

APPENDIX D

Pipeline Design and Construction Procedures



Pipeline Design and Construction Procedures

1.0 INTRODUCTION

Rendezvous Gas Services, L.L.C. (RGS) proposes to construct a 103.6-mile long, 30-inch diameter, natural gas pipeline (Rendezvous Phase 6 (R6) Pipeline) within the proposed Bird Canyon Corridor (BCC) and Blacks Fork Granger Corridor (BFGC) to transport natural gas produced in the PAPA to gas processing plants: Segment 1 of the proposed R6 Pipeline (41.5 miles) would be located in the BCC and Segment 2 (62.1 miles) would be located in the BFGC. Segment 1 of the proposed R6 Pipeline would begin at the Pinedale/Gobblers Knob Compressor Station and end at the Bird Canyon Compressor Station. Segment 2 of the proposed R6 Pipeline would begin at the Bird Canyon Compressor Station and end at the Blacks Fork Processing Plant. It is anticipated that the R6 Pipeline would be constructed during the summer and fall of 2008.

Jonah Gas Gathering Company (JGGC) proposes to construct a 41.5-mile long, 36-inch natural gas pipeline (Paradise to Bird Canyon (PBC) Pipeline) and a connecting 45.5-mile long, 30-inch pipeline (Opal Loop III Pipeline) to transport natural gas from the PAPA to gas processing plants. The PBC Pipeline is proposed to be located in the BCC and will parallel the R6 Pipeline. The Opal Loop III Pipeline is proposed to be located in the OPC and will parallel the Bridger Pipeline that was constructed in 2006.

The design and engineering of the proposed pipelines would be completed by RGS/JGGC personnel or their contractors in accordance with safe and proven engineering practices. All pipeline plans and specifications, alignment sheets, road profiles, cross sections, site-specific details, and design drawings associated with the project would be available for review at RGS's office in Green River, Wyoming, JGGC's office in Rock Springs, Wyoming, and the BLM Field Offices in Pinedale, Rock Springs, and Kemmerer, Wyoming prior to issuance of the right-of-way (ROW) grant.

RGS/JGGC would secure all rights of way on adjacent nonfederal lands prior to pipeline construction. RGS/JGGC would notify authorized ROW users of RGS/JGGC's proposed pipeline crossings or overlaps on the surface occupied by the affected ROW users. Any associated road and utility permits would be secured from the appropriate regulatory agency prior to construction. RGS and JGGC are requesting federal ROW grants for a period of 30 years with options to renew for as long as there are marketable quantities of natural gas available. All equipment and vehicular access would be confined to existing roads and the established ROW corridors. No major reconstruction or rerouting of roads is proposed.

2.0 PIPELINE DESCRIPTIONS

Surface disturbance associated with the proposed pipelines is provided in Table 1.

Table 1
Estimated Total and Life of Project (LOP)
Disturbance for Gas Sales Pipelines and the Granger Gas Plant

Component	Number or miles	Total Disturbance (acres)	LOP Disturbance (acres)
30-inch Rendezvous (R6) Pipeline ¹	103.6 miles	1,506.9	1.0
R6 temporary extra work areas ²	168	23.3	0.0
R6 temporary extra work areas – HDDs ³	4 sites	8.3	0.0
Subtotal		1,538.5	1.0
36-inch Paradise to Bird Canyon (PBC) Pipeline ¹	41.5 miles	603.6	1.0
PBC temporary extra work areas ²	48	9.4	0.0
PBC temporary extra work areas – HDDs ³	2 sites	4.2	0.0
Subtotal		617.2	1.0
30-inch Opal Loop III Pipeline ¹	45.5 miles	661.8	10
Opal Loop III temporary extra work areas ²	68	10.5	0.0
Subtotal		672.3	1.0
Granger Gas Plant	1 site	86.4	86.4
Total Sales Pipelines/Gas Plant	1 site	2,914.4	89.40
¹ Disturbance based on 120 feet construction ROW width.			
² Temporary extra work areas are required for road, foreign line, historic trail and waterbody crossings.			
³ horizontal directional drill.			

