

State of New Mexico
Energy, Minerals and Natural Resources Department

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Governor

David Martin
Cabinet Secretary-Designate

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Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division



May 29, 2013

Ms. Amy M. Blythe
El Paso Natural Gas Company
2 North Nevada Avenue
Colorado Springs, Colorado 80903

Re: Request for Renewal of Annual Temporary Permission to Discharge Hydrostatic Test Water
Company: El Paso Natural Gas Company
Permit: HBP - 017

Dear Ms. Blythe:

The Oil Conservation Division (OCD) has received El Paso Natural Gas Company's (EPNG) renewal request, dated May 28, 2013, for an annual temporary permission to discharge small quantities of hydrostatic test wastewater generated from the testing of new crude and/or natural gas pipelines throughout the State of New Mexico. EPNG's current approval expires June 26, 2013. Also, OCD acknowledges receipt of the filing fee (\$100.00) and temporary permission fee (\$150.00) with the May 28, 2013 request.

Based on the information provided in the request, annual temporary permission is hereby granted to EPNG for the discharge of the hydrostatic test wastewater generated from all new pipeline hydrostatic tests an operator may perform during an approved one-year period with the following understandings and conditions are applicable:

1. the volume does not exceed 25,000 gallons per hydrostatic test;
2. water from a public/municipal water supply or other OCD approved sources is used for each test;
3. written notification must be provided to the OCD 72 hours prior to each hydrostatic discharge event;
4. the discharge does not enter any lake, perennial stream, river or their respective tributaries that may be seasonal;
5. no discharge shall occur to a surface water body without obtaining a National Pollution Discharge Elimination Systems (NPDES) permit from the US EPA, NMED, and OCD prior to the discharge;

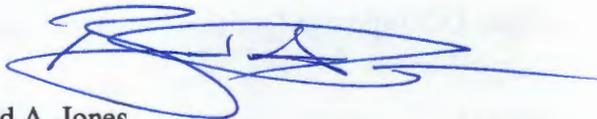
6. best management practices must be implemented to contain the discharge onsite, to ensure that the discharge does not impact adjacent property, and to control erosion;
7. the discharge does not cause any fresh water supplies to be degraded or to exceed standards as set forth in Subsections A, B, and C of the 20.6.2.3103 NMAC (the New Mexico Water Quality Control Commission Regulations);
8. EPNG shall report all unauthorized discharges, spills, leaks and releases of hydrostatic test water and conduct corrective action pursuant to OCD Rule 19.15.29 NMAC;
9. the landowner(s) of each proposed discharge and/or collection/retention or alternative discharge location must be properly notified of the activities prior to each proposed hydrostatic test event; and
10. an annual report, summarizing each test of new pipeline with less than 25,000 gallons per hydrostatic test event, will be submitted to OCD within 45 days after the temporary permission expiration date and shall contain the following information:
 - a. the location of hydrostatic test (Section/Township/Range or GPS coordinates);
 - b. the date of each test;
 - c. the volume of each discharge; and
 - d. the source and quality of test water (laboratory analysis, if necessary).

Annual temporary permissions shall expire one (1) year after issuance. **This temporary permission will expire June 26, 2014.** Renewal requests for annual temporary permission to discharge shall be submitted forty-five (45) days prior to the expiration date. An annual temporary permission may be revoked or suspended for violation of any applicable provisions and/or conditions of the permit.

Please be advised that approval of this request does not relieve EPNG of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve EPNG of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,



Brad A. Jones
Environmental Engineer

BAJ/baj

cc: OCD District Offices

BLM STIPULATIONS
June 2014
DOI-BLM-NM-L000-2014-0026-EA

1. ROW Construction Administration

The Holder shall construct, operate and maintain the facility, improvements, and structures within this right-of-way (ROW) in strict conformity with the stipulations which were approved and made part of the grant on _____. Any relocation, additional construction, or use that is not in accord with the approved stipulations, shall not be initiated without the prior written approval of the Authorized Officer. A copy of the complete ROW grant, including all stipulations, shall be made available on the ROW area during new construction, operation, and termination to the Authorized Officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

The Authorized Officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

The Holder shall designate a representative who shall have the authority to act upon and to implement instructions from the Authorized Officer. The Holder's representative shall be available for communication with the Authorized Officer within a reasonable time when construction or other surface disturbing activities are underway.

2. Work Limits

The Holder shall contact the Authorized Officer at least thirty days prior to the anticipated start of construction and/or any surface disturbing activities. The Authorized Officer may require and schedule a preconstruction conference with the Holder prior to the Holder's commencing construction and/or surface disturbing activities on the ROW. The Holder and/or his representative shall attend this conference. The Holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the ROW, shall also attend this conference to review the stipulations of the grant including the plan(s) of development.

The Holder shall submit a plan or plans of development that describe in detail the construction, operation, maintenance, and termination of the ROW and its associated improvements and/or facilities. The degree and scope of these plans will vary depending upon (1) the complexity of the ROW or its associated improvements and/or facilities, (2) the anticipated conflicts that require mitigation, and (3) additional technical information required by the Authorized Officer. The plans will be reviewed, and if appropriate, modified and approved by the Authorized Officer. An approved plan of development ("APD") shall be made a part of the ROW grant.

No surface disturbing activities shall take place on the subject ROW until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the APD, relevant to any ROW facilities.

The holder shall not initiate any construction or other surface disturbing activities related to the proposed action of Environmental Assessment number DOI-BLM-NM-L000-2014-0026-EA without the prior written authorization of the Authorized Officer. Such authorization shall be a written notice to proceed issued by the Authorized Officer. Any notice to proceed shall authorize construction or use only as therein expressly stated and only for the particular location or use therein described.

The Holder shall conduct all activities associated with the construction, operation, and termination of the ROW within the authorized limits of the ROW.

All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

The Holder shall remove only the minimum amount of vegetation necessary for the construction of structures and facilities. Topsoil shall be conserved during excavation and reused as cover on disturbed areas to facilitate regrowth of vegetation.

Holder shall limit excavation to the areas of construction. No borrow areas for fill material will be permitted on the site. All off-site borrow areas must be approved in writing by the Authorized Officer in advance of excavation. All waste material resulting from construction or use of the site by holder shall be removed from the site. All waste disposal sites on public land must be approved in writing by the Authorized Officer in advance of use.

Construction holes left open overnight shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.

During installation of the pipeline open trenches shall be kept to a minimum. Trenches left open at night would have an escape ramp for trapped wildlife, which would be inspected every morning for entrapped wildlife. Wildlife would be removed from the trench as necessary.

During conditions of extreme fire danger, operations shall be limited or suspended in specific areas by the Authorized Officer, or additional measures may be required by the Authorized Officer.

3. Access to and Along the ROW During New Construction

Construction-related traffic shall be restricted to routes approved by the Authorized Officer. New access roads or cross-country vehicle travel will not be permitted unless prior written approval is given by the Authorized Officer. Authorized roads used by the Holder shall be rehabilitated or maintained when construction activities are complete as approved by the Authorized Officer.

The Holder shall permit free and unrestricted public access to and upon the ROW for all lawful purposes except for those specific areas designated as restricted by the Authorized Officer to protect the public, wildlife, livestock, or facilities constructed within the ROW.

The Holder shall provide for the safety of the public entering the ROW. This includes, but is not limited to, barricades for open trenches, flagmen/women with communication systems for single-lane roads without visible turnouts, and attached gates for blasting operations.

Specific sites as identified by the Authorized Officer (e.g. archeological sites, areas with threatened and endangered species, or fragile watersheds) where construction equipment and vehicles shall not be allowed shall be clearly marked onsite by the Holder before construction or surface disturbing activities begin. The Holder shall be responsible for assuring that construction personnel are well-trained to recognize these markers and understand the equipment movement restrictions involved.

The Holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the Authorized Officer to ensure construction in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction.

The Holder shall mark the exterior boundaries of the ROW with a stake and/or lath at industry standard intervals. The intervals may be varied at the time of staking at the discretion of the Authorized Officer. The tops of the stakes and/or laths will be painted and the laths flagged in a distinctive color as determined by the Holder. The survey station numbers will be marked on the boundary stakes and/or laths at the entrance to and the exit from public land. Holder shall maintain all boundary stakes and/or laths in place until final cleanup and restoration is completed and approved by the Authorized Officer. The stakes and/or laths will then be removed at the direction of the Authorized Officer.

The Holder shall survey and clearly mark the centerline and/or exterior limits of the ROW, as determined by the Authorized Officer.

4. Pipelines

The Holder shall inform the Authorized Officer within 48 hours of any accidents on federal lands that require reporting to the Department of Transportation as required by 49 CFR Part 195.

The Holder is prohibited from discharging oil or other pollutants into or upon the navigable waters of the United States, adjoining shorelines, or the waters of the contiguous zone in violation of Section 311 of the Clean Water Act as amended, 33 U.S.C. 1321, and the regulations issued thereunder, or applicable laws of the State(s) of New Mexico or Texas and regulations issued thereunder. Holder shall give immediate notice of any such discharge to the Authorized Officer and such other Federal and State officials as are required by law to be given such notice.

Prior to any discharge, hydrostatic testing water will be tested and processed, if necessary, to ensure that the water meets local, State or Federal water quality standards. Prior to discharge of hydrostatic testing water from the pipeline, the Holder shall design and install a suitable energy dissipater at the outlets, and design and install suitable channel protection structures necessary to ensure that there will be no erosion or scouring of natural channels within the affected watershed as a result of such discharge. The Holder will be held responsible for any erosion or scouring

resulting from such discharge. Sandbags, rock, or other materials or objects installed shall be removed from the site upon completion of hydrostatic testing.

The Holder shall submit its contingency plan to the Authorized Officer prior to scheduled start up. Such contingency plan shall include:

- a. Include provisions for oil or other pollutant spill control.
- b. The agencies responsible for contingency plans in New Mexico shall be among the first to be notified in the event of any pipeline system failure resulting in a spill of oil or other pollutant.
- c. Provide for restoration of the affected resource.
- d. Provide that the Authorized Officer shall approve any materials or devices used for oil spill control and any disposal sites or techniques selected to handle oil, matter, or other pollutants.
- e. Include separate and specific techniques and schedules for cleanup of spills of oil or other pollutants on land or waters.

If during any phase of the construction, operation, maintenance or termination of the pipeline or related facilities, any oil or other pollutant should be discharged from the pipeline system, or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the Holder, regardless of fault. Upon failure of Holder to control, clean up, or dispose of such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the Holder. Such action by the Authorized Officer shall not relieve the Holder of any liability or responsibility.

5. Use of ROW

Except ROWs expressly authorizing a road after construction of the facility is completed, the Holder shall not use the ROW as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the Holder.

No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of three inches deep, the soil shall be deemed too wet to adequately support construction equipment.

Construction excavations, holes and trenches in roadways or in areas where pedestrians or vehicular traffic is present will be flagged, plated or appropriately marked as required.

Materials encountered on the project and needed for select borrow, surfacing, riprap, or other special needs shall be conserved.

6. Maintenance of ROW

Holder shall maintain the ROW in a safe, usable condition, as directed by the Authorized Officer. A regular maintenance program shall include, but is not limited to, blading, ditching, culvert installation and surfacing.

If "cross country" access is necessary, clearing vegetation or grading a roadbed will be avoided whenever practicable. All construction and vehicular traffic shall be confined to the ROW or designated access routes, roads, or trails unless otherwise authorized in writing by the Authorized Officer. All temporary roads used for construction shall be rehabilitated after construction is completed. Only one road or access route will be permitted to each site requiring access.

Water bars would be installed if necessary to reduce soil erosion.

7. Cultural

Any cultural resource (historical or prehistoric site or object) discovered by the Holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Holder will be responsible for the cost of evaluation of any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

8. Paleontological

The Holder shall immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operation under this authorization. The Holder shall suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and shall protect the discovery from damage or looting. The Holder may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with the Holder. Within 10 days, the Holder will be allowed to continue construction through the site, or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

9. Waste Disposal

The ROW site shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

10. Air and Dust Control

The Holder shall meet applicable Federal, State, and local emission standards for air quality. The Holder shall furnish and apply water or other means satisfactory to the Authorized Officer dust control.

11. Signs

Upon completion of construction, the Holder shall post as directed by the Authorized Officer, the Bureau serial number assigned to this ROW grant at ROW intersection points including but not limited to roads, utility lines, etc.

No signs or advertising devices shall be placed on the premises or on adjacent public land except those posted by or at the direction of the Authorized Officer. Holder may install pipeline location markers in conformance with regulatory standards.

12. Industrial and Toxic Waste Disposal

The Holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the ROW or on facilities authorized under this ROW grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

The Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the ROW (unless the release or threatened release is wholly unrelated to the ROW holder's activity on the ROW). This agreement applies without regard to whether a release is caused by the Holder, its agent, or unrelated third parties.

13. Noxious Weed Control

The Holder shall be responsible for weed control on disturbed areas within the limits of the site. The Holder is responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods, which include following EPA and BLM requirements and policy. (See Special Stipulations)

14. Indemnification

The United States, its officers and employees shall be held harmless from and indemnified against any damage, injury, or liability resulting from the construction, operation, or maintenance arising from the occupancy or use of public lands under this authorization.

Six months prior to termination of the ROW, the Holder shall contact the Authorized Officer to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limit to, removal of facilities, drainage structures, or surface material, re-contouring, top-soiling, or seeding. The Authorized Officer must approve the plan in writing prior to the Holder's commencement of any termination activities.

15. Survey Monuments

The Holder shall protect all survey monuments found within the ROW. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the Holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management ROW monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The Holder shall record such survey in the appropriate county and send a copy to the Authorized Officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the Holder shall be responsible for the survey cost.

16. Civil Rights / Corp of Engineers 404 Permits

The Holder of this ROW grant or the holder's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

The Holder shall comply with the construction practices and mitigating measures established by 33 CFR 323.4, which sets forth the parameters of the "nationwide permit" required by Section 404 of the Clean Water Act. If the proposed action exceeds the parameters of the nationwide permit, the holder shall obtain an individual permit from the appropriate office of the Army Corps of Engineers and provide the authorized officer with a copy of same. Failure to comply with this requirement shall be cause for suspension or termination of this ROW grant.

17. Cattle Guards / Fences

The Holder shall minimize disturbance to existing fences and other improvements on public lands. The Holder is required to promptly repair impacted improvements to at least their former state. The Holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway

prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

Fences, gates, and brace panels shall be reconstructed to appropriate Bureau standards and/or specifications as determined by the authorized officer.

When construction activity in connection with the ROW breaks or destroys a natural barrier used for livestock control, the gap, thus opened, shall be fenced to prevent the drift of livestock. The subject natural barrier shall be identified by the Authorized Officer and fenced by the Holder as per instruction of the Authorized Officer.

18. Proof of Construction

The Holder shall file a proof of construction within 90 days after completion of construction on the ROW covered by this grant. A period of five years from the date the ROW is granted is allowed for completion of construction.

Within 90 days of construction completion, the Holder shall provide the Authorized Officer with data in a format compatible with the Bureau's Arc-GIS Geographic Information System to accurately locate and identify the ROW/lease:

Acceptable data formats are:

- Corrected Global Positioning System files with sub-meter accuracy or better, in NAD 83 or WGS84 projection;
- An AUTOCAD dxf file;
- Or ARCInfo export files.

Data may be submitted in any of the following media:

- On a CD ROM, or DVD in compressed or uncompressed format. Compressed or ZIPed data must include a copy of the UNZIP.EXE file on the disk.

All data shall include metadata for each coverage, and conform to the Content Standards for Digital Geospatial Metadata Federal Geographic Data Committee standards. Contact BLM's GIS Coordinator at (575) 525-4300 for questions regarding data or media format questions.

19. Other

In the event that the public land underlying the ROW encompassed in this grant ROW, or a portion thereof, is conveyed out of Federal ownership and administration of the ROW or the land underlying the ROW is not being reserved to the United States in the patent/deed and/or the ROW is not within a ROW corridor being reserved to the United States in the patent/deed, the United States waives any right it has to administer the ROW, or portion thereof, within the conveyed land under Federal laws, statutes, and regulations, including the regulations at 43 CFR Part [2800][2880], including any rights to have the holder apply to BLM for amendments, modifications, or assignments and for BLM to approve or recognize such amendments, modifications, or assignments. At the time of conveyance, the patentee/grantee, and their successors and assigns, shall succeed to the interests of the United States in all matters relating to the ROW, or portion thereof, within the conveyed land and shall be subject to applicable State and local government laws, statutes, and ordinances. After conveyance, any disputes concerning compliance with the use and the terms and conditions of the ROW shall be considered a civil

matter between the patentee/grantee and the ROW Holder.

