil boring locations from the LSI and a cross-section location map are shown in Figure 2-2. A cross-section showing the cover system materials and thicknesses based on the work by Terracon is shown in Figure 2-3, which demonstrates that the cover system met the above criteria.

3.0 SAMPLING AND ANALYSIS PLAN

3.1 GROUNDWATER

The existing groundwater monitoring network at the site consists of ten 2-inch diameter wells installed to a maximum depth of 30 ft bls. The following selected wells will be sampled on a regular schedule:

Well I.D.	Rationale for Sampling
MW-5	Background well.
MW-3R	Well located side gradient to down gradient from former landfill. Provides an indication of potential migration of chemicals of concern.
MW-8	Well located at the toe of the landfill slope. Provides an early indication of potential migration of chemicals of concern.
MW-9	Well located at the toe of the landfill slope. Provides an early indication of potential migration of chemicals of concern.
MW-10	Well located on east side of the driving range, down gradient from the landfill.
MW-1	Well located down gradient from the landfill / driving range.

Water levels in some wells in the existing network have periodically dropped below the screened interval. If this occurs during a given event, an alternate well will be selected (MW-2R or MW-4). Groundwater samples will be collected using the standard operating procedures described in the QAPP (BEI, 2013). Bailers or pumps may be used, depending on the depth to groundwater, condition of each well casing, and the available water column in a given well. The order in which monitoring wells will be sampled will be based on historical detections of chemicals of concern, starting with the least impacted well and ending with the most impacted well. The sampling order may change depending on the results of the most recent sampling event.

The proposed groundwater sampling schedule involves quarterly, semi-annual, and annual events. The reduced frequency over time is based on the assumption that no groundwater impacts will be discovered that require corrective action. Sampling events would proceed on the following schedule:

Date	Quarterly Event	Semi-Annual Event	Annual Event
September 2013	X		
December 2013	X		
March 2013	X		
June 2014	X		
December 2014		X	
June 2015		X	
December 2015		X	
June 2016		X	
June 2017			X
June 2018			X

X – samples to be collected.

The analytical list of parameters may be reduced if certain analytes are not detected over four consecutive quarterly sampling events, as determined by the NMED. The first quarterly sampling event for this CAP was conducted in September, 2013 (prior to approval of the CAP) in order to meet the land patent schedule imposed by the Bureau of Land Management. The analyte list used for the September 2013 sampling event was similar to the Limited Site Investigation conducted in June of 2013 (report previously submitted to NMED) for continuity. The results of the sampling are attached to this CAP as Appendix D. Based on the results from the September 2013 event, and the 1994, and 2007 historical events, the recommended December 2013 analytes will include the following parameters:

Analyte(s)	Analytical Method(s)
Volatile Organic Compounds	USEPA 8260B
Semi-Volatile Organic Compounds	USEPA 8270C
Pesticides	USEPA 8081A
Herbicides	USEPA 8151A
RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) (field filtered)	USEPA 200.7 Rev. 4.4 USEPA 245.1 (Hg)
Iron, Magnesium, Manganese, and Sodium (field filtered)	USEPA 200.7 Rev. 4.4
Alkalinity	SM 2320B
Cyanide	SM 4500 CN E
Nitrate as N, Nitrite as N, Chloride, Sulfate	USEPA 300.0

USEPA – U.S. Environmental Protection Agency
SM – Standard Methods for the Examination of Water and Wastewater

Laboratory data from the first quarterly event will be assessed prior to the second quarter sampling event, and any proposed changes to the analyte list will be discussed with NMED, and documented in writing.

3.2 VAPOR

One additional monitoring event in December 2013 is proposed for the four soil vapor probes (VP-1 through VP-4). The parameter of concern for the vapor is methane, based on previous sampling events at this landfill, and the placement of water over the landfill cap to sustain vegetative growth. If the results of these data do not show any impacts, no further vapor sampling will be conducted. If methane is discovered during this sampling event, Vapor sampling will be continued in 2014. Vapor samples will be collected using the standard operating procedures described in the QAPP (Appendix C).

3.3 REPORTING

A brief report will be prepared and submitted to NMED after each sampling event. The report will include summary tables, figures, and supporting documentation as needed to document performance of the work.

4.0 MAINTENANCE PLAN

This section discusses the tasks to be performed to ensure that the cover system performs as designed.

4.1 GOLF COURSE / PRACTICE FACILITY IRRIGATION

To prevent the generation of leachate potentially containing chemicals of concern, no irrigation will take place directly over the landfill. To ensure that inadvertent irrigation does not occur, the existing irrigation heads over the landfill will be removed and plugged. Also, the landfill limits adjacent to the driving range/practice facility will be marked with signs or barriers.

4.2 COVER SYSTEM

The soil cover system functions with minimal maintenance. To ensure that the system performs as intended, the following maintenance tasks will be conducted:

- Regular cover system inspections (semi-annual) to detect erosion and other signs of cap failure;
- Cover system repairs as required by adding sand, clay fill, or vegetation; and
- Regular mowing of the facility and retrieval of golf balls.

5.0 CONTINGENCY PLAN

This CAP anticipates a five-year monitoring period**.** If the sampling of the approved monitor locations indicates the former landfill remains stable and all results obtained are acceptable to the NMED after the 5 year period, the site will receive a No Further Action Letter (NFA) from NMED, related directly to the previous irrigation activity directly over a portion of the former landfill site. Examples of potential issues that could cause implementation of this Contingency Plan include:

- Detection of groundwater impacts above applicable standards published at 20.6.2 NMAC;
- Detection of vapor concentrations indicative of contaminant migration or methane generation;
- Additional irrigation over the landfill; and
- Problems with the cover system that affect its ability to meet design criteria.

Since each issue could vary with respect to its environmental significance, a specific contingency plan cannot be presented at this time. However, Table 5-1 presents typical response actions, which generally assume that the trigger event will first be verified through a review of existing data, then possibly through additional field work, such as re-sampling and analysis. Certain response actions such as waste excavation and disposal are considered infeasible and not implementable as part of this contingency plan.

If an event occurs that requires corrective action, NMED will be contacted and the problem will be discussed. If required, a written response action plan will be prepared and submitted to NMED for review and approval.

6.0 REFERENCES

BASCOR Environmental, Inc. 2006. Closure Plan for the Former Truth or Consequences Landfill, Elephant Butte, New Mexico. August 2006.

BASCOR Environmental, Inc. 2007. Landfill Delineation Report, Former Truth or Consequences Landfill, Elephant Butte, NM. January 31, 2007.

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C.C. Johnson & Malhotra, P.C. 1990. Final Truth or Consequences Landfill Site Preliminary Assessment, Las Cruces District, New Mexico. October 26, 1990.

C.C. Johnson & Malhotra, P.C. 1995. Final Site Inspection Report, Truth or Consequences Landfill, Las Cruces District, New Mexico. May 10. 1995.

Souder, Miller and Associates. 2004. Phase II Environmental Site Assessment, Former Oasis Golf Course Development, Elephant Butte, New Mexico. December 1, 2004.

Terracon Consultants, Inc. 2013. Limited Site Investigation Report, Former Truth or Consequences Landfill, Country Club Road, Elephant Butte, Sierra County, New Mexico, August 21, 2013.

TABLES

Table 2-1

Summary of Historical Groundwater Sampling Results
Former T or C Landfill, Elephant Butte, New Mexico

Analyte	MW-01 8/4/94	MW-02 8/4/94	MW-2R 3/15/07	MW-03 8/5/94	MW-03 (DUP) 8/5/94	MW-3R 3/15/07	MW-3R 5/28/13	MW-04 8/5/94	MW-5 3/15/07	MW-5 6/25/13	MW-7 3/15/07	MW-8 5/21/13	MW-9 5/21/13	MW-10 5/21/13	Groundwater Standard [1]
Acetone	ND	4	<10	7	ND	<10	<10	4	<10	ND	<10	<10	<10	<10	NE
Bromoform	ND	ND	<1	ND	ND	<1	<1	ND	1.8	ND	2.8	<1	<1	<1	NE
Dibromochloromethane	ND	ND	<1	ND	ND	<1	<0.5	ND	1.8	ND	2.3	<0.5	<0.5	<0.5	NE
Di-n-butylphthalate	1	ND	<10	ND	1	<10	<11	ND	<10	ND	<10	<6	<10	<10	NE
bis(2-ethylhexyl)phthalate	2	8	<15	1	5	<15	<11	2	<15	ND	<15	<6	<15	<10	NE
2-Methylnapthene	ND	1	<10	ND	ND	<10	<11	ND	<10	ND	<10	<6	<10	<10	NE
Pesticides	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Herbicides	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	ND	ND	ND	NE
PCBs	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	NA	NA	NA	1
Aluminum	ND	ND	NA	1380 J	575 J	NA	NA	465 J	NA	NA	NA	NA	NA	NA	5000 [2]
Antimony	ND	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE
Arsenic	ND	ND	<20	3.2	ND	<20	<2000	ND	<20	ND	<20	ND	ND	<100	100
Barium	102	145	170	110	116	33	<2000	82.9	100	130	190	110	220	**1100**	1000
Beryllium	ND	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE
Cadmium	ND	ND	<2	ND	ND	<2	<20	ND	<2	ND	<2	ND	ND	<1	10
Calcium	181000	210000	NA	83400	83500	NA	170000	217000	NA	80600	NA	270000	170000	370000	NE
Chromium	ND	ND	<6	ND	ND	<6	<200	ND	<6	8.7	<6	ND	10	**130**	50
Cobalt	ND	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	50 [2]
Copper	ND	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	1000
Iron	ND	ND	610	658 J	270 J	200	NA	220 J	560	NA	310	NA	NA	NA	1000
Lead	*	*	<5	*	*	<5	<300	*	<5	9.1	<5	ND	ND	**73**	50
Magnesium	43500	30000	NA	24800	24900	NA	<40000	44400	NA	8000	NA	54000	47000	100000	NE
Manganese	39.8 J	143	**730**	16.7	17.9	31	NA	19.1 J	**290**	NA	**430**	NA	NA	NA	200
Mercury	ND	ND	<0.2	ND	ND	<0.2	<0.2	ND	<0.2	0.055 J	<0.2	ND	ND	ND	2
Nickel	ND	ND	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	200 [2]
Potassium	36200	11200	NA	7220	9020	NA	NA	23400	NA	NA	NA	NA	NA	NA	NE
Selenium	ND	ND	<50	ND	ND	<50	<2000	ND	<50	ND	<50	ND	ND	<100	50
Silver	ND	ND	<5	ND	ND	<5	<200	ND	<5	ND	<5	ND	ND	<10	50
Sodium	290000	210000	NA	328000	322000	NA	180000	300000	NA	163000	NA	250000	260000	290000	NE
Thallium	*	*	NA	*	*	NA	NA	*	NA	NA	NA	NA	NA	NA	NE
Vanadium	11.2	ND	NA	18.5	16.6	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE
Zinc	4	4.8 J	NA	ND	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	10000
Chloride	**486000**	**409000**	NA	**337000**	**1250000**	NA	170000	**499000**	NA	159000	NA	**710000**	**290000**	**380000**	250000
Sulfate	178000	265000	NA	223000	359000	NA	180000	268000	NA	120000	NA	220000	140000	260000	600000
Nitrate-Nitrite	ND	102	<500	ND	ND	<500	<200	ND	1500	540	3400	8500	ND	2000	10000

Notes:
All data in units of micrograms per liter (ug/L). Only detections listed. See lab reports for complete list.
Samples collected 6/25/13 analyzed by Pace Analytical Services, Inc., Allen, TX.
MW-8 resampled for SVOCs only on 6-25-13 and analyzed by Pace Analytical Services, Inc., Allen, TX.
NA - not analyzed.
ND - not detected.
NE - not established

J - estimated value.
* Results rejected due to laboratory QC problem.
Metals samples collected in 1994 were filtered. All others were unfiltered.
[1] Groundwater standards at 20.6.2.3103 NMAC. Highlighted results exceed the standard.
[2] Standard for irrigation use.

Table 5-1

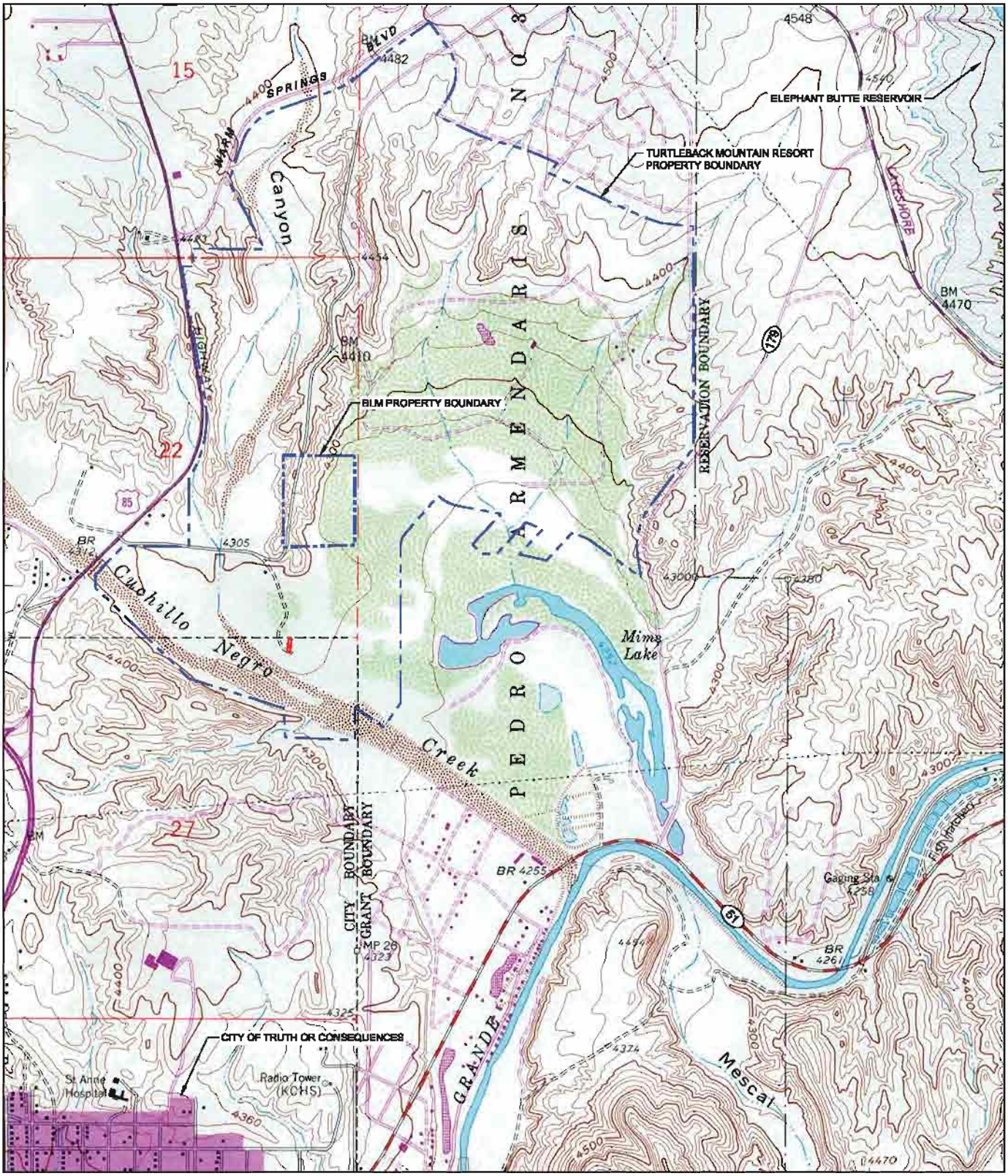
Potential Contingency Plan Response Actions
Former T or C Landfill, Elephant Butte, New Mexico

Event Triggering Response Action	**Potential Response Action [1]**
One or more groundwater sample analytical result is above applicable standards	• Review field and laboratory methods to ensure data meet Data Quality Objectives. • Re-sample affected well for chemicals of concern. • Conduct a limited site investigation to evaluate the extent of impact. • Develop and implement a modified sampling and analysis plan.
Vapor sample result indicates potential methane generation or migration of chemical of concern.	• Review field and laboratory methods to ensure data meet Data Quality Objectives. • Re-sample affected vapor point for chemicals of concern. • Conduct a limited site investigation to evaluate the extent of impact. • Develop and implement a vapor monitoring plan.
Issues regarding cover system integrity (e.g. erosion, waste at surface)	• Inspect cover to evaluate extent of problem. • Repair or re-grade the affected area with appropriate material (e.g. additional clay). • Upgrade or install vegetative cover over affected areas. • Construct diversion berms or other structures to divert surface water runoff away from affected areas.

Notes:

[1] Response action could involve any combination of activities listed, including another action appropriate for a particular situation.

FIGURES



BASE MAP SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP, ELEPHANT BUTTE, N. MEX. QUADRANGLE, 1958, PHOTOREVISED 1980.

N

0 1000 2000
SCALE IN FEET

BASCOR Environmental, Inc.
consulting engineers and scientists

P.O. Box 669
Mt. Prospect, IL 60056-0669
(847) 577-1980

TURTLEBACK MOUNTAIN RESORT
ELEPHANT BUTTE, NEW MEXICO

SITE LOCATION MAP

DRAWN	CHECKED	APPROVED	DATE
J.TANAKA	SJ SENN	SJ SENN	9-18-13

FILENAME: E:\DRAWINGS\TB13307M\SITE LOCATION MAP.DWG

FIGURE **1-1**

N

0 100 200

SCALE IN FEET

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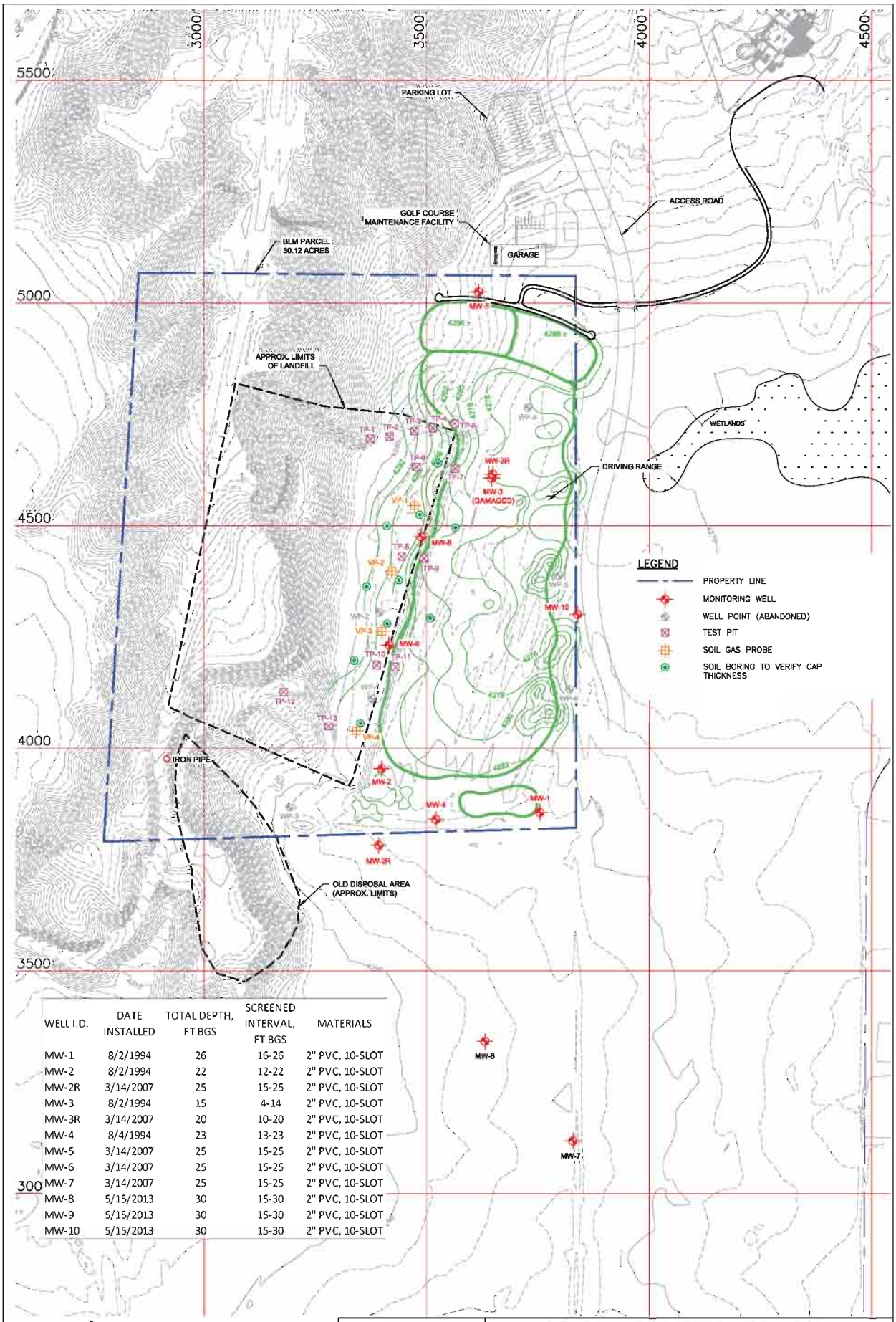
TURLEBACK MOUNTAIN RESORT
ELEPHANT BUTTE, NEW MEXICO

SITE PLAN

DRAWN	CHECKED	APPROVED	DATE
J.TANAKA	SJ SENN	SJ SENN	9-18-13

FILENAME: E:\DRAWINGS\TB13307M\SITE PLAN-AERIAL.DWG

FIGURE 1-2



WELL I.D.	DATE INSTALLED	TOTAL DEPTH, FT BGS	SCREENED INTERVAL, FT BGS	MATERIALS
MW-1	8/2/1994	26	16-26	2" PVC, 10-SLOT
MW-2	8/2/1994	22	12-22	2" PVC, 10-SLOT
MW-2R	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-3	8/2/1994	15	4-14	2" PVC, 10-SLOT
MW-3R	3/14/2007	20	10-20	2" PVC, 10-SLOT
MW-4	8/4/1994	23	13-23	2" PVC, 10-SLOT
MW-5	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-6	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-7	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-8	5/15/2013	30	15-30	2" PVC, 10-SLOT
MW-9	5/15/2013	30	15-30	2" PVC, 10-SLOT
MW-10	5/15/2013	30	15-30	2" PVC, 10-SLOT

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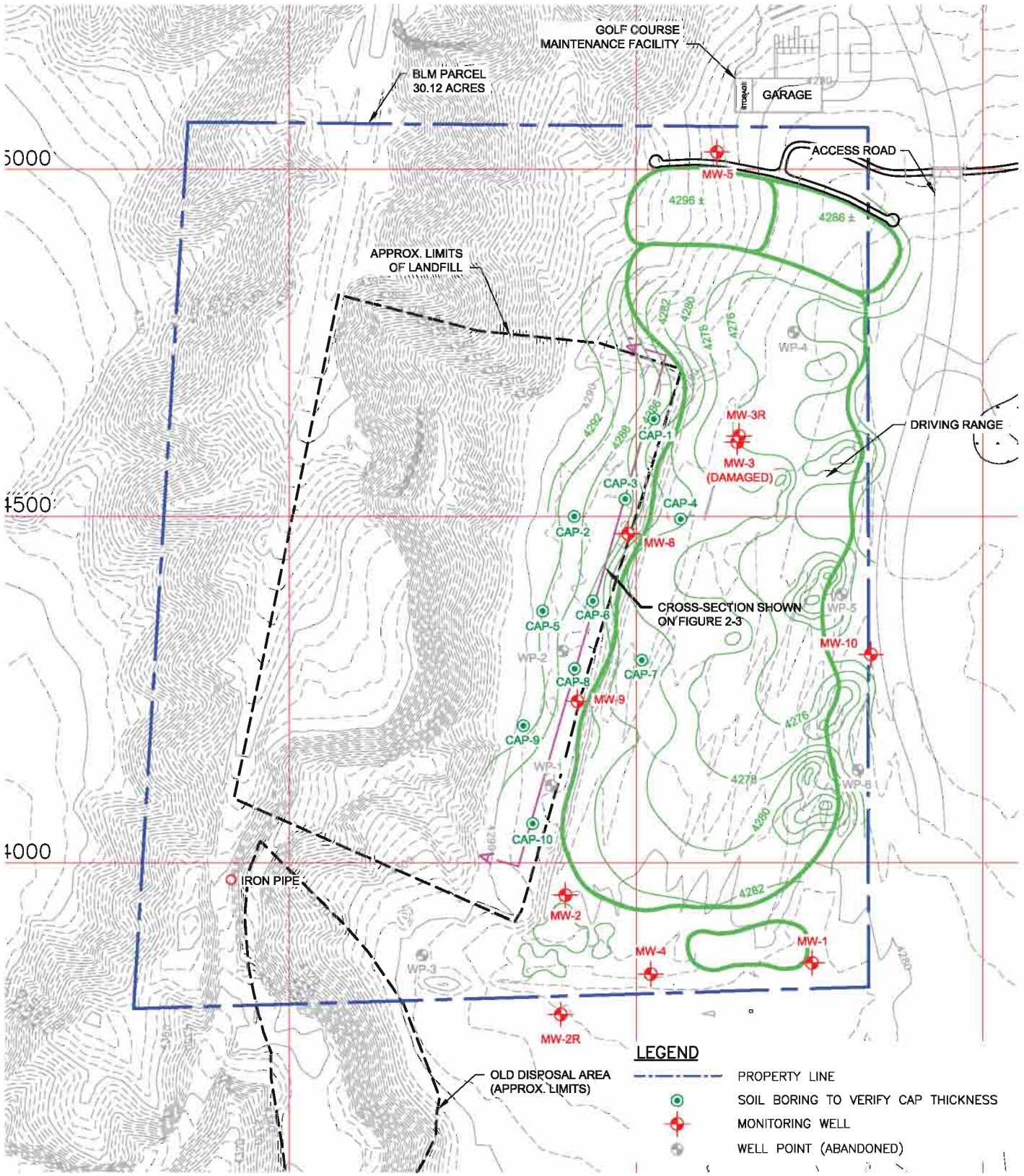
TURTLEBACK MOUNTAIN RESORT
ELEPHANT BUTTE, NEW MEXICO
SAMPLE LOCATION MAP

DRAWN	CHECKED	APPROVED	DATE
J. TANAKA	SJ SENN	SJ SENN	9-17-13

FILENAME: E:\DRAWINGS\TB13307M\SAMPLE LOCATION MAP-SEPTEMBER 2013.DWG

FIGURE 2-1



N

0 100 200
SCALE IN FEET

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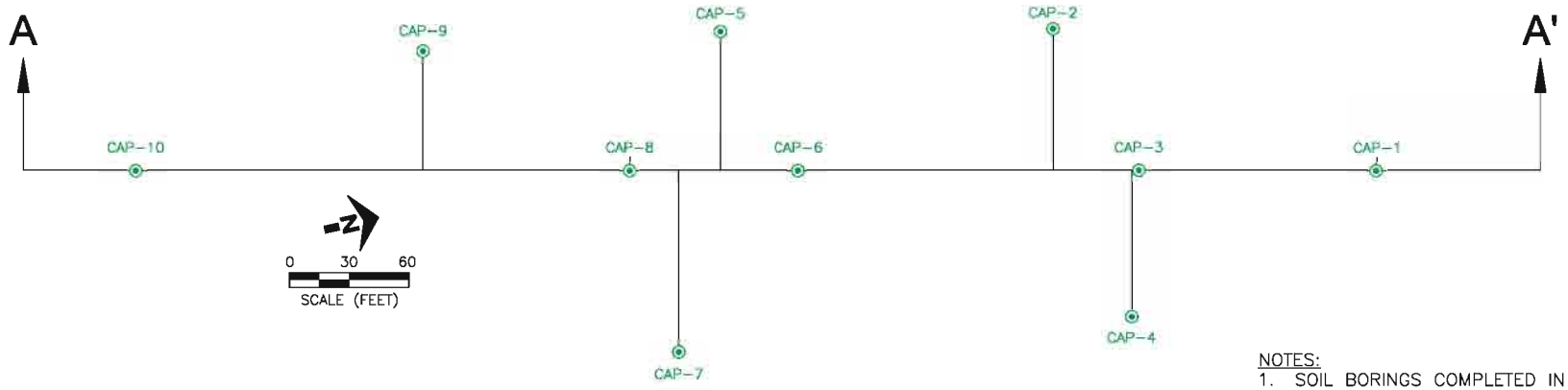
TURTLEBACK MOUNTAIN RESORT
ELEPHANT BUTTE, NEW MEXICO
CAP BORING AND CROSS-SECTION LOCATIONS

DRAWN	CHECKED	APPROVED	DATE
J.TANAKA	J.TANAKA	SJ SENN	9-30-13

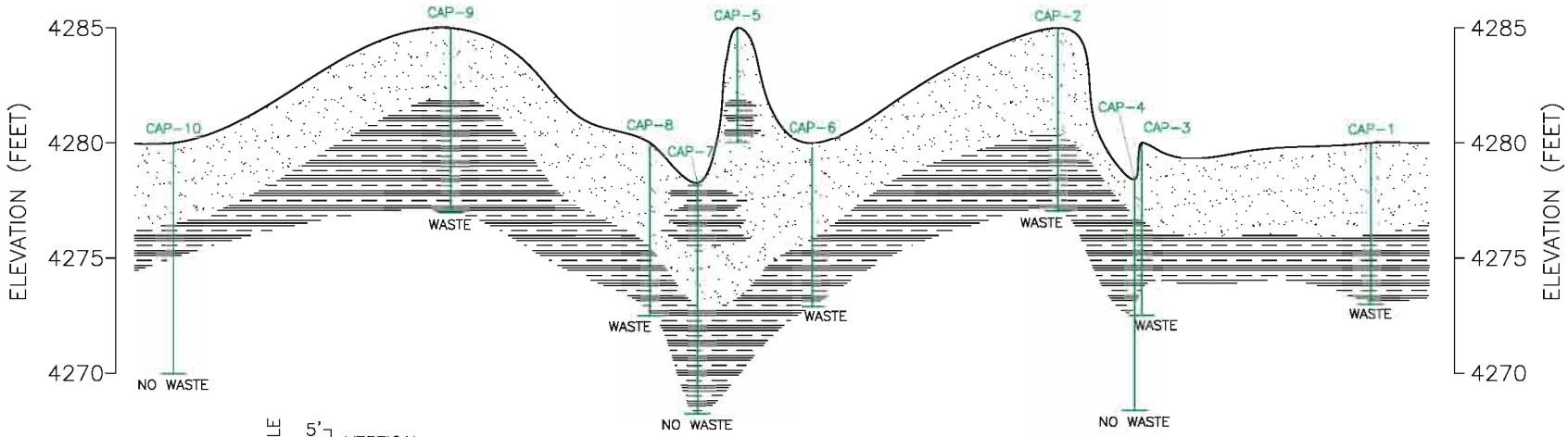
FILENAME: E:\DRAWINGS\TB13307M\BORING AND XSECT LOCATIONS.DWG

FIGURE 2-2



CROSS-SECTION PLAN

NOTES:
1. SOIL BORINGS COMPLETED IN MAY 2013 BY TERRACON CONSULTANTS, INC.
2. SEE FIGURE 2-2 FOR CROSS-SECTION LOCATION.



CROSS-SECTION A-A'

LEGEND
- LANDFILL CAP BORING
- SAND
- CLAY

VERTICAL SCALE: 5', 2.5', 0
VERTICAL EXAGGERATION = 12X
0 30' 60'
HORIZONTAL SCALE

BASCOR Environmental, Inc.
consulting engineers and scientists
P.O. Box 669
Mt. Prospect, IL 60056-0669
(847) 577-1960

TURTLEBACK MOUNTAIN RESORT
ELEPHANT BUTTE, NEW MEXICO
CLAY CAP PLAN AND THICKNESS CROSS-SECTION

DRAWN	CHECKED	APPROVED	DATE
J.TANAKA	SJ SENN	SJ SENN	9-30-13

FILENAME: E:\DRAWINGS\TB13307M\X-SECTION.DWG
FIGURE: 2-3

APPENDIX A

NMED Closure Work Plan Approval

357A

State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Quality Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2918
Fax (505) 827-2965

BILL RICHARDSON
GOVERNOR

RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

September 25, 2006

Mr. Jaime Aguilera, City Manager
City of Truth or Consequences
505 Sims Street
Truth or Consequences, NM 87901

RE: Closure Work Plan Approval for the Former City Landfill, Bureau of Land Management Recreation and Public Purposes Lease No. NM037574, Sierra County, New Mexico

Dear Mr. Aguilera:

The purpose of this letter is for the New Mexico Environment Department (NMED) to approve a work plan (Closure Plan) submitted August 28, 2006 from BASCOR Environmental, Inc. on behalf of the City of Truth or Consequences for a site located approximately 2 miles northeast of the city. The site is located on portions of 30.12-acres of federal land, leased from the Bureau of Land Management (BLM), for the purpose of municipal waste disposal. The city used the land for that purpose from the early 1960's to the mid 1970's. The work plan proposes to further assess any potential environmental contaminant issues that could occur with local land development. As submitted, the Closure Plan is being treated as a Corrective Action Report work plan under the New Mexico Water Quality Control Commission (WQCC) Regulations 20.6.2.1203.A NMAC since the waste disposal operations ceased prior to May 14, 1989, the date on which landfill closure plan requirements became effective in New Mexico.

The overall objectives of the work plan are to acquire further field data to determine an appropriate waste cover system, and to provide updated data on ground water quality. The following activities are proposed in the work plan:

- Clearing of brush, test trenching and pot-holing, and surface cleanup of white goods in order to provide access and confirm the lateral extent of past waste disposal practices.

- Design of a cover system based on general design criteria listed in current state regulations under 20.9.1 NMAC, Section 502. Some variation in design will likely be

necessary because the site includes both flat portions and steep slopes.

- Monitoring well installation to augment the existing well network and slug testing to estimate hydraulic conductivity of the shallow aquifer materials.

- A ground water potentiometric surface map will be developed using data from the well network. Ground water samples from each monitoring well in the network will be submitted to a laboratory for volatile and semi-volatile organic compounds, pesticides, polychlorinated biphenyls, and metals.

The above-referenced work plan is approved with the following conditions:

1.) The City of Truth or Consequences shall install at least 3 monitoring wells. One monitoring well shall be located upgradient of the site and 2 monitoring wells shall be located downgradient of the disposal areas.

2.) The monitoring wells shall be installed in accordance with NMED guidelines.

3.) Ground water samples shall also be analyzed for major cations and anions using appropriate EPA approved methods.

Please be advised that this work plan approval does not relieve the City of Truth or Consequences of responsibility if the plan fails to adequately address contamination related to waste management/disposal activities. In addition, NMED approval does not relieve the City of Truth or Consequences of its responsibility to obtain third-party access and to comply with any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

If you have any questions, please contact Bart Faris at (505) 222-9521 or Chris Whitman at (505) 647-7959. Thank you for the City's cooperation in this matter.

Sincerely,

William C. Olson, Chief
Ground Water Quality Bureau

cc: John Tanaka, P.E., BASCOR Environmental, 800 W. Central Rd., Ste. 104N, Mt. Prospect, IL 60056
Jack Whitt, Turtleback Mtn. Partners, 120 Stagecoach Dr., Elephant Butte, NM 87935
David Jevons, Bureau of Land Management, 1800 Marquess, Las Cruces, NM 88005
Chris Whitman, GWQB, NMED Dist. 3
Harry Mikel, SWB, NMED Dist. 3
ROS Reading File

APPENDIX B

BLM Closure Letter

NM 037574
R&PP Lease

DISTRICT OFFICE
P. O. Box 1420
Las Cruces, New Mexico
88001

December 16, 1974

Mr. Charles Markosky
City Manager
City of Truth or Consequences
Truth or Consequences, New Mexico 87901

Dear Mr. Markosky:

The examination of the landfill site with you and personnel of this office last week revealed the site has been properly closed. If the city would like to acquire the land as you indicated for a park and substation site, the landfill lease should be first relinquished and then a petition application may be filed.

Please refer to pages 8 & 9 of the attached brochure for instructions in preparing the application.

The land that will be used for park purposes may be acquired for $2.50 per acre and the land used for the substation site would be based on 50% of the appraised fair market value.

If you need any further assistance, please let me know.

Sincerely yours,

W. K. Barker
District Manager

Enclosures

MMJames:is

Tele 894-2601

mmj

APPENDIX C

Quality Assurance Project Plan

QUALITY ASSURANCE PROJECT PLAN FOR THE FORMER TRUTH OR CONSEQUENCES LANDFILL

Elephant Butte, New Mexico

Prepared for:

New Mexico Environment Department

City of Truth or Consequences, NM

Turtleback Mountain Partners

October 29, 2013

BASCOR Environmental, Inc.
consulting engineers and scientists

P.O. Box 669
Mt. Prospect, IL 60056-0669
Phone: (847) 577-1980

TITLE/SIGNATURE PAGE

QUALITY ASSURANCE PROJECT PLAN FOR CORRECTIVE ACTION

FORMER T OR C LANDFILL
ELEPHANT BUTTE, NEW MEXICO

October 29, 2013

Prepared by: Bascor Environmental, Inc.
Reviewed by: Gordon Environmental, Inc.

Prepared for: City of Truth or Consequences, New Mexico
Turtleback Mountain Partners

October 31, 2013

Samuel J. Senn, P.E., Bascor Environmental, Inc. — Date
Project Manager

Mike J. Crepeau, P.E., Gordon Environmental, Inc. — Date
Project Director

City of Truth or Consequences, New Mexico — Date

Ray Montes, New Mexico Environment Department — Date
Project Manager

October 31, 2013

John C. Tanaka, P.E., Bascor Environmental, Inc. — Date
Quality Assurance Officer

October 31, 2013

Randy Senn, CPG, Bascor Environmental, Inc. — Date
Health and Safety Officer

List of Acronyms

ASTM – American Society of Testing Materials

BLM – Bureau of Land Management

CPG – Certified Professional Geologist

EPA – Environmental Protection Agency

LEL – Lower Explosive Limit

NM – New Mexico

NMAC – New Mexico Administrative Code

P.E. – Profession Engineer

pH – Measure of acidity or basicity

QA – Quality Assurance

QC – Quality Control

QA/QC – Quality Assurance / Quality Control

SOP – Standard Operating Procedure

VOC – Volatile Organic Compounds

TABLE OF CONTENTS

1.0 PROJECT DESCRIPTION 1-1
1.1 Property Ownership and Previous Site Use 1-1
1.2 Site Characteristics 1-2
1.3 Limited Site Investigation 1-2
1.4 Project Objectives 1-3

2.0 PROJECT ORGANIZATION AND RESPONSIBILITY 2-1
2.1 New Mexico Environment Department 2-1
2.2 City of T or C 2-1
2.3 Bureau of Land Management 2-1
2.4 Turtleback Mountain Partners 2-1
2.5 Bascor Environmental, Inc. 2-2
2.6 Terracon Consultants, Inc. 2-2
2.7 Analytical Laboratories 2-2

3.0 QUALITY ASSURANCE OBJECTIVES FOR MEASUREMENT DATA 3-1
3.1 Data Quality Indicators 3-1
3.1.1 Precision 3-1
3.1.2 Accuracy 3-2
3.1.3 Representativeness 3-3
3.1.4 Completeness 3-3
3.1.5 Comparability 3-4
3.2 Level of Quality Control Effort 3-4

4.0 SAMPLING PROCEDURES 4-1
4.1 Groundwater Sampling and Analysis 4-1
4.2 Vapor Sampling and Analysis 4-1

5.0 SAMPLE HANDLING, PRESERVATION, AND CUSTODY PROCEDURES 5-1
5.1 Air, and Groundwater Sample Custody 5-1
5.1.1 Field Custody 5-1
5.1.2 Transfer of Custody and Shipment Procedures 5-2
5.2 Sample Containers and Sample Preservation 5-3

6.0 CALIBRATION PROCEDURES AND FREQUENCY 6-1
6.1 Field Instrument Calibration 6-2
6.2 Laboratory Instrument Calibration 6-3

7.0 ANALYTICAL PROCEDURES 7-1
7.1 Groundwater Analytical Procedures 7-1
7.2 Soil Vapor Analytical Procedures 7-1
7.3 IDW Sampling, Analytical Procedures, Characterization, Management, Treatment, and Disposal 7-1

8.0 DATA REDUCTION, VALIDATION, AND REPORTING 8-1
8.1 Field Data 8-1

8.2 Laboratory Data 8-1
8.2.1 Data Reduction 8-1
8.2.2 Data Validation 8-2
8.2.3 Data Reporting 8-2

9.0 INTERNAL QUALITY CONTROL CHECKS AND FREQUENCY 9-1
9.1 Field Measurements 9-1
9.2 Laboratory Analysis 9-1

10.0 PERFORMANCE AND SYSTEM AUDITS 10-1
10.1 Internal Audits of Field Activity 10-1
10.2 Internal Laboratory Audit 10-1

11.0 PREVENTIVE MAINTENANCE 11-1
11.1 Field Equipment/Instruments 11-1
11.2 Laboratory Instruments 11-1

12.0 DATA MEASUREMENT ASSESSMENT PROCEDURES 12-1

13.0 CORRECTIVE ACTION AND REPORTING 13-1
13.1 Field Corrective Action 13-1
13.2 Laboratory Corrective Action 13-2
13.3 Data Validation Corrective Action 13-2
13.4 Quality Assurance Reports 13-2

14.0 REFERENCES 14-1

TABLES

3-1 Quality Assurance / Quality Control Samples
5-1 Sample Container, Preservation, and Holding Time Requirements
5-2 Sample Preparation Methods and Methods of Analysis

FIGURES

2-1 Project Organization Chart

APPENDIX

A BEI Standard Operating Procedures

QUALITY ASSURANCE PROJECT PLAN FOR CORRECTIVE ACTION

FORMER T OR C LANDFILL
ELEPHANT BUTTE, NEW MEXICO

1.0 PROJECT DESCRIPTION

Bascor Environmental, Inc. (BEI) prepared this Quality Assurance Project Plan (QAPP) for Turtleback Mountain Partners (TMP) to document the technical planning process for environmental data acquisition, including monitoring procedures and sample analysis, to be performed during corrective action activities for the former Truth or Consequences (T or C) landfill in Elephant Butte, New Mexico. These activities were developed in response to previous irrigation directly over the former landfill. All irrigation over the former landfill was abandoned in May 2013. The QAPP defines the project data quality objectives and establishes procedures to ensure that these objectives are achieved.

1.1 PROPERTY OWNERSHIP AND PREVIOUS SITE USE

In March 1961, the City of T or C entered into a lease with BLM to use the site for solid waste disposal. The BLM leased the property pursuant to the Recreation and Public Purposes Act and assigned number NM 037574 to the lease. The site's use as a landfill pre-dates any State solid waste regulations, so the site is classified as "non-registered" by the New Mexico Environment Department (NMED).

Solid waste was disposed of at the site between 1961 and 1974. Based on available records, waste was typically disposed by dumping it from the east side of the elevated access road, allowing it to fall down the slopes, then burned. In about 1968, as a result of concerns raised by the Health Department, the City began to dispose of their waste on lower ground by pushing dirt over the waste with heavy machinery. By December 1974, use of the site as a landfill stopped, and an inspection by the BLM showed that the site was closed in accordance with the terms of the lease.

1.2 SITE CHARACTERISTICS

The subject site occupies 30.12 acres of land in Elephant Butte, Sierra County, New Mexico. Elephant Butte is located about 2 miles northeast of the City of T or C and the project site is located about 2.5 miles west of the Elephant Butte reservoir. In 2000, the population of Elephant Butte was 1,390.

A paved access road (no longer maintained) runs north-south through the site, although public access is restricted. Properties immediately adjacent to the BLM parcel were redeveloped as part of the Turtleback Mountain Resort (discussed further below). The site topography varies considerably. The eastern half of the site is relatively flat, then rises steeply (about 100 feet) to the west to a mesa through which the former landfill access road runs.

An area of solid waste disposal is present at the southwestern corner of the BLM parcel that extends onto the adjacent parcel to the south. It is believed that this area was used primarily for "fly dumping" (no subsurface waste disposal).

In 2007, the eastern half of the subject site was redeveloped into a golf course driving range/practice facility as part of Turtleback Mountain Resort. The practice facility was constructed partially over areas used as a landfill. A soil cover system was placed over the landfilled area to prevent direct contact with waste materials and to minimize leachate generation by minimizing precipitation from infiltrating through the waste.

1.3 LIMITED SITE INVESTIGATION

After the practice facility was operated for several seasons, it was discovered that the irrigation system had been inadvertently extended onto the east side of the former landfill. To address concerns related to potential leachate generation caused by irrigation, NMED requested a limited site investigation that included installation and sampling of groundwater monitoring wells and soil vapor monitoring points; and the completion of soil borings to evaluate the extent and thickness of the soil cover over the landfill. The results of the site investigation were documented in a Limited Site Investigation Report (Terracon, 2013). These data were then used to develop a Corrective Action Plan (CAP) for final site closure (BEI, 2013).

1.4 PROJECT OBJECTIVES

The overall objective of this project is to close the unregulated landfill in accordance with applicable NMED criteria and obtain a no further action letter from NMED. The tasks covered by this QAPP include the following:

- Groundwater sampling and analysis; and
- Soil vapor sampling and analysis.

The CAP (BEI 2013) is a companion document to this QAPP. The CAP includes a Sampling and Analysis Plan (SAP) that details specific sample types, locations, methods, and a sampling schedule.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITY

This section presents the project organization and responsibilities of project personnel to aid in the exchange of information and to ensure efficient project operation. The organization, lines of communication, and responsibilities of the project team are described below and shown graphically on Figure 2-1.

2.1 NEW MEXICO ENVIRONMENT DEPARTMENT

The former T or C landfill is an unregistered landfill being regulated pursuant to the New Mexico Water Quality Control Commission (WQCC) Regulations 20.6.2.1203.A NMAC. The NMED will review and approve project submittals through Mr. Ray Montes, its designated Project Manager.

2.2 CITY OF T OR C

The City of T or C leases the subject site from the BLM and was the operator of the former landfill. At present, the City does not have specific responsibilities covered by this QAPP, but will be kept informed of project activities.

2.3 BUREAU OF LAND MANAGEMENT

The Bureau of Land Management (BLM) is the owner of the subject property which leases the land to the City of T or C. The BLM does not have specific responsibilities covered by this QAPP, but will be kept informed of project activities.

2.4 TURTLEBACK MOUNTAIN PARTNERS

Turtleback Mountain Partners is the entity responsible for the re-development and investigation of the site to date.

2.5 BASCOR ENVIRONMENTAL, INC.

BEI is the primary environmental consultant for Turtleback Mountain Partners. Sam Senn, P.E. is BEI's Project Manager for this project. His responsibilities include ensuring that the project objectives are met; maintaining the project schedule and budget; and monitoring the technical adequacy of the work performed. He is the primary point of contact for technical, schedule, and contractual issues.

The Quality Assurance Officer (QAO) for this project is John Tanaka, P.E. Mr. Tanaka is responsible for reviewing data compliance with respect to this QAPP. He will oversee all data verification and validation and check in routinely with the laboratory to monitor progress. He is responsible for ensuring that the QAPP is maintained. Mr. Tanaka will review data quality objectives, set assessment criteria, and conduct audits to evaluate compliance. Mr. Tanaka will work directly with respective laboratory QC personnel on related quality control issues.

The Health and Safety Officer for this project is Randy Senn, CPG. Mr. Senn will ensure that the Health and Safety Plan (HASP) is properly prepared and implemented by all personnel working at the site, including contractors, and that all site personnel are trained in the site-specific project health and safety requirements. Mr. Senn will have authority to stop work if unsafe conditions are observed.

2.6 TERRACON CONSULTANTS, INC.

Terracon Consultants, Inc. (Terracon), Las Cruces, New Mexico is a subconsultant to BEI for selected field work and reporting tasks.

2.7 ANALYTICAL LABORATORIES

TestAmerica, Inc. or Hall Environmental Analysis Laboratory will provide primary services for the analysis of vapor and groundwater samples collected at the subject facility. Each laboratory will follow their own SOPs and related quality manuals during the performance of analytical services for this project.

3.0 QUALITY ASSURANCE OBJECTIVES FOR MEASUREMENT DATA

This QAPP uses a Data Quality Objectives (DQO) process to generate performance criteria for the collection of environmental data. For the former T or C landfill site, groundwater and soil vapor sampling and analysis data are the key indicators for decisions regarding final site closure. To meet the DQO performance criteria, sampling and analyses will be performed using standard methods, with properly operated and calibrated equipment, and by trained personnel. These data will be used to assess the presence or absence of environmental impacts, and ultimately to provide the necessary documentation to support a decision to close the site and obtain a "No Further Action" letter (or equivalent) from NMED.

The study area includes the BLM property boundaries and selected monitoring wells located southeast (hydraulically downgradient) of the site. Specific monitoring points are defined in the CAP (BEI, 2013). Groundwater and soil vapor will be sampled and analyzed for known and suspected chemicals of concern (COCs) associated with the subject property, as specified in the CAP. All environmental samples will be analyzed in accordance with the U.S. EPA's Publication SW-846, *Testing Methods for Evaluating Solid Waste, Standard Methods for the Examination of Water and Wastewater,* or other standard method. Specific analytical procedures and test methods, target analyte lists (TAL), the method detection limits (MDLs), and practical quantitation limits (PQLs), are discussed and identified in Section 7.0.

QA/QC procedures are identified and discussed in the laboratory's QA/QC Manual, Standard Operating Procedures (SOPs).

3.1 DATA QUALITY INDICATORS

Several data quality indicators will be assessed quantitatively to provide an overall evaluation of whether project DQOs are met. These indicators are discussed below.

3.1.1 Precision

Precision is the determination of the reproducibility of a measurement under a given set of conditions of a quantitative measure of the variability of a group of measurements compared to

their average value. Precision is either reported, depending on the end use of the data, as relative percent difference (RPD) or standard deviation.

Field precision will be assessed through the collection and analysis of duplicate samples. The precision of laboratory analyses will be based on laboratory matrix spike/matrix spike duplicate (MS/MSD) analyses. Precision is reported as Relative Percent Difference (RPD). A summary of the duplicate and other quality control samples to be collected is presented in Table 3-1.

Each laboratory's QA/QC procedures are identified and discussed in each laboratory's QA/QC Manual, Standard Operating Procedures. Copies of each laboratory's QA/QC Manual SOP are available directly from the laboratory by request.

3.1.2 Accuracy

Accuracy is the degree of agreement between a measurement or observed value and an accepted reference or true value. The field and laboratory accuracy objectives are identified below.

Field and trip blank samples will be collected and results evaluated for contamination to determine sampling accuracy. A trip blank will consist of a laboratory-prepared sample of reagent grade water. Trip blanks will accompany sample containers and be handled using the same procedures as the investigative samples. Trip blanks are only required when VOCs are a COC. One trip blank will be submitted for analysis with each shipping container with samples for VOC analysis.

Field blanks (equipment blanks) will be collected by pouring laboratory-prepared water or distilled water over or through the sampling equipment and collecting the rinsate in the proper analytical containers. One field blank will be analyzed per sampling event for all matrices.

The analysis of MS/MSD samples can be used to determine laboratory accuracy. The analysis of reference standard samples, laboratory control samples, surrogate compounds, and percent recoveries are also used for laboratory accuracy determinations. Accuracy goals for parameters to be analyzed will be in accordance with U.S. EPA methods.

A minimum of 1 field duplicate sample will be collected each day for analysis. A field duplicate is a sample collected from the same extracted sample from any point and labeled as such.

3.1.3 Representativeness

Representativeness is the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Field and laboratory representativeness are described below.

Representativeness will be achieved by establishing the level of allowable uncertainty in the data and then statistically determining the number of samples needed to characterize the population through the DQO process. It will also be achieved by ensuring that sampling locations are properly selected. Representativeness depends upon the proper design of the sampling program, and will be accomplished by ensuring that this QAPP, CAP (BEI, 2013), and all relevant SOPs are followed. The QA goal will be to have all samples and measurements representative of the media sampled. Field testing for pH, temperature, and conductivity stabilization prior to groundwater sampling will help ensure that representative samples are collected.

Representativeness of laboratory data cannot be quantified, but adherence to the prescribed analytical methods and procedures, including holding times, blanks, and duplicates, will ensure that the laboratory data is representative.

3.1.4 Completeness

Completeness is the measure of the quantity of valid data obtained from a measurement system compared to the quantity that was expected under normal conditions. Although a completeness goal of 100% is desirable, an overall completeness goal of 90% may be realistically achieved under normal field sampling and laboratory analysis conditions. Field and laboratory completeness are described below.

The field sampling crew will take measures to ensure that data generated in the field is as complete as possible. However, some samples may be lost or broken in transit. The goal for field completeness is to have at least 90% of samples collected result in valid data.

Laboratory completeness will be a measure of the quantity of valid data measurements and analyses obtained from all the measurements and analyses completed for the project. The laboratory completeness objective is for 90% of the samples analyzed to result in valid data.

3.1.5 Comparability

The confidence with which one data set can be compared to another is a measure of comparability. The ability to compare data sets is critical when a set of data for a specific parameter is compared to historical data for determining trends. Field and laboratory comparability are described below.

The comparability of field data will be satisfied by ensuring that the CAP and associated QAPP are adhered to and that all samples are properly handled and analyzed. Also, an effort will be made to perform sampling in a consistent manner by the same samplers (when possible).

Analytical data are comparable when the data are collected and preserved in the same manner followed by analysis with the same standard method and reporting limits. Data comparability is limited to data from the same environmental media. Analytical method quality specifications have been established to help ensure the data will produce results that are comparable. The analytical specifications for Matrix Spike Recovery and Relative Percent Difference limits will comply with applicable SW-846 requirements.

3.2 LEVEL OF QUALITY CONTROL EFFORT

DQOs are based on the end uses of the data to be collected, so different levels of data quality apply. For this project, there are three levels of DQOs that address various data uses and the QA/QC effort and methods required to achieve the desired level of quality. These levels are as follows:

1. **Field DQOs:** This level of data quality is appropriate for data collected in the field. Of the three levels of DQOs proposed for this investigation, field DQOs have the lowest level of QA/QC. Procedures for meeting field DQOs are described in Section 4.0 of this QAPP.

2. **Engineering DQOs:** This level of data quality is appropriate for engineering purposes and provides an intermediate level of data quality. The manner in which Engineering DQOs will be met is described in Sections 4.0, 7.0 and 8.0 of this QAPP.

3. **Confirmational DQOs:** This level of data quality is appropriate for the evaluation of the extent of constituents of concern in the subsurface and of potential remedial alternatives. The manner in which Confirmational DQOs will be met is described in Section 4.0 of this QAPP.

4.0 SAMPLING PROCEDURES

This section describes the sampling procedures for collecting the monitoring data. Samples will be collected to perform field screening and for laboratory analysis. Specific sample locations, the rationale for sampling, and a schedule are discussed in the CAP (BEI, 2013).

4.1 GROUNDWATER SAMPLING AND ANALYSIS

Monitoring wells will be sampled to evaluate groundwater quality consistent with the CAP (BEI, 2103). The sampling procedures will ensure that the data generated is representative and comparable, and also collected in a consistent manner during each sampling event, and from one sampling event to the next. Different sampling techniques may be used depending on the data quality objectives. For example, bailers may be used for routine sampling and low-flow sampling with a peristaltic pump may be used when additional field parameters (e.g. dissolved oxygen and oxidation-reduction potential [ORP]) are required. Bailers or an electric or air-operated bladder pump may be used if the depth to water exceeds the lift capability of a peristaltic pump.

Monitoring wells will not be sampled until at least one to two weeks following well development to allow equilibrium of the monitoring well with the aquifer. BEI's Standard Operating Procedure for monitoring well sampling will be followed (Appendix A).

4.2 VAPOR SAMPLING AND ANALYSIS

Vapor samples will be collected from temporary vapor monitoring points, which consist of 6" long by 0.25" diameter implants with 0.25" diameter polyethylene tubing to the ground surface. The monitoring points are completed with flush-mount vaults and concrete pads. Samples will be collected for field screening and/or laboratory analyses pursuant to the CAP (BEI, 2013). BEI's Standard Operating Procedure for vapor sampling is included in Appendix A.

5.0 SAMPLE HANDLING, PRESERVATION, AND CUSTODY PROCEDURES

The primary purpose of sample custody procedures is to create a written record that documents the transportation and possession of a sample from the moment of collection through analysis. The resulting information aids in data interpretation and serves as legal evidence of sample handling. The sample custody procedures summarized in the following sections are designed to comply with USEPA requirements for sample control and to ensure that the samples arrive at the laboratory with the chain of custody intact.

Any changes in the sampling procedures presented in this QAPP will be discussed with the project manager before implementation and will be documented in the field logbook.

5.1 AIR, AND GROUNDWATER SAMPLE CUSTODY

5.1.1 Field Custody

The field sampler is personally responsible for the care and custody of the samples until they are transferred or properly dispatched. As few people as possible will handle the samples.

All sample bottles will be tagged with sample numbers and locations. Sample labels will be completed for each sample with waterproof ink. If weather conditions preclude the use of waterproof ink, a notation should be made in the logbook. For example, a logbook notation might state that a pencil was used to fill out the sample tag because the ballpoint pen would not function in freezing weather.

Field logbooks will be used to record all data pertaining to sample collection activities. Entries will be as detailed as possible to enable field staff to reconstruct a particular field situation without reliance on memory.

Field logbooks will be bound field survey books or notebooks. Logbooks will be assigned to field personnel, but will be stored in the designated project file area when not in use. Each logbook will be identified by the project name.

The title page of each logbook will contain the following information:

- Names of personnel to whom the logbook is assigned;
- Logbook number;
- Project name;
- Project start date; and
- Project end date.

