

Appendix D

List of Acronyms and Glossary

Appendix D

LIST OF ACRONYMS

4WD	Four-Wheel Drive
AASHTO	American Association of State Highway and Transportation Officials
ACEC	Area of Critical Environmental Concern
AML	Appropriate Management Level
APD	Application for Permit to Drill (an oil or gas well)
AQRV	Air Quality Related Value
AQTG	Air Quality Task Group
AQTSD	Air Quality Technical Support Document
BACT	Best Available Control Technology
BCF	Billion Cubic Feet (of gas)
BEA	Bureau of Economic Analysis
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management (U.S. Department of the Interior)
BMP	Best Management Practice
BO	Biological Opinion
B.P.	Before Present
0C	Degrees Celsius
CAA	Clean Air Act (of 1970 and Amendments)
CASTNet	Clean Air Status and Trends Network
CBM	Coal Bed Methane
CCF	Hundred Cubic Feet (a measure of timber volume)
CDNST	Continental Divide National Scenic Trail
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COA	Conditions of Approval
CSU	Controlled Surface Use
dB	Decibel
DEIS	Draft Environmental Impact Statement
DEQ	Department of Environmental Quality (see also WDEQ)
DEQ-AQD	Department of Environmental Quality – Air Quality Division
dv	Deciview
EA	Environmental Assessment
EIS	Environmental Impact Statement
E.O.	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act (of 1973)
0F	Degrees Fahrenheit
FLM	Federal Land Manager
FLPMA	Federal Land Policy and Management Act (of 1976)

FO	Field Office
FOIA	Freedom of Information Act
FR	Federal Register
FS	Forest Service, U.S. Department of Agriculture (see also USFS)
FWS	United States Fish & Wildlife Service (see also USFWS)
FY	Fiscal Year
H ₂ S	Hydrogen Sulfide
H ₂ SO ₄	Sulfuric Acid
HAP	Hazardous Air Pollutants
HNO ₃	Nitric Acid
IMPROVE	Interagency Monitoring of Protected Visual Environments
Kg/ha	Kilograms per Hectare
µg/m ³	Micrograms per Cubic Meter
MA	Management Area
mg/L	Milligrams per Liter
MCF	Thousand cubic feet (of gas)
MMBF	Million board feet (a measure of timber volume)
MMCF	Million cubic feet
MOU	Memorandum of Understanding
(NH ₄) ₂ SO ₄	Ammonium Sulfate
NAAQS	National Ambient Air Quality Standards
NADP	National Atmospheric Deposition Program
NH ₄	Ammonium
NO ₂	Nitrogen Dioxide
NO ₃	Nitrate
NO _x	Nitrogen Oxides
NPS	National Park Service (see also USNPS)
NRCS	Natural Resource Conservation Service (U.S. Department of Agriculture)
NSO	No Surface Occupancy (a stipulation on an oil and gas lease)
NWPS	National Wilderness Preservation System
NWSRS	National Wild & Scenic Rivers System
O ₃	Ozone
OHV	Off-Highway Vehicle
PAWG	Pinedale Anticline Working Group
Pb	Lead
PFC	Proper Functioning Condition
PFO	Pinedale Field Office
PM	Particulate Matter
PM _{2.5}	Particulate Matter (less than 2.5 microns in diameter)
PM ₁₀	Particulate Matter (less than 10 microns in diameter)
POD	Plan of Development
ppb	Parts per Billion
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
RFA	Reasonably Foreseeable Action or Activity
RFD	Reasonably Foreseeable Development

RMG	Reservoir Management Group
RMP	Resource Management Plan (BLM land use plan under FLPMA)
RMPPA	Resource Management Plan Planning Area
ROD	Record of Decision
ROW	Right-of-Way
RSFO	Rock Springs Field Office
SIP	State Implementation Plan
SMA	Special Management Area
SO2	Sulfur Dioxide
SO4	Sulfate
TCF	Trillion Cubic Feet (of gas)
TDS	Total Dissolved Solid
TMDL	Total Maximum Daily Load
U.S.	United States of America
US-30	Highway 30
USBR	United States Bureau of Reclamation
U.S.C.	United States Code
USDA	United States Department of Agriculture
USDI	United States Department of Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WA	Wilderness Area
WAAQS	Wyoming Ambient Air Quality Standards
WAQD	Wyoming Air Quality Division
WAQSR	Wyoming Air Quality Standards & Regulations
WARMS	Wyoming Air Resources Monitoring System
WDEQ	Wyoming Department of Environmental Quality (see also DEQ)
WGFD	Wyoming Game and Fish Department
WOGCC	Wyoming Oil and Gas Conservation Commission
WSA	Wilderness Study Area
WSRA	Wild & Scenic Rivers Act (of 1973)
WSO	Wyoming (BLM) State Office
WYDOT	Wyoming Department of Transportation