Rendezvous Phase 6 Pipeline

The proposed R6 natural gas pipeline (both R6 Segments 1 and 2) would be constructed of 30-inch x 0.438- or 0.625-inch w.t., Grade X-70, steel pipe. Maximum operating pressure would be approximately 1,440 psig. The proposed R6 Pipeline would be buried to a minimum depth of 48 inches.

RGS proposes a 120-foot wide construction ROW which includes a 50-foot wide permanent ROW and a 70-foot temporary construction ROW. Additional temporary extra work areas would be required on both sides of road, historic trail, railroad, and waterbody crossings. At these locations, the total ROW width would increase to 150 feet. For all waterbody and railroad crossings, a temporary extra work area of 150 feet in width x 300 feet in length would be required. New disturbance for staging areas including pipe and equipment storage yards is not anticipated. Existing storage facilities located off-ROW would be used.

The proposed BCC and BFGC corridors and the specific route for R6 Pipeline within the proposed 500-foot and 300-foot corridors would be located parallel and adjacent to existing pipelines for approximately 81.0 miles (78 percent) of the pipeline's total length. The remaining 24.4 miles (22 percent) of the proposed route would parallel other linear features such as roads or traverse the landscape cross-country. The proposed 103.6-mile long R6 Pipeline would cross approximately 85.5 miles (83 percent) of federal lands, 0.8 mile (0.8 percent) of state lands, and 16.5 miles (16 percent) of private lands.

Estimated surface disturbance required for construction of the proposed R6 Pipeline is presented in Table 1. Disturbance associated with construction and operation of main line valve assemblies, pig launchers/receivers, side taps, and meter stations would be confined within the

50-foot wide permanent ROW. Off-ROW staging areas are not required due to the availability of existing storage yards for pipe and other equipment. Access by vehicles and equipment to the ROW for construction and operations would be via existing roads and would require no upgrades or improvements. Repairs to existing roads would be made should pipeline construction activities result in road damage.

In conjunction with the proposed pipeline project, RGS is requesting approximately 87 acres of BLM-administered federal land to expand the existing Granger Plant. The expansion would provide space for additional processing facilities to handle an additional 600 (MMSCF/D) of natural gas and associated natural gas liquids.

Paradise to Bird Canyon and Opal Loop III Pipelines

The Paradise to Bird Canyon Pipeline would be constructed of 36-inch x 0.515-inch w.t., Grade X-70, steep pipe. The Opal Loop III Pipeline would be constructed of 30-inch x 0.438-inch w.t., Grade X-70, steel pipe. Maximum operating pressure would be approximately 1,440 psig for both segments. The proposed JGGC pipelines would be buried to a minimum depth of 48 inches.

JGGC proposes a 120-foot wide corridor for construction of both the 36-inch and 30-inch pipelines with a 50-foot wide permanent ROW for operational and maintenance purposes and 70-foot wide temporary construction ROW within the 500-foot wide BCC and 300-foot wide OPC (PBC Pipeline and Opal Loop III Pipeline, respectively) of the proposed pipeline corridor. Additional temporary extra work areas, 30 feet wide by 100 feet long, would be required on both sides of road, historic trail, railroad, and creek crossings. At these locations, the total ROW width would increase to 150 feet. At river crossings, temporary extra work areas of 150 feet in width x 300 feet on both sides of horizontal directional drill (HDD) locations beyond the 120-foot construction ROW width would be required. Total construction ROW width at HDD crossings of rivers and other features would be 260 feet wide and 300 feet long on both sides.

The proposed BCC and OPC corridors and the specific route for the PBC Pipeline within the proposed 500-foot wide corridor, and the Opal Loop III Pipeline within the proposed 300-foot wide corridor, would be located parallel and adjacent to existing pipelines for approximately 66.8 miles (76.8 percent) of the pipeline's total length. The remaining 20.2 miles (23.2 percent) of the proposed route parallel other linear features such as roads or traverse the landscape cross-country.

