3.0 Affected Environment

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3.1 Air Quality

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3.1.1 Regional Climate

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Air quality in a given location is defined by pollutant concentrations in the atmosphere and is generally expressed in units of parts per million (ppm) or micrograms per cubic meter (μg/m^3). The existing air quality in the proposed development area is in attainment of the NAAQS ***(which are established by the USEPA to protect public health and the environment)*** and State AAQS (SAAQS) or has insufficient data to establish ***attainment status***. Representative ambient background levels of pollutants measured in Uintah and Salt Lake counties in Utah, and Sweetwater County, Wyoming, are shown in **Table 3.1-2**. Data for this table were obtained from the ***USEPA Air Quality System (AQS)*** data archives website. The carbon monoxide (CO) data from Salt Lake County are not representative of the area, but were used to provide a conservative estimate of background levels for estimating impacts on the NAAQS for CO.

Table 3.1-2 Ambient Air Quality Background Values

Pollutant	Averaging Period	Ranking[1]	Year	Concentration (μg/m^3)	County	State
NO_2	***1-hour***	***98th Percentile***	***2010***	***69.6[2]***	***Uintah***	***Utah***
		98th Percentile	***2010***	***58.3[3]***	***Uintah***	***Utah***
	Annual	H	***2010***	***8.0[2]***	***Uintah***	***Utah***
		H	***2010***	***7.2[3]***	***Uintah***	***Utah***
CO	1-hour	H2H	2004	6,210	Salt Lake	Utah
		H2H	2005	6,325	Salt Lake	Utah
		H2H	2006	6,325	Salt Lake	Utah
	8-hour	H2H	2004	3,680	Salt Lake	Utah
		H2H	2005	3,910	Salt Lake	Utah
		H2H	2006	3,450	Salt Lake	Utah
SO_2[4]	***1-hour***	***99th Percentile***	***2007***	***21.7***	***Sweetwater***	***Wyoming***
		99th Percentile	***2008***	***19.7***	***Sweetwater***	***Wyoming***
		99th Percentile	***2009***	***19.0***	***Sweetwater***	***Wyoming***
	3-hour	H2H	***2007***	***16.0***	Sweetwater	Wyoming
		H2H	***2008***	***16.7***	***Sweetwater***	***Wyoming***
		H2H	***2009***	***10.1***	Sweetwater	Wyoming
	24-hour	H2H	***2007***	***5.9***	Sweetwater	Wyoming
		H2H	***2008***	***5.6***	***Sweetwater***	***Wyoming***
		H2H	***2009***	***3.9***	Sweetwater	Wyoming
	Annual	H	***2007***	***1.5***	Sweetwater	Wyoming
		H	***2008***	***1.5***	***Sweetwater***	***Wyoming***
		H	***2009***	***0.8***	Sweetwater	Wyoming
Particulate matter (PM) with an aerodynamic diameter of 10 microns or less (PM_{10})	24-hour	H2H	2004	14.0	Uintah	Utah
		H2H	2005	18.0	Uintah	Utah
		H2H	2006	16.0	Uintah	Utah
	Annual	H	2004	5.0	Uintah	Utah
		H	2005	7.0	Uintah	Utah
		H	2006	7.0	Uintah	Utah
PM with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$)	24-hour	98th percentile	***2010***	***16***.0	***Uintah***	Utah
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[1] H = Highest value recorded; H2H = High Second High (second highest value from the highest receptor site); H4H = High Fourth High (fourth highest value from the highest receptor site).
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[5] Ozone is measured in parts per billion (ppb).

Figure 3.1-2 shows the maximum daily 8-hour average ozone concentrations recorded at the Ouray and Redwash monitoring stations from July 30, 2009, to August 31, 2010. These data show winter ozone levels above 75 ppb NAAQS; however, summer 8-hour daily maximum values do not exceed 75 ppb. This winter ozone pattern is similar to ozone monitoring observations made in other oil and gas fields including the Upper Green River Basin and Jonah-Pinedale Anticline (Schnell et al. 2009). The current scientific consensus is that the photochemical processes that form tropospheric ozone in the presence of NO_2 and free radical volatile organics are heightened by increased concentrations of ozone precursors from the stagnant winter atmospheric conditions and increased solar radiation reflected from the winter snow cover (Schnell et al. 2009). However, this is an area of ongoing scientific research.

3.1.3 Regulatory Framework

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3.1.3.1 National Ambient Air Quality Standards

The Federal ***Clean Air Act (***CAA***)*** require***s*** all states to control air pollution emission sources so that NAAQS are met and maintained. In addition to these requirements, the National Park Service (NPS) Organic Act requires the NPS to protect the natural resources of the lands it manages from the adverse effects of air pollution.

The NAAQS establishes maximum acceptable concentrations for oxides of nitrogen (NO_2/NO_X), CO, SO_2, PM_{10}, $PM_{2.5}$, ozone, and lead. Given the extremely low levels of lead emissions from project sources, the lead standards are not addressed in this analysis. These pollutants are known as criteria pollutants. The NAAQS are established by the USEPA and are outlined in 40 ***Code of Federal Regulations (***CFR***)*** 50. These standards represent the maximum allowable atmospheric concentrations that may occur without jeopardizing public health and welfare, and include a reasonable margin of safety to protect the more sensitive individuals in the population. The NAAQS represent maximum acceptable concentrations that generally may not be exceeded more than once per year; the annual standards may never be exceeded. An area that does not meet the NAAQS is designated as a nonattainment area on a pollutant-by-pollutant basis.

