

**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641**

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2006-189-EA

CASEFILE/PROJECT NUMBER COC70159

PROJECT NAME: Sagebrush pipeline rebuild

LEGAL DESCRIPTION: Sixth Principal Meridian
T. 2 S., R 98 W.,
sec. 26, NE¹/₄NW¹/₄, S¹/₂NW¹/₄, SW,
sec. 32, lot 8,
sec. 33, S¹/₂S¹/₂ ,
sec. 34, S¹/₂S¹/₂ , NE¹/₄SE¹/₄, E¹/₂NE¹/₄,
sec. 35, NW¹/₄NW¹/₄.

APPLICANT: Sagebrush Pipeline

ISSUES AND CONCERNS: This action is to replace an existing pipeline. In 1995, Rocky Mountain Natural Gas leased 2 pipeline rights of ways (ROWs), COC20507 and COC20507B to Riata Energy, but did not do any assignments. Rocky Mountain merged into KN Energy and the ROWs have since expired. Riata is still using the pipelines and has resolved the resulting trespass. Sagebrush had planned to request additional new pipeline routes, but has not provided the necessary information. This EA analyzes only the replacement line.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: Sagebrush Pipeline proposes to replace the existing 2 inch and 3 inch HD polyethylene pipeline which was constructed in 1984. The line was built to serve the 298-32-1, 33-1, 26-1, 26-2, and 25-1 wells. Hardcopies of the as-built maps were provided by Rocky Mountain and are available in the case file. A location map is attached as Exhibit A as well as the Construction Plan (Exhibit B) and the Dust Control Plan in Exhibit C. The permanent right-of-way segments are as follows:

Former COC#	Location	Length (Feet)	Width (Feet)	Acres
20507	T2S R98W, sec 26	4,877	30	3.359
20507B	T2S R98W, sec	14,600	30	10.055

Former COC#	Location	Length (Feet)	Width (Feet)	Acres
	32,33,34,35			
TOTAL		19,477		13.414

In addition, there would be a 20 foot wide construction area for a total of 19,477 feet, totaling 8.943 acres, authorized for a three year period for construction and reclamation. A Notice to Proceed will be issued when Sagebrush submits their plans to accommodate the mitigation for “fragile soils” and boring under Black Sulphur Creek.

Proposed Action: Sagebrush Pipeline LLC (Sagebrush) has applied for a natural gas pipeline right-of-way under Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185). The complete Construction, Operation, and Maintenance Plan is attached as Exhibit B. The Dust Control Plan submitted by Sagebrush is attached as Exhibit C. Sagebrush has requested a 30 year term and will operate the lines year around

Sagebrush requests a pipeline right-of-way approximately 4.8 miles in total length with a permanent easement 30 feet in width. The proposed pipeline will carry unprocessed gas from Riata Energy wells to the existing ROC Gas pipeline and processing plant. Related structures will be located along the right-of-way as necessary. These structures include valves, pigging facilities, cathodic protection equipment, and related aboveground appurtenances.

The pipelines will be used year-round for transport of natural gas. Estimated volume for the pipeline will be based on well output, but the current projected total gas volume for the ROC/Sagebrush system is approximately 80 MMscfd.

The proposed construction schedule is late summer 2006. Construction will require 4 to 6 weeks. In addition to the 30-foot permanent right-of-way, a 20-foot temporary construction right-of-way will be required.

No Action Alternative: The proposed action would not be implemented; there would be no need for mitigation.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: The existing pipeline is in use, but because of its age and surface location Riata Energy and its pipeline company, Sagebrush, need to replace it for safety. The “wet gas” from these wells can cause freezing in surface lines, there have been leaks in nearby lines of the same age and construction, and Riata is planning to drill additional wells which would require increased pressure.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-49 thru 2-52

Decision Language: “To make public lands available for the siting of public and private facilities through the issuance of applicable land use authorizations, in a manner that provides for reasonable protection of other resource values.”

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River Resource area has been classified as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed action is not located within a ten mile radius of any special designation air sheds or non-attainment areas. The air quality criteria pollutant likely to be most affected by the proposed actions is the level of inhalable particulate matter, specifically particles ten microns or less in diameter (PM₁₀) associated with fugitive dust. In addition, slight increases in the following criteria pollutants: carbon monoxide, ozone (secondary pollutant), nitrogen dioxide, and sulfur dioxide may also occur during construction due to the combustion of fossil fuels associated with construction operations. Also, non-criteria pollutants such as visibility, nitric oxide, air toxics (e.g. benzene) and total suspended particulates (TSP) may also experience slight short term increases as a result of the proposed actions (no national ambient air quality standards have been set for non-criteria pollutants). Unfortunately, no monitoring data is available for the survey area. However, it is apparent that current air quality near the proposed location is good because only one location on the western slope (Grand Junction, CO) is monitoring for criteria pollutants other than PM₁₀. Furthermore, the Colorado Air Pollution Control Division (APCD) estimates the maximum PM₁₀ levels (24-hour average) in rural portions of western Colorado like the Piceance Basin to be near 50 micrograms per cubic meter (µg/m³). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM₁₀ (24-hour average) of 150 µg/m³ (CDPHE 2005).

Environmental Consequences of the Proposed Action: Cumulative impacts detrimental to air quality in the Piceance Creek Basin can be expected as carbon monoxide, ozone (secondary pollutant), nitrogen dioxide, particulate matter, and sulfur dioxide levels are elevated due to increased oil and gas development. Construction equipment producing elemental and organic carbon via fuel combustion combined with surface disturbing activities that leave soils exposed to eolian processes will both increase production of particulate matter (PM₁₀) during construction. Elemental and organic carbon existing in the air as PM₁₀ can reduce visibility and increase the potential of respiratory health problems to exposed parties. However, following initial construction, suggested mitigation, and successful interim reclamation, criteria pollutant levels should return to near pre-construction levels.

Environmental Consequences of the No Action Alternative: Impacts to air quality from the no-action alternative are not anticipated.

Mitigation: The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive particulate matter (fugitive dust) from associated access roads, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. In addition, the application of a BLM approved dust suppressant (e.g. water or chemical stabilization methods) will be required during dry periods when dust plumes are visible at speeds less than or equal to 15 mph. Surfacing access roads with gravels will also help mitigate production of fugitive particulate matter. Land clearing, grading, earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour.

Disturbed areas will be restored to original contours, and revegetated as outlined in the vegetation portion of this EA. Following seeding, woody debris cleared from the ROW will be pulled back over the pipeline to increase effective ground cover and help retain soil moisture.

Construction equipment will be maintained in good operating condition to ensure that engines are running efficiently. Vehicles and construction equipment with emission controls will also be maintained to ensure effective pollutant emission reductions.

CULTURAL RESOURCES

Affected Environment: The original right of way was inventoried for cultural resources in 1984 (Conner 1984, Compliance Dated 10/11/1984). No cultural resources were identified in the pipeline ROW during the initial inventory. Under the current Colorado Protocol with the Colorado SHPO that report is no longer considered as viable or acceptable.

Environmental Consequences of the Proposed Action: If mitigation measures are strictly adhered to there should be no new impacts to cultural resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources under the No Action Alternative.

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

3. All proposed construction related activity must remain within the old existing construction disturbance, including requested temporary use areas and access routes. Any deviations outside are prohibited without a new cultural resources inventory of the expanded work areas. All inventories must be approved by the BLM archaeologist before the use areas can be authorized or utilized.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The noxious weed mullein occurs in disturbed areas associated with past construction of this pipeline right of way in SWSW Sec 33 and Sec 34. The Riata locations being serviced by this pipeline also have infestations of mullein that are currently untreated. The invasive alien cheatgrass is also present throughout the project area on areas of unvegetated soil disturbance associated with roads, well locations and pipelines.

Environmental Consequences of the Proposed Action: The proposed action could create up to 29 acres of new earthen disturbance which will provide safe sites for the establishment of mullein/ cheatgrass and other noxious weeds. If the disturbed areas are not promptly revegetated and noxious/ invasive species eradicated from the site, there will be a long term negative impact both on site and to adjacent plant communities.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: Prior to pipeline construction spray all current infestations of mullein with Escort/and surfactant at a rate of 1 oz per acre. Following pipeline replacement and recontouring, promptly revegetate all disturbed areas with Native Seed mix #3 (see Vegetation). The operator will be required to monitor the project area for a minimum of three years post disturbance and eradicate *all noxious and invasive species* which occur on site using materials and methods approved in advance by the Authorized Officer.

MIGRATORY BIRDS

Affected Environment: The proposed pipeline system involves an existing pipeline corridor that traverses pinyon-juniper woodlands variously interspersed with Wyoming big sagebrush and basin big sagebrush/greasewood valleys. Wyoming big sagebrush has reestablished on the corridor through the woodland types and the valley positions remain largely in an herbaceous state.

A number of migratory birds fulfill nesting functions in these woodland and shrubland habitats during the months of May, June, and July. Species associated with the shrublands are typical and widely represented in the Resource Area and region. Those bird populations identified as having higher conservation interest by the Rocky Mountain Bird Observatory/Partners in Flight program (i.e., Brewer's sparrow, green-tailed towhee) are abundant and well distributed in extensive suitable habitats throughout the Resource Area. Although the project is not expected to involve areas outside the previously disturbed pipeline corridor, species of higher conservation interest associated with adjacent woodlands include: black-throated gray warbler, gray flycatcher, juniper titmouse, pinyon jay, and violet-green swallow. The nesting utility of all habitats associated with the project are constrained either by their position immediately adjacent to a road or because they offer only a narrow linear parcel of sagebrush habitat through a predominant woodland community. Breeding bird density in habitats potentially influenced by pipeline installation would likely not exceed half that expected in more optimal habitats.

Environmental Consequences of the Proposed Action: There are no clear construction timeframes for this project and it is possible that construction could occur during the breeding season. About 1.5 miles of right-of-way (about 32%) would lie immediately adjacent to maintained well access roads where nesting activity would be unlikely within 50 feet of the roadside. The remainder of the project (3.3 miles or about 20 acres) would involve an existing

pipeline corridor) that would not be expected to support more than about a half dozen pair of birds of higher conservation interest.

Throughout the project, birds nesting within 100' of construction disturbance may be subject to levels of disturbance sufficient to fail ongoing nest attempts. These influences would extend to about 100 acres of predominantly pinyon-juniper habitats adjacent to the pipeline corridor. This parcel of woodland habitat during the peak of the breeding season would be expected to support up to 50 pair of migratory birds of higher conservation interest. It is expected that based on project timing (nest phenology and susceptibility to abandonment) and variable tolerance of individual pairs to disturbance about 25 nest efforts would fail as the result of this project in the worst case.

In total, the potential to directly or indirectly affect the nesting activities of migratory birds of higher conservation interest (project conducted entirely within the nesting season) would extend to about 30 or so nesting attempts, 6 directly and 25 nests indirectly. The total number of migratory bird nest attempts potentially influenced by this action would likely approach twice this number.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to disrupt the breeding activities of migratory birds. Alternate actions would have similar or more substantive consequences as those discussed under the proposed action.

Mitigation: To minimize disruption of migratory bird nesting efforts, it is suggested that the project be conducted during the fall of 2006 (i.e., September through December) or deferred until the later part of the breeding season (i.e., after mid-July 2007).