The PBC and Opal Loop III pipelines would be placed 35 feet from adjacent existing pipelines. The permanent ROW for these pipelines would require 25 feet of the 35 foot separation. Although the spoil side of the JGGC pipeline's construction ROWs would likely overlap with areas previously disturbed by the construction of the adjacent, existing pipeline, the amount of overlap with previous disturbed areas is unknown; therefore, the assessment of anticipated disturbance from construction of the JGGC pipelines is based on the convention that all disturbance would be considered new disturbance. The combined BCC and OPC corridors and the proposed 87.0 miles of JGGC pipelines would cross approximately 81.9 miles (94 percent) of federal lands, 0.9 mile (1 percent) of state lands, and 4.2 miles (5 percent) of private lands.

Estimated surface disturbance required for construction of the proposed PBC and Opal Loop III pipelines is presented in Table 1. Disturbance associated with construction and operation of main line valve assemblies, pig launchers/receivers, side taps, and meter stations would be confined within the 50-foot wide permanent ROW. The need for off-ROW staging areas where new disturbance would be necessary is not anticipated due to the availability of existing storage yards for pipe and other equipment. Access by vehicles and equipment to the proposed ROW for construction and operations would use existing roads and would require no upgrades or

improvements. Repairs to existing roads would be made, should pipeline construction activities result in road damage.

3.0 WORKFORCE REQUIREMENTS AND CONSTRUCTION SCHEDULE

Pipeline firms/proponents would notify the authorized officers of the appropriate agencies five days prior to commencing construction activities. Proponents would also comply with all timing stipulations for wildlife. Easements would be obtained from private landowners. The construction force for each pipeline is expected to number approximately 200 to 300 persons at the peak of construction and it is expected to take three (3) to five (5) months. No temporary work camps are anticipated.

The following is a list of construction equipment that would likely be required for a large diameter pipeline project:

- 15 welding trucks
- 12 tractor trailers
- 6 two ton trucks
- 25 pickup trucks
- 2 dump trucks
- 2 seed drillers and tractors (if applicable)
- rubber tired backhoes
- 12 trackhoes
- 20 side boom caterpillar
- wheel trenchers
- 8 D7 dozers
- 1 fuel truck
- 1 low head pump
- 1 pressure pump
- 1 air compressor -1750 cfm
- 1 air compressor-1200 cfm
- 2 motor graders

4.0 CONSTRUCTION SEQUENCE

Pipeline construction within the proposed corridors would commence when all permits and ROW documents have been secured, and BLM authorization is received. Proponents would notify the AO 5 days in advance of starting construction activities. All private surface landowners would be contacted prior to construction for access and surface usage. All materials, construction, operation, maintenance, and termination practices for the proposed pipeline would be completed by proponent personnel or their contractors in accordance with safe and proven engineering practices.

Construction sites would be maintained in a sanitary condition at all times; waste materials at those sites would be disposed of promptly at an appropriate waste disposal site. The term "waste" refers to all discarded matter including human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. A litter policing program which would cover all roads and sites associated with the ROW would be implemented by the proponent and approved in writing by the AO.

Construction of the pipeline would not inhibit public use of existing roads and trails, or inhibit wildlife or livestock movement. No additional trench would be opened than that which could be successfully backfilled and compacted in a 10 day period. Areas within 0.25 mile of livestock would be fenced, if required.

Clearing and Grading. The staked ROW would be cleared and graded to provide a smooth and even work area to facilitate the safe movement of equipment and personnel. A motor grader with a blade would be used to knock down vegetation, such as sagebrush within as much of the construction ROW as is needed to provide a safe working area. Grading usually requires cutting and/or filling to achieve a more uniform grade for the pipeline, and may include ripping rock close to the surface. Blading may be required to provide a safe and suitable working area in areas of excessively steep hillsides or at approaches to waterbody crossings and at established temporary extra work areas. The top six inches of soil would be salvaged, stockpiled on the side of the ROW, and spread back over the area after final grading.

For more typical but less steep terrain, a minimum of the top six inches of soil, more if the BLM deems necessary, would be stockpiled on the side of the ROW and spread back over the area after the final grading. Spoil and topsoil would be windrowed and separated along the nonworking side of the trench.