The USEPA established a 1-hour NO_2 NAAQS of 100 ppb (188 $\mu g/m^3$) on January 22, 2010 (75 Federal Register [FR] 6474-65370, February 9, 2010), supplementing the existing annual NO_2 NAAQS. Further, the USEPA established a 1-hour SO_2 NAAQS of 75 ppb (197 $\mu g/m^3$) on June 2, 2010 (FR 35520-35603, June 22, 2010). At the same time, USEPA revoked the existing 24-hour and annual primary SO_2 standards. The NO_2 and SO_2 standards became effective on April 12 and August 23, 2010, respectively. Compliance with the standard is attained for 1-hour NO_2 when the 3-year average of the 98th percentile of the annual distribution of daily maximum 1-hour concentrations does not exceed the standard within an area. For 1-hour SO_2, the standard is attained when the 3-year average of the 99th percentile

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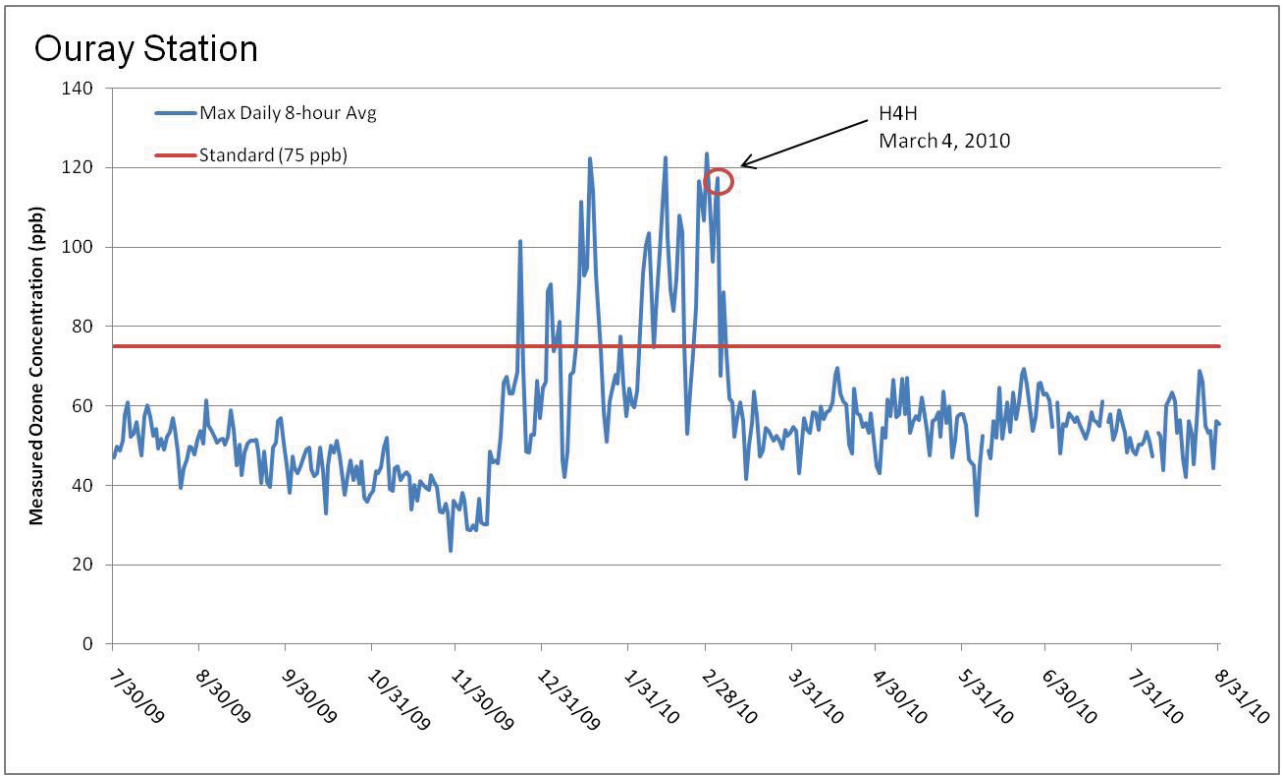