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: No animals listed, proposed, or candidate to the Endangered Species Act inhabit or derive important benefit from the project area. Several BLM sensitive species are possible seasonal (spring through fall) inhabitants of the project vicinity (i.e., Townsend's big-eared bat, and fringed and Yuma myotis, northern goshawk), but rely on mature stands of pinyon and juniper for roosting and nesting substrate and tend to select interior stand positions. Because areas potentially influenced by the proposed action would involve only stand margins along existing pipeline and road corridors which involves primarily younger age class trees, these project sites have no effective utility for goshawk nesting or bat roosting functions.

Environmental Consequences of the Proposed Action: The proposed action would have no reasonable probability of affecting special status animals.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would influence federally listed or BLM sensitive species.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: The area potentially influenced by the proposed and no-action alternatives does not currently support habitats associated with listed animal species, therefore, neither alternative would influence the applicable land health standards.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The operator shall be required to collect and properly dispose of any wastes generated by this project.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: The proposed replacement pipeline is located entirely within the Lower Piceance Creek watershed (fifth level watershed). Sixth and seventh level watersheds likely to be impacted by the proposed actions are Eureka Gulch, Yankee Gulch, and Black Sulphur Creek. The proposed replacement pipeline would cross Black Sulphur Creek (perennial), Yankee Gulch (ephemeral) and additional unnamed ephemeral tributaries to Yankee Gulch and Black Sulphur Creek. Currently the existing pipeline is impeding surface water flow (“buried” pipeline is suspended above channel bottom elevation) in Black Sulphur Creek and is vulnerable to trash accumulation and potential pipe failure. Yankee Gulch and Eureka Gulch are both ephemeral tributaries to Black Sulphur Creek which is a perennial tributary to Piceance Creek. Piceance Creek is a tributary to the White River which is a tributary to the Green River in Utah. The Green River is a tributary to the Colorado River.

Surface water quality in Piceance Creek is described as mixed bicarbonate in the upper drainages and as sodium bicarbonate in the lower drainages (BLM, 2003). Chemical components found in surface waters are attributed to the weathering of surficial materials in the area. The principal

ionic constituents include sodium, calcium, magnesium, bicarbonate, sulfate, chloride, potassium, and fluoride (Tobin 1987). Sodium, bicarbonate, and sulfate levels generally decrease during the spring snowmelt runoff because of the increased amount of water, while chloride and fluoride remain essentially constant. Calcium and magnesium concentrations show small decreases, and potassium increases during the snowmelt. During the irrigation season, sodium becomes concentrated, and calcium and magnesium concentrations increase. Approximately eighty percent of annual flows in Piceance Creek originates as discharge from alluvial and bedrock aquifers (Tobin, 1987).

The “Status of Water Quality in Colorado –2006” (CDPHE 2006b) and Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a) were reviewed for information relating to drainages impacted by the proposed action. Table 1 shows the affected watersheds and associated water quality stream segments to be impacted by the proposed actions.

Table 1:

Watershed	Stream segment	Drainage Basin	Use Protected	303(d) listed	M&E listed	Beneficial Use Classification
Black Sulphur Creek	20	White River	UP	N/A	N/A	Cold aquatic life 1, Recreation 2, Agriculture

(CDPHE 2005a)

Stream segment 20 of the White River Basin is defined as the mainstems of Black Sulphur and Hunter Creeks from their sources to their confluences with Piceance Creek. Segment 20 has not been designated use-protected. An intermediate level of water quality protection applies to waters that have not been designated outstanding waters or use-protected waters. For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review. The state has classified segment 20 as being beneficial for the following uses: Cold aquatic life 1, Recreation 2, and Agriculture (CDPHE 2005a).

Newly promulgated Colorado Regulations Nos. 93 and 94 (CDPHE 2006c and 2006d, respectively) were also reviewed for information related to the proposed project area drainages. Regulation No. 93 is the State’s Section 303(d) list of water-quality-limited segments requiring Total Maximum Daily Loads (TMDLs). The 2006 303(d) list of segments needing development of TMDLs (CDPHE 2006c) includes two segments within the White River - segment 9b, specifically the Flag Creek portion (for impairment from selenium with a low priority for TMDL development) and segment 22, specifically West Evacuation Wash, and Douglas Creek (sediment impairments with a low priority for TMDL development). Regulation 94 is the State’s list of water bodies identified for monitoring and evaluation (CDPHE 2006d), to assess water quality and determine if a need for TMDLs exists. The list includes two White River segments that are potentially impaired – 9 (Flag Creek-pH) and 22 (Soldier Creek- sediment). Segment 20 was not identified.

Ground Water: Surface geology along most of the proposed pipeline route location is Tertiary in age (Uinta Formation) and consists primarily of sandstone and siltstone. The Uinta Formation is

the principle geologic formation of the Upper Piceance Basin Aquifer. Water quality of the Upper Piceance Basin Aquifer is generally characterized by dissolved calcium, magnesium, and bicarbonate along the rim of the Piceance Basin; and by sodium, magnesium, bicarbonate, and sulfate in the central part of the Basin (Tobin, 1987). The proposed pipeline route will also encounter alluvial material associated with Black Sulphur Creek and its associated alluvial aquifer in the drainage bottom where the pipeline would cross Black Sulphur Creek. Alluvial aquifers are recharged by deeper ground water as well as infiltration of snowmelt and rain. Water quality in alluvial aquifers is primarily a function of local geology and communication with deeper groundwater in bedrock aquifers.

Environmental Consequences of the Proposed Action: Surface Water: The proposed action will result in replacement of an existing pipeline which is now exposed within the Black Sulphur Creek channel. Replacing the existing line will help protect against potential adverse environmental impacts resulting from a potential pipeline rupture. However, unearthing of the existing pipeline and burial of replacement line within the confines of the flood prone area of Black Sulphur Creek (and other affected drainages) would leave stream channel and banks vulnerable to erosion at high flows. Increased erosion from disturbed areas would increase sedimentation rates and salt loads directly to surface waters in the Colorado River System deteriorating downstream water quality.

Clearing, grading, and soil stockpiling activities may temporarily alter overland flow and natural groundwater recharge patterns. Near-surface soil compaction caused by construction equipment and vehicles could reduce the soil's ability to absorb water and could increase surface runoff and the potential for ponding. The magnitude and duration of potential impacts to surface runoff and groundwater recharge would depend on soil depth, soil type, vegetation type and density, slope, aspect, erosive force of rainfall or surface runoff, and duration and extent of construction activities. Impacts would likely be greatest immediately following commencement of construction activities and would naturally decrease thereafter due to reclamation activities.

Impacts resulting from discharge of hydrostatic test water on land could include soil erosion and subsequent degradation of water quality, including increased turbidity and sedimentation from hydrostatic test water runoff. If the CDPHE permit authorizes discharges directly into surface waters, high velocity flows could also cause erosion of stream banks and streambeds, resulting in a temporary increase in sediment load. Water discharges could also result in a change in water temperature and dissolved oxygen (DO) levels. DO levels decrease with increasing water temperature and could adversely impact aquatic life in lower reaches of the affected watershed.

Environmental Consequences of the No Action Alternative: The replacement line will not be installed. Riata would continue to use the existing pipeline as is. Potential for adverse environmental consequences resulting from pipeline failure and direct discharge of wet gas to surface water in Black Sulphur Creek would remain high.

Mitigation: Comply with "Gold Book" fourth edition surface operating standards for pipeline constructing (copies of the "Gold Book" fourth edition can be obtained at the WRFO). In addition, the operator will restrict non emergency maintenance activities on pipeline ROW

and associated access roads when soils become saturated to a depth of three inches or more. The operator will be responsible for complying with all local, state, and federal water quality regulations (such as but not limited to Phase I Storm Water Permit, Army Corps Section 404 permit coverage, and Industrial Wastewater/Produced Water Permits).

Surface Water: The **replacement line will be bored beneath perennial Black Sulphur Creek** to reduce surface disturbance to stream channel/banks and minimize sedimentation and salt loading to the Colorado River System. Through normal terrain, the pipeline will be buried to provide a minimum cover of 36 inches. The pipeline will be buried deep enough to avoid problems with irrigation ditches, potential irrigation areas and existing pipelines, as designated by the authorized officer. The pipeline shall be buried with a minimum of four feet of cover in alluvial areas.

The operator will consult with the State of Colorado Water Quality Control Division regarding Stormwater Discharge Permits prior to commencing construction activities. Construction activities that disturb one acre or greater require a Stormwater Discharge Permit. Written documentation to the BLM Authorized Officer is required within 30 days of the ROW approval date to indicate that appropriate permits have been obtained. Written documentation may be a copy of the Stormwater Discharge Permit or an official verification letter from the State Water Quality Control Division to the operator that includes the Permit Certification Number. For further information contact Nate Dieterich, WRFO Hydrologist at 970-878-3831 or Nathan_Dieterich@blm.gov. Appropriate documents may be sent via electronic mail, faxed (970-878-3805), or mailed to Nate Dieterich at the above address.

To mitigate additional soil erosion along the pipeline ROW and reduce the potential increased sediment and salt loading to nearby surface waters, reclamation of all disturbed surfaces will immediately follow pipeline construction. Stockpiled topsoil and spoil piles will be separated to prevent mixing during reclamation efforts. Reclamation efforts will include (but will not be limited to) the following procedures:

- Topsoil and spoil would be placed a minimum of 30 feet from the edge of any flowing water or ephemeral drainage. Erosion and sediment control measures will be installed adjacent to flowing waterbodies to prevent flow of topsoil or spoil into them. Erosion and sediment control measures will be maintained until stream banks and adjacent upland areas are stabilized.
- Stockpiled topsoil segregated from spoil piles will be replaced during reclamation in its respective original position (last out, first in) to minimize mixing of soil horizons.
- Stockpiled soils (spoil and topsoil) will be pulled back over all disturbed surfaces and brought to back to near pre-construction contours.
- The operator will ensure stockpiled topsoil is evenly distributed over the **top** of spoil used in re-contouring efforts.
- All disturbed surfaces will be seeded with a BLM recommended seed mixture, and all slopes exceeding 5 % will be covered with wildlife friendly biodegradable fabrics (such as but not limited to Jute blankets, Curlex, ...) to provide additional protection to topsoil and help retain soil moisture.

- Water bars or dikes shall be constructed across the full width of the disturbed area.
- Following seeding and placement of biodegradable fabrics, all available woody debris cleared during initial construction will be pulled back over the recontoured area to act as flow deflectors and sediment traps. Woody debris will be evenly distributed over the entire portion of the reclaimed area and will not account for more than 20% of total ground cover.
- The operator will be required to monitor all reclaimed areas for signs of erosion and the presence of noxious and invasive plant species. If problems arise the operator will consult with the BLM for further assistance.
- The operator will be responsible for achieving a reclamation success rate of sufficient vegetative ground cover from reclaimed plant species within three growing seasons after the application of seed. The ground cover of reclaimed seed species shall be comparable to that of the nearby undisturbed plant communities at a Potential Natural Community (PNC) state in relation to the seed mix as deemed appropriate by the BLM. Rehabilitation efforts must be repeated if it is concluded that the success rate is below an expectable level as determined by the BLM.
- Natural drainage patterns will be restored and stabilized with a combination of vegetative (seeding) and non-vegetative techniques (e.g. biodegradable fabrics, woody debris, straw waddles, etc).