Hauling and Stringing. All construction materials would be hauled to the job by truck (80-foot pole trailers), as needed, and strung as it arrives. Pipe would be strung in such a manner as to cause the least interference with the normal use of the land.

Trenching. A wheel trencher would be used to dig an approximate 60-inch wide, 84-inch deep trench, stacking the dirt beside the ditch. In rocky areas or in areas where the pipeline changes direction, an excavator would be used. The ditch would be excavated to a minimum depth adequate to allow for 48 inches of cover on the pipeline. Spoil and topsoil would be windrowed and stockpiled separately along the nonworking side of the trench.

Soft plugs would be constructed and left in the open trench every 0.25 mile to allow for wildlife crossings. These plugs would be removed just prior to lowering the welded pipe into the trench.

Road Crossings. Construction at road and railroad crossings would use heavier-walled pipe to withstand greater external loads. Roads that are not heavily used would be open cut. The open cut roads would be backfilled and compacted in a way that would maintain the integrity of the road. Roads that are more heavily traveled and railroads would be bored to avoid disruption of traffic. Two-track roads or trails which are rarely traveled and do not usually accommodate heavy loads would be crossed by conventional construction techniques.

Bending, Welding, and Coating. A bending machine would be used to bend the pipe to fit the trench and contour of the land. Induction bends (prefabricated bends) would be used for changes in direction greater than 30 degrees.

The pipeline welding crews would align the pipe for welding, and complete the welding of the pipeline above the trench. The welds would be nondestructively tested (x-rayed) to insure the quality of the weld. The pipe string would be temporarily stored on skids until lowered into the trench.

Although the pipe would arrive at the ROW with a corrosion resistant coating, crews would apply additional coating to the weld areas and repair any damage to the factory-applied coating to prevent corrosion.

Lowering In, Padding, & Backfilling. Side booms would be used to lower the pipe into the trench. In rocky areas, the trench would be padded with sand or soil using a padding machine, which separates rocks from satisfactory padding materials.

After the pipe is placed in the trench, a motor grader or caterpillar would be used to push the dirt back into the trench. The fill in the trench would then be tamped into place with the grader wheels, leaving a berm of four inches to accommodate settling. Any excavated material that cannot be placed in the trench would be disposed of in accordance with landowner and agency requirements.

Horizontal Directional Drills. In areas where it is impractical to use conventional construction techniques, or where environmentally sensitive areas exist, a horizontal directional drill (HDD) may be used. This construction technique uses equipment to drill a pilot hole beneath the waterbody crossing or other sensitive area at a depth that maintains minimum coverage requirements. Once the pilot hole has been successfully completed, the hole is enlarged by reaming out the pilot hole in multiple passes with a reamer. After the hole has been enlarged to a diameter large enough to receive the pipeline, a pre-welded and pre-tested section of pipe (coated with abrasion resistant coating), located on the opposite side of the drilling equipment, is pulled back into the bore hole. The annulus around the pipeline would be sealed with bentonite.

RGS is proposing to cross the New Fork River, the Green River and the Blacks Fork River by HDD construction methods. JGGC is proposing to cross the New Fork River and the Green River using HDD. All other waterbodies for both pipelines would be crossed by open-cut methods using conventional trenching techniques, however, they would only be crossed when the streambed is dry.

Fabrication/Tie Ins. The mainline valve assemblies, pig receivers, pig launchers, side taps, and meter stations would be prefabricated off site. In order to keep the construction assembly line moving as efficiently as possible, tie-in crews would be used to complete the final installation of fabricated assemblies.

5.0 HYDROSTATIC TESTING

Pipelines would be pressure tested with water after the trench is backfilled. A pipeline would be filled with water and pressurized to a minimum of 1.1 times the designated operating pressure for 8 hours to verify integrity. Test water would most likely be obtained from the New Fork, Green, and/or Blacks Fork rivers and hauled to the pipeline for testing. Permits or license agreements for the withdrawal would be obtained from the Wyoming State Engineer's Office and the Bureau of Reclamation. Prior to release, the test water would be analyzed and processed, if necessary, to ensure it meets local, state, and federal water quality standards. The test water would be discharged to an upland area. In order to prevent scouring and erosion, test water would be discharged into energy dissipation devices, filter bags, or straw bale dewatering structures, which would be removed upon completion of testing. Hydrostatic test water discharge would be approved in writing by the Wyoming Department of Environmental Quality/Water Quality Division (WDEQ/WQD).