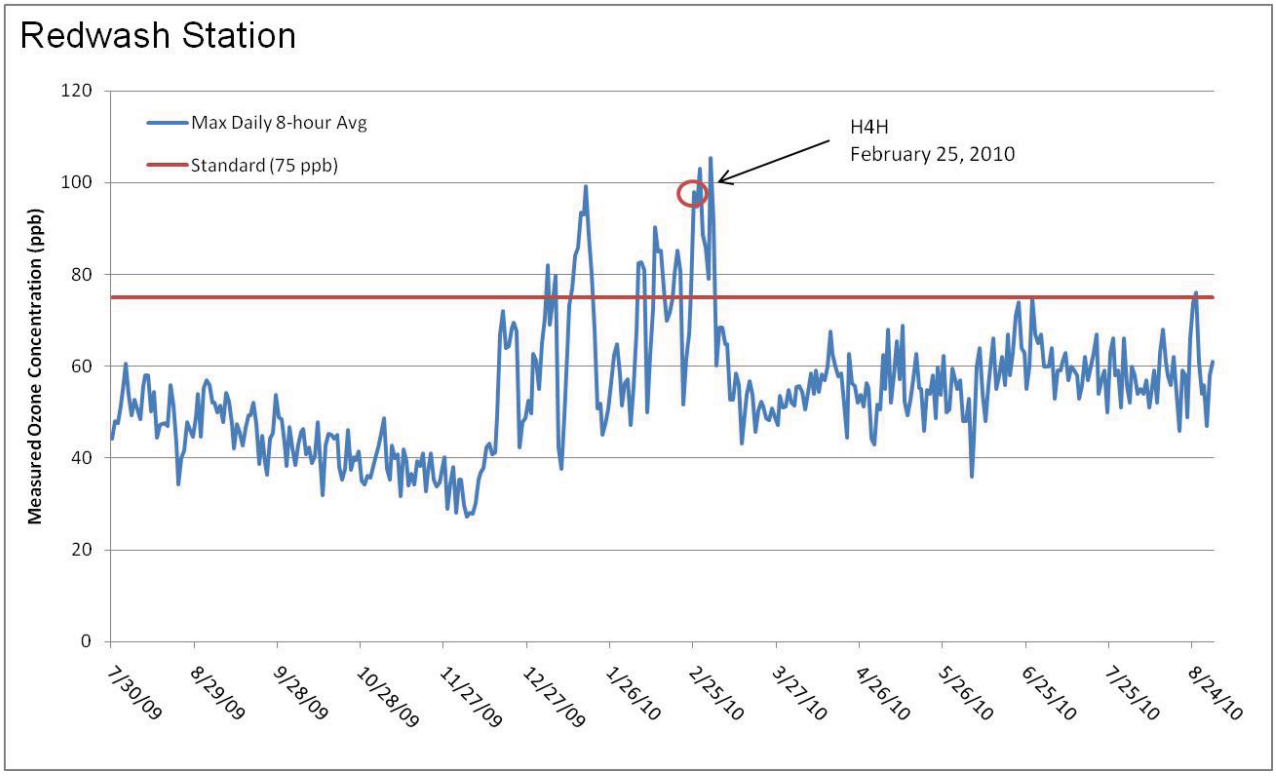

Figure 3.1-2 Ouray and Redwash Ozone Monitoring Data

3.9 Soils

This section is included in the Draft EIS and is not being amended in this supplement.

3.10 Transportation and Access

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3.11 Vegetation Resources

This section is included in the Draft EIS and is not being amended in this supplement.

3.12 Visual Resources

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3.13 Water Resources

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3.14 Wilderness Characteristics

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3.15 Wildlife and Fisheries Resources

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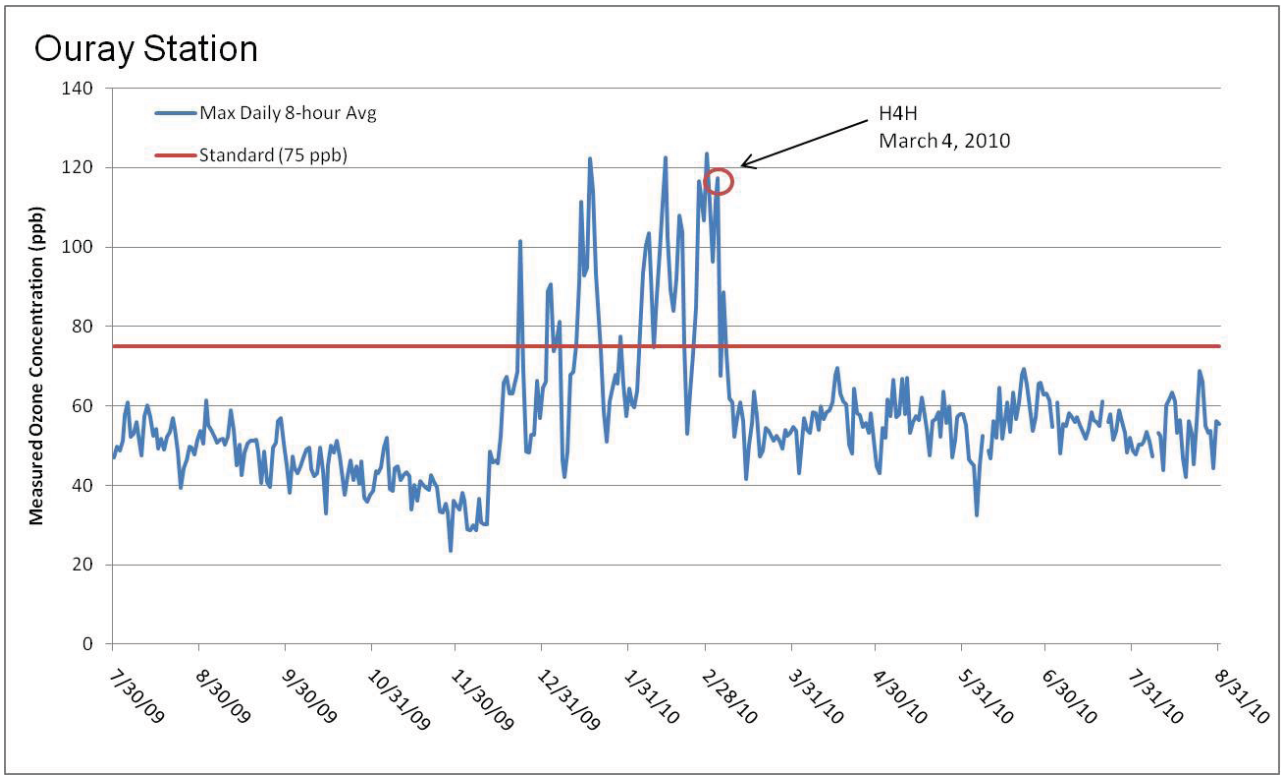