Refueling and equipment maintenance will take place at least 100 feet from stream banks. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies.

The operator will purchase hydrostatic test water from a local surface or groundwater right holder or a municipality. Sagebrush's construction contractor will be testing only new pipe and will not add any chemicals to the water during hydrostatic testing. Upon completion of each hydrostatic test section, the contractor will either pump the water into the next pipeline segment ready to be tested, discharge the water on land within the construction workspace, or discharge at a stream location authorized in the hydrostatic test water discharge permit to be obtained from the Water Quality Division of CDPHE. The operator will ensure that discharge water is filtered (e.g. silt fence, straw bails/waddles, etc.) before it reaches a stream course.

Finding on the Public Land Health Standard for water quality: Stream segment 20 of the White River Basin currently meets water quality standards set by the state. Many of the upper tributaries which are ephemeral and flow in direct response to storm events do not meet the standards during periods of flow. With implementation of all suggested mitigation measures, water quality in the affected stream segments should continue to meet standards.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The proposed alignment would require one channel crossing of Black Sulphur Creek, one of the larger perennial stream systems in Piceance Basin. The

proposed crossing is located on a small, approximately 1,000 foot reach of BLM-administered channel. Although no site-specific information (e.g., PFC analysis) is available for this land-locked parcel, there is at least modest riparian expression on this reach. Through its lower reaches, the Black Sulphur Creek valley is predominantly privately owned and these reaches tend to strongly influenced by irrigation drawdown and heavy livestock use such that the system would likely be classified as functional-at-risk. Common risk factors associated with these streams include channel entrenchment (i.e., limited floodplain access) and plant communities composed of species that do not offer root systems capable of preventing erosion during high flow events.

Environmental Consequences of the Proposed Action: Although difficult to discern on maps available for analysis, this project does not appear to intersect the channel at a desired right angle. Excavating an oblique pipeline trench (i.e., increasing the length of affected channel) under current stream conditions would increase the probability of compromising bank stability and prompting undesirable channel adjustments (e.g., bank erosion, lateral channel migration) that can have unpredictable consequences for both upstream and downstream channel stability. Relocating the pipeline (or modifying the crossing technique) and applying special reclamation practices as provided in the conditions of approval would promote sufficient redevelopment or maintenance of vegetation characteristics important for long term bank stability.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to influence riparian communities associated with Black Sulphur Creek.

Mitigation: Unless the pipeline is bored beneath the Black Sulphur channel, the pipeline crossing must be relocated perpendicular to the channel at a point selected by the BLM Hydrologist. In any case, any surface disturbance within the channel and its related bank and floodplain features and a 10-foot buffer either side of the channel should be limited to trench width and, unless wholly infeasible, construction, support, and crew vehicles would not be authorized to cross the channel except on established roadways. Special reclamation practices would be employed to aid in reestablishing sufficient bank vegetation to resist undue erosion.

Finding on the Public Land Health Standard for riparian systems: The Black Sulphur Creek channel potentially intersected by this pipeline is unfenced and is managed in conjunction with a preponderance of private land holdings. The current state of this channel likely meets the minimum criteria for Public Land Health, i.e., functional-at-risk, static trend. As conditioned, the proposed and no action alternatives would have no further influence on channel conditions and would serve to maintain the current land health status.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not

applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: The following data is a product of an order III soil survey conducted by the Natural Resources Conservation Service (NRCS) in Rio Blanco County, CO. Table 2 highlights important soil characteristics. A complete summary of this information can be found at the White River Field Office.

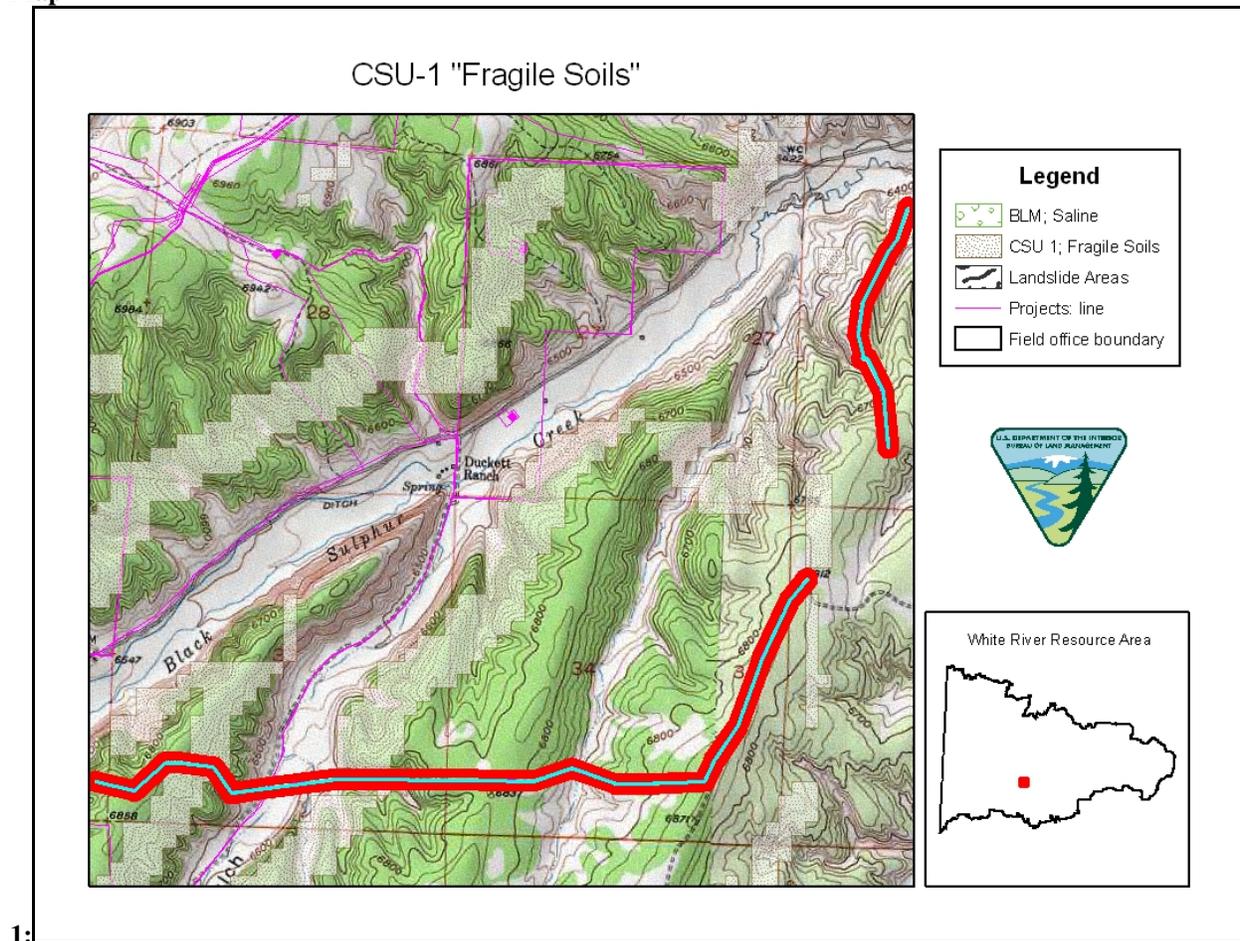
Table 2:

Soil Number	Soil Name	Acres w/in 30 m radius	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock
6	Barcus channery loamy sand	4.78	2-8%	Foothills Swale	<2	Slow	Moderate	>60
33	Forelle loam	1.51	3-8%	Rolling Loam	<2	Medium	Moderate	>60
36	Glendive fine sandy loam	3.74	2-4%	Foothills Swale	2-4	Slow	Slight	>60
64	Piceance fine sandy loam	2.56	5-15%	Rolling Loam	<2	Medium	Moderate to high	20-40
70	Redcreek-Rentsac complex	19.51	5-30%	PJ woodlands/PJ woodlands	<2	Very high	Moderate to high	10-20
73	Rentsac channery loam	48.9	5-50%	Pinyon-Juniper woodlands	<2	Rapid	Moderate to very high	10-20

Control Surface Use (CSU-1) “fragile soils” are mapped at identified portions of the proposed pipeline ROW in map 1. As outlined in the White River ROD/RMP, All surface disturbing activities encountering “fragile soils” will be allowed only after an engineered construction/reclamation plan is submitted by the operator and approved by the Area Manager. The following items must be addressed in the plan:

- How soil productivity will be restored
- How surface runoff will be treated to avoid accelerated erosion such as riling, gullyng, piping, and mass wasting.

Map



1:

6-Barcus channery loamy sand (2 to 8 percent slopes) is a deep, somewhat excessively drained soil found on alluvial fans and in narrow valleys. It formed in alluvium derived from calcareous sandstone and shale. The native vegetation is mainly low shrubs and grasses. Elevation is 5,800 to 6,800 feet. The average annual precipitation is 14 to 16 inches, the average annual air temperature is 42 to 44 degrees F, and the average frost-free period is 80 to 105 days. Typically, the surface layer is pale brown channery loamy sand 6 inches thick. The upper part of the underlying material is light yellowish brown channery sand 10 inches thick, and the lower part to a depth of 60 inches or more is stratified, light yellowish brown and pale brown very channery sand and very channery loamy fine sand. The soil is calcareous throughout. Permeability of the Barcus soil is rapid. Available water capacity is low. Effective rooting depth is 60 inches or more. Runoff is slow, and the hazard of water erosion is moderate.

33-Forelle loam (3 to 8 percent slopes) is a deep, well drained soil located on terraces and uplands. It formed in eolian and alluvial material derived dominantly from sedimentary rock. The native vegetation is mainly low shrubs and grasses. Elevation is 5,800 to 7,200 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 42 to 45 degrees F, and the average frost-free period is 80 to 105 days. Typically, the surface layer is pale

brown loam 4 inches thick. The upper 12 inches of the subsoil is yellowish brown clay loam, and the lower 5 inches is light yellowish brown loam. The substratum to a depth of 60 inches or more is very pale brown loam. Permeability of this Forelle soil is moderate. Available water capacity is high. Effective rooting depth is 60 inches or more. Runoff is medium, and the hazard of water erosion is moderate. If this unit is used for urban development, the main limitations are low soil strength, the potential for shrinking and swelling, and the hazard of frost action. The possibility of settlement can be minimized by compacting the building site before construction is begun. If buildings are constructed on this unit, properly designing foundations and footings and diverting runoff away from buildings help to prevent structural damage because of shrinking and swelling. Access roads should be designed to provide adequate cut-slope grade, and drains are needed to control surface runoff and keep soil losses to a minimum.

36-Glendale fine sandy loam (2-4 percent slopes) is a deep, well drained soil found along drainages on alluvial valley floors. It formed in alluvium. Elevation is 5,800 to 7,200 feet. The average annual precipitation is 14 to 17 inches, the average annual air temperature is 42 to 45 degrees F, and the average frost-free period is 80 to 105 days.