Logbook entries will contain a variety of information. At the beginning of each entry, the date, start time, weather, names of all sampling team members present, level of personal protection being used, and the signature of the person making the entry will be entered. The names of visitors to the site and the purpose of their visit will also be recorded in the field logbook.

Measurements made and samples collected will be recorded in the logbook. All entries will be in ink and no erasures will be made. If an incorrect entry is made, the information will be crossed out with a single strike mark. Whenever a sample is collected, or a measurement is made, a detailed description of the sampling location will be recorded.

The equipment used to collect samples will be noted, along with the time of sampling, sample description, depth at which the sample was collected, and the volume and number of containers. A sample identification number will be assigned prior to sample collection. Field duplicate samples, which will receive a separate sample identification number, will be noted under sample description.

5.1.2 Transfer of Custody and Shipment Procedures

During shipping and transfer of custody, a properly completed chain-of-custody form will accompany the samples. The chain-of-custody form will include the following information: project number, sample number, date collected, type of sample, laboratory information, and analyses to be performed. The sample numbers and locations will be listed on the chain-of-custody form. When transferring the possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time on the chain-of-custody form. This record documents transfer of custody of samples from the sampler to another person, to a mobile laboratory, to the permanent laboratory, or to/from a secure storage area.

Samples will be properly packaged for shipment and dispatched to the appropriate laboratory for analysis, with a separate signed custody record enclosed in each sample box or cooler. Shipping containers will be locked and secured with strapping tape and custody seals for shipment to the laboratory.

The chain-of-custody record identifying the contents will accompany all shipments. The original record will accompany the shipment, and a copy will be retained by the sampler and returned to the sampling office.

Samples will be sent by common carrier or hand-delivered. Receipts of bills of lading will be retained as part of the permanent documentation. Commercial carriers are not required to sign off on the custody form as long as the custody forms are sealed inside the sample cooler and the custody seals remain intact.

5.2 SAMPLE CONTAINERS AND SAMPLE PRESERVATION

Each sample will be collected in an appropriate container that has been prepared in a correspondingly appropriate manner. Sample containers required for each matrix are outlined in Table 5-1. The correct preparation method for each matrix, for each of the laboratory analyses to be performed, is outlined in Table 5-2. All samples collected will be analyzed within appropriate holding times (Table 5-1). The samples collected that are subject to this QAPP will be properly labeled with source, date and time of collection, and analysis to be performed. These labeled samples (except for air samples) will be stored on ice in a cooler to achieve 4°C or lower temperature during transport. The sampler will seal the cooler with a custody seal (to indicate if any tampering has occurred during transport). The samples will be transported to the laboratory in a manner consistent with the Chain-of-Custody procedures outlined in Section 5.1.2. The equipment used to verify field preservation conditions of samples will be calibrated each day of sampling, and as required by the SOP for that piece of equipment.

6.0 CALIBRATION PROCEDURES AND FREQUENCY

The calibration procedures to be employed for both the field and laboratory instruments used during the monitoring activities are discussed and/or referenced in this section. Measuring and test equipment used in the field and laboratory will be subjected to a formal calibration program. The program will require equipment of the proper type, range, accuracy, and precision to provide data compatible with the specified requirements and desired results. Calibration of measuring and test equipment may be performed internally using in-house reference standards, or externally by agencies or manufacturers.

The responsibility for the calibration of laboratory equipment rests with the laboratory. BEI site personnel are responsible for the calibration of BEI field equipment and field equipment provided by subcontractors.

Documented and approved procedures will be used for calibrating, measuring, and testing equipment. Widely accepted procedures, such as those published by EPA, ASTM, or procedures provided by manufacturers in equipment manuals, will be adopted.

Calibrated equipment will be uniquely identified by the manufacturer's serial number, a BEI equipment identification number, or other means. This identification, along with a label indicating when the next calibration is due (only for equipment not requiring daily calibration), will be attached to the equipment. If this is not possible, records traceable to the equipment will be readily available for reference. It will be the responsibility of all personnel to check the calibration status from the due date labels or records prior to using the equipment.

Measuring and test equipment will be calibrated at prescribed intervals and/or as part of operational use. Frequency will be based on the type of equipment, inherent stability, manufacturer's recommendations, values given in national standards, intended use, and experience. Equipment will be calibrated, whenever possible, using reference standards having known relationships to nationally recognized standards (e.g., National Institute of Standards and Technology) or accepted values of physical constants. If national standards do not exist, the basis for calibration will be documented.

Physical and chemical reference standards will be used only for calibration. Equipment that fails calibration or becomes inoperable during use will be removed from service and segregated to prevent inadvertent use and will be tagged to indicate the fault. Such equipment will be recalibrated and repaired to the satisfaction of the laboratory personnel or BEI site personnel, as applicable. Equipment that cannot be repaired will be replaced.

Records will be prepared and maintained for each piece of calibrated measuring and test equipment to document that established calibration procedures have been followed. Records for subcontractor field equipment and BEI equipment used only for this specific project will be kept in the project files. The laboratory will maintain laboratory calibration records.

Field instrument calibration is described below and laboratory instrument calibration is described in the following section. The SOPs associated with the calibration activities are identified below.

6.1 FIELD INSTRUMENT CALIBRATION

Instruments used to gather, generate, or measure field environmental data will be calibrated with sufficient frequency and in such a manner that accuracy and reproducibility of results are consistent with the manufacturer's specifications. Field measurement instruments for the field investigations will include PID units that are used for detecting VOC vapors, LEL units for measuring explosive conditions, instruments for measuring oxygen concentrations, and redox potential. As applicable, each field measurement instrument will be calibrated daily prior to use and the calibration will be checked consistent with the manufacturer’s recommendations.

Field measurement instruments will be operated by trained personnel in accordance with the appropriate SOPs or manufacturer’s specifications. On-site BEI staff will examine field measurement instruments used during field sampling to verify that they are in operating condition. The BEI project manager or other BEI staff will periodically audit the calibration and field performance of the field equipment to ensure that the system of field calibration meets the manufacturer’s specifications. Calibration procedures will be documented in the field logbook.

6.2 LABORATORY INSTRUMENT CALIBRATION

The proper calibration of laboratory equipment is a key element in the quality of the analysis done by the laboratory. Each type of instrumentation and each EPA-approved method has specific requirements for the calibration procedures, depending on the analytes of interest and the medium being analyzed.

The calibration procedures and frequencies of the equipment used to perform the analyses will be in accordance with the laboratory SOPs. The laboratory QA Managers will be responsible for assuring that the laboratory instrumentation is maintained in accordance with specifications. The laboratory's SOPs will be followed for corrective actions and preventive maintenance frequencies.

7.0 ANALYTICAL PROCEDURES

7.1 GROUNDWATER ANALYTICAL PROCEDURES

Groundwater samples will be analyzed for known and suspected COCs associated with the subject property. All environmental media samples will be collected and analyzed in accordance with the information listed in Table 5-2. Containers used for sample collection of samples will be cleaned to current U.S. EPA standards.

TestAmerica, Inc., Phoenix, Arizona or Hall Environmental Analysis Laboratory, Albuquerque, New Mexico will perform the bulk of the analytical services following their internal SOPs. Target detection limits will be as specified in the analytical methods listed in Table 5-2. If samples contain relatively high concentrations of specific constituents, dilutions may be required to quantify the dominant detected compounds. The laboratory will make every effort to quantify all constituents present, including re-analysis if necessary to provide lower detection limits. However it may not be practical to achieve the MDLs and PQLs for every constituent initially until the dominant detected constituent concentrations are substantially reduced.

7.2 SOIL VAPOR ANALYTICAL PROCEDURES

Vapor samples will be analyzed for known and suspected COCs associated with the subject property. TestAmerica or Hall Environmental Analysis Laboratory will perform all of the analytical services related to air and vapor samples following their internal SOPs. Applicable target detection limits will be as specified in the methods listed in Table 5-2.

7.3 IDW SAMPLING, ANALYTICAL PROCEDURES, CHARACTERIZATION, MANAGEMENT, TREATMENT, AND DISPOSAL

Wastes generated at the site will be referred to as investigative-derived waste (IDW) and includes, but is not limited to, the following:

1. All water, condensate, product, and residuals removed from wells and piezometers,

2. Decontamination wash water and rinse water from decontamination of any sampling equipment, or other investigation equipment, and other disposable equipment and

materials which may have come in contact with potentially contaminated media at the site.

All IDW will be properly containerized, labeled managed, representatively sampled, and tested or characterized for treatment and disposal in accordance with NMED regulations.

For wastewater containerized wastes, a grab sample will be collected from each batch to characterize the water for disposal. For example, if more than one container of wastewater is generated from sampling activities, only 1 of the containers will be sampled for characterization. The results will be used to dispose of all containers.

Each waste stream generated from the groundwater sampling will be representatively sampled in accordance with guidance in SW-846, Chapter 9. To the extent practical, each type of waste will be kept segregated from other types of wastes.

8.0 DATA REDUCTION, VALIDATION, AND REPORTING

Data generated during field activities will be used to determine if project objectives have been met. These data will be subject to a reduction and validation process prior to reporting. The procedures for the field and laboratory data reduction, validation, and reporting are described in this section.

8.1 FIELD DATA

Instruments that will be used for field measurements are all direct reading instruments so there is no calculation involved in evaluating the actual measurement. Validation processes for the direct reading instrument measurements include double-checking field entries to ensure that there are no transcription errors between field entry and data usage, tabulation, and reporting. In addition, a field logbook will be used to document that the direct reading instruments are properly calibrated before obtaining all measurements.

8.2 LABORATORY DATA

8.2.1 Data Reduction

Data reduction includes all processes that change either the form of expression (i.e., the units of measure) of the raw data or the quantity of data values (rounding). It often involves statistical and mathematical analysis of data and usually results in a reduced subset of the original data set. The person responsible for data reduction is generally concerned with equations used to calibrate results.

At the laboratory, data reduction is performed either manually by the analyst or by computer systems interfaced to the analytical instruments. Whenever such procedures are employed within the laboratory network, mathematical procedures have been verified for accuracy of computation. For manual data processing, all steps in the computations will be provided on a data sheet or laboratory computation sheet.

8.2.2 Data Validation

The purpose of data validation is to determine if the data conform to specifications and are suitable for the intended project use. An internal review of analytical data will be the responsibility of the laboratory personnel.

The BEI Quality Assurance Officer will oversee and provide an additional level of data validation including a review of the analytical results and the quality assurance summary provided with the laboratory report. An evaluation will be made based on the data quality objectives in this QAPP and a comparison of the laboratory quality assurance results with the laboratory established control limits. The analytical data validation by BEI will include evaluating holding times, instrument performance checks, results of calibration, blank and surrogate spike data, matrix spike data, and control samples. Completeness of the laboratory deliverable package will also be evaluated. If warranted, BEI will also perform additional data validation of the complete laboratory raw data package.

8.2.3 Data Reporting

Standards laboratory reporting criteria will be used for this project. Laboratory deliverables will document the analysis and associated quality assurance. The laboratory report will include the following items:

- Date, Project Name, Project Number, and Report Contents;
- Case Narrative;
- Discussion of any technical problems or observations;
- Discussion of any laboratory checks not meeting QA; and
- Summary of QC checks and acceptance.
- Laboratory analyses performed along with the number of samples and matrices;
- Description of data qualifiers; and
- Sample result and units.

9.0 INTERNAL QUALITY CONTROL CHECKS AND FREQUENCY

Internal quality control checks will be completed on various types of measurement equipment utilized for the project. A description of the checks is provided below.

9.1 FIELD MEASUREMENTS

Field equipment that will be utilized for air sample measurements include a photoionization detector (PID) or similar meter that measures VOCs, LEL, and oxygen concentration. A YSI 556 or similar piece of field equipment will be used to determine the dissolved oxygen, pH, temperature, oxidation/reduction potential, and conductivity of water at the site. The quality control checks for the above-described field equipment will consist of the calibration procedures supplied by the equipment manufacturer.

Field quality control checks will also include collection of various quality control samples as described in previous sections. The quality control samples that will be utilized to assess field quality control include field blanks, trip blanks, and duplicates.

9.2 LABORATORY ANALYSIS

TestAmerica or Hall Environmental Analysis Laboratory will provide the analytical support on this project and will follow their internal SOPs and Laboratory QA plans. Laboratory quality control checks will typically include the following:

- Initial Calibration Standards;
- Continuing Calibration Checks;
- Laboratory Control Samples; and
- Method/instrument blanks.

The final deliverables data package from the laboratory will include all quality control information such that someone, other than laboratory personnel, can track the quality control procedures during sample analysis. If samples do not meet the laboratory quality control criteria, re-analysis and/or other applicable corrective action will be implemented.

10.0 PERFORMANCE AND SYSTEM AUDITS

10.1 INTERNAL AUDITS OF FIELD ACTIVITY

The BEI Project QA Officer will conduct the internal audits of field activities. At least one internal field audit will be completed during each activity. The internal field audit will include the following checklist:

Item	Description of Internal Field Audit Task
1.	Scope of work followed Work Plan
2.	Review of site documentation
3.	Review of sampling procedures
4.	Review of field measurement procedures
5.	Review of field instrument calibration records
6.	Review of Daily Equipment Logs
7.	Review of adherence to Health and Safety Plan
8.	Review of sample handling, storage, and packaging
9.	Review of chain-of-custody

If deficiencies are noted during the audit, the deficiency shall be noted in writing and a follow-up audit may be completed, if deemed necessary by the Project QA Officer.

10.2 INTERNAL LABORATORY AUDIT

Internal system and performance audits to be conducted by the analytical laboratory will be in accordance with the laboratory's SOPs.

11.0 PREVENTIVE MAINTENANCE

Equipment maintenance will be performed in accordance with the manufacturer's published requirements. Preventive maintenance will be performed before each day's use or in accordance with the applicable manufacturer's guidelines. The preventive maintenance and internal quality control checks for field and laboratory instruments are discussed in this Section and also referenced in Sections 6.0 and 9.0.

11.1 FIELD EQUIPMENT/INSTRUMENTS

Field equipment that will be used for air sample measurements are limited to a Landtec Gem-2000 or similar meter that measures VOCs, LEL, and oxygen concentration. Field measurement of water samples will be performed using a YSI 556 or similar unit that measures temperature, pH, conductivity, dissolved oxygen, and oxidation/reduction potential. The quality control checks for the above-described field equipment will consist of the calibration procedures supplied by the equipment manufacturer.

Field measurement instruments for the field investigations will include the instruments discussed in Section 6.1. See Sections 6.0, Calibration Procedures and Frequency, and 9.0, Internal Quality Control Checks and Frequency, for relevant information regarding field instruments.

Field equipment will be checked for proper operating condition prior to beginning each day's activities. Any instrument found to not meet applicable manufacturer's specifications will be placed out of service until it is returned to proper mechanical operation.

The field instruments that will be used during the IM activities are limited to direct reading instruments that require minimal maintenance. The preventative maintenance procedures that will be employed are those recommended by the manufacturer. The field instruments will be checked and calibrated daily before use, or as recommended by the manufacturer, and calibration will be noted in the appropriate logbook.

11.2 LABORATORY INSTRUMENTS

Preventative maintenance procedures and schedules to be conducted by the analytical laboratory will be in accordance with the laboratory's SOP.

12.0 DATA MEASUREMENT ASSESSMENT PROCEDURES

Raw data obtained during field activities (e.g. water level, and PID readings) will be recorded on the appropriate field forms or in a field logbooks. This data will become part of the project file to be maintained as described previously in this QAPP. The BEI QA Officer will manage the data processing.

All arrangements with the analytical laboratory will be made prior to each sampling event. These arrangements will include scheduling sample delivery, establishing a laboratory contact, setting up any special sample handling or storage requirements, specifying sample bottle preparation and shipping procedures, describing required chain-of-custody documentation, and any other details that might factor into the sampling program.

Sampling team members will be informed of the proper field procedures (e.g., health and safety considerations, decontamination, chain of custody). If required, regulatory agency personnel will be contacted in advance to inform them of the sampling schedule.

Field personnel will use field forms or logbooks to record all sampling events and field observations. Entries in the logbooks will be dated and signed by the person making the entry. The following information will be included in the logbooks:

- Date;
- Client;
- Location;
- Weather;
- Names of sampling personnel;
- Work progress;
- QA/QC samples; and
- Health and safety monitoring.

In addition, any information that is not normally recorded on the sampling logs and forms should be included in the field logbook. Examples of such information includes:

- Delays;
- Unusual situations;
- Departure from established QA/QC field procedures;
- Instrument problems; and
- Accidents.

Sample labels are necessary to identify and prevent misidentification of the samples. Labels will be placed on the sample containers prior to or at the time of sampling. The labels will be filled out in permanent ink at the time of collection, and should include the following information:

- Sample I.D.;
- Type of analysis;
- Initials of collector;
- Date and time of collection;
- Client and geographic location;
- Company name; and
- Project number.

Data generated during activities at the site will be used to determine if the project objectives and purposes have been met. The data and QC assessment of the data will be compared to the QC objectives described in Section 3.0 after the calculations described in this section are completed. The only data that will be considered fully usable for decision making purposes will be the data meeting the QC objectives.

Data assessment will be completed by the BEI QA Officer and the BEI Project Manager, after the laboratory calculations described above are completed and the laboratory has completed the applicable internal QA/QC activities. Laboratory staff will also be involved in the data assessment with BEI staff, as needed.

A checklist of the items which will be evaluated during the assessment, at a minimum, is provided below:

- ☐ Were the sampling SOPs followed for all sample collection activities?
- ☐ Were the samples obtained from the proper and locations?
- ☐ Were the laboratory analyses completed following the SOPs and methodologies?
- ☐ Were the project decision rules utilized?
- ☐ Are the VOCs detected by the laboratory the same VOCs expected to be encountered during the investigative activities, IM's, and other remediation activities?
- ☐ To what extent are data found to have limited use due to qualifiers such as estimated concentrations and the presence of VOCs in method blanks?
- ☐ Do data validation qualifiers affect the ability to compare the data to screening values associated with the decision statement and rules?
- ☐ Has data which appears to be an outlier, as described below, been properly evaluated?
- ☐ Have any data gaps been evaluated?
- ☐ Were corrective action issues resolved?

If the above assessment of the data indicates that there is a reported concentration result that is much different from most other values in a data set for the same group, it will be referred to as an "outlier" or anomaly. Outliers can result from one or more of the following:

- Inconsistent sampling or analytical chemistry methodology;

- Errors in transcription of data values or decimal points;
- A catastrophic unnatural (but actual) occurrence such as a spill;
- Inconsistencies in the sample matrix (i.e., non-homogeneity of the sample matrix);
- Actual but extreme concentration values; and
- Amended errors in analytical methodologies.

The above-described procedures for data validation and assessment will identify any outliers that are due to the first two causes mentioned above. Any outlier not attributable to these two causes may be due to actual but extreme concentration values. The data point in question will then be compared to data from similar settings. Also, other aspects of the reported data will be examined to determine if a high reported concentration of a single constituent occurs in other samples but cannot be duplicated in replicate or QC samples. Sample results designated as outliers may be resampled and analyzed.

BEI will attempt to correct outlying values if the cause of the problem is documented. For example, the data will be corrected if outliers are caused by incorrect transcription and the correct values can be obtained and documented from valid records. Also, if a catastrophic event or problem in methodology occurred that can be documented, data values will be reported in clear reference. Outlier values will not be omitted from the raw data reported in the final data reports; however, these values and possible causes will be identified within the appropriate documentation.

13.0 CORRECTIVE ACTION AND REPORTING

Corrective action is the procedure of identifying, recommending, approving, and implementing measures to modify unacceptable procedures or out-of-limit QC performance that affect data quality. Corrective action will be implemented as necessary during field activities, laboratory analyses, data validation, and data assessment. Corrective action forms (Nonconformance Memos) will be utilized by the laboratory as required and described below. All corrective action proposed and implemented will be documented and included in the final reports.

Minor field corrective actions will be implemented after approval by the BEI Project Manager and the QA Officer. Corrective actions that are more significant will only be implemented after approval by NMED and BEI personnel. Corrective actions will be documented in routine or separate progress reports.

13.1 FIELD CORRECTIVE ACTION

Corrective action in the field may be needed for a variety of circumstances, such as:

- Changes in the sample network (e.g. more/fewer samples; sampling locations other than those specified; or changes in sampling strategy due to unforeseen circumstances);
- Modifications to sampling procedures or field analytical procedures due to unexpected conditions; and
- Instrument malfunctions.

Field personnel will contact the BEI Project Manager to assess potential impacts on the quality of collected data. An appropriate corrective action will be developed and implemented as required.

Corrective action will be documented in a field logbook. Documentation will include a description of the circumstances that initiated the corrective action, the action taken in response, the final resolution, and any necessary approvals.

13.2 LABORATORY CORRECTIVE ACTION

Corrective actions may need to be implemented by the analytical laboratory. The laboratory's SOP and QA Plan will be followed regarding any non-conformances and associated corrective actions.

13.3 DATA VALIDATION CORRECTIVE ACTION

The need for corrective action may be identified during data validation and/or data assessment activities. Potential types of corrective action may include re-sampling by the field team or re-injection/re-analysis of the sample(s) by the laboratory. The need for corrective action may be identified by the BEI QA Officer, Project Manager or by other data validation/assessment staff. All corrective action of this type will be documented and included in appropriate reports.

13.4 QUALITY ASSURANCE REPORTS

Quality assurance activities described in this QAPP will be documented as needed in internal reports and during planned reports documenting sampling results.

14.0 REFERENCES

Bascor Environmental, Inc. 2006. Closure Plan for the Former Truth or Consequences Landfill, Elephant Butte, New Mexico. August 2006.

Bascor Environmental, Inc. 2013. Corrective Action Plan for the Former Truth or Consequences Landfill, Elephant Butte, New Mexico. September 2013.

C.C. Johnson & Malhotra, P.C. 1990. Final Truth or Consequences Landfill Site Preliminary Assessment, Las Cruces District, New Mexico. October 26, 1990.

C.C. Johnson & Malhotra, P.C. 1995. Final Site Inspection Report, Truth or Consequences Landfill, Las Cruces District, New Mexico. May 10. 1995.

New Mexico Environment Department. 2005. Technical Background Document for Development of Soil Screening Levels, Revision 3.0. August 2005.

Souder, Miller and Associates. 2004. Phase II Environmental Site Assessment, Former Oasis Golf Course Development, Elephant Butte, New Mexico. December 1, 2004.

Terracon Consultants, Inc. 2013. Limited Site Investigation Report, Former Truth or Consequences Landfill, Country Club Road, Elephant Butte, Sierra County, New Mexico, August 21, 2013.

TABLES

Table 3-1

Quality Assurance/Quality Control Samples
Former Tor C Landfill, Elephant Butte, New Mexico

QC Sample Type	Frequency of Sample/Analysis	Details
Equipment Blanks	1 per event	Distilled water placed into contact with sampling equipment. Assess quality of field decontamination.
Field Duplicate Samples	1 per event	Samples collected by same method and at same time as original sample. Verify sampling and analytical reproducibility.
Trip Blanks	1 per sample cooler/VOC analysis	Bottles or vials that contain laboratory pure water, which accompany samples during transit, collection, and storage. Trip blanks measure cumulative contamination derived from the laboratory water, sample transit, sample site, and sample storage.
Method Blanks	1 per daily run and as needed/VOC analysis	Method Blanks are laboratory pure water samples that contain all of the method reagents that have been introduced into the field samples. Method blanks are taken through all of the same preparation and analysis steps as field samples. Method blanks measure the combined contamination from laboratory pure water, method reagents, instrumentation, sample preparation, and analysis procedures.
Laboratory Duplicates (also called Laboratory Replicates)	Analyzed as per method requirements and laboratory SOPs	Laboratory Duplicates (or Replicates) are two separate sample aliquots taken from the same field sample, or a single field sample aliquot analyzed twice. Laboratory duplicates are used as a cumulative measure of laboratory analytical precision, repeatability, and non-homogenous sample matrix effects.
Sample container samples	1 per organic sample container lot	Performed by container distributor, ensures that sample containers are contaminant free.

Table 5-1

Sample Container, Preservation, and Holding Time Requirements

MATRIX	ANALYSIS	CONTAINER	PRESERVATION	HOLDING TIME
Soil Vapor	Volatile organic compounds	Tedlar bag	None, keep away from sunlight	72 hours
	Fixed Gases (Methane)	Tedlar bag	None, keep away from sunlight	72 hours
Groundwater	Volatile organic compounds	Two 40-ml septum cap vials	2 Drops Concentrated HCl or 4 Drops 1:1 HCl to pH<2; Cool to 4 °C	14 Days
	Semi-volatile organic compounds	1 liter amber glass bottle with Teflon liner	Cool to 4 °C	7 days until extraction; 40 days after extraction
	Pesticides	1 liter amber glass bottle with Teflon liner	Cool to 4 °C	7 days until extraction; 40 days after extraction
	Herbicides	1 liter amber glass bottle with Teflon liner	Cool to 4 °C	7 days until extraction; 40 days after extraction
	Metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se, Ca, Fe, Mg, Mn, Na)	1 liter polyethylene bottle	Filter w/ 0.45 micron filter, then preserve with HNO_3 to pH<2, cool to 4 °C	6 months; mercury 28 days
	Cyanide	250 mL polyethylene bottle	NaOH to pH>12	14 days
	Alkalinity	1 liter polyethylene bottle	Cool to 4 °C	14 days
	Chloride, Sulfate	250 mL polyethylene bottle	Cool to 4 °C	28 days
	Nitrate/Nitrite	250 mL polyethylene bottle	Cool to 4 °C, H_2SO_4 to pH<2	28 days

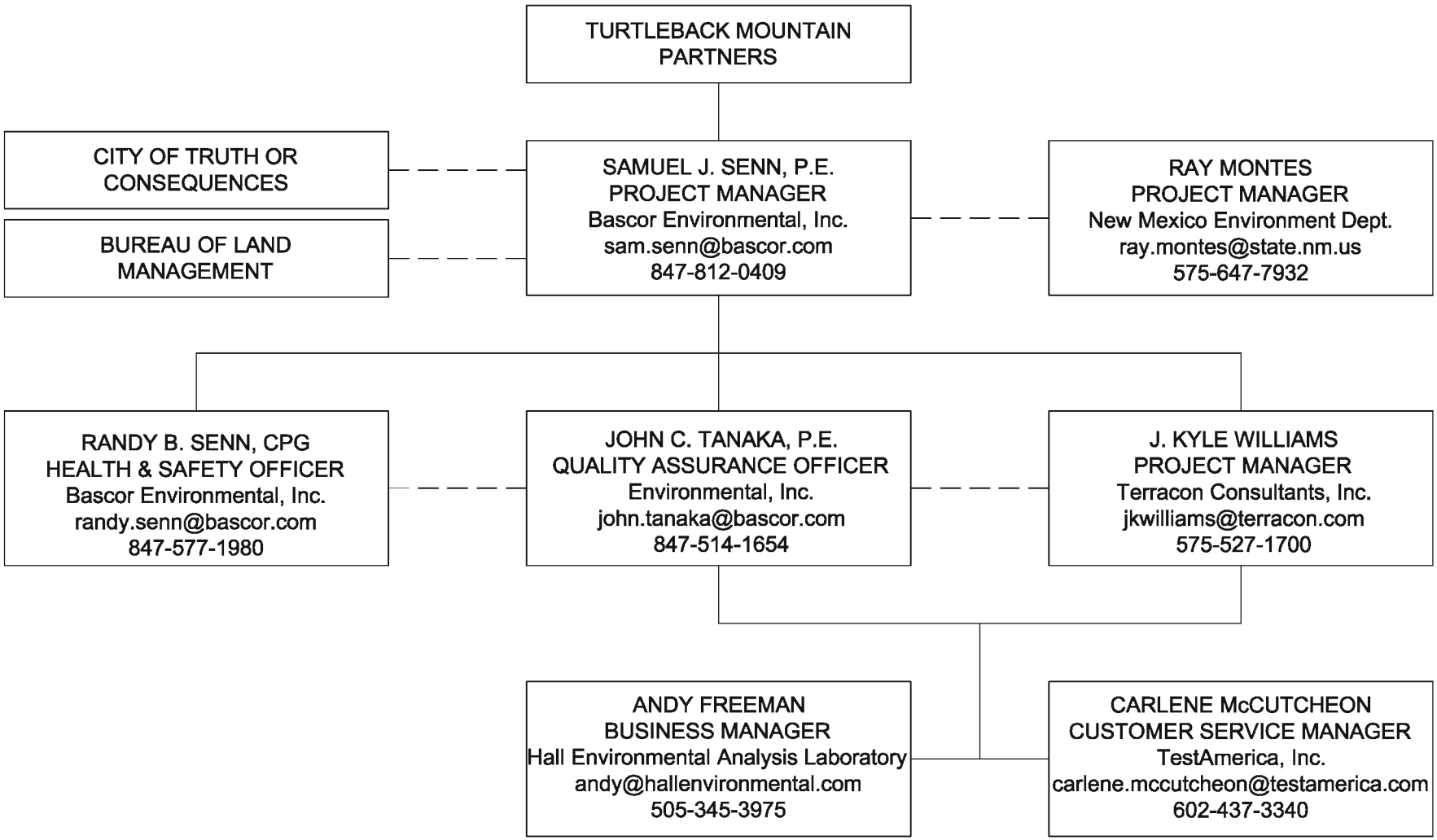
Table 5-2

Sample Preparation Methods and Methods of Analysis

MATRIX	ANALYSIS	PREPARATION METHOD*	ANALYSIS METHOD
Soil Vapor	Volatile organic compounds		USEPA 8260B (GC/MS)
	Fixed Gases (Methane)		USEPA 3C/ ASTM D1946
Groundwater	Volatile organic compounds	USEPA 5030	USEPA 8260B (GC/MS)
	Semi-volatile organic compounds	USEPA 3510, 3520, 3540, 3541, 3550, or 3580	USEPA 8270C (GC)
	Pesticides		USEPA 8081A (GC)
	Herbicides		USEPA 8151A (GC)
	Metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se, Ca, Fe, Mg, Mn, Na)		USEPA 200.7 (ICP), 245.1 (CVAA, Mercury)
	Cyanide		SM 4500 CN E
	Alkalinity		SM 2320B
	Anions [1]		USEPA 300.0

Notes:
All analytes will be reported for each method listed. Where applicable, analytical methods will include analytes for which groundwater standards are available.
[1] Nitrate as N, Nitrite as N, Chloride, Sulfate
GC – gas chromatography; MS – mass spectrometry; ICP – inductively coupled plasma; CVAA – cold vapor atomic absorption
All sample vials and bottles will be pre-cleaned and prepared (with any necessary preservative) by the laboratory in accordance with procedures for the appropriate analytical methods as specified in SW-846.
Equivalent methods may be used for selected compounds.
USEPA – U.S. Environmental Protection Agency
SM – Standard Methods for the Examination of Water and Wastewater

FIGURES



BASCOR Environmental, Inc.
consulting engineers and scientists

P.O. Box 669
Mt. Prospect, IL 60056-0669
(847) 577-1980

TURTLEBACK MOUNTAIN RESORT
ELEPHANT BUTTE, NEW MEXICO
PROJECT ORGANIZATION CHART

DRAWN	CHECKED	APPROVED	DATE
J.TANAKA	S.SENN	S.SENN	9-18-13

FILENAME: E:\DRAWINGS\TB13307M\ORG CHART.DWG

FIGURE: 2-1

APPENDIX A

BEI Standard Operating Procedures

STANDARD OPERATING PROCEDURE FOR VAPOR SAMPLES USING TEDLAR™ BAGS

Scope:

This SOP establishes procedures for the collection of vapor samples from the 4 sub-surface soil vapor probes. Vapor samples are collected in Tedlar air sample bags for laboratory analysis or field screening. Tedlar is a polyvinyl fluoride (PVF) film that can be used to collect samples containing common solvents, hydrocarbons, and other classes of compounds. Verify that Tedlar bags are appropriate for the chemicals of concern for the project prior to sampling.

Equipment:

- Sample pump and accessories (12 VDC, 120VAC, or hand driven).
- Tedlar air sample bags (typically 1-liter capacity) with integrated sample valves.
- Teflon and/or Tygon tubing.
- Field notebook and log form.
- Sample air flow meter (if necessary).

Procedure:

1. Prior to filling, label the Tedlar bag with appropriate sampling information. Do not write directly on the Tedlar bag.

2. Access the vapor probe, SVE well, or discharge point.

3. Connect the sample pump inlet tubing to the sample port. If the sample port tubing size is not compatible with the sample pump tubing, use a small piece of Teflon or Tygon tubing as a connector.

4. Turn on the sample pump and purge the vapor probe tubing for 10 to 20 seconds (approximately 3 volumes). If the soil vapor is known to contain high VOC concentrations, purge air downwind through a 10 to 15 foot length of 5/16” I.D. Tygon tubing. Use a PID or other real-time device to monitor ambient air concentrations for the protection of sampling personnel.

5. Connect the Tedlar sample bag to the sample pump discharge tubing. Ensure that the sample pump discharge tubing fits snugly on the sample bag stem.

6. Open the Tedlar sample bag valve, fill the sample bag (2/3 to 3/4 full) with the vapor from the monitoring point.

7. Stop the sample pump, close the sample bag valve, and disconnect the sample bag from the sample pump discharge tubing.

8. Disconnect the sample pump inlet tubing from the vapor probe. Turn on the sample pump and run ambient air through the sample system in between samples in order to purge the sample pump and tubing of residual VOCs.

9. Place filled Tedlar bags in an opaque plastic bag and keep away from sunlight. Store in a cooler or other protective container (without ice).

10. Ship or deliver bags accompanied with chain of custody forms to be accepted and signed by a laboratory representative. Laboratory to receive samples within 36 hours of collection to facilitate meeting the laboratory standard holding times for each sample.

Notes:

Do not re-use a Tedlar bag if attempting to detect concentrations below 1 part per million.

STANDARD OPERATING PROCEDURE FOR MONITORING WELL SAMPLING

Scope:
This SOP describes procedures for the collection of groundwater samples using various techniques. These procedures are designed to ensure that the data generated is representative and comparable, and also collected in a consistent manner during each sampling event.

If new monitoring wells are installed for the project, do not sample them until at least one week following well development to allow the wells to equilibrate with the aquifer.

Equipment:
- PID to measure headspace vapors (if necessary based on previous measurements).
- Personal protective equipment.
- Cleaning equipment.
- Appropriate logs and/or field notebook.
- Keys and tools to open wells.
- Electronic water level probe or weighted steel tape.
- Watch.
- Bailers.
- In-line disposable filtration capsule, 0.45 micron (if specified).
- Peristaltic or submersible pump (low-flow sampling).
- Multi-parameter probe and flow-through cell (low-flow sampling).
- Polypropylene rope.
- Graduated or known volume bucket.
- Temperature/pH/conductivity meter.
- Sample containers.
- Cooler and ice.
- 55-gallon DOT-approved drums (if necessary).
- Relevant well sampling data (i.e., previous water levels, well depth).
- Knife (for cutting plastic sheeting and rope).

Procedures for Sampling Using a Bailer:
1. Label all sample containers with the appropriate information (sample identification, time, date, sampler, preservative, sample location, etc.).

2. Use appropriate personal protection equipment.

3. Use a new pair of dedicated disposable gloves.

4. Open the monitoring well cover while standing upwind of the well. Remove the well cap and measure headspace vapors, if necessary.

5. Obtain water level and well depth measurements following the appropriate procedures and record them on the sampling log. Clean the water level probe and/or weighted steel tape after each use with a solution of laboratory-grade detergent (e.g. Alconox) and a distilled water rinse.

6. Calculate the number of gallons of water in the well (i.e. one well volume) using the length of the water column (in feet), multiplying by 0.16 for a 2-inch diameter well. Record the well volume on the groundwater sampling log.

7. Remove a minimum of three well volumes of groundwater using a bailer, unless the well goes dry prior to removing three well volumes. Contain the water in 55-gallon DOT-approved drums, as necessary.

8. After purging each well volume of groundwater, measure the temperature, pH, and conductivity by placing the groundwater sample into a plastic beaker or other container. Continue this procedure until the parameters stabilized.

9. After a minimum of three well volumes have been removed and the monitored field parameters have stabilized, or if the well has been pumped dry and allowed to recover, collect the groundwater sample using the same bailer used for purging the well. Gently pour water directly from the bailer into the appropriate sample containers with proper identification, and seal each container. Fill groundwater samples in the following order: 1) VOCs, 2) SVOCs, 3) metals, 4) pH, and 5) others, as required. If an in-line filtration capsule is specified, use a hand-operated pump and tubing to transfer the sample through the filter and into laboratory containers. Ensure that no air bubbles are present after filling the VOC vials.

10. Secure and lock the well.

11. Dispose of all non-reusable sampling materials (rope, gloves, bailers) and clean equipment following the procedures described above.

12. Complete a water sampling log (attached) with the field parameter readings and other required information. Complete sample handling, packaging, and shipping information as required. All sample shipments will be accompanied by a chain of custody form to be accepted and signed by the laboratory upon receipt.

Procedures for Sampling Using a Pump:

Follow steps 1 through 6 above.

7. If using a peristaltic pump, install polyethylene tubing into the monitoring point so that tube opening is within the open screen interval of the monitoring point. Connect down-hole tubing to silicone head tubing installed on the peristaltic pump. Connect additional tubing from the peristaltic pump to a water quality meter with a flow-through cell. If using a submersible pump, connect discharge tubing to the pump and slowly lower it into the well to the desired depth and connect the discharge tubing to a flow-through cell.

8. Begin purging at a slow rate by adjusting the variable flow control on the peristaltic pump or submersible pump controller. Monitor the flow rate to limit the water level drawdown.

9. Measure field parameters (pH, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and temperature) with a flow-through cell which is in-line with the pump discharge. Ensure that the flow-through cell is free of any air while discharging. Groundwater purging will be considered stabilized when the water quality measurements for three consecutive readings (at approximate 3 minute intervals) are stabilized to within the ranges specified below.

Parameter	Specified Range [1]
pH	+/- 0.1 standard pH unit
conductivity	+/- approximately 3%
ORP	+/- approximately 10 mV
DO	+/- 10%

[1] These ranges are guidelines only.

10. After reaching stabilized conditions, collect groundwater samples directly from the discharge (without an interruption in flow rate) by placing laboratory-supplied containers under the discharge and filling them with a minimum amount of turbulence. Fill the largest containers first, then reduce the flow rate if necessary to fill smaller containers (e.g. VOA vials). Groundwater samples will be analyzed by the test methods and constituents specified in the SAP included in the CAP. If an in-line filtration capsule is specified, connect appropriate tubing to the device and transfer the sample through the filter and into laboratory containers.

11. Secure and lock the well.

12. Dispose of sampling materials (tubing and gloves) and clean non-disposable equipment after each use following the appropriate cleaning protocols.

13. Complete a low-flow groundwater sampling log (attached) with the field parameter readings and other required information. Complete sample handling, packaging, and shipping information.

14. Manage IDW in accordance with appropriate protocols and procedures.

Attachments: Water Sampling Log
Low-Flow Groundwater Sampling Log

WATER SAMPLING LOG

Site Location	
Project No.	
Well No./Site	
Date	
Time Sampling Began	
Time Sampling Completed	

EVACUATION DATA

Description of Measuring Point (MP)				
Height of MP Above/Below Land Surface			MP Elevation	
Total Sounded Depth of Well Below MP			Water Level Elevation	
Held		Depth to Water Below MP	Diameter of Casing	
Wet		Water Column in Well	Gallons Pumped/Bailed (prior to sampling)	
		Gallons per Foot	Sampling Pump Intake Setting (feet below land surface)	
		Gallons in Well		
Evacuation Method				

SAMPLING DATA / FIELD PARAMETERS

Temperature		pH	
Specific Conductance umhos/cm			
Other (specific ion; OVA; HNU; Tip; etc.)			
Appearance			
Color		Odor	
Sampling Method and Material			

CONTAINER DESCRIPTION

Analyte	From Lab ☐ BEI ☐	Preservative

Coded Replicate No.	
Weather	
Remarks	
Sampling Personnel	

WELL CASING VOLUMES

Gallons/Foot	1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

LOW-FLOW GROUNDWATER SAMPLING LOG

Site Name / Location		**Date**	
Project No.		**Well No./Site**	
Depth to Water TOC (ft)		**Total Well Depth (ft)**	
Pump Make / Model		**Probe Make / Model**	
Time Pumping Began		**Time Pumping Completed**	
Total Gallons Removed		**Pumping Rate**	

Time	Temp (°F)	pH (S.U.)	Specific Conduct. (mS/cm)	ORP (mV)	D.O. (mg/L)	Notes
Targets		**±0.2**	**±3%**	**±20**	**±10%**	***These values are guidelines***

CONTAINER DESCRIPTION

Analyte	Container	Preservative

Coded Replicate No.			
Remarks			
Weather		Sampling Personnel	

WELL CASING VOLUMES

Gallons/Foot	**1¼" = 0.06**	**2" = 0.16**	**3" = 0.37**	**4" = 0.65**
	1½" = 0.09	**2½" = 0.26**	**3½" = 0.50**	**6" = 1.47**

APPENDIX D

September 2013
Groundwater Sampling Report

September 2013 Groundwater Sampling Report

Former Truth of Consequences Landfill

Country Club Road

Elephant Butte, Sierra County, NM

October 10, 2013

Terracon Project No. 68137008

Prepared for:

BASCOR Environmental, Inc.

Mesquite, Nevada

Prepared by:

Terracon Consultants, Inc.

Las Cruces, New Mexico

Offices Nationwide
Employee-Owned
Established in 1965
terracon.com
Terracon
Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

Terracon

October 10, 2013

BASCOR Environmental, Inc.
952 Blazing Star Crossing Street
Mesquite, Nevada 89034

Attn: Mr. Samuel J. Senn, P.E., Project Manager
M: (847) 812 0409
E: sam.senn@bascor.com

Re: September 2013 Groundwater Sampling Event
Former Truth or Consequences Landfill
Country Club Road
Elephant Butte, Sierra County, NM
Terracon Project No. 68137008

Dear Mr. Senn:

Terracon Consultants, Inc. (Terracon) is pleased to submit this September 2013 Groundwater Sampling Report for the above-referenced site. This sampling event was performed in accordance with Terracon Proposal No. P6813-080E Supplemental Change Order, dated September 16, 2013.

We appreciate the opportunity to perform these services for BASCOR Environmental, Inc. Please contact Kyle Williams at (575) 527-1700 or John Sallman at (913) 577-0403 if you have questions regarding the information provided in the report.

Sincerely,
Terracon

Prepared By:

for Debbie Daniels
J. Kyle Williams
Project Manager

Reviewed By:

John B. Sallman, P.G. for
Senior Principal

Enclosure

TABLE OF CONTENTS

Page No.

1.0 INTRODUCTION 1

1.1 Site Description 1
1.2 Scope of Work 1
1.3 Standard of Care 2
1.4 Additional Scope Limitations 2
1.5 Reliance 2

2.0 FIELD ACTIVITIES 3

2.1 Groundwater Level Measurement 3
2.2 Groundwater Sampling 4
2.3 Groundwater Potentiometric Surface 4

3.0 LABORATORY ANALYTICAL METHODS 5

3.1 Groundwater Samples 5

4.0 DATA EVALUATION 5

4.1 Groundwater Samples 5

5.0 FINDINGS 6

LIST OF APPENDICES

Appendix A: Exhibit 1 – Topographic Map
Exhibit 2 – Site Plan
Exhibit 3 – Potentiometric Surface Map, September 17, 2013

Appendix B: Laboratory Analytical Reports

SEPTEMBER 2013 GROUNDWATER SAMPLING EVENT

FORMER TRUTH OR CONSEQUENCES LANDFILL
COUNTRY CLUB ROAD
ELEPHANT BUTTE, SIERRA COUNTY, NEW MEXICO
Terracon Project No. 68137008
October 10, 2013

1.0 INTRODUCTION

1.1 Site Description

Site Name	Former Truth or Consequences Landfill
Site Location/Address	Country Club Road, Elephant Butte, New Mexico
General Site Description	The property is a 30.12-acre site located in Lot 3, Section 22, Township 3 South, Range 4 West, N.M.P.M. The western portion of the property includes the former Truth or Consequences Landfill.

Appendix A includes four figures; Exhibit 1 is topographic map depicting the location of the site; Exhibit 2 is a site plan depicting the site boundaries, pertinent site features, and sampling locations, and; Exhibit 3 is a potentiometric surface map showing the orientation of the uppermost groundwater surface as measured during the September 17, 2013 sampling event. Appendix B includes the laboratory analytical report with chain-of-custody documents.

1.2 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted sampling of six monitoring wells at the Former Truth or Consequences Landfill on Country Club Road in Elephant Butte, New Mexico (site). Terracon's LSI was performed in accordance with Terracon Proposal No. P6813-080E Supplemental Change Order as approved by BASCOR Environmental, Inc. on September 16, 2013.

The objectives of this groundwater sampling event include the following:

- Measure the depth to groundwater in the ten existing monitoring wells at the landfill, including MW-1, MW-2R, MW-3R, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10. Collect groundwater samples from six monitoring wells, including MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10 for laboratory analyses.

- Submit groundwater samples to Hall Environmental Analysis Laboratory of Albuquerque, NM for analyses of volatile organic compounds (VOC), semivolatile

organic compounds (SVOCs), RCRA metals (including arsenic, barium, cadmium, chromium, mercury, lead, selenium and silver, plus iron and manganese), Major ions (including alkalinity, calcium, chloride, magnesium, sodium and sulfate), nitrate-nitrogen (NO_3-N), pesticides and herbicides (above relevant laboratory reporting limits) in the groundwater as a result of potential leaching from the landfill waste.

- Develop a summary report detailing field activities, including a potentiometric map of groundwater beneath the site, and analytical results from the samples.

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally-accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as set forth in our proposal and were not intended to be in strict conformance with ASTM E1903-11.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.5 Reliance

This report has been prepared for the exclusive use of BASCOR Environmental, Inc. the Bureau of Land Management; and the City of Truth or Consequences, NM. Any of the named entities above can convey this report to an affiliate, related entity, subsidiary, lender, title insurer, regulatory or municipal agency, or the current property owner(s) and their agents, but use or reliance by any other party is prohibited without the written authorization of BASCOR Environmental, Inc. and Terracon. Any unauthorized distribution or reuse is at the client's sole

risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, LSI report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

Terracon's field activities were conducted on September 17, 2013, by Mr. Kyle Williams, geologist and a Terracon environmental scientist. Field activities began with measurement of the groundwater level in ten existing monitoring wells at the site. Groundwater samples were collected from six of the monitoring wells for the laboratory analyses detailed in Section 3.

2.1 Groundwater Level Measurement

Depths to groundwater in the ten existing monitoring wells were measured using an electronic water level meter. The depths to groundwater in the wells as measured on September 17, 2013 were referenced to the established measuring point (MP) of each well. Established MPs were the northernmost portion of the top of the 2-inch diameter well casing at each well. These measurements were used to develop a potentiometric surface map of the uppermost groundwater beneath the landfill. The water levels and total depths (TD) of each well as measured on September 17, 2013 are as follows:

Measurements Collected September 17, 2013

Monitoring Well	Depth to Groundwater (feet below MP)	Total Depth of Well (feet below MP)
MW-1	24.77	27.27
MW-2R	25.74	26.27
MW-3R	12.23	22.11
MW-4	24.39	25.02
MW-5	19.93	24.17
MW-6	Dry	25.00
MW-7	Dry	26.31
MW-8	21.07	30.31
MW-9	23.34	30.19
MW-10	12.54	25.15

When Terracon's geologist arrived at monitoring well MW-1, the well vault lid and well cap were found adjacent to the well, and the well was open to the environment. It should be noted that MW-1 is adjacent to the irrigated area of the driving range, and may be impacted by irrigation activities and recent precipitation.

2.2 Groundwater Sampling

Prior to groundwater sample collection, each well was purged with a new disposable bailer and rope, or low-flow sampling equipment using new dedicated tubing. Each monitoring well was purged of a minimum of three well casing volumes of groundwater, until the monitoring well formation fails to recharge, (i.e., well runs dry) or until consistent values (i.e., less than 10% variance between consecutive readings) were obtained for pH, temperature and conductivity.

Subsequent to sufficient recharge, one groundwater sample was collected from each monitoring well utilizing a new, disposable, polypropylene bailer or low flow sampling equipment using new, clean tubing. Groundwater samples were collected into laboratory-prepared glassware containing the appropriate preservative, labeled, logged on the chain-of-custody (COC) form, and placed on ice in sample coolers. The sample coolers were secured with a custody seal and transported to Hall Environmental Analysis Laboratory on the day of collection.

Monitoring wells MW-1, MW-3R, MW-8, MW-9 and MW-10 were purged and sampled using new, dedicated bailers and rope. Monitoring well MW-5 was purged and sampled using new, dedicated tubing connected to a peristaltic pump. The groundwater sample fractions submitted for RCRA metals analyses were field filtered using new, dedicated tubing and in-line filter (0.45 micron) connected to the peristaltic pump.

2.3 Groundwater Potentiometric Surface

The groundwater flow direction and the depth to shallow groundwater will likely vary depending upon seasonal variations in rainfall and depth to the soil/bedrock interface. The groundwater flow direction was determined for the date of groundwater sampling by first measuring the depth to groundwater below the MP in each monitoring well at the start of well purging activities, and calculating the groundwater elevation using the well survey data, below. Elevations of the measuring point and groundwater level in each well as measured on September 17, 2013 are as follows:

Monitoring Well and Groundwater Elevation Data

Monitoring Well	Measuring Point Elevation	Depth to Groundwater In feet below MP	Groundwater Elevation
MW-1	4,284.87	24.77	4,260.10
MW-2R	4,285.74	25.74	4,260.00
MW-3R	4,274.59	12.23	4,262.36
MW-4	4,284.26	24.39	4,259.87
MW-5	4,286.02	19.93	4,266.09
MW-6	4,288.17	Dry	--
MW-7	4,285.98	Dry	--
MW-8	4,283.34	21.07	4,262.27
MW-9	4,284.37	23.34	4,261.03
MW-10	4,272.87	12.54	4,260.33

The calculated elevations of the groundwater surface as measured at the start of groundwater sampling activities show a relative difference in elevation of 5.99 feet between MW-5 and MW-1. The elevation of groundwater in these monitoring wells was plotted and groundwater contours were developed as shown on Exhibit 3, Potentiometric Surface Map provided in Appendix A. On September 17, 2013 the uppermost groundwater flow direction was approximately S 17° E at an approximate gradient of 0.006 (feet/feet).

3.0 LABORATORY ANALYTICAL METHODS

3.1 Groundwater Samples

Groundwater samples collected from monitoring wells MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10 were analyzed for VOCs, SVOCs, RCRA 8 metals plus iron and manganese, major ions, NO_3-N, pesticides and herbicides using the following methods:

Groundwater Analytical Methods

Analysis	Sample Type	Laboratory Method
VOCs	Water	SW-846 Method 8260B
SVOCs	Water	SW-846 Method 8270C
RCRA metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se) plus Calcium, Iron, Magnesium, Manganese and Sodium	Water	SW-846 Method 6010B/7470
Chloride, Sulfate, NO_3-N	Water	SW-846 Method 300.0
Alkalinity	Water	SW-846 Method 2320B
Pesticides	Water	SW-846 Method 8081A
Herbicides	Water	SW-846 Method 8151A

The executed chain-of-custody forms and laboratory data packages are provided in Appendix B.

4.0 DATA EVALUATION

4.1 Groundwater Samples

The groundwater samples collected from monitoring wells MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10 did not exhibit VOC, SVOC, pesticide or herbicide concentrations above the laboratory reporting limits. Groundwater samples collected from the monitoring wells during this investigation did not exhibit the RCRA metals arsenic, cadmium, chromium, lead, mercury, selenium and silver above the relevant laboratory reporting limits.

Constituents at concentrations above relevant laboratory reporting limits are summarized below. These constituents are compared with their respective NMED regulatory limit. Regulatory limits

for these constituents are found in *20.6.2.3103 NMAC, STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS, Part A. Human Health Standards*.

Summary of Detections in Groundwater Samples

Analyte	NMED Standard	Units	MW-1	MW-3R	MW-5	MW-8	MW-9	MW-10
Metals								
Barium	1.0	mg/l	0.17	0.036	0.054	0.071	0.077	0.050
Iron	1.0	mg/l	0.16	ND	ND	ND	0.53	ND
Manganese	0.2	mg/l	**0.61**	**0.21**	ND	**0.55**	**2.0**	0.18
Calcium	NE	mg/l	170	110	81	230	160	93
Magnesium	NE	mg/l	31	16	7.6	41	43	22
Sodium	NE	mg/l	190	200	160	240	140	270
Anions and General Chemistry								
Chloride	250.0	mg/l	**480**	240	210	**620**	**390**	**330**
Nitrate	10.0	mg/l	7.7	0.49	0.46	**12**	ND	0.39
Sulfate	600.0	mg/l	130	190	120	220	150	210
Alkalinity	NE	mg/l	280	330	220	280	310	290
Bicarbonate Alkalinity	NE	mg/l	280	330	220	280	310	290

NE – Standard not established.
ND – Not detected.

The complete laboratory analytical report is provided as Appendix B.

5.0 FINDINGS

The findings of this investigation are as follows:

- The objectives of the LSI were to evaluate the following:
  - Measure the depth to groundwater in the ten existing monitoring wells at the landfill, including MW-1, MW-2R, MW-3R, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10. Collect groundwater samples from six monitoring wells (MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10) for laboratory analyses.
  - Submit groundwater samples to Hall Environmental Analysis Laboratory of Albuquerque, NM for analyses of volatile organic compounds (VOC), semivolatile organic compounds (SVOCs), RCRA metals, Major ions, nitrate-nitrogen (NO3-N), pesticides and herbicides (above relevant laboratory reporting limits) in the groundwater as a result of potential leaching from the landfill waste.

- Develop a summary report detailing field activities, including a potentiometric map of groundwater beneath the site, and analytical results from the samples.

- On September 17, 2013 the uppermost groundwater flow direction was approximately S 17° E at an approximate gradient of 0.006 (feet/feet).

- Based on review of the analytical results from groundwater samples collected during this quarterly sampling event, apparent constituent concentrations exceeding the NMED Human Health Standards include:

  - Groundwater in monitoring wells MW-1, MW-8, MW-9 and MW-10 appears to contain chloride at concentrations exceeding applicable NMED Human Health Standard of 250 mg/l.

  - Groundwater in monitoring wells MW-1, MW-3R, MW-8 and MW-9 appears to contain manganese at concentrations exceeding applicable NMED Human Health Standard of 0.2 mg/l.

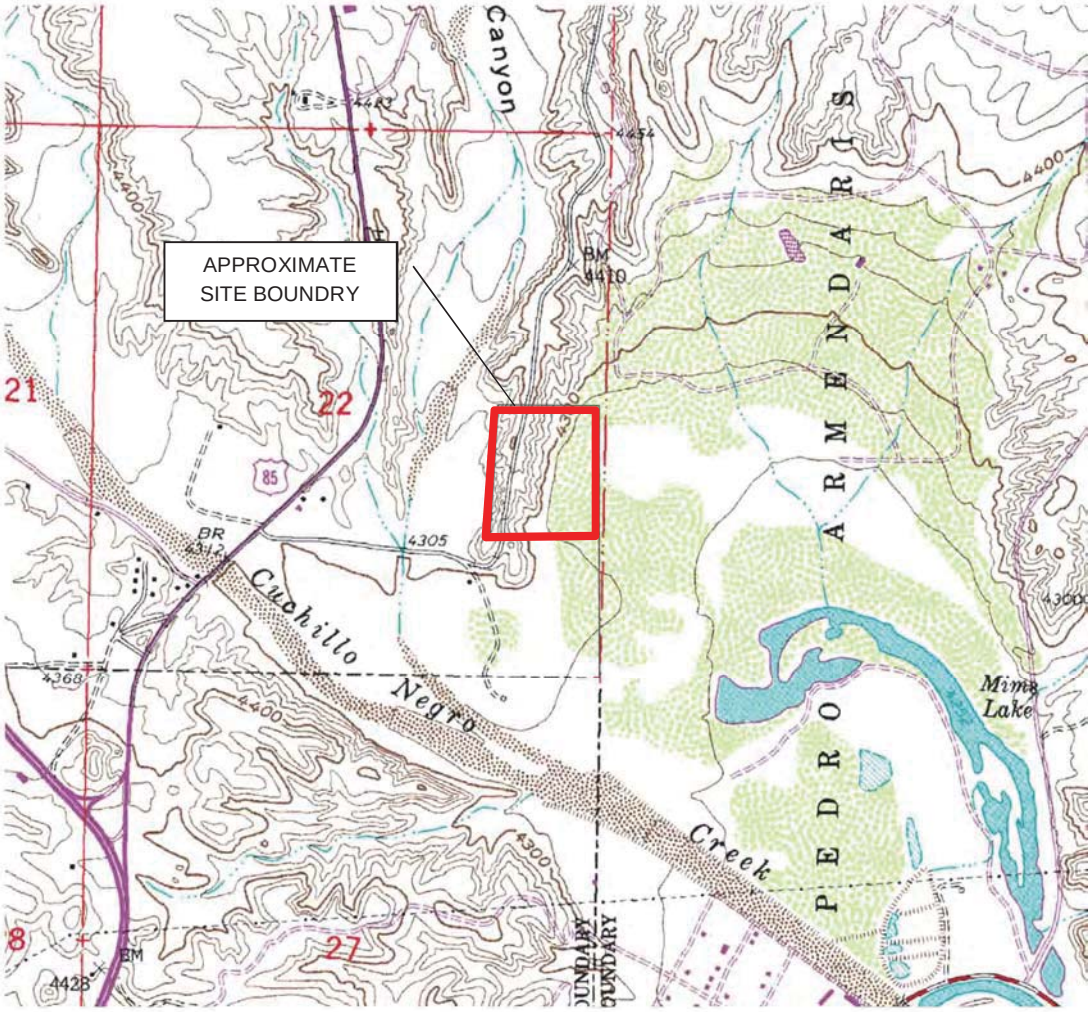
  - Groundwater in monitoring well MW-8 appears to contain nitrate-nitrogen at a concentration exceeding the applicable NMED Human Health Standard of 10 mg/l.