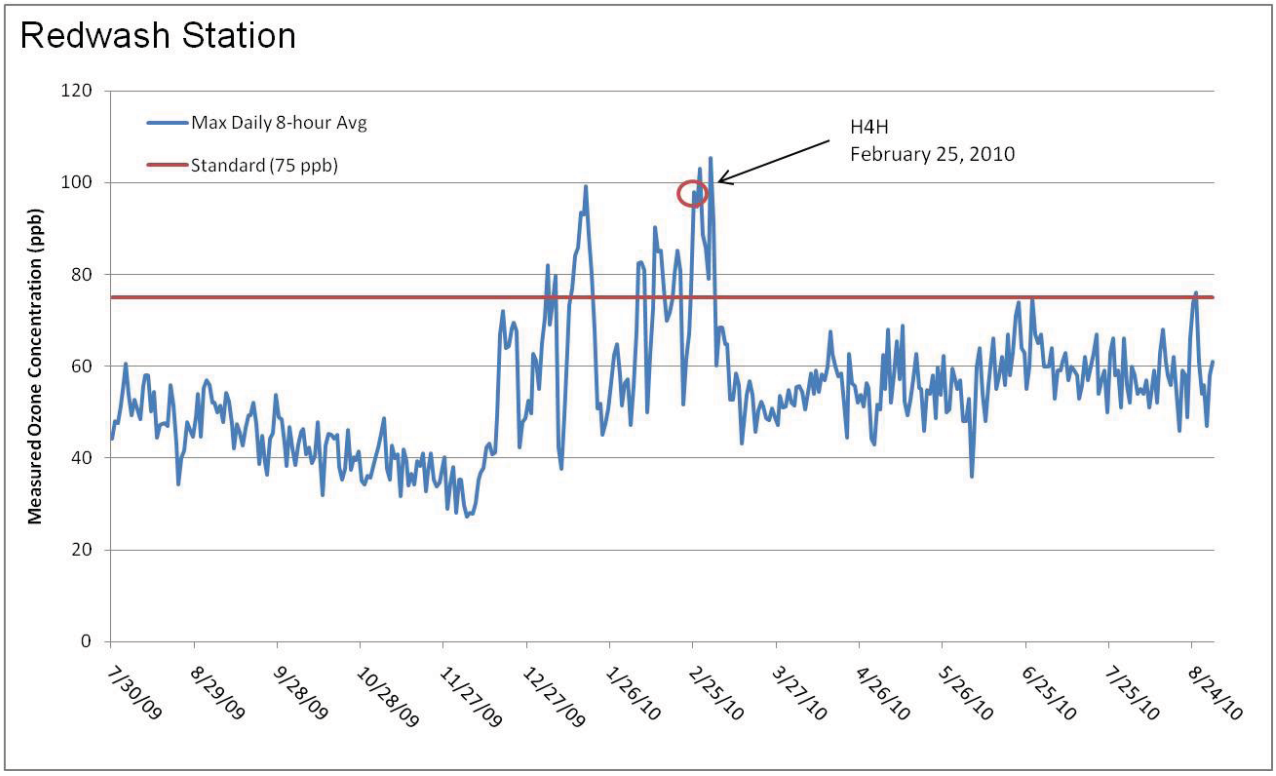

Figure 3.1-2 Ouray and Redwash Ozone Monitoring Data

of the annual distribution of daily maximum 1-hour concentrations does not exceed the standard within an area. Applicable state and federal criteria are presented in Table 3.1-3.