Glossary of Terms

abandon: To cease producing oil or gas from a well when it becomes unprofitable. Usually, some of the casing is removed and salvaged, and one or more cement plugs placed in the borehole to prevent migration of fluids between formations.

acre-foot or acre-feet (acre-ft): The volume of water that covers an area of one acre to a depth of one foot (43,560 cubic feet or 325,851 gallons).

affected environment: The resource values potentially affected by the Proposed Action and alternatives analyzed in a NEPA document.

air quality: The properties and degree of purity of air to which people and natural and heritage resources are exposed (National Park Service website <<http://www2.nature.nps.gov/air/AQBasics/glossary.htm>>).

alkaline: Having the quality of a base (pH of 7.0 or greater).

ambient air: The portion of the atmosphere, external to buildings, to which the public has general access (40 C.F.R. 50).

ambient concentration: The mass of a pollutant in a given volume of air, typically measured as micrograms of pollutant per cubic meter of air.

ambient standards: The absolute maximum level of a pollutant allowed to protect either public health (primary) or welfare (secondary).

ambient: The environment as it exists at the point of measurement and against which changes or impacts are measured.

ancillary facilities: Facilities often required in an oil and gas field other than the wells and pipelines, such as compressor stations. 8-2 Draft EIS, Jonah Infill Drilling Project
animal unit month (AUM): The amount of forage necessary to sustain one cow/calf pair for 1 month.

anticline: A geological formation described usually as a dome or inverted saucer. If covered by an impermeable layer of rock, the anticline is a potential oil or gas reservoir.

Application for Permit to Drill (APD): The Department of Interior application permit form to authorize oil and gas drilling activities on federal land or mineral estate.

area of critical environmental concern (ACEC): An area on public lands designated for special management to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes or to protect life and safety from natural hazards.

background concentration: The existing levels of air pollutant concentration in a given region. In general, it includes natural and existing emission sources but not future emission sources.

biodiversity: The variety of plant and animal life on a given area.

collector roads: BLM roads that provide primary access to large blocks of land and connect with, or are extensions of, a public road system.

commercial well: A well capable of producing profitably.

completion: The activities and methods to prepare a well for production. Includes installation of equipment for production from an oil or gas well.

condensate (gas condensate): Hydrocarbons (oil) contained in the natural gas stream, often removed by condensation.

conditions of approval (COAs): A set of restrictions, or conditions, included in the approval of a federal permit, including NEPA documents.

contrast: The effect of a notable difference in the form, line, color, or texture of the landscape features within the area being viewed.

Council on Environmental Quality (CEQ): An advisory council to the President established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

criteria pollutants: Air pollutants for which the EPA has established state and national ambient air quality standards. These include particulate matter (PM), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), and volatile organic compounds (VOCs).

critical elements of the human environment: A list of resource concerns that must be addressed in every NEPA document.

crucial range: Any particular seasonal range or habitat component that has been documented as the determining factor in a population's ability to maintain itself at a certain level over the long-term.

cubic feet per second (cfs): The rate of discharge representing a volume of 1 cubic foot of water passing a given point during 1 second.

cubic foot: The volume of gas contained in one cubic foot of space at a standard pressure base of 14.7 pounds per square inch and a standard temperature base of 60 °F.

cumulative impact: The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taken place over a period of time (40 C.F.R. 1508.7).

decibel: A unit of measurement of noise intensity. The measurements are based on the energy of the sound waves and units are logarithmic. Changes of 5 decibels or more are normally discernible to the human ear.

deciview: The unit of measurement of haze developed to uniformly describe levels of monitored and modeled visibility impairment.

diffusion: A process by which substances are transferred from regions of higher concentrations to regions of lower concentrations (National Park Service website <<http://www2.nature.nps.gov/air/AQBasics/glossary.htm>>).

directional drilling: The intentional deviation of a wellbore from vertical to reach subsurface areas off to one side from the surface drilling site.

dispersion: The spreading out of pollutants. Generally used to show how much an air pollutant will spread from a particular point.

diversity: The distribution and abundance of different plant and animal communities and species.

drainage: Natural channel through which water flows some time of the year. Natural and artificial means for effecting discharge of water as by a system of surface and subsurface passages.

drill rig: The mast, draw works, and attendant surface equipment of a drilling unit.