20. Termination

Six months prior to termination of the ROW, the Holder shall contact the Authorized Officer to arrange for a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surface material, contouring, top soiling, or seeding. The Authorized Officer must approve the plan in writing prior to the Holder's commencement of any termination activities.

SPECIAL STIPULATIONS

21. The Holder will ensure accurate locations of existing buried facilities are identified on the ground prior to any excavation. Pot-holing and other non-intrusive means of physical location of existing buried facilities will be employed to ensure that those facilities are not affected by construction activity.
22. If any Range improvements (i.e. fences, gates, pipeline, and troughs) are damaged by Holder during construction, operation, maintenance, and termination activities, BLM will be notified, and the damaged improvement will be repaired to the original functioning condition, as directed by BLM.
23. Prior to any construction, the Holder will obtain any required Federal, state, or local government, and private land owner express written permission(s). This includes but is not limited to ROWs, permits, easements, and licenses. The Holder must provide copies of these permissions to BLM.
24. An environmental professional must be on-site during excavation to monitor for potential hazardous materials discoveries due to the proximity of the closed adjacent landfill and historic illegal dumping activity in the area.
 - a. If the proposed activity reveals any presence of hazardous substances, physical hazards, significant solid waste, or other RECs and/or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 120(h) concerns on the property, all activity is to cease until the specific issue is assessed and abated at the liability and cost of the Holder. The Holder shall abate any or all hazards in accordance with all local, state, and federal regulations and standards. These actions will be outlined within the Holder's WMP.
 - b. The trench would be kept as close to the highway ROW fence as possible; the closer to the fence, the probability of exposing evidence of unauthorized dumping is potentially low but not guaranteed.

25. If Holder's construction operations occur during the migratory bird nesting season (March through August), the construction area will be inspected for nests by a qualified biologist.
26. If Sand Prickly Pear is encountered during construction, operation, maintenance, or termination activities, it must not be disturbed.
27. During construction, a paleontological monitor is required within Potential Fossil Yield Classification (PFYC) 4 areas.
28. The Holder will be responsible to ensure that accidental spills resulting from equipment fueling, lubrication, cleaning, etc., would be contained. Containment structures sufficiently impervious to prevent a discharge into waters of the United States, such as drip pans, or equivalent protective actions must be implemented, utilized, and maintained consistent with the Environmental Protection Agency's Spill Prevention, Control, and Countermeasure (SPCC) regulation (40 CFR 112); such containment structures must be located within the ROW grant area. The containment structure must have sufficient volume to contain, at the minimum, the content of the largest storage tank containing liquid hydrocarbons and sufficient freeboard to contain precipitation, unless more stringent protective requirements are deemed necessary by the Authorized Officer. Drip pans should be routinely checked and cleaned of petroleum or chemical discharges and designated to prevent access by wildlife and livestock.
29. The Holder shall properly report the occurrence of any spills associated with project construction, operation, maintenance or termination, and shall report and respond to spills of potential contaminants, such as gasoline, diesel, motor oils, solvents, chemicals, toxic and corrosive substances, etc., which may be a threat to public health or the environment.
30. In case of an emergency that would require ground disturbing repair work within the ROW, the holder shall notify the Authorized Officer immediately.

31. Noxious Weed

Power or high-pressure clean all equipment of all mud, dirt, and plants immediately prior to moving into the project area. Any gravel or fill to be used must come from weed-free sources. Inspect gravel pits and fill sources to identify weed-free sources. No soil spoil that could potentially contain noxious weed seeds shall be transported out of the area where it is created.

The project applicants shall be responsible for conducting a survey for and control of noxious weeds along the route proposed for construction. If during construction noxious weeds are identified that were not originally encountered during the survey, the project applicant shall avoid driving vehicles and equipment through or over the infested area. If avoidance measures cannot be taken within the area originally cleared, construction shall cease and the project inspector (PI) or the Authorized Officer contacted.

Any use of herbicides/pesticides shall comply with the applicable Federal and State laws. Herbicides/pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, holder shall obtain from the AO written approval of a plan showing the type and quantity of materials to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the AO. Emergency use of pesticides shall be approved in writing by the AO prior to use.

32. Reclamation

The Holder will reclaim disturbed areas in accordance with the following, which establishes guidelines to be used during reclamation, when necessary throughout New Mexico on lands administered by the Las Cruces Field Office of the Bureau of Land Management (BLM).

Water Diversions

Water diversions would be constructed as needed to control surface water runoff and soil erosion. Water diversions typically would consist of waterbars constructed at the following spacing intervals:

<u>Percent slope</u>	<u>Spacing Interval</u>
Less than 1%	400'
1-5%	300'
5-15%	200'
15-25%	100'
More than 25%	50'

If diversion of water from the ROW would result in accelerated erosion in undisturbed areas, water bars shall not be constructed. Furthermore, if the ROW has a side slope approximately one-third or more of the slope along the length of the ROW, water bars may not be constructed. Exceptions to spacing intervals would be upon approval of the Authorized Officer.

Contouring

When sufficiently abundant, overburden and topsoil would be stockpiled during construction for use during reclamation. Prior to reseeding the topsoil would be re-deposited (shaped and contoured) to resemble surrounding topography. Ripping or plowing compacted soils may be necessary in some areas and would be addressed on a case by case basis.

Seeding

Any seed used on public lands shall not contain noxious weed seed and must meet certified seed quality. The seed procured for use on public lands will meet the Federal Seed Act criteria. All seed to be applied on public lands must have a valid seed test, within 1 year of the acceptance date, from a seed analysis lab by a registered seed analyst (Association of

Official Seed Analysts). The seed lab results shall show no more than 0.5 percent by weight of other weed seeds. The seed lot shall contain no noxious, prohibited, or restricted weed seeds according to state seed laws in the respective state(s). Copies of the seed lab test results, including purity and germination (viability) rate, must be forwarded to the appropriate BLM office prior to seed application. If the seed does not meet the BLM and State/Federal standards for noxious weed seed content or other crop seed allowances, it shall not be applied to public lands. All seed test results must be retained in the seeding project file.

Seeding should be accomplished in June or July to coincide with the monsoon season to achieve optimum results. Seed-bed preparation should be performed to provide a hospitable environment for germinating seed by breaking up impermeable soil layers that have formed and increasing void spaces for air and water. Ground shall be roughed-up prior to planting, by raking, harrowing or other methods.

Seed shall be broadcast with a "cyclone" hand seeder or similar broadcast seeder to facilitate an even spread. After seed is broadcast, ground shall be raked or dragged, to help bury it and improve soil contact and provide texture. Next, mulch should be placed to prevent loss of moisture and seed to wind. Mulch shall be free of weeds and weed seed. Mulching shall be accomplished using one of these following methods:

- a. weed free straw (2 tons/ac;kg/ha)
- b. wood residues (sawdust, wood chips, bark (2 tons/ac;kg/ha)
- c. hydro-mulching (1,500 lb/ac;kg/ha)
- d. composted manure (5 tons/ac;kg/ha)
- e. excelsior blanket
- f. straw jute

Mulch shall be applied on the surface within one day following seeding. Mulch must be free of noxious weeds and other diseased plant residues. Rotten or molded hay is not acceptable as mulch. Here is the link to certified weed-free mulch providers:

<http://aces.nmsu.edu/ces/seedcert/certified-weed-free-fora.html>

The following recommended seed mixture and application rate of pounds pure-live-seed (PLS) per acre will be used. Species substitutions and deviations to application rates must be approved by the Authorized Officer. Sources of the seed (not the location of the growers) should be from within New Mexico or a similar ecosystem as close to the State as possible.

Species and Application Rate

<u>Species</u>	<u>Lbs./Acre PLS</u>
<u>mesa dropseed (<i>Sporobolus flexuosus</i>)</u>	<u>3.0</u>
<u>sand dropseed (<i>Sporobolus cryptandrus</i>)</u>	<u>3.0</u>
<u>scarlet globemallow (<i>Sphaeralcea coccinia</i>)</u>	<u>1.0</u>
<u>desert zinnia (<i>Zinnia acerosa</i>)</u>	<u>1.0</u>
<u>Total</u>	<u>8.0</u>



**Federal Energy
Regulatory
Commission**

**Office of
Energy Projects**

May 2013

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

Washington, DC 20426

MAY 2013 VERSION

**UPLAND EROSION CONTROL, REVEGETATION, AND
MAINTENANCE PLAN**

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UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN (PLAN)

I. APPLICABILITY

- A. The intent of this Plan is to assist project sponsors by identifying baseline mitigation measures for minimizing erosion and enhancing revegetation. Project sponsors shall specify in their applications for a new FERC authorization and in prior notice and advance notice filings, any individual measures in this Plan they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is authorized, project sponsors can request further changes as variances to the measures in this Plan (or the applicant's approved plan). The Director of the Office of Energy Projects (Director) will consider approval of variances upon the project sponsor's written request, if the Director agrees that a variance:

1. provides equal or better environmental protection;
2. is necessary because a portion of this Plan is infeasible or unworkable based on project-specific conditions; or
3. is specifically required in writing by another federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Sponsors of projects planned for construction under the automatic authorization provisions in the FERC's regulations must receive written approval for any variances in advance of construction.

Project-related impacts on wetland and waterbody systems are addressed in the staff's Wetland and Waterbody Construction and Mitigation Procedures (Procedures).

II. SUPERVISION AND INSPECTION

A. ENVIRONMENTAL INSPECTION

1. At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.
2. Environmental Inspectors shall have peer status with all other activity inspectors.
3. Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.

B. RESPONSIBILITIES OF ENVIRONMENTAL INSPECTORS

At a minimum, the Environmental Inspector(s) shall be responsible for:

1. Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.
2. Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;
3. Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;
4. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;
5. Identifying erosion/sediment control and soil stabilization needs in all areas;
6. Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;

7. Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;
8. Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action;
9. Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;
10. Ensuring restoration of contours and topsoil;
11. Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;
12. Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;
13. Inspecting and ensuring the maintenance of temporary erosion control measures at least:
 - a. on a daily basis in areas of active construction or equipment operation;
 - b. on a weekly basis in areas with no construction or equipment operation; and
 - c. within 24 hours of each 0.5 inch of rainfall;
14. Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;
15. Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;

16. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and
17. Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.

III. PRECONSTRUCTION PLANNING

The project sponsor shall do the following before construction:

A. CONSTRUCTION WORK AREAS

1. Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.
2. Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.
3. Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.

B. DRAIN TILE AND IRRIGATION SYSTEMS

1. Attempt to locate existing drain tiles and irrigation systems.
2. Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.
3. Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.
4. Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.

C. GRAZING DEFERMENT

Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.

D. ROAD CROSSINGS AND ACCESS POINTS

Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.

E. DISPOSAL PLANNING

Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.

F. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in this Plan and/or required by the FERC's Orders.

1. Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.
2. Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.
3. Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.
4. Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.

G. SPILL PREVENTION AND RESPONSE PROCEDURES

The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

H. RESIDENTIAL CONSTRUCTION

For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.

I. WINTER CONSTRUCTION PLANS

If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

The plan shall address:

1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping);
2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and
3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).

IV. INSTALLATION

A. APPROVED AREAS OF DISTURBANCE

1. Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.
2. The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists.

Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports:

- a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas;
- b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and

- c. a statement that landowner approval has been obtained and is available in project files.

Prior written approval of the Director is required when the authorized construction right-of-way width would be expanded by more than 25 feet.

B. TOPSOIL SEGREGATION

1. Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in:
 - a. cultivated or rotated croplands, and managed pastures;
 - b. residential areas;
 - c. hayfields; and
 - d. other areas at the landowner's or land managing agency's request.
2. In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.
3. Where topsoil segregation is required, the project sponsor must:
 - a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and
 - b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.
4. Maintain separation of salvaged topsoil and subsoil throughout all construction activities.
5. Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.
6. Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.

C. DRAIN TILES

1. Mark locations of drain tiles damaged during construction.
2. Probe all drainage tile systems within the area of disturbance to check for damage.
3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs.
4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).

D. IRRIGATION

Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.

E. ROAD CROSSINGS AND ACCESS POINTS

1. Maintain safe and accessible conditions at all road crossings and access points during construction.
2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal.
3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.

F. TEMPORARY EROSION CONTROL

Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.

1. Temporary Slope Breakers
 - a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope

breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.

- b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary):

<u>Slope (%)</u>	<u>Spacing (feet)</u>
5 - 15	300
>15 - 30	200
>30	100

- c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.
- d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.

2. Temporary Trench Plugs

Temporary trench plugs are intended to segment a continuous open trench prior to backfill.

- a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent.
- b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.

3. Sediment Barriers

Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources.

- a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials.

- b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.
- c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.

4. Mulch

- a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.
- b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.
- c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if:
 - (1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or
 - (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.
- d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.
- e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).

- f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.
- g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization.
- h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.

V. RESTORATION

A. CLEANUP

1. Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup.

If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

2. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.
3. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.

4. Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.
5. Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.
6. Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.
7. Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.

B. PERMANENT EROSION CONTROL DEVICES

1. Trench Breakers
 - a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers.
 - b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers.
 - c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.
 - d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.

2. Permanent Slope Breakers

- a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent.
- b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency.

In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:

<u>Slope (%)</u>	<u>Spacing (feet)</u>
5 - 15	300
>15 - 30	200
>30	100

- c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.
- d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.

C. SOIL COMPACTION MITIGATION

- 1. Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.
- 2. Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.

If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.

3. Perform appropriate soil compaction mitigation in severely compacted residential areas.

D. REVEGETATION

1. General

- a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.
- b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.

2. Soil Additives

Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.

3. Seeding Requirements

- a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.
- b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner.
- c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary

seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner.

- d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.
- e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.
- f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).
- g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.

Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.

VI. OFF-ROAD VEHICLE CONTROL

To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include:

- A. signs;
- B. fences with locking gates;
- C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and
- D. conifers or other appropriate trees or shrubs across the right-of-way.

VII. POST-CONSTRUCTION ACTIVITIES AND REPORTING

A. MONITORING AND MAINTENANCE

1. Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.
2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise.

Continue revegetation efforts until revegetation is successful.

3. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.
4. Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.
5. Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.
6. Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.

B. REPORTING

1. The project sponsor shall maintain records that identify by milepost:
 - a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used;
 - b. acreage treated;
 - c. dates of backfilling and seeding;
 - d. names of landowners requesting special seeding treatment and a description of the follow-up actions;
 - e. the location of any subsurface drainage repairs or improvements made during restoration; and
 - f. any problem areas and how they were addressed.
2. The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction.

The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.

Spill Prevention, Control, and Countermeasure Plan

EPNG Line No. 1004 Relocation Project

Two North Nevada Avenue
Colorado Springs, CO 80903

November 2013

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Abbreviations and Acronyms

EI	Environmental Inspector
MMcf/d	million cubic feet per day
MSDS	Material Safety Data Sheets
Project	EPNG Line 1004 Relocation Project
ROW	right-of-way
EPNG	El Paso Natural Gas Company
SPCC	Spill Prevention, Control, and Countermeasure Plan

Spill Prevention, Control, and Countermeasure Plan

1.0 Introduction

1.1 Project Overview

El Paso Natural Gas Company (EPNG), a subsidiary of Kinder Morgan, Inc., is proposing to relocate natural gas Line No. 1004 along New Mexico Highway (NM) 404 in Doña Ana County, New Mexico. The proposed project area is located on private lands and lands managed by the Bureau of Land Management (BLM) Las Cruces District Office (LCDO). EPNG has filed an application for a right-of-way (ROW) permit with the BLM LCDO for the proposed relocation of Line No. 1004. To maintain the integrity of the pipeline system, EPNG proposes to relocate and replace approximately 1,217 feet (ft) of 12-inch outside diameter (O.D.) pipe with approximately 1,502 ft of 12-inch O.D. pipe. The existing pipeline segment beneath the roadway will be abandoned in place. The construction corridor is 50 feet wide for a length of 1,502 ft and the temporary workspace for the road bore and staging equipment consists of approximately 300 ft by 60 ft for a total proposed project area of 3.29 acres. The 50 ft wide construction corridor includes the proposed new ROW of 30 ft and a temporary workspace disturbance of 15 ft located on the south side NM 404.

1.2 Plan Overview

This Spill Prevention, Control, and Countermeasure (SPCC) Plan describes measures that the Project contractor(s) would implement to prevent, control, and minimize impacts from a spill of fuels or other hazardous substances during construction of the Project. The goal of the SPCC Plan is to minimize the potential for a spill of these substances, to contain any spills to the smallest area possible, and to protect the environment, including those areas that are considered to be environmentally sensitive. The SPCC Plan specifies spill prevention measures, spill response activities, and spill reporting and notification procedures.

