OVERLAND PASS PIPELINE PROJECT
STORM WATER POLLUTION PREVENTION PLAN

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OVERLAND PASS PIPELINE PROJECT

REVISION SCHEDULE

This Storm Water Pollution Prevention Plan (SWPPP) will be revised and updated to address changes in site conditions, new or revised government regulations, and additional on-site storm water pollution controls as necessary.

All revisions to this SWPPP must be documented on the SWPPP Revision Documentation Form (below) and include the date and author of the revision and signature of an authorized representative. The authorized facility representative who approves the SWPPP should be an individual at or near the top of the facility's management organization, such as the President, Vice President, Construction Manager, Site Supervisor, or Environmental Manager. The signature of this representative attests that the SWPPP revision information is true and accurate. Previous authors and facility representatives are not responsible for the revisions.

SWPPP Revision Documentation Form			
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OVERLAND PASS GAS PIPELINE PROJECT

STORM WATER POLLUTION PREVENTION PLAN

CONTRACTOR'S CERTIFICATION

I certify under penalty of law that I have read, fully understand, and shall comply with all requirements and standards set by this document, all attachments, and all additional information submitted by me. I am aware that failure to comply with these requirements and standards may result in a violation of the State and Federal Clean Water Acts including the possibility of fine and imprisonment.

I also certify under penalty of law that the additional information submitted for this document and all attachments was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

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Signature Date

_____ _____

Print Name Title and Company

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1.0 INTRODUCTION

This Storm Water Pollution Prevention Plan (SWPPP) describes measures Overland Pass Pipeline Company LLC (Overland Pass) and its contractors (Contractor) will implement to protect water quality and manage storm water during construction of Overland Pass' new 751-mile-long interstate natural gas liquids (NGL) pipeline, referred to as the Overland Pass Pipeline Project (Overland Pass Project). This SWPPP incorporates the construction measures described in Overland Pass' Construction Mitigation and Restoration Plan (CM&R Plan), Spill Prevention Containment and Control Plan (SPCC Plan), and its Soil Stabilization and Restoration Plan (SS&R Plan) located in appendices A, B, and C respectively. Additionally, Overland Pass has prepared a Plan of Development for Federal Lands (POD), which outlines the construction procedures, environmental requirements, site-specific plans, and mitigation measures that it will implement during construction of its project.

Overland Pass' SWPPP was prepared to comply with the U.S. Environmental Protection Agency's (EPA) regulations for implementing pollution prevention requirements established under the National Pollutant Discharge Elimination System (NPDES) for permits for storm water point source discharges, and authorizations to discharge storm water associated with construction activities under the State of Wyoming General Permit WYR-10-0000, the State of Colorado Discharge Permit System General Permit COR-030000, and the State of Kansas General Permit S-MCST 0110-1.

1.1 Nature of Activity

The Overland Pass Project will consist of 759.9 miles of new 14- and 16-inch-diameter natural gas liquids (NGL) transmission pipeline, installation of 2 pump stations and 7 meter stations, and mainline valves (MLVs) that will be installed in accordance with the U.S. Department of Transportation (DOT) spacing requirements (Code of Federal Regulations (CFR) Title 49 Part 195.260). In addition, mainline scraper traps (also commonly referred to as pig launchers and receivers) will be installed every 80 to 110 miles and at each of the pump stations.

For the majority of the pipeline route, the construction right-of-way will be 75 feet wide, of which 50 feet will be retained as permanent right-of-way. A 10-foot permanent right-of-way will be retained for wetlands. Overland Pass' actual breakdown of workspace within the construction right-of-way (e.g., spoil storage areas, equipment travel lanes) will vary depending on site-specific conditions. Workspace configuration will be generally comprised of three major elements: spoil storage, trench line, and work area. Typical workspace configurations are included in appendix D.

During construction, Overland Pass will use Additional Temporary Workspace Areas (ATWS), contractor/pipe storage yards, rail siding yards, and temporary access roads. ATWS will be used for staging areas; wetland, waterbody, road, railroad, and foreign pipeline crossings; horizontal directional drilling entry and exit points and pipe string areas; truck turn-around areas; areas of rocky soils, steep slopes, and rugged terrain; and at the beginning and end of the project to tie the new facilities into the existing facilities. Erosion control measures and drawings depicting typical ATWS are included in appendix C and D, respectively. Contractor/pipe storage yards will be used during construction to stage construction, stockpile pipe and store other construction-related materials, park equipments, and provide space for temporary construction offices. Up to two contractor yards per construction spread will be required. Pipe storage yards will be located approximately every 90 to 100 miles along the pipeline route. Overland Pass will use existing private and public roads along the project line to access the construction right-of-

way (see appendix E). No new access roads will be constructed, but some of the existing roadways will require maintenance and/or improvements. The rail siding yards will be located adjacent to the railroad where pipe will be off-loaded from the rail cars.