ecosystem: An interacting system of organisms considered together with their environment--for example, marsh, watershed, and stream ecosystems.

emergent vegetation: Erect, rooted, herbaceous plants that project out of or emerge from the water.

emission factor: An empirically derived mathematical relationship between pollutant emission rate and some characteristic of the source such as volume, area, mass, or process output.

emission: Air pollution discharge into the atmosphere, usually specified by mass per unit time.

environment: The aggregate of physical, biological, economic, and social factors affecting organisms in an area.

environmental impact statement (EIS): An analysis of alternative actions and their predictable environmental impacts, including physical, biological, economic, and social consequences and their interactions; short- and long-term impacts; and direct, indirect, and cumulative impacts.

exploratory well: A well that is drilled to evaluate the gas or oil resources that may be present.

federal lands: All lands and interests in lands owned by the U.S., which are subject to the mineral leasing laws, including mineral resources or mineral estates reserved to the U.S. in the conveyance of a surface or non-mineral estate.

field: 1) A set of rocks containing hydrocarbons. 2) An oil and gas reservoir.

flare: Process that burns and evacuates unused gases.

formation: A rock/mineral deposit or structure covering an area with the same physical properties.

fracing (fracturing): A method of stimulating well production by increasing the permeability of the producing formation. Under extremely high hydraulic pressure, the fracturing fluid (water, oil, dilute hydrochloric acid, or other fluid) is pumped into the formation that parts or fractures it. Proppants or propping agents such as sand or glass beads are pumped into the formation as part of the fracturing job. The proppants become wedged in the open fractures, leaving channels for oil or gas to flow into the well after

the hydraulic fracture pressure is released. This process is often called a “frac job.” When high concentrations of acid are used, it may be called an “acid frac job.”

fugitive dust: Airborne particles emitted from any source other than through a controllable stack or vent.

gathering pipelines: Pipelines within a field that transport gas or oil from the well to a central production facility or to the point of sale.

ground water: Water contained in the pore spaces of consolidated and unconsolidated material.

human environment: The factors that include but are not limited to biological, physical, social, economic, cultural, and aesthetic factors that interrelate to form the environment.

hydrocarbon: A compound formed from carbon and hydrogen, for example oil and gas.

hydrology: A science that deals with the properties, distribution, and circulation of surface and subsurface water.

impacts: These include a) direct impacts, which are caused by the action and occur at the same time and place and b) indirect impacts, which are caused by the action and are later in time or farther removed in distance but are substantially foreseeable. Indirect impacts may include growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, or growth rate and related impacts on air and water and other natural systems, including ecosystems. Impacts include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Impacts may also include those resulting from actions which may have both beneficial and detrimental impacts, even if on balance the agency believes that the impact will be beneficial (40 C.F.R. 1508.8).

increment: Incremental standards (prevention of significant deterioration [PSD]) are the maximum amounts of pollutants allowed above the baseline in regions of clean air.

infrastructure: The basic framework or underlying foundation of a community including road networks, electric and gas distribution, water and sanitation services, and facilities.

injection well: A well that is used to inject water or gas in order to maintain pressure or to bring a field back under pressure.

interdisciplinary team (IDT): A group of Federal and cooperating agencies selected to work within the NEPA process in scoping, analysis, and document preparation. The purpose of the team is to integrate its collective knowledge of the physical, biological, economic, and social sciences and the environmental design arts into the environmental analysis process. Interaction among team members often provides insight that otherwise would not be apparent.

interim reclamation: Reclamation initiated on well pads, roads, and pipelines after drilling activity is completed and wells are in production. Interim reclamation is considered successful when reclamation performance objectives are met.

irretrievable: A term that applies to the loss of production, harvest, or use of natural resources. For example, some or all of the timber production from an area is lost

irretrievably while an area is serving as a winter sports site. The production lost is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume timber production.

irreversible: A term that describes the loss of future options. Applies primarily to the effects of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity, that are renewable only over long periods of time.

lease: 1) A legal document that conveys to an operator the right to drill for oil and gas. 2) The tract of land on which a lease has been obtained, where producing wells and production equipment are located.

life-of-project (LOP): Begins with the first disturbance authorized under the ROD for this project and ends when all wells are plugged and abandoned and all surface disturbance (each disturbed site) meets the reclamation performance objectives.

local roads: BLM roads that provide primary access to large blocks of land and connect with or are extensions of a public road system.

long-term impacts: For the purpose of this NEPA analysis, long-term impacts last for the life of the project or beyond.