- If soils or groundwater located on the site are to be disturbed during future excavations or construction activities, proper procedures should be followed with respect to worker health and safety; and any affected soil or groundwater encountered should be properly characterized, treated and/or disposed in accordance with applicable local, state or federal regulations.

- If the monitoring wells installed during this investigation are not expected to be used in the future, they should by plugged and abandoned in accordance with state regulations and guidance.

APPENDIX A

Exhibit 1 – Topographic Map
Exhibit 2 – Site Plan
Exhibit 3 – Potentiometric Surface Map



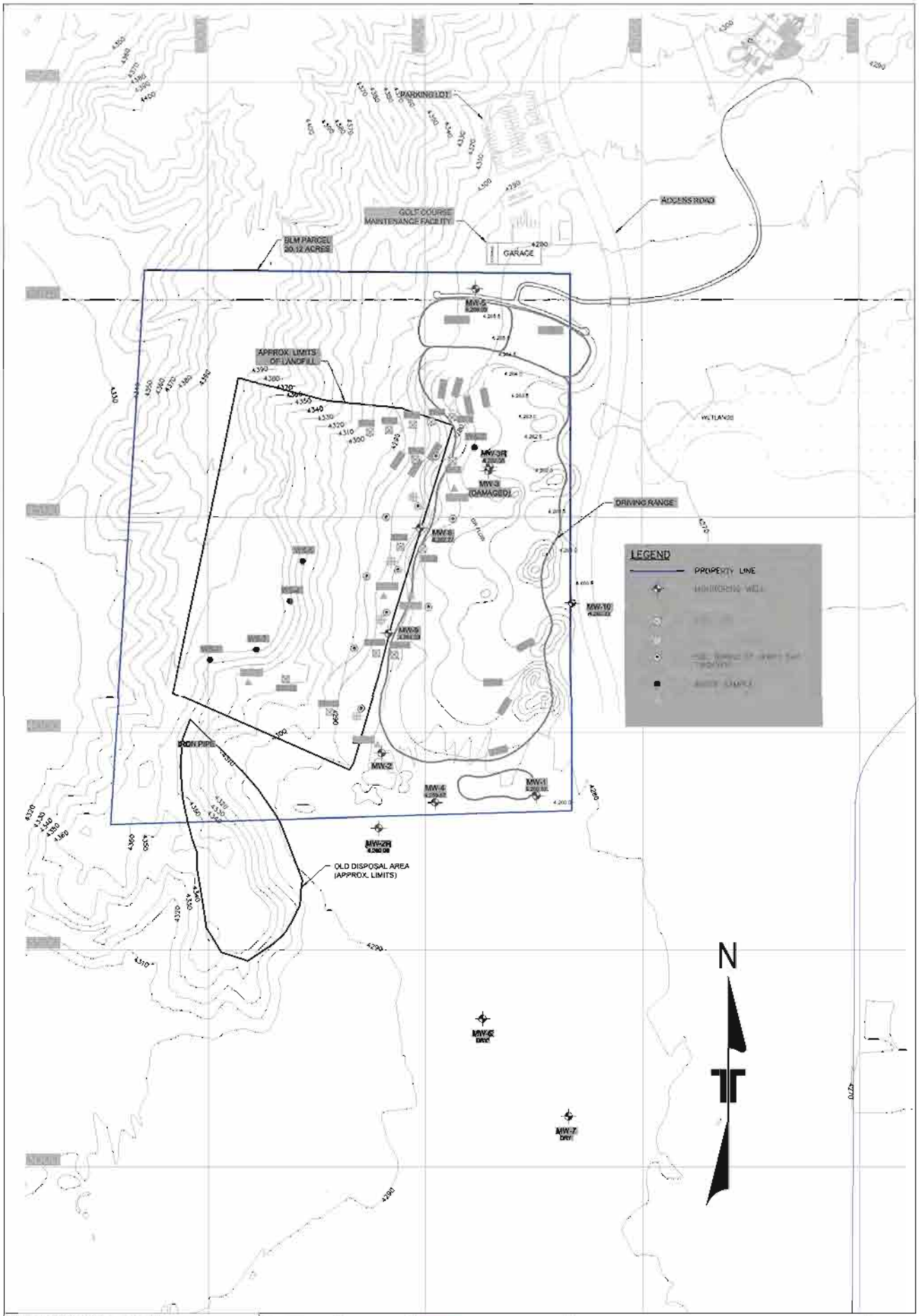
N

USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP

ELEPHANT BUTTE, NEW MEXICO, 1958

(QUADRANGLES)

Project Mgr	JKW	Project No	68137008	Terracon	TOPOGRAPHIC MAP	EXHIBIT
Approved by	JBS	Scale	1" = 2000'		Former Truth of Consequences Landfill	1
Checked by	JBS	Date	07/15/13	1640 Hickory Loop, Suite 105 Las Cruces, NM 88005	Country Club Road	
Drawn by	JKW	File No.	Exhibit 1	Ph: 575-527-1700 Fax: 575-527-1092	Elephant Butte, NM	



NOTE: BASE MAP AND LOCATIONS OF SITE FACILITIES PROVIDED BY BASCOR ENVIRONMENTAL INC.

BASEMAP IS INTENDED FOR GENERAL USE ONLY AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mgr	JKW
Checked By	JBS
Approved By	JBS
Drawn By	JKW
Scale	1"=200'
Date	09/26/13
Project No	68137008
File Name	

Terracon
Consulting Engineers and Scientists
840 Hickory Loop, Suite 102 Las Cruces, NM 88005
(575) 524-1722 (575) 524-1749

GROUNDWATER CONTOUR MAP, SEPTEMBER 17, 2013

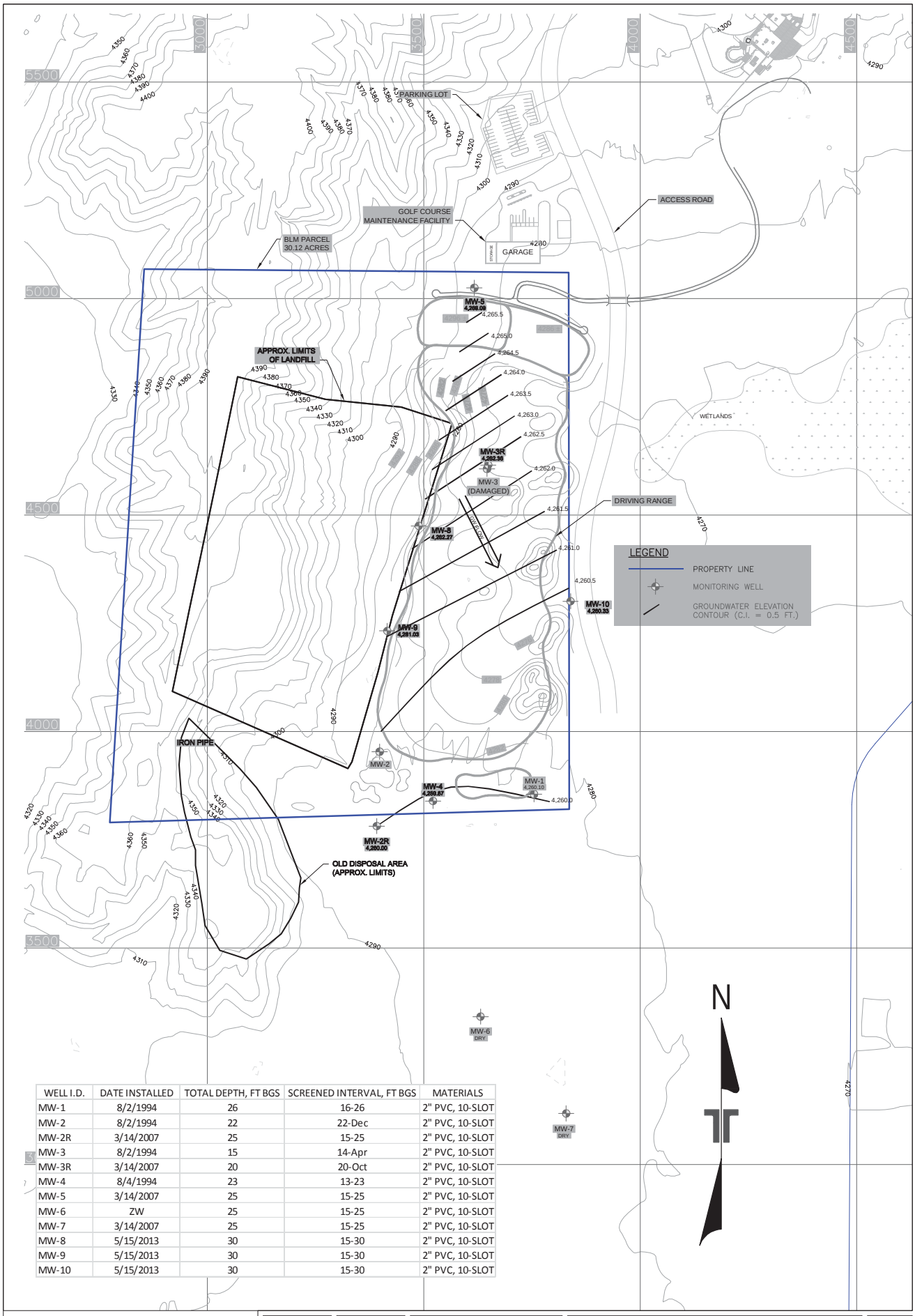
BASCOR Environmental, Inc.

FORMER TRUTH OR CONSEQUENCES LANDFILL

Country Club Road
Elephant Butte, NM

EXHIBIT

3



WELL I.D.	DATE INSTALLED	TOTAL DEPTH, FT BGS	SCREENED INTERVAL, FT BGS	MATERIALS
MW-1	8/2/1994	26	16-26	2" PVC, 10-SLOT
MW-2	8/2/1994	22	22-Dec	2" PVC, 10-SLOT
MW-2R	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-3	8/2/1994	15	14-Apr	2" PVC, 10-SLOT
MW-3R	3/14/2007	20	20-Oct	2" PVC, 10-SLOT
MW-4	8/4/1994	23	13-23	2" PVC, 10-SLOT
MW-5	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-6	ZW	25	15-25	2" PVC, 10-SLOT
MW-7	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-8	5/15/2013	30	15-30	2" PVC, 10-SLOT
MW-9	5/15/2013	30	15-30	2" PVC, 10-SLOT
MW-10	5/15/2013	30	15-30	2" PVC, 10-SLOT

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	JKW
Checked By:	JBS
Approved By:	JBS
Drawn By:	JKW
Scale:	1"=200'
Date:	09/26/13
Project No:	68137008
File Name:	

Terracon
Consulting Engineers and Scientists
1640 Hickory Loop, Suite 105 Las Cruces, NM 88005
(575) 527-1700 (575) 527-1092

GROUNDWATER CONTOUR MAP, SEPTEMBER 17, 2013
BASCOR Environmental, Inc.
FORMER TRUTH OR CONSEQUENCES LANDFILL
Country Club Road
Elephant Butte, NM

EXHIBIT
3

APPENDIX B

Laboratory Analytical Report

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 07, 2013

Kyle Williams

Terracon
1630 Hickory Loop Ste. H
Las Cruces, NM 88005
TEL:
FAX

RE: Former T or C Landfill OrderNo.: 1309718

Dear Kyle Williams:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/17/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1309718**
Date Reported: **10/7/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: Former T or C Landfill
Collection Date: 9/17/2013 9:00:00 AM
Lab ID: 1309718-001
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
4,4´-DDE	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
4,4´-DDT	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Aldrin	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
alpha-BHC	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
beta-BHC	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Chlordane	ND	1.0		µg/L	1	9/20/2013 12:15:34 PM	9389
delta-BHC	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Dieldrin	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Endosulfan I	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Endosulfan II	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Endosulfan sulfate	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Endrin	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Endrin aldehyde	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
gamma-BHC	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Heptachlor	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Heptachlor epoxide	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Methoxychlor	ND	0.050		µg/L	1	9/20/2013 12:15:34 PM	9389
Toxaphene	ND	1.0		µg/L	1	9/20/2013 12:15:34 PM	9389
Surr: Decachlorobiphenyl	59.0	52-114		%REC	1	9/20/2013 12:15:34 PM	9389
Surr: Tetrachloro-m-xylene	56.8	49.3-113		%REC	1	9/20/2013 12:15:34 PM	9389
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	210	10		mg/L	20	9/17/2013 7:25:54 PM	R13447
Nitrogen, Nitrate (As N)	0.46	0.10		mg/L	1	9/17/2013 7:13:29 PM	R13447
Sulfate	120	10		mg/L	20	9/17/2013 7:25:54 PM	R13447
EPA METHOD 7470: MERCURY						Analyst:	**TES**
Mercury	ND	0.00020		mg/L	1	9/26/2013 1:36:20 PM	9484
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Arsenic	ND	0.020		mg/L	1	9/25/2013 12:23:38 PM	9432
Barium	0.054	0.020		mg/L	1	9/25/2013 12:23:38 PM	9432
Cadmium	ND	0.0020		mg/L	1	9/25/2013 12:23:38 PM	9432
Calcium	81	1.0		mg/L	1	9/25/2013 12:23:38 PM	9432
Chromium	ND	0.0060		mg/L	1	9/25/2013 12:23:38 PM	9432
Iron	ND	0.050		mg/L	1	9/25/2013 12:23:38 PM	9432
Lead	ND	0.0050		mg/L	1	9/25/2013 12:23:38 PM	9432
Magnesium	7.6	1.0		mg/L	1	9/25/2013 12:23:38 PM	9432
Manganese	ND	0.0020		mg/L	1	9/25/2013 12:23:38 PM	9432
Selenium	ND	0.050		mg/L	1	9/25/2013 12:23:38 PM	9432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: Former T or C Landfill
Collection Date: 9/17/2013 9:00:00 AM
Lab ID: 1309718-001
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Silver	ND	0.0050		mg/L	1	9/25/2013 12:23:38 PM	9432
Sodium	160	5.0		mg/L	5	9/25/2013 12:26:26 PM	9432
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Acenaphthylene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Aniline	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Anthracene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Azobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Benz(a)anthracene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Benzoic acid	ND	40		µg/L	1	9/19/2013 7:38:18 PM	9388
Benzyl alcohol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Carbazole	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4-Chloroaniline	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2-Chlorophenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Chrysene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Di-n-octyl phthalate	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Dibenzofuran	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Diethyl phthalate	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Dimethyl phthalate	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2013 7:38:18 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: Former T or C Landfill
Collection Date: 9/17/2013 9:00:00 AM
Lab ID: 1309718-001
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2013 7:38:18 PM	9388
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2013 7:38:18 PM	9388
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Fluoranthene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Fluorene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Hexachlorobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Hexachloroethane	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Isophorone	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2-Methylphenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
3+4-Methylphenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Naphthalene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2-Nitroaniline	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
3-Nitroaniline	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4-Nitroaniline	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Nitrobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2-Nitrophenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
4-Nitrophenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Pentachlorophenol	ND	20		µg/L	1	9/19/2013 7:38:18 PM	9388
Phenanthrene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Phenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Pyrene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Pyridine	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2013 7:38:18 PM	9388
Surr: 2,4,6-Tribromophenol	53.7	41.5-117		%REC	1	9/19/2013 7:38:18 PM	9388
Surr: 2-Fluorobiphenyl	59.4	29.1-112		%REC	1	9/19/2013 7:38:18 PM	9388
Surr: 2-Fluorophenol	49.0	11.9-98.6		%REC	1	9/19/2013 7:38:18 PM	9388
Surr: 4-Terphenyl-d14	69.3	46-111		%REC	1	9/19/2013 7:38:18 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: Former T or C Landfill
Collection Date: 9/17/2013 9:00:00 AM
Lab ID: 1309718-001
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: Nitrobenzene-d5	54.7	34.9-112		%REC	1	9/19/2013 7:38:18 PM	9388
Surr: Phenol-d5	37.9	17.5-88.3		%REC	1	9/19/2013 7:38:18 PM	9388
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Toluene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Ethylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Naphthalene	ND	2.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Acetone	ND	10		µg/L	1	9/18/2013 2:55:37 PM	R13468
Bromobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Bromoform	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Bromomethane	ND	3.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
2-Butanone	ND	10		µg/L	1	9/18/2013 2:55:37 PM	R13468
Carbon disulfide	ND	10		µg/L	1	9/18/2013 2:55:37 PM	R13468
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Chlorobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Chloroethane	ND	2.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Chloroform	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Chloromethane	ND	3.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Dibromomethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: Former T or C Landfill
Collection Date: 9/17/2013 9:00:00 AM
Lab ID: 1309718-001
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
2-Hexanone	ND	10		µg/L	1	9/18/2013 2:55:37 PM	R13468
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2013 2:55:37 PM	R13468
Methylene Chloride	ND	3.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Styrene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Vinyl chloride	ND	1.0		µg/L	1	9/18/2013 2:55:37 PM	R13468
Xylenes, Total	ND	1.5		µg/L	1	9/18/2013 2:55:37 PM	R13468
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%REC	1	9/18/2013 2:55:37 PM	R13468
Surr: 4-Bromofluorobenzene	88.6	70-130		%REC	1	9/18/2013 2:55:37 PM	R13468
Surr: Dibromofluoromethane	88.3	70-130		%REC	1	9/18/2013 2:55:37 PM	R13468
Surr: Toluene-d8	97.4	70-130		%REC	1	9/18/2013 2:55:37 PM	R13468
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	220	20		mg/L CaCO3	1	9/17/2013 11:50:06 PM	R13449
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	9/17/2013 11:50:06 PM	R13449
Total Alkalinity (as CaCO3)	220	20		mg/L CaCO3	1	9/17/2013 11:50:06 PM	R13449

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:10:00 AM
Lab ID: 1309718-002
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
4,4´-DDE	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
4,4´-DDT	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Aldrin	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
alpha-BHC	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
beta-BHC	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Chlordane	ND	1.0		µg/L	1	9/20/2013 12:32:48 PM	9389
delta-BHC	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Dieldrin	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Endosulfan I	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Endosulfan II	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Endosulfan sulfate	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Endrin	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Endrin aldehyde	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
gamma-BHC	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Heptachlor	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Heptachlor epoxide	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Methoxychlor	ND	0.050		µg/L	1	9/20/2013 12:32:48 PM	9389
Toxaphene	ND	1.0		µg/L	1	9/20/2013 12:32:48 PM	9389
Surr: Decachlorobiphenyl	77.9	52-114		%REC	1	9/20/2013 12:32:48 PM	9389
Surr: Tetrachloro-m-xylene	76.4	49.3-113		%REC	1	9/20/2013 12:32:48 PM	9389
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	390	10	*	mg/L	20	9/17/2013 7:50:44 PM	R13447
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	9/17/2013 7:38:19 PM	R13447
Sulfate	150	2.5		mg/L	5	9/17/2013 7:38:19 PM	R13447
EPA METHOD 7470: MERCURY						Analyst:	**TES**
Mercury	ND	0.00020		mg/L	1	9/26/2013 1:41:38 PM	9484
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Arsenic	ND	0.020		mg/L	1	9/25/2013 12:29:12 PM	9432
Barium	0.077	0.020		mg/L	1	9/25/2013 12:29:12 PM	9432
Cadmium	ND	0.0020		mg/L	1	9/25/2013 12:29:12 PM	9432
Calcium	160	5.0		mg/L	5	9/25/2013 12:32:01 PM	9432
Chromium	ND	0.0060		mg/L	1	9/25/2013 12:29:12 PM	9432
Iron	0.53	0.050		mg/L	1	9/25/2013 12:29:12 PM	9432
Lead	ND	0.0050		mg/L	1	9/25/2013 12:29:12 PM	9432
Magnesium	43	1.0		mg/L	1	9/25/2013 12:29:12 PM	9432
Manganese	2.0	0.010		mg/L	5	9/25/2013 12:32:01 PM	9432
Selenium	ND	0.050		mg/L	1	9/25/2013 12:29:12 PM	9432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:10:00 AM
Lab ID: 1309718-002
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Silver	ND	0.0050		mg/L	1	9/25/2013 12:29:12 PM	9432
Sodium	140	5.0		mg/L	5	9/25/2013 12:32:01 PM	9432
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Acenaphthylene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Aniline	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Anthracene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Azobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Benz(a)anthracene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Benzoic acid	ND	40		µg/L	1	9/19/2013 9:04:19 PM	9388
Benzyl alcohol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Carbazole	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4-Chloroaniline	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2-Chlorophenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Chrysene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Di-n-octyl phthalate	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Dibenzofuran	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Diethyl phthalate	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Dimethyl phthalate	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2013 9:04:19 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:10:00 AM
Lab ID: 1309718-002
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2013 9:04:19 PM	9388
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2013 9:04:19 PM	9388
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Fluoranthene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Fluorene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Hexachlorobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Hexachloroethane	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Isophorone	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2-Methylphenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
3+4-Methylphenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Naphthalene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2-Nitroaniline	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
3-Nitroaniline	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4-Nitroaniline	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Nitrobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2-Nitrophenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
4-Nitrophenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Pentachlorophenol	ND	20		µg/L	1	9/19/2013 9:04:19 PM	9388
Phenanthrene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Phenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Pyrene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Pyridine	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2013 9:04:19 PM	9388
Surr: 2,4,6-Tribromophenol	67.4	41.5-117		%REC	1	9/19/2013 9:04:19 PM	9388
Surr: 2-Fluorobiphenyl	76.1	29.1-112		%REC	1	9/19/2013 9:04:19 PM	9388
Surr: 2-Fluorophenol	53.8	11.9-98.6		%REC	1	9/19/2013 9:04:19 PM	9388
Surr: 4-Terphenyl-d14	80.3	46-111		%REC	1	9/19/2013 9:04:19 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:10:00 AM
Lab ID: 1309718-002
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: Nitrobenzene-d5	68.2	34.9-112		%REC	1	9/19/2013 9:04:19 PM	9388
Surr: Phenol-d5	42.0	17.5-88.3		%REC	1	9/19/2013 9:04:19 PM	9388
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Toluene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Ethylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Naphthalene	ND	2.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Acetone	ND	10		µg/L	1	9/18/2013 5:03:17 PM	R13468
Bromobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Bromoform	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Bromomethane	ND	3.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
2-Butanone	ND	10		µg/L	1	9/18/2013 5:03:17 PM	R13468
Carbon disulfide	ND	10		µg/L	1	9/18/2013 5:03:17 PM	R13468
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Chlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Chloroethane	ND	2.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Chloroform	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Chloromethane	ND	3.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Dibromomethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:10:00 AM
Lab ID: 1309718-002
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
2-Hexanone	ND	10		µg/L	1	9/18/2013 5:03:17 PM	R13468
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2013 5:03:17 PM	R13468
Methylene Chloride	ND	3.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Styrene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Vinyl chloride	ND	1.0		µg/L	1	9/18/2013 5:03:17 PM	R13468
Xylenes, Total	ND	1.5		µg/L	1	9/18/2013 5:03:17 PM	R13468
Surr: 1,2-Dichloroethane-d4	90.7	70-130		%REC	1	9/18/2013 5:03:17 PM	R13468
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	1	9/18/2013 5:03:17 PM	R13468
Surr: Dibromofluoromethane	86.9	70-130		%REC	1	9/18/2013 5:03:17 PM	R13468
Surr: Toluene-d8	92.9	70-130		%REC	1	9/18/2013 5:03:17 PM	R13468
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	310	20		mg/L CaCO3	1	9/18/2013 12:02:50 AM	R13449
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	9/18/2013 12:02:50 AM	R13449
Total Alkalinity (as CaCO3)	310	20		mg/L CaCO3	1	9/18/2013 12:02:50 AM	R13449

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:40:00 AM
Lab ID: 1309718-003
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
4,4´-DDE	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
4,4´-DDT	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Aldrin	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
alpha-BHC	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
beta-BHC	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Chlordane	ND	1.0		µg/L	1	9/20/2013 1:24:47 PM	9389
delta-BHC	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Dieldrin	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Endosulfan I	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Endosulfan II	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Endosulfan sulfate	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Endrin	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Endrin aldehyde	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
gamma-BHC	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Heptachlor	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Heptachlor epoxide	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Methoxychlor	ND	0.050		µg/L	1	9/20/2013 1:24:47 PM	9389
Toxaphene	ND	1.0		µg/L	1	9/20/2013 1:24:47 PM	9389
Surr: Decachlorobiphenyl	65.1	52-114		%REC	1	9/20/2013 1:24:47 PM	9389
Surr: Tetrachloro-m-xylene	67.0	49.3-113		%REC	1	9/20/2013 1:24:47 PM	9389
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	620	25	*	mg/L	50	9/19/2013 11:07:55 AM	R13485
Nitrogen, Nitrate (As N)	12	0.50	*	mg/L	5	9/17/2013 8:27:58 PM	R13447
Sulfate	220	2.5		mg/L	5	9/17/2013 8:27:58 PM	R13447
EPA METHOD 7470: MERCURY						Analyst:	**TES**
Mercury	ND	0.00020		mg/L	1	9/26/2013 1:43:25 PM	9484
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Arsenic	ND	0.020		mg/L	1	9/25/2013 12:34:50 PM	9432
Barium	0.071	0.020		mg/L	1	9/25/2013 12:34:50 PM	9432
Cadmium	ND	0.0020		mg/L	1	9/25/2013 12:34:50 PM	9432
Calcium	230	5.0		mg/L	5	9/25/2013 12:37:48 PM	9432
Chromium	ND	0.0060		mg/L	1	9/25/2013 12:34:50 PM	9432
Iron	ND	0.050		mg/L	1	9/25/2013 12:34:50 PM	9432
Lead	ND	0.0050		mg/L	1	9/25/2013 12:34:50 PM	9432
Magnesium	41	1.0		mg/L	1	9/25/2013 12:34:50 PM	9432
Manganese	0.55	0.0020		mg/L	1	9/25/2013 12:34:50 PM	9432
Selenium	ND	0.050		mg/L	1	9/25/2013 12:34:50 PM	9432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:40:00 AM
Lab ID: 1309718-003
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Silver	ND	0.0050		mg/L	1	9/25/2013 12:34:50 PM	9432
Sodium	240	5.0		mg/L	5	9/25/2013 12:37:48 PM	9432
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Acenaphthylene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Aniline	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Anthracene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Azobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Benz(a)anthracene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Benzoic acid	ND	40		µg/L	1	9/19/2013 9:33:05 PM	9388
Benzyl alcohol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Carbazole	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4-Chloroaniline	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2-Chlorophenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Chrysene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Di-n-octyl phthalate	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Dibenzofuran	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Diethyl phthalate	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Dimethyl phthalate	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2013 9:33:05 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:40:00 AM
Lab ID: 1309718-003
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2013 9:33:05 PM	9388
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2013 9:33:05 PM	9388
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Fluoranthene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Fluorene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Hexachlorobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Hexachloroethane	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Isophorone	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2-Methylphenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
3+4-Methylphenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Naphthalene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2-Nitroaniline	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
3-Nitroaniline	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4-Nitroaniline	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Nitrobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2-Nitrophenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
4-Nitrophenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Pentachlorophenol	ND	20		µg/L	1	9/19/2013 9:33:05 PM	9388
Phenanthrene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Phenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Pyrene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Pyridine	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2013 9:33:05 PM	9388
Surr: 2,4,6-Tribromophenol	71.5	41.5-117		%REC	1	9/19/2013 9:33:05 PM	9388
Surr: 2-Fluorobiphenyl	80.7	29.1-112		%REC	1	9/19/2013 9:33:05 PM	9388
Surr: 2-Fluorophenol	67.1	11.9-98.6		%REC	1	9/19/2013 9:33:05 PM	9388
Surr: 4-Terphenyl-d14	90.9	46-111		%REC	1	9/19/2013 9:33:05 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:40:00 AM
Lab ID: 1309718-003
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: Nitrobenzene-d5	71.5	34.9-112		%REC	1	9/19/2013 9:33:05 PM	9388
Surr: Phenol-d5	50.5	17.5-88.3		%REC	1	9/19/2013 9:33:05 PM	9388
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Toluene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Ethylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Naphthalene	ND	2.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Acetone	ND	10		µg/L	1	9/18/2013 5:35:04 PM	R13468
Bromobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Bromoform	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Bromomethane	ND	3.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
2-Butanone	ND	10		µg/L	1	9/18/2013 5:35:04 PM	R13468
Carbon disulfide	ND	10		µg/L	1	9/18/2013 5:35:04 PM	R13468
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Chlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Chloroethane	ND	2.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Chloroform	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Chloromethane	ND	3.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Dibromomethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: Former T or C Landfill
Collection Date: 9/17/2013 10:40:00 AM
Lab ID: 1309718-003
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
2-Hexanone	ND	10		µg/L	1	9/18/2013 5:35:04 PM	R13468
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2013 5:35:04 PM	R13468
Methylene Chloride	ND	3.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Styrene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Vinyl chloride	ND	1.0		µg/L	1	9/18/2013 5:35:04 PM	R13468
Xylenes, Total	ND	1.5		µg/L	1	9/18/2013 5:35:04 PM	R13468
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%REC	1	9/18/2013 5:35:04 PM	R13468
Surr: 4-Bromofluorobenzene	90.0	70-130		%REC	1	9/18/2013 5:35:04 PM	R13468
Surr: Dibromofluoromethane	89.4	70-130		%REC	1	9/18/2013 5:35:04 PM	R13468
Surr: Toluene-d8	96.8	70-130		%REC	1	9/18/2013 5:35:04 PM	R13468
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	280	20		mg/L CaCO3	1	9/18/2013 12:17:53 AM	R13449
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	9/18/2013 12:17:53 AM	R13449
Total Alkalinity (as CaCO3)	280	20		mg/L CaCO3	1	9/18/2013 12:17:53 AM	R13449

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:10:00 AM
Lab ID: 1309718-004
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
4,4´-DDE	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
4,4´-DDT	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Aldrin	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
alpha-BHC	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
beta-BHC	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Chlordane	ND	1.0		µg/L	1	9/20/2013 1:42:05 PM	9389
delta-BHC	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Dieldrin	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Endosulfan I	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Endosulfan II	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Endosulfan sulfate	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Endrin	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Endrin aldehyde	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
gamma-BHC	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Heptachlor	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Heptachlor epoxide	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Methoxychlor	ND	0.050		µg/L	1	9/20/2013 1:42:05 PM	9389
Toxaphene	ND	1.0		µg/L	1	9/20/2013 1:42:05 PM	9389
Surr: Decachlorobiphenyl	74.7	52-114		%REC	1	9/20/2013 1:42:05 PM	9389
Surr: Tetrachloro-m-xylene	77.9	49.3-113		%REC	1	9/20/2013 1:42:05 PM	9389
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	240	10		mg/L	20	9/17/2013 9:05:11 PM	R13447
Nitrogen, Nitrate (As N)	0.49	0.10		mg/L	1	9/17/2013 8:52:47 PM	R13447
Sulfate	190	10		mg/L	20	9/17/2013 9:05:11 PM	R13447
EPA METHOD 7470: MERCURY						Analyst:	**TES**
Mercury	ND	0.00020		mg/L	1	9/26/2013 1:45:13 PM	9484
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Arsenic	ND	0.020		mg/L	1	9/25/2013 12:49:27 PM	9432
Barium	0.036	0.020		mg/L	1	9/25/2013 12:49:27 PM	9432
Cadmium	ND	0.0020		mg/L	1	9/25/2013 12:49:27 PM	9432
Calcium	110	5.0		mg/L	5	9/25/2013 12:52:20 PM	9432
Chromium	ND	0.0060		mg/L	1	9/25/2013 12:49:27 PM	9432
Iron	ND	0.050		mg/L	1	9/25/2013 12:49:27 PM	9432
Lead	ND	0.0050		mg/L	1	9/25/2013 12:49:27 PM	9432
Magnesium	16	1.0		mg/L	1	9/25/2013 12:49:27 PM	9432
Manganese	0.21	0.0020		mg/L	1	9/25/2013 12:49:27 PM	9432
Selenium	ND	0.050		mg/L	1	9/25/2013 12:49:27 PM	9432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:10:00 AM
Lab ID: 1309718-004
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Silver	ND	0.0050		mg/L	1	9/25/2013 12:49:27 PM	9432
Sodium	200	5.0		mg/L	5	9/25/2013 12:52:20 PM	9432
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Acenaphthylene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Aniline	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Anthracene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Azobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Benz(a)anthracene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Benzoic acid	ND	40		µg/L	1	9/19/2013 10:01:46 PM	9388
Benzyl alcohol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Carbazole	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4-Chloroaniline	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2-Chlorophenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Chrysene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Di-n-octyl phthalate	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Dibenzofuran	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Diethyl phthalate	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Dimethyl phthalate	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2013 10:01:46 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:10:00 AM
Lab ID: 1309718-004
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2013 10:01:46 PM	9388
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2013 10:01:46 PM	9388
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Fluoranthene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Fluorene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Hexachlorobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Hexachloroethane	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Isophorone	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2-Methylphenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
3+4-Methylphenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Naphthalene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
3-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Nitrobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2-Nitrophenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
4-Nitrophenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Pentachlorophenol	ND	20		µg/L	1	9/19/2013 10:01:46 PM	9388
Phenanthrene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Phenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Pyrene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Pyridine	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2013 10:01:46 PM	9388
Surr: 2,4,6-Tribromophenol	68.9	41.5-117		%REC	1	9/19/2013 10:01:46 PM	9388
Surr: 2-Fluorobiphenyl	75.1	29.1-112		%REC	1	9/19/2013 10:01:46 PM	9388
Surr: 2-Fluorophenol	61.4	11.9-98.6		%REC	1	9/19/2013 10:01:46 PM	9388
Surr: 4-Terphenyl-d14	90.0	46-111		%REC	1	9/19/2013 10:01:46 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:10:00 AM
Lab ID: 1309718-004
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: Nitrobenzene-d5	68.1	34.9-112		%REC	1	9/19/2013 10:01:46 PM	9388
Surr: Phenol-d5	46.0	17.5-88.3		%REC	1	9/19/2013 10:01:46 PM	9388
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Toluene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Ethylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Naphthalene	ND	2.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Acetone	ND	10		µg/L	1	9/18/2013 6:06:52 PM	R13468
Bromobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Bromoform	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Bromomethane	ND	3.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
2-Butanone	ND	10		µg/L	1	9/18/2013 6:06:52 PM	R13468
Carbon disulfide	ND	10		µg/L	1	9/18/2013 6:06:52 PM	R13468
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Chlorobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Chloroethane	ND	2.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Chloroform	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Chloromethane	ND	3.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Dibromomethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:10:00 AM
Lab ID: 1309718-004
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
2-Hexanone	ND	10		µg/L	1	9/18/2013 6:06:52 PM	R13468
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2013 6:06:52 PM	R13468
Methylene Chloride	ND	3.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Styrene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Vinyl chloride	ND	1.0		µg/L	1	9/18/2013 6:06:52 PM	R13468
Xylenes, Total	ND	1.5		µg/L	1	9/18/2013 6:06:52 PM	R13468
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%REC	1	9/18/2013 6:06:52 PM	R13468
Surr: 4-Bromofluorobenzene	87.3	70-130		%REC	1	9/18/2013 6:06:52 PM	R13468
Surr: Dibromofluoromethane	94.8	70-130		%REC	1	9/18/2013 6:06:52 PM	R13468
Surr: Toluene-d8	94.0	70-130		%REC	1	9/18/2013 6:06:52 PM	R13468
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	9/18/2013 12:32:12 AM	R13449
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	9/18/2013 12:32:12 AM	R13449
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	9/18/2013 12:32:12 AM	R13449

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Project: Former T or C Landfill
Lab ID: 1309718-005 **Matrix:** AQUEOUS

Client Sample ID: MW-10
Collection Date: 9/17/2013 11:45:00 AM
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
4,4´-DDE	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
4,4´-DDT	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Aldrin	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
alpha-BHC	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
beta-BHC	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Chlordane	ND	1.0		µg/L	1	9/20/2013 1:59:28 PM	9389
delta-BHC	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Dieldrin	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Endosulfan I	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Endosulfan II	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Endosulfan sulfate	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Endrin	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Endrin aldehyde	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
gamma-BHC	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Heptachlor	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Heptachlor epoxide	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Methoxychlor	ND	0.050		µg/L	1	9/20/2013 1:59:28 PM	9389
Toxaphene	ND	1.0		µg/L	1	9/20/2013 1:59:28 PM	9389
Surr: Decachlorobiphenyl	77.6	52-114		%REC	1	9/20/2013 1:59:28 PM	9389
Surr: Tetrachloro-m-xylene	79.7	49.3-113		%REC	1	9/20/2013 1:59:28 PM	9389
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	330	10	*	mg/L	20	9/17/2013 10:19:40 PM	R13447
Nitrogen, Nitrate (As N)	0.39	0.10		mg/L	1	9/17/2013 9:42:26 PM	R13447
Sulfate	210	10		mg/L	20	9/17/2013 10:19:40 PM	R13447
EPA METHOD 7470: MERCURY						Analyst:	**TES**
Mercury	ND	0.00020		mg/L	1	9/26/2013 1:47:02 PM	9484
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Arsenic	ND	0.020		mg/L	1	9/25/2013 12:55:06 PM	9432
Barium	0.050	0.020		mg/L	1	9/25/2013 12:55:06 PM	9432
Cadmium	ND	0.0020		mg/L	1	9/25/2013 12:55:06 PM	9432
Calcium	93	1.0		mg/L	1	9/25/2013 12:55:06 PM	9432
Chromium	ND	0.0060		mg/L	1	9/25/2013 12:55:06 PM	9432
Iron	ND	0.050		mg/L	1	9/25/2013 12:55:06 PM	9432
Lead	ND	0.0050		mg/L	1	9/25/2013 12:55:06 PM	9432
Magnesium	22	1.0		mg/L	1	9/25/2013 12:55:06 PM	9432
Manganese	0.18	0.0020		mg/L	1	9/25/2013 12:55:06 PM	9432
Selenium	ND	0.050		mg/L	1	9/25/2013 12:55:06 PM	9432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:45:00 AM
Lab ID: 1309718-005
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Silver	ND	0.0050		mg/L	1	9/25/2013 12:55:06 PM	9432
Sodium	270	5.0		mg/L	5	9/25/2013 12:58:03 PM	9432
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Acenaphthylene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Aniline	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Anthracene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Azobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Benz(a)anthracene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Benzoic acid	ND	40		µg/L	1	9/19/2013 10:30:28 PM	9388
Benzyl alcohol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Carbazole	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4-Chloroaniline	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2-Chlorophenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Chrysene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Di-n-octyl phthalate	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Dibenzofuran	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Diethyl phthalate	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Dimethyl phthalate	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2013 10:30:28 PM	9388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:45:00 AM
Lab ID: 1309718-005
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2013 10:30:28 PM	9388
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2013 10:30:28 PM	9388
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Fluoranthene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Fluorene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Hexachlorobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Hexachloroethane	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Isophorone	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2-Methylphenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
3+4-Methylphenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Naphthalene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
3-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Nitrobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2-Nitrophenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
4-Nitrophenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Pentachlorophenol	ND	20		µg/L	1	9/19/2013 10:30:28 PM	9388
Phenanthrene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Phenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Pyrene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Pyridine	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2013 10:30:28 PM	9388
Surr: 2,4,6-Tribromophenol	54.5	41.5-117		%REC	1	9/19/2013 10:30:28 PM	9388
Surr: 2-Fluorobiphenyl	58.0	29.1-112		%REC	1	9/19/2013 10:30:28 PM	9388
Surr: 2-Fluorophenol	47.7	11.9-98.6		%REC	1	9/19/2013 10:30:28 PM	9388
Surr: 4-Terphenyl-d14	81.0	46-111		%REC	1	9/19/2013 10:30:28 PM	9388

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:45:00 AM
Lab ID: 1309718-005
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: Nitrobenzene-d5	52.2	34.9-112		%REC	1	9/19/2013 10:30:28 PM	9388
Surr: Phenol-d5	38.8	17.5-88.3		%REC	1	9/19/2013 10:30:28 PM	9388
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Toluene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Ethylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2,4-Trimethylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,3,5-Trimethylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2-Dichloroethane (EDC)	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2-Dibromoethane (EDB)	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Naphthalene	ND	4.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1-Methylnaphthalene	ND	8.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
2-Methylnaphthalene	ND	8.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Acetone	ND	20	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Bromobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Bromodichloromethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Bromoform	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Bromomethane	ND	6.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
2-Butanone	ND	20	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Carbon disulfide	ND	20	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Carbon Tetrachloride	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Chlorobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Chloroethane	ND	4.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Chloroform	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Chloromethane	ND	6.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
2-Chlorotoluene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
4-Chlorotoluene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
cis-1,2-DCE	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
cis-1,3-Dichloropropene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2-Dibromo-3-chloropropane	ND	4.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Dibromochloromethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Dibromomethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2-Dichlorobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,3-Dichlorobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,4-Dichlorobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Dichlorodifluoromethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1-Dichloroethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1-Dichloroethene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: Former T or C Landfill
Collection Date: 9/17/2013 11:45:00 AM
Lab ID: 1309718-005
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,3-Dichloropropane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
2,2-Dichloropropane	ND	4.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1-Dichloropropene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Hexachlorobutadiene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
2-Hexanone	ND	20	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Isopropylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
4-Isopropyltoluene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
4-Methyl-2-pentanone	ND	20	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Methylene Chloride	ND	6.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
n-Butylbenzene	ND	6.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
n-Propylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
sec-Butylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Styrene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
tert-Butylbenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1,1,2-Tetrachloroethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1,2,2-Tetrachloroethane	ND	4.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Tetrachloroethene (PCE)	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
trans-1,2-DCE	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
trans-1,3-Dichloropropene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2,3-Trichlorobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2,4-Trichlorobenzene	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1,1-Trichloroethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,1,2-Trichloroethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Trichloroethene (TCE)	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Trichlorofluoromethane	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
1,2,3-Trichloropropane	ND	4.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Vinyl chloride	ND	2.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Xylenes, Total	ND	3.0	P	µg/L	2	9/18/2013 6:38:33 PM	R13468
Surr: 1,2-Dichloroethane-d4	92.3	70-130	P	%REC	2	9/18/2013 6:38:33 PM	R13468
Surr: 4-Bromofluorobenzene	83.3	70-130	P	%REC	2	9/18/2013 6:38:33 PM	R13468
Surr: Dibromofluoromethane	92.2	70-130	P	%REC	2	9/18/2013 6:38:33 PM	R13468
Surr: Toluene-d8	89.6	70-130	P	%REC	2	9/18/2013 6:38:33 PM	R13468
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	290	20		mg/L CaCO3	1	9/18/2013 12:47:31 AM	R13449
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	9/18/2013 12:47:31 AM	R13449
Total Alkalinity (as CaCO3)	290	20		mg/L CaCO3	1	9/18/2013 12:47:31 AM	R13449

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Project: Former T or C Landfill
Lab ID: 1309718-006 **Matrix:** AQUEOUS

Client Sample ID: MW-1
Collection Date: 9/17/2013 12:25:00 PM
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
4,4´-DDE	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
4,4´-DDT	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Aldrin	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
alpha-BHC	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
beta-BHC	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Chlordane	ND	1.0		µg/L	1	9/20/2013 2:16:48 PM	9389
delta-BHC	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Dieldrin	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Endosulfan I	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Endosulfan II	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Endosulfan sulfate	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Endrin	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Endrin aldehyde	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
gamma-BHC	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Heptachlor	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Heptachlor epoxide	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Methoxychlor	ND	0.050		µg/L	1	9/20/2013 2:16:48 PM	9389
Toxaphene	ND	1.0		µg/L	1	9/20/2013 2:16:48 PM	9389
Surr: Decachlorobiphenyl	71.8	52-114		%REC	1	9/20/2013 2:16:48 PM	9389
Surr: Tetrachloro-m-xylene	72.2	49.3-113		%REC	1	9/20/2013 2:16:48 PM	9389
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	480	25	*	mg/L	50	9/19/2013 11:20:21 AM	R13485
Nitrogen, Nitrate (As N)	7.7	2.0		mg/L	20	9/17/2013 11:09:21 PM	R13447
Sulfate	130	10		mg/L	20	9/17/2013 11:09:21 PM	R13447
EPA METHOD 7470: MERCURY						Analyst:	**TES**
Mercury	ND	0.00020		mg/L	1	9/26/2013 1:48:51 PM	9484
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**JLF**
Arsenic	ND	0.020		mg/L	1	9/25/2013 1:00:51 PM	9432
Barium	0.17	0.020		mg/L	1	9/25/2013 1:00:51 PM	9432
Cadmium	ND	0.0020		mg/L	1	9/25/2013 1:00:51 PM	9432
Calcium	170	5.0		mg/L	5	9/25/2013 1:09:46 PM	9432
Chromium	ND	0.0060		mg/L	1	9/25/2013 1:00:51 PM	9432
Iron	0.16	0.050		mg/L	1	9/25/2013 1:00:51 PM	9432
Lead	ND	0.0050		mg/L	1	9/25/2013 1:00:51 PM	9432
Magnesium	31	1.0		mg/L	1	9/25/2013 1:00:51 PM	9432
Manganese	0.61	0.010		mg/L	5	9/25/2013 1:09:46 PM	9432
Selenium	ND	0.050		mg/L	1	9/25/2013 1:00:51 PM	9432

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: Former T or C Landfill
Collection Date: 9/17/2013 12:25:00 PM
Lab ID: 1309718-006
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Silver	ND	0.0050		mg/L	1	9/25/2013 1:00:51 PM	9432
Sodium	190	5.0		mg/L	5	9/25/2013 1:09:46 PM	9432
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Acenaphthylene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Aniline	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Anthracene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Azobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Benz(a)anthracene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Benzoic acid	ND	40		µg/L	1	9/19/2013 10:59:13 PM	9388
Benzyl alcohol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Carbazole	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4-Chloroaniline	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2-Chlorophenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Chrysene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Di-n-octyl phthalate	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Dibenzofuran	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Diethyl phthalate	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Dimethyl phthalate	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2013 10:59:13 PM	9388

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: Former T or C Landfill
Collection Date: 9/17/2013 12:25:00 PM
Lab ID: 1309718-006
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2013 10:59:13 PM	9388
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2013 10:59:13 PM	9388
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Fluoranthene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Fluorene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Hexachlorobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Hexachloroethane	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Isophorone	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2-Methylphenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
3+4-Methylphenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Naphthalene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
3-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4-Nitroaniline	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Nitrobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2-Nitrophenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
4-Nitrophenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Pentachlorophenol	ND	20		µg/L	1	9/19/2013 10:59:13 PM	9388
Phenanthrene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Phenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Pyrene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Pyridine	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2013 10:59:13 PM	9388
Surr: 2,4,6-Tribromophenol	65.8	41.5-117		%REC	1	9/19/2013 10:59:13 PM	9388
Surr: 2-Fluorobiphenyl	81.4	29.1-112		%REC	1	9/19/2013 10:59:13 PM	9388
Surr: 2-Fluorophenol	68.3	11.9-98.6		%REC	1	9/19/2013 10:59:13 PM	9388
Surr: 4-Terphenyl-d14	88.5	46-111		%REC	1	9/19/2013 10:59:13 PM	9388

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: Former T or C Landfill
Collection Date: 9/17/2013 12:25:00 PM
Lab ID: 1309718-006
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: Nitrobenzene-d5	72.6	34.9-112		%REC	1	9/19/2013 10:59:13 PM	9388
Surr: Phenol-d5	50.5	17.5-88.3		%REC	1	9/19/2013 10:59:13 PM	9388
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Toluene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Ethylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Naphthalene	ND	4.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1-Methylnaphthalene	ND	8.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
2-Methylnaphthalene	ND	8.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Acetone	ND	20		µg/L	2	9/18/2013 7:41:53 PM	R13468
Bromobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Bromodichloromethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Bromoform	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Bromomethane	ND	6.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
2-Butanone	ND	20		µg/L	2	9/18/2013 7:41:53 PM	R13468
Carbon disulfide	ND	20		µg/L	2	9/18/2013 7:41:53 PM	R13468
Carbon Tetrachloride	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Chlorobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Chloroethane	ND	4.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Chloroform	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Chloromethane	ND	6.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
2-Chlorotoluene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
4-Chlorotoluene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
cis-1,2-DCE	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Dibromochloromethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Dibromomethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1-Dichloroethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1-Dichloroethene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: Former T or C Landfill
Collection Date: 9/17/2013 12:25:00 PM
Lab ID: 1309718-006
Matrix: AQUEOUS
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,3-Dichloropropane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
2,2-Dichloropropane	ND	4.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1-Dichloropropene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Hexachlorobutadiene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
2-Hexanone	ND	20		µg/L	2	9/18/2013 7:41:53 PM	R13468
Isopropylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
4-Isopropyltoluene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
4-Methyl-2-pentanone	ND	20		µg/L	2	9/18/2013 7:41:53 PM	R13468
Methylene Chloride	ND	6.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
n-Butylbenzene	ND	6.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
n-Propylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
sec-Butylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Styrene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
tert-Butylbenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
trans-1,2-DCE	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Trichlorofluoromethane	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Vinyl chloride	ND	2.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Xylenes, Total	ND	3.0		µg/L	2	9/18/2013 7:41:53 PM	R13468
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%REC	2	9/18/2013 7:41:53 PM	R13468
Surr: 4-Bromofluorobenzene	95.5	70-130		%REC	2	9/18/2013 7:41:53 PM	R13468
Surr: Dibromofluoromethane	92.8	70-130		%REC	2	9/18/2013 7:41:53 PM	R13468
Surr: Toluene-d8	89.1	70-130		%REC	2	9/18/2013 7:41:53 PM	R13468
SM2320B: ALKALINITY						Analyst: **JML**	
Bicarbonate (As CaCO3)	280	20		mg/L CaCO3	1	9/18/2013 1:01:59 AM	R13449
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	9/18/2013 1:01:59 AM	R13449
Total Alkalinity (as CaCO3)	280	20		mg/L CaCO3	1	9/18/2013 1:01:59 AM	R13449

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: Trip Blank
Project: Former T or C Landfill
Collection Date:
Lab ID: 1309718-007
Matrix: TRIP BLANK
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Toluene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Ethylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Naphthalene	ND	2.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Acetone	ND	10		µg/L	1	9/18/2013 8:13:31 PM	R13468
Bromobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Bromoform	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Bromomethane	ND	3.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
2-Butanone	ND	10		µg/L	1	9/18/2013 8:13:31 PM	R13468
Carbon disulfide	ND	10		µg/L	1	9/18/2013 8:13:31 PM	R13468
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Chlorobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Chloroethane	ND	2.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Chloroform	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Chloromethane	ND	3.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Dibromomethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2013 8:13:31 PM	R13468

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: Trip Blank
Project: Former T or C Landfill
Collection Date:
Lab ID: 1309718-007
Matrix: TRIP BLANK
Received Date: 9/17/2013 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
2-Hexanone	ND	10		µg/L	1	9/18/2013 8:13:31 PM	R13468
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2013 8:13:31 PM	R13468
Methylene Chloride	ND	3.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Styrene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Vinyl chloride	ND	1.0		µg/L	1	9/18/2013 8:13:31 PM	R13468
Xylenes, Total	ND	1.5		µg/L	1	9/18/2013 8:13:31 PM	R13468
Surr: 1,2-Dichloroethane-d4	92.6	70-130		%REC	1	9/18/2013 8:13:31 PM	R13468
Surr: 4-Bromofluorobenzene	91.5	70-130		%REC	1	9/18/2013 8:13:31 PM	R13468
Surr: Dibromofluoromethane	93.6	70-130		%REC	1	9/18/2013 8:13:31 PM	R13468
Surr: Toluene-d8	87.8	70-130		%REC	1	9/18/2013 8:13:31 PM	R13468

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	130919051
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1309718
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	130919051-001	**Sampling Date**	9/17/2013	**Date/Time Received**	9/19/2013	12:15 PM
Client Sample ID	1309718-001F / MW-5	**Sampling Time**	9:00 AM	**Extraction Date**	9/24/2013	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 130919051-001

Surrogate Standard	Method	Percent Recovery	Control Limits
3,5-Dichlorobenzoic Acid	EPA 8151A	102.5	35-145

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 130919051
Project Name: 1309718

Analytical Results Report

Sample Number	130919051-002	**Sampling Date**	9/17/2013	**Date/Time Received**	9/19/2013	12:15 PM
Client Sample ID	1309718-002F / MW-9	**Sampling Time**	10:10 AM	**Extraction Date**	9/24/2013	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 130919051-002

Surrogate Standard	Method	Percent Recovery	Control Limits
3,5-Dichlorobenzoic Acid	EPA 8151A	102.0	35-145

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	130919051
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1309718
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	130919051-003	**Sampling Date**	9/17/2013	**Date/Time Received**	9/19/2013	12:15 PM
Client Sample ID	1309718-003F / MW-8	**Sampling Time**	10:40 AM	**Extraction Date**	9/24/2013	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 130919051-003

Surrogate Standard	Method	Percent Recovery	Control Limits
3,5-Dichlorobenzoic Acid	EPA 8151A	101.5	35-145

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 130919051
Project Name: 1309718

Analytical Results Report

Sample Number	130919051-004	**Sampling Date**	9/17/2013	**Date/Time Received**	9/19/2013	12:15 PM
Client Sample ID	1309718-004F / MW-3R	**Sampling Time**	11:10 AM	**Extraction Date**	9/24/2013	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 130919051-004

Surrogate Standard	Method	Percent Recovery	Control Limits
3,5-Dichlorobenzoic Acid	EPA 8151A	103.0	35-145

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 130919051
Project Name: 1309718

Analytical Results Report

Sample Number	130919051-005	**Sampling Date**	9/17/2013	**Date/Time Received**	9/19/2013	12:15 PM
Client Sample ID	1309718-005F / MW-10	**Sampling Time**	11:45 AM	**Extraction Date**	9/24/2013	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 130919051-005

Surrogate Standard	Method	Percent Recovery	Control Limits
3,5-Dichlorobenzoic Acid	EPA 8151A	100.0	35-145

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Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 130919051
Project Name: 1309718

Analytical Results Report

Sample Number	130919051-006	**Sampling Date**	9/17/2013	**Date/Time Received**	9/19/2013 12:15 PM
Client Sample ID	1309718-006F / MW-1	**Sampling Time**	12:25 PM	**Extraction Date**	9/24/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	9/24/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 130919051-006

Surrogate Standard	Method	Percent Recovery	Control Limits
3,5-Dichlorobenzoic Acid	EPA 8151A	103.5	35-145

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382525** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.7	0.50	8.000	0	96.7	90	110			
Nitrogen, Nitrate (As N)	4.9	0.10	4.800	0	103	90	110			
Sulfate	20	0.50	20.00	0	99.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382527** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382528** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.3	90	110			
Sulfate	9.6	0.50	10.00	0	95.9	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	102	90	110			
Nitrogen, Nitrate (As N)	7.8	0.10	7.200	0	108	90	110			
Sulfate	31	0.50	30.00	0	103	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.2	90	110			
Nitrogen, Nitrate (As N)	2.9	0.10	3.000	0	98.0	90	110			
Sulfate	12	0.50	12.50	0	94.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382561** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.7	0.50	8.000	0	96.6	90	110			
Nitrogen, Nitrate (As N)	4.9	0.10	4.800	0	102	90	110			
Sulfate	20	0.50	20.00	0	98.7	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382573** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	102	90	110			
Nitrogen, Nitrate (As N)	7.8	0.10	7.200	0	108	90	110			
Sulfate	31	0.50	30.00	0	103	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.4	90	110			
Sulfate	9.5	0.50	10.00	0	95.2	90	110			

Sample ID **1309718-005BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **MW-10** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382582** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.8	0.10	2.500	0.3875	97.9	93	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **1309718-005BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **MW-10** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.8	0.10	2.500	0.3875	98.3	93	113	0.342	20	

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/17/2013** SeqNo: **382585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.7	90	110			
Nitrogen, Nitrate (As N)	2.9	0.10	3.000	0	97.2	90	110			
Sulfate	12	0.50	12.50	0	95.1	90	110			

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **382597** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.8	0.50	8.000	0	97.2	90	110			
Nitrogen, Nitrate (As N)	4.9	0.10	4.800	0	103	90	110			
Sulfate	20	0.50	20.00	0	98.7	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **382609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	102	90	110			
Nitrogen, Nitrate (As N)	7.8	0.10	7.200	0	108	90	110			
Sulfate	31	0.50	30.00	0	103	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **382621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Nitrogen, Nitrate (As N)	2.9	0.10	3.000	0	97.5	90	110			
Sulfate	12	0.50	12.50	0	94.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13447** RunNo: **13447**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **382626** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.8	0.50	8.000	0	97.0	90	110			
Nitrogen, Nitrate (As N)	4.9	0.10	4.800	0	102	90	110			
Sulfate	20	0.50	20.00	0	98.1	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R13485** RunNo: **13485**
Prep Date: Analysis Date: **9/19/2013** SeqNo: **383624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R13485** RunNo: **13485**
Prep Date: Analysis Date: **9/19/2013** SeqNo: **383625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.5	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13485** RunNo: **13485**
Prep Date: Analysis Date: **9/19/2013** SeqNo: **383634** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.2	90	110			