A total of 65.1 acre-feet of water would be necessary for hydrostatic testing of the R6 Pipeline, 45.1 acre-feet for the length of the pipeline and 20 acre-feet for testing of the HDDs and railroad crossing. Approximately 13.4 acre-feet would be withdrawn from the New Fork River; approximately 12.4 acre-feet from the Green River; and approximately 19.3 acre-feet from the Blacks Fork River. An additional 5 acre-feet of water would be used at each HDD crossing (three rivers and one railroad crossing) for a total of 20 acre-feet of water for the HDDs (Table 2).

Table 2
Rendezvous Phase 6 Pipeline Hydrostatic Testing

Source Waterbody	Volume (acre-feet)	Withdrawal Location	Discharge Location
Pipeline Testing			
New Fork River	13.4	SWSE Sec. 11, T. 31 N., R. 109 W.	SWSE Sec. 11, T. 31 N., R. 109 W. NWNW Sec. 4, T. 30 N., R. 108 W. NE Sec. 34, T. 27 N., R. 111 W.
Green River	12.4	NESE Sec. 17, T. 23 N., R. 111 W.	NESE Sec. 17, T. 23 N., R. 111 W. SESE Sec. 21, T. 26 N., R. 111 W.
Blacks Fork River	19.3	SW Sec. 28, T. 19 N., R. 111 W.	SW Sec. 28, T. ;19 N., R. 111 W.
HDD Testing			
New Fork River	5	SWSE Sec. 11, T. 31 N., R. 109 W.	SWSE Sec. 11, T. 31 N., R. 109 W.
Green River	5	NESE Sec. 17, T. 23 N., R. 111 W.	NESE Sec. 17, T. 23 N., R. 111 W.
Blacks Fork River	5	SW Sec. 28, T. 19 N., R. 111 W.	SW Sec. 28, T. 19 N., R. 111 W.
Railroad Testing			
Blacks Fork River	5	SW Sec. 28, T. 19 N., R. 111 W.	SW Sec. 28, T. 19 N., R. 111 W.
Total	65.1		

A total of 40.6 acre-feet of water would be required for hydrostatic testing of the PBC and Opal Loop III pipelines. Hydrostatic testing would likely be performed in 7 to 10 mile sections repeated for the length of the pipelines using water from two sources and multiple discharge point locations. Approximately 10.0 acre-feet would be withdrawn from the New Fork River, and approximately 20.6 acre-feet would be withdrawn from the Green River. An additional 5.0 acre-feet of water would be used at each HDD crossing (two rivers) for a total of 10 acre-feet of water (Table 3).

Table 3
Paradise to Bird Canyon and Opal Loop III Pipelines Hydrostatic Testing

Source Waterbody	Volume (acre-feet)	Withdrawal Location	Discharge Location
Pipeline Testing			
New Fork River	10.0	SWSE Sec. 11, T. 31 N., R. 109 W.	SWSE Sec. 11, T. 31 N., R. 109 W. NWNW Sec. 4, T. 30 N., R. 108 W. NE Sec. 34, T. 27 N., R. 111 W.
Green River	20.6	NESE Sec. 17, T. 23 N., R. 111 W.	NESE Sec. 17, T. 23 N., R. 111 W. SESE Sec. 21, T. 26 N., R. 111 W.
HDD Testing			
New Fork River	5	SWSE Sec. 11, T. 31 N., R. 109 W.	SWSE Sec. 11, T. 31 N., R. 109 W.
Green River	5	NESE Sec. 17, T. 23 N., R. 111 W.	NESE Sec. 17, T. 23 N., R. 111 W.
Total	40.6		

6.0 SPECIAL CONSTRUCTION TECHNIQUES

General. Pipeline warning signs would be installed at line-of-sight intervals at road crossings to identify the location of the pipeline within the ROW.