Table 3.1-3 *Applicable* Ambient Air Quality Standards

Pollutant	Averaging Period	Ambient Air Quality Standards[1]			
		National	Wyoming	Utah	Colorado
NO_2 (µg/m^3)	***1-hour[2]***	***188***	***--[3]***	***188***	***--[3]***
	Annual[4]	100	100	100	100
CO (µg/m^3)	1-hour[5]	40,000	40,000	40,000	40,000
	8-hour[5]	10,000	10,000	10,000	10,000
SO_2 (µg/m^3)	***1-hour[6]***	***197***	***--[3]***	***197***	***--[3]***
	3-hour[5,7]	1,300	1,300	1,300	1,300
	24-hour[5,7]	***--[8]***	260	365	365
	Annual[4]	***--[8]***	60	80	80
PM_{10} (µg/m^3)	24-hour[9]	150	150	150	150
	Annual[4]	--[10]	50	50	50
$PM_{2.5}$ (µg/m^3)	24-hour[11]	35	35	35	35
	Annual[12]	15	15	15	15
Ozone (pp***b***)	8-hour[13]	***75***	***75***	***75***	***75***

[1] Sources: USEPA 2009, Wyoming Department of Environmental Quality (WDEQ) 2008, and Colorado Department of Public Health and Environment 2007.
[2] Three-year average of the 98th percentile of the daily maximum 1-hour average.
[3] No state standard has been incorporated into the State Implementation Plan.
[4] Never to be exceeded.
[5] Not to be exceeded more than once per year.
[6] Three-year average of the 99th percentile of daily maximum 1-hour average.
[7] Secondary standard only.
[8] The 24-hour and annual SO_2 NAAQS have been revoked and replaced with the 1-hour standard (75 FR 35520-35603, June 22, 2010).
[9] Not to be exceeded more than once per year on average over 3 years.
[10] The annual PM_{10} NAAQS of 50 µg/m^3 was revoked by USEPA on September 21, 2006. See FR Volume 71, Number 200, October 17, 2006.
[11] Three-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed the standard.
[12] Three-year average of the weighted annual mean concentrations from single or multiple community-oriented monitors must not exceed this standard.
[13] Three-year average of the fourth highest daily maximum 8-hour average measured at each monitor within an area over each year must not exceed this standard.

3.1.3.2 Prevention of Significant Deterioration

Prevention of Significant Deterioration (PSD***)*** regulations***, which*** restrict the degree of ambient air quality deterioration allowed ***in areas that meet the NAAQS,*** apply to proposed new or modified major stationary sources located in an attainment area that have the potential to emit criteria pollutants in excess of predetermined de minimis values (40 CFR Part 51). Increments for criteria pollutants are based on the PSD classification of the area. Class I area status is assigned to federally protected wilderness areas and allows the lowest amount of permissible deterioration. Class I areas allow the lowest amount of air quality increment consumption, while Class II designations allow higher increment consumption. There are no designated Class III or heavy industrial use areas.

As defined in 40 CFR 51, a source is a major stationary source if it:

1. Can be classified in one of the 28 named source categories listed in Section 169 of the CAA and it emits or has the potential to emit ***(PTE)*** 100 tons per year (tpy) or more of any pollutant regulated by the Act; or
2. Is any other stationary source that emits or has the ***PTE*** 250 tpy or more of any pollutants regulated by the CAA (USEPA 1990).

Compressor stations and other upstream oil and gas sources are not listed as one of the 28 named source types in Section 169 of the Act; therefore, 250 tpy is the threshold for major source status.

In addition to more stringent PSD increments, Class I areas are protected by Federal Land Managers (FLMs) by management of air quality related values (AQRVs) such as visibility and acid deposition. Though not a regulatory program under PSD, FLMs review the issuance of a PSD permit for any impacts that exceed guideline thresholds for these parameters. The air quality impacts in the area must meet the NAAQS, which apply nationwide. The nearest Class I area is Arches National Park about 80 miles south of the ***Greater Natural Buttes Project Area (***GNBPA***)***. See **Table 3.1-4** for a complete list of Class I and Class II areas considered in the air quality analysis.

Table 3.1-4 Class I and Sensitive Class II Areas of Concern for Air Quality Impact Analysis

NPS Class I Areas
Arches National Park
Black Canyon of the Gunnison National Park
Canyonlands National Park
Capitol Reef National Park
Mesa Verde National Park
***U.S. Forest Service (*USFS*)* Class I Areas**
Eagles Nest Wilderness Area
Flat Tops Wilderness Area
La Garita Wilderness Area
Maroon Bells-Snowmass Wilderness Area
Mount Zirkel Wilderness Area
Weminuche Wilderness Area
West Elk Wilderness Area
NPS Class II Areas
Colorado National Monument
Dinosaur National Monument
USFS Class II Areas
Flaming Gorge National Recreation Area
High Uintah Wilderness Area
Holy Cross Wilderness Area
Hunter/Frying Pan Wilderness Area
Raggeds Wilderness Area
***U.S. Fish and Wildlife Service (*USFWS*)* Class II Areas**
Browns Park National Wildlife Refuge

Allowable deterioration to air quality can be expressed as the incremental increase to ambient concentrations of criteria pollutants, or PSD increment. Modeled air concentrations of NO_2, SO_2, and PM_{10} predicted at near-field receptors that result from the emissions due to project sources are compared with the convenient threshold of allowable PSD increments. This comparison to PSD Class II increments ***is solely for informational purposes and*** does not represent a regulatory PSD increment consumption analysis because the focus of this study is the Proposed Action and alternatives under ***the National Environmental Policy Act (***NEPA***)***, not increment-affecting sources, which are not evaluated for regulatory purposes under NEPA. The allowable PSD increments for ***Class I and*** Class II areas are given in **Table 3.1-5**.