Typically, the surface layer is pale brown fine sandy loam 6 inches thick. The underlying material to a depth of 60 inches or more is very pale brown, stratified fine sandy loam that has thin lenses of loamy fine sand to sandy clay loam. The soil is calcareous throughout. In some areas the surface layer is channery fine sandy loam. Permeability of this Glendale soil is moderately rapid. Available water capacity is moderate. Effective rooting depth is 60 inches or more. Runoff is slow, and the hazard of water erosion is slight. The soil is subject to rare periods of flooding.

64-Piceance fine sandy loam (5 to 15 percent slopes) is a moderately deep, well drained soil found on uplands and broad ridgetops. It formed in eolian material and colluvium derived dominantly from sandstone. The native vegetation is mainly low shrubs, grasses, and a few pinyon trees. Elevation is 6,300 to 7,500 feet. The average annual precipitation is 15 to 18 inches, the average annual air temperature is 42 to 45 degrees F, and the average frost-free period is 80 to 105 days. Typically, the surface layer is brown fine sandy loam 4 inches thick. The upper 5 inches of the subsoil is brown loam, and the lower 13 inches is light yellowish brown loam. The substratum is very pale brown channery loam 8 inches thick. Hard sandstone is at a depth of 30 inches. Depth to sandstone ranges from 20 to 40 inches. Permeability of this Piceance soil is moderate. Available water capacity is moderately low. Effective rooting depth is 20 to 40 inches. Runoff is slow to medium, and the hazard of water erosion is moderate to high.

70-Redcreek-Rentsac complex (5 to 30 percent slopes) is located on mountainsides and ridges. Areas are elongated and are 40 to 300 acres. The native vegetation is mainly pinyon and juniper trees with an understory of shrubs and grasses. Elevation is 6,000 to 7,400 feet. The average annual precipitation is 14 to 18 inches, the average annual air temperature is 42 to 45 degrees F, and the average frost-free period is 85 to 105 days. This unit is 60 percent Redcreek sandy loam and 30 percent Rentsac channery loam. The Redcreek soil is shallow and well drained. It formed in residual and eolian material derived dominantly from sandstone. Typically, the surface layer is brown sandy loam about 4 inches thick. The next layer is brown, calcareous

sandy loam about 7 inches thick. The underlying material is very pale brown, calcareous channery loam 5 inches thick. Hard sandstone is at a depth of 16 inches. Depth to hard sandstone or hard shale ranges from 10 to 20 inches. Permeability of the Redcreek soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

The Rentsac soil is shallow and well drained. It formed in residuum derived dominantly from sandstone. Typically, the upper part of the surface layer is grayish brown channery loam about 5 inches thick. The next layer is brown very channery loam about 4 inches thick. The underlying material is very pale brown extremely flaggy loam 7 inches thick. Hard sandstone is at a depth of 16 inches. Depth to hard sandstone or hard shale ranges from 10 to 20 inches. Permeability of the Rentsac soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

73-Rentsac channery loam (5 to 50 percent slopes) is a shallow, well drained soil located on ridges, foothills, and side slopes. It formed in residuum derived dominantly from calcareous sandstone. The native vegetation is mainly pinyon, juniper, brush, and grasses. Elevation is 6,000 to 7,600 feet. The average annual precipitation is 14 to 18 inches, the average annual air temperature is 42 to 45 degrees F, and the average frost-free period is 80 to 105 days. Typically, the surface layer is grayish brown channery loam about 5 inches thick. The next layer is very channery loam about 4 inches thick. The underlying material is extremely flaggy light loam 7 inches thick. Hard sandstone is at a depth of 16 inches. Depth to sandstone ranges from 10 to 20 inches. Permeability of this Rentsac soil is moderately rapid. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is moderate to very high.

Environmental Consequences of the Proposed Action: Clearing and grading of the pipeline right of way will remove protective vegetative cover from the affected soils accelerating the erosion process. Construction activities may result in soil compaction which would decrease infiltration rates increasing potential for erosive overland flows. Grading, trenching, and backfilling activities could cause mixing of the soil horizons and could result in reduced soil fertility reducing revegetation potential. Much of the affected soils are derived from a calcareous protolith. As a result, dissolution of calcium carbonate may lead to soil piping and sinkhole formation along the pipeline ROW if proper drainage relief structures are not in place. In addition, eroded topsoil and subsoil may increase salt loading and sedimentation to surface waters down gradient of disturbed areas. Increased sedimentation/salt loads could adversely impact water quality and aquatic life.

Any leaks or spills of environmentally unfriendly substances (e.g. diesel fuel) could compromise the productivity of affected soils. Decreased soil productivity will hinder reclamation efforts and leave soils further exposed to erosional processes.

Environmental Consequences of the No Action Alternative: None

Mitigation: All surface disturbing activities encountering “fragile soils” located in T.2 S., R.98W., section 33, in the SW¼ and SE¼ will be authorized only after an engineered construction/reclamation plan is submitted by the operator and approved by the Area Manager. The following items must be addressed in the plan:

- How soil productivity will be restored
- How surface runoff will be treated to avoid accelerated erosion such as riling, gullyng, piping, and mass wasting.

Finding on the Public Land Health Standard for upland soils: Currently, soils within the project area are meeting land health standards for upland soils. Following proper mitigation techniques and reclamation procedures, soil health should remain unchanged from current conditions.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Most of the existing pipeline right of way was constructed through pinyon-juniper woodland and, where it crosses Yankee Gulch and the two drainages immediately east of Yankee, former basin big sagebrush. The pinyon-juniper areas are woodland sites and the drainages are Foothill Swale ecological sites.

Environmental Consequences of the Proposed Action: The proposed action could create up to 29 acres of new earthen disturbance. In terms of plant community composition, structure and function, the principal negative impact over the long term would occur if mullein/cheatgrass or other noxious weeds are allowed to establish and proliferate on the disturbed areas resulting from pipeline construction and then spread onto the adjacent plant communities.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation

Mitigation: Promptly revegetate all disturbed areas with Native Seed mix #3 (see below). The operator will be required to monitor the project area for a minimum of three years post disturbance and eradicate all noxious and invasive species which occur on site using materials and methods approved in advance by the Authorized Officer.

Native Seed mix #3		
Species/Variety	PLS/acre	Range sites
Western wheatgrass (Rosanna)	2	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)
Bluebunch wheatgrass (Whitmar)	2	
Thickspike wheatgrass (Critana)	1	
Indian ricegrass (Rimrock)	2	
Fourwing saltbush (Wytana)	1	
Utah sweetvetch	1	

Revegetation will commence immediately after construction and will not be delayed until the following fall. Debris will not be scattered on the pipeline until after seeding operations are completed. Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application.

If construction/development occurs between April 15 and November 15, the operator will be required to water or surface access roads to reduce airborne dust and damage to roadside vegetation communities.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Vegetation in the project area currently meets the Standard on a watershed and landscape basis and is expected to continue to meet the Standard in the future following implementation of the proposed action.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The proposed alignment would require a channel crossing of Black Sulphur Creek, one of the larger perennial stream systems in Piceance Basin. The proposed crossing is located on a small, approximately 1000-foot reach of BLM-administered channel. In its upper reaches (at least to Yankee Gulch), the stream supports a self-sustaining fishery composed of stocked non-native forms of rainbow and cutthroat trout. Although the channel is degraded in its lower reaches (see Riparian section above), it is likely that trout disperse downstream throughout the system when the channel holds sufficient flow.

Environmental Consequences of the Proposed Action: Although difficult to discern on maps available for analysis, this project does not appear to intersect the channel at a desired right angle. Excavating an oblique pipeline trench (i.e., increasing the length of affected channel) under current stream conditions would increase the probability of compromising bank stability and prompting undesirable channel adjustments (e.g., bank erosion, lateral channel migration) that can have unpredictable consequences for both upstream and downstream channel stability. Although current aquatic habitat conditions at the project site are not amenable to the support of fisheries, a downcutting event or lateral channel migration prompted by inappropriate channel disturbance could indirectly influence upstream channel conditions or result in channel modifications that would limit the potential for this stream segment to respond to beneficial management practices in the long term. Relocating the pipeline (or modifying the crossing technique) and applying special reclamation practices as provided in the conditions of approval would promote sufficient redevelopment or maintenance of vegetation characteristics important for long term bank stability.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to influence riparian communities associated with Black Sulphur Creek.

Mitigation: See mitigation presented in the Riparian and Hydrology sections.

Finding on the Public Land Health Standard for riparian systems: The Black Sulphur Creek channel potentially intersected by this pipeline is unfenced and is managed in conjunction with a preponderance of private land holdings. The current state of this channel likely meets the minimum criteria for Public Land Health, i.e., functional-at-risk, static trend. As conditioned, the proposed and no action alternatives would have no further influence on aquatic habitat conditions and would serve to maintain the current land health status.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The proposed pipeline system is encompassed by general mid-elevation winter ranges of deer and elk. These ranges are most consistently occupied by the largest number of animals from October through January and again in April and early May. About 30% of the proposed pipeline corridor is situated immediately adjacent to maintained well access roads and the remaining sections parallel an existing pipeline corridor that does not sustain regular vehicle use. Access throughout the proposed project area is privately controlled, which limits the frequency and intensity of vehicle use.

Because pipeline installation would remain within the existing pipeline right-of-way, the project would not directly involve woodland raptor nest habitat. However, raptors that may nest within about 300' of the woodland margin may be subjected to adverse levels of disturbance depending on the timing and intensity of construction work. No raptor surveys have been conducted on this project to date. Other non-game wildlife using this area are typical and widely distributed in extensive like-habitats across the Resource Area and northwest Colorado; there are no narrowly endemic or highly specialized species known to inhabit those lands potentially influenced by this action.

Environmental Consequences of the Proposed Action: The proposed action, as conditioned, would not add to the local road network and would, therefore, avoid density-related big game effects attributable to vehicle use (e.g., elevated energy demands, habitat disuse). Vegetation clearing of the right-of-way and the reduction in the herbaceous and woody forage base for big game (about 30 acres) would be discountable. About 30% of the proposed surface disturbance would occur in situations where effective habitat utility is currently compromised by existing road use. Herbaceous forage availability would be largely regained through reclamation by the following growing season. Similarly, the loss of forage and cover for non-game animals would be negligible at the local scale.

In the event this project is implemented during timeframes that coincide with the raptor nest season (i.e., 1 April through 15 August), it will be necessary to survey the entire length of the right-of-way for nesting raptors prior to construction or clearing activity as per established BLM protocols. Timing limitations may be imposed in the area within 0.25 mile of active nest efforts as necessary to prevent nest abandonment, depriving the young of adult visitation (necessary brooding or feeding), or premature fledging of young birds.

Environmental Consequences of the No Action Alternative: No immediate action would be authorized that would have potential to adversely modify terrestrial wildlife habitats or be capable of disrupting animal behavior within the project area.

Mitigation: Locate any necessary pipeline facilities mentioned in the proposed action (e.g., valves, pigging facilities, cathodic protection equipment, and related aboveground appurtenances) along existing, recognized BLM or county roads such that no residual vehicle access would be required on those portions of the ROW that deviate from established roadways.

Those portions of the proposed ROW that deviate from the established road network will be conditioned to effectively preclude further vehicular travel, including ATVs (e.g., redistributing woody shrub material, fencing). The grantee would be responsible for maintaining this condition on the ROW through the term of the grant.