Cathodic test stations would be installed at all foreign line crossings, on one side of all road bores, and at intervals of one mile along the pipeline. These stations would be used to test and monitor the corrosion resistance of the pipeline.

Wet Construction. RGS and JGGC would not allow any construction or routine maintenance activities during periods when soil is too wet to adequately support construction equipment. If such equipment creates surface ruts in excess of 4 inches deep, proponents would deem that soil conditions are too wet to adequately support construction equipment. Construction activities would not be allowed until soil conditions improve.

Dust Control. In addition to water withdrawn from rivers for hydrostatic testing, water would be withdrawn from the New Fork, Green, and Blacks Fork rivers for use in dust control during pipeline construction. Construction of the 103.6 mile long R6 Pipeline would require approximately 67.0 acre-feet of water from a combination of New Fork, Green, and Blacks Fork river sources. Construction of the 41.5-mile long PBC Pipeline would require approximately 26.9 acre feet of water from the New Fork and Green rivers. Construction of the 45.5 mile long Opal Loop III Pipeline would require approximately 29.3 acre feet of water from the Green River. Water would be pumped into 80- and 100-barrel tanker trucks/trailers and hauled to the construction sites where the water would be sprayed from the tanks to the ground.

Winter Construction 6 Step Frozen Ground Procedure. Should winter construction be necessary, proponents would:

- remove snow and slightly scalp vegetation with a grader blade and windrow it to one side of the ROW;
- use a wheeled trencher equipped with rock teeth to remove approximately 6 to 8 inches of topsoil by appropriately setting trencher depth (frosted top soil would be broken to smallest density possible; a kick board would be installed on the trencher to distribute topsoil directly down on the ROW near the trench and deter top soil from being thrown too far off ROW; the kick board would enable operator to vary speed for better cultivation of top soil);
- allow trencher to provide for 4 feet of burial and stockpile the soil or spoil to one side;
- install pipe and backfill trench with spoil;
- place stockpiled topsoil in the trench; and
- place the scalped vegetation back on the ROW using a grader.

The BLM would be contacted prior to construction in frozen ground.

7.0 RECLAMATION

Following the completion of hydrostatic testing, the ROW would be restored in accordance with the regulatory agency or landowner requirements. All disturbed areas would be re-contoured so that the disturbed area blends into the surrounding terrain. Topsoil would be evenly spread across the ROW. Appropriate measures would be taken to prevent erosion through the use of construction diversion terraces, rip-rap, matting/erosion control fabric, mulch, and/or water bars.

All disturbed areas would be reseeded. Seed would be planted using a drill and in areas not suitable for drilling, the seed would be broadcasted. The seed would be raked or chained to cover the seed. The application rate and seed mixture would comply with landowner or agency specifications. The proposed upland seed mix is provided in Table 4.

**Table 4
Upland Seed Mix and Application Rates**

Species/Variety	Drill Seeding Rate lbs/acre PLS ¹
Western Wheatgrass/Rosanna	4
Thickspike Wheatgrass/Critana	4
Indian Ricegrass	4
Bitterbrush	1
Scarlet Globe mallow	1
Winterfat	2
Fourwing Saltbush	1
Total	17
¹ PLS=pure live seed. Formula: % of purity of seed mixture times % germination of seed mixture=portion of seed mixture that is PLS.	

If herbicides are required following construction, proponents would comply with all applicable federal and state laws. Herbicides would be used in accordance with registered uses and within limitations imposed by the Secretary of Interior. Before using herbicides (including emergency situations), proponents would obtain, from the AO, written approval of a plan showing the type and quantity of material used, weed(s) to be controlled, method of application, location of storage, disposal of containers, and any other information deemed necessary.

Proponents would be responsible for weed control on the disturbed areas within the established limits of the ROW. Proponents would coordinate with the AO, or local authorities, to obtain acceptable weed control methods for the disturbed areas within the ROW.