Table 3.1-5 PSD Increments for Class I and Class II Areas

PSD Class	Pollutant	Allowable Increment ($\mu g/m^3$)		
		Annual Arithmetic Mean	24-hour Maximum	3-hour Maximum
Class I	NO_2	2.5	-	-
	SO_2	2	5	25
	PM_{10}	4	8	-
Class II	NO_2	25	-	-
	SO_2	20	91	512
	PM_{10}	17	30	-

On June 3, 2010, the USEPA issued the final rule that "tailors" the applicability of PSD regarding USEPA and/or permitting authorities to implement PSD permitting requirements for greenhouse gases (GHGs) (75 FR 31514). The "Tailoring Rule" took effect on January 2, 2011, for new or modified sources that have the PTE or net increase in emissions more than 75,000 tpy of carbon dioxide (CO_2) equivalents (CO_2e) and would be considered major for other PSD pollutants. On or after July 1, 2011, this rule will apply to any new source with the PTE 100,000 tpy CO_2e and exceeds the major source threshold of any GHG on a mass basis regardless of the PTE of other PSD pollutants. Further, modifications at an existing major source that results in a net emissions increase of 75,000 tpy CO_2e also will be reviewed under the PSD rules.

This EIS does not evaluate permitting requirements under the CAA; however, if a major source were to be proposed during the course of development of any alternatives, emissions from that source would need to be evaluated regarding the applicability of the PSD program based on GHG emissions, as well as the standard criteria air pollutant emissions. Under the current project design, including compressor stations that are the largest sources of GHGs, none of the proposed sources would trigger PSD review under the Tailoring Rule.

3.1.3.3 Nonattainment New Source Review

This section is included in the Draft EIS and is not being amended in this supplement.

3.1.3.4 Conformity for General Federal Actions

This section is included in the Draft EIS and is not being amended in this supplement.

3.1.3.5 New Source Performance Standards

This section is included in the Draft EIS and is not being amended in this supplement.

3.1.3.6 National Emission Standards for Hazardous Air Pollutants

Under the National Emissions Standards for Hazardous Air Pollutants (NESHAPs), the USEPA promulgated ***Maximum Achievable Control Technology (***MACT***)*** standards pursuant to Section 112 of the 1990 CAA Amendments and these rules are provided in 40 CFR 63. The MACT standards that potentially would be applicable to the proposed project include:

- Subpart A – General Provisions;
- Subpart HH – Oil and Natural Gas Production Facilities;
- Subpart YYYY – Stationary Combustion Turbines; and
- Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines

Subpart A – General Provisions

The general provisions for all sources affected by a MACT standard are promulgated under Subpart A. Each of the promulgated standards contains a detailed list of Subpart A ***provisions*** that ***are*** applicable to the affected facility. The critical sections of Subpart A are summarized in Section 63.6, specifically including paragraph 63.6(e), which provides operation and maintenance requirements.

Subpart HH – Oil and Natural Gas Production Facilities

In the January 3, 2007, Federal Register ***(72 FR pp. 26-43)***, the USEPA amend***ed*** 40 CFR 63, Subpart HH to include area sources rather than just major sources of ***hazardous air pollutants (***HAPs***)***. An affected source under this final rule is each tri-ethylene glycol dehydration unit located at an area source oil and natural gas production facility. ***The USEPA is reviewing the Subpart HH rules and is under a consent decree schedule to issue a final rule revising Subpart HH, or a determination that revisions are not necessary, by November 30, 2011.***

Subpart YYYY – Stationary Combustion Turbines

The USEPA published the final stationary combustion turbine MACT rule in the Federal Register on March 5, 2004. New lean premix and diffusion flame gas- and oil-fired turbines at major HAP facilities are required to limit formaldehyde emissions to 91 ppb volume dry at 15 percent oxygen. On April 7, 2004, the USEPA published two proposed rules affecting natural gas-fired lean premix combustion turbines and three other subcategories. On August 18, 2004, USEPA issued a final rule to stay of the effectiveness for two categories of stationary combustion turbines: lean pre-mix gas-fired turbines and diffusion flame gas-fired turbines.

Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines

On January 18, 2008, the USEPA published in the Federal Register finalized rules to amend 40 CFR 63, Subpart ZZZZ. An affected source under this amended Subpart is any existing, new, or reconstructed stationary reciprocating internal combustion engine with a site-rating of more than 25 brake horsepower, which are located at either a major source or area source of HAPs.

On August 20, 2010, the USEPA published further revisions to this rule (71 FR 51570 et. seq.) to address emissions from existing stationary spark-ignition (SI) engines less than or equal to 500 horsepower (hp) at major sources and all existing stationary SI engines located at area sources.