All Project construction work will implement the SPCC Plan measures and procedures. This SPCC Plan does not certify the contractor or other individuals to become licensed waste haulers.

2.0 Prevention Measures

The contractor(s) will ensure that all practicable measures are taken to minimize the potential for and consequences of a spill during construction of the Project. The contractor(s) is responsible for complying with applicable environmental and safety laws and regulations, for training construction personnel, and for providing equipment designed to prevent pollution.

The proper use of materials and equipment greatly reduces the potential of contamination. The following is a list of general preventive practices to be implemented during construction of the Project.

- The contractor(s) must supply each construction crew with spill kits containing a sufficient quantity of absorbent and barrier materials to adequately contain and recover potential spills of fuels or lubricating oils. These kits may include, but are not limited to, drip pans, buckets, absorbent pads, straw bales, absorbent clay, sawdust, floor-drying agents, spill containment barriers, heavy plastic sheeting, plastic bags, shovels, and sealable containers. These materials must be readily accessible during all construction activities.
- The contractor(s) will train all personnel who handle fuels and other regulated substances to follow spill prevention procedures and to quickly and effectively contain and clean up spills.
- Fuels and lubricating oils for vehicles or heavy equipment would be not be stored within 100 feet of dry washes/ephemeral streams.
- Refueling of construction equipment would not occur within 100 feet of dry washes/ephemeral streams.
- Fuel dispensing operations may not be left unattended.
- On-site vehicles will be monitored for leaks and will receive regular maintenance to reduce the chance of leaks. Vehicle maintenance wastes, including used oils and other fluids, will be handled and managed by personnel trained in the procedures outlined in this plan.
- Storage containers will display labels that identify the contents of the container and whether the contents are hazardous. The contractor shall maintain and provide, on demand, copies of all Material Safety Data Sheets (MSDS).
- Site foremen and construction personnel who will be working with hazardous or regulated substances will be trained in the requirements of this plan prior to participation in site work.

3.0 Spill Response

Immediately upon learning of the spill of any fuel, oil, hazardous substance, or other regulated substance, the contractor(s) will undertake the following activities.

- Identify the source of a spill and take all necessary measures to prevent further material from being spilled.
- Remove all potential ignition sources if the spilled material is combustible or flammable if it is safe to do so.
- Notify the contractor's spill coordinator. The contractor's spill coordinator will notify the Project Environmental Inspector (EI).
- Assess the situation and determine subsequent clean-up activities and responsibilities.
- If the spill is beyond the response ability of on-site equipment and personnel, immediately notify the Project EI that an emergency response contractor is needed.

For spills that occur on land, earthen berms will be constructed with available equipment to physically contain spills, if appropriate. Absorbent materials will also be applied to soak up spilled material, and traffic will be minimized on contaminated soils.

In the unlikely event that spills occur near or into a stream, wetland, or other waterbody, regardless of size, the following conditions shall apply in addition to the measures described above.

- For spills in standing water, floating booms, skimmer pumps, and holding tanks will be used as appropriate to recover and contain released materials on the surface of the water.
- For a spill threatening a waterbody (e.g., the CAP Canal), berms and/or trenches will be constructed to contain the spill prior to its entry into the waterbody. Deployment of booms, skimmers, and sorbent may be necessary if the spill reaches the water.
- Spilled material will be immediately and completely contained and cleaned up if it is safe to do so. The material manufacturer's methods for spill cleanup will be followed as described on the material MSDS.

All contaminated soils, vegetation, absorbent materials, and other contaminated wastes shall be handled, contained, and disposed of by the contractor(s) in accordance with applicable local, state, and federal regulations.

4.0 Reporting Procedures

The contractor(s) is required to report all spills of hazardous substances, regardless of size or location to the Project EI. The contractor(s) is also required to notify the Project EI of any of the following hazardous conditions.

- "Hazardous substance" means any substance or mixture that presents a danger to the public health or safety, including but not limited to: a substance that is toxic, corrosive, or flammable; that is an irritant; or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances that, in sufficient quantity, may be hazardous: acids; explosive; fertilizers; heavy metals such as chromium, arsenic, mercury, lead, or cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons; radioactive materials; sludges; and organic solvents.
- "Hazardous condition" means any situation involving the actual, imminent, or probable spill, leak, or release of a hazardous substance onto the land or into the atmosphere that, because of its quantity, strength, or toxicity, its mobility in the environment, or its persistence, creates an immediate or potential danger to the public health or safety or to the environment.

Depending on the material spilled and the quantity and location of the spill, notification of appropriate federal and/or state emergency response entities may be required. El Paso Natural Gas's Environmental Project Manager or Environmental Compliance Staff located in El Paso shall report any hazardous substance spill or hazardous condition to the National Response Center, which is the sole federal point of contact for reporting oil and chemical spills, and/or the Arizona Emergency Response Hotline if:

- A hazardous substance has the potential to leave the property by flowing over the surface or through sewers, tile lines, culverts, drains, utility lines, or other conduit.
- A hazardous substance has the potential to reach any surface water or groundwater.
- Any hazardous substance has spilled directly into a water of the state.
- A hazardous substance is detected in the air at the boundaries of the construction ROW by the senses (sight and smell) or by monitoring equipment.
- There is a hazardous condition that poses a potential threat to the public health and safety.

Reportable quantities of hazardous substances and reportable hazardous conditions include the following:

- A spill of any hazardous substance in a quantity of 5 gallons or greater on land.
- Any amount of substances such as paint, solvents, fertilizer, acids, etc.
- Any spill of solid petroleum product greater than 100 pounds.
- Any spill to a water of the state.

The appropriate federal and state contacts for the Project are as follows:

Federal Contact	National Response Center (Washington, D.C.) Phone: (800) 424-8802 (24 Hours)
New Mexico Contact	Emergency Response Hotline (24 Hours) Phone: (505) 827-2855 or Toll Free: (800) 219-6157

EL PASO

WASTE MANAGEMENT PLAN (WMP)

Complete all applicable data fields for Group Designation per color code indicated below for each section of the WMP. The Project Coordinator will initiate preparation of WMP and submit to the appropriate Division Environmental Representative for completion of remaining data fields, final review and approval. **Environmental to print WMP Title Page, WMP, Job Responsibilities, and any State Specific Requirements, Sign (type) on WMP Title Page and send to Project Coordinator as PDF file.**

Project Coordinator:

Environmental Representative:

WMP Title Page Tab: (Items 1-19)

	Data Field Description
1	Date - Enter date Waste Management Plan was prepared.
2	Requested Approval Date - Enter date approved WMP required.
3	Project Name - Enter project name as shown on Company Project Information Form (PIF).
4	Project ID Number - Enter project identification number assigned in PeopleSoft.
5	Facility/Station - Enter facility name or station number, if applicable.
6	Division/Area - Enter Division and Operating Area for project location.
7	Line Number - Enter pipeline number for project location, if applicable.
8	EPA ID Number - Enter EPA identification number provided by Environmental, if applicable. For some projects a one-time EPA ID# maybe required for the generation of hazardous waste. This process could take up to 3-4 weeks.
9	Construction Start - Enter proposed start date for project.
10	Construction End - Enter proposed completion date for project.
11	Contractor Name - Enter name of Contractor awarded job or CMD if in-house.
12	Subcontractor Name - Enter name of Subcontractor, if applicable.
13	Contractor Representative - Enter name and phone number of Contractor's Representative.
14	On-Site El Paso Representative - Enter name of company representative (PM, Inspector, etc.)
15	El Paso Project Coordinator - Enter name of Project Coordinator.
16	El Paso Waste Coordinator - Enter name of Waste Coordinator (PM, Inspector, etc.)
17	El Paso Waste Tracking Coordinator - Enter name of who will be responsible for entering wastes into Corporate ESS Waste Tracking system, if applicable.
18	Approved By /Date - Enter name of person approving the plan and date approved.
19	Brief Project Description - Provide description of project. If possible, use the same information entered in PeopleSoft.

Waste Management Plan Template (WMP) Tab: (Cols. A-R)

A	Waste Stream - From drop down menu select the waste streams to be generated on the project.
C	Waste Type - From drop down menu select the "category" that best describes the type of waste to be generated.
D	Sampling Required - From drop down menu select "yes or no" to indicate if sampling of the waste stream is required for waste characterization purposes to ensure proper disposal.
E	Labeling Required - From drop down menu select "yes or no" to indicate if container used to the manage waste on-site requires labeling.
F	Weekly Site Inspection - From drop down menu select "yes or no" to indicate if weekly inspection is required. Weekly inspection is required if wastes is categorized as "Hazardous or Potentially Hazardous Waste".
G	Waste Tracking Required - From drop down menu select "yes or no" to indicate if waste stream generated subject for entry in Corporate Waste Tracking Program.
H	Estimated Quantity - Enter amount of waste to be generated (round all quantities to nearest whole number).
I	Units - Indicate unit of measure to describe volume of waste to be generated (e.g., lbs, gallons, tons, drums)
J	Waste Storage (Secure Location) - From drop down menu select the location where waste will be stored until arrangements have been made for final transportation and disposal.
K	Responsible for Managing Waste - Identify "Group" or "Individual" if known that will be responsible for securing waste containers, labeling, and proper on-site storage per Regulatory and Company Requirements.

EL PASO

WASTE MANAGEMENT PLAN (WMP)

Complete all applicable data fields for Group Designation per color code indicated below for each section of the WMP. The Project Coordinator will initiate preparation of WMP and submit to the appropriate Division Environmental Representative for completion of remaining data fields, final review and approval. **Environmental to print WMP Title Page, WMP, Job Responsibilities, and any State Specific Requirements, Sign (type) on WMP Title Page and send to Project Coordinator as PDF file.**

Project Coordinator:

Environmental Representative:

WMP Title Page Tab: (Items 1-19)

	Data Field Description
L	Waste Storage Container Type - From drop down menu select the type of container that will be used for on-site storage. For some bulk liquids/sludge waste, the actual container required for off-site shipment may be different.
M	Responsible to Transport Waste (<i>from generation site</i>) - Identify "Group" or "Individual" that will be responsible for proper of waste from generation location to secure storage site, if authorized.
N	Transporter Company Name (<i>from generation site</i>) - Identify "Group" or "Individual" that will be responsible for proper of waste from generation location to secure storage site, if authorized.
O	Responsible for Weekly Site Inspection - Identify "Group" or "Individual" if known that will be responsible for conducting weekly inspection of all hazardous and potentially hazardous waste containers, if applicable.
P	Responsible to Coordinate Disposal - From drop down menu select "Group" or identify "Individual" that will be responsible for ensuring all wastes generated on the project has been disposed of properly.
Q	Transporter Company Name (Final Disposal Site) - From drop down menu select disposal company that will transport the waste for final management.
R	Final Disposal Site - From drop down menu select disposal company that will receive wastes. Disposal site must be approved by Company.
	Labeling Requirements - Enter description of labels that must be affixed to the storage container.
	Sampling Requirements - Enter analysis required to properly characterize waste for disposal purposes.
	Responsible for Sampling - Identify "Group or Individual" if known that will be responsible for collection and shipment of samples to a Company approved laboratory.
	Special Issues - Identify other precautions, storage or reporting requirements to ensure proper on-site management and disposal of wastes.

Additional Tabs

Job Site Responsibilities: Describes general responsibilities for managing the waste (this should be printed and included in the WMP)

Pipelines Addendum: Additional requirements for projects executed on El Paso Pipelines (this should be printed and included in the WMP).

State-Specific Addendum: Additional state-specific requirements for projects executed on El Paso Pipelines (this should be printed and included in the WMP).

Examples by Waste Classification: Lists commonly encountered wastes by classification such as Potentially Hazardous Wastes (PHW), Hazardous Waste (HW), or Non-Hazardous Waste (Non-Haz).

Examples by Waste Type: Lists commonly encountered wastes by the waste stream type such as ACM, abrasive blast media, general trash, and oily liquids.

Labels: Shows examples of commonly used labels to identify the waste in a container.

COAL TAR AND ASPHALTIC PIPE COATING MANAGEMENT PLAN

I. WHAT THE PLAN COVERS

This Coal Tar and Asphaltic Pipe Coating Management Plan (the "Plan") contains Company procedures for the inspection, removal, containment, storage, transportation, and disposal of coal tar enamel and asphaltic pipe coating ("Pipe Coating") on onshore and offshore pipelines. The type of coating addressed in this Plan typically consists of an asphalt or coal tar-like material that has been wrapped in or incorporated into an asbestos-containing fiber mesh or wrap. Because of the difficulty of determining in advance whether Pipe Coating contains asbestos or not, the Company has determined that all Pipe Coating should be treated as if it contains asbestos, unless it is conclusively proven not to contain asbestos through documentation or through appropriate laboratory analysis of samples collected through a sampling protocol approved in advance by the Environmental and Safety Department, as discussed below.

The Plan covers all work performed by company employees, contractors, subcontractors, and 3rd party vendors.

The intent of the Plan is to:

- ❖ **communicate required management practices to construction project and operations personnel out in the field for non-regulated, non-friable Pipe Coating;**
- ❖ **provide construction project bidders with minimum requirements;**
- ❖ **allow for proper handling of regulated Pipe Coating through recognition, segregation, and subsequent handling by licensed asbestos abatement contractors (outside the scope of this document).**

This Plan is to be used in conjunction with the El Paso Asbestos Management Policy, The El Paso Corporation Safety & Health Handbook, the El Paso Pipeline Group Environmental Handbook, and the El Paso Pipeline Environmental Compliance Manual.

Please note that Pipe Coating may contain PCBs. Any PCB-containing Pipe Coating shall also be handled in accordance with El Paso's Managing Pipe Coating That May Contain PCBs document.

This Plan does not apply to asbestos-containing materials (ACM) that may exist in insulating materials (e.g. steam piping insulation), nor does it apply to non-coal tar enamel pipe coating systems.

II. GENERAL CONSIDERATIONS

The handling of asbestos-containing Pipe Coating and other asbestos-containing materials are subject to regulations promulgated by the Occupational Safety and Health Administration ("OSHA") and the Environmental Protection Agency ("EPA"). Depending on where the job site is, the regulations may be administered directly by the federal OSHA and EPA agencies or by delegated state and county agencies. Delegated agencies' regulations may be more stringent than EPA's.

OSHA's and EPA's regulations are similar, but not identical. OSHA's regulations apply to all workers in the vicinity of asbestos-containing Pipe Coating, even if the Pipe Coating is in good

physical condition. Increased exposure controls and specialized work practices are required if the Pipe Coating is in a condition where the asbestos fibers are no longer likely to be bound to the coal tar or asphalt matrix.

EPA regulations apply when threshold amounts of regulated asbestos-containing material containing greater than (>1%) asbestos (**RACM; See Appendix 2**) is planned to be removed and/or is generated. Even though the Plan assumes that all Pipe Coating contains asbestos, it is critical that prior to any removal of the Pipe Coating, it must be properly categorized as to friability and amounts of friable material quantified in order to determine applicability of the EPA's Asbestos NESHAP requirement. The categorization and quantification must be conducted by a person trained in accordance with OSHA and NESHAP regulations. This person is defined in this Plan as the **Pipe Coating Inspector** (See Appendix 1).

The Company has determined that the removal or disturbance of friable Pipe Coating must be done by State-licensed third-party asbestos-abatement contractors. Removal or disturbance of friable Pipe Coating in limited amounts (i.e. <1 glove bag or 3 sq. ft./3 linear ft.) may be performed by Company employees only if they meet the 16 hour "Competent Person" training (O&M) requirements as specified in the Safety Department's Asbestos Management Policy, Table 2.

III. PRE-JOB ACTIVITIES

III (a) Project Managers must contact the Environmental Department for state-specific guidance.

As a result of varying interpretations by individual State regulatory agencies, in certain States the Company follows procedures that are somewhat different from those contained in this Plan. Accordingly, Project Managers must check with the Environmental Department before each job to determine if there are any State-specific modifications to the procedures contained in this Plan.

The Company assumes that all Pipe Coating contains asbestos, even though some Pipe Coating does not. Therefore, all work involving the disturbance of Pipe Coating must be conducted in accordance with this Plan unless the absence of asbestos has been confirmed through laboratory analysis of samples of Pipe Coating that have been collected in accordance with a sampling plan approved in advance by the Environmental and Safety Departments.

III (b) Company Project Management Must Alert Workers if Job Involves Pipe Coating.