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R13485** RunNo: **13485**
Prep Date: Analysis Date: **9/19/2013** SeqNo: **383646** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.7	0.50	8.000	0	96.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **MB-9389** SampType: **MBLK** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW** Batch ID: **9389** RunNo: **13502**
Prep Date: **9/19/2013** Analysis Date: **9/20/2013** SeqNo: **384196** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	ND	0.050								
4,4´-DDE	ND	0.050								
4,4´-DDT	ND	0.050								
Aldrin	ND	0.050								
alpha-BHC	ND	0.050								
beta-BHC	ND	0.050								
Chlordane	ND	1.0								
delta-BHC	ND	0.050								
Dieldrin	ND	0.050								
Endosulfan I	ND	0.050								
Endosulfan II	ND	0.050								
Endosulfan sulfate	ND	0.050								
Endrin	ND	0.050								
Endrin aldehyde	ND	0.050								
gamma-BHC	ND	0.050								
Heptachlor	ND	0.050								
Heptachlor epoxide	ND	0.050								
Methoxychlor	ND	0.050								
Toxaphene	ND	1.0								
Surr: Decachlorobiphenyl	2.1		2.500		84.1	52	114			
Surr: Tetrachloro-m-xylene	2.0		2.500		80.8	49.3	113			

Sample ID **LCS-9389** SampType: **LCS** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW** Batch ID: **9389** RunNo: **13502**
Prep Date: **9/19/2013** Analysis Date: **9/20/2013** SeqNo: **384231** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.38	0.050	0.5000	0	76.6	33.3	165			
4,4´-DDE	0.40	0.050	0.5000	0	79.6	43.8	144			
4,4´-DDT	0.39	0.050	0.5000	0	78.2	41.7	151			
Aldrin	0.37	0.050	0.5000	0	74.0	45.4	134			
alpha-BHC	0.37	0.050	0.5000	0	74.6	41.7	136			
beta-BHC	0.38	0.050	0.5000	0	75.2	47.2	144			
delta-BHC	0.38	0.050	0.5000	0	76.6	35	154			
Dieldrin	0.36	0.050	0.5000	0	72.4	46.2	137			
Endosulfan I	0.38	0.050	0.5000	0	76.0	47.9	138			
Endosulfan II	0.37	0.050	0.5000	0	73.6	45.3	135			
Endosulfan sulfate	0.38	0.050	0.5000	0	75.4	39.1	150			
Endrin	0.40	0.050	0.5000	0	80.0	48.4	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **LCS-9389** SampType: **LCS** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW** Batch ID: **9389** RunNo: **13502**
Prep Date: **9/19/2013** Analysis Date: **9/20/2013** SeqNo: **384231** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin aldehyde	0.39	0.050	0.5000	0	77.6	43.6	145			
gamma-BHC	0.38	0.050	0.5000	0	76.0	43.6	138			
Heptachlor	0.37	0.050	0.5000	0	74.4	43.3	137			
Heptachlor epoxide	0.37	0.050	0.5000	0	74.4	46.5	139			
Methoxychlor	0.37	0.050	0.5000	0	74.0	21.7	177			
Surr: Decachlorobiphenyl	1.7		2.500		69.1	52	114			
Surr: Tetrachloro-m-xylene	1.7		2.500		67.1	49.3	113			

Sample ID **1309718-002EMS** SampType: **MS** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **MW-9** Batch ID: **9389** RunNo: **13502**
Prep Date: **9/19/2013** Analysis Date: **9/20/2013** SeqNo: **384282** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.37	0.050	0.5000	0	74.8	63.2	145			
4,4´-DDE	0.38	0.050	0.5000	0	76.8	54	154			
4,4´-DDT	0.39	0.050	0.5000	0	77.8	49.7	145			
Aldrin	0.37	0.050	0.5000	0	73.4	42.4	121			
alpha-BHC	0.36	0.050	0.5000	0	72.2	45.5	115			
beta-BHC	0.36	0.050	0.5000	0	72.6	55.6	126			
delta-BHC	0.39	0.050	0.5000	0	77.2	49.6	130			
Dieldrin	0.37	0.050	0.5000	0	73.6	42.7	136			
Endosulfan I	0.37	0.050	0.5000	0	73.4	49.8	136			
Endosulfan II	0.37	0.050	0.5000	0	73.8	47.9	144			
Endosulfan sulfate	0.36	0.050	0.5000	0	71.6	53.2	143			
Endrin	0.39	0.050	0.5000	0	77.8	55.9	146			
Endrin aldehyde	0.35	0.050	0.5000	0	69.2	42.2	145			
gamma-BHC	0.37	0.050	0.5000	0	73.6	45.5	120			
Heptachlor	0.36	0.050	0.5000	0	72.2	42.6	123			
Heptachlor epoxide	0.36	0.050	0.5000	0	71.8	44	134			
Methoxychlor	0.37	0.050	0.5000	0	74.4	66	143			
Surr: Decachlorobiphenyl	1.6		2.500		65.9	52	114			
Surr: Tetrachloro-m-xylene	1.6		2.500		64.0	49.3	113			

Sample ID **1309718-002EMSD** SampType: **MSD** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **MW-9** Batch ID: **9389** RunNo: **13502**
Prep Date: **9/19/2013** Analysis Date: **9/20/2013** SeqNo: **384385** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	0.35	0.050	0.5000	0	69.4	63.2	145	7.49	20	
4,4´-DDE	0.36	0.050	0.5000	0	72.2	54	154	6.17	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **1309718-002EMSD** SampType: **MSD** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **MW-9** Batch ID: **9389** RunNo: **13502**
Prep Date: **9/19/2013** Analysis Date: **9/20/2013** SeqNo: **384385** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDT	0.37	0.050	0.5000	0	74.6	49.7	145	4.20	20	
Aldrin	0.35	0.050	0.5000	0	69.4	42.4	121	5.60	20	
alpha-BHC	0.34	0.050	0.5000	0	68.4	45.5	115	5.41	20	
beta-BHC	0.34	0.050	0.5000	0	68.2	55.6	126	6.25	20	
delta-BHC	0.36	0.050	0.5000	0	72.6	49.6	130	6.14	20	
Dieldrin	0.34	0.050	0.5000	0	68.8	42.7	136	6.74	20	
Endosulfan I	0.34	0.050	0.5000	0	68.4	49.8	136	7.05	20	
Endosulfan II	0.34	0.050	0.5000	0	68.8	47.9	144	7.01	20	
Endosulfan sulfate	0.34	0.050	0.5000	0	68.4	53.2	143	4.57	20	
Endrin	0.36	0.050	0.5000	0	72.4	55.9	146	7.19	20	
Endrin aldehyde	0.33	0.050	0.5000	0	65.0	42.2	145	6.26	20	
gamma-BHC	0.35	0.050	0.5000	0	70.4	45.5	120	4.44	20	
Heptachlor	0.34	0.050	0.5000	0	68.6	42.6	123	5.11	20	
Heptachlor epoxide	0.34	0.050	0.5000	0	67.6	44	134	6.03	20	
Methoxychlor	0.35	0.050	0.5000	0	69.4	66	143	6.95	20	
Surr: Decachlorobiphenyl	1.5		2.500		58.9	52	114	0	20	
Surr: Tetrachloro-m-xylene	1.5		2.500		58.9	49.3	113	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **b4**		SampType: **MBLK**			TestCode: **EPA Method 8260B: VOLATILES**						
Client ID: **PBW**		Batch ID: **R13468**			RunNo: **13468**						
Prep Date:		Analysis Date: **9/18/2013**			SeqNo: **383101**		Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	1.0									
Toluene	ND	1.0									
Ethylbenzene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
1,2,4-Trimethylbenzene	ND	1.0									
1,3,5-Trimethylbenzene	ND	1.0									
1,2-Dichloroethane (EDC)	ND	1.0									
1,2-Dibromoethane (EDB)	ND	1.0									
Naphthalene	ND	2.0									
1-Methylnaphthalene	ND	4.0									
2-Methylnaphthalene	ND	4.0									
Acetone	ND	10									
Bromobenzene	ND	1.0									
Bromodichloromethane	ND	1.0									
Bromoform	ND	1.0									
Bromomethane	ND	3.0									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	2.0									
Chloroform	ND	1.0									
Chloromethane	ND	3.0									
2-Chlorotoluene	ND	1.0									
4-Chlorotoluene	ND	1.0									
cis-1,2-DCE	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	2.0									
Dibromochloromethane	ND	1.0									
Dibromomethane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
Dichlorodifluoromethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2-Dichloropropane	ND	1.0									
1,3-Dichloropropane	ND	1.0									
2,2-Dichloropropane	ND	2.0									

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **b4** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R13468** RunNo: **13468**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **383101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.6	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.3	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R13468** RunNo: **13468**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **383103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	106	82.2	124			
Chlorobenzene	19	1.0	20.00	0	94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R13468** RunNo: **13468**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **383103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	119	83.5	155			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		88.9	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

Sample ID **1309718-001ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-5** Batch ID: **R13468** RunNo: **13468**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **383106** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	67.9	137			
Toluene	22	1.0	20.00	0	112	77	127			
Chlorobenzene	19	1.0	20.00	0	96.1	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	66.5	131			
Trichloroethene (TCE)	21	1.0	20.00	0	103	66.3	134			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.8	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.1	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.5	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID **1309718-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MW-5** Batch ID: **R13468** RunNo: **13468**
Prep Date: Analysis Date: **9/18/2013** SeqNo: **383107** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.4	67.9	137	7.58	20	
Toluene	20	1.0	20.00	0	97.8	77	127	13.5	20	
Chlorobenzene	19	1.0	20.00	0	93.8	70	130	2.48	20	
1,1-Dichloroethene	21	1.0	20.00	0	107	66.5	131	8.59	20	
Trichloroethene (TCE)	19	1.0	20.00	0	92.8	66.3	134	9.98	20	
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.0		10.00		89.7	70	130	0	0	
Surr: Dibromofluoromethane	8.4		10.00		83.8	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		96.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID	**mb-9388**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**		
Client ID:	**PBW**	Batch ID:	**9388**	RunNo:	**13491**		
Prep Date:	**9/19/2013**	Analysis Date:	**9/19/2013**	SeqNo:	**383794**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	40								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID	**mb-9388**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**9388**	RunNo:	**13491**				
Prep Date:	**9/19/2013**	Analysis Date:	**9/19/2013**	SeqNo:	**383794**	Units:	**µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2,4,6-Tribromophenol	130		200.0		63.6	41.5	117			
Surr: 2-Fluorobiphenyl	76		100.0		76.4	29.1	112			
Surr: 2-Fluorophenol	150		200.0		73.4	11.9	98.6			
Surr: 4-Terphenyl-d14	87		100.0		87.1	46	111			
Surr: Nitrobenzene-d5	70		100.0		69.8	34.9	112			
Surr: Phenol-d5	140		200.0		68.0	17.5	88.3			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **lcs-9388** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **9388** RunNo: **13491**
Prep Date: **9/19/2013** Analysis Date: **9/19/2013** SeqNo: **383797** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	10	100.0	0	72.8	48	101			
4-Chloro-3-methylphenol	160	10	200.0	0	79.8	47.9	109			
2-Chlorophenol	150	10	200.0	0	74.1	40	105			
1,4-Dichlorobenzene	74	10	100.0	0	73.7	40.8	94.3			
2,4-Dinitrotoluene	63	10	100.0	0	63.2	28.3	131			
N-Nitrosodi-n-propylamine	83	10	100.0	0	82.9	46.2	119			
4-Nitrophenol	44	10	200.0	0	22.2	10.5	67.9			
Pentachlorophenol	81	20	200.0	0	40.7	22.4	81.1			
Phenol	100	10	200.0	0	50.6	21.4	72.9			
Pyrene	81	10	100.0	0	81.2	46.9	109			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.4	43.1	98.4			
Surr: 2,4,6-Tribromophenol	140		200.0		67.9	41.5	117			
Surr: 2-Fluorobiphenyl	77		100.0		77.1	29.1	112			
Surr: 2-Fluorophenol	140		200.0		67.8	11.9	98.6			
Surr: 4-Terphenyl-d14	88		100.0		87.6	46	111			
Surr: Nitrobenzene-d5	79		100.0		79.1	34.9	112			
Surr: Phenol-d5	110		200.0		54.4	17.5	88.3			

Sample ID **1309718-001cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MW-5** Batch ID: **9388** RunNo: **13491**
Prep Date: **9/19/2013** Analysis Date: **9/19/2013** SeqNo: **383806** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	65.6	70	130			S
4-Chloro-3-methylphenol	140	10	200.0	0	68.9	70	130			S
2-Chlorophenol	130	10	200.0	0	65.3	70	130			S
1,4-Dichlorobenzene	67	10	100.0	0	66.5	70	130			S
2,4-Dinitrotoluene	58	10	100.0	0	57.8	70	130			S
N-Nitrosodi-n-propylamine	76	10	100.0	0	76.4	70	130			
4-Nitrophenol	39	10	200.0	0	19.4	70	130			S
Pentachlorophenol	71	20	200.0	11.24	30.0	70	130			S
Phenol	88	10	200.0	0	43.8	70	130			S
Pyrene	76	10	100.0	0	76.4	70	130			
1,2,4-Trichlorobenzene	59	10	100.0	0	58.8	70	130			S
Surr: 2,4,6-Tribromophenol	120		200.0		61.2	41.5	117			
Surr: 2-Fluorobiphenyl	65		100.0		64.8	29.1	112			
Surr: 2-Fluorophenol	100		200.0		51.8	11.9	98.6			
Surr: 4-Terphenyl-d14	74		100.0		74.4	46	111			
Surr: Nitrobenzene-d5	63		100.0		63.4	34.9	112			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **1309718-001cms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MW-5** Batch ID: **9388** RunNo: **13491**
Prep Date: **9/19/2013** Analysis Date: **9/19/2013** SeqNo: **383806** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Phenol-d5	85		200.0		42.6	17.5	88.3			

Sample ID **1309718-001cmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **MW-5** Batch ID: **9388** RunNo: **13491**
Prep Date: **9/19/2013** Analysis Date: **9/19/2013** SeqNo: **383808** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.0	70	130	6.40	20	S
4-Chloro-3-methylphenol	150	10	200.0	0	73.6	70	130	6.64	20	
2-Chlorophenol	140	10	200.0	0	69.0	70	130	5.44	20	S
1,4-Dichlorobenzene	74	10	100.0	0	73.8	70	130	10.3	20	
2,4-Dinitrotoluene	52	10	100.0	0	52.3	70	130	9.99	20	S
N-Nitrosodi-n-propylamine	84	10	100.0	0	84.1	70	130	9.60	20	
4-Nitrophenol	31	10	200.0	0	15.5	70	130	22.5	20	SR
Pentachlorophenol	75	20	200.0	11.24	31.9	70	130	5.17	20	S
Phenol	82	10	200.0	0	40.8	70	130	7.06	20	S
Pyrene	80	10	100.0	0	79.9	70	130	4.53	20	
1,2,4-Trichlorobenzene	64	10	100.0	0	64.5	70	130	9.31	20	S
Surr: 2,4,6-Tribromophenol	130		200.0		65.0	41.5	117	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		69.5	29.1	112	0	0	
Surr: 2-Fluorophenol	100		200.0		51.9	11.9	98.6	0	0	
Surr: 4-Terphenyl-d14	72		100.0		72.0	46	111	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.3	34.9	112	0	0	
Surr: Phenol-d5	83		200.0		41.6	17.5	88.3	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **MB-9484** SampType: **MBLK** TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW** Batch ID: **9484** RunNo: **13638**
Prep Date: **9/25/2013** Analysis Date: **9/26/2013** SeqNo: **388408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-9484** SampType: **LCS** TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW** Batch ID: **9484** RunNo: **13638**
Prep Date: **9/25/2013** Analysis Date: **9/26/2013** SeqNo: **388411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	100	80	120			

Sample ID **1309718-001DMS** SampType: **MS** TestCode: **EPA Method 7470: Mercury**
Client ID: **MW-5** Batch ID: **9484** RunNo: **13638**
Prep Date: **9/25/2013** Analysis Date: **9/26/2013** SeqNo: **388414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	105	75	125			

Sample ID **1309718-001DMSD** SampType: **MSD** TestCode: **EPA Method 7470: Mercury**
Client ID: **MW-5** Batch ID: **9484** RunNo: **13638**
Prep Date: **9/25/2013** Analysis Date: **9/26/2013** SeqNo: **388415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	105	75	125	0.498	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **MB-9432** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **9432** RunNo: **13554**
Prep Date: **9/23/2013** Analysis Date: **9/24/2013** SeqNo: **385594** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Iron	ND	0.050								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID **LCS-9432** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **9432** RunNo: **13554**
Prep Date: **9/23/2013** Analysis Date: **9/24/2013** SeqNo: **385595** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.52	0.020	0.5000	0	104	80	120			
Barium	0.50	0.020	0.5000	0	101	80	120			
Cadmium	0.50	0.0020	0.5000	0	101	80	120			
Chromium	0.50	0.0060	0.5000	0	99.5	80	120			
Iron	0.51	0.050	0.5000	0	103	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Manganese	0.49	0.0020	0.5000	0	98.8	80	120			
Selenium	0.49	0.050	0.5000	0	98.6	80	120			
Silver	0.090	0.0050	0.1000	0	90.3	80	120			

Sample ID **MB-9432** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387232** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Sodium	ND	1.0								

Sample ID **LCS-9432** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **LCS-9432** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	51	1.0	50.00	0	103	80	120			
Sodium	51	1.0	50.00	0	102	80	120			

Sample ID **1309718-006DMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-1** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387286** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	97.2	75	125			
Barium	0.62	0.020	0.5000	0.1655	90.0	75	125			
Cadmium	0.48	0.0020	0.5000	0	95.4	75	125			
Chromium	0.46	0.0060	0.5000	0	91.4	75	125			
Iron	0.62	0.050	0.5000	0.1635	92.1	75	125			
Lead	0.47	0.0050	0.5000	0.003730	92.3	75	125			
Magnesium	76	1.0	50.00	30.73	89.8	75	125			
Selenium	0.46	0.050	0.5000	0	92.0	75	125			
Silver	0.088	0.0050	0.1000	0	87.7	75	125			

Sample ID **1309718-006DMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-1** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387287** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	75	125	3.33	20	
Barium	0.62	0.020	0.5000	0.1655	91.7	75	125	1.37	20	
Cadmium	0.48	0.0020	0.5000	0	96.6	75	125	1.21	20	
Chromium	0.47	0.0060	0.5000	0	93.1	75	125	1.93	20	
Iron	0.63	0.050	0.5000	0.1635	93.2	75	125	0.807	20	
Lead	0.47	0.0050	0.5000	0.003730	93.2	75	125	0.933	20	
Magnesium	76	1.0	50.00	30.73	91.1	75	125	0.872	20	
Selenium	0.46	0.050	0.5000	0	92.5	75	125	0.561	20	
Silver	0.090	0.0050	0.1000	0	89.6	75	125	2.21	20	

Sample ID **1309718-006DMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-1** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	220	5.0	50.00	173.7	96.3	75	125			
Manganese	1.1	0.010	0.5000	0.6112	100	75	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID **1309718-006DMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-1** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	240	5.0	50.00	188.5	95.7	75	125			

Sample ID **1309718-006DMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-1** Batch ID: **9432** RunNo: **13601**
Prep Date: **9/23/2013** Analysis Date: **9/25/2013** SeqNo: **387290** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	210	5.0	50.00	173.7	77.3	75	125	4.36	20	
Manganese	1.1	0.010	0.5000	0.6112	92.7	75	125	3.36	20	
Sodium	230	5.0	50.00	188.5	76.5	75	125	4.15	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1309718**
07-Oct-13

Client: Terracon
Project: Former T or C Landfill

Sample ID	**mb-1**	SampType:	**mblk**	TestCode:	**SM2320B: Alkalinity**						
Client ID:	**PBW**	Batch ID:	**R13449**	RunNo:	**13449**						
Prep Date:		Analysis Date:	**9/17/2013**	SeqNo:	**382670**	Units:	**mg/L CaCO3**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		ND	20								

Sample ID	**lcs-1**	SampType:	**lcs**	TestCode:	**SM2320B: Alkalinity**						
Client ID:	**LCSW**	Batch ID:	**R13449**	RunNo:	**13449**						
Prep Date:		Analysis Date:	**9/17/2013**	SeqNo:	**382671**	Units:	**mg/L CaCO3**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		80	20	80.00	0	101	90	110			

Sample ID	**mb-2**	SampType:	**mblk**	TestCode:	**SM2320B: Alkalinity**						
Client ID:	**PBW**	Batch ID:	**R13449**	RunNo:	**13449**						
Prep Date:		Analysis Date:	**9/17/2013**	SeqNo:	**382675**	Units:	**mg/L CaCO3**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		ND	20								

Sample ID	**lcs-2**	SampType:	**lcs**	TestCode:	**SM2320B: Alkalinity**						
Client ID:	**LCSW**	Batch ID:	**R13449**	RunNo:	**13449**						
Prep Date:		Analysis Date:	**9/17/2013**	SeqNo:	**382676**	Units:	**mg/L CaCO3**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)		80	20	80.00	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-LC Work Order Number: 1309718 RcptNo: 1

Received by/date: AF 09/17/13

Logged By: **Michelle Garcia** 9/17/2013 3:40:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 9/17/2013 3:50:41 PM Michelle Garcia

Reviewed By: 09/18/13

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
Adjusted? NO
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	12.1	Good	Not Present			

Chain-of-Custody Record

Client: Terracon

Mailing Address: 1640 Hickory Loop Ste 105
Las Cruces, NM 88005

Phone #: 575. 527.1700

email or Fax#: 527.1092

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Forum Tom C Landfill

Project #: 6813700 80

Project Manager: Williams

Sampler: JKW

On Ice: ☒ Yes ☐ No

Sample Temperature: 12.1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1309718	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA ~~8 Metals~~ 10 metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8151 Herbicides				Air Bubbles (Y or N)
9-17-13	0900	water	MW-5	various	various	-001							X	X	X	X	X	X				
	1010		MW-9			-002																
	1040		MW-8			-003																
	1110		MW-3 R			-004																
	1145		MW-10			-005																
	1225		MW-1			-006																
			Trip Blank			-007										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/17/13	1300	[signature] Terracon	[signature]	9/17/13	1300
9/17/13	1540	[signature]	[signature]	9/17/13	1540

Remarks:
Metals - see email from John Tanaka - BASCOR for full metals list

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

December 2013 Groundwater and Soil Gas Sampling Report

Former Truth of Consequences Landfill

Country Club Road

Elephant Butte, Sierra County, NM

Revised January 13, 2014

Terracon Project No. 68137008

Prepared for:

BASCOR Environmental, Inc.

Mesquite, Nevada

Prepared by:

Terracon Consultants, Inc.

Las Cruces, New Mexico

Offices Nationwide
Employee-Owned
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Terracon
Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

Terracon

January 13, 2014

BASCOR Environmental, Inc.
952 Blazing Star Crossing Street
Mesquite, Nevada 89034

Attn: Mr. Samuel J. Senn, P.E., Project Manager
M: (847) 812 0409
E: sam.senn@bascor.com

Re: December 2013 Groundwater and Soil Gas Sampling Event
Former Truth or Consequences Landfill
Country Club Road
Elephant Butte, Sierra County, NM
Terracon Project No. 68137008

Dear Mr. Senn:

Terracon Consultants, Inc. (Terracon) is pleased to submit this December 2013 Groundwater and Soil Gas Sampling Report for the above-referenced site. This quarterly sampling event was performed in accordance with Terracon Proposal No. P6813-080E Supplemental Change Order, dated November 1, 2013.

We appreciate the opportunity to perform these services for BASCOR Environmental, Inc. Please contact Kyle Williams at (575) 527-1700 or John Sallman at (913) 577-0403 if you have questions regarding the information provided in the report.

Sincerely,
Terracon

Prepared By:

J. Kyle Williams
Project Manager

Reviewed By:

/for

John B. Sallman, P.G.
Senior Principal

Enclosure

TABLE OF CONTENTS

Page No.

1.0 INTRODUCTION 1

1.1 Site Description 1
1.2 Scope of Work 1
1.3 Standard of Care 2
1.4 Additional Scope Limitations 2
1.5 Reliance 3

2.0 FIELD ACTIVITIES 3

2.1 Groundwater Level Measurement 3
2.2 Groundwater Sampling 4
2.3 Groundwater Potentiometric Surface 4
2.4 Soil Gas Screening 5
2.5 Soil Gas Sampling 5

3.0 LABORATORY ANALYTICAL METHODS 6

3.1 Groundwater Samples 6
3.2 Soil Gas Samples 6

4.0 DATA EVALUATION 6

4.1 Groundwater Samples 6
4.2 Soil Gas Samples 7

5.0 FINDINGS 8

LIST OF APPENDICES

Appendix A: Exhibit 1 – Topographic Map
Exhibit 2 – Site Plan
Exhibit 3 – Potentiometric Surface Map, December 5, 2013

Appendix B: Laboratory Analytical Reports

DECEMBER 2013 GROUNDWATER AND SOIL GAS SAMPLING EVENT

FORMER TRUTH OR CONSEQUENCES LANDFILL
COUNTRY CLUB ROAD
ELEPHANT BUTTE, SIERRA COUNTY, NEW MEXICO
Terracon Project No. 68137008
Revised January 13, 2014

1.0 INTRODUCTION

1.1 Site Description

Site Name	Former Truth or Consequences Landfill
Site Location/Address	Country Club Road, Elephant Butte, New Mexico
General Site Description	The property is a 30.12-acre site located in Lot 3, Section 22, Township 3 South, Range 4 West, NMPM. The western portion of the property includes the former Truth or Consequences Landfill.

Appendix A includes three figures; Exhibit 1 is topographic map depicting the location of the site; Exhibit 2 is a site plan depicting the site boundaries, pertinent site features, and sampling locations, and; Exhibit 3 is a potentiometric surface map showing the orientation of the uppermost groundwater surface as measured during the December 5, 2013 sampling event. Appendix B includes the laboratory analytical report with chain-of-custody documents.

1.2 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted groundwater sampling of six monitoring wells, soil gas screening of four vapor points, and soil gas sampling of vapor points exhibiting organic vapor concentrations in excess of 10 parts per million (ppm) at the Former Truth or Consequences Landfill on Country Club Road in Elephant Butte, New Mexico (site). Terracon's quarterly groundwater and soil gas sampling event was performed in accordance with Terracon Proposal No. P6813-080E Supplemental Change Order as approved by BASCOR Environmental, Inc. on November 1, 2013.

The objectives of this groundwater and soil gas sampling event include the following:

- Measure the depth to groundwater in the ten existing monitoring wells at the landfill, including MW-1, MW-2R, MW-3R, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10. Collect groundwater samples from six monitoring wells (MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10) for laboratory analyses.

- Submit groundwater samples to Hall Environmental Analysis Laboratory of Albuquerque, NM for analysis of volatile organic compounds (VOC), semi-volatile organic compounds (SVOCs), RCRA metals (including arsenic, barium, cadmium, chromium, mercury, lead, selenium and silver, plus iron and manganese), Major ions (including alkalinity, calcium, chloride, magnesium, sodium and sulfate), nitrate-nitrogen (NO_3-N), pesticides and herbicides (above relevant laboratory reporting limits) in the groundwater as a result of potential leaching from the landfill waste.

- Perform photoionization detector (PID) screening of four existing vapor points including VP-1, VP-2, VP-3 and VP-4. Collect soil gas samples from vapor points that have measurable organic vapors in excess of 10 parts per million (ppm).

- Submit soil gas samples to Hall Environmental Analysis Laboratory of Albuquerque, NM for analyses of volatile organic compounds (VOC) and methane (above relevant laboratory reporting limits) in the soil gas as a result of potential gas generation from the landfill waste.

- Develop a summary report detailing field activities, including a potentiometric map of groundwater beneath the site, and analytical results from the samples.

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally-accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as set forth in our proposal and were not intended to be in strict conformance with ASTM E1903-11.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this quarterly sampling event. Subsurface conditions may vary from those encountered at specific borings or wells or during

other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.5 Reliance

This report has been prepared for the exclusive use of BASCOR Environmental, Inc. the Bureau of Land Management; and the City of Truth or Consequences, NM. Any of the named entities above can convey this report to an affiliate, related entity, subsidiary, lender, title insurer, regulatory or municipal agency, or the current property owner(s) and their agents, but use or reliance by any other party is prohibited without the written authorization of BASCOR Environmental, Inc. and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, quarterly sampling event report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

Terracon's field activities were conducted on December 5, 2013, by Mr. Kyle Williams, geologist and a Terracon environmental scientist. Field activities began with measurement of the groundwater level in ten existing monitoring wells at the site. Groundwater samples were collected from six of the monitoring wells for the laboratory analyses detailed in Section 3.

2.1 Groundwater Level Measurement

Depths to groundwater in the ten existing monitoring wells were measured using an electronic water level meter. The depths to groundwater in the wells as measured on December 5, 2013 were referenced to the established measuring point (MP) of each well. Established MPs were the northernmost portion of the top of the 2-inch diameter well casing at each well. These measurements were used to develop a potentiometric surface map of the uppermost groundwater beneath the landfill. The water levels and total depths (TD) of each well as measured on December 5, 2013 are as follows:

Measurements Collected December 5, 2013

Monitoring Well	Depth to Groundwater (feet below MP)	Total Depth of Well (feet below MP)
MW-1	22.87	27.68
MW-2R	24.28	26.35
MW-3R	11.30	22.05
MW-4	23.03	25.00

Monitoring Well	Depth to Groundwater (feet below MP)	Total Depth of Well (feet below MP)
MW-5	19.37	24.05
MW-6	Dry	25.00
MW-7	26.00	26.31
MW-8	19.99	30.20
MW-9	22.06	30.19
MW-10	11.00	24.20

2.2 Groundwater Sampling

Prior to groundwater sample collection, each well was purged with a new disposable bailer and rope, or low-flow sampling equipment using new dedicated tubing. Each monitoring well was purged of a minimum of three well casing volumes of groundwater, until the monitoring well formation fails to recharge, (i.e., well runs dry) or until consistent values (i.e., less than 10% variance between consecutive readings) were obtained for pH, temperature and conductivity.

Subsequent to sufficient recharge, one groundwater sample was collected from each monitoring well utilizing a new, disposable, polypropylene bailer or low flow sampling equipment using new, clean tubing. The groundwater sample fraction submitted for RCRA metals analyses at each monitoring well was field filtered using new, dedicated tubing and a new in-line filter (0.45 micron) connected to the peristaltic pump. Groundwater samples were collected into laboratory-prepared sample bottles (glass and plastic) containing the appropriate preservative, labeled, logged on the chain-of-custody (COC) form, and placed on ice in sample coolers. The sample coolers were secured with a custody seal and transported to Hall Environmental Analysis Laboratory on the day of collection.

Monitoring wells MW-1, MW-3R, MW-8, MW-9 and MW-10 were purged and sampled using new, dedicated bailers and rope. Monitoring well MW-5 was purged and sampled using new, dedicated tubing connected to a peristaltic pump.

2.3 Groundwater Potentiometric Surface

The groundwater flow direction and the depth to shallow groundwater will likely vary depending upon seasonal variations in rainfall and depth to the soil/bedrock interface. The groundwater flow direction was determined for the date of groundwater sampling by first measuring the depth to groundwater below the MP in each monitoring well at the start of well purging activities, and calculating the groundwater elevation using the well survey data, below. Elevations of the measuring point and groundwater level in each well as measured on December 5, 2013 are as follows:

Monitoring Well and Groundwater Elevation Data

Monitoring Well	Measuring Point Elevation	Depth to Groundwater In feet below MP	Groundwater Elevation
MW-1	4,284.87	22.87	4,262.00
MW-2R	4,285.74	24.28	4,261.46
MW-3R	4,274.59	11.30	4,263.29
MW-4	4,284.26	23.03	4,261.23
MW-5	4,286.02	19.37	4,266.65
MW-6	4,288.17	Dry	--
MW-7	4,285.98	26.00	4,259.98
MW-8	4,283.34	19.99	4,263.35
MW-9	4,284.37	22.06	4,262.31
MW-10	4,272.87	11.00	4,261.87

The calculated elevations of the groundwater surface as measured at the start of groundwater sampling activities show a relative difference in elevation of 4.65 feet between MW-5 and MW-1. The elevation of groundwater in these monitoring wells was plotted and groundwater contours were developed as shown on Exhibit 3, Potentiometric Surface Map provided in Appendix A. On December 5, 2013 the uppermost groundwater flow direction was approximately S 35° E at an approximate gradient of 0.009 (feet/feet).

2.4 Soil Gas Screening

Terracon performed soil gas screening at each of the four vapor points on December 5, 2013. Soil gas screening was performed using a PID connected to the vapor point valve. PID readings were allowed to stabilize for a minimum of one minute, and average and peak organic vapor measurements in ppm were collected. PID measurements for the December 5, 2013 soil gas sampling event are as follows:

Vapor Point PID Readings

Vapor Point	December 5, 2013	
	Average (ppm)	Peak (ppm)
VP-1	0.0	0.0
VP-2	0.7	3.4
VP-3	72.4	119
VP-4	34.6	66.9

2.5 Soil Gas Sampling

Soil gas samples were collected from vapor points that exhibited organic vapor concentrations in excess of 10 ppm. Based on the results of the PID screening, soil gas samples were collected from VP-3 and VP-4. Soil gas samples were collected in laboratory-provided Tedlar bags (two Tedlar bags per sample). Soil gas samples were placed in a black plastic bag, placed on ice in a sample cooler, and transported to the analytical laboratory, Hall Environmental Analysis Laboratory of Albuquerque, NM, on the day of collection.

3.0 LABORATORY ANALYTICAL METHODS

3.1 Groundwater Samples

Groundwater samples collected from monitoring wells MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10 were analyzed for VOCs, SVOCs, RCRA 8 metals plus iron and manganese, major ions, NO_3-N, pesticides and herbicides using the following methods:

Groundwater Analytical Methods

Analysis	Sample Type	Laboratory Method
VOCs	Water	SW-846 Method 8260B
SVOCs	Water	SW-846 Method 8270C
RCRA metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se) plus Calcium, Iron, Magnesium, Manganese and Sodium	Water	SW-846 Method 6010B/7470
Chloride, Sulfate, NO_3-N	Water	SW-846 Method 300.0
Alkalinity	Water	SW-846 Method 2320B
Pesticides	Water	SW-846 Method 8081A
Herbicides	Water	SW-846 Method 8151A

The executed chain-of-custody forms and laboratory data packages are provided in Appendix C.

3.2 Soil Gas Samples

Soil gas samples collected from vapor points VP-3 and VP-4 were analyzed for VOCs and methane using the following methods:

Soil Gas Analytical Methods

Analysis	Sample Type	Laboratory Method
VOCs	Soil gas	SW-846 Method 8260B
Methane	Soil gas	EPA3C/ASTMD1946 - Fixed Gases

The executed chain-of-custody forms and laboratory data packages are provided in Appendix C.

4.0 DATA EVALUATION

4.1 Groundwater Samples

The groundwater samples collected from monitoring wells MW-1, MW-3R, MW-5, MW-8, MW-9 and MW-10 did not exhibit VOC, SVOC, pesticide or herbicide concentrations above the laboratory reporting limits. Groundwater samples collected from the monitoring wells during this

sampling event did not exhibit the RCRA metals arsenic, cadmium, chromium, lead, mercury, selenium and silver above the relevant laboratory reporting limits.

Constituents at concentrations above relevant laboratory reporting limits are summarized below. These constituents are compared with their respective NMED regulatory limit, in units of milligrams per liter (mg/L). Regulatory limits for these constituents are found in *20.6.2.3103 NMAC, STANDARDS FOR GROUND WATER OF 10,000 mg/L TDS CONCENTRATION OR LESS, Part A. Human Health Standards* and *Part B. Other Standards for Domestic Water Supply* (for iron and manganese). Detected constituents which exceed the applicable standard are shown in bold font.

Summary of Detections in Groundwater Samples

Analyte	NMED Standard	Units	MW-1	MW-3R	MW-5	MW-8	MW-9	MW-10
Detected RCRA Metals								
Barium	1.0	mg/L	0.11	0.038	0.056	0.086	0.071	0.029
Iron	1.0	mg/L	ND	ND	ND	ND	0.99	ND
Manganese	0.2	mg/L	0.15	**0.29**	ND	**0.72**	**1.7**	0.057
Anions and General Chemistry								
Nitrate	10.0	mg/L	9.9	1.4	2.1	5.3	ND	0.37
Chloride	250.0	mg/L	**760**	**270**	210	**840**	**330**	**320**
Sulfate	600.0	mg/L	170	200	130	230	140	220
Calcium	NE	mg/L	270	140	110	320	150	90
Magnesium	NE	mg/L	51	20	9.5	63	42	22
Sodium	NE	mg/L	300	230	170	270	150	270
Alkalinity	NE	mg/L	310	330	210	280	330	280
Bicarbonate Alkalinity	NE	mg/L	310	330	210	280	330	280

NE – Standard not established.
ND – Not detected at stated reporting limit. See laboratory report for individual reporting limits.

The complete laboratory analytical report is provided as Appendix B.

4.2 Soil Gas Samples

The soil gas samples collected on December 5, 2013 from VP-3 and VP-4 were analyzed for VOCs and methane by Hall Environmental Analysis Laboratory of Albuquerque, NM. The VOC compound dichlorodifluoromethane was detected in the VP-3 and VP-4 samples above laboratory reporting limits at concentrations of 0.43 micrograms per liter (ug/L) and 0.65 ug/L, respectively. The EPA Region 6 residential screening level for dichlorodifluoromethane is 10 micrograms per cubic meter (ug/m^3). The reported concentrations of dichlorodifluoromethane in VP-3 and VP-4 when converted to units of ug/m^3, are 430 ug/m^3 and 650 ug/m^3, respectively. The reported results from VP-3 and VP-4 exceed the EPA Region 6 residential screening levels for dichlorodifluoromethane.

The VOC compound trichlorofluoromethane was detected in the VP-3 and VP-4 samples above laboratory reporting limits at a concentration of 0.17 ug/L and 0.12 ug/L, respectively. The EPA Region 6 residential screening level for trichlorofluoromethane is 73 ug/m^3. The reported concentrations of trichlorofluoromethane in VP-3 and VP-4 when converted to units of ug/m^3, are 170 ug/m^3 and 120 ug/m^3, respectively. The reported results from VP-3 and VP-4 exceed the EPA Region 6 residential screening levels for trichlorofluoromethane. Methane was not detected in the December 5, 2013 samples collected from VP-3 and VP-4 above the laboratory reporting limit.

Turtleback Mountain Resort has installed a driving range over the former landfill. An irrigation system is installed at the driving range, and the range is watered regularly. Dichlorofluoromethane and trichlorofluoromethane are commonly found in soil gas in areas that are irrigated using water treated with chlorine and fluorine for potable uses.

5.0 FINDINGS

The findings of this quarterly sampling event are as follows:

- On December 5, 2013 the uppermost groundwater flow direction was approximately S 35° E at an approximate gradient of 0.009 (feet/feet).

- Based on review of the analytical results from groundwater samples collected during this sampling event, groundwater at the site appears to contain chloride at concentrations exceeding applicable NMED Human Health Standard of 250 mg/L with the exception of the upgradient monitoring well MW-5. Monitoring wells MW-3R, MW-8 and MW-9 contained manganese in excess of the NMED Domestic Water Standard of 0.2 mg/L.

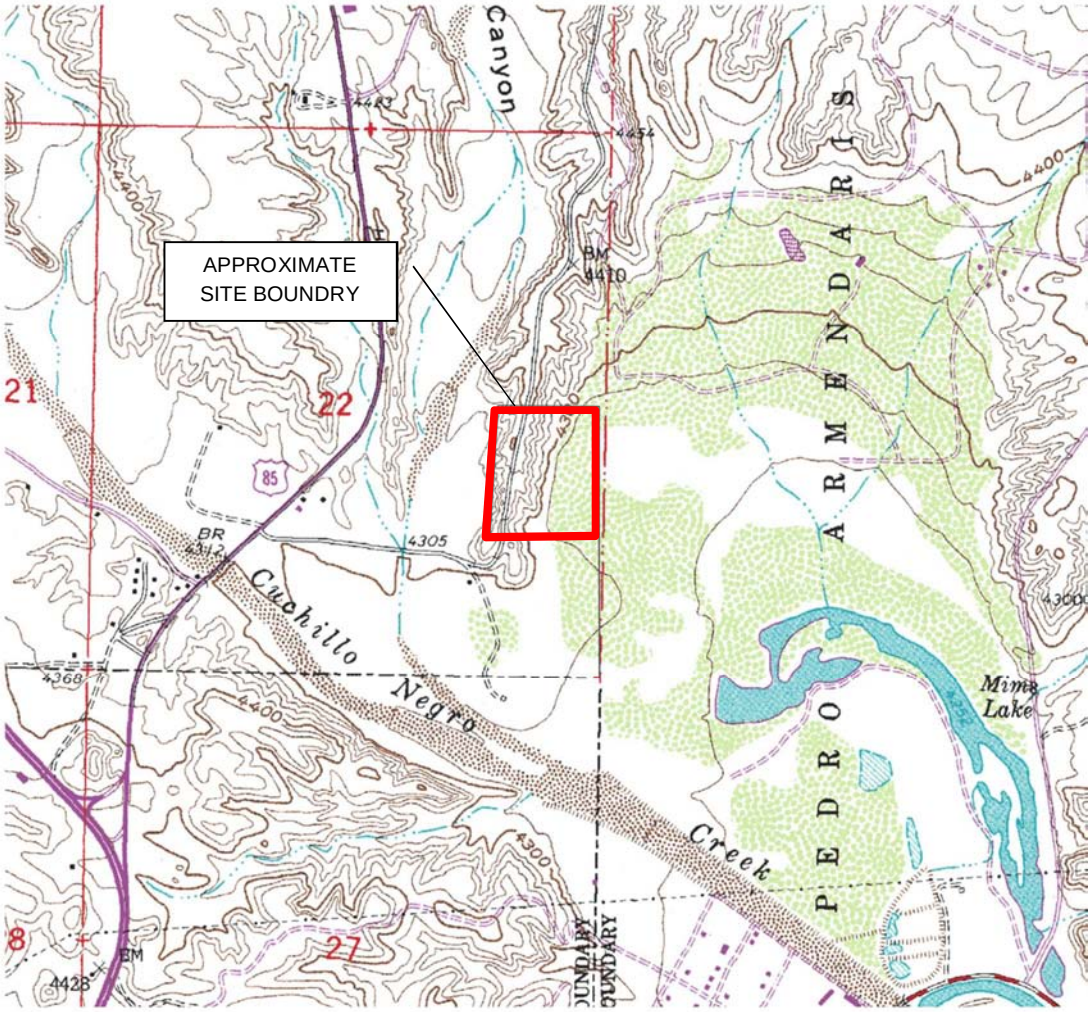
- Based on review of the analytical results from soil gas samples collected during this sampling event, soil gas appears to contain dichlorodifluoromethane and trichlorofluoromethane at concentrations exceeding applicable EPA Region 6 residential screening levels of 10 ug/m^3 and 73 ug/m^3, respectively.

- If soils or groundwater located on the site are to be disturbed during future excavations or construction activities, proper procedures should be followed with respect to worker health and safety; and any affected soil or groundwater encountered should be properly characterized, treated and/or disposed in accordance with applicable local, state or federal regulations.

- If the monitoring wells installed during this investigation are not expected to be used in the future, they should by plugged and abandoned in accordance with state regulations and guidance.

APPENDIX A

Exhibit 1 – Topographic Map
Exhibit 2 – Site Plan
Exhibit 3 – Potentiometric Surface Map



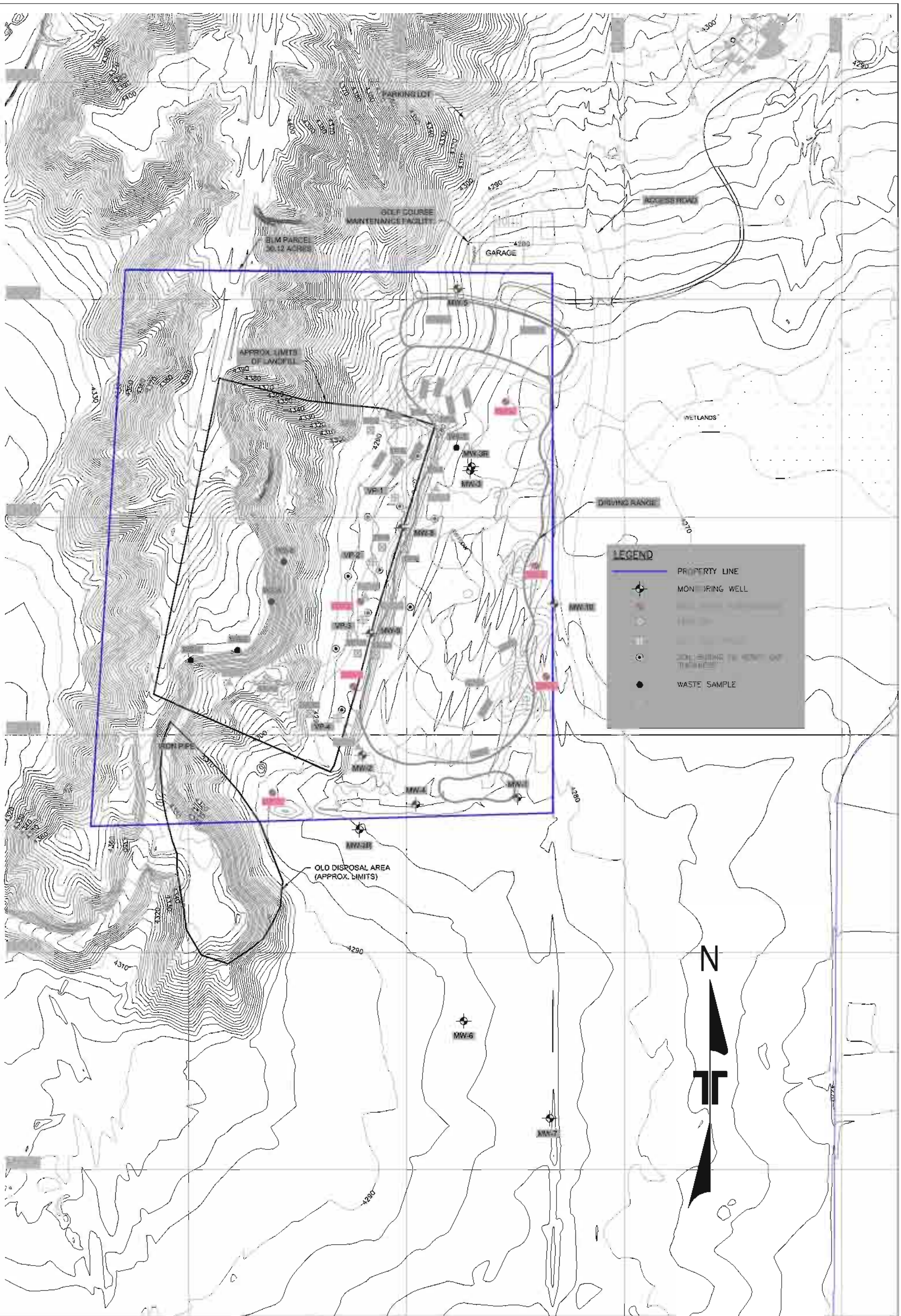
N

USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP

ELEPHANT BUTTE, NEW MEXICO, 1958

(QUADRANGLES)

Project Mgr	JKW	Project No	68137008	Terracon	TOPOGRAPHIC MAP	EXHIBIT
Approved by	JBS	Scale	1" = 2000'		Former Truth of Consequences Landfill	1
Checked by	JBS	Date	07/15/13	1640 Hickory Loop, Suite 105 Las Cruces, NM 88005	Country Club Road	
Drawn by	JKW	File No.	Exhibit 1	Ph: 575-527-1700 Fax: 575-527-1092	Elephant Butte, NM	



NOTE: BASE MAP AND LOCATIONS OF SITE FACILITIES PROVIDED BY BASCOR ENVIRONMENTAL INC.

DIAGRAM IS INTENDED FOR GENERAL USE ONLY AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr	JKW
Checked By	JBS
Approved By	JBS
Drawn By	JKW
Scale	1"=200'
Date	12/12/13
Project No	68137008
File Name	

Terracon
Consulting Engineers and Scientists
1640 Hickory Loop, Suite 105 Las Cruces, NM 88005
(575) 527-1700 (575) 527-1092

SITE PLAN

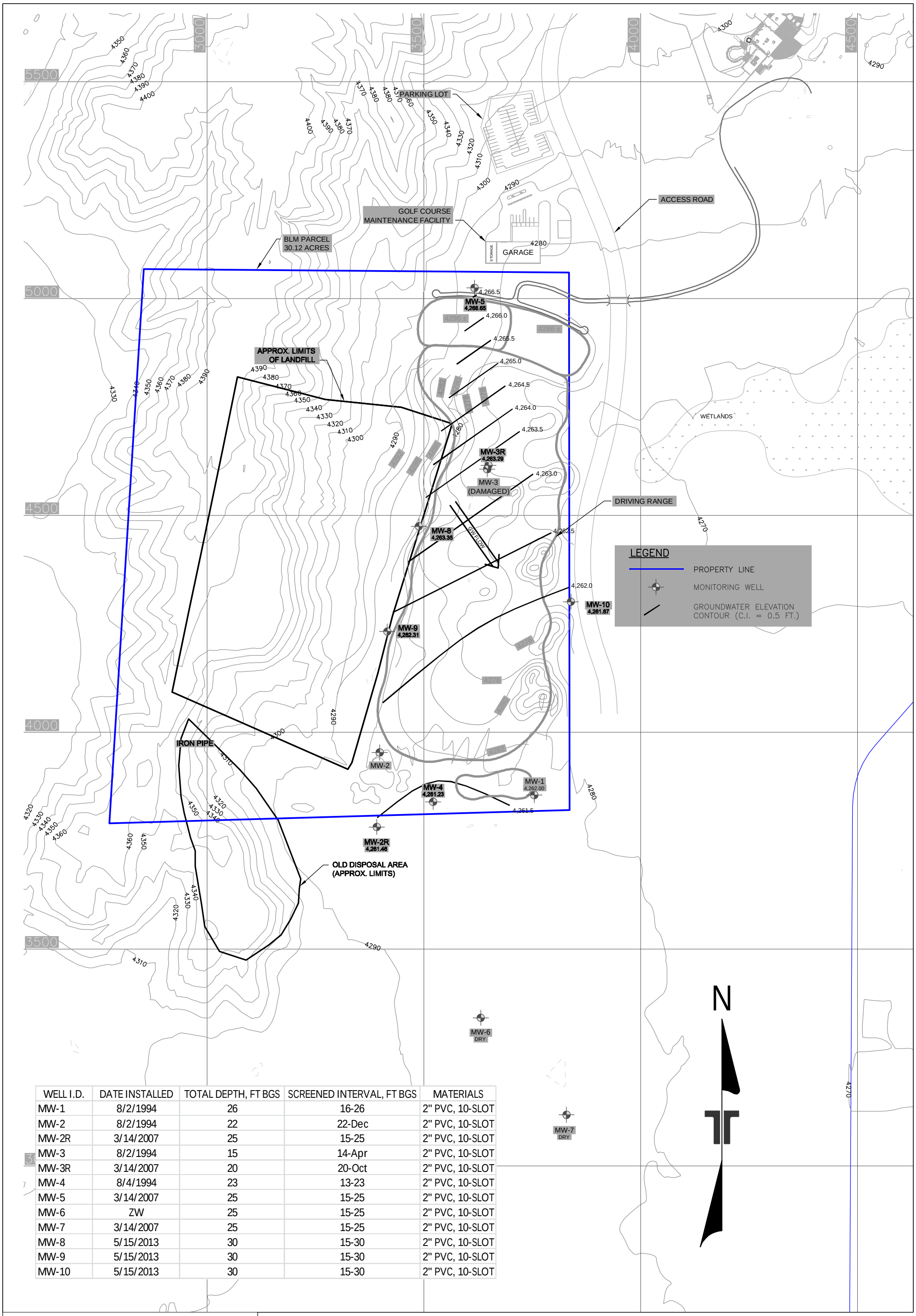
BASCOR Environmental, Inc.

FORMER TRUTH OR CONSEQUENCES LANDFILL

Country Club Road
Elephant Butte, NM

EXHIBIT

2



WELL I.D.	DATE INSTALLED	TOTAL DEPTH, FT BGS	SCREENED INTERVAL, FT BGS	MATERIALS
MW-1	8/2/1994	26	16-26	2" PVC, 10-SLOT
MW-2	8/2/1994	22	22-Dec	2" PVC, 10-SLOT
MW-2R	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-3	8/2/1994	15	14-Apr	2" PVC, 10-SLOT
MW-3R	3/14/2007	20	20-Oct	2" PVC, 10-SLOT
MW-4	8/4/1994	23	13-23	2" PVC, 10-SLOT
MW-5	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-6	ZW	25	15-25	2" PVC, 10-SLOT
MW-7	3/14/2007	25	15-25	2" PVC, 10-SLOT
MW-8	5/15/2013	30	15-30	2" PVC, 10-SLOT
MW-9	5/15/2013	30	15-30	2" PVC, 10-SLOT
MW-10	5/15/2013	30	15-30	2" PVC, 10-SLOT

DIAGRAM IS INTENDED FOR GENERAL USE ONLY, AND IS NOT FOR CONSTRUCTION PURPOSES. LOCATIONS ARE APPROXIMATE.