As an aid in regaining forage and cover properties for resident wildlife, excess rock will not be allowed to be used as an erosion control measure (as per section III F of the applicant’s proposed action), unless specifically authorized in writing by the Authorized Officer.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project area presently meets the public land health standards for terrestrial animal communities. As conditioned, the proposed action and no-action alternatives would have negligible short and long term influence on the utility or function of big game, raptor, or nongame habitats in the vicinity of these sites. Prior to successful rehabilitation, pipeline right-of-ways cannot be considered as meeting the definition of the land health standard, but this condition is presumably short term and the overall shrubland communities comprising this landscape retain sufficient character to support viable populations of resident game and nongame species. Thus, in an overall context, lands affected by the no-action or proposed action would continue to meet the land health standard for terrestrial animals.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management		X	
Forest Management			X
Geology and Minerals		X	
Hydrology/Water Rights			X
Law Enforcement		X	
Noise		X	
Paleontology			X

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Rangeland Management		X	
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

ACCESS AND TRANSPORTATION

Affected Environment: Approximately 4100 feet of the proposed action will occur within an area where motorized travel is limited to existing routes from Oct 15th through May 1st of each year while the remaining 13,000 feet of the action is located in an area where motorized travel is limited to existing routes year-round. Pipeline route crosses BLM roads 1182 and 1183 several times.

Environmental Consequences of the Proposed Action: If pipeline trench is left open it will inhibit the use of BLM roads 1182 and 1183 as well the use of unnumbered side routes leaving BLM roads 1182 and 1183. Open trench will create a hazardous situation for public land users.

Environmental Consequences of the No Action Alternative: None.

Mitigation: Construction warning signs will be placed on all BLM routes that will be impacted. Trenches shall not be open longer than 24 hours to provide for public safety.

FOREST MANAGEMENT

Affected Environment: The proposed project will cross approximately 5,770 acres of pinyon/juniper woodland. These woodlands were removed during construction of the previous pipeline.

Environmental Consequences of the Proposed Action: The proposed action should be within the confines of the previous disturbance and no woodland species should be removed by construction activities.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: In the event that work is conducted which would remove woodland species the operator will contact the authorized office so that an evaluation can be conducted, fees determined for materials removed and reclamation determined.

HYDROLOGY AND WATER RIGHTS

Affected Environment: The proposed replacement pipeline is located entirely within the Lower Piceance Creek watershed (fifth level watershed). Sixth and seventh level watersheds likely to be impacted by the proposed actions are Eureka Gulch, Yankee Gulch, and Black Sulphur Creek. The proposed replacement pipeline would cross Black Sulphur Creek (perennial), Yankee Gulch (ephemeral) and additional unnamed ephemeral tributaries to Yankee Gulch and Black Sulphur Creek. Currently the existing pipeline is impeding surface water flow (“buried” pipeline is suspended above channel bottom elevation) in Black Sulphur Creek and is vulnerable to trash accumulation and potential pipe failure. Yankee Gulch and Eureka Gulch are both ephemeral tributaries to Black Sulphur Creek which is a perennial tributary to Piceance Creek. Piceance Creek is a tributary to the White River which is a tributary to the Green River in Utah. The Green River is a tributary to the Colorado River.

Recorded stream flow peaks from USGS gaging station 09306175 located in Black Sulphur Creek near the confluence with Piceance Creek was reviewed to assess potential flow volumes near the project area. Table X outlines stream flow peaks by water year from 1975 to 1983.

Table 1: Black Sulphur Creek USGS Gaging station 09306175 (recorded stream flow peaks)

Rio Blanco County, Colorado			
Hydrologic Unit Code 14050006			
Latitude 39°52'17", Longitude 108°17'13" NAD27			
Drainage area 103 square miles			
Gage datum 6,130.00 feet above sea level NGVD29			
Water Year	Date	Gage Height (feet)	Stream flow (cfs)
1975	6/7/75	1.56	44
1976	5/21/76	1.42	22
1977	9/12/77	2.33	20
1978	2/26/78	1.86	7.9
1979	5/29/79	2.47	52
1980	5/14/80	2.86	72
1981	7/18/81	3.56	144
1982	8/17/82	2.37	43
1983	8/29/83	5.4	346

Data obtained online at: <http://waterdata.usgs.gov/co/nwis/peak?>

Stream flows in Piceance Creek and its tributaries (Black Sulphur Creek) generally peak in mid spring as a result of high elevation snowmelt and periodically during late summer and early fall in response to high intensity precipitation events. Ephemeral drainages flow only in direct response to snowmelt and intense summer and early autumn storms. Approximately 98% of the precipitation in the Piceance Basin is lost to evapotranspiration. The remaining water runs off rapidly and replenishes streamflow or recharges bedrock and alluvial aquifers. Ground water recharge areas generally are located in higher parts of the drainage basin. The recharge moves

slowly laterally and downward into the upper aquifer system, passes through the Mahogany zone (leaky confining unit) and enters the lower aquifer system through fractures and solution openings. The water in the upper and lower aquifers moves horizontally through the basin to the discharge areas. In the Piceance drainage basin, the water eventually moves upward back through the aquifer system where it discharges into the valley-fill alluvial aquifer or emerges as springs in the stream valleys (Taylor 1987). No BLM springs or water wells have been identified within 0.5 miles of any surface disturbing activities associated with the proposed actions.

The stream banks of Piceance Creek (and tributaries) are generally composed of sand, silt, and clay particles that are less than about one-tenth of an inch in diameter. The bank materials erode easily when stream discharge increases during peak flow conditions. Bank erosion is probably most prominent during the spring snowmelt when high flows persist for several days. The bank material absorbs a large amount of water, becomes soft and easily removable, and sloughs into the stream in large clumps. The stream bed of Piceance Creek is composed of silt, sand, gravel, and occasional cobbles, with pockets of fine material where the velocity of the stream generally is slow. Coarse streambed materials normally move only under peak flow conditions (Norman 1987).

Environmental Consequences of the Proposed Action: The proposed action will result in replacement of an existing pipeline which is now exposed within the Black Sulphur Creek channel. Replacing the existing line will help protect against potential adverse environmental impacts resulting from a potential pipeline rupture. However, unearthing of the existing pipeline and burial of replacement line within the confines of the flood prone area of Black Sulphur Creek (and other affected drainages) would leave stream channel and banks vulnerable to erosion at high flows. Increased erosion from disturbed areas would increase sedimentation rates. Increased sediment loads to local surface water drainages will result in a sediment rich system. Sediment rich systems are characterized by deposition and high width to depth ratios (W/D ratio) (wide shallow channels). As the W/D ratio increases, the hydraulic stress against the banks also increases and bank erosion is accelerated. Increases in the sediment supply to the channel develop from bank erosion, reducing the systems capability to transport sediment. As a result, deposition occurs, further accelerating bank erosion, and the cycle continues (Rosgen, 1996). In addition, the proposed stream crossing of Black Sulphur Creek is currently designed to cross the channel at an angle NOT perpendicular the thalweg which will leave channel bottom and banks even more vulnerable to erosion and bank cutting during high flow events.

Furthermore, construction activities may disrupt natural surface and ground water flow patterns. Altered flow patterns could disrupt natural surface and ground water recharge/discharge patterns. Changes to natural recharge/discharge patterns could have adverse impacts on stream channel morphology, riparian areas and aquatic life.

Environmental Consequences of the No Action Alternative: The existing pipeline would not be replaced. Within the Black Sulphur Creek channel, the pipeline would continue to act as a sediment trap which may alter stream channel and bank stability above and below the crossing.

Mitigation: To preserve stream channel and bank stability in Black Sulphur Creek, the operator will cut and remove the portion of existing pipeline exposed on the channel bottom and banks. Existing pipeline segments immediately adjacent to stream banks (~30') will remain in place to avoid additional impacts to stream channel/bank morphology and existing riparian communities. The remaining portion of the pipeline will be removed as outlined in the proposed action.

The **replacement line will be bored beneath perennial Black Sulphur Creek at an angle perpendicular to the thalweg** to reduce surface disturbance to stream channel/banks and minimize impacts to channel/bank morphologic conditions above and below the site. Through normal terrain, the pipeline will be buried to provide a minimum cover of 36 inches. The pipeline will be buried deep enough to avoid problems with irrigation ditches, potential irrigation areas and existing pipelines, as designated by the authorized officer. The pipeline shall be buried with a minimum of four feet of cover in alluvial areas.

For additional mitigation measures refer to Water Quality portion of this document.

PALEONTOLOGY

Affected Environment: The proposed project is located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM WRFO has classified as a Condition I fossil bearing formation meaning it is known to produce scientifically important fossil resources.

Environmental Consequences of the Proposed Action: If at any time it becomes necessary to excavate into the underlying rock to bury any portion of the proposed pipeline or to prepare any construction surface there is the potential to impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to paleontological resources under the No Action Alternative.

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator

will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

If, at any time, it becomes necessary to excavate into the underlying rock to bury any pipeline or level/prepare any construction then a paleontological monitor shall be present during all such excavation.

REALTY AUTHORIZATIONS

Affected Environment: The proposed pipeline follows the route of COC20507 and COC20507B. These two pipeline rights-of-way expired in 2005 when KN Energy did not renew them. Riata had leased the lines and was still using them. The resulting trespass will be resolved with COC70192. The line follows RBC Rd 85 and BLM Rd 1019. Other linear facilities in the area are: Riata's access road COC55123 and pipeline COC24022. Sagebrush is currently constructing a new line, COC69874, which will be used for a tie-in in section 32. A segment at each end of the route is on private property in T.2S., R.98W., sections 32 and 23, and the access roads cross private property. The proponent has not requested authorization to rebuild COC20507A

Environmental Consequences of the Proposed Action: Riata's right-of-way for the existing line will expire December 31, 2007. The replacement line would be authorized to Sagebrush as COC70320, and the temporary construction area will be a 3-year authorization. All construction would take place within the existing ROW and the proponent has not requested any temporary use areas at this time. The holder must request authorization for any work areas, including those needed for boring or otherwise crossing Black Sulphur Creek which would require working outside the existing ROW boundaries. Authorization for use of public lands implies no rights on privately held lands and the holder is responsible for obtaining agreements from the affected private landowners for access, pipeline right-of-way and any temporary use areas.

Environmental Consequences of the No Action Alternative: There would be no impacts from construction. The existing pipeline is old and may not hold up under pressure, creating an emergency situation.

Mitigation: 1. Colorado One Call must be initiated prior to any earth moving. 2. Holder must obtain a separate agreement for access, pipeline right-of-way, and temporary use areas with the private landowners and provide documentation thereof to the BLM before construction begins. 3. If additional temporary work areas become necessary, such as those needed for boring operations, the holder must apply for authorization prior to use to allow time for the permitting process.

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The project areas area has been delineated a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

Environmental Consequences of the Proposed Action: The public will lose approximately 100 acres of dispersed recreation potential during construction. The public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If action coincides with hunting seasons (September through November) it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pads and roads, an increase of traffic could be expected increasing the likelihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Environmental Consequences of the No Action Alternative: No loss of dispersed recreation potential and no impact to hunting recreationists.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The proposed action would be located in an area with a VRM III classification. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: The level of change to the characteristic landscape would be low, since there is already an existing pipeline in place. Temporary change in the growth stage of vegetation could attract the attention of a casual observer, but should not dominate the view. By painting all above ground facilities Juniper Green to blend with and mimic the surrounding vegetation, the level of change to the

characteristic landscape should be low, and the objectives of the VRM III classification would be retained.