3.1.3.7 Carbon Dioxide and Other Greenhouse Gases

Ongoing scientific research has identified the potential impacts of anthropogenic (man-made) GHG emissions and changes in biological carbon sequestration due to land management activities on global climate. Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy

radiated by the earth back into space. Although GHG levels have varied for millennia, recent industrialization and burning of fossil carbon sources have caused CO_2e concentrations to increase dramatically, and are likely to contribute to overall global climatic changes. The Intergovernmental Panel on Climate Change (IPCC) recently concluded that warming of the climate system is unequivocal and most of the observed increase in globally average temperatures since the mid-20th century very likely is due to the observed increase in anthropogenic GHG concentrations (IPCC 2007).

Global mean surface temperatures increased nearly 1.8 ***degrees Fahrenheit (***°F***)*** from 1890 to 2006. Models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Northern latitudes (above 24°N) have exhibited temperature increases of nearly 2.1°F since 1900, with nearly a 1.8°F increase since 1970. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

In 2001, the IPCC projected that by the year 2100, global average surface temperatures could increase by 2.5 to 10.4°F above 1990 levels. The National Academy of Sciences (2010) has confirmed these projections, but also has indicated that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature would not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures are more likely than increases in daily maximum temperatures. Although large-scale spatial shifts in precipitation distribution may occur, these changes are more uncertain and difficult to predict.

As with any field of scientific study, there are uncertainties associated with the science of climate change; however, this does not imply that scientists do not have confidence in many aspects of climate change science. Some aspects of the science are known with virtual certainty because they are based on well-known physical laws and documented trends (USEPA 2010***a***).

Several activities contribute to the phenomena of climate change, including emissions of GHGs (especially CO_2 and methane [CH_4]) from fossil fuel development, large wildfires, activities using combustion engines, changes to the natural carbon cycle, and changes to radiative forces and reflectivity (albedo). It is important to note that GHGs will have a sustained climatic impact over different temporal scales. For example, recent emissions of CO_2 may influence climate for 100 years.

It may be difficult to discern whether climate change is already affecting resources globally, let alone those in the vicinity of the proposed project. In most cases, there is little information about potential or projected effects of global climate change on resources. It is important to note that projected changes are likely to occur over several decades to a century. Therefore, many of the projected changes associated with climate change may not be measurably discernible within the reasonably foreseeable future. Existing climate prediction models are global in nature; therefore, they are not at the appropriate scale to ***provide a credible*** estimate of climate change ***impacts in*** the ***project*** vicinity.

The analysis of the Regional Climate Impacts prepared by the U.S. Global Change Research Program (USGCRP) (2009) suggests that recent warming in the region was among the most rapid nationally. They conclude that this warming is causing decline in spring snowpack and reducing flow in the Colorado River. Their projections of future climate change indicate that further strong warming will reduce precipitation, which in turn will strain regional water supplies, increase the risk of wildfires and invasive species, and degrade recreational opportunities.

Past records and future projections predict an overall increase in regional temperatures, which would cover the development area. As has been observed at many sites to date, the observed increase is largely the result of the warmer nights, and effectively higher average daily minimum temperatures at many of the sites in the region. The USGCRP (2009) projects a region-wide decrease in precipitation, although with substantial variability in interannual conditions. For eastern Utah, the projections range

from approximately 5 percent decrease in annual precipitation to decreases as high as 40 percent of annual precipitation.

In *Massachusetts v. EPA*, the U.S. Supreme Court (April 7, 2007) held that CO_2 satisfies the definition of "air pollutant" and that USEPA has authority to regulate emissions of CO_2 and other GHGs from new motor vehicles under the CAA. The Supreme Court remanded the case to the USEPA to determine whether such motor vehicle emissions contribute to global climate change, and thereby endanger public health or welfare.

On October 30, 2009, the USEPA promulgated the final mandatory reporting rule for GHGs under 40 CFR Part 98, which requires a wide range of sources to record and report selected GHG emissions including CO_2, CH_4, nitrous oxide (N_2O), and some halogenated compounds. A CO_2e value is calculated for combined emissions of these gases based on their comparative global warming potential. This rule applies to sources that emit 25,000 tpy or more CO_2e. Further, the USEPA issued the final reporting GHG requirements for petroleum and natural gas production on November 30, 2010 (40 CFR Part 98, Subpart W) (75 FR 74458). The rule specifically identifies monitoring and reporting requirements for natural gas systems including combustion units (Subpart C) as well as on-shore gas production, storage, processing, and transmission (Subpart W).

Applicable USEPA rules do not require any controls or establish any ***emission limits*** related to GHG emissions or impacts. Therefore, there is no requirement at this time that would affect development of the proposed project under ***this*** rule, other than the ***requirement for the operator to develop a monitoring plan and maintain*** recordkeeping and reporting of GHG emissions.

3.2 Cultural Resources and Native American Traditional Values

This section is included in the Draft EIS and is not being amended in this supplement.

3.3 Geology

This section is included in the Draft EIS and is not being amended in this supplement.

3.4 Land Use

This section is included in the Draft EIS and is not being amended in this supplement.

3.5 Paleontology

This section is included in the Draft EIS and is not being amended in this supplement.

3.6 Range Resources

This section is included in the Draft EIS and is not being amended in this supplement.

3.7 Recreation

This section is included in the Draft EIS and is not being amended in this supplement.