8.0 OPERATION AND MAINTENANCE

Proponents would conduct all activities associated with the operation and maintenance of the pipeline within the authorized limits of the ROW. The pipeline would be routinely patrolled and inspected by foot and/or vehicle to check for problems such as erosion, ROW condition, unauthorized encroachment, and any other situation that could cause a safety hazard or require preventive maintenance. If damage should occur to the pipe from external sources, repair or replacement of the portion of the pipeline could be necessary. Detailed line break and emergency procedures would be used by proponents as routine operational procedures. All permanent aboveground facilities, including piping and valving, would be painted a flat, non-contrasting color harmonious with the surrounding landscape (Carlsbad Canyon (2.5Y 6/2) or as identified by the AO).

Proponents would remain responsible for weed control within the established limits of the ROW. Proponents would coordinate with the AO to develop acceptable weed control methods for implementation, as needed. Prior to use of herbicides, including use in emergency situations, proponents would obtain written approval of a plan, detailing the type and quantity of herbicide to be used, weed to be controlled, method of application, location of storage, disposal of containers, and any other information deemed necessary by the AO. Proponents would comply with all applicable federal and state laws regarding the use of herbicides. Herbicides would be used in accordance with registered uses and within limitations imposed by the appropriate regulatory authority.

9.0 ABANDONMENT

Prior to cessation of pipeline operations, proponents would obtain necessary authorization to abandon the facilities. All aboveground pipeline facilities would be removed and all unsalvageable materials would be disposed of at authorized sites. Regrading, reclamation, and revegetation of disturbed areas (if applicable) would be completed as necessary.

10.0 ENVIRONMENTAL PROTECTION MEASURES

Hazardous Materials. No toxic substances are proposed for use in connection with the construction project; however if toxic substances are required, usage shall conform with provisions of the Toxic Substances Control Act of 1976, as amended (40 CFR Part 702-799). Any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity as established by 40 CFR Part 117.3 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, Section 102 B. A copy of any requested report required by any Federal or State agency of a reportable release or spill of any hazardous material shall be furnished to the AO within 5 working days of the occurrence of the spill or release.

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

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

Survey Monuments. Proponents would protect all survey monuments, witness corners, reference monuments, and bearing trees within the ROW against disturbance during construction, operation, maintenance, and rehabilitation. If any monument, corner, or accessory is destroyed, obliterated, or damaged, proponents would arrange for a registered land surveyor to restore the disturbed monument, corner, or accessory using surveying procedures specified in the *Manual of Surveying Instruction for the Survey of Public Lands of the United States*, 1973 edition. Proponents would record the survey in the appropriate BLM office.

Fire Control. Proponents would notify the AO of any fires during construction and would comply with all rules and regulations administered by the AO concerning the use, prevention, and suppression of fires on federal lands.

In the event of a fire, proponents or their contractors would initiate fire suppression actions in the work area. Suppression would continue until the fire is out or until the crew is relieved by an authorized representative of the agency on whose land the fire occurred. Heavy equipment would not be used for fire suppression outside the ROW without prior approval of the AO unless there is imminent danger to life or property. Proponents or their contractors would be responsible for all costs associated with the suppression of fires and the rehabilitation of fire damage resulting from their operations, employees, or contractors.

Proponents would designate a representative to be in charge of fire control during pipeline construction. The fire representative would ensure that each construction crew has fire fighting tools and equipment, such as extinguishers, shovels, and axes available at all times. The number of tools needed would depend on the number of persons working in the area. Proponents would, at all times during construction, maintenance, and operations, require that satisfactory spark arresters be maintained on internal combustion engines.

Cultural Resources. Proponents and contractors would inform their employees about relevant federal regulations protecting cultural resources. If any cultural remains, monument sites, objects, or antiquities subject to the Antiquities Act of June 8, 1906 or the Archaeological Resources Protection Act of 1979 are discovered during construction, activities shall immediately cease and the responsible AO would be notified.

An open trench inspection would be conducted on the pipeline. Previously unknown or unanticipated resources found during this activity would be recorded, tested, and evaluated in consultation with the Wyoming State Preservation Office.