Environmental Consequences of the No Action Alternative: There would be environmental consequences.

Mitigation: All permanent (on-site for six months or longer) structures, facilities, and equipment placed on-site shall be painted Munsell Soil Color Chart Juniper Green or equivalent within six months of installation.

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts for each resource value that would be affected by from oil and gas development were analyzed in the White River Resource Area Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) completed in June 1996. Current development, including the proposed action, has not exceeded the cumulative impacts from the foreseeable development analyzed in the PRMP/FEIS.

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Tweto, Ogden

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: none

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation, Rangeland Management
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species
Melissa J. Kindall	Hazmat Collateral; Range Technician	Wastes, Hazardous or Solid; Wild Horses
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Ed Hollowed	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Nate Dieterich		Soils
Ed Hollowed	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Linda Jones	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2006-189-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve the proposed action to replace 19,477 feet of existing buried and surface pipeline with buried steel line with the mitigation measures listed below.

MITIGATION MEASURES:

1. The holder is responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. To minimize production of fugitive particulate matter (fugitive dust) from associated access roads, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. To reduce airborne dust and damage to roadside vegetation communities, the holder is required to apply a BLM approved dust suppressant (e.g. water or chemical stabilization methods) during dry periods (i.e. between April 15 and November 15) or when dust plumes are visible at speeds less than or equal to 15 mph. Surfacing access roads with gravels will also help mitigate production of fugitive particulate matter if requested by the BLM. Land clearing, grading, earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour.
2. Construction equipment will be maintained in good operating condition to ensure that engines are running efficiently. Vehicles and construction equipment with emission controls will also be maintained to ensure effective pollutant emission reductions
3. The holder is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or **archaeological sites**, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the holder is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the holder as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the holder will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the holder wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the holder will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the holder will then be allowed to resume construction.

4. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
5. All proposed construction related activity must remain within the old existing construction disturbance, including requested temporary use areas and access routes. Any deviations outside are prohibited without a new cultural resources inventory of the expanded work areas. All inventories must be approved by the BLM archaeologist before the use areas can be authorized or utilized.
6. Prior to pipeline construction, the holder shall conduct an inventory of existing noxious and invasive species (weeds). All current infestations of mullein will be treated with Escort/and surfactant at a rate of 1 oz per acre. The holder shall monitor the project area for a minimum of three years post disturbance and control *all noxious and invasive species* which occur on site using materials and methods approved in advance by the Authorized Officer.
7. To minimize disruption of migratory bird nesting efforts, construction shall take place in the fall of 2006 (September through December) or deferred until the later part of the breeding season (after mid-July 2007). The holder may request modification of this stipulation.
8. The holder shall be required to collect and properly dispose of any wastes generated by this project.
9. The holder shall comply with “Gold Book” fourth edition surface operating standards for pipeline constructing (copies of the “Gold Book” fourth edition can be obtained at the WRFO).

10. The holder will restrict non emergency maintenance activities on the pipeline ROW and associated access roads when soils become saturated to a depth of three inches or more.
11. The holder is responsible for complying with all local, state, and federal water quality regulations (such as but not limited to Phase I Storm Water Permit, Army Corps Section 404 permit coverage, and Industrial Wastewater/Produced Water Permits). The holder will consult with the State of Colorado Water Quality Control Division regarding Stormwater Discharge Permits prior to commencing construction activities. Construction activities that disturb one acre or greater require a Stormwater Discharge Permit. Written documentation to the BLM Authorized Officer is required within 30 days of the ROW approval date to indicate that appropriate permits have been obtained. Written documentation may be a copy of the Stormwater Discharge Permit or an official verification letter from the State Water Quality Control Division to the holder that includes the Permit Certification Number. For further information contact Nate Dieterich, WRFO Hydrologist at 970-878-3831 or Nathan_Dieterich@blm.gov. Appropriate documents may be sent via electronic mail, faxed (970-878-3805), or mailed to Nate Dieterich at the above address.
12. To mitigate additional soil erosion along the pipeline ROW and reduce the potential increased sediment and salt loading to nearby surface waters, reclamation of all disturbed surfaces will immediately follow pipeline construction. Stockpiled topsoil and spoil piles will be separated to prevent mixing during reclamation efforts. Reclamation efforts will include (but will not be limited to) the following procedures:
 - Topsoil and spoil would be placed a minimum of 30 feet from the edge of any flowing water or ephemeral drainage. Erosion and sediment control measures will be installed adjacent to flowing waterbodies to prevent flow of topsoil or spoil into them. Erosion and sediment control measures will be maintained until stream banks and adjacent upland areas are stabilized.
 - Stockpiled topsoil segregated from spoil piles will be replaced during reclamation in its respective original position (last out, first in) to minimize mixing of soil horizons.
 - Stockpiled soils (spoil and topsoil) will be pulled back over all disturbed surfaces and brought to back to near pre-construction contours.
 - The holder will ensure stockpiled topsoil is evenly distributed over the **top** of spoil used in re-contouring efforts.
 - All disturbed surfaces will be seeded with a BLM recommended seed mixture, and all slopes exceeding 5 % will be covered with wildlife friendly biodegradable fabrics (such as but not limited to Jute blankets, Curlex, etc.) to provide additional protection to topsoil and help retain soil moisture.
 - Water bars or dikes shall be constructed across the full width of the disturbed area.
 - Following seeding and placement of biodegradable fabrics, all available woody debris cleared during initial construction will be pulled back over the recontoured area to act as flow deflectors and sediment traps. Woody debris will be evenly distributed over the entire portion of the reclaimed area and will not account for more than 20% of total ground cover.

- The holder will be required to monitor all reclaimed areas for signs of erosion and the presence of noxious and invasive plant species. If problems arise the holder will consult with the BLM for further assistance.
- The holder will be responsible for achieving a reclamation success rate of sufficient vegetative ground cover from reclaimed plant species within three growing seasons after the application of seed. The ground cover of reclaimed seed species shall be comparable to that of the nearby undisturbed plant communities at a Potential Natural Community (PNC) state in relation to the seed mix as deemed appropriate by the BLM. Rehabilitation efforts must be repeated if it is concluded that the success rate is below an expectable level as determined by the BLM.
- Natural drainage patterns will be restored and stabilized with a combination of vegetative (seeding) and non-vegetative techniques (e.g. biodegradable fabrics, woody debris, straw waddles, etc).
- As an aid in regaining forage and cover properties for resident wildlife, excess rock will not be allowed to be used as an erosion control measure (as suggested in Section III F Construction Methods and the Dust Control Plan submitted by the applicant), unless specifically authorized in writing by the Authorized Officer

13. Refueling and equipment maintenance will take place at least 100 feet from stream banks.

14. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies.

15. The holder will purchase hydrostatic test water from a local surface or groundwater right holder or a municipality. Sagebrush's construction contractor will be testing only new pipe and will not add any chemicals to the water during hydrostatic testing. Upon completion of each hydrostatic test section, the contractor will either pump the water into the next pipeline segment ready to be tested, discharge the water on land within the construction workspace, or discharge at a stream location authorized in the hydrostatic test water discharge permit to be obtained from the Water Quality Division of CDPHE. The holder will ensure that discharge water is filtered (e.g. silt fence, straw bails/waddles, etc.) before it reaches a stream course.

16. Unless the pipeline is bored beneath the Black Sulphur channel, the pipeline crossing must be relocated perpendicular to the channel at a point selected by the BLM Hydrologist. In any case, any surface disturbance within the channel and its related bank and floodplain features and a 10-foot buffer either side of the channel should be limited to trench width and, unless wholly infeasible, construction, support, and crew vehicles would not be authorized to cross the channel except on established roadways. Special reclamation practices would be employed to aid in reestablishing sufficient bank vegetation to resist undue erosion.

17. All surface disturbing activities encountering "fragile soils", located in T. 2S., R. 98W., in the south half of section 32, will be allowed only after an engineered construction/ reclamation plan is submitted by the holder and approved by the Field Office Manager. The following items must be addressed in the plan:

- How soil productivity will be restored
- How surface runoff will be treated to avoid accelerated erosion such as riling, gullyng, piping, and mass wasting.

18. All disturbed areas will promptly be restored to original contours and revegetated with Native Seed mix #3 (see below). Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application. Following seeding, woody debris cleared from the ROW will be pulled back over the pipeline to increase effective ground cover and help retain soil moisture.

Native Seed mix #3		
SPECIES/ VARIETY	# PLS/ACRE	RANGE SITE TYPES
Western wheatgrass (Rosanna)	2	Gravelly 10"-14", Pinyon/Juniper
Bluebunch wheatgrass (Whitmar)	2	Woodland, Stony Foothills, 147
Thickspike wheatgrass (Critana)	1	(Mountain Mahogany)
Indian ricegrass (Rimrock)	2	
Fourwing saltbush (Wytana)	1	
Utah sweetvetch	1	

19. Revegetation will commence immediately after construction and will not be delayed until the following fall. The holder will be required to monitor the project area for a minimum of three years post disturbance and control all noxious and invasive species which occur on-site using materials and methods approved in advance by the Authorized Officer. Debris will not be scattered on the pipeline until after seeding operations are completed.
20. Locate any necessary pipeline facilities mentioned in the proposed action (e.g., valves, pigging facilities, cathodic protection equipment, and related aboveground appurtenances) along existing, recognized BLM or county roads such that no residual vehicle access would be required on those portions of the ROW that deviate from established roadways.
21. Those portions of the proposed ROW that deviate from the established road network will be conditioned to effectively preclude further vehicular travel, including ATVs (e.g., redistributing woody shrub material, fencing). The grantee would be responsible for maintaining this condition on the ROW through the term of the grant.
22. Construction warning signs will be placed on all BLM routes that will be impacted. Trenches shall not be open longer than 24 hours to provide for public safety.
23. In the event that any trees are removed during construction, the holder will contact the authorized office so that an evaluation can be conducted. If needed, fees will be determined for materials removed and reclamation determined.
24. To preserve stream channel and bank stability in Black Sulphur Creek, the holder will cut and remove the portion of existing pipeline exposed on the channel bottom and banks. Existing pipeline segments immediately adjacent to stream banks (~30') will remain in place to avoid additional impacts to stream channel/bank morphology and existing riparian

communities. The remaining portion of the pipeline will be removed as outlined in the proposed action.