3.8 Socioeconomics and Environmental Justice

3.8.1 Study Area for Socioeconomics

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.2 Background on the Role of Oil and Gas Development in the Region

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.3 Local Population

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.4 Local Economy and Labor Force

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.5 Specific Economic Sectors

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.6 Community Facilities and Services

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.7 Public Expenditures and Revenues

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.8 Population and Employment Projections

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.9 Community Social Conditions

This section is included in the Draft EIS and is not being amended in this supplement.

3.8.10 Environmental Justice

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (USEPA 1998a). Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, tasks "each Federal agency [to] make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations."

Implementation of EO 12898 for NEPA by agency directive involves the following steps (BLM 2002):

- ***Identification of the presence of minority and low-income populations and Indian Tribes in areas that may be affected by the action under consideration.***
- ***Determination of whether the action under consideration would have adverse human health, environmental, or other effects on any population.***

- ***Determine of whether such environmental, human health, or other effects would be disproportionately high and adverse on minority or low-income populations or Indian Tribes.***
- ***Providing opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices (USEPA 1998a).***

Table 3.8-32 shows the proportions of low-income, minority, and Tribal populations in selected communities in Duchesne and Uintah counties. Data for the State of Utah are shown for comparison. The table includes the main communities in each county near the GNBPA, including the Fort Duchesne Census Designated Place (CDP), Randlett CDP, and Whiterocks CDP. The three CDPs are boundary-defined places within the Uintah and Ouray Reservation enumerated by the U.S. Census Bureau in 2000. All three are located in western Uintah County and are approximately 18, 10, and 28 linear miles, respectively, from the northwest corner of the GNBPA. Fort Duchesne is the headquarters location of the Ute Tribe.

Table 3.8-32 Poverty and Minority Population Characteristics of Selected Communities, 2000

Population	Percent of Total Population in Poverty	Minority as Percent of Total Population[1]	Percent American Indian
Duchesne County	16.8	***11.2***	5.4
Duchesne City	12.4	***5.0***	0.7
Roosevelt	22.1	***14.9***	8.1
Uintah County	14.5	***14.1***	***10.3***
Vernal	14.8	***8.2***	***3.1***
Naples	***6.7***	***4.1***	***0.8***
Ballard	***8.5***	***5.7***	***3.9***
Uintah and Ouray Reservation	20.2	***20.0***	***16.4***
Fort Duchesne CDP[2]	54.6	***94.8***	90.2
Randlett CDP	54.5	***96.4***	93.3
Whiterocks CDP	70.9	***94.4***	93.8
State of Utah	9.4	***14.7***	1.3

[1] ***The total minority population comprises all persons of a minority racial identity plus persons of Hispanic-origin identity not already included because of race.***
[2] ***Unincorporated communities with boundaries defined for purposes of enumeration during the decennial census.***
Source: U.S. Census Bureau 2000a,***b***.

The BLM standard for identifying a low-income population is the poverty level used by the U.S. Census Bureau. The standard for identifying minority populations is either: 1) the minority population of the affected area exceeds 50 percent, or 2) the minority population percentage of the affected area is "meaningfully greater" than the minority population percentage in the general population or other appropriate unit of geographic analysis. For environmental justice compliance, the relevant minority population is the total minority population comprising all persons of a minority racial identity plus persons of Hispanic-origin identity (BLM 2002).

Resident populations with a poverty rate over 50 percent exist in ***the*** Fort Duchesne, Randlett, and Whiterocks ***CDPs***. Elsewhere in Duchesne and Uintah counties, the poverty rate varies from ***6.7*** percent to 22.1 percent, compared to 9.4 percent in the state overall. Fort Duchesne, Randlett, and Whiterocks ***also*** are minority communities***, each having populations*** more than 90 percent minority***, principally*** American Indian. ***The***

concentration of the American Indian population in the three CDPs is consistent with a 1994 survey of the Ute Tribe members in which 64 percent of the respondents living on the reservation reported their residence in Whiterocks, 16 percent in Fort Duchesne, and 8 percent in Randlett. The remaining survey respondents cited places of residence not enumerated by the U.S. Census Bureau (Duchesne County 2005). The minority population percentages elsewhere in Duchesne and Uintah counties, including rural areas near the three CDPs, are not meaningfully higher than the state average (Table 3.8-32).

In summary, economic and demographic data from the 2000 Census indicates several concentrations of minority and/or low-income populations residing northwest of the GNBPA meeting the BLM standard for consideration of potential environmental justice issues.

3.9 Soils

This section is included in the Draft EIS and is not being amended in this supplement.

3.10 Transportation and Access

This section is included in the Draft EIS and is not being amended in this supplement.

3.11 Vegetation Resources

This section is included in the Draft EIS and is not being amended in this supplement.

3.12 Visual Resources

This section is included in the Draft EIS and is not being amended in this supplement.

3.13 Water Resources

This section is included in the Draft EIS and is not being amended in this supplement.

3.14 Wilderness Characteristics

This section is included in the Draft EIS and is not being amended in this supplement.

3.15 Wildlife and Fisheries Resources

This section is included in the Draft EIS and is not being amended in this supplement.