For each job where potentially asbestos-containing Pipe Coating is likely to be encountered, Company Project Management (e.g. Engineering, Operations, Pipeline Services, Central Maintenance, etc.) must notify all Company employees involved in the project, third-party contractor bidders and buyers of pipe for salvage that all Pipe Coating on Company pipelines must be treated as if it contains asbestos. Any bid packages or other written materials provided to potential contractors must contain the notice and a copy of this Plan, so that the bidders are familiar with the Company's work practices and the Company's interpretation of the asbestos regulations. The provisions of this Plan must be discussed at pre-bid meetings and bid showings on jobs involving Pipe Coating. The discussion should include potential scenarios under which non-friable Pipe Coating (**Category I or Category II; see Appendix 2**) may become friable (i.e., become pulverized or reduced to a powder to the point where asbestos fibers are likely to become separated from the coal tar or asphalt matrix). The contractors must review the contents of the

Plan with their employees. All buyers of surplus pipe must sign a liability waiver, the most recent version of which can be obtained from the Legal Department.

NOTE: While this Plan contains work practices that are consistent with the Company's interpretation of the asbestos regulations (including EPA's Asbestos National Emission Standard for Hazardous Air Pollutants ("NESHAP") and OSHA's asbestos construction standard), third-party contractors are responsible for complying with the applicable regulations, and their interpretation of what the asbestos regulations require may differ from what is contained in this Plan. However, in no event should a contractor be allowed to employ work practices which are less protective of human health and the environment than those contained in this Plan.

NOTE: Pipe Coating must be included in project Waste Management Plans for proper storage, shipping, and disposal. See Section V. on Waste Procedures.

III (c) Thoroughly Inspect the Job Site for the Presence, Condition and Amount of Pipe Coating.

Prior to the beginning of the job, a Pipe Coating Inspector must thoroughly inspect the job site for the visible presence of Pipe Coating. If Pipe Coating is identified, the Company assumes it is asbestos-containing, and the Pipe Coating Inspector must determine if it is "friable" and therefore a Regulated Asbestos-Containing Material ("RACM"). All Pipe Coating assessments must be documented by the Pipe Coating Inspector.

If there is RACM present, the Inspector must determine how much is present. If the amount of RACM to be stripped, removed, dislodged or disturbed during the job is more than **260 linear feet or 35 cubic feet**, a written NESHAP notice must be filed with the federal or delegated regulatory agency with jurisdiction over the job, and the removal of the friable Pipe Coating may not start until ten (10) **working days (See Appendix 2)** after written notice has been given. In such cases, the Inspector should immediately contact the Environmental Department for help in filing the notice.¹

NOTE: The federal threshold amount (260 linear feet/35 cubic feet of RACM) applies to the whole job, not just the visible friable Pipe Coating identified during the pre-job inspection. **Any activities which occur under a single project ID number constitute one "job"**. Other methods for determining a "job" are allowed only with approval from the Manager of the Company's Environmental Department. Therefore, the agency notification must be filed as soon as the Pipe Coating Inspector has reason to believe that the job as a whole (amount of friable Pipe Coating or RACM identified during pre-job inspection plus amount of friable or RACM Pipe Coating encountered or generated during the job) will involve more than the threshold amount of RACM. **Note also that delegated agency reporting thresholds may differ from the federal ones.**

NOTE: Breaking Pipe Coating into pieces does not necessarily cause it to become "friable." "Non-friable" Pipe Coating can, however, become "friable" if power tools are used to remove it or if it is cut, sawn, ground or abraded or if it becomes pulverized into a powder.

The technical requirements of the notice are found at 40 C.F.R. §61.145(b).

III (d) (1) Non-friable Pipe Coating That is Loose Should be Addressed Before Primary Work Activity Begins.

Prior to the beginning of the primary work activity, any pieces of loose but non-friable Pipe Coating at the job site (on the ground surface, on pipe, etc.) should be picked up in accordance with the Work Practices specified in this Plan.

III (d) ((2) Friable Pipe Coating Must Be Handled By Qualified Asbestos Abatement Contractors.

Friable Pipe Coating (of any quantity) is to be stripped, removed, dislodged or disturbed by a State-licensed, third-party asbestos-abatement contractor. **Removal or disturbance of friable Pipe Coating in limited amounts (i.e. <1 glove bag or 3 sq. ft/3 linear ft.) may be performed by Company employees only if they meet the 16 hour "Competent Person" training (O&M) requirements as specified in the Safety Department's Asbestos Management Policy, Table 2.**

IV. PIPE COATING REMOVAL PRACTICES

IV (a) Pipe Coating Worker and Inspector Training

OSHA regulations provide that anyone who is handling or in the vicinity of any asbestos-containing Pipe Coating ("Pipe Coating Worker") must receive specified training in the nature and proper handling of the material. OSHA and EPA's regulations further provide that anyone responsible for determining the condition of asbestos-containing Pipe Coating ("Pipe Coating Inspector") must receive more training than that received by Pipe Coating Workers. A summary of the required training for Pipe Coating Workers and Inspectors is contained in Appendix 1 to this Plan. Training documentation for contractors will be provided at the request of the Company.

IV (b) Personal Protective Equipment

At a minimum, the following personal protective equipment will be required by all personnel involved in the removal or disturbance of non-friable Pipe Coating:

- Leather gloves
- 2. Steel-toed work boots
- 3. Hardhats
- 4. Safety glasses with side shields
- 5. Face shield, as necessary
- 6. Any other PPE as provided in the Company's Safety Policy & Procedures.

IV (c) Equipment/Materials

The material and equipment listed below will be used to remove non-friable Pipe Coating:

- Plastic sheeting, tarp, or equivalent
- 2. Pump sprayer/bottle and "amended water" (water with surfactant added)
- 3. 6-mil ACM plastic bags

4. Duct tape
5. Mallet or hammer
6. Scraper tool
7. Burlap sacks, as needed
8. Absorbent rags
9. Fully-enclosed DOT-approved drums or plastic-lined roll-off dumpsters
10. Labels containing the following information: **“ACM (Asbestos Containing Material), Non-friable Pipe Coating”**. The label must also include the following information: Project ID/Name; Collection Start Date; Collection End Date; Station Name or Line Number (Including valve location or mile post)
11. Pallet wrap or equivalent material for securing any areas on the pipe where the Pipe Coating is susceptible to falling off

IV (d) Procedure for Removing Pipe Coating

All Pipe Coating will be handled as if it contains asbestos, unless it is conclusively proven not to contain asbestos through documentation or through appropriate laboratory analysis of samples collected through a sampling protocol approved in advance by the Environmental and Safety Departments. This procedure is a minimum standard procedure to be used in conjunction with federal regulations, state regulations, and local ordinances.

If the initial visual observation of the Pipe Coating Inspector determines that the coating is friable (can be crumbled, pulverized, or reduced to powder by hand pressure, applied in one continuous motion), work must cease and the Project Inspector, Environmental, and the Safety Department must be contacted prior to commencing removal activities. If the Pipe Coating is determined to be friable, the area containing the friable Pipe Coating must be demarcated and onsite personnel must be instructed to stay out of that area.

For non-friable Pipe Coating, place sheeting/tarp in and around the excavation so that all areas beneath and around the planned pipe cuts or Pipe Coating removal are completely covered.

3. The entire circumference of the Pipe Coating removal area must be **adequately wetted** (See **Appendix 2**) at the beginning of the removal process and as frequently as needed to keep the Pipe Coating wet.
4. Remove the coating by **manually** scraping the pipe or pounding the coating using a brass mallet or equivalent. Keep the area adequately wet while working. **Do not apply mechanical means such as grinders, sanders, saws to remove the coating, or engage in any other activity which could pulverize or reduce the coating to powder.** Wet burlap sacks may be used to act as a barrier between the coating and the mallet. **Use of other Pipe Coating removal methods (e.g., water blasting) must be reviewed with the Environmental Department in advance to determine regulatory requirements that may be applicable.**
5. If, during the job, Pipe Coating becomes friable, cease work and immediately contact the Project Inspector and the Environmental and Safety Departments before continuing removal activities.
6. Remove the sheeting or tarp by folding in a manner such that all of the Pipe Coating is contained within the tarp. Place all of the Pipe Coating into double 6-mil plastic bags. Seal each bag with duct tape. For larger projects, the removed Pipe Coating may be placed directly into a plastic-lined roll-off dumpster.

Place the Pipe Coating in a DOT-approved container or lined roll-off dumpster and label with the information as identified under the Equipment/Materials section above. Drums and roll-off dumpsters must be covered at all times.

8. If required, a log (form to be furnished by Company) will be maintained on each container to record all activities involving the waste. Logs are typically required for projects involving multiple job sites. The log must be provided to the Area Manager or designated Company representative at the end of the job or as otherwise requested.
9. Containers will be transported to a designated secure and fenced facility in a timely manner. Full containers are not to remain on unsecured work sites longer than one (1) week. Contact the Environmental Department for appropriate disposal.

IV (e) Pipe Temporary Work-Storage and Preparation for Transport

The following procedure will be used for handling pipe with non-friable Pipe Coating while in temporary storage or transport. Contact the Environmental Department for guidance in handling pipe containing friable Pipe Coating.

1. During removal, transporting, and loading, Contractor or third-party pipe buyer must take precautions to prevent the Pipe Coating from becoming airborne or scattered. The precautions must include removing any significantly loose Pipe Coating from the pipe and bagging it for disposal. In addition, prior to transportation, any areas of the Pipe Coating which show indications of loosening must be removed or secured, for example, by wrapping it in pallet wrap, plastic, tape, or equivalent material.
2. Any non-friable Pipe Coating that falls from the pipe during handling must be wetted, picked up, bagged and labeled for disposal. **This is to be done no later than the end of the work day.**
3. For pipe that is expected to be stored for extended periods of time (i.e. >one (1) month) at a job site or staging area, every reasonable effort must be made to protect the Pipe Coating from weathering and deteriorating.
4. Appropriate measures for securing the area must be taken, as well as preventing storm water run-off. Storm water permits are typically in place if there is a chance of impacting a water of the United States.
5. If the Pipe Coating becomes friable (e.g., through extensive weathering), immediately contact the Environmental Department for further guidance.
6. **Vehicle or equipment travel should be minimized on any surface area that contains Pipe Coating.**

IV (f) Pipe Storage at Company Facilities or Pipe Yards

This section applies to company facilities such as compressor stations or pipe yards located at warehouse locations.

As a general rule, company locations should avoid storing pipe that contains Pipe Coating.

2. During removal, transporting, and loading, adequate precautions must be taken to prevent the Pipe Coating from becoming airborne or scattered. The precautions must include removing any loose coating from the pipe and bagging it for disposal. Any Pipe Coating that falls from the pipe must be wetted, picked up, bagged and labeled for disposal. **This**

is to be done by the end of the work day when the dislodging or the observation occurs

3. **All Pipe Coating on pipe segments or pipeline appurtenances being held for re-use or disposal must be removed according to this Plan within 90 days.**
4. If special circumstances exist such that removal of Pipe Coating is not feasible, please contact the Environmental Department for further guidance as to disposal options and procedures (authorized landfills, required labeling, etc.).
5. If Pipe Coating has become friable (e.g., through extensive weathering), immediately contact the Environmental Department for further guidance.

IV (g) Pipe Disposition

The following procedure will be used for the disposition of pipe with non-friable Pipe Coating:

All agreements or contracts for the disposition of the pipe must be administered by MCM and approved by the Environmental and Legal departments.

2. An agreement or contract and liability waiver must be signed prior to having the pipe transported off-site.
3. Any parties taking ownership of the pipe must comply with specifications listed under the "Pipe Temporary Work-Storage and Preparation for Transport" and "Pipe Storage" sections above.
4. Any parties taking ownership of the pipe are responsible for proper containment and disposal of pipe coating waste generated as the result of their pipe handling activities.
5. If the pipe contains friable Pipe Coating, immediately contact the Environmental Dept. and do not release custody of the pipe until further instructions are obtained.

V. Waste Management for Non Regulated Asbestos Containing Material (RACM) pipe coating

Waste Storage - Place all of the Pipe Coating into double 6 mil plastic bags. Seal each bag with duct tape. For larger projects, the double bagged material may be placed directly into a plastic-lined roll-off dumpster. For small projects, the double bagged material may be placed into a DOT-approved container as needed.

Waste Labeling - Labels must contain the following information: **"ACM (Asbestos Containing Material), Non-friable Pipe Coating"**. The label must also include the following information: Project ID/Name; Collection Start Date; Collection End Date; Station Name or Line Number (Including valve location or mile post).

Waste Disposal - Containers will be transported to a designated secure and fenced facility in a timely manner. It is recommended that pipe coating is not stored onsite greater than 90 days prior to its disposal. Full containers are not to remain on unsecured work sites longer than one (1) week. Contact the Environmental Department for appropriate disposal. Disposal will be allowed at only approved landfills.

Waste Shipment Records - If required, a log (form to be furnished by Company) will be maintained on each container to record all activities involving the waste. Logs are typically required for projects involving multiple job sites. The log must be provided to the Area Manager or designated company representative at the end of the job or as otherwise requested. Utilize a completed Bill of Lading to transport the material.

COAL TAR AND ASPHALTIC PIPE COATING MANAGEMENT PLAN

Appendix 1: Training

Work which involves the removal of non-friable asbestos-containing Pipe Coating is subject to OSHA requirements at 29 CFR 1226.1101, Section (g) (11). Personnel working on jobs covered by paragraph (g) (11) are not subject to the special training requirements of OSHA Class II, III, or IV work.

Work involving the removal of asbestos-containing Pipe Coating is also subject to EPA requirements at 40 CFR 61.145 (c) (8)

“Pipe Coating Worker” Training: Before workers can handle Pipe Coating, they must receive training in the following subjects. The training need not be of any specific duration, but must include a “hands on” component. Training records must be kept for at least one (1) year past last date of employment.

- Explanation of What Asbestos is and Where it Comes From
- Use of Asbestos in Pipe Coating, Past and Present
 - Methods of recognizing asbestos
 - Characteristics of asbestos
- Physical Condition of Pipe Wrap (i.e., “Intact,” “Non-friable”, “Non-intact”, “Friable”)
 - Regulatory definitions
 - How to recognize friable and/or non-intact asbestos
- OSHA Permissible Exposure Limits
 - Time weighted average limit
 - Excursion limit
- Health Effects Associated with Asbestos Exposure
 - Diseases (latency, medical tests for identifying asbestos-related diseases)
 - Exposure routes
 - Dose/response relationships
 - Significance of “Permitted Exposure Limits” and “Significant Risk”
- Relationships Between Asbestos Exposure, Smoking and Lung Cancer
 - Availability of smoking cessation programs
 - Names, addresses, phone numbers of smoking cessation programs
- Nature of Operations that Could Result in Asbestos Exposure
- Importance of Measures to Prevent Exposure to Asbestos
 - Personal protective equipment (e.g., purpose, use, fitting and limitations of respirators)
- Appropriate work practices
 - Requirement that manual, wet removal methods be used
 - Procedures to be followed in non-intact Pipe Coating encountered
 - Clean-up and waste disposal requirements, including labeling
- Circumstances when medical monitoring required

- Content of OSHA Asbestos Standard, including appendices

“Pipe Coating Inspector” Training: Before workers can perform pre-job surveys (including categorization and quantification of asbestos-containing Pipe Coating they must receive the Pipe Coating Worker training, plus:

- Methods of determining presence/absence of asbestos-containing Pipe Coating
- Understanding and interpreting air monitoring data
- State requirements that mandate air monitoring on all ACM jobs
- National Emissions Standards Hazardous Air Pollutants (NESHAPs) applicability
- Notification requirements under NESHAPs
- Waste Management
- Reporting and Recordkeeping

Appendix 2: Definitions

Adequately wet: Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Category I non-friable asbestos-containing material: Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix E, subpart E, 40 CFR part 763, Section 1, Polarized Light Microscopy.

Category II non-friable asbestos-containing material: Any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix E, subpart E, 40 CFR part 763, Section I, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Friable asbestos material: Any material containing more than 1 percent asbestos, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable asbestos-containing material: Any material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Regulated asbestos-containing material (RACM):

- (a) Friable asbestos material
- (b) Category I non-friable ACM that has become friable
- (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
- (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Working day: Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

Appendix 3: Pipe Coating Assessment Form

PIPE COATING ASSESSMENT FORM

Project ID Number: _____ Date: _____

Line Number Begin MP/Valve Footage _____

Line Number End MP/Valve Footage _____

Station Name/Description: _____

Condition of Pipe Coating? Nonfriable Friable

Note: If friable, stop work immediately and notify Environmental Department.

Any deviations from Pipe Coating Management Plan? Yes No

Action Taken: _____

At any time during the coating removal/replacement process, did the activities conducted appear to cause the material to become friable, or to release fibers to the air?