25. The **replacement line will be bored beneath perennial Black Sulphur Creek at an angle perpendicular to the thalweg** (at a right angle to the stream bed) to reduce surface disturbance to stream channel/banks and minimize impacts to channel/bank morphologic conditions above and below the site. Through normal terrain, the pipeline will be buried to provide a minimum cover of 36 inches. The pipeline will be buried deep enough to avoid problems with irrigation ditches, potential irrigation areas and existing pipelines, as designated by the authorized officer. The pipeline shall be buried with a minimum of four feet of cover in alluvial areas.
26. The holder is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the holder is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the holder as to:
 - whether the materials appear to be of noteworthy scientific interest
 - the mitigation measures the holder will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)If the holder wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the holder will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the holder will then be allowed to resume construction.
28. If, at any time, it becomes necessary to excavate into the underlying rock to bury any pipeline or level/prepare any construction then a paleontological monitor shall be present during all such excavation.
29. Colorado One Call must be initiated prior to any earth moving.
30. Holder must obtain a separate agreement for access, pipeline right-of-way, and temporary use areas with the private landowners and provide documentation thereof to the BLM before construction begins.
31. If additional temporary work areas become necessary, such as those needed for boring operations, the holder must apply for authorization prior to use to allow time for the permitting process.

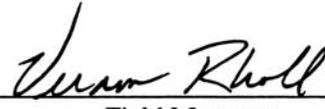
32. All permanent (on-site for six months or longer) structures, facilities, and equipment placed on-site shall be painted Munsell Soil Color Chart Juniper Green or equivalent within six months of installation.

COMPLIANCE/MONITORING: Compliance monitoring should be performed at five year intervals by White River Field Office staff.

NAME OF PREPARER: Linda Jones

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:



Field Manager

DATE SIGNED:

9/18/06

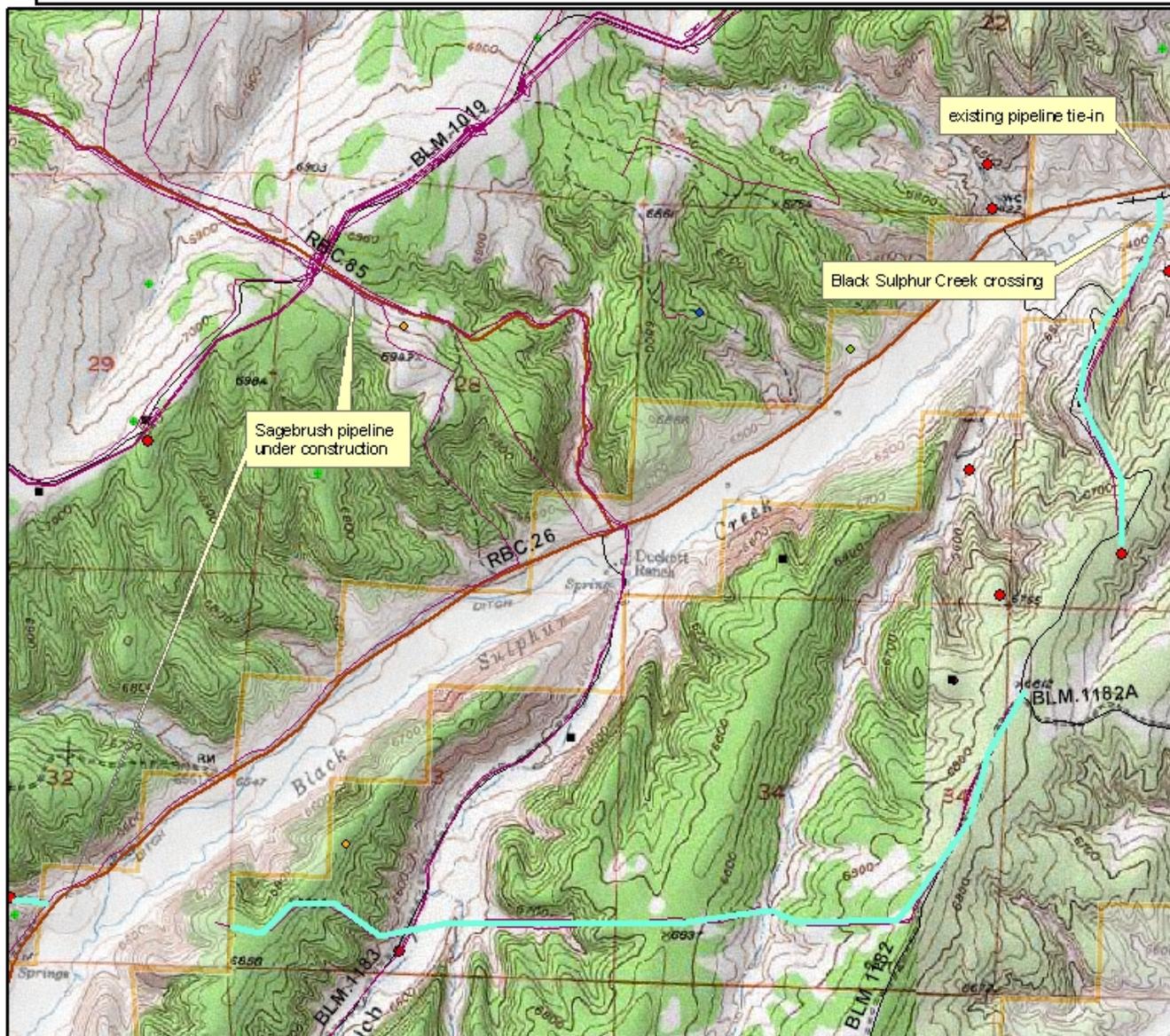
ATTACHMENTS: Exhibit A – Map of the Proposed Action
Exhibit B – Sagebrush Construction Plan
Exhibit C – Sagebrush Dust Control Plan



Sagebrush Pipeline Replacement COC70159

EXHIBIT A
CO-110-06-189-EA

6th PM T.2S., R. 98W.



- BLM
- CDW
- FOR
- NPS
- PRI
- STA
- Abandoned Location
- Dry & Abandoned
- DM
- Injecta
- Pugged&Abandoned
- Producing
- Shut in
- Temp. Abandoned
- Unknown
- Verbal Pugging
- Waiting on Completion
- XX
- Major roads
- RD_CODE
- Highway
- County
- NPS
- Forester route
- BLM
- Project line

09/08/2006 scale 1:24,000



EXHIBIT B

CONSTRUCTION, OPERATION, AND MAINTENANCE PLAN

Sagebrush Pipeline LLC (Sagebrush) has applied for a natural gas pipeline right-of-way under Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185).

I. PROJECT DESCRIPTION

- A. Sagebrush requests a pipeline right-of-way approximately 4.8 miles in total length with a permanent easement 30 feet in width. The proposed pipeline will carry unprocessed gas from Riata Energy wells to the existing ROC Gas pipeline and processing plant. Related structures will be located along the right-of-way as necessary. These structures include valves, pigging facilities, cathodic protection equipment, and related aboveground appurtenances.
- B. The pipelines will be used year-round for transport of natural gas.
- C. Estimated volume for the pipeline will be based on well output, but the current projected total gas volume for the ROC/Sagebrush system is approximately 80 MMscfd.
- D. The proposed construction schedule is summer 2006. Construction will require xx days/weeks.
- E. In addition to the 30-foot permanent right-of-way, a 20-foot temporary construction right-of-way will be required.

II. PRE-CONSTRUCTION

- A. Design Factor: Sagebrush will design and build the pipeline according to the National Electrical Code (NEC), Department of Transportation 40 CFR Part 192, and ASME B31.8 standards. Additionally, the facilities will be designed, constructed, and operated in compliance with the Occupational Safety and Health Act (OSHA) regulations pertaining to pipeline construction and operation.
- B. Civil Survey: A flagged survey has been established along the centerline of the proposed pipeline rights-of-ways. The construction rights-of-ways will be marked prior to construction with laths and/or flagging. The right-of-way staking will consist of marking the edges of the construction right-of-way boundaries and temporary use area boundaries. Laths/flagging will be maintained throughout construction and will not be removed until after revegetation activities have been completed.
- C. Resource Surveys: Biological and archaeological surveys will be completed, if necessary, prior to construction. Reports will be submitted upon completion of any surveys.
- D. Applicable Regulations: Sagebrush will comply with all applicable federal, state and local laws and regulations as they relate to public health, safety and environmental protection in the construction, operation, and maintenance of this facility.
- E. Permits Required: In addition to the Right-of-Way Grant with stipulations and any Notice to Proceed requirements, any of the following permits, if required by the project, will be obtained and adhered to:
 - Rio Blanco County Special Use Permit, and Rio Blanco Road Crossing Permit
 - Colorado General Construction Stormwater Permit

- Colorado Air Emission Permit
 - Army Corp of Engineers Nationwide Permit 12
- F. Safety: All safety measures have been considered in the design, construction, operation and maintenance of the facility. Sagebrush will have inspectors present during construction, and any accidents to persons or property on federal lands will immediately be reported to the authorized officer.

III. CONSTRUCTION

- A. Notification: The WRFO will be notified at least 24 hours prior to the start of construction and 24 hours prior to surface reclamation work.
- B. Access: Access to the proposed project areas would be via Rio Blanco County Road 26 (Black Sulphur), existing Riata right-of-way COC55123, and BLM Roads 1182 and 1183. Roads used for the project would be maintained and/or repaired as necessary to conditions equal to or better than those which existed prior to project-related use.
- C. Hazardous Materials Management: To prevent the accidental release of hazardous materials and petroleum products, construction, operation, and maintenance activities shall comply with Sagebrush Pipeline's Spill Prevention, Containment, and Countermeasure Plan.
- D. Solid Waste Management: The construction right-of-way and temporary use areas will be maintained in a sanitary condition at all times and waste materials on the project will be disposed of promptly at an appropriate waste disposal facility. Waste includes, but is not limited to, human waste, trash, garbage, ashes, welding rods, etc. Portable toilets will be available on-site. Liquid and solid waste generated during construction of the project will be disposed of in an approved manner at an appropriate facility so as not to impact air, water, soil, vegetation, or wildlife.
- E. Erosion Control Methods: During construction, erosion and sediment control structures including waterbars and sediment barriers will be employed as necessary to reduce erosion and runoff from the construction workspace to adjacent areas.
- Sediment barriers will include silt fence and straw bales. Sediment barriers will typically be installed at the base of slopes at road crossings or slopes adjacent to flowing waterbodies, and around topsoil or subsoil stockpiles at flowing waterbodies. Sediment barriers will be installed at the direction of the on-site Sagebrush Pipeline representative. To be effective, the bottom of the silt fence will be imbedded into the soil surface at a minimum depth of six inches. The straw bales will be imbedded into the surface soil at a minimum depth of four inches and will be double-staked with wooden stakes. Sediment will be removed from the sediment barriers when capacity is reduced to 50 percent of original. Sediment barriers will be removed from the construction right-of-way if replaced by an equivalent BMP or once the final stabilization criteria has been met.
 - Slope breakers (waterbars) will be installed in sloped areas susceptible to erosion and constructed as berms made from disturbed soil materials within the construction right-of-way. Topsoil will not be used to construct waterbars. Drainage or outfall from waterbars shall be directed into natural drainage swales and stable, well-vegetated areas. The drainage from the slope breaker outlets may

be further controlled with energy-dissipating devices (i.e. rock or sediment barriers) based upon site-specific conditions.