mineral rights: Reserved mineral rights are the retention of ownership of all or part of the mineral rights by a person or party conveying land to the United States. Conditions for exercising these rights have been defined in the Secretary's Rules and Regulations to Govern Exercising of Mineral Rights Reserved in Conveyances to the United States attached to and made a part of deeds reserving mineral rights.

mitigate: To lessen the severity.

mitigation measures: Actions taken to reduce or minimize potential impacts to the environment.

mitigation: Avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree of magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or compensating for the impact by replacing or providing substitute resources or environments.

modeling: A mathematical or physical representation of an observable situation. In air pollution control, models afford the ability to predict pollutant distribution or dispersion from identified sources for specified weather conditions.

monitor: To systematically and repeatedly watch, observe, or measure environmental conditions in order to track changes.

National Ambient Air Quality Standards (NAAQS): The allowable concentrations of air pollutants in the air specified by the federal government. The air quality standards are divided into primary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite to protect the public health) and secondary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite

to protect the public welfare from any unknown or expected adverse effects of air pollutants).

National Environmental Policy Act of 1969 (NEPA): The federal law established in 1969, which went into effect on January 1, 1970, that 1) established a national policy for the environment, 2) requires federal agencies to become aware of the environmental ramifications of their proposed actions, 3) requires full disclosure to the public of proposed federal actions and a mechanism for public input into the federal decision-making process, and 4) requires federal agencies to prepare an environmental impact statement for every major action that would significantly affect the quality of the human environment.

Notice of Intent (NOI): A notice published in the Federal Register to announce the intent to prepare an EIS.

oil and gas field: A natural accumulation of oil and gas in the subsurface. Oil and gas may be present in two or more reservoirs at different depths.

oil and gas lease: A federal oil and gas lease is a legal document that gives the lease holder the right to explore for and develop any oil and gas that may be present under the area designated in the lease while complying with any surface use conditions which may have been stipulated when the lease was issued.

ozone (O₃): A molecule containing three oxygen atoms produced by passage of an electrical spark through air or oxygen (O₂).

particulate matter: A particle of soil or liquid matter (e.g., soot, dust, aerosols, fumes, and mist).

PM 10: Airborne suspended particles with an aerodynamic diameter of 10 microns or less.

PM 2.5: Airborne suspended particles with an aerodynamic diameter of 2.5 microns or less.

prevention of significant deterioration (PSD): A classification established to preserve, protect, and enhance the air quality in National Wilderness Preservation System areas in existence prior to August 1977 and other areas of national significance, while ensuring economic growth can occur in a manner consistent with the preservation of existing clean air resources. Specific emission limitations and other measures, by class, are detailed in the Clean Air Act (42 U.S.C. 1875 et seq.).

production: Phase of commercial operation of an oil field.

PSD increments: The maximum allowable increase in pollutant concentrations permitted over baseline conditions as specified in the EPA Prevention of Significant Deterioration (PSD) regulations (40 C.F.R. Part 52.21). The regulations apply only to areas currently attaining NAAQS/WAAQS. Most National Parks and Wilderness Areas are Class I areas, where almost no future pollution increase is permitted. Most other areas are Class II areas, where moderate increases in pollution levels are allowed.

public land: Lands or interests in lands owned by the United States and in this case administered by the Secretary of Interior through the Bureau of Land Management, without regard to how the United States acquired ownership.

reclamation: Rehabilitation of a disturbed area to make it acceptable for designated uses. This normally involves regrading, replacement of topsoil, revegetation, and other work necessary to restore it for use.

Record of Decision (ROD): A decision document for an EIS or Supplemental EIS that publicly and officially discloses the responsible official's decision regarding the actions proposed in the EIS and their implementation.

resource roads: Spur roads that provide point access, as to a well site, and connect to local or collector roads.

revegetation: The re-establishment and development of self-sustaining plant cover. On disturbed sites, human assistance will speed natural processes by seed bed preparation, reseeding, and mulching.

rig: A collective term to describe the permanent equipment needed when drilling a well.

right-of-way (ROW): The legal right for use, occupancy, or access across land or water areas for a specified purpose or purposes.

riparian: Land areas which are directly influenced by water. They usually have visible vegetative or physical characteristics showing this water influence. Streamsides and lake borders are typical riparian areas.

runoff: That part of precipitation that appears in surface streams. Precipitation that is not retained on the site where it falls and is not absorbed by the soil.

scope: Extent or range of view.

scoping: An early and open process for determining the scope of issues to be addressed in an EIS and for identifying the significant issues related to a proposed action. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, and written comments in response to news releases, direct mailings, and articles about the proposed action and scoping meetings.