Project Mngr:	JKW
Checked By:	JBS
Approved By:	JBS
Drawn By:	JKW
Scale:	1"=200'
Date:	12/12/13
Project No:	68137008
File Name:	

Terracon
Consulting Engineers and Scientists
1640 Hickory Loop, Suite 105 Las Cruces, NM 88005
(575) 527-1700 (575) 527-1092

GROUNDWATER CONTOUR MAP, DECEMBER 5, 2013
BASCOR Environmental, Inc.
FORMER TRUTH OR CONSEQUENCES LANDFILL
Country Club Road
Elephant Butte, NM

EXHIBIT
3

APPENDIX B

Laboratory Analytical Report

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 30, 2013

Kyle Williams

Terracon
1630 Hickory Loop Ste. H
Las Cruces, NM 88005
TEL: (575) 527-1700
FAX (575) 527-1092

RE: T or C LF OrderNo.: 1312246

Dear Kyle Williams:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/5/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1312246**
Date Reported: **12/30/2013**

CLIENT: Terracon
Client Sample ID: MW-5
Project: T or C LF
Collection Date: 12/5/2013 9:40:00 AM
Lab ID: 1312246-001
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
4,4´-DDE	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
4,4´-DDT	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Aldrin	ND	10		µg/L	1	12/9/2013 7:34:07 PM	10675
alpha-BHC	ND	0.10		µg/L	1	12/9/2013 7:34:07 PM	10675
beta-BHC	ND	0.10		µg/L	1	12/9/2013 7:34:07 PM	10675
Chlordane	ND	5.0		µg/L	1	12/9/2013 7:34:07 PM	10675
delta-BHC	ND	0.10		µg/L	1	12/9/2013 7:34:07 PM	10675
Dieldrin	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Endosulfan I	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Endosulfan II	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Endosulfan sulfate	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Endrin	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Endrin aldehyde	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
gamma-BHC	ND	0.10		µg/L	1	12/9/2013 7:34:07 PM	10675
Heptachlor	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Heptachlor epoxide	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Methoxychlor	ND	10		µg/L	1	12/9/2013 7:34:07 PM	10675
Toxaphene	ND	1.0		µg/L	1	12/9/2013 7:34:07 PM	10675
Surr: Decachlorobiphenyl	79.5	52-114		%REC	1	12/9/2013 7:34:07 PM	10675
Surr: Tetrachloro-m-xylene	92.2	49.3-113		%REC	1	12/9/2013 7:34:07 PM	10675
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	210	10		mg/L	20	12/6/2013 5:10:19 PM	R15322
Nitrogen, Nitrate (As N)	2.1	0.10		mg/L	1	12/6/2013 4:57:55 PM	R15322
Sulfate	130	10		mg/L	20	12/6/2013 5:10:19 PM	R15322
EPA METHOD 7470: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	12/7/2013 12:54:24 PM	10686
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Arsenic	ND	0.020		mg/L	1	12/9/2013 10:02:59 AM	10692
Barium	0.056	0.020		mg/L	1	12/9/2013 10:02:59 AM	10692
Cadmium	ND	0.0020		mg/L	1	12/9/2013 10:02:59 AM	10692
Calcium	110	5.0		mg/L	5	12/9/2013 11:20:10 AM	10692
Chromium	ND	0.0060		mg/L	1	12/9/2013 10:02:59 AM	10692
Iron	ND	0.050		mg/L	1	12/9/2013 10:02:59 AM	10692
Lead	ND	0.0050		mg/L	1	12/9/2013 10:02:59 AM	10692
Magnesium	9.5	1.0		mg/L	1	12/9/2013 10:02:59 AM	10692
Manganese	ND	0.0020		mg/L	1	12/9/2013 10:02:59 AM	10692
Selenium	ND	0.050		mg/L	1	12/9/2013 10:02:59 AM	10692

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: T or C LF
Collection Date: 12/5/2013 9:40:00 AM
Lab ID: 1312246-001
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**	
Silver	ND	0.0050		mg/L	1	12/9/2013 10:02:59 AM	10692
Sodium	170	5.0		mg/L	5	12/9/2013 11:20:10 AM	10692
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Acenaphthylene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Aniline	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Anthracene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Azobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Benz(a)anthracene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Benzo(a)pyrene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Benzo(b)fluoranthene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Benzo(k)fluoranthene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Benzoic acid	ND	40		µg/L	1	12/8/2013 11:17:57 AM	10674
Benzyl alcohol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Butyl benzyl phthalate	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Carbazole	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4-Chloroaniline	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2-Chloronaphthalene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2-Chlorophenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Chrysene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Di-n-butyl phthalate	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Di-n-octyl phthalate	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Dibenzofuran	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
1,2-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
1,3-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
1,4-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Diethyl phthalate	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Dimethyl phthalate	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2,4-Dichlorophenol	ND	20		µg/L	1	12/8/2013 11:17:57 AM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: T or C LF
Collection Date: 12/5/2013 9:40:00 AM
Lab ID: 1312246-001
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/8/2013 11:17:57 AM	10674
2,4-Dinitrophenol	ND	20		µg/L	1	12/8/2013 11:17:57 AM	10674
2,4-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2,6-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Fluoranthene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Fluorene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Hexachlorobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Hexachlorobutadiene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Hexachloroethane	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Isophorone	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
1-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2-Methylphenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
3+4-Methylphenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
N-Nitrosodimethylamine	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Naphthalene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2-Nitroaniline	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
3-Nitroaniline	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4-Nitroaniline	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Nitrobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2-Nitrophenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
4-Nitrophenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Pentachlorophenol	ND	20		µg/L	1	12/8/2013 11:17:57 AM	10674
Phenanthrene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Phenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Pyrene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Pyridine	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/8/2013 11:17:57 AM	10674
Surr: 2-Fluorophenol	26.4	22.7-98		%REC	1	12/8/2013 11:17:57 AM	10674
Surr: Phenol-d5	23.0	23.4-74.9	S	%REC	1	12/8/2013 11:17:57 AM	10674
Surr: 2,4,6-Tribromophenol	67.2	23.3-111		%REC	1	12/8/2013 11:17:57 AM	10674
Surr: Nitrobenzene-d5	53.0	36.8-111		%REC	1	12/8/2013 11:17:57 AM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: T or C LF
Collection Date: 12/5/2013 9:40:00 AM
Lab ID: 1312246-001
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorobiphenyl	59.6	38.3-110		%REC	1	12/8/2013 11:17:57 AM	10674
Surr: 4-Terphenyl-d14	72.9	52.1-116		%REC	1	12/8/2013 11:17:57 AM	10674
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Toluene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Ethylbenzene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Acetone	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Bromoform	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Bromomethane	ND	2.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
2-Butanone	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Carbon disulfide	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Chlorobenzene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Chloroethane	ND	2.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Chloroform	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Chloromethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Dibromomethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,2-Dichloropropane	ND	0.50		µg/L	1	12/12/2013 2:03:44 PM	R15477
2-Hexanone	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Methylene Chloride	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Styrene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	12/12/2013 2:03:44 PM	R15477
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-5
Project: T or C LF
Collection Date: 12/5/2013 9:40:00 AM
Lab ID: 1312246-001
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
1,2,3-Trichloropropane	ND	1.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Vinyl chloride	ND	0.40		µg/L	1	12/12/2013 2:03:44 PM	R15477
Xylenes, Total	ND	2.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Acrylonitrile	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Bromochloromethane	ND	2.0		µg/L	1	12/12/2013 2:03:44 PM	R15477
Iodomethane	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
trans-1,4-Dichloro-2-butene	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Vinyl acetate	ND	10		µg/L	1	12/12/2013 2:03:44 PM	R15477
Surr: Dibromofluoromethane	90.6	70-130		%REC	1	12/12/2013 2:03:44 PM	R15477
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	1	12/12/2013 2:03:44 PM	R15477
Surr: Toluene-d8	104	70-130		%REC	1	12/12/2013 2:03:44 PM	R15477
Surr: 4-Bromofluorobenzene	78.1	70-130		%REC	1	12/12/2013 2:03:44 PM	R15477
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	210	20		mg/L CaCO3	1	12/6/2013 3:50:50 PM	R15308
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	12/6/2013 3:50:50 PM	R15308
Total Alkalinity (as CaCO3)	210	20		mg/L CaCO3	1	12/6/2013 3:50:50 PM	R15308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: T or C LF
Collection Date: 12/5/2013 10:30:00 AM
Lab ID: 1312246-002
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
4,4´-DDE	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
4,4´-DDT	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Aldrin	ND	10		µg/L	1	12/9/2013 7:51:22 PM	10675
alpha-BHC	ND	0.10		µg/L	1	12/9/2013 7:51:22 PM	10675
beta-BHC	ND	0.10		µg/L	1	12/9/2013 7:51:22 PM	10675
Chlordane	ND	5.0		µg/L	1	12/9/2013 7:51:22 PM	10675
delta-BHC	ND	0.10		µg/L	1	12/9/2013 7:51:22 PM	10675
Dieldrin	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Endosulfan I	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Endosulfan II	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Endosulfan sulfate	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Endrin	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Endrin aldehyde	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
gamma-BHC	ND	0.10		µg/L	1	12/9/2013 7:51:22 PM	10675
Heptachlor	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Heptachlor epoxide	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Methoxychlor	ND	10		µg/L	1	12/9/2013 7:51:22 PM	10675
Toxaphene	ND	1.0		µg/L	1	12/9/2013 7:51:22 PM	10675
Surr: Decachlorobiphenyl	82.6	52-114		%REC	1	12/9/2013 7:51:22 PM	10675
Surr: Tetrachloro-m-xylene	106	49.3-113		%REC	1	12/9/2013 7:51:22 PM	10675
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	270	10	*	mg/L	20	12/6/2013 5:35:08 PM	R15322
Nitrogen, Nitrate (As N)	1.4	0.10		mg/L	1	12/6/2013 5:22:44 PM	R15322
Sulfate	200	10		mg/L	20	12/6/2013 5:35:08 PM	R15322
EPA METHOD 7470: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	12/7/2013 12:59:49 PM	10686
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Arsenic	ND	0.020		mg/L	1	12/9/2013 10:05:53 AM	10692
Barium	0.038	0.020		mg/L	1	12/9/2013 10:05:53 AM	10692
Cadmium	ND	0.0020		mg/L	1	12/9/2013 10:05:53 AM	10692
Calcium	140	5.0		mg/L	5	12/9/2013 11:22:56 AM	10692
Chromium	ND	0.0060		mg/L	1	12/9/2013 10:05:53 AM	10692
Iron	ND	0.050		mg/L	1	12/9/2013 10:05:53 AM	10692
Lead	ND	0.0050		mg/L	1	12/9/2013 10:05:53 AM	10692
Magnesium	20	1.0		mg/L	1	12/9/2013 10:05:53 AM	10692
Manganese	0.29	0.0020		mg/L	1	12/9/2013 10:05:53 AM	10692
Selenium	ND	0.050		mg/L	1	12/9/2013 10:05:53 AM	10692

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: T or C LF
Collection Date: 12/5/2013 10:30:00 AM
Lab ID: 1312246-002
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Silver	ND	0.0050		mg/L	1	12/9/2013 10:05:53 AM	10692
Sodium	230	5.0		mg/L	5	12/9/2013 11:22:56 AM	10692
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Acenaphthylene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Aniline	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Anthracene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Azobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Benz(a)anthracene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Benzo(a)pyrene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Benzo(b)fluoranthene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Benzo(k)fluoranthene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Benzoic acid	ND	40		µg/L	1	12/8/2013 11:46:16 AM	10674
Benzyl alcohol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Butyl benzyl phthalate	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Carbazole	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4-Chloroaniline	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2-Chloronaphthalene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2-Chlorophenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Chrysene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Di-n-butyl phthalate	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Di-n-octyl phthalate	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Dibenzofuran	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
1,2-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
1,3-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
1,4-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Diethyl phthalate	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Dimethyl phthalate	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2,4-Dichlorophenol	ND	20		µg/L	1	12/8/2013 11:46:16 AM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: T or C LF
Collection Date: 12/5/2013 10:30:00 AM
Lab ID: 1312246-002
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/8/2013 11:46:16 AM	10674
2,4-Dinitrophenol	ND	20		µg/L	1	12/8/2013 11:46:16 AM	10674
2,4-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2,6-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Fluoranthene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Fluorene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Hexachlorobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Hexachlorobutadiene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Hexachloroethane	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Isophorone	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
1-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2-Methylphenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
3+4-Methylphenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
N-Nitrosodimethylamine	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Naphthalene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2-Nitroaniline	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
3-Nitroaniline	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4-Nitroaniline	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Nitrobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2-Nitrophenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
4-Nitrophenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Pentachlorophenol	ND	20		µg/L	1	12/8/2013 11:46:16 AM	10674
Phenanthrene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Phenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Pyrene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Pyridine	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/8/2013 11:46:16 AM	10674
Surr: 2-Fluorophenol	55.0	22.7-98		%REC	1	12/8/2013 11:46:16 AM	10674
Surr: Phenol-d5	41.0	23.4-74.9		%REC	1	12/8/2013 11:46:16 AM	10674
Surr: 2,4,6-Tribromophenol	91.1	23.3-111		%REC	1	12/8/2013 11:46:16 AM	10674
Surr: Nitrobenzene-d5	90.1	36.8-111		%REC	1	12/8/2013 11:46:16 AM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: T or C LF
Collection Date: 12/5/2013 10:30:00 AM
Lab ID: 1312246-002
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorobiphenyl	93.6	38.3-110		%REC	1	12/8/2013 11:46:16 AM	10674
Surr: 4-Terphenyl-d14	85.4	52.1-116		%REC	1	12/8/2013 11:46:16 AM	10674
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
Benzene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Toluene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Ethylbenzene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Acetone	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Bromodichloromethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Bromoform	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Bromomethane	ND	4.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
2-Butanone	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Carbon disulfide	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Carbon Tetrachloride	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Chlorobenzene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Chloroethane	ND	4.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Chloroform	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Chloromethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
cis-1,2-DCE	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Dibromochloromethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Dibromomethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,2-Dichlorobenzene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,4-Dichlorobenzene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,1-Dichloroethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,1-Dichloroethene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,2-Dichloropropane	ND	1.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
2-Hexanone	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
4-Methyl-2-pentanone	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Methylene Chloride	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Styrene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Tetrachloroethene (PCE)	ND	1.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
trans-1,2-DCE	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-3R
Project: T or C LF
Collection Date: 12/5/2013 10:30:00 AM
Lab ID: 1312246-002
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
1,1,1-Trichloroethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,1,2-Trichloroethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Trichloroethene (TCE)	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Trichlorofluoromethane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
1,2,3-Trichloropropane	ND	2.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Vinyl chloride	ND	0.80		µg/L	2	12/12/2013 4:11:10 PM	R15477
Xylenes, Total	ND	4.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Acrylonitrile	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Bromochloromethane	ND	4.0		µg/L	2	12/12/2013 4:11:10 PM	R15477
Iodomethane	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
trans-1,4-Dichloro-2-butene	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Vinyl acetate	ND	20		µg/L	2	12/12/2013 4:11:10 PM	R15477
Surr: Dibromofluoromethane	94.9	70-130		%REC	2	12/12/2013 4:11:10 PM	R15477
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%REC	2	12/12/2013 4:11:10 PM	R15477
Surr: Toluene-d8	104	70-130		%REC	2	12/12/2013 4:11:10 PM	R15477
Surr: 4-Bromofluorobenzene	83.5	70-130		%REC	2	12/12/2013 4:11:10 PM	R15477
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	12/6/2013 4:36:12 PM	R15308
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	12/6/2013 4:36:12 PM	R15308
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	12/6/2013 4:36:12 PM	R15308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: T or C LF
Collection Date: 12/5/2013 10:50:00 AM
Lab ID: 1312246-003
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
4,4´-DDE	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
4,4´-DDT	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Aldrin	ND	10		µg/L	1	12/9/2013 8:08:35 PM	10675
alpha-BHC	ND	0.10		µg/L	1	12/9/2013 8:08:35 PM	10675
beta-BHC	ND	0.10		µg/L	1	12/9/2013 8:08:35 PM	10675
Chlordane	ND	5.0		µg/L	1	12/9/2013 8:08:35 PM	10675
delta-BHC	ND	0.10		µg/L	1	12/9/2013 8:08:35 PM	10675
Dieldrin	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Endosulfan I	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Endosulfan II	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Endosulfan sulfate	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Endrin	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Endrin aldehyde	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
gamma-BHC	ND	0.10		µg/L	1	12/9/2013 8:08:35 PM	10675
Heptachlor	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Heptachlor epoxide	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Methoxychlor	ND	10		µg/L	1	12/9/2013 8:08:35 PM	10675
Toxaphene	ND	1.0		µg/L	1	12/9/2013 8:08:35 PM	10675
Surr: Decachlorobiphenyl	82.6	52-114		%REC	1	12/9/2013 8:08:35 PM	10675
Surr: Tetrachloro-m-xylene	104	49.3-113		%REC	1	12/9/2013 8:08:35 PM	10675
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	320	10	*	mg/L	20	12/6/2013 5:59:57 PM	R15322
Nitrogen, Nitrate (As N)	0.37	0.10		mg/L	1	12/6/2013 5:47:33 PM	R15322
Sulfate	220	10		mg/L	20	12/6/2013 5:59:57 PM	R15322
EPA METHOD 7470: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	12/7/2013 1:05:20 PM	10686
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Arsenic	ND	0.020		mg/L	1	12/9/2013 10:08:52 AM	10692
Barium	0.029	0.020		mg/L	1	12/9/2013 10:08:52 AM	10692
Cadmium	ND	0.0020		mg/L	1	12/9/2013 10:08:52 AM	10692
Calcium	90	1.0		mg/L	1	12/9/2013 10:08:52 AM	10692
Chromium	ND	0.0060		mg/L	1	12/9/2013 10:08:52 AM	10692
Iron	ND	0.050		mg/L	1	12/9/2013 10:08:52 AM	10692
Lead	ND	0.0050		mg/L	1	12/9/2013 10:08:52 AM	10692
Magnesium	22	1.0		mg/L	1	12/9/2013 10:08:52 AM	10692
Manganese	0.057	0.0020		mg/L	1	12/9/2013 10:08:52 AM	10692
Selenium	ND	0.050		mg/L	1	12/9/2013 10:08:52 AM	10692

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: T or C LF
Collection Date: 12/5/2013 10:50:00 AM
Lab ID: 1312246-003
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Silver	ND	0.0050		mg/L	1	12/9/2013 10:08:52 AM	10692
Sodium	270	5.0		mg/L	5	12/9/2013 11:25:40 AM	10692
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Acenaphthylene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Aniline	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Anthracene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Azobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Benz(a)anthracene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Benzo(a)pyrene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Benzo(b)fluoranthene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Benzo(k)fluoranthene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Benzoic acid	ND	40		µg/L	1	12/8/2013 12:14:32 PM	10674
Benzyl alcohol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Butyl benzyl phthalate	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Carbazole	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4-Chloroaniline	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2-Chloronaphthalene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2-Chlorophenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Chrysene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Di-n-butyl phthalate	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Di-n-octyl phthalate	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Dibenzofuran	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
1,2-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
1,3-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
1,4-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Diethyl phthalate	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Dimethyl phthalate	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2,4-Dichlorophenol	ND	20		µg/L	1	12/8/2013 12:14:32 PM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: T or C LF
Collection Date: 12/5/2013 10:50:00 AM
Lab ID: 1312246-003
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/8/2013 12:14:32 PM	10674
2,4-Dinitrophenol	ND	20		µg/L	1	12/8/2013 12:14:32 PM	10674
2,4-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2,6-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Fluoranthene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Fluorene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Hexachlorobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Hexachlorobutadiene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Hexachloroethane	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Isophorone	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
1-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2-Methylphenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
3+4-Methylphenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
N-Nitrosodimethylamine	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Naphthalene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2-Nitroaniline	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
3-Nitroaniline	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4-Nitroaniline	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Nitrobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2-Nitrophenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
4-Nitrophenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Pentachlorophenol	ND	20		µg/L	1	12/8/2013 12:14:32 PM	10674
Phenanthrene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Phenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Pyrene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Pyridine	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/8/2013 12:14:32 PM	10674
Surr: 2-Fluorophenol	40.5	22.7-98		%REC	1	12/8/2013 12:14:32 PM	10674
Surr: Phenol-d5	33.5	23.4-74.9		%REC	1	12/8/2013 12:14:32 PM	10674
Surr: 2,4,6-Tribromophenol	68.1	23.3-111		%REC	1	12/8/2013 12:14:32 PM	10674
Surr: Nitrobenzene-d5	63.3	36.8-111		%REC	1	12/8/2013 12:14:32 PM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: T or C LF
Collection Date: 12/5/2013 10:50:00 AM
Lab ID: 1312246-003
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorobiphenyl	63.3	38.3-110		%REC	1	12/8/2013 12:14:32 PM	10674
Surr: 4-Terphenyl-d14	69.5	52.1-116		%REC	1	12/8/2013 12:14:32 PM	10674
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Toluene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Ethylbenzene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Acetone	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Bromodichloromethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Bromoform	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Bromomethane	ND	2.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
2-Butanone	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Carbon disulfide	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Carbon Tetrachloride	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Chlorobenzene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Chloroethane	ND	2.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Chloroform	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Chloromethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
cis-1,2-DCE	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Dibromochloromethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Dibromomethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,1-Dichloroethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,1-Dichloroethene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,2-Dichloropropane	ND	0.50		µg/L	1	12/12/2013 4:43:05 PM	R15477
2-Hexanone	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
4-Methyl-2-pentanone	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Methylene Chloride	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Styrene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	12/12/2013 4:43:05 PM	R15477
trans-1,2-DCE	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-10
Project: T or C LF
Collection Date: 12/5/2013 10:50:00 AM
Lab ID: 1312246-003
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Trichlorofluoromethane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
1,2,3-Trichloropropane	ND	1.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Vinyl chloride	ND	0.40		µg/L	1	12/12/2013 4:43:05 PM	R15477
Xylenes, Total	ND	2.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Acrylonitrile	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Bromochloromethane	ND	2.0		µg/L	1	12/12/2013 4:43:05 PM	R15477
Iodomethane	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
trans-1,4-Dichloro-2-butene	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Vinyl acetate	ND	10		µg/L	1	12/12/2013 4:43:05 PM	R15477
Surr: Dibromofluoromethane	90.2	70-130		%REC	1	12/12/2013 4:43:05 PM	R15477
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%REC	1	12/12/2013 4:43:05 PM	R15477
Surr: Toluene-d8	102	70-130		%REC	1	12/12/2013 4:43:05 PM	R15477
Surr: 4-Bromofluorobenzene	83.5	70-130		%REC	1	12/12/2013 4:43:05 PM	R15477
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	280	20		mg/L CaCO3	1	12/6/2013 4:51:42 PM	R15308
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	12/6/2013 4:51:42 PM	R15308
Total Alkalinity (as CaCO3)	280	20		mg/L CaCO3	1	12/6/2013 4:51:42 PM	R15308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: T or C LF
Collection Date: 12/5/2013 11:15:00 AM
Lab ID: 1312246-004
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
4,4´-DDE	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
4,4´-DDT	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Aldrin	ND	10		µg/L	1	12/9/2013 8:25:48 PM	10675
alpha-BHC	ND	0.10		µg/L	1	12/9/2013 8:25:48 PM	10675
beta-BHC	ND	0.10		µg/L	1	12/9/2013 8:25:48 PM	10675
Chlordane	ND	5.0		µg/L	1	12/9/2013 8:25:48 PM	10675
delta-BHC	ND	0.10		µg/L	1	12/9/2013 8:25:48 PM	10675
Dieldrin	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Endosulfan I	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Endosulfan II	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Endosulfan sulfate	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Endrin	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Endrin aldehyde	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
gamma-BHC	ND	0.10		µg/L	1	12/9/2013 8:25:48 PM	10675
Heptachlor	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Heptachlor epoxide	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Methoxychlor	ND	10		µg/L	1	12/9/2013 8:25:48 PM	10675
Toxaphene	ND	1.0		µg/L	1	12/9/2013 8:25:48 PM	10675
Surr: Decachlorobiphenyl	69.3	52-114		%REC	1	12/9/2013 8:25:48 PM	10675
Surr: Tetrachloro-m-xylene	86.4	49.3-113		%REC	1	12/9/2013 8:25:48 PM	10675
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	760	25	*	mg/L	50	12/10/2013 7:01:19 PM	R15406
Nitrogen, Nitrate (As N)	9.9	2.0		mg/L	20	12/6/2013 6:24:48 PM	R15322
Sulfate	170	10		mg/L	20	12/6/2013 6:24:48 PM	R15322
EPA METHOD 7470: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	12/7/2013 1:07:09 PM	10686
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Arsenic	ND	0.020		mg/L	1	12/9/2013 10:11:48 AM	10692
Barium	0.11	0.020		mg/L	1	12/9/2013 10:11:48 AM	10692
Cadmium	ND	0.0020		mg/L	1	12/9/2013 10:11:48 AM	10692
Calcium	270	5.0		mg/L	5	12/9/2013 11:28:24 AM	10692
Chromium	ND	0.0060		mg/L	1	12/9/2013 10:11:48 AM	10692
Iron	ND	0.050		mg/L	1	12/9/2013 10:11:48 AM	10692
Lead	ND	0.0050		mg/L	1	12/9/2013 10:11:48 AM	10692
Magnesium	51	1.0		mg/L	1	12/9/2013 10:11:48 AM	10692
Manganese	0.15	0.0020		mg/L	1	12/9/2013 10:11:48 AM	10692
Selenium	ND	0.050		mg/L	1	12/9/2013 10:11:48 AM	10692

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: T or C LF
Collection Date: 12/5/2013 11:15:00 AM
Lab ID: 1312246-004
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Silver	ND	0.0050		mg/L	1	12/9/2013 10:11:48 AM	10692
Sodium	300	5.0		mg/L	5	12/9/2013 11:28:24 AM	10692
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Acenaphthylene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Aniline	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Anthracene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Azobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Benz(a)anthracene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Benzo(a)pyrene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Benzo(b)fluoranthene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Benzo(k)fluoranthene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Benzoic acid	ND	40		µg/L	1	12/8/2013 2:10:21 PM	10674
Benzyl alcohol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Butyl benzyl phthalate	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Carbazole	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4-Chloroaniline	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2-Chloronaphthalene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2-Chlorophenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Chrysene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Di-n-butyl phthalate	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Di-n-octyl phthalate	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Dibenzofuran	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
1,2-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
1,3-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
1,4-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Diethyl phthalate	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Dimethyl phthalate	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2,4-Dichlorophenol	ND	20		µg/L	1	12/8/2013 2:10:21 PM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: T or C LF
Collection Date: 12/5/2013 11:15:00 AM
Lab ID: 1312246-004
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/8/2013 2:10:21 PM	10674
2,4-Dinitrophenol	ND	20		µg/L	1	12/8/2013 2:10:21 PM	10674
2,4-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2,6-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Fluoranthene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Fluorene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Hexachlorobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Hexachlorobutadiene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Hexachloroethane	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Isophorone	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
1-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2-Methylphenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
3+4-Methylphenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
N-Nitrosodimethylamine	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Naphthalene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2-Nitroaniline	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
3-Nitroaniline	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4-Nitroaniline	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Nitrobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2-Nitrophenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
4-Nitrophenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Pentachlorophenol	ND	20		µg/L	1	12/8/2013 2:10:21 PM	10674
Phenanthrene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Phenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Pyrene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Pyridine	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/8/2013 2:10:21 PM	10674
Surr: 2-Fluorophenol	56.9	22.7-98		%REC	1	12/8/2013 2:10:21 PM	10674
Surr: Phenol-d5	46.7	23.4-74.9		%REC	1	12/8/2013 2:10:21 PM	10674
Surr: 2,4,6-Tribromophenol	89.7	23.3-111		%REC	1	12/8/2013 2:10:21 PM	10674
Surr: Nitrobenzene-d5	94.4	36.8-111		%REC	1	12/8/2013 2:10:21 PM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: T or C LF
Collection Date: 12/5/2013 11:15:00 AM
Lab ID: 1312246-004
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorobiphenyl	88.3	38.3-110		%REC	1	12/8/2013 2:10:21 PM	10674
Surr: 4-Terphenyl-d14	90.3	52.1-116		%REC	1	12/8/2013 2:10:21 PM	10674
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
Benzene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Toluene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Ethylbenzene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Acetone	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Bromodichloromethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Bromoform	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Bromomethane	ND	4.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
2-Butanone	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Carbon disulfide	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Carbon Tetrachloride	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Chlorobenzene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Chloroethane	ND	4.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Chloroform	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Chloromethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
cis-1,2-DCE	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Dibromochloromethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Dibromomethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,2-Dichlorobenzene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,4-Dichlorobenzene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,1-Dichloroethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,1-Dichloroethene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,2-Dichloropropane	ND	1.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
2-Hexanone	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
4-Methyl-2-pentanone	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Methylene Chloride	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Styrene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Tetrachloroethene (PCE)	ND	1.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
trans-1,2-DCE	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-1
Project: T or C LF
Collection Date: 12/5/2013 11:15:00 AM
Lab ID: 1312246-004
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
1,1,1-Trichloroethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,1,2-Trichloroethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Trichloroethene (TCE)	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Trichlorofluoromethane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
1,2,3-Trichloropropane	ND	2.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Vinyl chloride	ND	0.80		µg/L	2	12/12/2013 5:14:58 PM	R15477
Xylenes, Total	ND	4.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Acrylonitrile	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Bromochloromethane	ND	4.0		µg/L	2	12/12/2013 5:14:58 PM	R15477
Iodomethane	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
trans-1,4-Dichloro-2-butene	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Vinyl acetate	ND	20		µg/L	2	12/12/2013 5:14:58 PM	R15477
Surr: Dibromofluoromethane	91.2	70-130		%REC	2	12/12/2013 5:14:58 PM	R15477
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	2	12/12/2013 5:14:58 PM	R15477
Surr: Toluene-d8	104	70-130		%REC	2	12/12/2013 5:14:58 PM	R15477
Surr: 4-Bromofluorobenzene	81.2	70-130		%REC	2	12/12/2013 5:14:58 PM	R15477
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	310	20		mg/L CaCO3	1	12/6/2013 5:05:36 PM	R15308
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	12/6/2013 5:05:36 PM	R15308
Total Alkalinity (as CaCO3)	310	20		mg/L CaCO3	1	12/6/2013 5:05:36 PM	R15308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: T or C LF
Collection Date: 12/5/2013 11:30:00 AM
Lab ID: 1312246-005
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
4,4´-DDE	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
4,4´-DDT	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Aldrin	ND	10		µg/L	1	12/9/2013 8:42:57 PM	10675
alpha-BHC	ND	0.10		µg/L	1	12/9/2013 8:42:57 PM	10675
beta-BHC	ND	0.10		µg/L	1	12/9/2013 8:42:57 PM	10675
Chlordane	ND	5.0		µg/L	1	12/9/2013 8:42:57 PM	10675
delta-BHC	ND	0.10		µg/L	1	12/9/2013 8:42:57 PM	10675
Dieldrin	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Endosulfan I	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Endosulfan II	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Endosulfan sulfate	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Endrin	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Endrin aldehyde	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
gamma-BHC	ND	0.10		µg/L	1	12/9/2013 8:42:57 PM	10675
Heptachlor	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Heptachlor epoxide	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Methoxychlor	ND	10		µg/L	1	12/9/2013 8:42:57 PM	10675
Toxaphene	ND	1.0		µg/L	1	12/9/2013 8:42:57 PM	10675
Surr: Decachlorobiphenyl	82.6	52-114		%REC	1	12/9/2013 8:42:57 PM	10675
Surr: Tetrachloro-m-xylene	109	49.3-113		%REC	1	12/9/2013 8:42:57 PM	10675
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	840	50	*	mg/L	100	12/10/2013 7:13:43 PM	R15406
Nitrogen, Nitrate (As N)	5.3	2.0		mg/L	20	12/6/2013 6:49:38 PM	R15322
Sulfate	230	10		mg/L	20	12/6/2013 6:49:38 PM	R15322
EPA METHOD 7470: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	12/7/2013 1:09:01 PM	10686
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Arsenic	ND	0.020		mg/L	1	12/9/2013 10:14:48 AM	10692
Barium	0.086	0.020		mg/L	1	12/9/2013 10:14:48 AM	10692
Cadmium	ND	0.0020		mg/L	1	12/9/2013 10:14:48 AM	10692
Calcium	320	5.0		mg/L	5	12/9/2013 11:31:08 AM	10692
Chromium	ND	0.0060		mg/L	1	12/9/2013 10:14:48 AM	10692
Iron	ND	0.050		mg/L	1	12/9/2013 10:14:48 AM	10692
Lead	ND	0.0050		mg/L	1	12/9/2013 10:14:48 AM	10692
Magnesium	63	1.0		mg/L	1	12/9/2013 10:14:48 AM	10692
Manganese	0.72	0.0020		mg/L	1	12/9/2013 10:14:48 AM	10692
Selenium	ND	0.050		mg/L	1	12/9/2013 10:14:48 AM	10692

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: T or C LF
Collection Date: 12/5/2013 11:30:00 AM
Lab ID: 1312246-005
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Silver	ND	0.0050		mg/L	1	12/9/2013 10:14:48 AM	10692
Sodium	270	5.0		mg/L	5	12/9/2013 11:31:08 AM	10692
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Acenaphthylene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Aniline	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Anthracene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Azobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Benz(a)anthracene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Benzo(a)pyrene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Benzo(b)fluoranthene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Benzo(k)fluoranthene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Benzoic acid	ND	40		µg/L	1	12/8/2013 2:38:39 PM	10674
Benzyl alcohol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Butyl benzyl phthalate	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Carbazole	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4-Chloroaniline	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2-Chloronaphthalene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2-Chlorophenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Chrysene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Di-n-butyl phthalate	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Di-n-octyl phthalate	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Dibenzofuran	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
1,2-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
1,3-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
1,4-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Diethyl phthalate	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Dimethyl phthalate	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2,4-Dichlorophenol	ND	20		µg/L	1	12/8/2013 2:38:39 PM	10674

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: T or C LF
Collection Date: 12/5/2013 11:30:00 AM
Lab ID: 1312246-005
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/8/2013 2:38:39 PM	10674
2,4-Dinitrophenol	ND	20		µg/L	1	12/8/2013 2:38:39 PM	10674
2,4-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2,6-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Fluoranthene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Fluorene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Hexachlorobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Hexachlorobutadiene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Hexachloroethane	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Isophorone	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
1-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2-Methylphenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
3+4-Methylphenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
N-Nitrosodimethylamine	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Naphthalene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2-Nitroaniline	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
3-Nitroaniline	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4-Nitroaniline	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Nitrobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2-Nitrophenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
4-Nitrophenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Pentachlorophenol	ND	20		µg/L	1	12/8/2013 2:38:39 PM	10674
Phenanthrene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Phenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Pyrene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Pyridine	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/8/2013 2:38:39 PM	10674
Surr: 2-Fluorophenol	55.4	22.7-98		%REC	1	12/8/2013 2:38:39 PM	10674
Surr: Phenol-d5	44.4	23.4-74.9		%REC	1	12/8/2013 2:38:39 PM	10674
Surr: 2,4,6-Tribromophenol	87.9	23.3-111		%REC	1	12/8/2013 2:38:39 PM	10674
Surr: Nitrobenzene-d5	88.9	36.8-111		%REC	1	12/8/2013 2:38:39 PM	10674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: T or C LF
Collection Date: 12/5/2013 11:30:00 AM
Lab ID: 1312246-005
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorobiphenyl	88.5	38.3-110		%REC	1	12/8/2013 2:38:39 PM	10674
Surr: 4-Terphenyl-d14	84.6	52.1-116		%REC	1	12/8/2013 2:38:39 PM	10674
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Toluene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Ethylbenzene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Acetone	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Bromodichloromethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Bromoform	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Bromomethane	ND	2.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
2-Butanone	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Carbon disulfide	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Carbon Tetrachloride	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Chlorobenzene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Chloroethane	ND	2.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Chloroform	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Chloromethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
cis-1,2-DCE	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Dibromochloromethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Dibromomethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,1-Dichloroethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,1-Dichloroethene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,2-Dichloropropane	ND	0.50		µg/L	1	12/13/2013 5:19:54 PM	R15515
2-Hexanone	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
4-Methyl-2-pentanone	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Methylene Chloride	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Styrene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	12/13/2013 5:19:54 PM	R15515
trans-1,2-DCE	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-8
Project: T or C LF
Collection Date: 12/5/2013 11:30:00 AM
Lab ID: 1312246-005
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Trichlorofluoromethane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
1,2,3-Trichloropropane	ND	1.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Vinyl chloride	ND	0.40		µg/L	1	12/13/2013 5:19:54 PM	R15515
Xylenes, Total	ND	2.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Acrylonitrile	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Bromochloromethane	ND	2.0		µg/L	1	12/13/2013 5:19:54 PM	R15515
Iodomethane	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
trans-1,4-Dichloro-2-butene	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Vinyl acetate	ND	10		µg/L	1	12/13/2013 5:19:54 PM	R15515
Surr: Dibromofluoromethane	92.5	70-130		%REC	1	12/13/2013 5:19:54 PM	R15515
Surr: 1,2-Dichloroethane-d4	95.7	70-130		%REC	1	12/13/2013 5:19:54 PM	R15515
Surr: Toluene-d8	99.8	70-130		%REC	1	12/13/2013 5:19:54 PM	R15515
Surr: 4-Bromofluorobenzene	84.1	70-130		%REC	1	12/13/2013 5:19:54 PM	R15515
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	280	20		mg/L CaCO3	1	12/6/2013 5:20:48 PM	R15308
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	12/6/2013 5:20:48 PM	R15308
Total Alkalinity (as CaCO3)	280	20		mg/L CaCO3	1	12/6/2013 5:20:48 PM	R15308

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: T or C LF
Collection Date: 12/5/2013 11:55:00 AM
Lab ID: 1312246-006
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES						Analyst:	**JDC**
4,4´-DDD	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
4,4´-DDE	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
4,4´-DDT	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Aldrin	ND	10		µg/L	1	12/9/2013 9:00:10 PM	10675
alpha-BHC	ND	0.10		µg/L	1	12/9/2013 9:00:10 PM	10675
beta-BHC	ND	0.10		µg/L	1	12/9/2013 9:00:10 PM	10675
Chlordane	ND	5.0		µg/L	1	12/9/2013 9:00:10 PM	10675
delta-BHC	ND	0.10		µg/L	1	12/9/2013 9:00:10 PM	10675
Dieldrin	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Endosulfan I	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Endosulfan II	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Endosulfan sulfate	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Endrin	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Endrin aldehyde	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
gamma-BHC	ND	0.10		µg/L	1	12/9/2013 9:00:10 PM	10675
Heptachlor	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Heptachlor epoxide	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Methoxychlor	ND	10		µg/L	1	12/9/2013 9:00:10 PM	10675
Toxaphene	ND	1.0		µg/L	1	12/9/2013 9:00:10 PM	10675
Surr: Decachlorobiphenyl	64.0	52-114		%REC	1	12/9/2013 9:00:10 PM	10675
Surr: Tetrachloro-m-xylene	76.5	49.3-113		%REC	1	12/9/2013 9:00:10 PM	10675
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	330	10	*	mg/L	20	12/6/2013 7:39:16 PM	R15322
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	12/6/2013 7:26:52 PM	R15322
Sulfate	140	10		mg/L	20	12/6/2013 7:39:16 PM	R15322
EPA METHOD 7470: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	12/7/2013 1:11:10 PM	10686
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Arsenic	ND	0.020		mg/L	1	12/9/2013 10:17:49 AM	10692
Barium	0.071	0.020		mg/L	1	12/9/2013 10:17:49 AM	10692
Cadmium	ND	0.0020		mg/L	1	12/9/2013 10:17:49 AM	10692
Calcium	150	5.0		mg/L	5	12/9/2013 11:33:53 AM	10692
Chromium	ND	0.0060		mg/L	1	12/9/2013 10:17:49 AM	10692
Iron	0.99	0.25		mg/L	5	12/9/2013 11:33:53 AM	10692
Lead	ND	0.0050		mg/L	1	12/9/2013 10:17:49 AM	10692
Magnesium	42	1.0		mg/L	1	12/9/2013 10:17:49 AM	10692
Manganese	1.7	0.010		mg/L	5	12/9/2013 11:33:53 AM	10692
Selenium	ND	0.050		mg/L	1	12/9/2013 10:17:49 AM	10692

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Hall Environmental Analysis Laboratory, Inc.

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Project: T or C LF
Collection Date: 12/5/2013 11:55:00 AM
Lab ID: 1312246-006
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst:	**ELS**
Silver	ND	0.0050		mg/L	1	12/12/2013 3:15:25 PM	10692
Sodium	150	5.0		mg/L	5	12/9/2013 11:33:53 AM	10692
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Acenaphthylene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Aniline	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Anthracene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Azobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Benz(a)anthracene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Benzo(a)pyrene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Benzo(b)fluoranthene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Benzo(k)fluoranthene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Benzoic acid	ND	40		µg/L	1	12/8/2013 3:07:00 PM	10674
Benzyl alcohol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Butyl benzyl phthalate	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Carbazole	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4-Chloroaniline	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2-Chloronaphthalene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2-Chlorophenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Chrysene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Di-n-butyl phthalate	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Di-n-octyl phthalate	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Dibenzofuran	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
1,2-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
1,3-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
1,4-Dichlorobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Diethyl phthalate	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Dimethyl phthalate	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2,4-Dichlorophenol	ND	20		µg/L	1	12/8/2013 3:07:00 PM	10674

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: T or C LF
Collection Date: 12/5/2013 11:55:00 AM
Lab ID: 1312246-006
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/8/2013 3:07:00 PM	10674
2,4-Dinitrophenol	ND	20		µg/L	1	12/8/2013 3:07:00 PM	10674
2,4-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2,6-Dinitrotoluene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Fluoranthene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Fluorene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Hexachlorobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Hexachlorobutadiene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Hexachloroethane	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Isophorone	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
1-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2-Methylnaphthalene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2-Methylphenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
3+4-Methylphenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
N-Nitrosodimethylamine	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Naphthalene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2-Nitroaniline	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
3-Nitroaniline	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4-Nitroaniline	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Nitrobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2-Nitrophenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
4-Nitrophenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Pentachlorophenol	ND	20		µg/L	1	12/8/2013 3:07:00 PM	10674
Phenanthrene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Phenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Pyrene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Pyridine	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/8/2013 3:07:00 PM	10674
Surr: 2-Fluorophenol	50.6	22.7-98		%REC	1	12/8/2013 3:07:00 PM	10674
Surr: Phenol-d5	41.0	23.4-74.9		%REC	1	12/8/2013 3:07:00 PM	10674
Surr: 2,4,6-Tribromophenol	81.1	23.3-111		%REC	1	12/8/2013 3:07:00 PM	10674
Surr: Nitrobenzene-d5	80.7	36.8-111		%REC	1	12/8/2013 3:07:00 PM	10674

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: MW-9
Project: T or C LF
Collection Date: 12/5/2013 11:55:00 AM
Lab ID: 1312246-006
Matrix: AQUEOUS
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorobiphenyl	78.9	38.3-110		%REC	1	12/8/2013 3:07:00 PM	10674
Surr: 4-Terphenyl-d14	83.1	52.1-116		%REC	1	12/8/2013 3:07:00 PM	10674
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Toluene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Ethylbenzene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Acetone	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Bromodichloromethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Bromoform	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Bromomethane	ND	2.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
2-Butanone	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Carbon disulfide	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Carbon Tetrachloride	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Chlorobenzene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Chloroethane	ND	2.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Chloroform	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Chloromethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
cis-1,2-DCE	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Dibromochloromethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Dibromomethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,1-Dichloroethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,1-Dichloroethene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,2-Dichloropropane	ND	0.50		µg/L	1	12/13/2013 7:27:35 PM	R15515
2-Hexanone	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
4-Methyl-2-pentanone	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Methylene Chloride	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Styrene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	12/13/2013 7:27:35 PM	R15515
trans-1,2-DCE	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515

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Lab ID: 1312246-006
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst:	**DJF**
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Trichlorofluoromethane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
1,2,3-Trichloropropane	ND	1.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Vinyl chloride	ND	0.40		µg/L	1	12/13/2013 7:27:35 PM	R15515
Xylenes, Total	ND	2.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Acrylonitrile	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Bromochloromethane	ND	2.0		µg/L	1	12/13/2013 7:27:35 PM	R15515
Iodomethane	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
trans-1,4-Dichloro-2-butene	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Vinyl acetate	ND	10		µg/L	1	12/13/2013 7:27:35 PM	R15515
Surr: Dibromofluoromethane	93.4	70-130		%REC	1	12/13/2013 7:27:35 PM	R15515
Surr: 1,2-Dichloroethane-d4	90.7	70-130		%REC	1	12/13/2013 7:27:35 PM	R15515
Surr: Toluene-d8	100	70-130		%REC	1	12/13/2013 7:27:35 PM	R15515
Surr: 4-Bromofluorobenzene	86.7	70-130		%REC	1	12/13/2013 7:27:35 PM	R15515
SM2320B: ALKALINITY						Analyst:	**JML**
Bicarbonate (As CaCO3)	330	20		mg/L CaCO3	1	12/6/2013 5:35:11 PM	R15308
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	12/6/2013 5:35:11 PM	R15308
Total Alkalinity (as CaCO3)	330	20		mg/L CaCO3	1	12/6/2013 5:35:11 PM	R15308

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: TRIP BLANK
Project: T or C LF
Collection Date:
Lab ID: 1312246-007
Matrix: TRIP BLANK
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Toluene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Ethylbenzene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Acetone	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Bromodichloromethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Bromoform	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Bromomethane	ND	2.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
2-Butanone	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Carbon disulfide	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Carbon Tetrachloride	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Chlorobenzene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Chloroethane	ND	2.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Chloroform	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Chloromethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
cis-1,2-DCE	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Dibromochloromethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Dibromomethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,1-Dichloroethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,1-Dichloroethene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,2-Dichloropropane	ND	0.50		µg/L	1	12/16/2013 5:18:53 PM	R15534
2-Hexanone	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
4-Methyl-2-pentanone	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Methylene Chloride	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Styrene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Tetrachloroethene (PCE)	ND	0.50		µg/L	1	12/16/2013 5:18:53 PM	R15534
trans-1,2-DCE	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: TRIP BLANK
Project: T or C LF
Collection Date:
Lab ID: 1312246-007
Matrix: TRIP BLANK
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES, TABLE I						Analyst: **DJF**	
Trichlorofluoromethane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
1,2,3-Trichloropropane	ND	1.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Vinyl chloride	ND	0.40		µg/L	1	12/16/2013 5:18:53 PM	R15534
Xylenes, Total	ND	2.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Acrylonitrile	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Bromochloromethane	ND	2.0		µg/L	1	12/16/2013 5:18:53 PM	R15534
Iodomethane	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
trans-1,4-Dichloro-2-butene	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Vinyl acetate	ND	10		µg/L	1	12/16/2013 5:18:53 PM	R15534
Surr: Dibromofluoromethane	93.4	70-130		%REC	1	12/16/2013 5:18:53 PM	R15534
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%REC	1	12/16/2013 5:18:53 PM	R15534
Surr: Toluene-d8	98.7	70-130		%REC	1	12/16/2013 5:18:53 PM	R15534
Surr: 4-Bromofluorobenzene	81.6	70-130		%REC	1	12/16/2013 5:18:53 PM	R15534

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	131210038
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1312246
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	131210038-001	**Sampling Date**	12/5/2013	**Date/Time Received**	12/10/2013 12:51 PM
Client Sample ID	1312246-001E / MW-5	**Sampling Time**	9:40 AM	**Extraction Date**	12/12/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 131210038-001

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4-Dichlorophenylacetic acid	EPA 8151A	103.0	70-130

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 131210038
Project Name: 1312246

Analytical Results Report

Sample Number	131210038-002	**Sampling Date**	12/5/2013	**Date/Time Received**	12/10/2013 12:51 PM
Client Sample ID	1312246-002E / MW-3R	**Sampling Time**	10:30 AM	**Extraction Date**	12/12/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 131210038-002

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4-Dichlorophenylacetic acid	EPA 8151A	103.0	70-130

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 131210038
Project Name: 1312246

Analytical Results Report

Sample Number	131210038-003	**Sampling Date**	12/5/2013	**Date/Time Received**	12/10/2013 12:51 PM
Client Sample ID	1312246-003E / MW-10	**Sampling Time**	10:50 AM	**Extraction Date**	12/12/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 131210038-003

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4-Dichlorophenylacetic acid	EPA 8151A	102.0	70-130

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 131210038
Project Name: 1312246

Analytical Results Report

Sample Number	131210038-004	**Sampling Date**	12/5/2013	**Date/Time Received**	12/10/2013 12:51 PM
Client Sample ID	1312246-004E / MW-1	**Sampling Time**	11:15 AM	**Extraction Date**	12/12/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 131210038-004

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4-Dichlorophenylacetic acid	EPA 8151A	107.5	70-130

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 131210038
Project Name: 1312246

Analytical Results Report

Sample Number	131210038-005	**Sampling Date**	12/5/2013	**Date/Time Received**	12/10/2013 12:51 PM
Client Sample ID	1312246-005E / MW-8	**Sampling Time**	11:30 AM	**Extraction Date**	12/12/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 131210038-005

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4-Dichlorophenylacetic acid	EPA 8151A	105.0	70-130

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Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 131210038
Project Name: 1312246

Analytical Results Report

Sample Number	131210038-006	**Sampling Date**	12/5/2013	**Date/Time Received**	12/10/2013 12:51 PM
Client Sample ID	1312246-006E / MW-9	**Sampling Time**	11:55 AM	**Extraction Date**	12/12/2013
Matrix	Water	**Sample Location**			
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
2,4,5-T	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4,5-TP (Silvex)	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-D	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
2,4-DB	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Chloramben	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dacthal	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dalapon	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dicamba	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dichloroprop	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Dinoseb	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Pentachlorophenol	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	
Picloram	ND	ug/L	0.1	12/12/2013	TGT	EPA 8151A	

Surrogate Data

Sample Number 131210038-006

Surrogate Standard	Method	Percent Recovery	Control Limits
2,4-Dichlorophenylacetic acid	EPA 8151A	103.0	70-130

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441502** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	8.1	0.50	8.000	0	101	90	110			
Nitrogen, Nitrate (As N)	5.0	0.10	4.800	0	104	90	110			
Sulfate	20	0.50	20.00	0	102	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441514** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	103	90	110			
Nitrogen, Nitrate (As N)	7.8	0.10	7.200	0	108	90	110			
Sulfate	32	0.50	30.00	0	105	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441526** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.3	90	110			
Nitrogen, Nitrate (As N)	2.9	0.10	3.000	0	97.2	90	110			
Sulfate	12	0.50	12.50	0	96.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441530** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441531** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.7	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.8	90	110			
Sulfate	9.7	0.50	10.00	0	96.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.8	0.50	8.000	0	97.9	90	110			
Nitrogen, Nitrate (As N)	4.9	0.10	4.800	0	102	90	110			
Sulfate	20	0.50	20.00	0	101	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/7/2013** SeqNo: **441550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	102	90	110			
Nitrogen, Nitrate (As N)	7.7	0.10	7.200	0	107	90	110			
Sulfate	32	0.50	30.00	0	105	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/7/2013** SeqNo: **441562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.2	90	110			
Nitrogen, Nitrate (As N)	2.9	0.10	3.000	0	97.3	90	110			
Sulfate	12	0.50	12.50	0	97.4	90	110			

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15322** RunNo: **15322**
Prep Date: Analysis Date: **12/7/2013** SeqNo: **441568** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.8	0.50	8.000	0	98.0	90	110			
Nitrogen, Nitrate (As N)	4.9	0.10	4.800	0	102	90	110			
Sulfate	20	0.50	20.00	0	101	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443713** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	103	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443715** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443716** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	95.0	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443738** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.8	0.50	8.000	0	97.5	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443751** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	103	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443772** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.3	90	110			

Sample ID **A5** SampType: **CCV_5** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/10/2013** SeqNo: **443786** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	7.9	0.50	8.000	0	98.4	90	110			

Sample ID **A6** SampType: **CCV_6** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/11/2013** SeqNo: **443796** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	12	0.50	12.00	0	103	90	110			

Sample ID **A4** SampType: **CCV_4** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R15406** RunNo: **15406**
Prep Date: Analysis Date: **12/11/2013** SeqNo: **443805** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **MB-10675** SampType: **MBLK** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW** Batch ID: **10675** RunNo: **15368**
Prep Date: **12/6/2013** Analysis Date: **12/9/2013** SeqNo: **442762** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	ND	1.0								
4,4´-DDE	ND	1.0								
4,4´-DDT	ND	1.0								
Aldrin	ND	10								
alpha-BHC	ND	0.10								
beta-BHC	ND	0.10								
Chlordane	ND	5.0								
delta-BHC	ND	0.10								
Dieldrin	ND	1.0								
Endosulfan I	ND	1.0								
Endosulfan II	ND	1.0								
Endosulfan sulfate	ND	1.0								
Endrin	ND	1.0								
Endrin aldehyde	ND	1.0								
gamma-BHC	ND	0.10								
Heptachlor	ND	1.0								
Heptachlor epoxide	ND	1.0								
Methoxychlor	ND	10								
Toxaphene	ND	1.0								
Surr: Decachlorobiphenyl	2.0		2.500		80.8	52	114			
Surr: Tetrachloro-m-xylene	2.6		2.500		103	49.3	113			

Sample ID **LCS-10675** SampType: **LCS** TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW** Batch ID: **10675** RunNo: **15368**
Prep Date: **12/6/2013** Analysis Date: **12/10/2013** SeqNo: **442861** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4,4´-DDD	ND	1.0	0.5000	0	104	33.3	165			
4,4´-DDE	ND	1.0	0.5000	0	105	43.8	144			
4,4´-DDT	ND	1.0	0.5000	0	91.6	41.7	151			
Aldrin	ND	10	0.5000	0	102	45.4	134			
alpha-BHC	0.54	0.10	0.5000	0	108	41.7	136			
beta-BHC	0.51	0.10	0.5000	0	103	47.2	144			
delta-BHC	0.54	0.10	0.5000	0	108	35	154			
Dieldrin	ND	1.0	0.5000	0	102	46.2	137			
Endosulfan I	ND	1.0	0.5000	0	101	47.9	138			
Endosulfan II	ND	1.0	0.5000	0	99.0	45.3	135			
Endosulfan sulfate	ND	1.0	0.5000	0	91.8	39.1	150			
Endrin	ND	1.0	0.5000	0	99.6	48.4	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **LCS-10675**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**			
Client ID: **LCSW**	Batch ID: **10675**	RunNo: **15368**			
Prep Date: **12/6/2013**	Analysis Date: **12/10/2013**	SeqNo: **442861**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Endrin aldehyde	ND	1.0	0.5000	0	90.8	43.6	145			
gamma-BHC	0.54	0.10	0.5000	0	108	43.6	138			
Heptachlor	ND	1.0	0.5000	0	101	43.3	137			
Heptachlor epoxide	ND	1.0	0.5000	0	96.2	46.5	139			
Methoxychlor	ND	10	0.5000	0	75.8	21.7	177			
Surr: Decachlorobiphenyl	2.4		2.500		97.4	52	114			
Surr: Tetrachloro-m-xylene	3.2		2.500		130	49.3	113			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles, Table I**			
Client ID: **PBW**	Batch ID: **R15477**	RunNo: **15477**			
Prep Date:	Analysis Date: **12/12/2013**	SeqNo: **445496**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Acetone	ND	10								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	2.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	0.50								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	1.0								
Styrene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
Tetrachloroethene (PCE)	ND	0.50								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **PBW** Batch ID: **R15477** RunNo: **15477**
Prep Date: Analysis Date: **12/12/2013** SeqNo: **445496** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
Vinyl chloride	ND	0.40								
Xylenes, Total	ND	2.0								
Acrylonitrile	ND	10								
Bromochloromethane	ND	2.0								
Iodomethane	ND	10								
trans-1,4-Dichloro-2-butene	ND	10								
Vinyl acetate	ND	10								
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.1	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.1	70	130			

Sample ID **100nglcs,200ngacac** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **LCSW** Batch ID: **R15477** RunNo: **15477**
Prep Date: Analysis Date: **12/12/2013** SeqNo: **445497** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	111	82.2	124			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	83.5	155			
Trichloroethene (TCE)	19	1.0	20.00	0	93.3	70	130			
Surr: Dibromofluoromethane	7.7		10.00		77.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		86.2	70	130			

Sample ID **1312246-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **MW-5** Batch ID: **R15477** RunNo: **15477**
Prep Date: Analysis Date: **12/12/2013** SeqNo: **445499** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	67.9	137			
Toluene	22	1.0	20.00	0	109	77	127			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	66.5	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.3	66.3	134			
Surr: Dibromofluoromethane	7.7		10.00		77.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **1312246-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **MW-5** Batch ID: **R15477** RunNo: **15477**
Prep Date: Analysis Date: **12/12/2013** SeqNo: **445499** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		80.5	70	130			

Sample ID **1312246-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **MW-5** Batch ID: **R15477** RunNo: **15477**
Prep Date: Analysis Date: **12/12/2013** SeqNo: **445500** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.8	67.9	137	9.00	20	
Toluene	20	1.0	20.00	0	101	77	127	7.65	20	
Chlorobenzene	18	1.0	20.00	0	91.6	70	130	9.59	20	
1,1-Dichloroethene	21	1.0	20.00	0	103	66.5	131	6.91	20	
Trichloroethene (TCE)	17	1.0	20.00	0	83.4	66.3	134	10.2	20	
Surr: Dibromofluoromethane	7.8		10.00		77.8	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.7	70	130	0	0	
Surr: Toluene-d8	11		10.00		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		86.1	70	130	0	0	

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **PBW** Batch ID: **R15515** RunNo: **15515**
Prep Date: Analysis Date: **12/13/2013** SeqNo: **446229** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Acetone	ND	10								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	2.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles, Table I**			
Client ID: **PBW**	Batch ID: **R15515**	RunNo: **15515**			
Prep Date:	Analysis Date: **12/13/2013**	SeqNo: **446229**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloromethane	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	0.50								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	1.0								
Styrene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
Tetrachloroethene (PCE)	ND	0.50								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
Vinyl chloride	ND	0.40								
Xylenes, Total	ND	2.0								
Acrylonitrile	ND	10								
Bromochloromethane	ND	2.0								
Iodomethane	ND	10								
trans-1,4-Dichloro-2-butene	ND	10								
Vinyl acetate	ND	10								
Surr: Dibromofluoromethane	9.1		10.00		90.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.8	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		85.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **100nglcs,200ngacac** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **LCSW** Batch ID: **R15515** RunNo: **15515**
Prep Date: Analysis Date: **12/13/2013** SeqNo: **446231** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	21	1.0	20.00	0	104	82.2	124			
Chlorobenzene	19	1.0	20.00	0	94.7	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	121	83.5	155			
Trichloroethene (TCE)	18	1.0	20.00	0	92.1	70	130			
Surr: Dibromofluoromethane	8.5		10.00		85.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.9	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.5	70	130			

Sample ID **1312246-005ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **MW-8** Batch ID: **R15515** RunNo: **15515**
Prep Date: Analysis Date: **12/13/2013** SeqNo: **446233** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	67.9	137			
Toluene	21	1.0	20.00	0	105	77	127			
Chlorobenzene	20	1.0	20.00	0	99.0	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	125	66.5	131			
Trichloroethene (TCE)	19	1.0	20.00	0	94.4	66.3	134			
Surr: Dibromofluoromethane	8.3		10.00		82.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	8.5		10.00		85.5	70	130			

Sample ID **1312246-005amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **MW-8** Batch ID: **R15515** RunNo: **15515**
Prep Date: Analysis Date: **12/13/2013** SeqNo: **446234** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	67.9	137	4.21	20	
Toluene	20	1.0	20.00	0	100	77	127	5.14	20	
Chlorobenzene	19	1.0	20.00	0	93.1	70	130	6.17	20	
1,1-Dichloroethene	23	1.0	20.00	0	116	66.5	131	6.89	20	
Trichloroethene (TCE)	18	1.0	20.00	0	91.7	66.3	134	2.91	20	
Surr: Dibromofluoromethane	8.8		10.00		88.4	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.9		10.00		89.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles, Table I**			
Client ID: **PBW**	Batch ID: **R15534**	RunNo: **15534**			
Prep Date:	Analysis Date: **12/16/2013**	SeqNo: **446922**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Acetone	ND	10								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	2.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	0.50								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	1.0								
Styrene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	1.0								
Tetrachloroethene (PCE)	ND	0.50								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **PBW** Batch ID: **R15534** RunNo: **15534**
Prep Date: Analysis Date: **12/16/2013** SeqNo: **446922** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	1.0								
Vinyl chloride	ND	0.40								
Xylenes, Total	ND	2.0								
Acrylonitrile	ND	10								
Bromochloromethane	ND	2.0								
Iodomethane	ND	10								
trans-1,4-Dichloro-2-butene	ND	10								
Vinyl acetate	ND	10								
Surr: Dibromofluoromethane	9.4		10.00		94.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			