Yes No

Action Taken: _____

Pipe Coating Inspector Signature: _____

Pipe Coating Inspector Training Expiration Date: _____

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1. Applicability

- Gathering
- Processing
- Transmission/Regulated Onshore Gathering
- Kinder Morgan Treating

2. Scope

This procedure establishes guidelines for response to any release of solid, liquid or gas substances or compounds into the environment (land, air, surface or groundwater). It provides information necessary to respond to the release and to provide appropriate notification in a manner consistent with the Corporate Crisis Response Plan. This procedure is designed to provide the Environmental, Health and Safety (EHS) Department with the information necessary to ensure compliance with regulatory reporting requirements.

3. Core Information and Requirements

Always conduct release response procedures with safety as the greatest priority.

3.1. Definition of Release

A release is any unintentional, accidental or unauthorized leak, rupture, spill, emission, disposal, discharge or dumping of a substance (solid, liquid or gas) that causes property damage or has the potential to adversely affect the environment or the health or safety of the public and/or employees.

3.2. Initial Response

When a release occurs, initiate the following steps:

- Immediately begin corrective action to stop and contain the release but only if the corrective action can be conducted in a safe manner (refer to [Subsection 3.2.1 - Substance Identification and Human Safety](#) section)
- Determine the nature and extent of the release
- Determine whether the release meets a Level 0 (local), Level I (minor), or Level II (major) operating crisis/incident in conformance with [O&M Procedure 159 – Emergency Reporting and Investigation](#) and the Corporate Crisis Response Plan
- If the release qualifies as a Level I or Level II incident, immediately contact the appropriate Gas Control personnel for your region, who will activate the Emergency Response Line ([ERL](#)), an automated paging system
- Immediately notify your supervisor and the local EHS Environmental Representative

3.2.1. Substance Identification and Human Safety

It is extremely important initially to identify the chemical or materials involved as quickly as possible with accurate details relating to the release. Appropriately trained and responsible Company personnel should make this assessment. Any questions should be directed to the local EHS Environmental Representative.

Always use appropriate personal protective equipment (PPE) (see [O&M Procedure 120 – Personal Protective Equipment](#)) and exercise extreme caution. Only trained personnel should ever approach a release.

Individuals who first identify a release should:

- Do not enter area without verifying if flammable vapors are present with an appropriate calibrated air monitoring gas detector
- Avoid direct contact with the released material
- Avoid inhaling any gases, fumes, vapor or smoke; stay upwind or out of the area if necessary
- Move and keep personnel away from the scene; contact emergency authorities if necessary
- Attempt to locate and remove all ignition sources without unnecessarily endangering personnel
- Contact your supervisor and local EHS Environmental Representative and allow them to handle the response activities

3.3. Determining Reporting Levels

Refer to [O&M Procedure 159 – Emergency Investigation and Reporting](#) for incident reporting level definitions.

3.4. Gas Control Notification and ERL

In the event of a Level I or Level II emergency, immediately contact the appropriate Company Gas Control office.

3.5. Release Reporting Information

Gas Control will notify all necessary personnel through the Company's Emergency Response Line. Appropriate corporate personnel will be notified of Level I incidents through the [ERL](#) system and Level II incidents through the [ERL+](#) system.

3.5.1. Information to Report

Refer to [O&M Procedure 159 – Emergency Investigation and Reporting](#) for initial incident reporting information

3.5.2. Release Reporting

Corporate EHS or Codes and Standards staff will report releases to any required federal or state agencies. Provide detailed information regarding the release to EHS personnel to allow them to file verbal and written reports.

3.6. Federal and State Reporting Requirements

Mandatory reporting requirements for releases into the environment are contained in several federal laws:

- The Clean Water Act (CWA)
- The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), referred to as Superfund
- The Emergency Planning and Community Right-to-Know Act (EPCRA)
- The Toxic Substance Control Act (TSCA)
- The Resource Conservation Recovery Act (RCRA)
- The Clean Air Act (CAA)
- The Hazardous Materials Transportation Act (HMTA)

Additional reporting requirements and notification may be necessary to certain agencies depending on the nature and location of the release, as follows:

Location of Release	Agency Jurisdiction
Releases into coastal water	US Coast Guard
Releases during transportation	US Department of Transportation (USDOT)
Releases from pipelines	State Public Utilities Commission (PUC), the National Pipeline Safety Board, USDOT, Federal Energy Regulatory Commission (FERC)
Releases on federal leases or lands	Bureau of Land Management (BLM)
Releases on tribal lands	Bureau of Indian Affairs (BIA)

3.6.1. Environmental Reportable Quantity

In general, releases greater than the federal or state-specific reportable quantity (RQ) for a specific chemical or material must be reported to appropriate agencies immediately after discovery. It is imperative to determine accurately the chemicals or materials involved, accurately estimate the quantity of the release and compare it to the RQ. In general, if the release exceeds the environmental RQ during a 24-hour period, then a minor or major incident has occurred and reporting procedures must be initiated as quickly as possible.

Note: If a release of any quantity of oil or petroleum hydrocarbon-related substance contacts surface water (onshore, offshore, flowing or not flowing), groundwater or a drainage, then the RQ has been exceeded, a minor or major incident has occurred and reporting procedures must be initiated. All State and Federal RQs are provided on the [EHS Emergency, Crisis & Security Support Intranet site](#):

<http://kmonline/ehs/Pages/EmergencyCrisisSecuritySupport.aspx>

3.6.2. USDOT Reporting Criteria

In addition to the environmental RQs, USDOT has federal and state reporting criteria for pipeline incidents involving property damage, personal injury or fatalities. The emergencies described in [O&M Procedure 159 – Emergency Reporting and Investigation](#) are designed to identify and include the majority of USDOT (or state/local equivalent) reportable incidents.

4. Training

Document the initial review of this procedure with all personnel and review as necessary.

5. Documentation

Supervisors or their designees may complete [O&M Form OM1200-02 – Release Response Notification](#) to aid in the collection of required information for all releases, regardless of the quantity, to complete the Incident Report in the Incident Management System. When utilized, attach a copy into the Incident Management System (STARS or equivalent). If the release was from a pipeline or gas related facility and caused property damage, personal injury, or a fatality, complete appropriate forms as required in [O&M Procedure 159 – Emergency Reporting and Investigation](#).

Report all gas lost for all Company assets through online [Field Ticketing – Unmeasured Gas](#) within the production month that it occurs and no later than the second workday of the following month in conformance with [O&M Procedure 1030 – Unmeasured Gas Use/Lost Reporting](#).

6. References

- 29 CFR Part 1910.120
- 40 CFR Part 302
- [O&M Procedure 100 – Employees' O&M Responsibilities](#)
- [O&M Procedure 111 – Fire Prevention](#)
- [O&M Procedure 120 – Personal Protective Equipment](#)
- [O&M Procedure 159 – Emergency Reporting and Investigation](#)

- [O&M Procedure 183 – Training and Record Keeping](#)
- [O&M Procedure 1030 – Unmeasured Gas Use/Lost Reporting](#)
- [O&M Form OM1000-05 – Gas Lost Report](#)
- [O&M Form OM1200-02 – Release Response Notification](#)
- [Field Ticketing Procedures](#)



**Federal Energy
Regulatory
Commission**

**Office of
Energy Projects**

May 2013

WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES

Washington, DC 20426

MAY 2013 VERSION

WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES

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**WETLAND AND WATERBODY
CONSTRUCTION AND MITIGATION PROCEDURES (PROCEDURES)**

I. APPLICABILITY

- A. The intent of these Procedures is to assist project sponsors by identifying baseline mitigation measures for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies. Project sponsors shall specify in their applications for a new FERC authorization, and in prior notice and advance notice filings, any individual measures in these Procedures they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is authorized, project sponsors can request further changes as variances to the measures in these Procedures (or the applicant's approved procedures). The Director of the Office of Energy Projects (Director) will consider approval of variances upon the project sponsor's written request, if the Director agrees that a variance:

1. provides equal or better environmental protection;
2. is necessary because a portion of these Procedures is infeasible or unworkable based on project-specific conditions; or
3. is specifically required in writing by another federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Sponsors of projects planned for construction under the automatic authorization provisions in the FERC's regulations must receive written approval for any variances in advance of construction.

Project-related impacts on non-wetland areas are addressed in the staff's Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).

B. DEFINITIONS

1. “Waterbody” includes any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as ponds and lakes:
 - a. “minor waterbody” includes all waterbodies less than or equal to 10 feet wide at the water’s edge at the time of crossing;
 - b. “intermediate waterbody” includes all waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the water’s edge at the time of crossing; and
 - c. “major waterbody” includes all waterbodies greater than 100 feet wide at the water’s edge at the time of crossing.
2. “Wetland” includes any area that is not in actively cultivated or rotated cropland and that satisfies the requirements of the current federal methodology for identifying and delineating wetlands.

II. PRECONSTRUCTION FILING

- A. The following information must be filed with the Secretary of the FERC (Secretary) prior to the beginning of construction, for the review and written approval by the Director:
 1. site-specific justifications for extra work areas that would be closer than 50 feet from a waterbody or wetland; and
 2. site-specific justifications for the use of a construction right-of-way greater than 75-feet-wide in wetlands.
- B. The following information must be filed with the Secretary prior to the beginning of construction. These filing requirements do not apply to projects constructed under the automatic authorization provisions in the FERC’s regulations:
 1. Spill Prevention and Response Procedures specified in section IV.A;
 2. a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, within any designated coldwater fishery, and within any waterbody identified as habitat for federally-listed threatened or endangered species. The project sponsor will revise the schedule as necessary to provide FERC staff at least 14 days advance notice. Changes within this last 14-day period must provide for at least 48 hours advance notice;

3. plans for horizontal directional drills (HDD) under wetlands or waterbodies, specified in section V.B.6.d;
4. site-specific plans for major waterbody crossings, described in section V.B.9;
5. a wetland delineation report as described in section VI.A.1, if applicable; and
6. the hydrostatic testing information specified in section VII.B.3.

III. ENVIRONMENTAL INSPECTORS

- A. At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.
- B. The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).

IV. PRECONSTRUCTION PLANNING

- A. The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each construction spread. This filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.
 1. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that:
 - a. all employees handling fuels and other hazardous materials are properly trained;
 - b. all equipment is in good operating order and inspected on a regular basis;
 - c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads;
 - d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the

project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;

- e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas;
 - f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;
 - g. pumps operating within 100 feet of a waterbody or wetland boundary utilize appropriate secondary containment systems to prevent spills; and
 - h. bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills.
2. The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must:
- a. ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination;
 - b. ensure that each construction crew has on hand sufficient tools and material to stop leaks;
 - c. know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and

- d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.

B. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.

V. WATERBODY CROSSINGS

A. NOTIFICATION PROCEDURES AND PERMITS

1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits.
2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority.
3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver.
4. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits.

B. INSTALLATION

1. Time Window for Construction

Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows:

- a. coldwater fisheries - June 1 through September 30; and
- b. coolwater and warmwater fisheries - June 1 through November 30.

2. Extra Work Areas

- a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where

the adjacent upland consists of cultivated or rotated cropland or other disturbed land.

- b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the conditions that will not permit a 50-foot setback and measures to ensure the waterbody is adequately protected.
- c. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing.

3. General Crossing Procedures

- a. Comply with the COE, or its delegated agency, permit terms and conditions.
- b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit.
- c. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact.
- d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings.
- e. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses.
- f. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.
- g. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1.

4. Spoil Pile Placement and Control

- a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2.
- b. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody.

5. Equipment Bridges

- a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment.
- b. Construct and maintain equipment bridges to allow unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include:
 - (1) equipment pads and culvert(s);
 - (2) equipment pads or railroad car bridges without culverts;
 - (3) clean rock fill and culvert(s); and
 - (4) flexi-float or portable bridges.

Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges.

- c. Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts.
- d. Design and maintain equipment bridges to prevent soil from entering the waterbody.
- e. Remove temporary equipment bridges as soon as practicable after permanent seeding.
- f. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.

- g. Obtain any necessary approval from the COE, or the appropriate state agency for permanent bridges.

6. Dry-Ditch Crossing Methods

- a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.

- b. Dam and Pump

- (1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.
- (2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:
 - (i) use sufficient pumps, including on-site backup pumps, to maintain downstream flows;
 - (ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);
 - (iii) screen pump intakes to minimize entrainment of fish;
 - (iv) prevent streambed scour at pump discharge; and
 - (v) continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.

- c. Flume Crossing

The flume crossing method requires implementation of the following steps:

- (1) install flume pipe after blasting (if necessary), but before any trenching;
- (2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream flow through the flume pipe (some modifications to the stream bottom may be required to achieve an effective seal);

- (3) properly align flume pipe(s) to prevent bank erosion and streambed scour;
- (4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and
- (5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.

d. Horizontal Directional Drill

For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:

- (1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;
- (2) justification that disturbed areas are limited to the minimum needed to construct the crossing;
- (3) identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;
- (4) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and
- (5) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.

The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

7. Crossings of Minor Waterbodies

Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:

- a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours.

Streambanks and unconsolidated streambeds may require additional restoration after this period;

- b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and
- c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in section V.B.5.

8. Crossings of Intermediate Waterbodies

Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions:

- a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;
- b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and
- c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5.

9. Crossings of Major Waterbodies

Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.

10. Temporary Erosion and Sediment Control

Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland.

Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings:

- a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;
- b. where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and
- c. use temporary trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody.

11. Trench Dewatering

Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.

C. RESTORATION

1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.
2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel.
3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.
4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament

mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.

5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.
6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.
7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.
8. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan.

In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody.

9. Sections V.C.3 through V.C.7 above also apply to those perennial or intermittent streams not flowing at the time of construction.

D. POST-CONSTRUCTION MAINTENANCE

1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.
2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency.
3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.

VI. WETLAND CROSSINGS

A. GENERAL

1. The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

This report shall identify:

- a. by milepost all wetlands that would be affected;
- b. the National Wetlands Inventory (NWI) classification for each wetland;
- c. the crossing length of each wetland in feet; and
- d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type.

The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.

2. Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.
3. Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.
4. Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.

5. Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum:
 - a. spoil control;
 - b. equipment bridges;
 - c. restoration of waterbody banks and wetland hydrology;
 - d. timing of the waterbody crossing;
 - e. method of crossing; and
 - f. size and location of all extra work areas.
6. Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.

B. INSTALLATION

1. Extra Work Areas and Access Roads
 - a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.
 - b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected.
 - c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats).

In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall

use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way.

- d. The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland.

2. Crossing Procedures

- a. Comply with COE, or its delegated agency, permit terms and conditions.
- b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.
- c. Use “push-pull” or “float” techniques to place the pipe in the trench where water and other site conditions allow.
- d. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.
- e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.
- f. Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal.

The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.

- g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way.
- h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are

saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.

- i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.
- j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.
- k. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.

3. Temporary Sediment Control

Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan.

- a. Install sediment barriers across the entire construction right-of-way immediately upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland.
- b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the wetland.
- c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.

4. Trench Dewatering

Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.

C. RESTORATION

1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.
2. Restore pre-construction wetland contours to maintain the original wetland hydrology.
3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.
4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency.
5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.
6. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).
7. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.
8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.

D. POST-CONSTRUCTION MAINTENANCE AND REPORTING

1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points.
2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency.
3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.
4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.
5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied:
 - a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation);
 - b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction;
 - c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and
 - d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.
6. Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.

For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a

professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.

VII. HYDROSTATIC TESTING

A. NOTIFICATION PROCEDURES AND PERMITS

1. Apply for state-issued water withdrawal permits, as required.
2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.
3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing.

B. GENERAL

1. Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands.
2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project's Spill Prevention and Response Procedures.
3. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

C. INTAKE SOURCE AND RATE

1. Screen the intake hose to minimize the potential for entrainment of fish.
2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission.
3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.
4. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.

D. DISCHARGE LOCATION, METHOD, AND RATE

1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.
2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission.

**A Paleontological Resource Survey
for the El Paso Natural Gas Line No.
1004 Relocation Project in Doña Ana
County, New Mexico**

Prepared for

Kinder Morgan Incorporated

Prepared by

SWCA Environmental Consultants

February 2014

**A PALEONTOLOGICAL RESOURCE SURVEY FOR THE EL PASO
NATURAL GAS LINE NO. 1004 RELOCATION PROJECT IN DOÑA ANA
COUNTY, NEW MEXICO**

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) was selected on behalf of El Paso Natural Gas Company (EPNG), a subsidiary of Kinder Morgan, Inc., to complete a paleontological resource survey for the relocation of a segment of Line No. 1004 in Doña Ana County, New Mexico (Figure 1 and Figure 2). The project area is located on private and Bureau of Land Management (BLM) property along New Mexico Highway 404 just east of Interstate 10. To maintain the integrity of the pipeline system, the project will require the relocation and replacement of a segment of 12-inch outside diameter (O.D.) pipe. EPNG proposes to relocate and replace approximately 1,217 feet of 12-inch O.D. pipe with approximately 1,502 feet of 12-inch O.D. pipe from Milepost 24+2273 in Section 30, Township 26 South, Range 4 East to Milepost 24+3775 in Section 25, Township 26 South, Range 3 East in Doña Ana County, New Mexico.