1.2 Sequence of Major Construction Activities

1.2.1 Construction Schedule

Construction of Overland Pass' pipeline, MLVs, and scraper traps is currently scheduled to begin July 2007, and will take approximately 6 months to complete. Overland Pass is planning to place its facilities in-service November 30, 2007. The schedule, phases, facilities, and areas affected are described in table 1.2-1.

TABLE 1.2-1

Project Schedule

Phase Spread	Begin MP	End MP	Associated Aboveground Facilities (MP)	County and (State)	Proposed Schedule
1	0.0	147.0	Pump Station (146.5) Meter Stations (0.0 & 146.5)	Lincoln, Sweetwater, and Carbon (Wyoming)	
2	147.0	281.0	Pump Station (271.7) Meter Station (271.7)	Sweetwater, Carbon, and Albany (Wyoming)	
3	281.0	438.0	N / A	Albany and Laramie (Wyoming) Weld, Morgan, Logan, and Washington (Colorado)	
4	438.0	591.0	Meter Station (447.8)	Washington and Yuma (Colorado) Cheyenne, Rawlins, Thomas, and Sheridan (Kansas)	
5	591.0	749.4	Meter Stations (606.0, 717.5 & 749.4)	Sheridan, Graham, Gove, Trego, Ellis, Russell, Barton, Ellsworth, Rice, and McPherson (Kansas)	

Overland Pass will adhere to time windows prohibiting construction activities in specific areas for specified periods of time as necessary. If construction in such areas does not conform to its construction schedule, Overland Pass will move around (e.g., skip) those areas and return to complete construction activities after the time restrictions are lifted.

1.2.2 Construction Sequencing

Overland Pass will use standard pipeline construction sequencing for installation of the majority of its project. Pipeline construction typically will proceed in an assembly-line process with specific tasks occurring concurrently which are described within this section. Special construction techniques will be used where necessary based on site-specific conditions.

Survey and Staking

Overland Pass will complete civil surveys to locate its pipeline centerline and construction workspace areas, and will survey and stake the construction work area prior to the start of construction. Existing utility lines and other sensitive resources (including environmental buffer areas) will be located and marked to prevent accidental damage during pipeline construction.

Clearing and Grading

Overland Pass will clear and grade (where necessary) its construction right-of-way to provide a relatively level surface for trench excavating equipment and a sufficiently wide workspace for the passage of heavy construction equipment. In areas where grading is not required, vegetation will be cut off at ground level (leaving the root system intact), cleared to the edge of the work area, and stockpiled for subsequent replacement during final cleanup and restoration. Where grading is required, topsoil (where available) from across the entire width of the graded work area will be segregated and stockpiled for restoration purposes. Where no grading is required topsoil will be salvaged from the trench and subsoil storage area (ditchline only) in actively cultivated or rotated croplands and pastures, residential areas, hayfields, and other areas at the landowner's or land managing agency's request.

Trenching

The pipeline trench will be excavated to a depth sufficient to provide the minimum cover required by DOT specifications. Generally, the trench will be about 4.5 feet to 5 feet deep (to allow for about 3 feet of cover) and about 3.5 feet to 4 feet wide in stable soils. Additional cover will be provided at road and waterbody crossings. Less cover is required in rocky areas (18 inches). In sandy, unstable soils, the trench could be considerably wider because the walls could cave or slough during trenching. Soil from the trench will be spread on the working side of the right-of-way and worked over by the equipment or temporarily stored in piles located adjacent to the trench.

Pipe Stringing, Bending, and Welding

Prior to or following trenching, the externally coated pipe up to 60 feet long (also referred to as joints) will be strung along the right-of-way. Individual sections of pipe will be bent where necessary to fit the contours of the trench, aligned, welded together into long strings, and placed on temporary supports along the edge of the trench. Welds will be visually inspected and x-rayed to ensure structural integrity and compliance with applicable DOT regulations. Welds that do not meet established specifications will be repaired or removed.

Lowering-in and Backfilling

Before the pipeline is lowered in, the trench will be dewatered (in accordance with applicable permits) and cleaned of debris where necessary. In areas of rock, padding material such as sand, sandbags, or screened soil will be placed in the bottom of the trench. No topsoil will be used as padding material. The pipeline will then be lowered into the trench and backfilled using the excavated materials.