Sample ID **100nglcs,200ngacac** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles, Table I**
Client ID: **LCSW** Batch ID: **R15534** RunNo: **15534**
Prep Date: Analysis Date: **12/16/2013** SeqNo: **446925** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	103	82.2	124			
Chlorobenzene	19	1.0	20.00	0	96.8	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	127	83.5	155			
Trichloroethene (TCE)	20	1.0	20.00	0	97.7	70	130			
Surr: Dibromofluoromethane	8.4		10.00		83.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **mb-10674**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **10674**	RunNo: **15320**			
Prep Date: **12/6/2013**	Analysis Date: **12/6/2013**	SeqNo: **441452**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Azobenzene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	5.0								
Benzo(b)fluoranthene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	5.0								
Benzoic acid	ND	40								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	5.0								
4-Bromophenyl phenyl ether	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
Chrysene	ND	5.0								
Di-n-butyl phthalate	ND	5.0								
Di-n-octyl phthalate	ND	5.0								
Dibenz(a,h)anthracene	ND	5.0								
Dibenzofuran	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
3,3´-Dichlorobenzidine	ND	5.0								
Diethyl phthalate	ND	5.0								
Dimethyl phthalate	ND	5.0								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	5.0								
2,4-Dinitrophenol	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **mb-10674**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **10674**	RunNo: **15320**			
Prep Date: **12/6/2013**	Analysis Date: **12/6/2013**	SeqNo: **441452**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
Fluoranthene	ND	5.0								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0								
4-Nitrophenol	ND	5.0								
Pentachlorophenol	ND	5.0								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Pyridine	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
Surr: 2-Fluorophenol	100		200.0		49.8	22.7	98			
Surr: Phenol-d5	85		200.0		42.4	23.4	74.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.9	23.3	111			
Surr: Nitrobenzene-d5	72		100.0		72.1	36.8	111			
Surr: 2-Fluorobiphenyl	74		100.0		73.5	38.3	110			
Surr: 4-Terphenyl-d14	82		100.0		81.6	52.1	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **lcs-10674** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **10674** RunNo: **15320**
Prep Date: **12/6/2013** Analysis Date: **12/6/2013** SeqNo: **441453** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	89	10	100.0	0	88.9	48	101			
4-Chloro-3-methylphenol	180	10	200.0	0	88.6	47.9	109			
2-Chlorophenol	160	10	200.0	0	81.7	40	105			
1,4-Dichlorobenzene	84	10	100.0	0	83.7	40.8	94.3			
2,4-Dinitrotoluene	79	10	100.0	0	79.0	28.3	131			
N-Nitrosodi-n-propylamine	89	10	100.0	0	88.8	46.2	119			
4-Nitrophenol	77	10	200.0	0	38.4	10.5	67.9			
Pentachlorophenol	120	20	200.0	0	59.4	22.4	81.1			
Phenol	100	10	200.0	0	50.9	21.4	72.9			
Pyrene	85	10	100.0	0	84.6	46.9	109			
1,2,4-Trichlorobenzene	88	10	100.0	0	88.5	43.1	98.4			
Surr: 2-Fluorophenol	110		200.0		55.7	22.7	98			
Surr: Phenol-d5	95		200.0		47.4	23.4	74.9			
Surr: 2,4,6-Tribromophenol	200		200.0		98.3	23.3	111			
Surr: Nitrobenzene-d5	82		100.0		81.7	36.8	111			
Surr: 2-Fluorobiphenyl	82		100.0		82.3	38.3	110			
Surr: 4-Terphenyl-d14	96		100.0		96.3	52.1	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **MB-10686** SampType: **MBLK** TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW** Batch ID: **10686** RunNo: **15314**
Prep Date: **12/6/2013** Analysis Date: **12/7/2013** SeqNo: **441342** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-10686** SampType: **LCS** TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW** Batch ID: **10686** RunNo: **15314**
Prep Date: **12/6/2013** Analysis Date: **12/7/2013** SeqNo: **441343** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Sample ID **1312246-001DMS** SampType: **MS** TestCode: **EPA Method 7470: Mercury**
Client ID: **MW-5** Batch ID: **10686** RunNo: **15314**
Prep Date: **12/6/2013** Analysis Date: **12/7/2013** SeqNo: **441349** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.9	75	125			

Sample ID **1312246-001DMSD** SampType: **MSD** TestCode: **EPA Method 7470: Mercury**
Client ID: **MW-5** Batch ID: **10686** RunNo: **15314**
Prep Date: **12/6/2013** Analysis Date: **12/7/2013** SeqNo: **441350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.9	75	125	0.00919	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **MB-10692** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Iron	ND	0.050								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS-10692** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.45	0.020	0.5000	0	90.5	80	120			
Barium	0.44	0.020	0.5000	0	87.7	80	120			
Cadmium	0.45	0.0020	0.5000	0	90.0	80	120			
Calcium	49	1.0	50.00	0	98.0	80	120			
Chromium	0.45	0.0060	0.5000	0	89.3	80	120			
Iron	0.45	0.050	0.5000	0	89.6	80	120			
Lead	0.43	0.0050	0.5000	0	86.7	80	120			
Magnesium	50	1.0	50.00	0	99.4	80	120			
Manganese	0.43	0.0020	0.5000	0	86.3	80	120			
Selenium	0.45	0.050	0.5000	0	90.0	80	120			
Silver	0.095	0.0050	0.1000	0	94.6	80	120			
Sodium	49	1.0	50.00	0	98.0	80	120			

Sample ID **1312246-006DMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-9** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442219** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.45	0.020	0.5000	0.01094	88.7	75	125			
Barium	0.50	0.020	0.5000	0.07098	86.1	75	125			
Cadmium	0.44	0.0020	0.5000	0	88.4	75	125			
Chromium	0.44	0.0060	0.5000	0	87.7	75	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **1312246-006DMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-9** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442219** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.41	0.0050	0.5000	0	82.5	75	125			
Magnesium	89	1.0	50.00	42.43	94.1	75	125			
Selenium	0.43	0.050	0.5000	0	85.8	75	125			

Sample ID **1312246-006DMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-9** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442220** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.47	0.020	0.5000	0.01094	92.8	75	125	4.31	20	
Barium	0.51	0.020	0.5000	0.07098	87.0	75	125	0.911	20	
Cadmium	0.45	0.0020	0.5000	0	89.8	75	125	1.62	20	
Chromium	0.44	0.0060	0.5000	0	88.6	75	125	1.00	20	
Lead	0.42	0.0050	0.5000	0	83.4	75	125	1.03	20	
Magnesium	94	1.0	50.00	42.43	103	75	125	4.77	20	
Selenium	0.43	0.050	0.5000	0	85.7	75	125	0.126	20	

Sample ID **1312246-006DMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-9** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	200	5.0	50.00	148.5	99.1	75	125			
Iron	1.5	0.25	0.5000	0.9877	97.3	75	125			
Manganese	2.1	0.010	0.5000	1.688	86.3	75	125			
Sodium	200	5.0	50.00	146.0	103	75	125			

Sample ID **1312246-006DMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **MW-9** Batch ID: **10692** RunNo: **15348**
Prep Date: **12/7/2013** Analysis Date: **12/9/2013** SeqNo: **442285** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	210	5.0	50.00	148.5	114	75	125	3.79	20	
Iron	1.5	0.25	0.5000	0.9877	107	75	125	3.37	20	
Manganese	2.2	0.010	0.5000	1.688	107	75	125	4.68	20	
Sodium	210	5.0	50.00	146.0	118	75	125	3.85	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID	**1312246-006DMS**	SampType:	**MS**	TestCode:	**EPA 6010B: Total Recoverable Metals**				
Client ID:	**MW-9**	Batch ID:	**10692**	RunNo:	**15460**				
Prep Date:	**12/7/2013**	Analysis Date:	**12/12/2013**	SeqNo:	**445101**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	99.7	75	125			

Sample ID	**1312246-006DMSD**	SampType:	**MSD**	TestCode:	**EPA 6010B: Total Recoverable Metals**				
Client ID:	**MW-9**	Batch ID:	**10692**	RunNo:	**15460**				
Prep Date:	**12/7/2013**	Analysis Date:	**12/12/2013**	SeqNo:	**445102**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.099	0.0050	0.1000	0	98.7	75	125	0.988	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1312246**
30-Dec-13

Client: Terracon
Project: T or C LF

Sample ID **mb-1** SampType: **mblk** TestCode: **SM2320B: Alkalinity**
Client ID: **PBW** Batch ID: **R15308** RunNo: **15308**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441188** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1** SampType: **lcs** TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW** Batch ID: **R15308** RunNo: **15308**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441189** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79	20	80.00	0	98.2	90	110			

Sample ID **1312246-001b ms** SampType: **ms** TestCode: **SM2320B: Alkalinity**
Client ID: **MW-5** Batch ID: **R15308** RunNo: **15308**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441191** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	280	20	80.00	210.9	90.5	18.3	129			

Sample ID **1312246-001b msd** SampType: **msd** TestCode: **SM2320B: Alkalinity**
Client ID: **MW-5** Batch ID: **R15308** RunNo: **15308**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441192** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	280	20	80.00	210.9	86.8	18.3	129	1.04	10	

Sample ID **mb-2** SampType: **mblk** TestCode: **SM2320B: Alkalinity**
Client ID: **PBW** Batch ID: **R15308** RunNo: **15308**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441204** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-2** SampType: **lcs** TestCode: **SM2320B: Alkalinity**
Client ID: **LCSW** Batch ID: **R15308** RunNo: **15308**
Prep Date: Analysis Date: **12/6/2013** SeqNo: **441205** Units: **mg/L CaCO3**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79	20	80.00	0	98.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-LC Work Order Number: 1312246 RcptNo: 1

Received by/date: ALF 12/05/13

Logged By: **Michelle Garcia** 12/5/2013 4:30:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 12/6/2013 8:53:03 AM Michelle Garcia

Reviewed By: 12/06/13

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
Adjusted? _____
Checked by: MG

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Not Present			

Chain-of-Custody Record

Client: Terracon

Mailing Address: 1648 Hickory Loop Suite 105
Las Cruces, NM 88005

Phone #: 575-527-1700

email or Fax#: jkwilliams@terracon.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Tor C LF

Project #: 6813700

Project Manager: Kyle Williams

Sampler: Kyle Williams

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1312246	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals + Fe, Mn	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8151 Herbicides	Nitrate EPA 300			Air Bubbles (Y or N)
12-5-13	0940	GW	MW-5	various, 14	various	-001							X	X	X	X	X	X	X			
	1030	GW	MW-3R	12		-002							X	X	X	X	X	X	X			
	1050	GW	MW-10			-003							X	X	X	X	X	X	X			
	1115	GW	MW-1			-004							X	X	X	X	X	X	X			
	1130	GW	MW-8			-005							X	X	X	X	X	X	X			
	1155	GW	MW-9			006							X	X	X	X	X	X	X			
			Trip Blank 4/12/06			-007										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/5/13	4:30	[signature]	[signature]	12/5/13	4:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: See Attached List JAT 12/06/13

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 13, 2013

Kyle Williams

Terracon
1630 Hickory Loop Ste. H
Las Cruces, NM 88005
TEL: (575) 527-1700
FAX (575) 527-1092

RE: T or C LF OrderNo.: 1312244

Dear Kyle Williams:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/5/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1312244**
Date Reported: **12/13/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: VP-3
Project: T or C LF
Collection Date: 12/5/2013 12:30:00 PM
Lab ID: 1312244-001
Matrix: AIR
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMP**	
Benzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Toluene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Ethylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Naphthalene	ND	0.20		µg/L	1	12/9/2013 12:06:40 PM	R15365
1-Methylnaphthalene	ND	0.40		µg/L	1	12/9/2013 12:06:40 PM	R15365
2-Methylnaphthalene	ND	0.40		µg/L	1	12/9/2013 12:06:40 PM	R15365
Acetone	ND	1.0		µg/L	1	12/9/2013 12:06:40 PM	R15365
Bromobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Bromodichloromethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Bromoform	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Bromomethane	ND	0.20		µg/L	1	12/9/2013 12:06:40 PM	R15365
2-Butanone	ND	1.0		µg/L	1	12/9/2013 12:06:40 PM	R15365
Carbon disulfide	ND	1.0		µg/L	1	12/9/2013 12:06:40 PM	R15365
Carbon tetrachloride	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Chlorobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Chloroethane	ND	0.20		µg/L	1	12/9/2013 12:06:40 PM	R15365
Chloroform	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Chloromethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
2-Chlorotoluene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
4-Chlorotoluene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
cis-1,2-DCE	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/9/2013 12:06:40 PM	R15365
Dibromochloromethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Dibromomethane	ND	0.20		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Dichlorodifluoromethane	0.43	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,1-Dichloroethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,1-Dichloroethene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2-Dichloropropane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,3-Dichloropropane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
2,2-Dichloropropane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: VP-3
Project: T or C LF
Collection Date: 12/5/2013 12:30:00 PM
Lab ID: 1312244-001
Matrix: AIR
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMP**	
1,1-Dichloropropene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Hexachlorobutadiene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
2-Hexanone	ND	1.0		µg/L	1	12/9/2013 12:06:40 PM	R15365
Isopropylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
4-Isopropyltoluene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/9/2013 12:06:40 PM	R15365
Methylene chloride	ND	0.30		µg/L	1	12/9/2013 12:06:40 PM	R15365
n-Butylbenzene	ND	0.30		µg/L	1	12/9/2013 12:06:40 PM	R15365
n-Propylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
sec-Butylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Styrene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
tert-Butylbenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
trans-1,2-DCE	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Trichlorofluoromethane	0.17	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/9/2013 12:06:40 PM	R15365
Vinyl chloride	ND	0.10		µg/L	1	12/9/2013 12:06:40 PM	R15365
Xylenes, Total	ND	0.15		µg/L	1	12/9/2013 12:06:40 PM	R15365
Surr: Dibromofluoromethane	90.2	70-130		%REC	1	12/9/2013 12:06:40 PM	R15365
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%REC	1	12/9/2013 12:06:40 PM	R15365
Surr: Toluene-d8	96.6	70-130		%REC	1	12/9/2013 12:06:40 PM	R15365
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	12/9/2013 12:06:40 PM	R15365

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: VP-4
Project: T or C LF
Collection Date: 12/5/2013 1:00:00 PM
Lab ID: 1312244-002
Matrix: AIR
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMP**	
Benzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Toluene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Ethylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Naphthalene	ND	0.20		µg/L	1	12/9/2013 1:03:17 PM	R15365
1-Methylnaphthalene	ND	0.40		µg/L	1	12/9/2013 1:03:17 PM	R15365
2-Methylnaphthalene	ND	0.40		µg/L	1	12/9/2013 1:03:17 PM	R15365
Acetone	ND	1.0		µg/L	1	12/9/2013 1:03:17 PM	R15365
Bromobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Bromodichloromethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Bromoform	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Bromomethane	ND	0.20		µg/L	1	12/9/2013 1:03:17 PM	R15365
2-Butanone	ND	1.0		µg/L	1	12/9/2013 1:03:17 PM	R15365
Carbon disulfide	ND	1.0		µg/L	1	12/9/2013 1:03:17 PM	R15365
Carbon tetrachloride	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Chlorobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Chloroethane	ND	0.20		µg/L	1	12/9/2013 1:03:17 PM	R15365
Chloroform	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Chloromethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
2-Chlorotoluene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
4-Chlorotoluene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
cis-1,2-DCE	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/9/2013 1:03:17 PM	R15365
Dibromochloromethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Dibromomethane	ND	0.20		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Dichlorodifluoromethane	0.65	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,1-Dichloroethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,1-Dichloroethene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2-Dichloropropane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,3-Dichloropropane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
2,2-Dichloropropane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: VP-4
Project: T or C LF
Collection Date: 12/5/2013 1:00:00 PM
Lab ID: 1312244-002
Matrix: AIR
Received Date: 12/5/2013 4:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMP**	
1,1-Dichloropropene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Hexachlorobutadiene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
2-Hexanone	ND	1.0		µg/L	1	12/9/2013 1:03:17 PM	R15365
Isopropylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
4-Isopropyltoluene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/9/2013 1:03:17 PM	R15365
Methylene chloride	ND	0.30		µg/L	1	12/9/2013 1:03:17 PM	R15365
n-Butylbenzene	ND	0.30		µg/L	1	12/9/2013 1:03:17 PM	R15365
n-Propylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
sec-Butylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Styrene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
tert-Butylbenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
trans-1,2-DCE	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Trichlorofluoromethane	0.12	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/9/2013 1:03:17 PM	R15365
Vinyl chloride	ND	0.10		µg/L	1	12/9/2013 1:03:17 PM	R15365
Xylenes, Total	ND	0.15		µg/L	1	12/9/2013 1:03:17 PM	R15365
Surr: Dibromofluoromethane	89.0	70-130		%REC	1	12/9/2013 1:03:17 PM	R15365
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%REC	1	12/9/2013 1:03:17 PM	R15365
Surr: Toluene-d8	96.7	70-130		%REC	1	12/9/2013 1:03:17 PM	R15365
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	12/9/2013 1:03:17 PM	R15365

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1312244-001B; VP-3
Location:
Lab ID: G13120158-001

Report Date: 12/11/13
Collection Date: 12/05/13 12:30
Date Received: 12/10/13
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Methane	< 0.001	Mol %		GPA 2261	12/11/13 11:40 / djb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated
Client Sample ID: 1312244-002B; VP-4
Location:
Lab ID: G13120158-002

Report Date: 12/11/13
Collection Date: 12/05/13 13:00
Date Received: 12/10/13
Sampled By: Not Provided

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
NATURAL GAS CHROMATOGRAPHIC ANALYSIS REPORT					
Methane	< 0.001	Mol %		GPA 2261	12/11/13 13:16 / djb

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Gillette, WY Branch

Client: Hall Environmental
Project: Not Indicated

Report Date: 12/11/13
Work Order: G13120158

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: GPA 2261									Analytical Run: Varian GC_131211A	
Sample ID: ICV-1312110828		Initial Calibration Verification Standard							12/11/13 08:28	
Methane		72.389	Mol %	0.001	99	90	110			
Method: GPA 2261									Batch: R208759	
Sample ID: LCS-1312110846		Laboratory Control Sample				Run: Varian GC_131211A			12/11/13 08:47	
Methane		93.466	Mol %	0.001	100	90	110			
Sample ID: G13120158-001ADUP		Sample Duplicate				Run: Varian GC_131211A			12/11/13 11:45	
Methane		< 0.001	Mol %	0.001					10	
Sample ID: G13120158-002ADUP		Sample Duplicate				Run: Varian GC_131211A			12/11/13 13:20	
Methane		< 0.001	Mol %	0.001					10	
Sample ID: LCS-1312111330		Laboratory Control Sample				Run: Varian GC_131211A			12/11/13 13:31	
Methane		93.488	Mol %	0.001	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-LC Work Order Number: 1312244 RcptNo: 1

Received by/date: AF 12/05/13

Logged By: **Michelle Garcia** 12/5/2013 4:30:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 12/6/2013 8:41:39 AM Michelle Garcia

Reviewed By: 12/06/13

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☐ NA ☑
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Chain-of-Custody Record

Client: Terracon

Mailing Address: 1640 Hickory Loop Suite 105
Las Cruces, NM 88005

Phone #: 575-527-1700

email or Fax#: jkwilliams@terracon.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: Ton C LF

Project #: 68137008

Project Manager: Kyle Williams

Sampler: Kyle Williams

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1312244	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	8021B/OC	8021B Methane			Air Bubbles (Y or N)
12-5-13	1230	gas	VP-3	tedlar	NA	-001												X	X			
12-5-13	1300	gas	VP-4	tedlar	NA	-002												X	X			

Date	Time	Relinquished by:	Received by:	Date	Time
12/5/13	4:30			12/5/13	4:30
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

2006 OCT 23 PM 2:24

MINERAL-POTENTIAL REPORT

T. 13 S., R. 4 W., SECTION 22: LOT 3, NMPM

A 30.12-acre parcel located near Truth or Consequences, NM

PREPARED FOR SUBMITTAL TO:

Beth M. Burkard
BASCOR Environmental, Inc.
800 W. Central Road, Suite 104N
Mt. Prospect, IL 60056

October 19, 2006

Thomas C. Custer
Delta Terra
1845 Meadow Ln
Las Cruces, NM 88007
505-526-1945
deltaterra@earthlink.net

TABLE OF CONTENTS

SUMMARY 1

1.0 INTRODUCTION 2

1.1 Purpose 2
1.2 Background 2
1.3 Location 2

2.0 MINING CLAIMS, LEASES, PERMITS 3

3.0 GEOLOGIC SETTING 2

3.1 Physiography 2
3.2 Lithologic Units 3

4.0 ENERGY AND MINERAL RESOURCES 3

4.1 Known Mineral Deposits 3
4.2 Known Prospects and Mineral Occurrences 3
4.3 Strategic and Critical Minerals 3

5.0 POTENTIAL FOR OCCURRENCE AND DEVLOPMENT OF ENERGY AND MINERAL RESOURCES 3

5.1 Geothermal Energy 3
5.2 Oil and Gas 4
5.3 Mineral Materials 4
5.4 Other Energy and Mineral Resources 5

6.0 CONCLUSIONS 5

7.0 RECOMMENDATIONS 6

8.0 REFERENCES 7

FIGURES 1 AND 2: LOCATION MAPS

FIGURE 3: SITE MAP

APPENDIX 1: BLM MINERAL-POTENTIAL CLASSIFICATION SYSTEM

APPENDIX 2: PHOTOGRAPHS

SUMMARY

A Mineral-Potential report was prepared to assess the energy resource and mineral potential of a 30.12-acre parcel of land located about 2.5 miles north-northeast of Truth or Consequences, New Mexico. The subject parcel is federally-owned public land managed by the U.S. Department of the Interior, Bureau of Land Management, and is proposed for disposal to the City of Truth or Consequences. Based on site reconnaissance and literature review, the findings are as follows:

- The subject property has high potential for the occurrence of commercial-quality mineral materials (sand and gravel). However, development potential is considered low due to probable surface interference with planned redevelopment of the property for recreational use.

- The subject property has moderate potential for the occurrence and development of direct-use, low-temperature geothermal resources.

- The potential for the occurrence of all other energy and mineral resources is considered low.

It is recommended that BLM proceed with disposal of the subject property to the City of Truth or Consequences by transferring both the surface and mineral estates.

1.0 INTRODUCTION

In October 2006, BASCOR Environmental, Inc. retained Thomas C. Custer, Delta Terra, to prepare a Mineral-Potential report for a 30.12-acre parcel of land located 2.5 miles north-northeast of Truth or Consequences (T or C), New Mexico. The subject parcel is federally-owned public land managed by the U.S. Department of the Interior (USDI), Bureau of Land Management (BLM). BLM is proposing to transfer ownership of the parcel to the City of T or C. This report follows the guidance in BLM Manual 3060, Mineral Reports-Preparation and Review, 1994.

1.1 Purpose

The purpose of this report is to assess the potential for the occurrence and development of energy and mineral resources on the subject parcel. If federal land proposed for disposal has high potential for energy or mineral resources, the mineral estate is usually reserved to the federal government upon transfer of the surface estate.

1.2 Background

The City of T or C operated a municipal, solid-waste landfill on the property from 1961 to 1974. BLM proposes to dispose of this land to the City of T or C for redevelopment of the site for recreational uses. A closure plan for the old landfill, prepared by BASCOR on behalf of the City, has been approved by the New Mexico Environment Department (2006).

1.3 Location

The property is located in Sierra County, New Mexico about 2.5 miles north-northeast of downtown Truth or Consequences. The legal description of the property is T. 13 S., R. 4 W., Section 22: Lot 3, NMPM (see Figures 1 and 2).

2.0 MINING CLAIMS, LEASES, PERMITS

BLM records indicate that no mining claims, leases, or other mineral-use permits are connected with this property (U.S. Department of the Interior, 2006).

3.0 GEOLOGIC SETTING

3.1 Physiography

The T or C region is situated within the Basin and Range physiographic province. The dominant structural feature of the region is the Rio Grande rift which extends through central Sierra County. The rift is an active thermo-tectonic system that extends from south-central Colorado to northern Chihuahua, Mexico. The rift is characterized by late Quaternary faulting and volcanic activity, high heat flow, and deep sedimentary basins.

Geologic environments in the region are diverse. Igneous intrusions, lava flows, cinder cones, tilted fault blocks of sedimentary rocks, bolson-fill deposits, and fluvial deposits of the Rio Grande are present within a 15-mile radius of T or C.

The subject property is situated on Quaternary alluvial deposits of the ancestral Rio Grande. A prominent north-trending ridge on the western portion of the subject property is composed primarily of sand and gravel with interbedded clay lenses of the axial river-facies of the Palomas Formation (Lozinsky et. al. 1986). The area east of the ridge and occupying the lowland portion of the subject property is situated on undifferentiated fluvial sediments of the ancestral Rio Grande consisting primarily of sand and silt with some gravel.

3.2 Lithologic Units

Other than the Palomas Formation and associated fluvial deposits of the ancestral Rio Grande there are no other lithologic units that crop out on the subject property.

4.0 ENERGY AND MINERAL RESOURCES

4.1 Known Mineral Deposits

There are no known mineral deposits on the subject property.

4.2 Known Prospects and Mineral Occurrences

The only known mineral occurrences on the property are the sands and gravels of the Palomas Formation that comprise the north-trending ridge on the western portion of the property. Sand and gravel is currently being extracted from the arroyo adjacent to the subject property just west of the ridge. The materials are being used in the development of Turtleback Mountain Resort on land north and east of the subject property.

4.3 Strategic and Critical Materials

There are no strategic and critical minerals or materials associated with the property (U.S. Department of Defense, 2006).

5.0 POTENTIAL FOR OCCURRENCE AND DEVELOPMENT OF ENERGY AND MINERAL RESOURCES

5.1 Geothermal Energy

The most promising geothermal prospects in New Mexico are within the Rio Grande rift. Late Cenozoic extensional tectonics, basaltic volcanism, and thermal activity characterize the T or C vicinity. Numerous shallow wells and springs in the downtown area of T or C discharge thermal waters with temperatures ranging from 37 °C to 46 °C. The low-temperature uses of these thermal waters are mainly bath houses. Effective space-heating

applications normally require temperatures greater than 50 °C (Witcher, 1995 and New Mexico Energy Research and Development Institute, 1981).

On the subject property, four ground-water monitoring wells and six well points drilled in support of an environmental site investigation of the old T or C landfill, revealed water temperatures ranging from 23.8 °C to 37.5 °C (C.C. Johnson & Malhotra, 1995). The depths to ground water in the wells ranged from approximately 4 to 30 feet.

Based on local and regional geothermal studies and data, the subject parcel is considered to have moderate potential for the occurrence and development of low-temperature geothermal resources.

5.2 Oil and Gas

The T or C region is within a frontier area of New Mexico in terms of petroleum exploration. Cambrian through Cretaceous sediments exceeding 10,000 feet occur in this frontier area and should provide good to excellent reservoir and source rocks (Grant and Foster, 1989). Laramide and later rift-related structural features provide potential for stratigraphic and structural traps but the rock units are not uniformly distributed. Within the vicinity of the subject property, petroleum-bearing rock types and formation thicknesses are generally not known. The nearest oil and gas test well is the Brown and Lester Scott-A #1, a dry hole with a depth of 520 feet, located in T. 13 S., R. 4 W., Section 28:SE¼ about 1.5 miles southwest of the subject property. Approximately 3 miles north of the subject property are two other dry test wells: the Getty Oil Co. #2 W. Elephant Butte Federal located in T. 13 S., R. 4 W., Section 3:SE¼ and the Summit Mims #A-1, located about 0.5 miles east-northeast of the Getty well on the Pedro Armendaris land grant. These holes were drilled to 7,556 and 6,195 feet respectively (New Mexico Bureau of Mines and Mineral Resources, no date).

Tertiary Basin and Range tectonism and volcanism have probably reduced the potential for any significant accumulation of oil. A deterrent to oil and gas exploration is the presence of thick sequences of Tertiary deposits including unconsolidated valley fill, volcanics, and materials eroded from Laramide uplifts (Grant and Foster, 1989). Based on this information, the potential for the occurrence of oil and gas in the vicinity of the subject property is considered low.

5.3 Mineral Materials

The fluvial sand and gravel deposits, on and adjacent to the subject property, offer high potential for the occurrence of materials that meet specifications for various types of construction projects. However, commercial development of these mineral materials would probably not occur on the subject property because the property is planned for redevelopment including closure of the old landfill and construction of a golf practice range. Any commercial extraction of mineral materials would likely interfere with redevelopment of the site. Consequently, the potential for the occurrence of commercial sand and gravel deposits is high however the potential for development is low.

5.4 Other Energy and Mineral Resources

There are no coal outcrops within the subject property. Most discoveries of economic coal resources in New Mexico are restricted to Cretaceous deposits which are not present on the property. Consequently the potential for the occurrence of coal is considered low.

Economic deposits of potassium and sodium compounds such as potash, soda ash, and salt are essentially restricted to large-volume, widespread evaporate deposits. This type of geologic environment is not present on the property or in the vicinity. Consequently, the potential for the occurrence of these types of mineral deposits is low.

The geologic environment in the vicinity of the property is not suitable for the occurrence of metallic minerals. These types of mineral occurrences are not associated with alluvial deposits of the ancestral Rio Grande. A possible exception would be placer deposits however there is no known source for potential placer deposits in proximity to the subject land. Consequently, the potential for the occurrence of metallic minerals is considered low.

Other than mineral materials such as sand and gravel, the Quaternary alluvial deposits on the property and in the vicinity are not a favorable type of geologic environment for the occurrence of other types of mineral resources.

A summary of mineral potential for the subject property is shown below:

RESOURCE	POTENTIAL FOR OCCURRENCE/LEVEL OF CERTAINTY[1]	POTENTIAL FOR DEVELOPMENT[2]
ENERGY RESOURCES		
Geothermal	Mod/C	Mod
MINERAL MATERIALS		
Sand and Gravel	High/D	Low
ALL OTHER ENERGY AND MINERAL RESOURCES	Low/D	Low

[1] See Appendix 1, BLM Mineral-Potential Classification System
[2] Subjective forecast of development potential within the next 20 years

6.0 CONCLUSIONS

Based on the analyses of mineral occurrence and development potential, on and in the vicinity of the subject property, there are no valuable energy resources or minerals occurring on the property. There is moderate potential for the occurrence and development of direct-use, low-temperature geothermal resources. There is high potential for the occurrence of commercial-quality mineral materials (sand and gravel) but low potential for development due to probable surface interference with the proposed recreational use of the property.

7.0 RECOMMENDATIONS

It is recommended that the BLM's proposed disposal of the subject property be consummated by transfer of both the surface and mineral estates to the City of T or C.

8.0 REFERENCES

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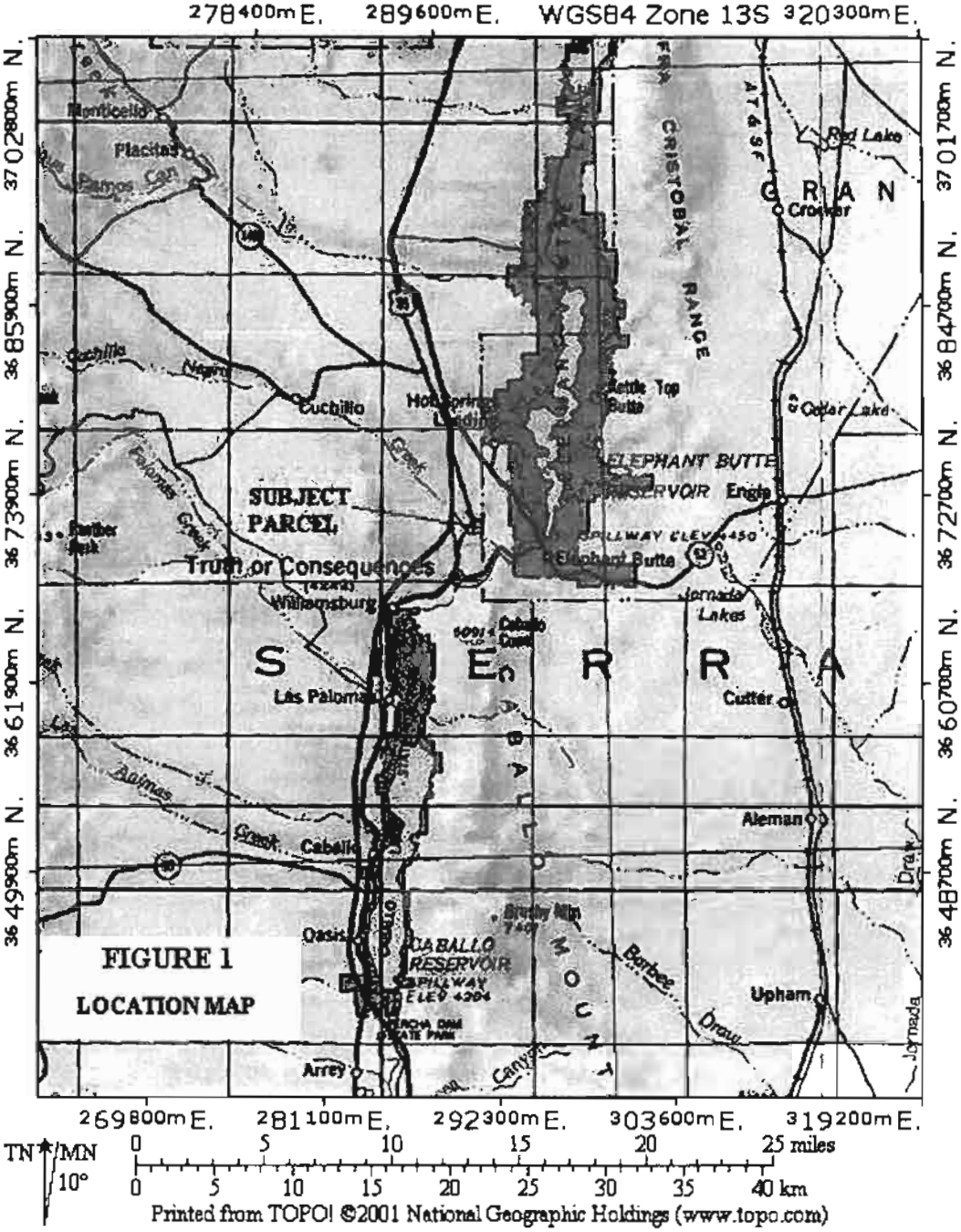

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APPENDIX 1

BLM MINERAL-POTENTIAL CLASSIFICATION SYSTEM

BLM MINERAL-POTENTIAL CLASSIFICATION SYSTEM

Level of Potential

O. The geologic environment, the inferred geologic processes, and the lack of mineral occurrences indicate no potential for accumulation of mineral resources.

L. The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.

M. The geologic environment, the inferred geologic processes, and the reported mineral occurrences or valid geochemical/geophysical anomalies indicate moderate potential for accumulation of geologic resources.

H. The geologic environment, the inferred geologic processes, the reported mineral occurrences and/or valid geochemical/geophysical anomalies, and the known mines or deposits indicate high potential for accumulation of mineral resources. The "known mines or deposits" do not have to be within the area that is being classified but have to be within the same type of geologic environment.

ND. Mineral potential not determined due to lack of useful data. This notation does not require a level-of-certainty qualifier.

Level of Certainty

A. The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.

B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.

C. The available data provide direct evidence but are quantitatively minimal to support or refute the possible existence of mineral resources.

D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

For the determination of No Potential, use O/D. This class shall seldom be used, and when used it should be for a specific commodity only. For example, if the available data show that the surface and subsurface types or rock in the respective area is batholithic (igneous intrusive), one can conclude, with reasonable certainty, that the area does not have potential for coal.

In this classification system, potential refers to potential for the presence (occurrence) of a concentration of one or more energy and/or mineral resources. It does not refer to ore or imply potential for development and/or extraction of mineral resources. It does not imply that the potential concentration is or may be economic, that is, could be extracted profitably.

Source: BLM Manual 3031, Energy and Mineral Resource Assessment, June 19, 1985

NLCE-13-018-13-118

FINAL
Biological Resources Survey Report

For a Patent Change of 30 Acres in Elephant Butte, Sierra County, New Mexico

September 2013

Quality ■ Commitment ■ Service

zia engineering & environmental consultants, llc

FINAL
BIOLOGICAL RESOURCES SURVEY REPORT
FOR A PATENT CHANGE OF 30 ACRES IN ELEPHANT BUTTE, SIERRA COUNTY, NEW MEXICO

Zia Project No. NLCE-13-018
Document No. NLCE-13-018-13-118
Report Date: 4 September 2013

Prepared for:

BASCOR Environmental Inc.
PO Box 669
Mt. Prospect, IL 60056
(847) 812-0409

Submitted by:

Leah R. Markiewitz
Project Manager / NEPA Specialist

Kenneth Stabinsky
Senior Scientist

zia engineering & environmental consultants, llc

755 S. Telshor Blvd., Suite F-201
Las Cruces, New Mexico
(575) 532-1526 voice
(575) 532-1587 fax

The biological resources survey report was prepared by Zia Engineering & Environmental Consultants, LLC (Zia) under Zia Project Number NLCE-13-018. Zia's point of contact with BASCOR Environmental Inc. (BASCOR) was Sam Senn, P.E. Zia employees and their role in the survey and document production are indicated in Table 1.

TABLE 1. ZIA PROJECT STAFFING

Leah R. Markiewitz	**Victoria Brown**
Project Scientist / NEPA Specialist	Project Scientist
Role: Surveyor, Main Author, Project Manager	Role: Surveyor, Reviewer
Kenneth Stabinsky	**Adriana Caraballo**
Biologist / GIS Specialist	Publications
Role: Reviewer, Figures	Role: QA/QC

TABLE OF CONTENTS

1.0 INTRODUCTION 5

2.0 METHODS 6
2.1 IDENTIFICATION OF PLANT AND WILDLIFE SPECIES 8
2.2 IDENTIFICATION OF LISTED SPECIES 8
2.3 WETLANDS AND WATERWAYS 8

3.0 EXISTING ENVIRONMENTAL CONDITIONS 9
3.1 CLIMATE 9
3.2 SOILS 9
3.3 VEGETATION 10
3.4 NOXIOUS WEEDS 14
3.5 WILDLIFE 14
3.6 MIGRATORY BIRDS 15
3.7 WETLANDS AND WATERS OF THE U.S. 15

4.0 FEDERAL AND STATE LISTED SPECIES AND HABITATS FOR SIERRA COUNTY 16
4.1 SPECIES ELIMINATED FROM FURTHER ANALYSIS 16
4.1.1 Threatened and Endangered Plant Species 17
4.1.2 Threatened and Endangered Wildlife Species 18
4.2 SPECIES IMPACT EVALUATIONS 22
4.2.1 Plants 22
4.2.2 Wildlife 22

5.0 CONCLUSIONS AND RECOMMENDATIONS 23
5.1 GENERAL VEGETATION AND WILDLIFE 23
5.1.1 Vegetation 23
5.1.2 Wildlife 23
5.2 MIGRATORY BIRDS 23
5.3 WETLANDS AND WATERS OF THE U.S. 24
5.4 FEDERAL AND STATE LISTED SPECIES AND HABITATS 24
5.4.1 Threatened and Endangered Plant Species 24
5.4.2 Threatened and Endangered Wildlife Species 24

6.0 REFERENCES 25

List of Figures

Figure 1. Project Area Vicinity Map 3
Figure 2. Project Area Topographic Map 4
Figure 3. Project Area Aerial Map 5
Figure 4. Overlooking northeast end of project area from top of mesa 11
Figure 5. Overlooking center of project area from top of mesa 11
Figure 6. Overlooking southeast end of the project area from top of mesa 12
Figure 7. South end of project area on top of mesa 12
Figure 8. North end of project area on top of mesa 13
Figure 9. Saltcedar west of the project area 14
Figure 10. National Wetland Inventory Map of the Project Area 15
Figure 11. Critical Habitat Map 16

List of Tables

Table 1. Zia Project Staffing ii
Table 2. Project Area UTM Coordinates 5
Table 3. Qualitative Estimate of Species Abundance 8
Table 4. Soils within the Project Area 9
Table 5. Observed Plant Species 13
Table 6. Observed Wildlife Species 14
Table 7. Threatened and Endangered PLANT SPECIES 17
Table 8. Threatened and Endangered Wildlife SPECIES 18
Table 9. Effect Determination of Threatened and Endangered Wildlife SPECIES 22

Appendices

APPENDIX A. Threatened, Endangered, and Sensitive Species Resources
APPENDIX B. New Mexico Department of Agriculture Noxious Weed List
APPENDIX C. New Mexico Department of Game and Fish Guidelines

FINAL BIOLOGICAL RESOURCES SURVEY REPORT

1.0 INTRODUCTION

Zia Engineering & Environmental Consultants, LLC (Zia) was requested by BASCOR Environmental Inc. (BASCOR) per the request of the Bureau of Land Management (BLM) to conduct a new biological resources survey. Zia conducted a biological survey in 2006 for BASCOR. The project area is located on lands managed by the BLM.

Funding is provided through private sources. The biological survey is proposed to be used to support the completion of an environmental assessment (EA). The EA will be applied to the completion of a patent change from the BLM to the City of Truth or Consequences.

The project area comprises approximately 30 acres (12 hectares) of BLM west of Mims Lake and within the Turtleback Mountain Resort golf course. Historically, the property used to be a landfill for the City of Truth or Consequences. The property was leased in 1961 from the BLM under the Recreation and Public Purposes Act. Eventually, the landfill was closed in 1974 in accordance to the terms of the BLM lease.

Starting in 2006, the City of Truth or Consequences began taking action under the direction of the BLM and the New Mexico Environment Department (NMED) to facilitate properly redevelopment of the property. In 2007, NMED informed BASCOR that a concurrence was made of no significant impact from the results and conclusions of the groundwater investigation following the clean-up and capping of the landfill. The project area is identified within Lot 3, of Section 22, Township 13 South, Range 4 West.

The project boundaries are identified in Table 2 and Figures 1 - 3.

TABLE 2. PROJECT AREA UTM COORDINATES
Zone 13, WGS 84

Location	Easting	Northing
Northeast corner	291951	3671783
Northwest corner	291647	3671786
Southeast corner	291942	3671383
Southwest corner	291639	3671390

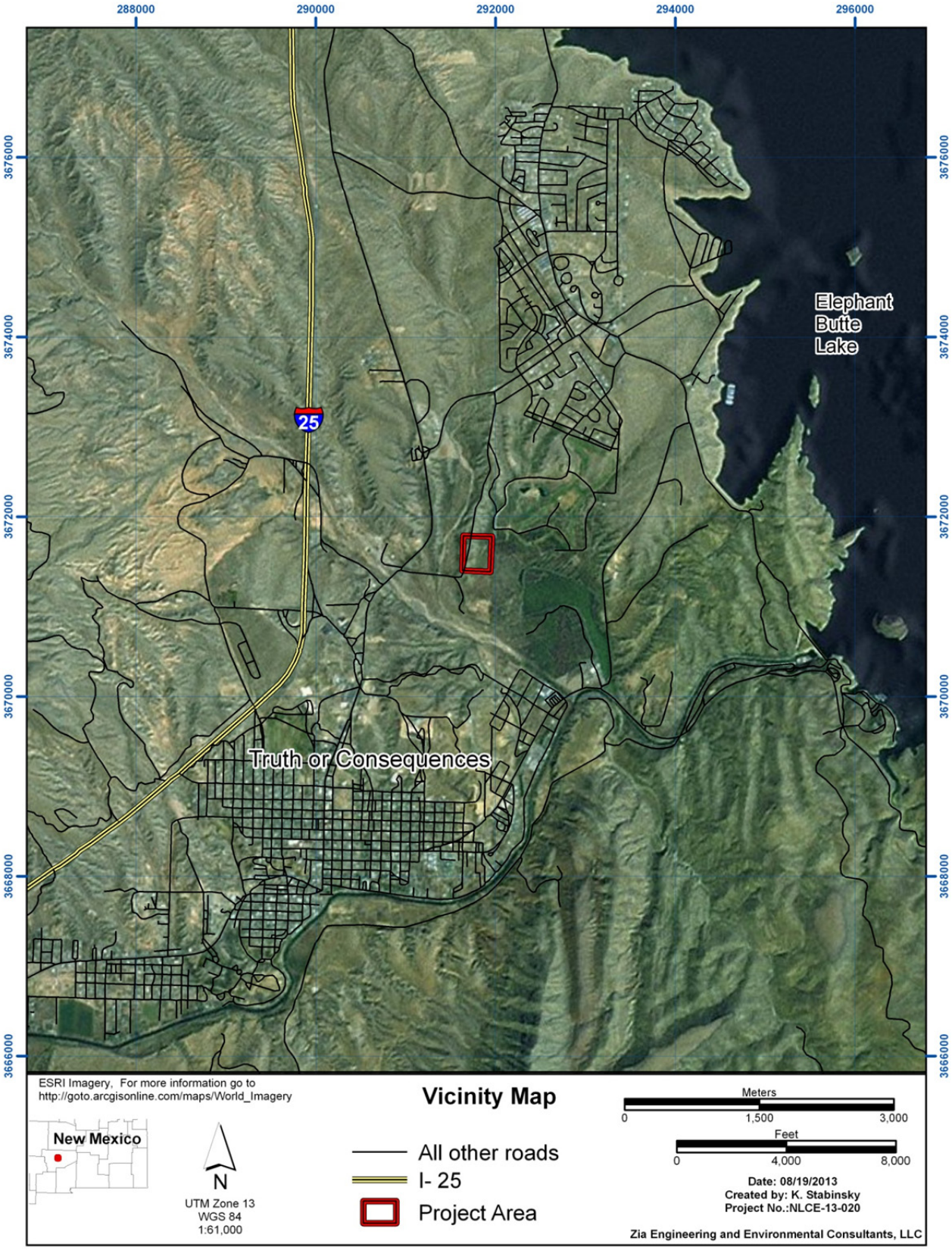

Figure 1. Project Area Vicinity Map

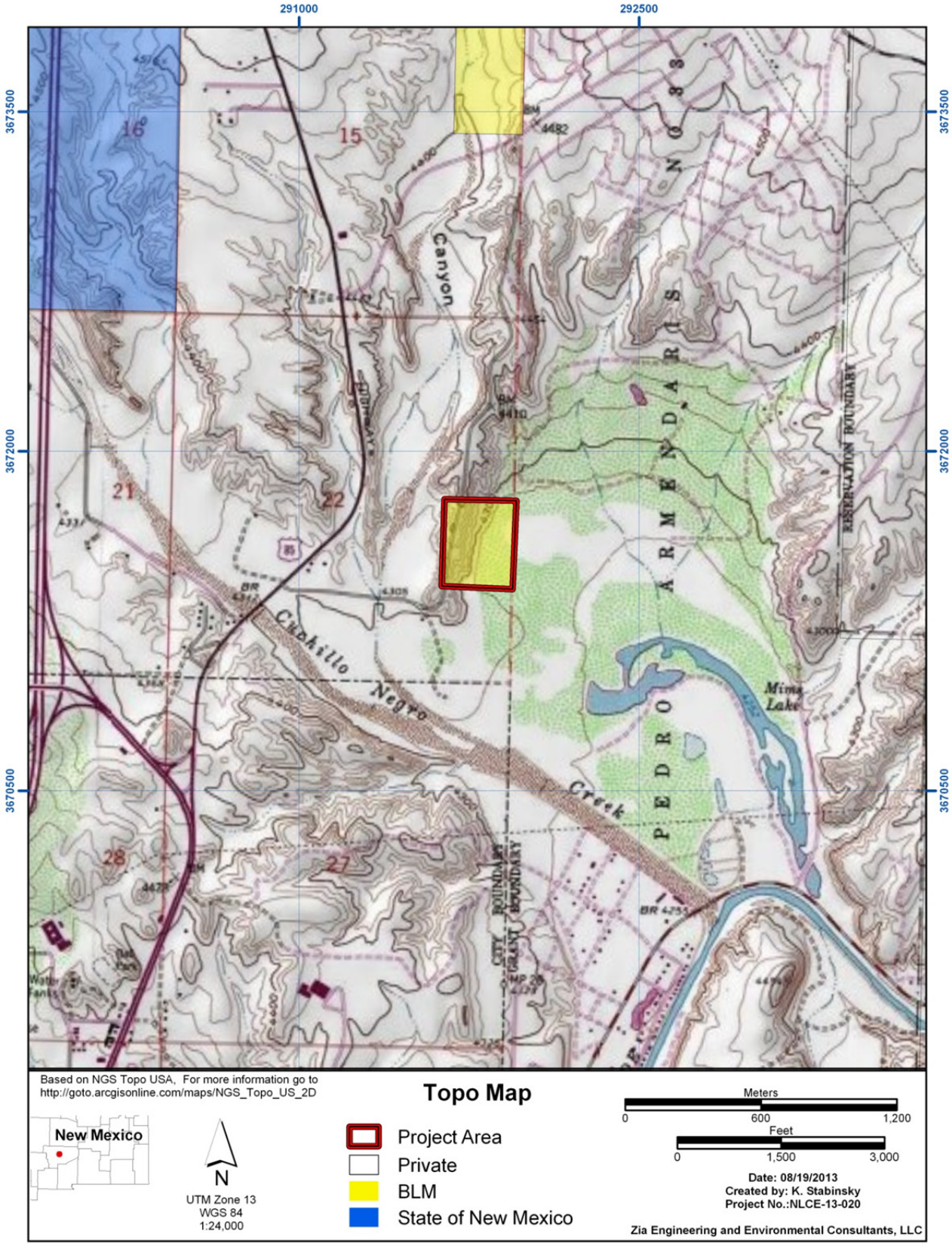

Figure 2. Project Area Topographic Map

Figure 3. Project Area Aerial Map

2.0 METHODS

The purpose of this assessment was to provide a biological survey of the project area to determine whether the project area contained plant and wildlife species, sensitive habitats, or wetlands and jurisdictional waters protected by the following governing acts.

Endangered Species Act of 1973, New Mexico Wildlife Conservation Act of 1978, and other agency regulations, as applicable

The United States Fish and Wildlife Service (USFWS) has direct responsibility for implementing the Endangered Species Act (ESA), officially listing species as threatened or endangered and protecting such listed species. Protection varies depending upon the listing status of each species.

- An ***endangered*** listing provides federal protection for any species in danger of extinction throughout all or a significant portion of its range.
- A ***threatened*** listing provides protection for species which are likely to become endangered within the foreseeable future through all or a significant portion of their range.
- A ***candidate*** listing is designated to those species for which sufficient information exists to warrant an endangered or threatened designation, but the listing action is precluded by other priorities. Candidate species receive no protection under ESA.
- A ***proposed designation*** is used when a notice has been published in the Federal Register to list a specific species as either threatened or endangered under ESA.
- An ***under review*** designation is used when the USFWS is completing a status review of a particular species to determine whether it warrants protection under ESA. Any species that is proposed or under review is not afforded protection until it receives a designation as either a threatened or endangered species.
- Federal ***species of concern*** (SOC) are also not afforded legal protection under the ESA and are included for planning purposes only. These are taxa for which further information is needed to resolve their conservation status. The USFWS does not provide consultation for species not protected under ESA.

Other federal agencies (i.e., United States Forest Service [USFS] and the Bureau of Land Management [BLM]) also list species as sensitive or as species of concern, and the New Mexico Department of Game and Fish [NMDGF] lists species as endangered, threatened, or sensitive under the New Mexico Wildlife Conservation Act.

Migratory Bird Treaty Act of 1918

Section 703 of the Migratory Bird Treaty Act (MBTA) states,

> Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof, included in the terms of the conventions between the United States and Great Britain for the protection of migratory birds concluded August 16, 1916 (39 Stat. 1702), the United States and the United Mexican States for the protection of migratory birds and game mammals concluded February 7, 1936, the United States and the Government of Japan for the protection of migratory birds and birds in danger of extinction, and their environment concluded March 4, 1972 and the convention between the United States and the Union of Soviet Socialist Republics for the conservation of migratory birds and their environments concluded November 19, 1976.

Key Points of MBTA

Do Not…..

- Pursue
- Hunt
- Take
- Capture
- Kill
- Possess
- Sell

any migratory bird, any part, nest, or eggs of any such bird.

Clean Water Act

The Clean Water Act (CWA) provides for protection of wetlands and jurisdictional waters of the United States by the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) as defined in Sections 404 and 401.

Noxious Weed Act of 1963

Under the New Mexico Territorial Laws Chapter 76 Article 7, the Noxious Weed Act of 1963 maintains how noxious weeds are to be managed throughout the state. Noxious weeds within New Mexico are distinguished within a class ranking system:

- **Class A** – those species currently not present or having a limited distribution in the state,
- **Class B** – those species limited to portions of the state, and
- **Class C** – those species that are widespread throughout the state.

Management decisions differ between the classes and range from eradication to prevention to control. The New Mexico Department of Agriculture (NMDA) will provide best management practices if consulted.

Zia professional staff, as indicated previously in Table 1, completed a 100-percent pedestrian survey of the 30 acre (12 hectare) project area and assessed impacts to the natural environment on August 12, 2013. Location data was collected using a Garmin handheld GPS unit with 1-meter precision. Photographs of important features were taken with an 8 megapixel digital camera. This report was prepared by Leah R. Markiewitz and Kenneth Stabinsky.

2.1 IDENTIFICATION OF PLANT AND WILDLIFE SPECIES

Surveys were conducted for both plant and wildlife species. As part of the field investigations, species lists were compiled and a qualitative estimate of abundance (Table 3) or frequency of species occurrence in the project area (Tables 5 and 6) was developed.

TABLE 3. QUALITATIVE ESTIMATE OF SPECIES ABUNDANCE

Category	Plants	Wildlife
Abundant	Present in large numbers over most or all of the project area	Species or sign seen in great numbers throughout the entire project area.
Common	Easily found in most of the project area, or in high numbers in select areas	Species or sign easily found in most of the project area, or in appropriate habitat.
Uncommon	Present in isolated patches or small numbers	Species or sign present occasionally in appropriate habitat
Few	1 or 2 individuals present.	Species sighted only once; is expected to inhabit area only very briefly; or is suspected to occur only in a very limited area.

The investigations included a survey for noxious weeds as designated by the NMDA and United States Department of Agriculture (USDA), and an evaluation of potential impacts to nesting birds protected under the MBTA.

2.2 IDENTIFICATION OF LISTED SPECIES

Federal and state lists of threatened, endangered, and sensitive wildlife and plant species in Doña Ana County were examined within this report (USFWS 2013a, NMDGF 2013; New Mexico Rare Plant Technical Council [NMRPTC] 1999). Locations of designated critical habitat for listed species were also examined (USFWS 2013b). The habitat requirements of listed species were compared to the habitat available at the proposed project location to identify potentially affected species.

- Species considered unlikely to occur and for which suitable habitat did not exist within the proposed project area were removed from further consideration.
- If potential habitat for any listed species occurred within the survey area, further evaluation of the potential impacts of the proposed project on the species was conducted and recommendations made for impact avoidance.

2.3 WETLANDS AND WATERWAYS

The investigation included an evaluation of potential CWA, Section 404 jurisdictional waters, as defined by the USACE, which could be impacted by the proposed project. If potential wetlands were identified (USFWS 2013c), Zia preliminarily defined these wetlands according to the USACE Wetland Delineation Manual (USACE 1987) and the appropriate regional supplement.

3.0 EXISTING ENVIRONMENTAL CONDITIONS

3.1 CLIMATE

The Elephant Butte region tends to be semi-arid with average annual rainfall measuring approximately 10.7 inches (27.1 centimeters). Most rainfall occurs in August with approximately 2.29 inches (5.8 centimeters) of precipitation. Maximum average temperatures are in the 90's° Fahrenheit (F) (32.2 – 37.7° Celsius [C]) and average minimum temperature is in the 40's°F (4.4- 9.9°C). (IDcide.com 2013)

On August 12, 2013, the air temperature ranged between 73 and 83°F (23 and 28°C). Wind speeds ranged from 8 to 25 miles per hour (13 to 40 kilometers per hour). Visibility was good (wunderground.com 2013).

3.2 SOILS

The project area consisted of two soils mapped by the Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2009). Specific soil types are noted in Table 4, shown on Figure 4 and are described below.

TABLE 4. SOILS WITHIN THE PROJECT AREA

Soil Name	Special Notes
Anthony-Vinton fine sandy loams	Farmland of statewide importance but not a hydric soil
Blupoint loamy fine sand, moderately rolling	Neither farmland of statewide importance or a hydric soil
Nickel very gravelly fine sandy loam, very steep	Neither farmland of statewide importance or a hydric soil

7 – Anthony-Vinton fine sandy loams

Anthony-Vinton fine sandy loams contain the components Anthony and Vinton. Each makes up 50 and 35 percent, respectively, of the map unit. The map unit is known to exist at elevations of 4,100 to 4,350 feet (1,250 to 1,326 meters).

The Anthony component has been identified to exist on flood plains. The parent material composing this component is mixed alluvium. Slopes are between 0 and 1 percent. This component is classified as well drained. The component does not pond or floods. The component has a depth of more than 80 inches (203 cm) to a restrictive layer. The available water capacity within this component is moderate (approximately 7.8 inches [19.8 cm]). The component is classified as prime farmlands but not a hydric soil. The ecological site that defines this component is Bottomland (R042XB018NM).

The Vinton component has been identified to exist on flood plains. The parent material composing this component is mixed alluvium. Slopes are between 0 and 1 percent. This component is classified as well drained. The component does not pond or floods. The component has a depth of more than 80 inches (203 cm) to a restrictive layer. The available water capacity within this component is moderate (approximately 6.1 inches [15.5 cm]). The component is classified as prime farmlands but not a hydric soil. The ecological site that defines this component is Bottomland (R042XB018NM).

21 – Bluepoint loamy fine sand, moderately rolling

Bluepoint loamy fine sand, moderately rolling, contains a Bluepoint component which makes up 85 percent of the map unit. The map unit is known to exist on piedmonts at elevations of 4,050 to 5,200 feet (1,234 to 1,585 meters).

The Bluepoint component's parent material is composed of mixed, wind modified sandy alluvium. Slopes are 1 to 15 percent. The component is classified as somewhat excessively drained. The component does not pond or floods. The component has a depth of more than 80 inches (203 centimeters [cm]) to a restrictive layer. The available water capacity within this component is low (approximately 4.4 inches [11 cm]). The component is not classified as prime farmlands or a hydric soil. The ecological site that defines this component is Deep Sand (R042XB011NM).

62 – Nickel very gravelly fine sandy loam, very steep

Nickel very gravelly fine sandy loam, very steep, contains a Nickel component which makes up 80 percent of the map unit. The map unit is known to exist on piedmonts at elevations of 4,100 to 6,000 feet (1,250 to 1,829 meters).