The pipeline relocation project crosses lands underlain by the fluvial facies of the Pliocene to early Pleistocene Camp Rice Formation, Santa Fe Group. The underlying Camp Rice Formation is covered by Holocene eolian sand (Kelley and Matheny 1983). The Camp Rice Formation is designated as having high potential (Class 4) in the Potential Fossil Yield Classification (PFYC) system, and a paleontological resource survey was required by the BLM Las Cruces District Office (LCDO). The Camp Rice Formation has produced important vertebrate fossils (e.g., Lucas et al. 1998; Lucas et al. 2000; Morgan et al. 1998).

2 METHODS

2.1 BLM AUTHORITIES AND STANDARDS

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or un-mineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. Paleontological resources include not only fossils themselves, but also the associated rocks or organic matter and the physical characteristics of the fossils' associated sedimentary matrix. Fossils are considered non-renewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced (Murphey and Daitch 2007). Fossils are important scientific and educational resources.

This paleontological assessment, consisting of a literature and records search and a field survey, was conducted at the request of the BLM (the lead agency for the project) and in accordance with their policies. Various laws, regulations, and standards govern how fossils on public lands may be collected and preserved. The BLM currently uses the Federal Land Management and Policy Act of 1976 as the legislative authority for its paleontological resource policies. Additionally, the BLM's Instructional Memorandum (IM) 2008-009 (BLM 2007), Manual H-8720-1 (1998), and IM 2009-011 (BLM 2008) provide general procedural guidelines for the management of paleontological resources. Management objectives include locating, evaluating, managing, and protecting paleontological resources, as well as ensuring that proposed land use projects do not inadvertently damage or destroy important paleontological resources.

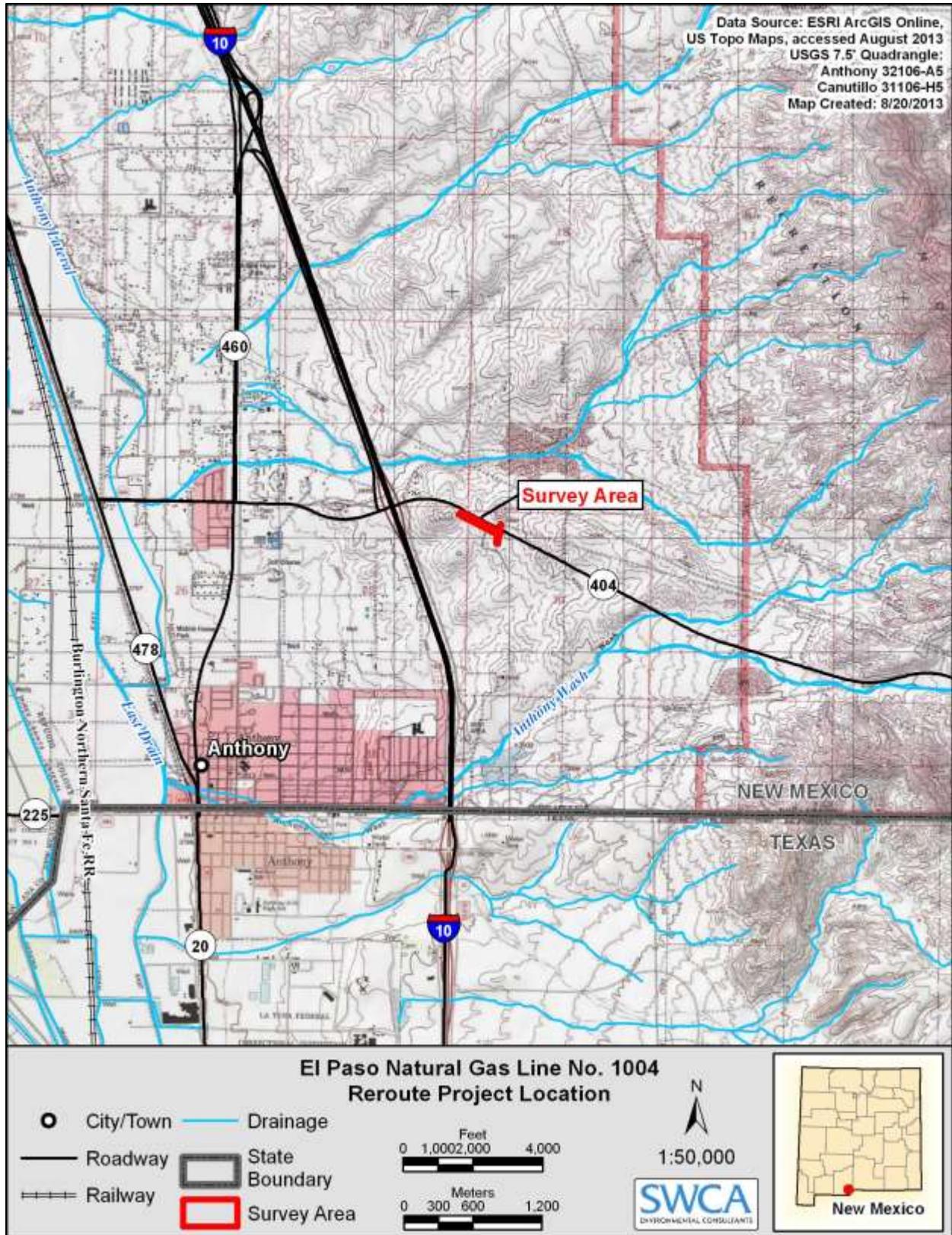


Figure 1. Project location of the EPNG Line No. 1004 reroute.

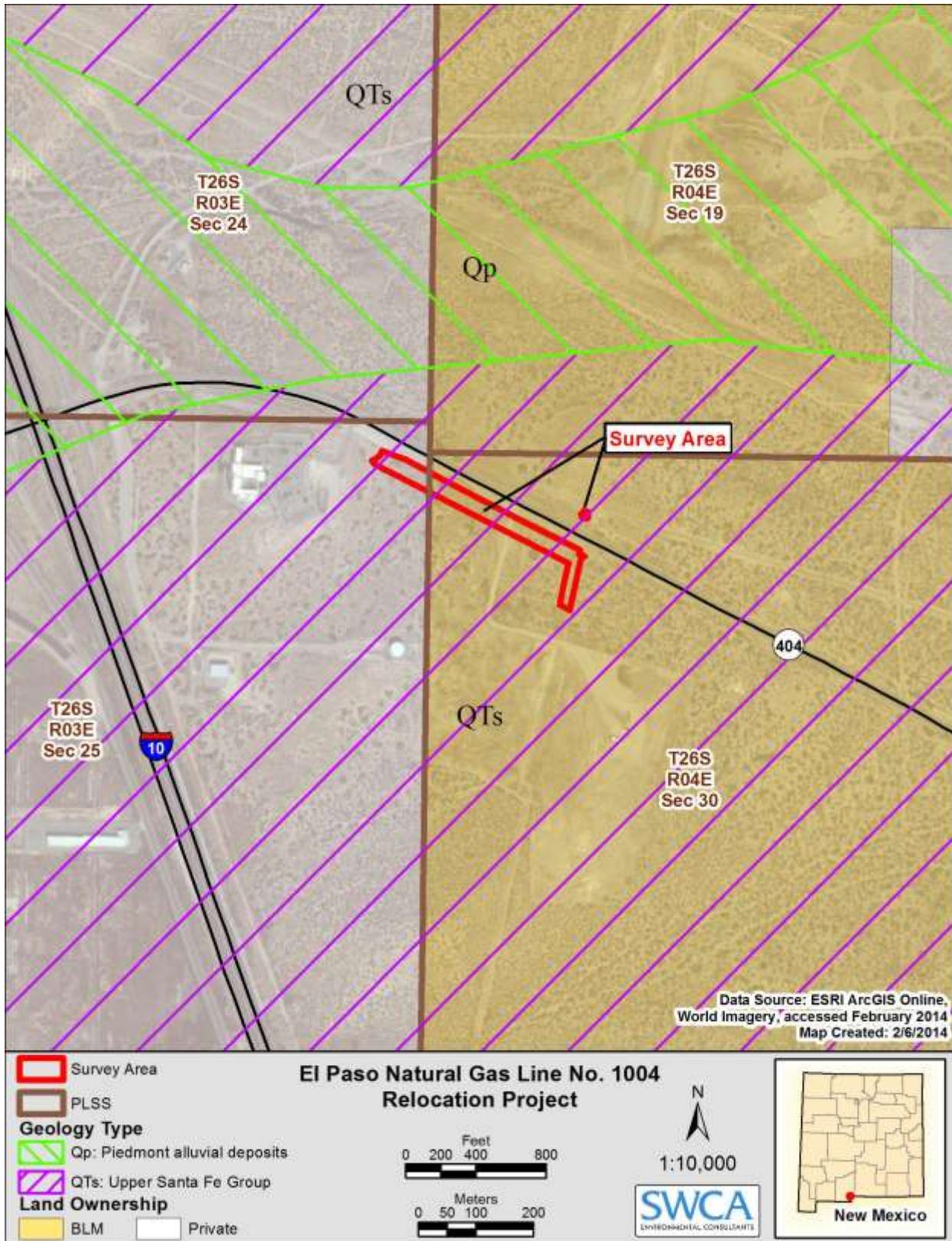


Figure 2. Aerial view of the project area for the EPNG Line No. 1004 reroute.

Implementing regulations for the Paleontological Resources Preservation Subtitle of the Omnibus Public Lands Act of 2009 (PRPA), Title VI, Subtitle D, are currently being developed. Under the PRPA, the Secretaries (of the Interior and Agriculture) shall manage and protect paleontological resources on federal land using scientific principles and expertise. The PRPA is modeled after the Archaeological Resources Protection Act and incorporates the recommendations of the May 2000 report of the Secretary of the Interior, *Assessment of Fossil Management on Federal and Indian Lands*, regarding future actions to formulate a consistent paleontological resources management framework. With the passage of the PRPA, Congress officially recognized the importance of paleontological resources on federal lands by declaring that fossils from federal lands are federal property. The PRPA essentially codifies existing policies of the BLM, National Park Service, U.S. Forest Service, Bureau of Reclamation, and U.S. Fish and Wildlife Service. The PRPA provides the following.

- Uniform definitions for *paleontological resources* and *casual collecting*.
- Uniform, minimum requirements for paleontological resource use permit issuance (terms, conditions, and qualifications of applicants).
- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands.
- Uniform requirements for curation of federal fossils in approved repositories.

According to BLM's IM 2009-011, a Significant Paleontological Resource is defined as:

Any paleontological resource that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be scientifically important because it is a rare or previously unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has identified educational or recreational value. Paleontological resources that may be considered to not have paleontological significance include those that lack provenience or context, lack physical integrity because of decay or natural erosion, or that are overly redundant or are otherwise not useful for research. Vertebrate fossil remains and traces include bone, scales, scutes, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities. (BLM 2008:1-19 to 1-20)

2.2 ANALYSIS OF EXISTING DATA

Geologic units (bedrock formations and surficial sedimentary deposits) have been assigned a Potential Fossil Yield Classification (PFYC) System ranking by the BLM CFO paleontology resource lead. These assignments were based on the taxonomic diversity and abundance of previously recorded, scientifically significant fossil occurrences from each geologic unit, and the potential for future discoveries.

Prior to the field survey, the project area was the subject of thorough background research and analysis. A records search of the BLM's New Mexico paleontological database (BLM unpublished) was conducted to 1) determine whether any previously recorded fossil localities occur in the project area, 2) assess the potential for disturbance of these localities during construction, and 3) evaluate the paleontological sensitivity in the project area.

2.3 FIELD SURVEY METHODS

The survey was designed to 1) determine the surface presence of previously unknown significant vertebrate fossils and/or noteworthy occurrences of invertebrate, plant, or trace fossils; 2) evaluate, if applicable, the condition of previously recorded paleontological localities and the potential for disturbance of these localities during construction; and 3) evaluate potential adverse impacts to subsurface paleontological resources during construction.

The paleontological assessment covered a 75-foot buffer around the proposed disturbance area. The survey area was inspected for 1) surface fossils, 2) exposures of potentially fossiliferous rock, and 3) areas in which fossiliferous rock would be exposed or otherwise impacted during construction.

2.4 DISTRIBUTION OF DATA

Copies of this report will be submitted to the BLM LCDO and EPNG, and an electronic file will be retained at SWCA's Albuquerque office and on SWCA's corporate server along with relevant field notes, maps, and other data.

3 RESULTS

3.1 LITERATURE REVIEW AND LOCALITY RECORDS SEARCH RESULTS

The project location is in the Mesilla Basin, one of many north-south-trending fault block uplifts along the Rio Grande Rift. The stratigraphically youngest basin fill in the EPNG Line 1004 reroute project area is the Camp Rice Formation of the Santa Fe Group, though outcrops do not appear at the surface. The fluvial facies of the Camp Rice Formation consists of channel sand and floodplain clay that intertongue with an eolian facies of loamy sand (Kelley and Matheny 1983). These sediments were deposited by the ancestral Rio Grande (Seager and Mack 1994; Mack et al. 1998). The fluvial facies have produced fossils of horses, mammoths, camels, glyptodonts, and turtles (Hawley et al. 1969). The nearest documented fossil locality to the project area is approximately 4.5 miles to the west (BLM unpublished). Mammal fossils place the Camp Rice Formation in the Blancan and Irvingtonian North American Land Mammal Ages (Morgan et al. 1998). These sedimentary units have been assigned Class 4 in the PFYC system (BLM 2007):

“Class 4 – High. Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Surface disturbing activities may adversely affect paleontological resources in many cases.”

“Class 4a – Unit is exposed with little or no soil or vegetative cover. Outcrop areas are extensive with exposed bedrock areas often larger than two acres. Paleontological resources may be susceptible to adverse impacts from surface disturbing actions. Illegal collecting activities may impact some areas.”

“Class 4b – These are areas underlain by geologic units with high potential but have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation due to moderating circumstances. The bedrock unit has high potential, but a protective layer of soil, thin alluvial material, or other conditions may lessen or prevent potential impacts to the bedrock resulting from the activity.

- Extensive soil or vegetative cover; bedrock exposures are limited or not expected to be impacted.
- Areas of exposed outcrop are smaller than two contiguous acres.
- Outcrops form cliffs of sufficient height and slope so that impacts are minimized by topographic conditions.
- Other characteristics are present that lower the vulnerability of both known and unidentified paleontological resources.”

3.2 PALEONTOLOGICAL SURVEY RESULTS

On January 26, 2014, SWCA paleontologist John Burris conducted a pedestrian survey of a 1,502-foot long, 150-foot wide corridor for proposed EPNG Line 1004 pipeline relocation.

In this area, the Camp Rice Formation is covered by at least 3 to 15 feet of Holocene eolian sands that form coppice dune (dunes stabilized by vegetation) and thin veneers of unconsolidated sand (Kelley and Matheny 1983) (Photograph 1 and Photograph 2). Therefore, this area falls within the definition for PFYC Class 4b, as opposed to Class 4a as described above (see Section 3.1), and the surface deposits have a lower sensitivity than the subsurface bedrock. Holocene-age deposits are too young to contain fossils. Gravel-sized pieces of medium-grained lithic sandstone, micritic limestone, chert, andesite, and granite are concentrated as lag deposits on the surface of the sand in the troughs of the dunes (Photograph 3). Trash is abundant on the surface of the dunes. In addition, portions of the EPNG Line 1004 reroute project area has already been disturbed, as an underground pipeline and access road currently exist in the project area (Photograph 4).

No fossils were found along the proposed EPNG Line 1004 pipeline relocation.



Photograph 1. Holocene eolian sands with current ripple marks in the EPNG Line 1004 reroute project area.



Photograph 2. Holocene coppice sand dune in the EPNG Line 1004 reroute project area, facing east.



Photograph 3. Gravel-sized limestone lag deposit concentrated on surface of sand in trough of sand dune.



Photograph 4. Existing disturbance in the form of an access road and underground pipeline in EPNG Line 1004 reroute project area, facing north.