Proponents would comply with all BLM and State Historic Preservation Office (SHPO) recommendations for crossings of Historic Trails. Trails would be crossed in areas of existing disturbance and no new disturbance would occur in undisturbed portions of trails. Historic Trail segments would not be used by proponents or their contractors to access the pipeline ROW.

Direct impacts to the Sublette Cutoff, the East Bank Kinney Cutoff, and the Baker Davis Road/Slate Creek Cutoff would be prohibited. The areas where these trails are crossed by the proposed pipelines would be fenced so as to prohibit construction damage to existing trail ruts. All fences would extend a minimum of 50 feet from each side of a trail center point for a total of 100 feet. The position of the fence would be determined by a permitted archaeologist. The trails would be bored from outside of the fenced areas. This approach to trail crossing would eliminate new impacts to historic trail ruts.

All surface disturbing activity within 200 feet of the Sublette Cutoff, the East Bank Kinney Cutoff, and the Baker Davis Road/Slate Creek Cutoff would be monitored by an archaeologist who meets or exceeds the qualification standards recommended by the Secretary of the Interior.

The proposed crossing of the Oregon Trail and the second crossing of the Oregon Trail/Pony Express Route by the BFGC and R6 pipelines is contained within previous disturbance. These historic trails are crossed by existing pipelines and the proposed corridor in an area previously determined non-contributing to the overall eligibility of the sites. Construction would be contained within the existing disturbance.

Paleontological Resources. Proponents of pipelines would support a BLM-approved paleontologist's review, evaluation, and possible monitoring of potential paleontological resources for a proposed pipeline ROW. The paleontologist would conduct a literature search for information pertinent to the proposed pipeline ROW, complete a pre-construction survey of the proposed ROW where previous surveys have not been completed, collect surface fossil specimens if deemed necessary, and make recommendations for mitigation, including monitoring if necessary, of potential impacts from construction.

If paleontological resources are uncovered during construction activities, proponents or their contractors would suspend all operations to prevent further disturbance of such materials and would immediately contact the BLM's AO, who would arrange for a determination of significance and, if necessary, recommend a recovery or avoidance plan. Mitigation of paleontological resources would occur on a case-by-case basis, and proponents would be responsible for the costs. Proponents would abide by the mitigation plan approved by the BLM.

Wildlife. Proponents would comply with the following guidelines concerning avoidance of raptor nests, greater sage-grouse leks and nesting areas.

Raptors. Where feasible, pipeline ROWs and temporary extra work areas would be selected and designed to avoid disturbance to raptor nests. If construction activities are to occur between February 1 and July 31, surveys for raptor nests within 0.5 to 1.0 mile of the proposed pipeline route would be conducted, to determine nest occupancy. All construction activities would be restricted between February 1 and July 31 within a 0.5-mile radius of all occupied raptor nests, except ferruginous hawk and bald eagle nests, for which the seasonal buffer would be 1.0 mile. Surface structures requiring repeated human presence would not be constructed within 825 feet (2,000 feet for bald eagles) of active raptor nests, where practical. An active raptor nest is defined as a nest that has been occupied within the past 3 years.

Greater Sage- Grouse. Surface disturbance within 0.25 mile of greater sage-grouse leks would be avoided. If construction activities are planned in potential greater sage-grouse nesting habitat (i.e., areas within 2 miles of an active lek) between March 1 and July 31, BLM wildlife biologists would conduct field evaluations to identify active nests or leks. If an active greater sage-grouse nest is identified in an area proposed for disturbance, construction activities would be delayed until nesting is complete and the young are fledged.

Special Status Animals and Plants. The BLM would conduct U.S. Fish and Wildlife Service (FWS) consultation and coordination, as necessary, for all mitigation activities relating to threatened or endangered (T&E), candidate species, proposed species, and their habitats. In areas that have not been previously surveyed or cleared for these species, a qualified biologist/botanist would conduct surveys for these species in areas of potential habitat prior to disturbance. If T&E, candidate, or proposed species are found, consultation with the FWS would be initiated, as necessary, and construction activities would be curtailed until the BLM, FWS, and proponents concur on which activities can be authorized.

Proponents would conduct site-specific surveys for sensitive plants on uncleared areas as directed by the BLM.