The Nickel component has been identified to exist on fan piedmonts. The parent material composing this component is mixed gravelly alluvium. Slopes are 10 to 65 percent. The component is classified as well drained. The component does not pond or floods. The component has a depth of more than 80 inches (203 centimeters [cm]) to a restrictive layer. The available water capacity within this component is low (approximately 4.8 inches [12 cm]). The component is not classified as prime farmlands or a hydric soil. The ecological site that defines this component is Gravelly (R042XB010NM).

3.3 VEGETATION

The project area is located within the Rio Grande Floodplain ecoregion of the Chihuahuan Deserts region (Griffith et al. 2006). The hydrology of this ecoregion has been impacted by the Elephant Butte Dam and the Caballo Lake east of the project area. Areas within this ecoregion contain riparian woodlands and scrublands that have been overgrown with salt cedar. Other areas contain narrow bands of cropland, orchards, vineyards, and small farms (Griffith et al. 2006).

Dick-Peddie (1993) categorized the general vegetation of the project area as Chihuahuan Desert scrub. The project area is indicative of disturbed Chihuahuan desert scrub which has been heavily disturbed by the capped landfill and driving range associated with the neighboring golf course (Figures 5 - 8).

During the pedestrian survey, vegetation within the surveyed area was dominated by creosotebush (*Larrea tridentata*) and honey mesquite (*Prosopis gladulosa*) (Figure 8). The survey area also contained disturbances such as trash most likely associated with the historic landfill. Additionally, the area was heavily utilized by pedestrians and vehicles. Vegetation observed within the project area is summarized in Table 5. The driving range was recently mowed so identification of the grass could not be determined.

Figure 4. Overlooking northeast end of project area from top of mesa

Figure 5. Overlooking center of project area from top of mesa

Figure 6. Overlooking southeast end of the project area from top of mesa

Figure 7. South end of project area on top of mesa

Figure 8. North end of project area on top of mesa

TABLE 5. OBSERVED PLANT SPECIES

Scientific Name	Common Name	Abundance
Forbs		
Allionia incarnata	trailing windmills	Uncommon
Cevallia sinuata	stinging serpent	Common
Chamaesyce serrula	sawtooth sandmat	Uncommon
Euphorbia albomarginata	whitemargin sandmat	Uncommon
Gutierrezia sarothrae	broom snakeweed	Common
Proboscidea parviflora	devil's claw	Few
Salsola tragus	Russian thistle	Common
Senna bauhinioides	twinleaf senna	Uncommon
Solanum elaeagnifolium	silverleaf nightshade	Uncommon
Sphaeralcea grossulariifolia	gooseberryleaf globemallow	Few
Shrubs		
Atriplex canescens	four-wing saltbush	Common
Ephedra trifurca	longleaf jointfir	Few
Larrea tridentata	creosotebush	Abundant
Lycium pallidum	pale desert-thorn	Few
Prosopis gladulosa	honey mesquite	Abundant
Grasses		
Dasyochloa pulchella	low woollygrass	Common
Muhlenbergia porteri	bush muhly	Common

3.4 NOXIOUS WEEDS

From those species listed on the NMDA Noxious Weed List (2009), a New Mexico C noxious weed species, salt cedar (*Tamarix ramosissima*), was identified immediately outside the project area (Figure 9). Individuals of this species were not observed within the project area. However, a previous survey in 2006 by Zia did observe this species within the project area.

The species was observed along the dirt road west of the project area (UTM NAD 83, 291974 3671710). Several trees were observed throughout the Turtleback Mountain Resort golf course. Class A or C noxious weed species was not observed during the pedestrian survey.

Figure 9. Saltcedar west of the project area

3.5 WILDLIFE

Wildlife species observed within the project area are noted in Table 6. Activity indicators included small mammal burrows.

TABLE 6. OBSERVED WILDLIFE SPECIES

Scientific Name	Common Name	Abundance
Insect		
Orthoporus ornatus	desert millipede	Uncommon

3.6 MIGRATORY BIRDS

Historically, migratory birds are known to pass through and nest within and adjacent to the project area. Individual birds and nests were not observed during the pedestrian survey.

3.7 WETLANDS AND WATERS OF THE U.S.

Per the USFWS National Wetland Inventory (NWI) Map (USFWS 2013b), the project area does not contain any classified wetlands (Figure 10).

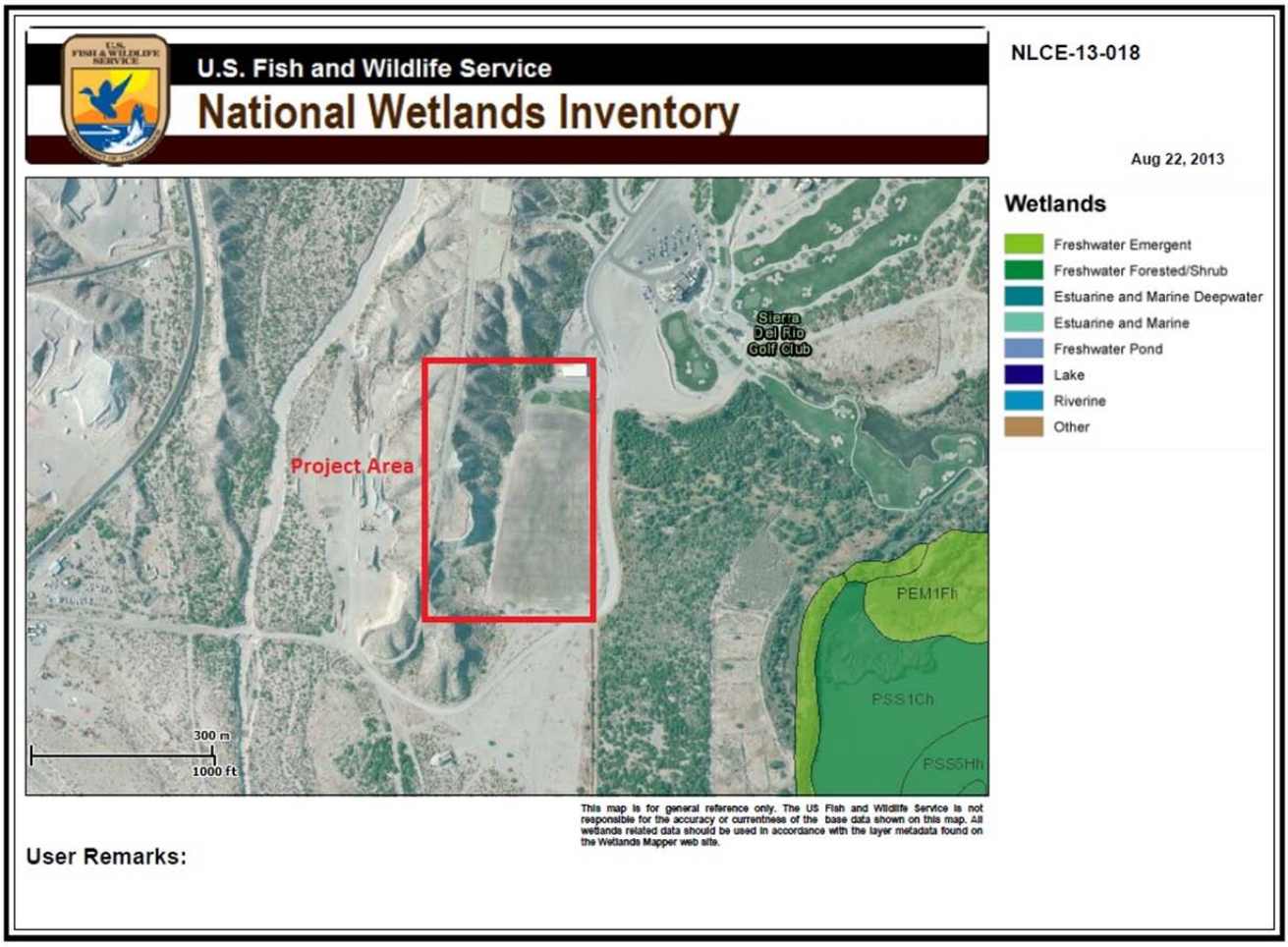

Figure 10. National Wetland Inventory Map of the Project Area
(USFWS 2013c)

Dominant vegetation observed within or adjacent to the proposed project area was reviewed for inclusion on the USDA Wetland Indicator Status List for the Arid West (USDA 2012). Although plant species observed within the project area were included on the 2012 National Wetland Plant List, none contained a status of Facultative Wetland or Obligate. Both these classifications are necessary for plants known to grow within wetlands.

4.0 FEDERAL AND STATE LISTED SPECIES AND HABITATS FOR SIERRA COUNTY

Zia reviewed federal and state lists of threatened, endangered, and sensitive wildlife known to occur in Doña Ana County to identify species that could be affected by project activities (Appendix A; NMDGF 2013, USFWS 2013a, NMRPTC 1999). Those having potentially suitable habitat or known presence within the project area are analyzed below. Species unlikely to occur due to lack of suitable habitat are not discussed in detail in this report.

Sierra County does contain designate critical habitat areas (Figure 11; USFWS 2013b). Additionally, in January 2013, the USFWS designated additional critical habitat for the southwestern willow flycatcher that is not depicted on Figure 11. This area covers the Rio Grande from Caballo Lake south to Fort Seldon. The project area is not located within a mapped or known critical habitat area.

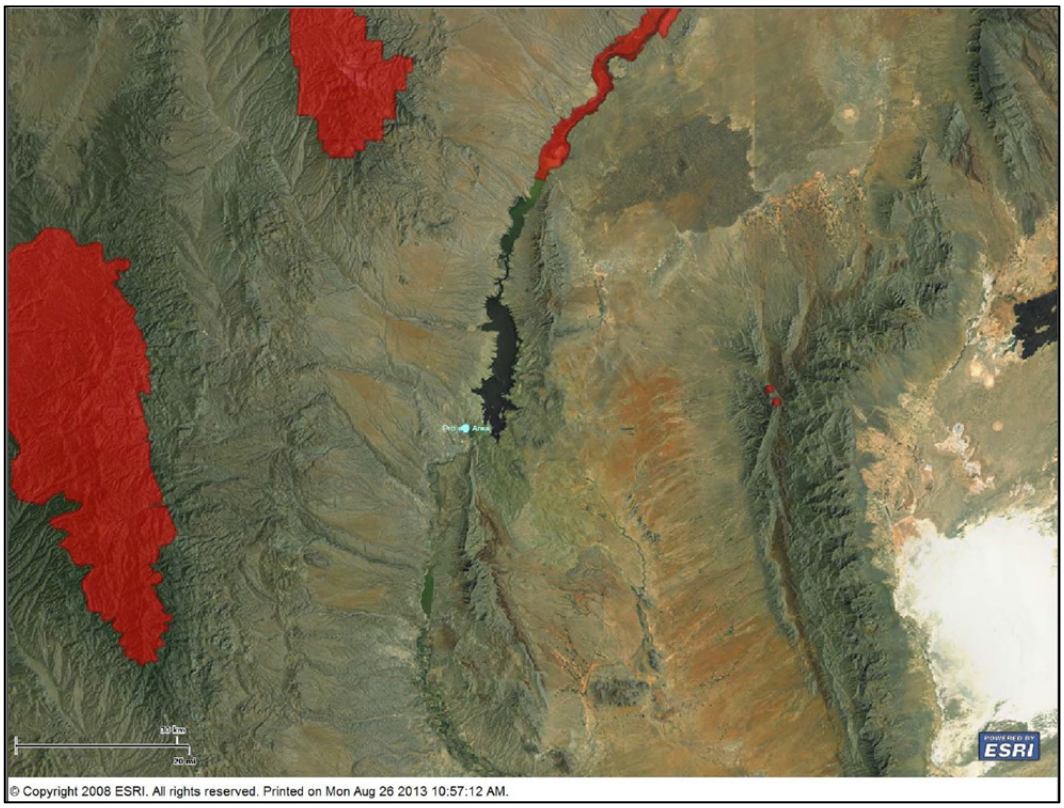

Figure 11. Critical Habitat Map

If critical habitat were present, areas would be shaded in red. (USFWS 2013b)

4.1 SPECIES ELIMINATED FROM FURTHER ANALYSIS

Of the USFWS, BLM and state listed species occurring in Sierra County, the following taxa have been eliminated from further evaluation because appropriate habitat is not present within the project area.

4.1.1 Threatened and Endangered Plant Species

TABLE 7. THREATENED AND ENDANGERED PLANT SPECIES

Scientific Name	Common Name	Status	Potentially Suitable Habitat Present?	Known Occupied Habitat Present?	Species Impacted by Action?
Plants					
Agastache cana	grayish-white giant hyssop	NM-SOC	No	No	No
Astragalus castetteri	Caster's milkvetch	NM-SOC	No	No	No
Chenopodium cycloides	Sandhill goosefoot	FWS-SOC	No	No	No
Cirsium wrightii	Wright's marsh thistle	FWS – C; NM – E	No	No	No
Cuscuta warneri	Warner's dodder	FWS – SOC; NM – SOC	No	No	No
Desmodium metcalfei	Metcalfe's ticktrefoil	FWS – SOC; NM – SOC	No	No	No
Draba mogollonica	Mogollon whitlowgrass	FWS – SOC; NM – SOC	No	No	No
Draba standleyi	Standley's whitlowgrass	FWS-SOC; NM-SOC	No	No	No
Erigeron scopulinus	rock fleabane	FWS – SOC; NM – SOC	No	No	No
Escobaria duncanii	Duncan pincushion cactus	FWS – SOC; BLM – S; NM – E	No	No	No
Escobaria sandbergii	Sandberg pincushion cactus	NM-SOC	No	No	No
Grindelia arizonica var. *neomexicana*	New Mexico gumweed	FWS – SOC; NM – SOC	No	No	No
Hedeoma todsenii	Todsen's pennyroyal	FWS – E; BLM – E; NM – E	No	No	No
Hexalectris arizonica	Arizona coralroot	FWS-S; NM-E	No	No	No
Hymenoxys vaseyi	Vasey's bitterweed	NM-SOC	No	No	No
Penstemon metcalfei	Metcalfe's penstemon	FWS – SOC; NM – SOC	No	No	No
Perityle staurophylla var. *homoflora*	San Andres rock daisy	FWS – SOC; NM – SOC	No	No	No
Perityle staurophylla var. *staurophylla*	New Mexico rock daisy	NM-SOC	No	No	No

Scientific Name	Common Name	Status	Potentially Suitable Habitat Present?	Known Occupied Habitat Present?	Species Impacted by Action?
Physaria gooddingii	Goodding's bladderpod	FWS – SOC; NM – SOC	No	No	No
Silene plankii	Plank's campion	NM-SOC	No	No	No
Silene thurberi	Thurber's campion	FWS – SOC; NM – SOC	No	No	No
Silene wrightii	Wright's campion	FWS – SOC; NM – SOC	No	No	No
Talinum humile	Pinos Altos flame flower	FWS-SOC; NM-SOC	No	No	No
FWS ~ USFWS E ~ Endangered SOC ~ Species of Concern	NM ~ New Mexico T ~ Threatened S ~ Sensitive			(NMRPTC 1999; USFWS 2013a)	

4.1.2 Threatened and Endangered Wildlife Species

TABLE 8. THREATENED AND ENDANGERED WILDLIFE SPECIES

Scientific Name	Common Name	Status	Potentially Suitable Habitat Present?	Known Occupied Habitat Present?	Species Impacted by Action?
Invertebrates					
Limenitis archippus obsoleta	desert viceroy butterfly	FWS-SOC	No	No	No
Oreohelix pilsbryi	Mineral Creek mountainsnail	FWS – UR, SOC; NM – T	No	No	No
Streptocephalus moorei	Moore's fairy shrimp	NM-S	No	No	No
Fish					
Agosia chrysogaster	longfin dace	BLM – S	No	No	No
Catostomus clarki	desert sucker	FWS-SOC; BLM-S; NM-S	No	No	No
Catostomus insignis	Sonora sucker	FWS-SOC; BLM-S; NM-S	No	No	No
Cyprinodon tularosa	White Sands pupfish	FWS – UR; SOC; NM – E	No	No	No
Gila nigra	headwater chub	FWS – C; NM – E	No	No	No

Scientific Name	Common Name	Status	Potentially Suitable Habitat Present?	Known Occupied Habitat Present?	Species Impacted by Action?
Gila pandora	Rio Grande chub	NM –S	No	No	No
Hybognathus amarus	Rio Grande silvery minnow	FWS-E	No	No	No
Oncorhynchus clarki virginalis	Rio Grande cutthroat trout	FWS – C; NM – S	No	No	No
Oncorhynchus gilae	Gila trout	FWS – T; NM – T	No	No	No
Amphibians and Reptiles					
Anaxyrus microscaphus microscaphus	Arizona toad	BLM – S; NM – S	No	No	No
Lithobates chiricahuensis	Chiricahua leopard frog	FWS–CH, T; NM – S	No	No	No
Trachemys gaigeae	Big Bend slider	NM – S	No	No	No
Birds					
Accipiter gentilis atricapillus; apache	northern goshawk	FWS-SOC; BLM-S; NM-S	No	No	No
Athene cunicularia hypugaea	burrowing owl	FWS-SOC; BLM-S	No	No	No
Ammodramus bairdii	Baird's sparrow	FWS-SOC; BLM-S; NM-T	No	No	No
Anthus spragueii	Sprague's pipit	FWS-C	No	No	No
Buteo regalis	ferruginous hawk	BLM-S	No	No	No
Buteocallus anthracinus anthracinus	common black-hawk	FWS-SOC; NM-T	No	No	No
Calothorax lucifer	Lucifer hummingbird	NM-T	No	No	No
Calypte costae	Costa's hummingbird	NM-T	No	No	No
Charadrius montanus	mountain plover	NM-S	No	No	No
Chlidonias niger surinamensis	black tern	FWS-SOC; BLM-S	No	No	No
Coccyzus americanus occidentalis	yellow-billed cuckoo (western pop.)	FWS-C; NM-S	No	No	No
Columbina passerine pallescens	common ground-dove	NM-E	No	No	No
Cynanthus latirostris magicus	broad-billed hummingbird	NM-T	No	No	No

Scientific Name	Common Name	Status	Potentially Suitable Habitat Present?	Known Occupied Habitat Present?	Species Impacted by Action?
Empidonax traillii extimus	southwestern willow flycatcher	FWS- CH, E; NM-E	No	No	No
Falco femoralis septentrionalis	aplomado falcon	FWS-E, EXPN; NM-E	No	No	No
Falco peregrinus anatum	peregrine falcon	FWS-SOC; NM-T	No	No	No
Falco peregrinus tundrius	Arctic peregrine falcon	FWS-SOC; NM-T	No	No	No
Grus Americana	whooping crane	FWS-EXPN, E; NM-E	No	No	No
Haliaeetus leucocephalus alascanus	bald eagle	NM-T	No	No	No
Passerina versicolor versicolor; dickeyae	varied bunting	NM-T	No	No	No
Pelecanus occidentalis carolinensis	brown pelican	NM-E	No	No	No
Phalacrocorax brasilianus	neotropic cormorant	NM-T	No	No	No
Plegadis chihi	white-faced ibis	BLM-S	No	No	No
Sterna antillarum athalassos	least tern	FWS-E; NM-E	No	No	No
Strix occidentalis lucida	Mexican spotted owl	FWS- CH, T; NM-S	No	No	No
Trogon elegans canescens	elegant trogon	NM-E	No	No	No
Tyrannus crassirostris	thick-billed kingbird	NM-E	No	No	No
Vireo bellii arizonae; medius	Bell's vireo	FWS-SOC NM-T	No	No	No
Vireo vicinior	gray vireo	NM-T	No	No	No
Mammals					
Bassariscus astutus arizonensis; flavus	ringtail	NM-S	No	No	No
Canis lupus baileyi	Mexican gray wolf	FWS-EXPN, E; NM-E	No	No	No

Scientific Name	Common Name	Status	Potentially Suitable Habitat Present?	Known Occupied Habitat Present?	Species Impacted by Action?
Conepatus leuconotus mearnsi; venaticus	common hog-nosed skunk	NM-S	No	No	No
Corynorhinus townsendii pallescens	pale Townsend's big-eared bat	FWS-SOC; BLM-S; NM-S	No	No	No
Cynomys gunnisoni gunnisoni; zuniensis	Gunnison's prairie dog (prairie population)	NM-S	No	No	No
Cynomys gunnisoni gunnisoni; zuniensis	Gunnison's prairie dog (montane population)	FWS-C; NM-S	No	No	No
Cynomys ludovicianus	black-tailed prairie dog	FWS-SOC; NM-S	No	No	No
Eutamias quadrivittatus australis	Organ Mountains Colorado chipmunk	FWS-SOC; BLM-S; NM-T	No	No	No
Geomys arenarius brevirostris	desert pocket gopher	FWS-SOC; NM-S	No	No	No
Idionycteris phyllotis	Allen's big-eared bat	FWS-SOC; BLM-S; NM-S	No	No	No
Lutra Canadensis sonorae	southwestern otter	FWS-SOC; BLM-S	No	No	No
Mustela nigripes	black-footed ferret	FWS-EXPN; E	No	No	No
Myotis ciliolabrum melanorhinus	western small-footed myotis bat	BLM-S; NM-S	No	No	No
Myotis evotis evotis	long-eared myotis bat	BLM-S; NM-S	No	No	No
Myotis thysanodes thysanodes	fringed myotis bat	BLM-S; NM-S	No	No	No
Myotis volans interior	long-legged myotis bat	BLM-S; NM-S	No	No	No
Myotis occultus	Arizona myotis bat	BLM-S; NM-S	No	No	No
Myotis yumanensis yumanensis	Yuma myotis bat	BLM-S; NM-S	No	No	No
Neotoma micropus leucophaea	White Sands wood rat	FWS-SOC	No	No	No
Ondatra zibethicus ripensis	Pecos River muskrat	FWS-SOC; BLM-S; NM-S	No	No	No
Spilogale gracilis	western spotted skunk	NM-S	No	No	No
NM ~ New Mexico S ~ Sensitive FWS ~ U.S. Fish and Wildlife Service SOC ~ Species of Concern CH ~ Critical Habitat designated	E ~ Endangered C ~ Candidate BLM ~ Bureau of Land Management EXPN ~ Experimental Population	T ~ Threatened UR ~ Under Review		(NMDGF 2013; USFWS 2013a)	

4.2 SPECIES IMPACT EVALUATIONS

For analysis purposes, this report has adopted the USFWS effect determinations and rationale for all federal and state listed plant and wildlife species which could utilize the project area. Effect determinations for each potential species were made utilizing the following definitions:

No effect – This determination is used when it is deemed that there will be no effect on the species in question as a result of the proposed action. It has been determined that either "no suitable habitat" exists within the proposed project area for this species and/or no individuals were observed. In this situation, no further contact with responsible management agencies is required.

May affect, not likely to adversely affect – This determination is used when the proposed action includes effects that are beneficial (b), insignificant (i) or discountable (d). This type of effect requires informal Section 7 consultation with the USFWS and concurrence with the determination for federally listed species. This effect may also require informal consultation with NMDGF or New Mexico Division of Forestry (NMDF) for state listed species.

May affect, likely to adversely affect – This determination is used when adverse effects cannot be avoided by the proposed action either directly or indirectly. In the event the overall effect of the proposed action is beneficial to the listed species, but also is likely to cause some adverse effects, the proper effect determination for the proposed action is "likely to adversely affect" the listed species. A "likely to adversely affect" determination requires formal Section 7 consultation with the USFWS and will require consultation with NMDGF or NMDF.

Potentially suitable habitat for two federal and/or state listed species is present within the project area. However, none of these species or signs of their presence were observed in the project area during the pedestrian survey.

4.2.1 Plants

No sensitive plants contain suitable habitat within the project area.

4.2.2 Wildlife

TABLE 9. EFFECT DETERMINATION OF THREATENED AND ENDANGERED WILDLIFE SPECIES

Scientific Name	Common Name	Status	Effect Determination
Reptiles			
Phrynosoma cornutum	Texas horned lizard	BLM-S	No effect
Birds			
Lanius ludovicianus excubitorides	loggerhead shrike	BLM-S; NM-S	No effect
FWS ~ U.S. Fish and Wildlife Service NM ~ New Mexico BLM ~ Bureau of Land Management E ~ Endangered EXPN ~ Experimental Population S ~ Sensitive SOC ~ Species of Concern			(NMRPTC 1999; NMDGF 2013; USFWS 2013a)

Reptiles

Areas within close proximity to the project area contain suitable habitat for the Texas horned lizard. Texas horned lizards are predominantly found in flat, sandy areas with shrubs and/or rocks for hiding. Although not observed during the pedestrian survey, the Texas horned lizard may forage within the project area. Since the proposed action is to leave the property as-is, impact to this species is not expected to occur.

Birds

The project area contained habitat suitable for the loggerhead shrike. The loggerhead shrike may forage within the project area. Individuals and nests were not observed during the pedestrian survey. Since the proposed action is to leave the property as-is, impact to this species is not expected to occur.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 GENERAL VEGETATION AND WILDLIFE

5.1.1 Vegetation

The project area comprises approximately 30 acres (12 hectares) of BLM west of Mims Lake and within the Turtleback Mountain Resort golf course. Historically, the property used to be a landfill for the City of Truth or Consequences.

The survey area also contained disturbances such as trash most likely associated with the historic landfill. Additionally, the area was heavily utilized by pedestrians and vehicles.

One Class C noxious weed, saltcedar, was identified adjacent to the project area. No noxious weeds were observed during the pedestrian survey.

5.1.2 Wildlife

Since the proposed action is to leave the property as-is, impact to wildlife is not expected to occur.

5.2 MIGRATORY BIRDS

Migratory birds were not observed within and adjacent to the project area during the pedestrian survey; however, migratory birds would be expected to occupy the project area. As long as the project remains in its current state, migratory birds are not expected to be impacted. If this were to change, the proposed action should adhere to the regulations stipulated by the MBTA and USFWS to prevent impacts. These regulations identify that pre-construction surveys should be conducted for active nests within the project area, if construction occurs during the nesting season (March through September).

Any active nests found should be marked and avoided until young have successfully fledged and left the nest. If mitigation measures are conducted, construction efforts are not expected to impact bird species or nesting habitat.

5.3 WETLANDS AND WATERS OF THE U.S.

Wetlands, as defined by the USACE, were not identified during the survey or on the USACE NWI maps (USFWS 2013c). Impact is not expected to occur.

5.4 FEDERAL AND STATE LISTED SPECIES AND HABITATS

5.4.1 Threatened and Endangered Plant Species

Of the plants listed for Sierra County, no threatened and endangered plant species were identified. The habitat within and outside the project area did not appear to be suitable for any other state or federally listed endangered or threatened plant species that may occur in Sierra County.

5.4.2 Threatened and Endangered Wildlife Species

The project area contained suitable habitat for the following threatened and endangered wildlife species: Texas horned lizard and loggerhead shrike. None of these species were identified during the pedestrian survey.

If construction were to occur on the property, the NMDGF recommends following their trenching guidelines (2003) during the construction of open trenches that could potentially trap small mammals, amphibians, and reptiles or could potentially cause injury to larger mammals. Periods of highest activity for many of these species include night time, summer months, and wet weather. Below is an excerpt of the guidelines from the NMDGF (Appendix C).

- To minimize the amount of open trenches at any given time, keep trenching and back-filling crews close together.
- Trench during the cooler months (October – March). However, there may be exceptions (e.g., critical wintering areas) which need to be assessed on a site-specific basis.
- Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters. Escape ramps can be short lateral trenches sloping to the surface or wooden planks extending to the surface. The slope should be less than 45 degrees (100%). Trenches that have been left open overnight, especially where endangered species occur, should be inspected and animals removed prior to back-filling.

If construction efforts complied with these guidelines, where they apply, impacts to wildlife species would be reduced.

Nests that could have potentially been utilized by the loggerhead shrike were not observed during the pedestrian survey. The habitat in the survey area did not appear suitable for any other state or federally listed endangered or threatened wildlife species that may occur in Sierra County.

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APPENDIX A

Threatened, Endangered, and Sensitive Species Resources

Biota Information System Of New Mexico

Support New Mexico's Wildlife...Buy a Hunting, Fishing, or Trapping License and Give to the Share with Wildlife Program.

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Database Query

Your search terms were as follows:

59 species returned.

Taxonomic Group	# Species	Taxonomic Group	# Species
Fish	6	Mammals	17
Amphibians	2	Molluscs	1
Reptiles	2	Crustaceans	1
Birds	29	Lepidoptera; moths and butterflies	1

Export to Excel

Species ID	Common Name	Scientific Name	Habitat Map	Photo	County	Status
010140	**Chub, Rio Grande**	Gila pandora	Yes		Sierra	State NM: Sensitive taxa (informal)
010146	**Chub, Headwater**	Gila nigra	Yes	no photo	Sierra	Federal: Candidate State NM: Endangered
010170	**Dace, Longfin**	Agosia chrysogaster	Yes	no photo	Sierra	BLM Sensitive: NM State Office (NMSO)
010360	**Pupfish, White Sands**	Cyprinodon tularosa	Yes	no photo	Sierra	Federal: FWS Species of Concern State NM: Threatened
010585	**Trout, Cutthroat, Rio Grande**	Oncorhynchus clarki virginalis (NM)	Yes		Sierra	Federal: Candidate State NM: Sensitive taxa (informal)
010600	**Trout, Gila**	Oncorhynchus gilae	Yes		Sierra	Federal: Threatened State NM: Threatened
020025	**Frog, Leopard, Chiricahua**	Lithobates chiricahuensis	Yes		Sierra	Federal: Critical Hab. Designated (NM) Federal: Threatened State NM: Sensitive taxa (informal)
020120	**Toad, Arizona**	Anaxyrus microscaphus microscaphus (NM,AZ)	Yes		Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
030070	**Lizard, Horned, Texas**	Phrynosoma cornutum	Yes		Sierra	BLM Sensitive: NM State Office (NMSO)
030205	**Slider, Big Bend**	Trachemys gaigeae	Yes		Sierra	State NM: Sensitive taxa (informal)
040040	**Black-Hawk, Common**	Buteogallus anthracinus anthracinus (NM)	Yes		Sierra	Federal: FWS Species of Concern State NM: Threatened
040125	**Bunting, Varied**	Passerina versicolor versicolor (NM);dickeyae (NM)			Sierra	State NM: Threatened
040195	**Cormorant, Neotropic**	Phalacrocorax brasilianus	Yes		Sierra	State NM: Threatened
040250	**Cuckoo, Yellow-billed**	Coccyzus americanus occidentalis (western pop)			Sierra	Federal: Candidate State NM: Sensitive taxa (informal)
040370	**Eagle, Bald**	Haliaeetus leucocephalus alascanus (NM)	Yes		Sierra	State NM: Threatened
040380	**Falcon, Aplomado**	Falco femoralis septentrionalis (NM)	Yes		Sierra	Federal: Endangered Federal: Nonessential Experimental Population State NM: Endangered
040384	**Falcon, Peregrine**	Falco peregrinus anatum	Yes		Sierra	Federal: FWS Species of Concern State NM: Threatened

040385	**Falcon, Peregrine, Arctic**	Falco peregrinus tundrius	Yes	no photo	Sierra	Federal: FWS Species of Concern State NM: Threatened
040521	**Flycatcher, Willow, Southwestern**	Empidonax traillii extimus	Yes		Sierra	Federal: Critical Hab. Designated (NM) Federal: Endangered State NM: Endangered
040610	**Goshawk, Northern**	Accipiter gentilis atricapillus (NM,AZ);apache (NM,AZ)		no photo	Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern State NM: Sensitive taxa (informal)
040690	**Ground-dove, Common**	Columbina passerina pallescens (NM)	Yes		Sierra	State NM: Endangered
040805	**Hawk, Ferruginous**	Buteo regalis	Yes		Sierra	BLM Sensitive: NM State Office (NMSO)
040905	**Hummingbird, Broad-billed**	Cynanthus latirostris magicus (NM)	Yes		Sierra	State NM: Threatened
040925	**Hummingbird, Costa's**	Calypte costae	Yes		Sierra	State NM: Threatened
040930	**Hummingbird, Lucifer**	Calothorax lucifer	Yes	no photo	Sierra	State NM: Threatened
040970	**Ibis, White-faced**	Plegadis chihi	Yes		Sierra	BLM Sensitive: NM State Office (NMSO)
041055	**Kingbird, Thick-billed**	Tyrannus crassirostris	Yes		Sierra	State NM: Endangered
041320	**Owl, Burrowing**	Athene cunicularia hypugaea (NM,AZ)	Yes		Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern
041375	**Owl, Spotted, Mexican**	Strix occidentalis lucida (NM,AZ)	Yes		Sierra	Federal: Critical Hab. Designated (NM) Federal: Threatened State NM: Sensitive taxa (informal)
041400	**Pelican, Brown**	Pelecanus occidentalis carolinensis (NM)	Yes		Sierra	State NM: Endangered
041475	**Pipit, Sprague's**	Anthus spragueii	Yes	no photo	Sierra	Federal: Candidate
041500	**Plover, Mountain**	Charadrius montanus	Yes		Sierra	State NM: Sensitive taxa (informal)
041750	**Shrike, Loggerhead**	Lanius ludovicianus excubitorides (NM);sonoriensis (NM);gambeli (NM)			Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
041785	**Sparrow, Baird's**	Ammodramus bairdii	Yes		Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern State NM: Threatened
042050	**Tern, Black**	Chlidonias niger surinamensis (NM)			Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern
042070	**Tern, Least**	Sternula antillarum athalassos (NM)	Yes		Sierra	Federal: Endangered State NM: Endangered
042165	**Trogon, Elegant**	Trogon elegans canescens (NM)	Yes		Sierra	State NM: Endangered
042190	**Vireo, Bell's**	Vireo bellii arizonae (NM,AZ);medius (NM)			Sierra	Federal: FWS Species of Concern State NM: Threatened
042200	**Vireo, Gray**	Vireo vicinior	Yes		Sierra	State NM: Threatened
050020	**Bat, Big-eared, Allen's**	Idionycteris phyllotis	Yes		Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern State NM: Sensitive taxa (informal)
050025	**Bat, Big-eared, Townsend's, Pale**	Corynorhinus townsendii pallescens (NM,AZ)	Yes		Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern State NM: Sensitive taxa (informal)
050032	**Bat, Myotis, Arizona**	Myotis occultus	Yes	no photo	Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
050047	**Bat, Myotis, Fringed**	Myotis thysanodes thysanodes (NM,AZ)		no photo	Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)

050057	**Bat, Myotis, Long-eared**	Myotis evotis evotis (NM,AZ)		no photo	Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
050059	**Bat, Myotis, Long-legged**	Myotis volans interior (NM,AZ)			Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
050093	**Bat, Myotis, Small-footed, W.**	Myotis ciliolabrum melanorhinus (NM,AZ)			Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
050103	**Bat, Myotis, Yuma**	Myotis yumanensis yumanensis (NM,AZ)			Sierra	BLM Sensitive: NM State Office (NMSO) State NM: Sensitive taxa (informal)
050205	**Prairie Dog, Gunnison's, prairie populations**	Cynomys gunnisoni gunnisoni (NM);zuniensis (NM)	Yes		Sierra	State NM: Sensitive taxa (informal)
050206	**Prairie Dog, Gunnison's, montane populations**	Cynomys gunnisoni gunnisoni (NM);zuniensis (NM)	Yes	no photo	Sierra	Federal: Candidate State NM: Sensitive taxa (informal)
050260	**Gopher, Pocket, Desert**	Geomys arenarius brevirostris (NM)		no photo	Sierra	Federal: FWS Species of Concern State NM: Sensitive taxa (informal)
050496	**Muskrat, Pecos River**	Ondatra zibethicus ripensis (NM)		no photo	Sierra	BLM Sensitive: NM State Office (NMSO) Federal: FWS Species of Concern State NM: Sensitive taxa (informal)
050657	**Rat, Wood, White Sands**	Neotoma micropus leucophaea		no photo	Sierra	Federal: FWS Species of Concern
050670	**Ringtail**	Bassariscus astutus arizonensis (NM,AZ);flavus (NM);yumanensis (AZ);nevadensis (AZ)			Sierra	State NM: Sensitive taxa (informal)
050735	**Skunk, Hog-nosed, Common**	Conepatus leuconotus mearnsi (NM);venaticus (NM,AZ)		no photo	Sierra	State NM: Sensitive taxa (informal)
050747	**Skunk, Spotted, Western**	Spilogale gracilis	Yes	no photo	Sierra	State NM: Sensitive taxa (informal)
050866	**Wolf, Gray, Mexican**	Canis lupus baileyi (NM,AZ)	Yes		Sierra	Federal: Endangered Federal: Nonessential Experimental Population State NM: Endangered
060070	**Mountainsnail, Mineral Creek**	Oreohelix pilsbryi	Yes	no photo	Sierra	Federal: FWS Species of Concern State NM: Threatened
070060	**Shrimp, Fairy, Moore's**	Streptocephalus moorei	Yes	no photo	Sierra	State NM: Sensitive taxa (informal)
215995	**Butterfly, Viceroy, Obsolete**	Limenitis archippus obsoleta (NM,AZ)	Yes	no photo	Sierra	Federal: FWS Species of Concern

_____
Close Window

Southwest Region

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Back to Start

List of species by county for New Mexico:

Counties Selected: Sierra

Select one or more counties from the following list to view a county list:

Bernalillo
Catron
Chaves
Cibola
Colfax

View County List

Sierra County

Common Name	Scientific Name	Species Group	Listing Status	Species Image	Species Distribution Map	Critical Habitat	More Info
black-footed ferret	*Mustela nigripes*	Mammals	E, EXPN				P
Chiricahua leopard frog	*Rana chiricahuensis*	Amphibians	T				P
Gila trout	*Oncorhynchus gilae*	Fishes	T				P
gray wolf	*Canis lupus*	Mammals	DR, E, EXPN, T				P
Mexican spotted owl	*Strix occidentalis lucida*	Birds	T			Final	P
northern aplomado falcon	*Falco femoralis septentrionalis*	Birds	E, EXPN				P
Rio Grande cutthroat trout	*Oncorhynchus clarki virginalis*	Fishes	C				P
Rio Grande silvery minnow	*Hybognathus amarus*	Fishes	E				P
southwestern willow flycatcher	*Empidonax traillii extimus*	Birds	E				P
Sprague's pipit	*Anthus spragueii*	Birds	C	No Image			P
Todsen's pennyroyal	*Hedeoma todsenii*	Flowering Plants	E			Final	P
yellow-billed Cuckoo	*Coccyzus americanus*	Birds	C				P

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Endangered Species
Electronic Library
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Energy
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Texas Coastal Program
National Wetlands Inventory
Field Offices

FWS Field Notes	Landscape Conservation Cooperatives	Visitor Services	Partners Program	Contact Us	Eagle Permits	CITES Information	Digital Library	Duck Stamps
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Â		Â	Field Offices	Â	Â	Â	Â	Contact Us
Â	Â	Â	Â	Â	Â	Â	Â	Â

New Mexico Ecological Services Field Office

Listed and Sensitive Species in Sierra County

Total number of species: 33

Print

Common Name	Scientific Name	Group	Status
Sprague's pipit	*Anthus spragueii*	Bird	Candidate
Yellow-billed cuckoo	*Coccyzus americanus*	Bird	Candidate
Rio Grande cutthroat trout	*Oncorhynchus clarki virginalis*	Fish	Candidate
Southwestern willow flycatcher Proposed Critical Habitat	*Empidonax traillii extimus*	Bird	Endangered
Rio Grande silvery minnow [3]	*Hybognathus amarus*	Fish	Endangered
Black-footed ferret [2]	*Mustela nigripes*	Mammal	Endangered
Todsen's pennyroyal Designated Critical Habitat	*Hedeoma todsenii*	Plant	Endangered
Northern aplomado falcon	*Falco femoralis septentrionalis*	Bird	Experimental, Non-essential Population
Whooping Crane	*Grus americana*	Bird	Experimental, Non-essential Population
Gray Wolf (Mexican Gray Wolf)	*Canis lupus baileyi*	Mammal	Experimental, Non-essential Population
Chiricahua leopard frog Designated Critical Habitat	*Rana chiricahuensis*	Amphibian	Threatened
Mexican spotted owl Designated Critical Habitat	*Strix occidentalis lucida*	Bird	Threatened
Gila trout	*Oncorhynchus gilae*	Fish	Threatened
White Sands pupfish	*Cyprinodon tularosa*	Fish	Under Review
Mineral Creek mountainsnail	*Oreohelix pilsbryi*	Mollusc - Invertebrate	Under Review

Species of Concern

Species of Concern are included for planning purposes only.

Common Name	Scientific Name	Group	Status

Desert viceroy butterfly	*Limenitis archippus obsoleta*	Arthropod - Invertebrate	Species of Concern
American peregrine falcon	*Falco peregrinus anatum*	Bird	Species of Concern
Arctic peregrine falcon	*Falco peregrinus tundrius*	Bird	Species of Concern
Baird's sparrow	*Ammodramus bairdii*	Bird	Species of Concern
Bell's vireo	*Vireo bellii*	Bird	Species of Concern
Black tern	*Chlidonias niger*	Bird	Species of Concern
Northern goshawk	*Accipiter gentilis*	Bird	Species of Concern
Western burrowing owl	*Athene cunicularia hypugaea*	Bird	Species of Concern
Desert sucker	*Catostomus clarki*	Fish	Species of Concern
Sonora sucker	*Catostomus insignis*	Fish	Species of Concern
Black-tailed prairie dog [1]	*Cynomys ludovicianus*	Mammal	Species of Concern
Organ Mountains Colorado chipmunk	*Eutamias quadrivittatus australis*	Mammal	Species of Concern
Southwestern otter	*Lutra canadensis sonorae*	Mammal	Species of Concern
Townsend's big-eared bat	*Corynorhinus townsendii*	Mammal	Species of Concern
White Sands woodrat	*Neotoma micropus leucophaea*	Mammal	Species of Concern
Duncan's pincushion cactus	*Coryphantha duncanii*	Plant	Species of Concern
Pinos Altos flame flower	*Talinum humile*	Plant	Species of Concern
Sandhill goosefoot	*Chenopodium cycloides*	Plant	Species of Concern

Endangered	Any species which is in danger of extinction throughout all or a significant portion of its range.	**Threatened**	Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.
Candidate	Candidate Species (taxa for which the Service has sufficient information to propose that they be added to list of endangered and threatened species, but the listing action has been precluded by other higher priority listing	**Proposed**	Any species of fish, wildlife or plant that is proposed in the Federal Register to be listed under section 4 of the Act. This could be either proposed for endangered or threatened status.

	activities).
Experimental, Non-essential Population	A reintroduced population established outside the species' current range, but within its historical range. For purposes of section 7 consultation, this population is treated as a proposed species, except when it is located within a National Wildlife Refuge and National Park, when the population is considered threatened.
Under Review	Determining whether the status of the species meets the definition of threatened or endangered.
Species of Concern	Taxa for which further biological research and field study are needed to resolve their conservation status OR are considered sensitive, rare, or declining on lists maintained by Natural Heritage Programs, State wildlife agencies, other Federal agencies, or professional/academic scientific societies. Species of Concern are included for planning purposes only.

Foot Notes:

D Designated Critical Habitat.

P Proposed Critical Habitat.

1 Introduced population.

3 Extirpated in this county.

2 Survey should be conducted if project involves impacts to prairie dog towns or complexes of 200-acres or more for the Gunnison's prairie dog (*Cynomys gunnisoni*) and/or 80-acres or more for any subspecies of Black-tailed prairie dog (*Cynomys ludovicianus*). A complex consists of two or more neighboring prairie dog towns within 4.3 miles (7 kilometers) of each other.

Home
About NMRPTC
Contacts
Rare Plant List
County List
Agency Status
Photo List
About the List
History of Changes
Species Considered, but dropped
Photographers, Illustrators and Authors
Image Usage Guidelines
Sponsors
Discussion Group
Useful Literature
Links

Results of County Search

SIERRA	
Scientific name	County-NM
Agastache cana	Doña Ana, Grant, Luna, Sierra
Astragalus castetteri	Doña Ana, Sierra
Cirsium wrightii	Chaves, Eddy, Guadalupe, Otero, Sierra, Socorro
Cuscuta warneri	Roosevelt, Sierra
Desmodium metcalfei	Grant, Sierra
Draba mogollonica	Catron, Grant, Sierra, Socorro
Draba standleyi	Doña Ana, Otero, Sierra, Socorro
Erigeron scopulinus	Catron, Sierra, Socorro
Escobaria duncanii	Sierra
Escobaria sandbergii	Doña Ana, Sierra
Grindelia arizonica var. neomexicana	Grant, Sierra
Hedeoma todsenii	Otero, Sierra
Hexalectris arizonica	Doña Ana, Hidalgo, Otero, Sierra
Hymenoxys vaseyi	Doña Ana, Sierra
Penstemon metcalfei	Sierra
Perityle staurophylla var. homoflora	Sierra, Socorro
Perityle staurophylla var. staurophylla	Doña Ana, Otero, Sierra
Physaria gooddingii	Catron, Sierra
Silene plankii	Bernalillo, Doña Ana, Sandoval, Sierra, Socorro, Torrance
Silene thurberi	Grant, Hidalgo, Sierra
Silene wrightii	Catron, Grant, Luna, Sierra, Socorro

Photo credits in header *Peniocereus greggii var. greggii* © T. Todsen, *Lepidospartum burgessii* © M. Howard, *Argemone pleiacantha ssp. pinnatisecta* © R. Sivinski

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APPENDIX B

New Mexico Department of Agriculture Noxious Weed List

New Mexico Department of Agriculture
Office of the Director/Secretary
MSC 3189
New Mexico State University
P.O. Box 30005
Las Cruces, NM 88003-8005
Phone: (575) 646-3007

April 1, 2009

MEMORANDUM

TO: General Public

FROM: I. Miley Gonzales, Ph.D.

SUBJECT: New Mexico Noxious Weed List Update

The Director of the New Mexico Department of Agriculture has selected the following plant species *(see attached New Mexico Noxious Weed List)* to be targeted as noxious weeds for control or eradication pursuant to the Noxious Weed Management Act of 1998.

Petitions to add new plant species to the state noxious weed list were solicited and received by the New Mexico Department of Agriculture (NMDA) from Cooperative Weed Management Areas, individuals, agencies and organizations. The petitions were reviewed by the New Mexico Weed List Advisory Committee using ecological, distribution, impact, and legal status criteria within the State of New Mexico and adjoining states.

During its review the committee recommended the establishment of a new "watch list" category. This category contains plant species that have the potential to be problematic. More data is needed in order to determine if the species should be listed. Placing a plant species on the watch list will raise awareness of the species, and promote data collection and reporting efforts statewide. This will provide the data needed to determine if the plant should be listed.

This list does not include every plant species with the potential to negatively impact the state's environment or economy. Landowners and land managers are encouraged to recognize plant species listed on the federal noxious weed list and other western states' noxious weed lists as potentially having negative impacts and to manage them accordingly.

attachment: New Mexico Noxious Weed List

IMG/jm/jw

New Mexico Noxious Weed List

Update April 2009

Class A Species

Class A species are currently not present in New Mexico, or have limited distribution. Preventing new infestations of these species and eradicating existing infestations is the highest priority.

Commom Name	Scientific Name
Alfombrilla	*Drymaria arenariodes*
Black henbane	*Hyoscyamus niger*
Camelthorn	*Alhagi psuedalhagi*
Canada thistle	*Cirsium arvense*
Dalmation toadflax	*Linaria dalmatica*
Diffuse knapweed	*Centaurea diffusa*
Dyer's woad	*Isatis tinctoria*
Eurasian watermilfoil	*Myriophyllum spicatum*
Giant salvinia	*Salvinia molesta*
Hoary cress	*Cardaria spp.*
Hydrilla	*Hydrilla verticllata*
Leafy spurge	*Euphorbia esula*
Oxeye daisy	*Leucanthemum vulgare*
Parrotfeather	*Myriophyllum aquaticum*
Purple loosestrife	*Lythrum salicaria*
Purple starthistle	*Centaurea calcitrapa*
Ravenna grass	*Saccharum ravennae*
Scotch thistle	*Onopordum acanthium*
Spotted knapweed	*Centaurea biebersteinii*
Yellow starthistle	*Centaurea solstitialis*
Yellow toadflax	*Linaria vulgaris*

Class B Species

Class B Species are limited to portions of the state. In areas with severe infestations, management should be designed to contain the infestation and stop any further spread.

Common Name	Scientific Name
African rue	*Peganum harmala*
Chicory	*Cichorium intybus*
Halogeton	*Halogeton glomeratus*
Malta starthistle	*Centaurea melitensis*
Musk thistle	*Carduus nutans*
Perennial pepperweed	*Lepidium latifolium*

Russian knapweed	*Acroptilon repens*
Poison hemlock	*Conium maculatum*
Teasel	*Dipsacus fullonum*
Tree of heaven	*Ailanthus altissima*

Class C Species

Class C species are wide-spread in the state. Management decisions for these species should be determined at the local level, based on feasibility of control and level of infestation.

Common Name	**Scientific Name**
Bull thistle	Cirsium vulgare
Cheatgrass	*Bromus tectorum*
Jointed goatgrass	*Aegilops cylindrica*
Russian olive	*Elaeagnus angustifolia*
Saltcedar	*Tamarix spp.*
Siberian elm	*Ulmus pumila*

Watch List Species

Watch List species are species of concern in the state. These species have the potential to become problematic. More data is needed to determine if these species should be listed. When these species are encountered please document their location and contact appropriate authorities.

Common Name	**Scientific Name**
Crimson fountaingrass	*Pennisetum setaceum*
Giant cane	*Arundo donax*
Meadow knapweed	*Centaurea pratensis*
Pampas grass	*Cortaderia sellonana*
Quackgrass	*Elytrigia repens*
Sahara mustard	*Brassica tournefortii*
Spiny cocklebur	*Xanthium spinosum*
Wall rocket	*Diplotaxis tenuifolia*

APPENDIX C

New Mexico Department of Game and Fish Guidelines

TRENCHING GUIDELINES

NEW MEXICO DEPARTMENT OF GAME AND FISH

September 2003

Open trenches and ditches can trap small mammals, amphibians and reptiles and can cause injury to large mammals. Periods of highest activity for many of these species include nighttime, summer months and wet weather. Implementing the following recommendations can minimize loss of wildlife.

- Keep trenching and back-filling crews close together, to minimize the amount of open trenches at any given time.

- Trench during the cooler months (October – March). However, there may be exceptions (e.g., critical wintering areas) that need to be assessed on a site-specific basis.

- Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters.
  Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The slope should be less than 45 degrees (1:1). Trenches that have been left open overnight should be inspected and animals removed prior to backfilling, especially where endangered species occur.

On a statewide basis there are numerous threatened, endangered or sensitive species potentially at risk by trenching operations. Project initiators should seek county species list to evaluate potential impact of projects. Risk to these species depends upon a wide variety of conditions at the trenching site, such as trench depth, side slope, soil characteristics, season, and precipitation events.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Las Cruces District Office
1800 Marquess
Las Cruces, New Mexico 88005
www.blm.gov/nm

TAKE PRIDE IN AMERICA

In Reply Refer To:
(1703)
NMNM 003757401

To: Las Cruces District Manager

From: Pecos District Environmental Professional

Subject: Truth or Consequences Landfill Land Disposal Environmental Site Assessment (ESA) Cover Sheet/Update Memorandum

As a Bureau of Land Management Environmental Professional I have reviewed the ESA prepared by Thomas C. Custer, Delta Terra, on the subject property. This ESA was originally signed on July 24, 2009.

Due to the realty disposal process extending over the ASTM timeframe, the document was reviewed for the purpose of updating it as necessary. This included a visual inspection conducted on April 7, 2014; and personal knowledge of BLM staff of government records and activities on the subject property. Based on the review of the entire assessment, the associated supporting documentation, and the closing opinions and recommendations, I have reached the following conclusions:

(1) This assessment has revealed evidence of recognized environmental conditions (RECs) and/or CERCLA 120(h) concerns and will be conveyed to the City of Truth or Consequences as a Potentially Responsible Party (PRP). In accordance with the Environmental Site Assessments for Disposal of Real Property Handbook (BLM Manual H-2000-02) a federal agency may transfer suspected or known to be contaminated property without remediation to a PRP.

(2) No further inquiry is needed for purposes of all appropriate inquires and this real property is suitable for disposal. The ESA may be considered as 'updated' for another 180 day period.

Al Collar
Pecos District Office
Certified Environmental Professional

Date of Review: 27, 2014

Bill Childress
Las Cruces District Manager

Date of Approval: July 8, 2014

Cc:
Rusty Stovall, Operations Chief
Edward Seum, Lands/Minerals Supervisor
Thomas C. Custer, Delta Terra

PHASE I

ENVIRONMENTAL SITE ASSESSMENT

UPDATE

T. 13 S., R. 4 W., SECTION 22: LOT 3, NMPM

30.12-acre parcel located near Truth or Consequences, NM

PREPARED FOR SUBMITTAL TO:

U.S. DEPARMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
1800 MARQUESS
LAS CRUCES, NM 88005

JULY 24, 2009

Thomas C. Custer
Delta Terra
1845 Meadow Ln.
Las Cruces, NM 88007
575-526-1945
deltaterra@earthlink.net

TABLE OF CONTENTS

SUMMARY 1

1.0 INTRODUCTION 2

1.1 Purpose 2
1.2 Terms and Conditions 2
1.3 Limitations and Exceptions 2
1.4 Standard of Care 3

2.0 SITE DESCRIPTION 3

2.1 Site Location 3
2.2 Site History 3
2.3 Physical Setting 6
2.4 Site Reconnaissance 7
2.5 Adjacent Property Condition 8
2.6 Recognized Environmental Concerns 8
2.7 Solid Waste/Physical Hazards 9

3.0 GOVERNMENT RECORDS AND HISTORICAL SOURCES 9

3.1 Government Records 9
3.2 Historical Sources 9

4.0 FINDINGS 10

5.0 OPINIONS 10

6.0 CONCLUSIONS 11

7.0 RECOMMENDATIONS 11

8.0 SIGNATURE AND QUALIFICATIONS OF ENIVIRONMENTAL PROFESSIONAL 11

9.0 REFERENCES 12

FIGURES 1, 2, and 3: LOCATION MAPS

FIGURE 4: SITE SKETCH

APPENDIX 1: PHOTOGRAPHS

APPENDIX 2: HISTORICAL RESEARCH DOCUMENTATION

SUMMARY

An updated Phase I Environmental Site Assessment was prepared for a 30.12-acre parcel of land located 2.5 miles north-northeast of Truth or Consequences, New Mexico. The subject parcel is federally-owned public land managed by the U.S. Department of the Interior, Bureau of Land Management, and is proposed for transfer to the City of Truth or Consequences. Based on records search, site reconnaissance, and review of previous reports, it has been determined that:

- Although *recognized environmental conditions* occur on the subject property as indicated by the presence of hazardous substances associated with an old landfill, these conditions do not pose a significant threat to human health or the environment.

- Potential direct contact with non-hazardous solid waste such as glass and metal still poses a physical hazard where waste is exposed, primarily on the steep, uncovered and unstabilized slopes below the bench top.

- BASCOR's engineered cap design for the landfill waste source on the lower terrace area will significantly reduce the potential for direct contact with waste materials.

- The reclamation activities proposed by BASCOR's landfill closure plan prepared for the City of T or C and approved by the New Mexico Environment Department will significantly reduce the potential for further migration of contaminants to the surface-water and ground-water pathways.

- The landfill cap and surface-water run-off and run-on controls constructed by BASCOR will minimize erosion of the cap on the eastern, lower area of the property.

It is recommended that Bureau of Land Management proceed with their plan to transfer the subject property to the City of Truth or Consequences. Although CERCLA 120(h) essentially prevents a federal agency from transferring contaminated property without first remediating the site, the law does allow a federal agency to transfer the property to a *potentially responsible party* (PRP) without performing any site cleanup prior to transfer. Such is the case with the subject property since the City is a PRP.

The Bureau of Land Management should prepare a *notice* as described under CERCLA 120(h) and 40 CFR Part 373 which describes requirements for disclosing hazardous substance activity when selling or transferring federal property. The notice must be included in the property transfer documents. Guidance for preparing the notice is found in BLM draft manual H-2000-02, Environmental Site Assessments for Disposal of Real Property.

1.0 INTRODUCTION

In July 2009, Mr. David Jevons, Las Cruces District Office, Bureau of Land Management, requested that Delta Terra prepare an *updated* Phase I Environmental Site Assessment (ESA) for a 30.12-acre parcel of land located 2.5 miles north-northeast of Truth or Consequences (T or C), New Mexico. The subject parcel is federally-owned public land managed by the U.S. Department of the Interior, Bureau of Land Management (BLM), and is proposed for transfer to the City of T or C.

The original ESA was prepared by Delta Terra in October 2006 for BASCOR Environmental, Inc. and is available for review at the Las Cruces District Office.

1.1 Purpose

The Phase I ESA is an industry-standard report developed by ASTM International: *E-1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The Phase I ESA is normally used to satisfy the requirements of *all appropriate inquiries* as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) prior to purchase or acquisition of a commercial property. The ESA is used to conduct *all appropriate inquiries* into the previous ownership and uses of a property for the purpose of meeting the *all appropriate inquiries* provisions necessary to qualify for landowner liability protections under CERCLA. The primary objective of the Phase I ESA is to determine if *recognized environmental conditions* (REC) are associated with a property.

However, use of the Phase I ESA is not limited to property acquisition. The BLM's purpose for conducting an ESA on the subject property, which is to be transferred to the City of T or C, is to implement the requirements of Section 120(h), *Property Transferred by Federal Agencies*, of CERCLA and 40 CFR 373, *Reporting Hazardous Substance Activity When Selling or Transferring Federal Real Property*. Preparing an ESA will provide the BLM with documentation of property conditions prior to property transfer in order to establish baseline conditions in the event hazardous substances or petroleum products are found or conditions change after the property has been conveyed.

1.2 Terms and Conditions

Project details were provided by Mr. David Jevons and Ms. Lorraine Salas of the BLM. The scope of work calls for conducting an ESA that meets the requirements of ASTM E-1527-05.