sediment: Soil or mineral transported by moving water, wind, gravity, or glaciers, and deposited in streams or other bodies of water or on land.

sediment load: The amount of sediment (sand, silt, and fine particles) carried by a stream or river.

short-term impacts: For the purpose of this analysis, short-term impacts are generally defined as those that would last for 5 years or less.

shut-in: The process of stopping production at an otherwise producing well.

significant impact: A meaningful standard to which an action may impact the environment. The impact may be beneficial, adverse, direct, indirect, or cumulative and may be short-term or long-term.

spacing: The number of acres per given well in the subsurface. For instance, 160-acre spacing means that one well would be drilled in each quarter section (160 acres) or up to four wells per section (640 acres).

stipulation: A legal requirement, specifically a requirement that is part of the terms of a mineral lease. Some stipulations are standard on all federal leases. Other stipulations may be applied to the lease at the discretion of the surface management agency to protect valuable surface resources. Stipulations are supported by the NEPA process; without NEPA support, a stipulation cannot be added to the lease. **strata:** An identifiable layer of bedrock or sediment.

terrestrial: Consisting of or pertaining to the land. **Tertiary:** The older of the two geologic periods comprising the Cenozoic Era; also the system of strata deposited during that period. **threatened species:** Any species (plant or animal) that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Threatened species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act. **thrust fault:** A low angle fault in which the rocks above the fault plane move up relative to the rocks below. The rocks that move up are the thrust sheet. **topographic basin:** A large depression of erosional origin. **topography:** The features of the earth, including relief, vegetation, and waters. **topsoil:** The uppermost layers of naturally occurring soils suitable for use as a plant growth medium.

vegetation type: A plant community with visually distinguishable characteristics, named for the apparent dominant species.

viewshed: The areas seen from any given point.

visibility: Refers to the visual quality of the view or scene in daylight, with respect to color, rendition, and contrast definition. The ability to perceive form, color, and texture.

visual range: The distance at which a black object just disappears from view.

visual resource: The composite of basic terrain, geologic features, water features, vegetation patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for viewers.

Management VRM): (A system of visual management used by the BLM. The program **Visual Resource** has a dual purpose--to manage the quality of the visual environment and to reduce the visual impact of development activities while maintaining effectiveness in all BLM resource programs. VRM also identifies scenic areas that warrant protection through special management attention. The system uses four classes for categorizing visual resources.

Class I -Natural ecological changes and limited management activity are allowed. Any contrasts created within the characteristic landscape must not attract attention. This classification is applied to wilderness areas, wild and scenic rivers, and other similar situations.

Class II -Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. Contrasts are seen but must not attract attention.

Class III - Contrasts to the basic elements caused by a management activity are evident but should remain subordinate to the existing landscape.

Class IV -Any contrast may attract attention and be a dominant feature of the landscape in terms of scale, but it should repeat the form, line, color, and texture of the characteristic landscape.

water quality: Refers to a set of chemical, physical, or biological characteristics that describe the condition of a river, stream, or lake. The quality of water determines what beneficial uses it can support. Different conditions or levels of water quality are required to support different beneficial uses.

watershed: The total land area that drains to a given watercourse or body of water.

watershed (6th level): The watershed and subwatershed hydrologic unit boundaries provide a uniquely identified and uniform method of subdividing large drainage areas. The smaller-sized level sub-watersheds (up to 250,000 acres) are useful for application programs.

well or wellbore: The hole drilled from the surface to the gas-bearing formation, several of which may be developed from a single well pad.

well pad: Relatively flat work area (surface location) that is used for drilling a well or wells and producing from the well once it is completed.

wetlands: Areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

wind rose: Any one of a class of diagrams designed to illustrate the distribution of wind direction experienced at a given location over a given period of time. Wind roses may also give information concerning distribution of wind speed, stability, or other meteorological parameters.

winter range: The place where migratory (and sometimes non-migratory) animals congregate during the winter season.

workover: Well maintenance activities that require onsite mobilization of a drill rig to repair the well bore equipment (casing, tubing, rods, or pumps) or the wellhead. In some cases, a workover may involve development activities to improve production from the target formation.

Wyoming Ambient Air Quality Standards (WAAQS): The allowable concentrations of air pollutants in the air specified by the State of Wyoming. The air quality standards are divided into primary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite to protect the public health) and secondary standards (based on the air quality criteria and allowing an adequate margin of safety and

requisite to protect the public welfare from any unknown or expected adverse effects of air pollutants).