4 RECOMENDATIONS

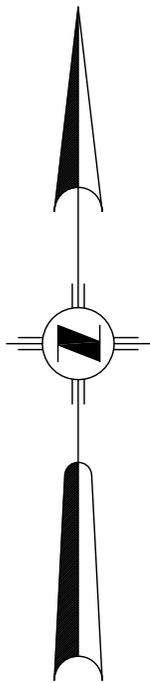
Because the highly paleontologically sensitive Camp Rice Formation is covered by at least 3 to 15 feet of Holocene eolian sands and no known fossil localities exist within the vicinity, immediate surface and subsurface clearance is recommended.

If during construction activities fossils are uncovered, they should be left in place untouched and disturbance in a 50-foot radius of the discovery should halt until a BLM-permitted paleontologist can access the discovery and make further recommendations. The operator may then be allowed to continue activities without mitigation or will be given the choice of either 1) following the BLM-permitted paleontologist's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or 2) following the BLM-permitted paleontologist's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area, which may include halting excavation in the vicinity until the fossil(s) can be safely collected by a BLM-permitted paleontologist.

5 REFERENCES

- Bureau of Land Management (BLM), 1998 (revised), Paleontology Resources Management Manual and Handbook. H-8270-1.
- , 2007, Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands. Instruction Memorandum No. 2008-009.
- , 2008, Assessment and Mitigation of Potential Impacts to Paleontological Resources. Instruction Memorandum No. 2009-011.
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- Lucas S. G., Morgan, G. S., and Mack, G. H., 1998, Early Pleistocene (Early Irvingtonian) Co-occurrence of the Proboscideans *Cuvieronius*, *Stegomastodon*, and *Mammuthus* at Tortugas Mountain, Doña Ana County, New Mexico. New Mexico Geological Society Guidebook, 49th Field Conference, Las Cruces Country II, p.34.
- Lucas, S. G., Morgan, G. S., and Estep, J. W., 2000, Biochronological Significance of the Co-occurrence of the Proboscideans *Cuvieronius*, *Stegomastodon*, and *Mammuthus* in the Lower Pleistocene of Southern New Mexico. New Mexico's Fossil Record 2, S. G. Lucas, ed., New Mexico Museum of Natural History and Science Bulletin 16, pp. 209–216.
- Mack, G. H., Kottowski, F. E., and Seager, W. R., 1998, The Stratigraphy of South-Central New Mexico. New Mexico Geological Society Guidebook, 49th Field Conference, Las Cruces Country II, pp. 135–154.
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- Murphey, P.C., and Daitch, D., 2007, Paleontological overview of oil shale and tar sands areas in Colorado, Utah and Wyoming. Prepared for the U.S. Department of Interior Bureau of Land Management. U.S. Department of Energy, Argonne National Laboratory.
- Seager, W. R., and Mack, G. H., 1994, Geology of east Potrillo Mountains and vicinity, Doña Ana County, New Mexico. New Mexico Bureau of Mines & Mineral Resources Bulletin 113, 27 p.

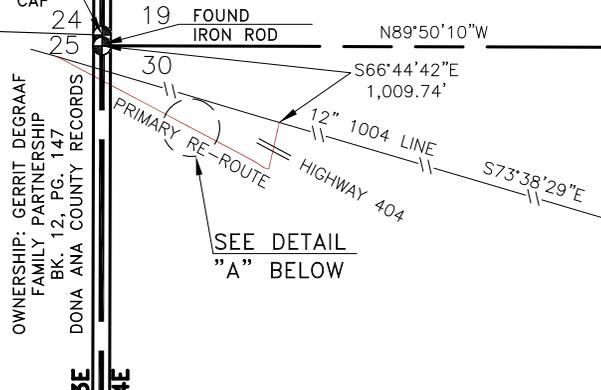
SECTIONS 30 & 25, TOWNSHIP 26-S, RANGE 4-E & 3-E, DONA ANA COUNTY, NEW MEXICO



SECTIONS 25 & 30
BASIS OF BEARING: G.P.S. OBSERVATIONS
UTM ZONE 13 NAD 83
SEC. 25 & 30, T.W.S. 26S, RNG. 3E & 4E

FOUND BRASS CAP
OWNERSHIP: GERRIT DEGRAAF FAMILY PARTNERSHIP
BK. 12, PG. 147
DONA ANA COUNTY RECORDS

RANGE 3E
RANGE 4E



CALCULATED CORNER	
19	20
30	29

SCALE: 1" = 1000'

LEGEND

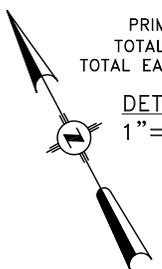
- FOUND SECTION CORNER
- CALCULATED CORNER

LEGEND

- PRIMARY RE-ROUTE
- PERMANENT EASEMENT
- NEW EASEMENT
- FENCE
- POINT OF COMMENCEMENT P.O.C.
- BEGINNING OF LINE B.O.L.
- END OF LINE E.O.L.

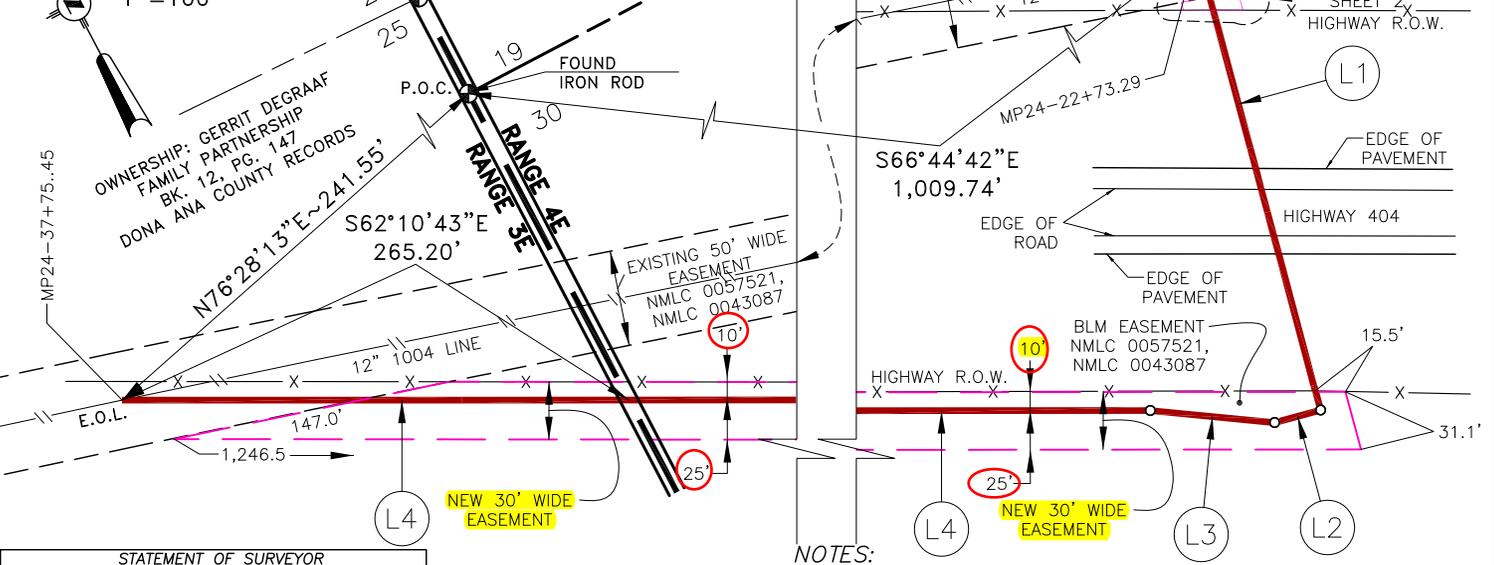
LINE	BEARING	DISTANCE
1	S 12°43'25" W	248.43'
2	N 77°17'01" W	24.93'
3	N 56°40'08" W	65.36'
4	N 62°10'26" W	1163.44'

25	30	30	29
26	31	31	32



PRIMARY RE-ROUTE
TOTAL FEET: 1,502.16'
TOTAL EASEMENT: 1.61 ACRES

DETAIL "A"
1"=100'



STATEMENT OF SURVEYOR

I, V. Lynn Bezner, a Registered Land Surveyor in the State of New Mexico, state that the survey of said work was made under my supervision, and that the monuments shown hereon are described correctly.

V. Lynn Bezner LS 7920

NOTES:

- 1.) The accompanying plat does not constitute a boundary survey.
- 2.) Easement centerline may not represent location of pipeline.
- 3.) Title research provided by El Paso Corporation Land Department.
- 4.) Basis of bearings - Derived from GPS observations established by OPUS solutions.
- 5.) Coordinates shown are relative to UTM Zone 13 North, US Survey Feet. All distances shown are ground distances.
- 6.) Combined surface adjustment factor: 1.0003175471

SURVEYED AND PREPARED BY:



Division:	TUCSON	Op. Area:	DEMING
State:	NEW MEXICO	Co./Par.:	DONA ANA
Section:	30 & 25	Township:	26S
		Range:	4E & 3E
Dft:	RR	Date:	6/25/13
		Project ID:	PENDING
Chk:		Date:	
		Scale:	
Appr:		Date:	
		Filename:	01004.01-X-018.DWG

NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					

30' EASEMENT PLAT
NEW MEXICO HIGHWAY 404 RE-ROUTE
1004 LINE-FROM CALIFORNIA LINES
TO DOUGLAS TAKE-OFF

El Paso
Natural Gas Company
a Kinder Morgan company

1004.1-X-18	Sheet: 1 of 2	Rev. 0
	Type: ACAD	

DONA ANA COUNTY, NEW MEXICO

NEW 30 FOOT WIDE EASEMENT DESCRIPTION

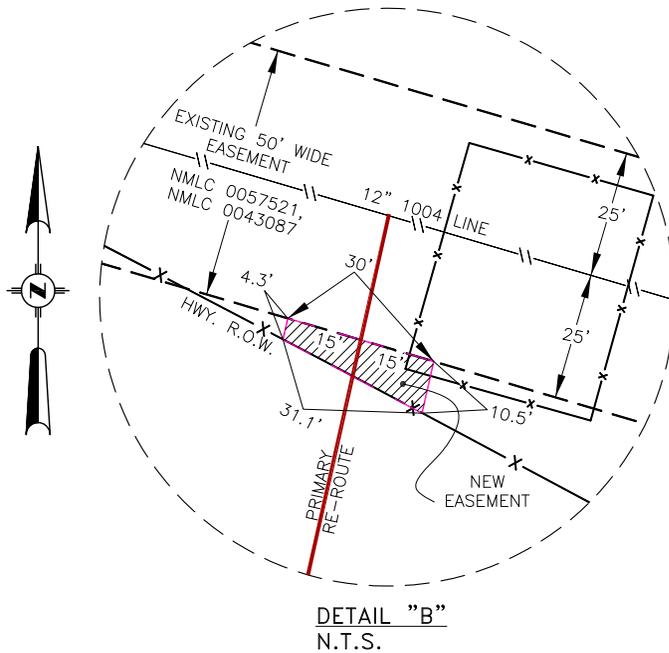
JUNE 25, 2013
SHEET 2 OF 2

A NEW EASEMENT 30 FEET IN WIDTH OF A SURVEYED RE-ROUTE LINE, IN THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUADRANT OF SECTION 30, TOWNSHIP 26 SOUTH, RANGE 4 EAST, DONA ANA COUNTY, NEW MEXICO AND THE NORTHEAST QUARTER OF THE NORTHEAST QUADRANT OF SECTION 25 TOWNSHIP 26 SOUTH, RANGE 3 EAST, DONA ANA COUNTY, NEW MEXICO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 30, COMMON CORNER OF THE NORTHEAST CORNER OF SAID SECTION 25, SAID POINT BEING A FOUND IRON ROD, THENCE S 66°44'42" E, A DISTANCE OF 1,009.74 FEET THE **BEGINNING OF LINE**;

THENCE; S 12°43'25" W, A DISTANCE OF 248.43 FEET, (L1)
THENCE; N 77°17'01" W, A DISTANCE OF 24.93 FEET, (L2)
THENCE N 56°40'08" W, A DISTANCE OF 65.36 FEET, (L3)
THENCE N 62°10'26" W, A DISTANCE OF 1,163.44 FEET TO THE **END OF LINE** (L4)
THENCE N 76°28'13" E, A DISTANCE OF 241.55 FEET,
 BACK TO THE **POINT OF COMMENCEMENT**

THE ABOVE SURVEYED RE-ROUTE LINE CONTAINING A TOTAL DISTANCE OF 1,502.16 FEET.



STATEMENT OF SURVEYOR

I, V. Lynn Bezner, a Registered Land Surveyor in the State of New Mexico, state that the survey of said work was made under my supervision, and that the monuments shown hereon are described correctly.

SURVEYED AND PREPARED BY:

V. Lynn Bezner LS 7920

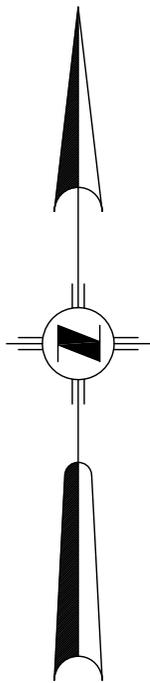
TOPOGRAPHIC

SURVEYING • MAPPING • GIS • GPS
1510 N. ZARAGOZA ROAD, SUITE A-12, EL PASO, TX. 79936, PH. (915)772-4500

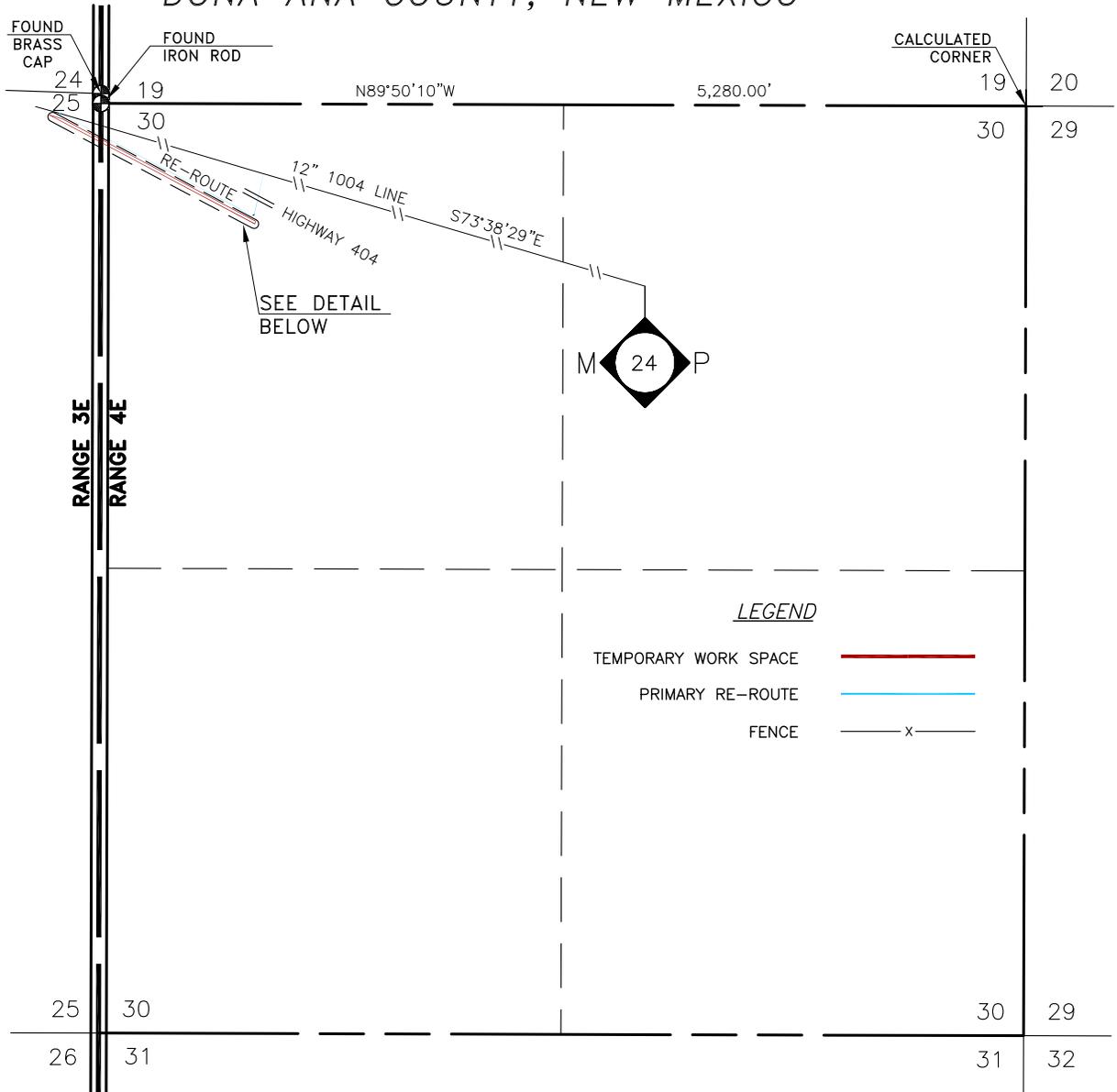
NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					
			30' EASEMENT PLAT NEW MEXICO HIGHWAY 404 RE-ROUTE 1004 LINE-FROM CALIFORNIA LINES TO DOUGLAS TAKE-OFF		
			El Paso Natural Gas Company <small>a Kinder Morgan company</small>		
			1004.1-X-18.1	Sheet: 2 of 2 Type: ACAD	Rev. 0