1.3 Limitations and Exceptions

A Phase I ESA is normally prepared to determine the occurrence of *recognized environmental conditions* in connection with a property. The Phase I ESA does not require sampling or other intrusive types of investigation. If the Phase I ESA concludes that *REC* do occur in connection with a property, further, more intensive investigation can be performed through a Phase II ESA following the guidelines in ASTM E-1903-97.

As documented in the original ESA, an intensive site investigation was performed on the subject property in 1995 by C.C. Johnson & Malhotra (CCJM). In 2007, BASCOR excavated test pits to further delineate the extent of the landfill and also drilled additional monitoring wells. The objective of this updated ESA is to document current site conditions with respect to *REC* and to summarize any important new information.

The conclusions and recommendations in this ESA report are based on site reconnaissance and the review of reasonably ascertainable public records. No ESA can eliminate uncertainty regarding the potential occurrence of hazardous substances or other regulated materials on a property. The findings in this report do not preclude that hazardous substances or other regulated materials may occur in the subsurface or that hazardous substances or other materials may be spilled or disposed on the property after completion of this report.

1.4 Standard of Care

The environmental services performed by Delta Terra have been conducted with that degree of care and skill ordinarily exercised under similar circumstances by reputable members of the industry practicing in the same locality under similar budget and time constraints. No other warranty, expressed or implied, is made.

2.0 SITE DESCRIPTION

2.1 Site Location

The property is located in Sierra County, New Mexico about 2.5 miles north-northeast of downtown Truth or Consequences. The legal description of the property is T. 13 S., R. 4 W., Section 22: Lot 3, NMPM (see Figures 1, 2, and 3).

2.2 Site History

The City of T or C operated a solid-waste landfill on the site from 1961 to 1974. Use of the property for a landfill was authorized by the BLM Las Cruces District Office under a Recreation and Public Purpose Act lease, NM 037574. File records indicate that the City did not keep records on the quantities or types of waste being disposed at the landfill. Waste was typically dumped on a bench-top along the east side of the ridge-top access road but not properly covered. Waste was later dumped on a lower terrace below the steep slopes of the ridge and covered with soil by heavy equipment.

In 1974, BLM noted various lease violations concerning deposition of trash, unauthorized burning, and an impending shortage of fill material to cover exposed waste. BLM subsequently recommended closing the landfill which included covering the waste with a minimum of two feet of clean, compacted soil. A BLM post-closure inspection in December 1974 noted that the landfill had been adequately closed (CCJM, 1995).

In 1989, most of the BLM landfills in New Mexico, including the T or C landfill, were listed on the Federal Agency Hazardous Waste Compliance Docket and the Comprehensive Environmental Response, Compensation, and Liability Information

System (CERCLIS). The CERCLIS identification for the T or C landfill is NM 8141199986.

In 1990, BLM contracted with CCJM to prepare a CERCLA Preliminary Assessment (PA) on the T or C landfill. This is mandatory for all sites on CERCLIS. The PA identified heavy metals above background concentrations, low levels of organic compounds, and the presence of significant targets in the ground-water pathway. Due to these findings, the U.S. Environmental Protection Agency (EPA) determined that further investigation was needed and recommended to BLM that a CERCLA Site Investigation (SI) be prepared (EPA, 1992). BLM then contracted with CCJM to prepare the site investigation which was completed in 1995. The SI included surface and subsurface waste-source and soil sampling, sediment sampling in drainages, and ground-water sampling from four ground-water monitoring wells and six well points. The findings of the SI are summarized below:

- Approximately 5.7 acres of the 30.12-acre parcel have been used or impacted by waste-disposal activities.

- The waste source (landfill) does not demonstrate effective containment to mitigate off-site contaminant migration.

- Hazardous substances associated with the waste source include heavy metals, cyanide, volatile organic compounds, pesticides, and PCB's.

- Ground-water samples indicate a total of 12 observed releases of manganese and zinc to the ground-water migration pathway.

- Twenty observed releases to the surface-water migration pathway including heavy metals, volatile organic compounds, and pesticides.

- The uncontained nature of the waste source represents a significant threat to environmental targets.

- There is no evidence of imminent threat with regard to human targets.

- The Hazard Ranking Score (HRS) is 17.97 which is below the minimum score of 28.50 necessary for listing the site on the National Priorities List (NPL).

- The verification of surficial soil contamination and contaminant migration via the ground-water and surface-water pathways underscores the need to address waste-source containment and restrict site access.

More recently, BLM and the City of T or C, have negotiated a plan for transfer of the property to the City to facilitate redevelopment of the site. Prior to property transfer, one of the BLM requirements is for the City to have an approved Closure Plan from the New

Mexico Environment Department (NMED). On behalf of the City, BASCOR filed a Closure Plan with NMED in 2006 (BASCOR, 2006). The plan included removal of white goods and other large pieces of solid waste, construction of an engineered soil cover system for the old landfill, ground-water monitoring, and development of the eastern portion of the property with earthen fill and vegetative cover for use as a golf practice range. NMED approved the closure plan on September 25, 2006 (NMED, 2006).

In November 2006, BASCOR excavated 13 test pits to further define the eastern limits of solid-waste disposal. Ten of the excavations encountered solid waste east and southeast of the previously assumed limits of the landfill. Based on this additional data, BASCOR estimated that the total extent of solid waste covers approximately 8.5 acres.

In March 2007, BASCOR supervised the drilling of five new ground-water monitoring wells: two in the northeast portion of the property and three south of the property. In their report to NMED, which summarized monitoring-well installation and sampling, BASCOR noted:

> *No organic compounds (VOCs, SVOCs, pesticides, and PCBs) were detected above laboratory practical quantitation limits (PQLs) except for very low concentrations of bromoform and dibromochloromethane, detected in wells MW-5 and MW-7. However, the concentrations of these compounds were very low (just above PQLs). The only other compounds detected were barium, iron, manganese, and nitrate+nitrite.*

BASCOR's sampling results indicate that only manganese was detected above its State ground-water standard of 0.2 mg/l in monitoring wells MW-2, MW-5, and MW-7. BASCOR also noted that monitoring well MW-3R "*...was the only well sampled using low-flow techniques. Low-flow sampling generally results in lower turbidity and thus typically produces samples that are more representative of actual groundwater quality (especially for inorganic compounds such as manganese).*" BASCOR also notes that "*... MW-5 is a background well, indicating that manganese could be naturally occurring, not a result of potential impacts cause by the former T or C landfill.*" New Mexico's ground-water standard for manganese is based on aesthetics (e.g. taste, odor, staining) rather than human health concerns (NMED et al., 2000).

In June 2007, Terracon prepared a Phase I Environmental Site Assessment/Land Transfer Audit for BASCOR. Terracon concluded, in part, that:

Terracon did not conduct any testing of the soil or ground water on or around the landfill; however, based on previous reports, results of previous tests conducted on soil and ground water at the site, the condition of the existing/remaining landfill cap, and the type of exposed solid waste, the presence of the former landfill should not result in potential liability to the United states related to the disposal, placement, or release of a hazardous substance. Terracon did not identify RECs which warrant additional investigation at this time. However, Terracon strongly recommends that the landfill cover/cap be periodically inspected and properly maintained.

During the period of March through October 2008, BASCOR began construction of the landfill-cover with the addition of cover material at the top of the bench. This was followed by installation of an engineered cover system on the lower terrace at the toe of the steep slopes and on the eastern lowland area. Based on the results of the 2006 excavation of test pits to delineate the area of historic solid-waste disposal, BASCOR constructed the golf practice facility so as not to impact the areas containing solid waste. A sprinkler system was installed and the practice facility was seeded with grass in October 2008.

The landfill is listed in the "archived sites" section of CERCLIS (U.S. EPA, 2009). As noted by EPA:

> *The Archive designation indicates the site has no further interest under the Federal Superfund Program based on available information. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available.*

2.3 Physical Setting

The site is situated on ancestral Rio Grande alluvial deposits. A north-trending ridge is situated on the western portion of the site. An old access road follows the top of the ridge. The eastern portion of the site is a lowland area. The highest elevation on the site is about 4390 feet along the top of the ridge in the northwest portion of the site. The lowest elevations range from about 4270 to 4280 feet along the eastern boundary of the property. The average annual precipitation is 9.9 inches falling mostly as rain from July through October. The average maximum and average minimum temperatures respectively are 77.2 and 46.2 °F (Western Regional Climate Center, 2006).

Vegetation on the western portion of the property is predominated by creosote and mesquite. The eastern lowland area of the property has been seeded with grass for development of a golf practice facility.

There are no perennial surface waters on the site. Surface-water flow occurs mostly during heavy precipitation events during the monsoon season in late summer. Prior to development of the golf practice facility, natural surface-water drainage was predominantly toward the east and east-northeast via overland flow and several small gullies. Surface run-off in the northeastern portion of the property flows toward Mims Lake, which is about 0.4 miles southeast of the northeast property corner.

In 1995 CCJM calculated ground-water flow to be toward the south-southeast. More recently, BASCOR calculated flow to be toward the southeast based on their monitoring-well data. Depth to ground water varies on the site. Ground-water sampling by CCJM in 1995 revealed that ground-water depths ranged from approximately 4 to 30 feet (CCJM, 1995. BASCOR's monitoring-well data collected in 2007 indicates that depths to water ranged from 9 to 25 feet (BASCOR, 2007).

Site soils along the ridge and higher elevations on the western portion of the site consist of very gravelly, fine sandy loam. The lowland, eastern portion of the site consists

mostly of fine sandy loam with minor amounts of silt and gravel much of which is overlain by a sandy loam that has been imported from an off-site location for use as cap material for the golf practice facility.

2.4 Site Reconnaissance

A pedestrian survey of the site was performed on July 13, 15, and 20, 2009 by Thomas C. Custer, Delta Terra.

The old access road to the site along the top of the ridge is currently open to public access. Waste was historically dumped along the top and down the side of the ridge on the east side of the access road. This area of historic dumping along the ridge slope extends south of the property for about 300 feet. There are several sites in this area where people have been excavating with hand tools in search of artifacts such as old bottles. In the 2006 ESA performed by Delta Terra, it was noted that the historic soil cover placed on the waste was undergoing moderate to severe erosion and much of the waste was exposed. Most of that exposed waste consisted of non-hazardous solid waste such as metal, wood, glass, and plastic. Erosion of the steep slopes along the east side of the ridge was allowing waste and any contaminants associated with the waste source to migrate eastward toward the lowland area of the property. Surface water run-off from the site in the northeastern portion of the site was a concern because contaminants could reach the wetland area of Mims Lake.

Moderate to severe erosion of the steep slopes is still occurring, however recent reclamation efforts by BASCOR have reduced the impact of erosion along the east-facing slopes of the ridge where solid waste is still exposed. BASCOR has placed cover material (gravelly soil) on the top of the bench above the steep slopes and constructed a berm along the edge which should reduce run-off. However, precipitation falling directly on the slopes will still contribute to erosion resulting in possible transport and migration of waste materials to the eastern lowland area.

Light to moderate erosion of the constructed cap is occurring near the southwestern edge of the golf practice facility along the lower terrace slope. Long-term maintenance and continued growth of the grass should help to stabilize erosion.

BASCOR has reduced the potential impact of surface-water run-on to the lowland area by constructing a ditch at the bottom of the steep slopes which re-directs surface water to a ponding area in the southern portion of the site. Surface-water run-off from the practice facility is directed toward a shallow ditch on the east side of the property were run-off flows through a culvert beneath the adjacent access road.

The soil cover on the golf practice facility is being irrigated in order to establish the seeded grass cover. According to Mr. John Tanaka of BASCOR, watering of the cap on the lower terrace area where BASCOR delineated areas of additional disposal of solid waste is controlled by the sprinkler system and is set to reduce the amount of water falling on this area.

In the northwest portion of the subject property, surface-water run-on from adjacent property is occurring via a south-trending drainage and an area where severe erosion on the east side of the old access road has created a deep gully about 100 feet north of the property. In these drainages, surface-water flows toward the southeast and east-southeast and enters the property about midway between the northwest and northeast property corners. However, the surface-water run-on controls constructed by BASCOR appear to be preventing or at least minimizing erosion of the cap on the northern portion of the golf practice facility.

2.5 Adjacent Property Condition

Full-time construction activities are occurring to the north and northeast of the property in support of the Turtleback Mountain Resort including the golf facility. An unpaved access road borders the east side of the property and continues toward the southwest. The area east and southeast of the property toward Mims Lake contains mostly undisturbed natural vegetation. The area south of the subject property has been cleared but remains undeveloped. Sand and gravel are being excavated from an arroyo just west of the property however these activities do not appear to affect the property.

A waste-water lift station using activated-carbon filtration for odor control is situated on adjacent property along the northeast boundary of the subject property. It does not appear to adversely impact the subject property.

In the original 2006 ESA it was noted that:

> *Land clearing and road construction to the south of the subject property is providing a path for surface-water run-on to the subject property. Other than some erosion along the southern boundary of the subject property, there does not appear to be any other environmental concern from these construction activities.*
>
> *Surface-water run-on from adjacent property is occurring near the northwest and southwest portions of the subject property. Severe erosion on the east side of the old access road has created a deep gully about 100 feet north of the property. Surface water flows toward the east-southeast and enters the property about midway between the northwest and northeast property corners. In the southwest portion of the subject property, surface water is entering the site from erosion of that portion of the old landfill that extends south of the property.*

However, recent reclamation and stabilization efforts by BASCOR which included the construction of a diversion ditch at the bottom of the steep slopes, the addition of cover material, and re-contouring of the lowland area, have significantly reduced potential impacts related to surface-water run-on and run-off. Continued long-term maintenance of these erosion-control features will help to minimize or prevent erosion.

2.6 Recognized Environmental Conditions

Analyses of samples collected from the site investigation by CCJM detected the following hazardous substances on the site. Although the concentrations detected do not

exceed CERCLA reportable quantities or NMED regulatory standards, the presence of these substances in association with the old landfill indicate a *recognized environmental condition*:

4,4'-DDE	4,4'-DDT
acetone	alpha-chlordane
aroclor-1248	aroclor-1254
beta-BHC	cadmium
chromium	copper
cyanide	dibromochloromethane
dieldrin	gamma-chlordane
manganese	lead
methylene chloride	mercury
silver	nickel
thallium	toluene
xylene	zinc

2.7 Solid Waste/Physical Hazards

Other than potential direct contact with non-hazardous solid waste such as glass and metal, no other physical hazards were observed on the property.

3.0 GOVERNMENT RECORDS AND HISTORICAL SOURCES

3.1 Government Records

A report summarizing the search of federal and state records was performed by Environmental Data Resources and is included in Appendix 2. Other than the T or C landfill which is the subject of this ESA, the records search by EDR did not reveal any sites or conditions that would affect the BLM property. The data sources searched include, but are not limited to:

- National Priority List
- Comprehensive Environmental Response, Compensation, and Liability Information System
- Resource Conservation and Recovery Act Information
- Toxic Substances Control Act
- State Solid Waste Facilities
- State Listing of Leaking Underground Storage Tanks
- State Voluntary Remediation Program Sites

3.2 Historical Sources

- Aerial photographs dated 1974 and 1980 (USDI, 2006)

- Final Site Inspection Report, Truth of Consequences Landfill (CCJM, 1995)
- Closure Plan for the Former Truth or Consequences Landfill (BASCOR, 2006)
- Landfill Delineation Report (BASCOR, 2007)
- Monitoring-well installation and sampling data (BASCOR, 2007)
- Phase I Environmental Site Assessment/Landfill Transfer Audit (Terracon, 2007)

4.0 FINDINGS

Based on records search, site reconnaissance, and review of the CCJM site investigation, the findings are as follows:

Recognized Environmental Conditions: The presence of an old landfill, past and present erosion of the historic landfill cap, and the detection of hazardous substances, indicate that *recognized environmental conditions* occur on the subject property.

Other conditions which affect the subject property:

1. Potential direct contact with non-hazardous solid waste such as glass and metal still poses a potential physical hazard in areas on the western portion of the property where solid waste has not been covered.

2. In the northwest portion of the subject property, surface-water run-on from adjacent property is occurring via a south-trending drainage and an area where severe erosion on the east side of the old access road has created a deep gully about 100 feet north of the property. In these drainages, surface water flows toward the southeast and east-southeast and enters the property about midway between the northwest and northeast property corners.

3. Erosion of the steep slopes on the western portion of the property is still occurring.

4. Erosion of the cap is occurring on the lower terrace slopes along the southwestern edge of the golf practice facility.

5.0 OPINIONS

It is the opinion of the preparer of this report that the *recognized environmental conditions* on this property do not pose a significant threat to human health or the environment. The reclamation activities proposed by BASCOR in the closure plan prepared for the City of T or C and approved by NMED, will significantly reduce the potential for any further migration of contaminants to the surface-water and ground-water pathways. Bascor's engineered cap design for the landfill will also prevent direct contact

with waste materials and minimize infiltration of surface water assuming the cap is inspected and maintained on a regular basis.

Although the erosion controls constructed by BASCOR on top of the bench are reducing run-off down the slopes, precipitation that falls directly on the slopes will likely result in continued erosion until this portion of the old landfill is stabilized.

The surface-water run-on controls and the cap constructed by BASCOR appear to be preventing or at least minimizing erosion of the cap on the lower, eastern portion of the property. Continued maintenance of the cap and establishment of the grass cover will minimize long-term erosion.

6.0 CONCLUSIONS

Thomas C. Custer, Delta Terra, has performed a Phase I Environmental Site Assessment in conformance with ASTM Standard E-1527-05. Any exceptions from this guidance are described in Section 1.3 of this report. This Phase I ESA identifies hazardous substances, as listed in Section 2.6 of this report, to be *recognized environmental conditions* in connection with the subject property.

7.0 RECOMMENDATIONS

It is recommended that Bureau of Land Management proceed with their plan to transfer the subject property to the City of Truth or Consequences. Although CERCLA 120(h) essentially prevents a federal agency from transferring contaminated property without first remediating the site, the law does allow a federal agency to transfer the property to a *potentially responsible party* (PRP) without doing any site cleanup prior to transfer. Such is the case with the subject property since the City is a PRP.

As described in the BLM's draft manual, H-2000-02, Environmental Site Assessments for Disposal of Real Property, the BLM should prepare a *notice* as required under CERCLA 120(h) and 40 CFR Part 373. The draft manual describes requirements for disclosing hazardous substance activity when selling or transferring federal property. The notice must be included in the property-transfer documents and include a list of hazardous substances connected with the property.

8.0 SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

This Phase I Environmental Site Assessment was performed by Thomas C. Custer who has thirty years of professional experience with the U.S. Department of the Interior. Most of Mr. Custer's career has been associated with geologic and environmental investigations including Phase I ESA's.

Signed:

7/24/09

Thomas C. Custer Date

9.0 REFERENCES

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BASCOR Environmental, Inc., 2007, Landfill Delineation Report BLM Site, in BLM files, Las Cruces District Office.

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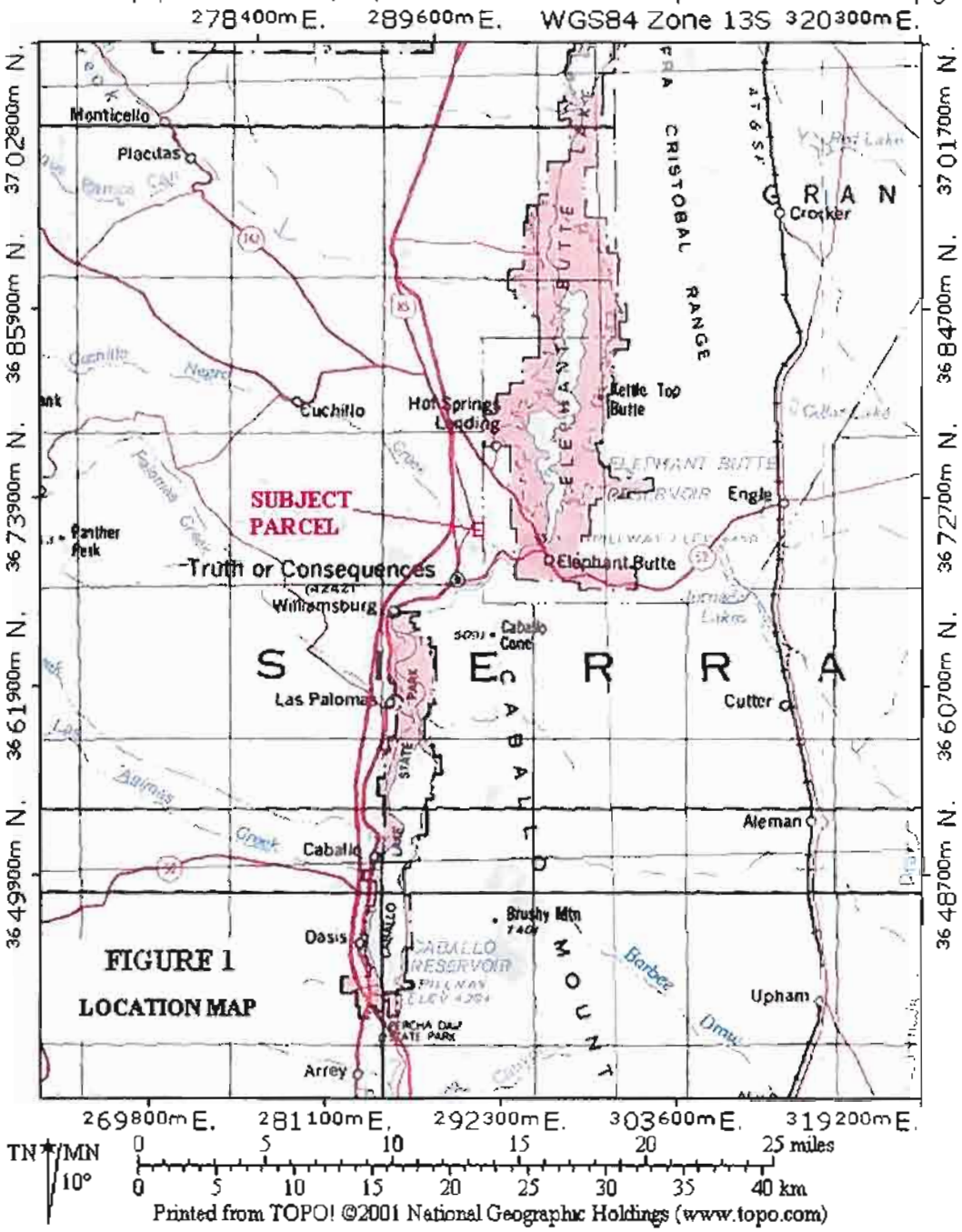

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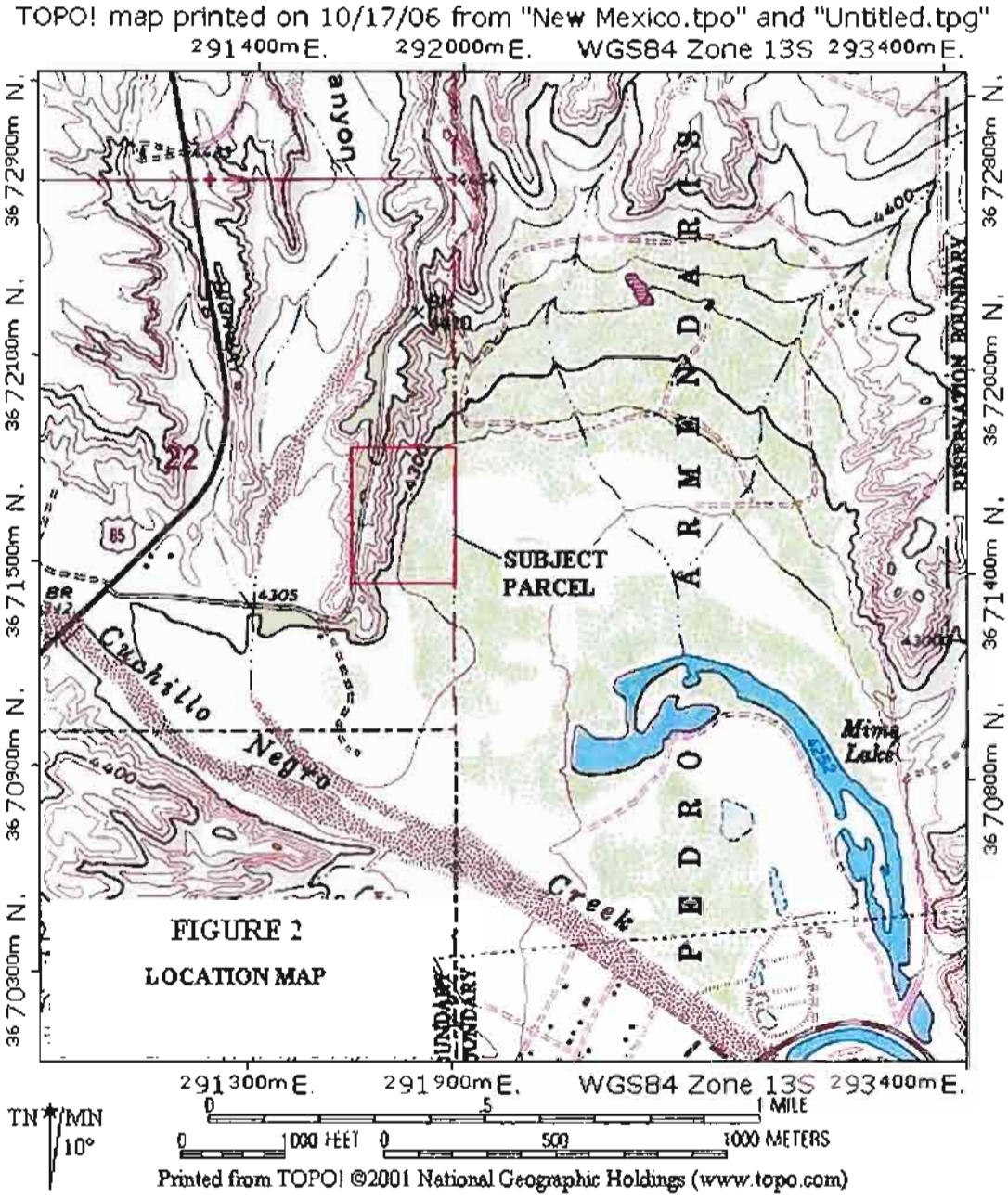
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36 71500m N.
36 71400m N.
36 70900m N.
36 70800m N.
36 70300m N.
291300m E.
291900m E.
WGS84 Zone 13S
293400m E.
Canyon
22
85
4305
4400
4410
4300
SUBJECT PARCEL
PEDRO ARMENDARIS
Cuchillo Negro Creek
Mima Lake
4232
PRESERVATION BOUNDARY
FIGURE 2
LOCATION MAP
TN
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10°
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1 MILE
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1000 METERS
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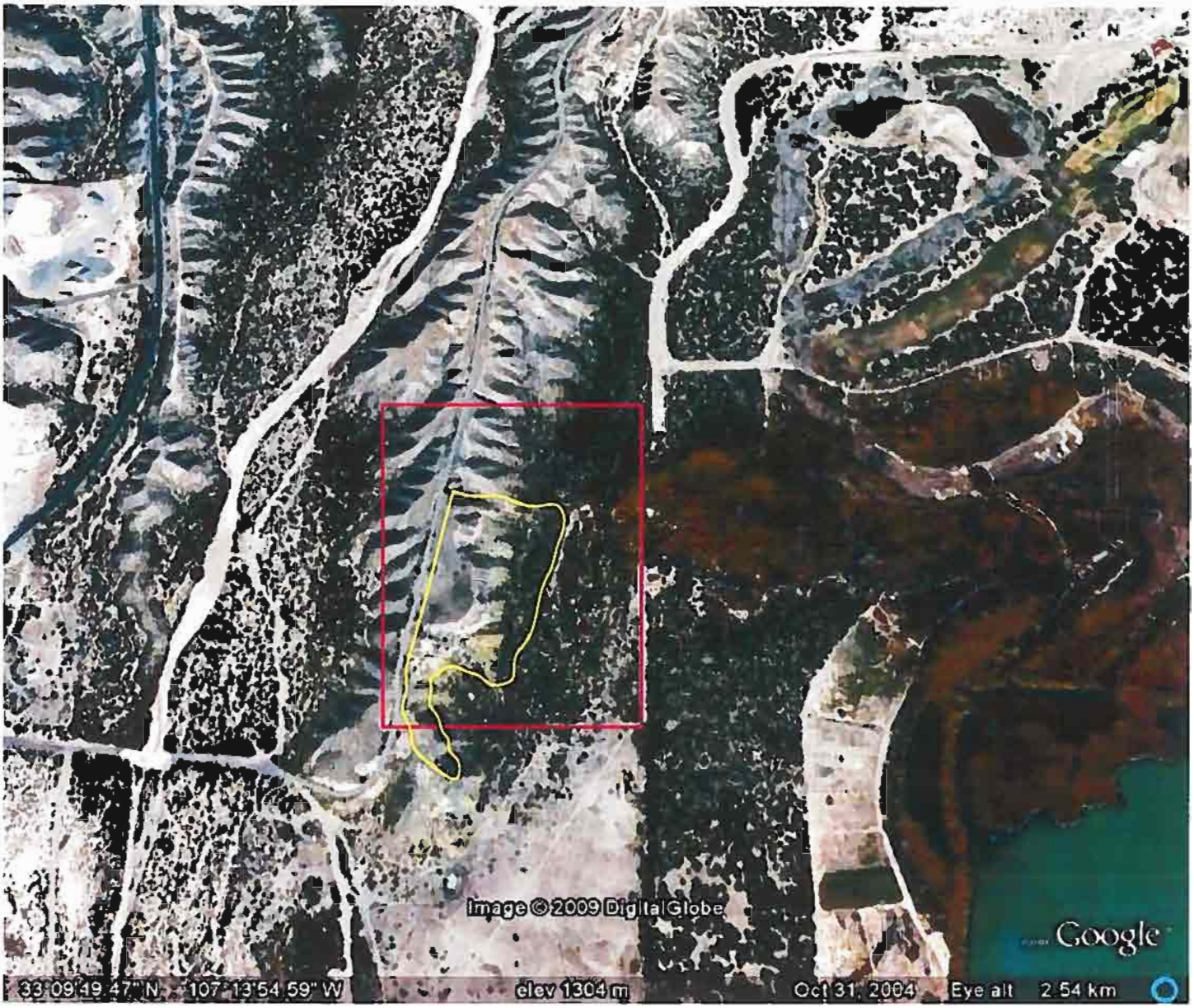

BLM property

Approximate limits of solid-waste disposal

500 ft
scale is approximate

N

FIGURE 3
LOCATION MAP

Source: Google Earth, actual image date unknown

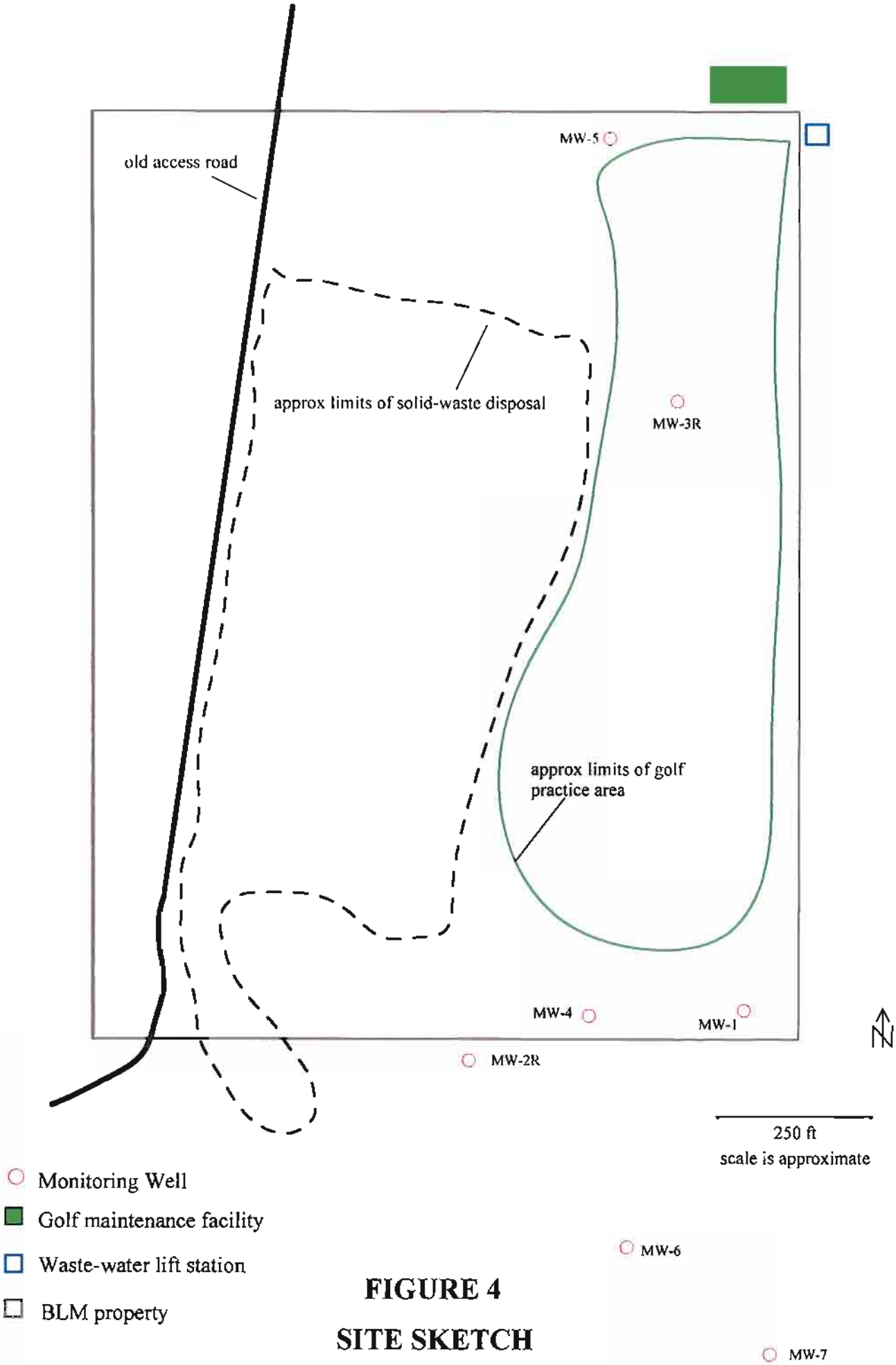

FIGURE 4

SITE SKETCH

APPENDIX 1

PHOTOGRAPHS

View toward east along north property line. 7/13/2009

View toward west along north property line. 7/13/2009

View toward south along east property line. Waste-water lift station in left foreground. 7/13/2009

View toward north along east property line. 7/13/2009

View toward west along south property line. 7/13/2009

View toward east along south property line. 7/13/2009

Erosion on steep slopes below bench top. Note cover material and run-off control berm constructed by BASCOR. View toward east-northeast. 7/13/2009

Run-off controls on top of bench. View toward south-southeast. 7/13/2009

Erosion on steep slopes below bench top. View toward north. 7/13/2009

Erosion below old access road near south boundary line. View toward east. 7/13/2009

Erosion on cap along lower terrace slope near southwest edge of golf practice facility. View toward east. 7/13/2009

Erosion controls near base of steep slopes. View toward south. 7/13/2009

Erosion controls near base of steep slopes.
View toward north. 7/13/2009

Golf practice facility on eastern lowland area.
View toward southeast. 7/13/2009

Golf practice facility on eastern lowland area.
View toward east. 7/13/2009

APPENDIX 2

HISTORICAL RESEARCH DOCUMENTATION

EDR Radius Map Report

T or C Landfill, New Mexico
3 Mi NNE
T or C, NM 87901

Inquiry Number: 2540989.1s
July 17, 2009

The EDR Radius Map™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

FORM-NULL-MEN

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	7
Orphan Summary	8
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3 MI NNE
T OR C, NM 87901

COORDINATES

Latitude (North):	33.162500 - 33' 9' 45.0"
Longitude (West):	107.233300 - 107' 13' 59.9"
Universal Tranverse Mercator:	Zone 13
UTM X (Meters):	291731.8
UTM Y (Meters):	3671331.2
Elevation:	4310 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	33107-B2 ELEPHANT BUTTE, NM
Most Recent Revision:	1980

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
TRUTH OR CONSEQUENCES LANDFILL APPROXIMATELY 3 MILES NORTH ON HIGH TRUTH OR CONSEQUENCES, NM 87901	SWF/LF	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SCS..... State Cleanup Sites Listing
SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State and tribal leaking storage tank lists

LUST..... Leaking Underground Storage Tank Prioritization Database
LAST..... Leaking Aboveground Storage Tank Sites
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST..... Listing of Underground Storage Tanks
AST..... Aboveground Storage Tanks List
INDIAN UST..... Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

State and tribal institutional control / engineering control registries

INST CONTROL..... Sites with Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Remediation Program Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
SWRCY..... Recycling Facility Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs
CDL..... Clandestine Drug Laboratory Listing

Local Land Records

LIENS 2..... CERCLA Lien Information
LUCIS..... Land Use Control Information System

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
SPILLS..... Spill Data

Other Ascertainable Records

RCRA-NonGen..... RCRA - Non Generators
DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems

EXECUTIVE SUMMARY

ICIS..... Integrated Compliance Information System
PADS..... PCB Activity Database System
MLTS..... Material Licensing Tracking System
RADINFO..... Radiation Information Database
FINDS..... Facility Index System/Facility Registry System
RAATS..... RCRA Administrative Action Tracking System
DRYCLEANERS..... Drycleaner Facility Listing
NPDES..... List of Discharge Permits
ASBESTOS..... List of Asbestos Demolition and Renovations Jobs
INDIAN RESERV..... Indian Reservations
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

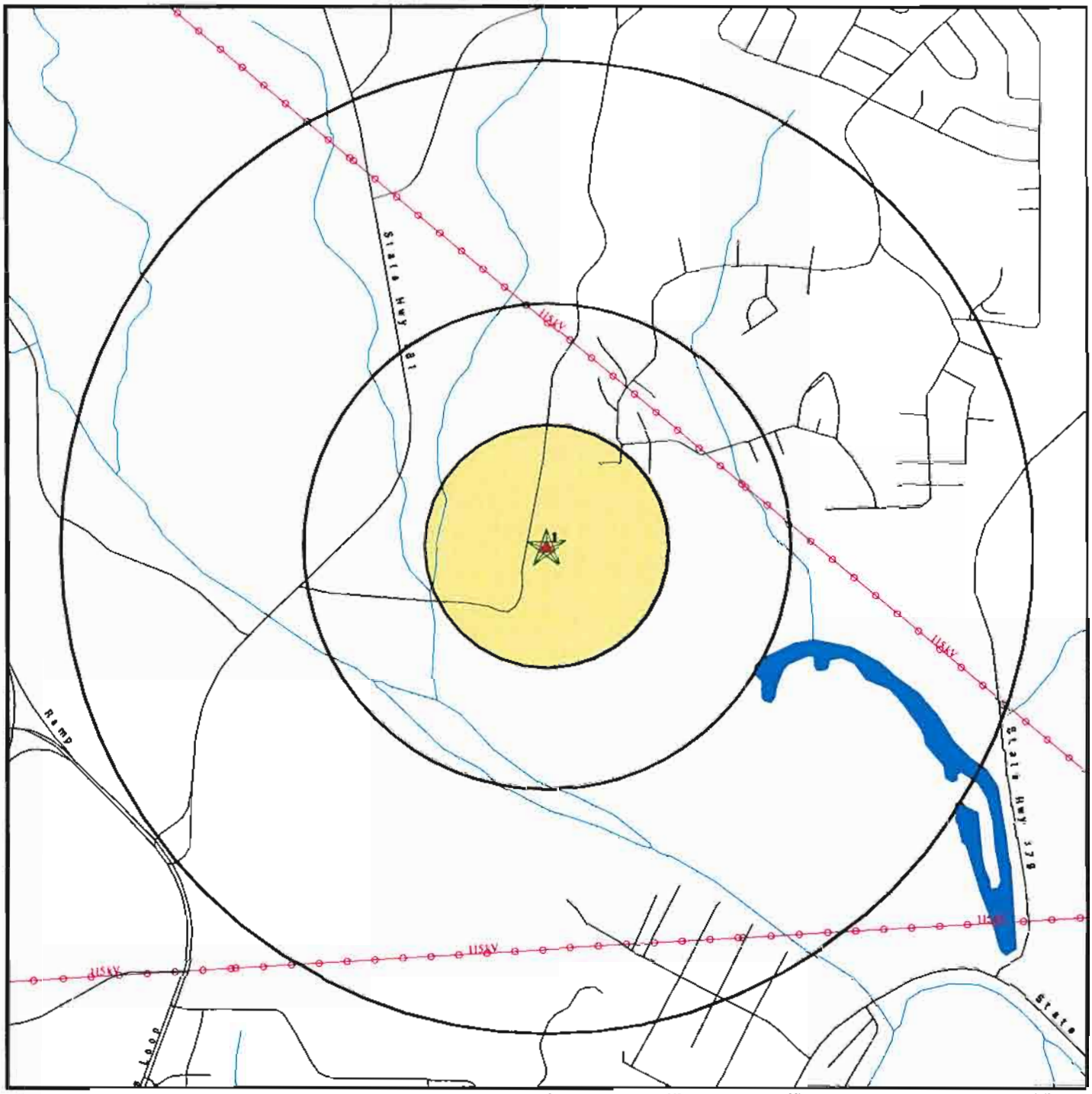
Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
LOUGHRIDGE SPILL	SCS
T OR C RECYCLING CENTER	SWRCY
NORTH BROADWAY GROUNDWATER PLUME	CERCLIS, FINDS
BLM-TRUTH OR CONSEQUENCES LANDFILL	CERC-NFRAP
ARREY LANDFILL	SWF/LF
CUCHILLO LANDFILL	SWF/LF
SIERRA COUNTY LANDFILL	SWF/LF
BELL GAS T OR C	LUST
T OR C	LUST
CUTTER NM RMLR	UST
KINGSTON ADMINISTRATIVE SITE	UST
DAM SITE MARINA RESTAURANT	AST
BARTOO SAND AND GRAVEL INC	AST
BARTOO SAND & GRAVEL INC	FINDS, RCRA-NonGen

OVERVIEW MAP - 2540989.1s



0 1/4 1/2 1 Miles

- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ♟ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines

SITE NAME: T or C Landfill, New Mexico ADDRESS: 3 MI NNE T or C NM 87901 LAT/LONG: 33.1625 / 107.2333	CLIENT: Tom Custer CONTACT: Tom Custer INQUIRY #: 2540989.1s DATE: July 17, 2009 4:17 pm

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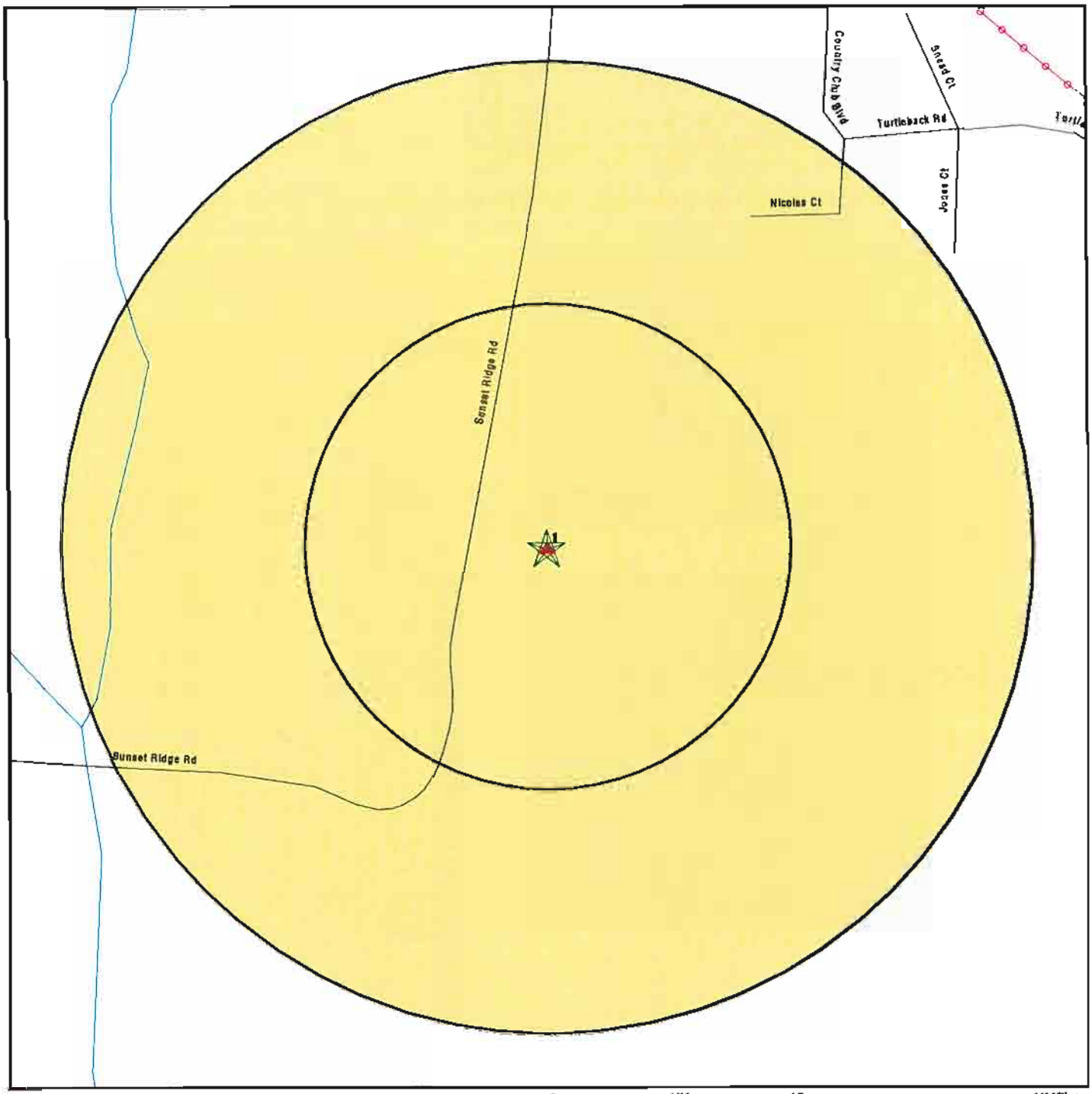
DETAIL MAP - 2540989.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines

0 1/16 1/8 1/4 Miles

SITE NAME: T or C Landfill, New Mexico ADDRESS: 3 Mi NNE T or C NM 87901 LAT/LONG: 33.1625 / 107.2333	CLIENT: Tom Custer CONTACT: Tom Custer INQUIRY #: 2540989.1s DATE: July 17, 2009 4:17 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SCS		1.000	0	0	0	0	NR	0
SHWS		N/A	N/A	N/A	N/A	N/A	N/A	N/A
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	X	0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
LAST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
ASBESTOS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
1 Target Property	TRUTH OR CONSEQUENCES LANDFILL APPROXIMATELY 3 MILES NORTH ON HIGH TRUTH OR CONSEQUENCES, NM 87901	SWF/LF	S106105654 N/A

Actual:
4310 ft.

SWF/LF:

Facility Status:	OPEN
Facility Type:	Landfill - registered
Facility Phone:	5758946939
Owner Name:	Truth or Consequences
Owner Contact:	Leonard Carrillo
Owner Address:	505 Sims Street
Owner City,St,Zip:	Truth or Consequences, NM 87901
Owner Phone:	5058946939
Facility Mailing Address:	505 Sims Street
Physical Location:	Approximately 3 miles North on Highway 181 from exit 83 on I-25

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
T OR C	S108954743	LOUGHRIDGE SPILL	N. HWY. 181 (NORTH OF DESERTAI	87901	SCS
TRUTH OR CONSEQUENC	1005904080	NORTH BROADWAY GROUNDWATER PLUME	BROADWAY STREET	87901	CERCLIS, FINDS
TRUTH OR CONSEQUENC	S109229177	ARREY LANDFILL	ARREY NM	87901	SWF/LF
TRUTH OR CONSEQUENC	U003868822	DAM SITE MARINA RESTAURANT	BOX 77B ENGLE ST RTE	87901	AST
TRUTH OR CONSEQUENC	S105426780	BELL GAS T OR C	BROADWAY AND PERSLIP	87901	LUST
TRUTH OR CONSEQUENC	S108348346	CUCHILLO LANDFILL	CUCHILLO NM	87901	SWF/LF
TRUTH OR CONSEQUENC	A100213420	BARTOO SAND AND GRAVEL INC	0.5 MILES N OF T OR C ON HWY 1	87901	AST
TRUTH OR CONSEQUENC	U001891326	CUTTER NM RMLR	10 MILES S OF STATE HIGH	87901	UST
TRUTH OR CONSEQUENC	1004754131	BARTOO SAND & GRAVEL INC	HWY N 181 CUCHILLO CREEK	87901	FINDS, RCRA-NonGen
TRUTH OR CONSEQUENC	S109595921	T OR C RECYCLING CENTER	601 NADYNE COURT; TORC	87901	SWRCY
TRUTH OR CONSEQUENC	S109229012	SIERRA COUNTY LANDFILL	T OR C SIERRA NM HWY 52, 6.5 M	87901	SWF/LF
TRUTH OR CONSEQUENC	S105959723	T OR C	505 SIMS ST CITY HALL	87901	LUST
TRUTH OR CONSEQUENC	U003193186	KINGSTON ADMINISTRATIVE SITE	STATE HWY 90	87901	UST
TRUTH OR CONSEQUENC	1002980214	BLM-TRUTH OR CONSEQUENCES LANDFILL	T13SR4WSEC22NMPH	87901	CERC-NFRAP

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/02/2009
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 46

Source: EPA
Telephone: N/A
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites
A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/23/2009
Date Data Arrived at EDR: 04/28/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens
Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/02/2009	Source: EPA
Date Data Arrived at EDR: 02/12/2009	Telephone: N/A
Date Made Active in Reports: 03/30/2009	Last EDR Contact: 04/20/2009
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/27/2009
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2009	Source: EPA
Date Data Arrived at EDR: 01/30/2009	Telephone: 703-412-9810
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 07/14/2009
Number of Days to Update: 101	Next Scheduled EDR Contact: 10/12/2009
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007	Source: EPA
Date Data Arrived at EDR: 12/06/2007	Telephone: 703-412-9810
Date Made Active in Reports: 02/20/2008	Last EDR Contact: 06/15/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: 09/14/2009
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2009	Source: EPA
Date Data Arrived at EDR: 04/02/2009	Telephone: 800-424-9346
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 06/01/2009
Number of Days to Update: 39	Next Scheduled EDR Contact: 08/31/2009
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the Institutional controls.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/30/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 109

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 05/12/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SCS: State Cleanup Sites Listing
State cleanup sites that fall under the state's Water Quality Control Commission Regulations.

Date of Government Version: 04/23/2009
Date Data Arrived at EDR: 05/28/2009
Date Made Active in Reports: 06/05/2009
Number of Days to Update: 8

Source: Environment Department
Telephone: 505-827-2855
Last EDR Contact: 05/28/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Department of the Environment
Telephone: 505-827-2918
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: N/A

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/16/2009
Date Data Arrived at EDR: 06/16/2009
Date Made Active in Reports: 07/09/2009
Number of Days to Update: 23

Source: New Mexico Environment Department
Telephone: 505-827-0347
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 08/31/2009
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Priorization Database
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 10/06/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 33

Source: New Mexico Environment Department
Telephone: 505-984-1741
Last EDR Contact: 04/28/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Varies

LAST: Leaking Aboveground Storage Tank Sites
A listing of leaking aboveground storage tank sites.

Date of Government Version: 05/01/2006
Date Data Arrived at EDR: 05/01/2006
Date Made Active in Reports: 06/05/2006
Number of Days to Update: 35

Source: Environment Department
Telephone: 505-984-1926
Last EDR Contact: 04/28/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/24/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 28

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/20/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 06/04/2009
Date Data Arrived at EDR: 06/05/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 12

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 06/01/2009
Date Data Arrived at EDR: 06/03/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 14

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/15/2008
Date Data Arrived at EDR: 12/16/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/20/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 9

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/24/2009
Date Data Arrived at EDR: 03/03/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Semi-Annually

State and tribal registered storage tank lists

UST: Listing of Underground Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 10/23/2006
Number of Days to Update: 26

Source: New Mexico Environment Department
Telephone: 505-984-1741
Last EDR Contact: 07/07/2009
Next Scheduled EDR Contact: 09/21/2009
Data Release Frequency: Varies

AST: Aboveground Storage Tanks List
Aboveground tanks that have been inspected by the State Fire Marshal.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 10/20/2006
Number of Days to Update: 23

Source: Environment Department
Telephone: 505-984-1926
Last EDR Contact: 07/07/2009
Next Scheduled EDR Contact: 09/21/2009
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 06/04/2009
Date Data Arrived at EDR: 06/05/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 12

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/15/2008
Date Data Arrived at EDR: 12/16/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 90

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 06/01/2009
Date Data Arrived at EDR: 06/03/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 14

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/22/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/20/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 9

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/24/2009
Date Data Arrived at EDR: 03/03/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/17/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites with Institutional Controls
Sites included in the Voluntary Cleanup listing that have Institutional Controls in place.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 06/11/2009
Date Made Active in Reports: 07/09/2009
Number of Days to Update: 28

Source: Environment Department
Telephone: 505-827-2754
Last EDR Contact: 05/06/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Remediation Program Sites
Sites involved in the Voluntary Remediation Program.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 06/11/2009
Date Made Active in Reports: 07/09/2009
Number of Days to Update: 28

Source: Environment Department
Telephone: 505-827-2754
Last EDR Contact: 05/06/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 11/14/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 07/14/2009
Next Scheduled EDR Contact: 10/12/2009
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 07/13/2009
Next Scheduled EDR Contact: 09/21/2009
Data Release Frequency: Varies

SWRCY: Recycling Facility Listing
A listing of recycling facility locations.

Date of Government Version: 06/16/2009
Date Data Arrived at EDR: 06/16/2009
Date Made Active in Reports: 07/09/2009
Number of Days to Update: 23

Source: Environment Department
Telephone: 505-827-0197
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 08/31/2009
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/26/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Quarterly

CDL: Clandestine Drug Laboratory Listing
A listing of clandestine drug labs, such as illegal methamphetamine labs.

Date of Government Version: 05/12/2009
Date Data Arrived at EDR: 05/13/2009
Date Made Active in Reports: 06/05/2009
Number of Days to Update: 23

Source: Environment Department
Telephone: 505-476-6000
Last EDR Contact: 05/13/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/03/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/18/2009
Next Scheduled EDR Contact: 08/17/2009
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 06/08/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 43

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/16/2009
Next Scheduled EDR Contact: 10/12/2009
Data Release Frequency: Annually

SPILLS: Spill Data
Hazardous materials spills data.

Date of Government Version: 01/12/2006
Date Data Arrived at EDR: 01/23/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 35

Source: Environment Department
Telephone: 505-827-0166
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/27/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/01/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 04/23/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 18

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/21/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/23/2009
Date Data Arrived at EDR: 04/28/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 21

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites
Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 01/05/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 05/08/2009
Number of Days to Update: 1

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Varies

MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 03/24/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 42

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/23/2009
Next Scheduled EDR Contact: 09/21/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 04/09/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 69

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/16/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 07/14/2009
Next Scheduled EDR Contact: 10/12/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/14/2009
Next Scheduled EDR Contact: 10/12/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 03/20/2009
Date Data Arrived at EDR: 03/20/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 07/13/2009
Next Scheduled EDR Contact: 10/12/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 02/26/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 9

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 05/04/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/02/2009
Date Data Arrived at EDR: 04/24/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 25

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/28/2009
Date Data Arrived at EDR: 04/29/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/29/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/28/2009
Date Data Arrived at EDR: 05/01/2009
Date Made Active in Reports: 05/19/2009
Number of Days to Update: 18

Source: EPA
Telephone: (214) 665-2200
Last EDR Contact: 06/29/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 92

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/08/2009
Next Scheduled EDR Contact: 09/07/2009
Data Release Frequency: Biennially

DRYCLEANERS: Drycleaner Facility Listing

A listing of drycleaner facility locations. The listing may contain facilities that are no longer there, or under different management.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/21/2009
Date Made Active in Reports: 04/15/2009
Number of Days to Update: 84

Source: Environment Department
Telephone: 505-222-9507
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: No Update Planned

NPDES: List of Discharge Permits

General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 05/13/2009
Date Made Active in Reports: 06/05/2009
Number of Days to Update: 23

Source: Environment Department
Telephone: 505-827-2918
Last EDR Contact: 05/13/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Semi-Annually

ASBESTOS: List of Asbestos Demolition and Renovations Jobs

Asbestos is a common fibrous rock found worldwide which has been used in various products for over 4500 years. It has been used in over 3000 different products such as textiles, paper, ropes, wicks, stoves, filters, floor tiles, roofing shingles, clutch facings, water pipe, cements, filters, felt, fireproof clothing, gaskets, battery boxes, clapboard, wallboard, fire doors, fire curtains, insulation, brake linings, etc.

Date of Government Version: 04/01/2007
Date Data Arrived at EDR: 05/09/2007
Date Made Active in Reports: 05/30/2007
Number of Days to Update: 21

Source: New Mexico Environment Department
Telephone: 505-827-1494
Last EDR Contact: 06/05/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 04/13/2009
Date Data Arrived at EDR: 04/14/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 06/22/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/22/2009
Date Data Arrived at EDR: 05/27/2009
Date Made Active in Reports: 07/01/2009
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/27/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/08/2008
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/06/2009
Next Scheduled EDR Contact: 10/05/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Day Care Providers
Source: Office of Child Development
Telephone: 505-827-7946

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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