- Slope breaker spacing will be primarily dependent upon the slope of the right-of-way, the soil erosion potential, and the general right-of-way configuration. Temporary water bars will be installed at the base of slopes adjacent to flowing waterbodies and in sloped areas susceptible to erosion. Temporary spacing will be determined based on site-specific conditions and as directed by the Sagebrush Pipeline Representative. Permanent water bars will be installed across the right-of-way after topsoil replacement. Permanent water bars will typically be installed at the following spacing intervals:

Slope (%)	Spacing (feet)
5-15	300
15-30	200
30+	100

- Permanent waterbars will be installed with a 2 to 8 percent outfall to facilitate drainage off of the right-of-way into stable, well-vegetated areas. Permanent waterbar spacing and outfall may be adjusted by the Sagebrush Pipeline Representative based on site-specific conditions.

F. Construction Methods/Sequence: The standard open cut construction method will be used to install the pipeline. This method includes clearing, grading, trenching, pipe stringing, pipe bending, welding, joint coating, padding where required, lowering in, backfilling, pneumatic testing, cleanup, and revegetation.

- Clearing, topsoil and grading will be limited to the minimum area required for safe and efficient construction. Clearing will be performed only to the extent necessary to allow for construction activities. The ground surface will not be grubbed or cleared of vegetation less than four inches in height when possible. Every effort will be made to salvage root systems. Large vegetation, such as trees and shrubs, will be cleared from the right-of-way and stockpiled or windrowed at the edge of the approved workspace for later use in reclamation.
- Topsoil will be removed and stockpiled. Where topsoil is available, the top 4 to 6 inches of soil will be removed over the trenchline and in areas requiring grading. Topsoil and cleared vegetation will be stockpiled together on BLM lands. The right-of-way will be graded only to the extent necessary to create safe and efficient pipeline installation conditions.
- Trenching operations will begin after the right-of-way has been prepared. The trench will be excavated in accordance with OSHA and DOT requirements. Subsoil material will be stockpiled separately from topsoil stockpiles.
- After preparing the right-of-way and trench, pipeline construction and installation will include stringing, bending, welding, x-raying, and coating. Segments of pipe (joints) will be transported to the right-of-way, bent to conform to the contours of the trench, and welded together. The welds will be visually inspected and non-destructively tested utilizing radiographic or other approved techniques in

accordance with API standards. At a minimum, radiographic inspection will be conducted in accordance with DOT requirements. The welded joints will be coated and any coating anomalies will be repaired accordingly.

- Completed sections will be lowered into the trench, padded as necessary to prevent rocks or other objects from coming in contact with and damaging pipe coating, and backfilled with stockpiled subsoil.
- All construction-related debris will be removed and disposed of at an approved disposal area. The right-of-way and temporary use areas will be graded as near as possible to the pre-construction contours and natural runoff and drainage patterns will be restored. Stockpiled topsoil will be redistributed over the trench and other portions of the right-of-way from which the topsoil was salvaged. Topsoil will be left in a roughened condition.
- Vegetative mulch and excess rock will be used to reduce erosion potential by providing additional surface relief structure. Vegetative debris salvaged during clearing operations will be distributed across the right-of-way. Layering of rock may be used on the surface of erodible soils in some critical areas to reduce erosion and restore appearance of native surface. Suitable sites include naturally rocky slopes and areas that have a natural gravel, cobble, or boulder veneer on the surface. Suitable sites will be determined by the Sagebrush Pipeline Representative in conjunction with the authorized officer.
- All disturbed areas will be reseeded with the appropriate seed mix and rate as determined by the BLM and included in the stipulations attached to the ROW Grant. Seed mixes will be purchased from commercial seed vendors and must be state-certified weed-free mixtures. Seed bag tags will be collected and submitted to the BLM to confirm that the seed was purchased from a commercial seed vendor and was tested and certified. Seeding rate will be listed as pounds per acre of pure live seed (PLS).
- Seed will be placed in direct contact with the soil at an average depth of 0.5-inches, covered with soil, and firmed to eliminate air pockets around the seeds. Seed will be applied using a rangeland seed drill with a seed release and agitation mechanism sufficient to allow seeds of various sizes and densities to be planted at the proper seeding depth. Broadcast seeding will be employed only in areas where drill seeding is unsafe or physically impossible. Broadcast application rates will be twice that of drill rates. Immediately after broadcasting, the seed will be uniformly raked, chained, or dragged to incorporate seed to a sufficient seeding depth. If the area is seeded prior to a soil crust forming (within 24 hours of topsoil replacement), harrowing or raking may not be necessary. Fall seeding would be completed after September 1 and prior to prolonged ground frost. If necessary, spring seeding will be completed when the ground thaws and prior to May 15.
- All existing improvements, such as fences, gates, ditches, and cattle guards, will be maintained and repaired by the Contractor to at least pre-construction condition and to the satisfaction of the authorized officer. OHV barriers may be required by the BLM. Suitable sites will be determined by the Sagebrush Pipeline Representative in conjunction with the authorized officer.

- G. Waterbody and Wetland Crossings: The project does not cross any wetlands. All drainages are expected to be dry at the time of construction. Streambanks will be restored to preconstruction contours and reseeded with the BLM seed mix. Erosion control fabric will be installed at streambanks if requested by the authorized officer.
- H. Road and Pipeline Crossings: Where the proposed line crosses existing access roads or parallels a county road within its established ROW, it will be buried to a minimum depth of 48” below the surface, coated and cathodic protection will be installed. Pipeline crossings of unsurfaced, lightly traveled, or rural roads will be made with a mechanical ditching machine or a backhoe. Installation at these locations, including cleanup and restoration of road surfaces, will usually be completed within one day. In such cases, provisions will be made to detour or control passage of traffic during construction. All applicable permits will be obtained for road and utility line crossings.
- I. Hydrostatic/Pneumatic Testing: To test the integrity of the pipeline, pipeline segments will be hydrostatically tested with water or pneumatically tested with nitrogen and held under pressure for a specified period of time.

IV. POST CONSTRUCTION

- A. Maintenance and Operation: Sagebrush Pipeline will maintain the area as required by the stipulations in the Right-of-Way Grant. Maintenance of the right-of-way includes, but is not limited to, soil stabilization and reseeded. All existing improvements affected by construction and maintenance of this authorization will be kept in as good as, or better than, original condition. Sagebrush Pipeline will participate in the maintenance of roads used to access the right-of-way and ancillary facilities in conjunction with other facilities.
- The project will be operated according to natural gas industry standards. Supervisors and field personnel will monitor and control the system by driving throughout the project area inspecting facilities on a periodic basis. Travel down the reclaimed right-of-way will be kept to a minimum and utilize the least impacting vehicle feasible (i.e. a four-wheeler). Disposal of any liquid and solid waste generated during maintenance and operation of the pipeline will be done at an approved facility in an environmentally sound and approved manner.
 - Sagebrush Pipeline will control noxious weeds as required in the BLM stipulations attached to the Right-of-Way Grant and any Rio Blanco County requirements.
- B. Abandonment: Upon abandonment of the pipeline, a Notice of Intent to Abandon will be filed with the BLM for final recommendations regarding surface reclamation. After abandonment of the associated production facilities, the gas pipelines will be abandoned according to BLM specifications. At the time of final abandonment, the intent of reclamation will be to return disturbed areas to near natural conditions. All disturbed surfaces will be re-contoured to the approximate natural contours, with reclamation to be performed within six months, weather permitting, after final abandonment.
- The surface of disturbed areas will be re-contoured to blend all cuts, fills, road berms, and borrow ditches to be natural in appearance as compared to the surrounding

terrain. Disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions may include the reestablishment of natural drainage systems, the reestablishment of appropriate soil conditions, and the reestablishment of vegetation as specified.

V. MITIGATION MEASURES

The following protective measures have been adopted by Sagebrush Pipeline to address specific resource values and environmental concerns associated with the project. Additional mitigation measures may be attached as stipulations to the BLM Right-of-Way Grant.

- A. Air Quality: Sagebrush Pipeline will develop and implement a Dust Control Plan to mitigate air quality impacts. Any additional requirements listed in the CDPHE Construction Emissions Permit would also be implemented.
- B. Noxious Weeds: Noxious weeds will be controlled as stipulated in the BLM stipulations attached to the Right-of-Way Grant. In addition, equipment will arrive on the right-of-way clean and free of mud from other construction projects. After reclamation, monitoring and treatment of any infested areas will be conducted as specified in the BLM stipulations.
- C. Erosion: Temporary and permanent erosion control measures will be implemented to control erosion and transport of sediment. Erosion and sediment controls will be used and maintained during all phases of construction. Selection of appropriate erosion controls will be selected based on soil properties, steepness of the slope, and anticipated surface flow or runoff. Erosion control measures are detailed in the Stormwater Pollution Prevention Plan in Appendix B.
- D. Threatened, Endangered, and Sensitive Species: If Threatened, Endangered, or Sensitive Species are identified within the project area, appropriate mitigation measures will be implemented.
- E. Cultural Resources: The following mitigation measures will be followed during construction, operation, and maintenance of the project:
 - All persons in the area who are associated with this project must be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons will be subject to prosecution.
 - The BLM authorized officer must be notified, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Activities must stop in the vicinity of the discovery and the discovery must be protected for 30 days or until notified to proceed by the authorized officer.
 - If in connection with operations under this contract the project proponent, his contractors, subcontractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural or paleontological value or scientific interest such as historic or prehistoric ruins, graves or grave markers, fossils, or artifacts, the proponent shall immediately suspend all operations in the vicinity of the cultural or paleontological resource and shall notify the BLM authorized officer of the findings. Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer.

EXHIBIT C - DUST CONTROL PLAN

INTRODUCTION

The following Fugitive Dust Control (Dust) Plan describes the general control measures which shall be followed before, during, and after any dust generating operation associated with construction activities for the Sagebrush Pipeline LLC pipeline project in western Colorado. This Dust Plan identifies measures to be taken by Sagebrush and its contractors (Contractor) to ensure that dust suppression techniques are implemented to control fugitive dust sources during construction operations. Measures identified in this plan apply to work within the project area defined as the right-of-way, access roads, temporary use and disturbed areas, and other areas used during construction of the project. Additional mitigation measures may be required and will be listed as conditions in the Construction Emissions Permit. Sagebrush and Contractor personnel are to be thoroughly familiar with this plan and its contents prior to initiating construction on the project.

REQUIREMENTS FOR DUST CONTROL

General Requirements

The Contractor is required to provide dust control measures for all areas disturbed by construction. The measures listed below will be required, as necessary, to control fugitive dust. Additional measures, if required, will be listed in the Construction Emissions Permit.

Control of Unpaved Roads On-Site

- Suppress dust with application of water or other suppressant as needed.
 - Control vehicle speed to 15 mph. Signs must be posted by the Contractor.
- Dust suppressants will be applied to the construction work area and access roads at the request of the BLM or Rio Blanco County representatives.

Control of Disturbed Areas On-Site

- Suppress dust with application of water or other suppressant as needed.
- Control vehicle speed to 15 mph. Signs must be posted by the Contractor.
- Revegetate disturbed areas in accordance with the BLM Right-of-Way Grant and attached stipulations to stabilize soils after construction activities are complete.
- Apply vegetative mulch and excess rock across slopes on BLM-administered lands to minimize wind erosion after construction activities are complete.

Controlling vehicle speeds and revegetating the right-of-way are mandatory mitigation measures. Dust suppressants will be applied to the construction work area and access roads at the request of the BLM or Rio Blanco County representatives.