Division: TUCSON		Op. Area: DEMING	
State: NEW MEXICO		Co./Par.: DONA ANA	
Section: 30 & 25	Township: 26S	Range: 4E & 3E	
Dft: RR	Date: 6/25/13	Project ID: PENDING	
Chk:	Date:	Scale:	
Appr:	Date:	Filename: 01004.01-X-018.1.DWG	

SECTIONS 30, TOWNSHIP 26-S, RANGE 4-E,
DONA ANA COUNTY, NEW MEXICO



SECTION 30
BASIS OF BEARING: G.P.S. OBSERVATIONS
UTM ZONE 13 NAD 83
SEC. 30, T.W.S. 26S, RNG. 4E



LEGEND

- TEMPORARY WORK SPACE —
- PRIMARY RE-ROUTE —
- FENCE x

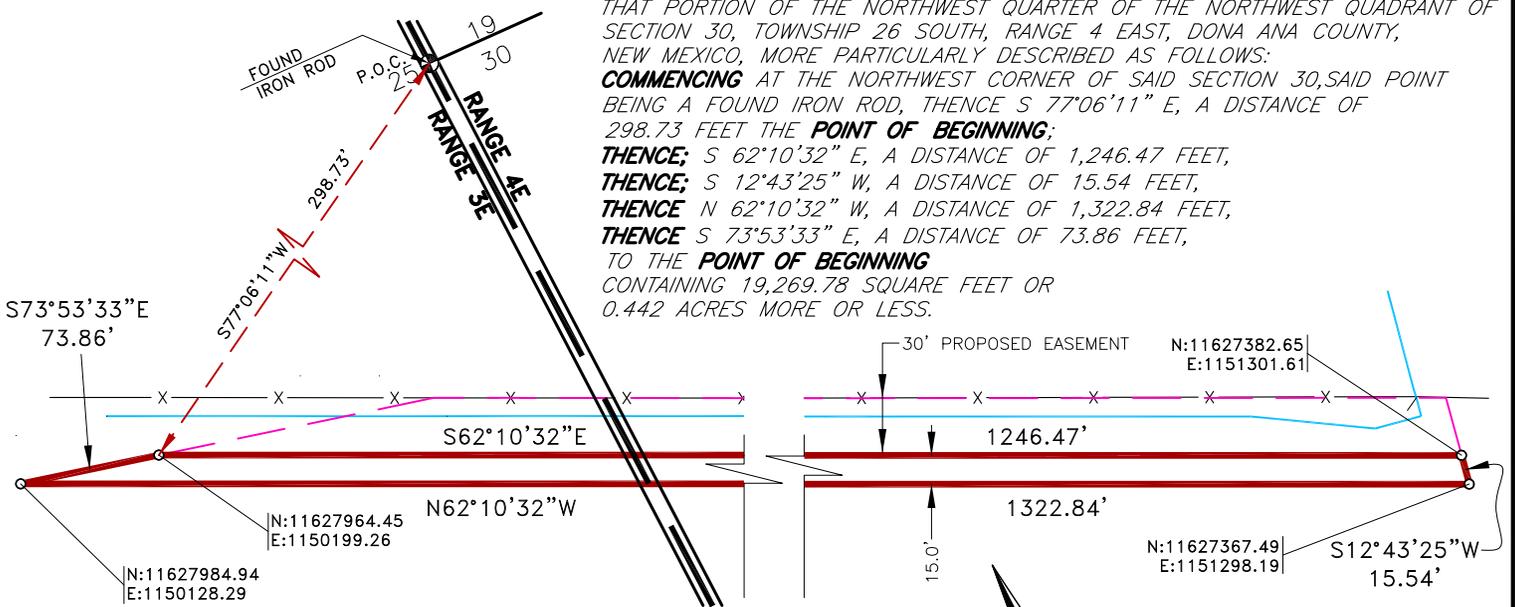
LEGEND

- FOUND SECTION CORNER
- CALCULATED CORNER

T.W.S. DESCRIPTION

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUADRANT OF SECTION 30, TOWNSHIP 26 SOUTH, RANGE 4 EAST, DONA ANA COUNTY, NEW MEXICO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 30, SAID POINT BEING A FOUND IRON ROD, **THENCE** S 77°06'11" E, A DISTANCE OF 298.73 FEET **THE POINT OF BEGINNING**;
THENCE; S 62°10'32" E, A DISTANCE OF 1,246.47 FEET,
THENCE; S 12°43'25" W, A DISTANCE OF 15.54 FEET,
THENCE N 62°10'32" W, A DISTANCE OF 1,322.84 FEET,
THENCE S 73°53'33" E, A DISTANCE OF 73.86 FEET,
TO THE POINT OF BEGINNING
 CONTAINING 19,269.78 SQUARE FEET OR 0.442 ACRES MORE OR LESS.



NOTES:

- 1.) The accompanying plat does not constitute a boundary survey.
- 2.) Easement centerline may not represent location of pipeline.
- 3.) Title research provided by **El Paso Corporation** Land Department.
- 4.) Basis of bearings - Derived from GPS observations established by OPUS solutions.
- 5.) Coordinates shown are relative to UTM Zone 13 North, US Survey Feet. All distances shown are ground distances.
- 6.) Combined surface adjustment factor: 1.0003175471

TEMPORARY WORK SPACE
19,269.78 SQ. FT.
0.442 ACRES

DETAIL
1"=100'

SURVEYED AND PREPARED BY:

TOPOGRAPHIC

SURVEYING • MAPPING • GIS • GPS
2225 PERRYTON PARKWAY, PAMPA, TX. 79065, PH. (800)658-6382

NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					

Division:	TUCSON	Op. Area:	DEMING
State:	NEW MEXICO	Co./Par.:	DONA ANA
Section:	30	Township:	26S
		Range:	4E
Dft:	RR	Date:	6/25/13
		Project ID:	PENDING
Chk:		Date:	
		Scale:	
Appr:		Date:	
		Filename:	01004.01-X-019.DWG

15' TEMPORARY WORK SPACE PLAT
NEW MEXICO HIGHWAY 404 RE-ROUTE
1004 LINE-FROM CALIFORNIA LINES
TO DOUGLAS TAKE-OFF



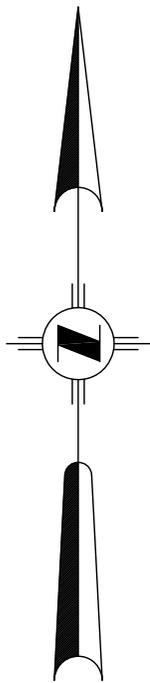
El Paso
Natural Gas Company
a Kinder Morgan company

1004.1-X-19

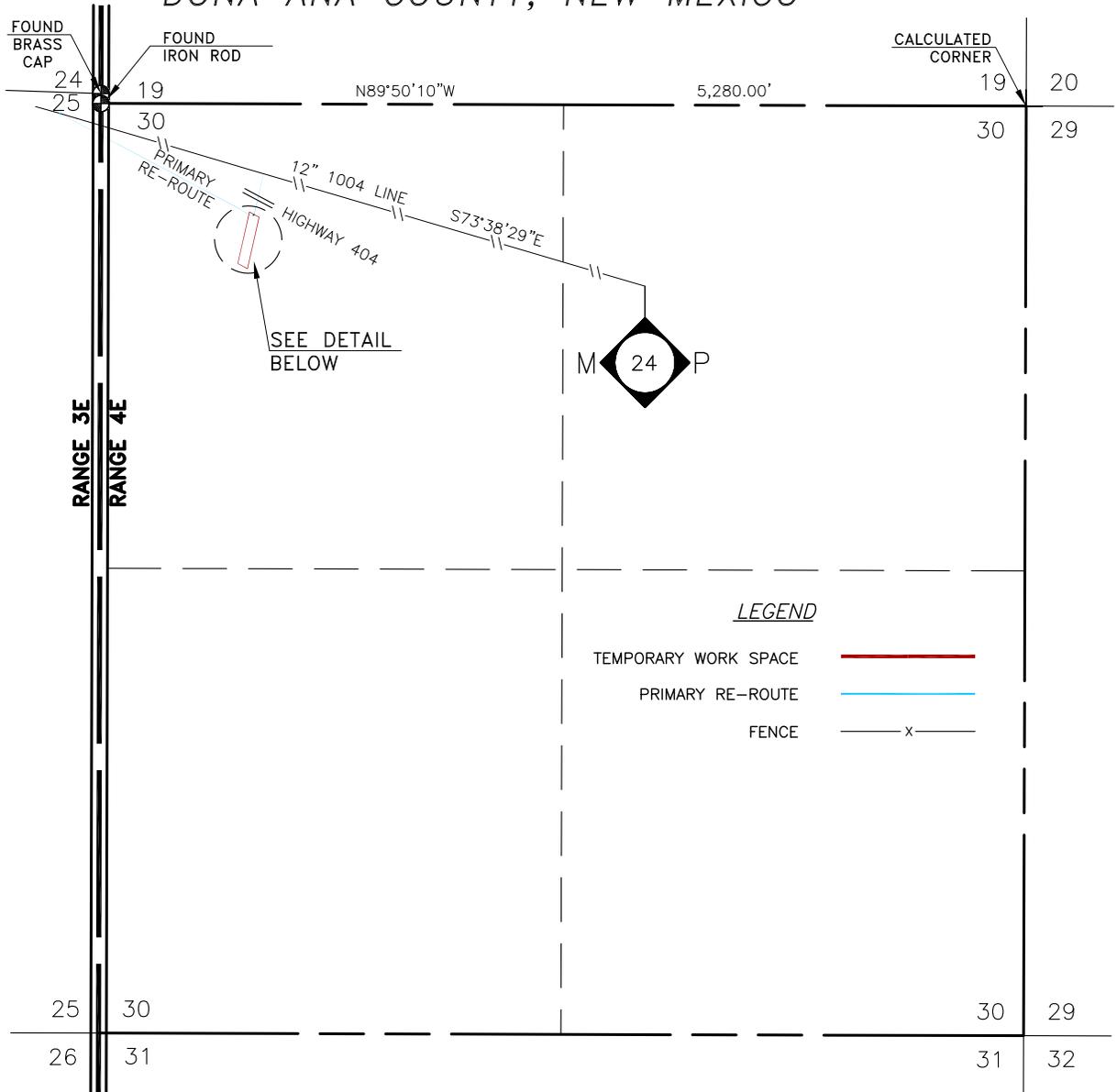
Sheet: 1 of 1
Type: ACAD

Rev.
0

SECTIONS 30, TOWNSHIP 26-S, RANGE 4-E, DONA ANA COUNTY, NEW MEXICO



SECTION 30
BASIS OF BEARING: G.P.S. OBSERVATIONS
UTM ZONE 13 NAD 83
SEC. 30, T.W.S. 26S, RNG. 4E



SCALE: 1" = 1000'
0 500' 1000'

LEGEND

- FOUND SECTION CORNER
- CALCULATED CORNER

LEGEND

- TEMPORARY WORK SPACE
- PRIMARY RE-ROUTE
- FENCE

T.W.S. DESCRIPTION

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUADRANT OF SECTION 30, TOWNSHIP 26 SOUTH, RANGE 4 EAST, DONA ANA COUNTY, NEW MEXICO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 30, SAID POINT BEING A FOUND IRON ROD, THENCE S 53°58'07" E, A DISTANCE OF 1,048.27 FEET THE **POINT OF BEGINNING**;

- THENCE**; S 61°37'21" E, A DISTANCE OF 62.31 FEET,
- THENCE**; S 12°43'25" W, A DISTANCE OF 300.00 FEET,
- THENCE** N 61°37'21" W, A DISTANCE OF 62.31 FEET,
- THENCE** N 12°43'25" E, A DISTANCE OF 300.00 FEET,

CONTAINING 18,000.00 SQUARE FEET OR 0.413 ACRES MORE OR LESS.

NOTES:

- 1.) The accompanying plat does not constitute a boundary survey.
- 2.) Easement centerline may not represent location of pipeline.
- 3.) Title research provided by El Paso Corporation Land Department.
- 4.) Basis of bearings – Derived from GPS observations established by OPUS solutions.
- 5.) Coordinates shown are relative to UTM Zone 13 North, US Survey Feet. All distances shown are ground distances.
- 6.) Combined surface adjustment factor: 1.0003175471

SURVEYED AND PREPARED BY:

TOPOGRAPHIC
SURVEYING • MAPPING • GIS • GPS

2225 PERRYTON PARKWAY, PAMPA, TX. 79065, PH. (800)658-6382

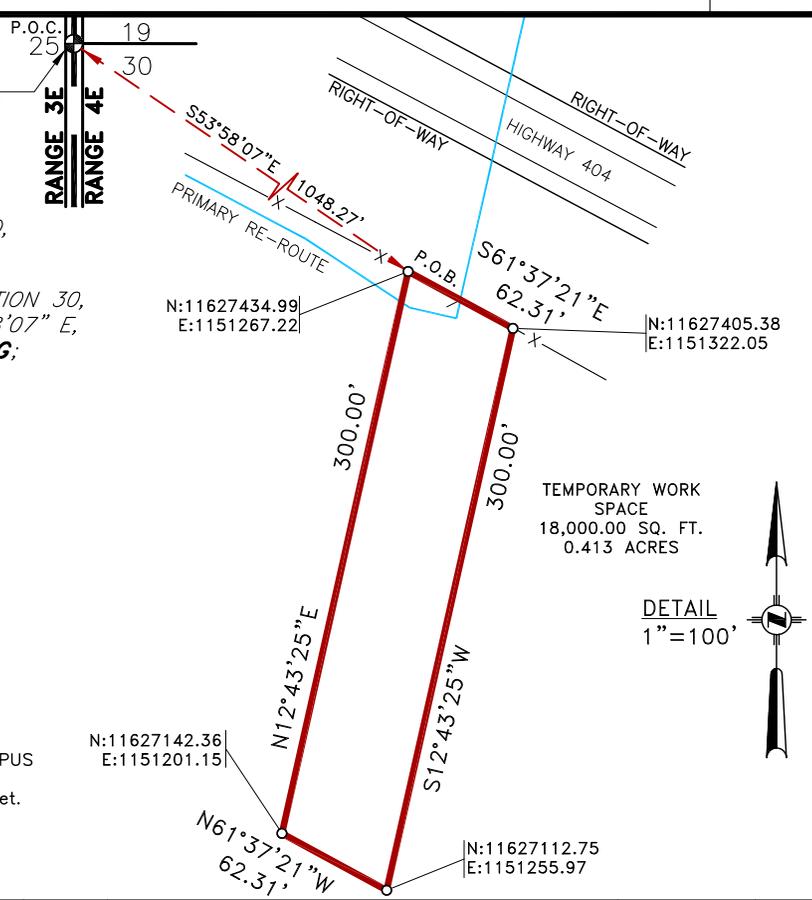
Division: TUCSON		Op. Area: DEMING	
State: NEW MEXICO		Co./Par.: DONA ANA	
Section: 30	Township: 26S	Range: 4E	
Dft: RR	Date: 6/25/13	Project ID: PENDING	
Chk:	Date:	Scale:	
Appr:	Date:	Filename: 01004.01-X-020.DWG	

NO.	DATE	BY	DESCRIPTION	PROJ. ID	APPR.
REVISIONS					

60'x300' TEMPORARY WORK SPACE PLAT
NEW MEXICO HIGHWAY 404 RE-ROUTE
1004 LINE-FROM CALIFORNIA LINES
TO DOUGLAS TAKE-OFF

El Paso
Natural Gas Company
a Kinder Morgan company

1004.1-X-20	Sheet: 1 of 1	Rev. 0
	Type: ACAD	



DETAIL
1" = 100'