Hydrostatic Testing

Overland Pass' construction contractor will hydrostatically test the pipeline according to DOT specifications (Title 49 CFR Part 195). Test water will be pumped into a test section, pressurized to design test pressure plus 25% and maintained at that pressure for about 8 hours. Hydrostatic test water will be discharged to an agency-approved location in accordance with Overland Pass' Hydrostatic Testing Plan.

Clean-up, Installation of Erosion Control Devices, and Reclamation

Work areas will be final graded and restored to preconstruction contours as closely as possible. Every reasonable effort will be made to complete final cleanup (including final grading and installation of erosion control devices) within 20 days after backfilling the trench and where applicable, temporary erosion control measures will be installed. Construction debris will be cleaned up and taken to a disposal facility. Preconstruction contours will be restored, except in upland areas where a crown will be formed over the trench to compensate for settling of the backfill and restoration measures will be implemented in accordance with Overland Pass' CM&R Plan (see appendix A).

1.3 Project Location and Estimate of Total Area of Disturbance

1.3.1 Project Location

The Overland Pass Project will begin construction in Opal (milepost [MP] 0.0), Lincoln County, Wyoming. From Opal, the pipeline will continue approximately 326.9 miles through the counties of Sweetwater, Carbon, Albany, and Laramie, Wyoming to Larmier County, Colorado (MP 321.1). From Larmier County, the pipeline will continue through Weld, Morgan, Logan, Washington, and Yuma Counties, Colorado for an additional 171.7 miles. The pipeline will then enter Cheyenne County, Kansas, at MP 492.3 and continue approximately 261.2 miles through the counties of Rawlins, Thomas, Sheridan, Graham, Gove, Trego, Ellis, Russell, Barton, Ellsworth, Rick, and McPherson and end at Overland Pass' existing facilities in Conway, Kansas (MP 750.9). At Bushton and Conway, the transported NGLs will be processed and distributed through the existing transportation infrastructure to consumer markets in the Midwest and Texas Gulf of Mexico coast. Topographic-based maps depicting the location of the Overland Pass Project are included in appendix F.

1.3.2 Residential Areas

Based on aerial alignment sheets, no residences are located within 50 feet of the proposed project area. Additionally, no commercial buildings have been identified within 50 feet of the proposed construction work area. Should reroutes be required that would place the pipeline within 50 feet of an occupied home or building, Overland Pass will develop site-specific construction plans to mitigate the impacts of construction on residential and commercial structures located within 50 feet of the proposed project area.

1.3.3 Sensitive Areas

Storm water runoff from the Overland Pass Project area could affect environmentally sensitive areas located adjacent to the right-of-way. Environmentally sensitive areas include streams, wetlands, habitat for federally listed threatened or endangered (T&E) species, and vegetation communities of special concern. Overland Pass consulted with the U.S. Fish and Wildlife Service (USFWS), the BLM, the U.S. Forest Service (FS), the Colorado Department of Wildlife, the Wyoming Game and Fish Department, the Kansas Natural Heritage Inventory and the Kansas Department of Wildlife and Parks to identify potential impacts on those areas, including storm water runoff, and develop resource avoidance and/or mitigation measures. Overland Pass developed conservation measure plans that identify specific mitigation measures to be used in sensitive areas, in addition to its CM&R Plan (see appendix A).

1.3.4 Estimate of Total Area of Disturbance

Construction of Overland Pass' 760 mile pipeline project will disturb approximately 8,306 total acres; 3,654 acres in Wyoming, 1,774 acres in northeastern Colorado , and 2,878 acres in

Kansas. Of the total acres affected by construction, 6,932 acres will be for construction of pipeline and aboveground facilities, and 1,374 acres for TUAs, and pipe, contractor, and rail yards. Approximately 4,615 acres will be retained by Overland Pass' to operate its new facilities. Table 1.3.4-1 summarizes land requirements for construction and operation of the Overland Pass Project.

TABLE 1.3.4-1

Acres of Land Affected by Construction and Operation of Pipeline and Aboveground Facilities

State/ County	Pipeline		Aboveground [a/]		ATWS	Permanent Access Roads	Pipe/Contractor Yards
	Construction ROW	Permanent ROW	Construction ROW	Permanent ROW			
Wyoming	2,973.8	1,982.5	14.5	5.9	600.1	82.2	65.2
Lincoln	201.6	134.4	1.2	0.5	29.7	12.9	8.9
Sweetwater	1,274.0	849.4	1.0	0.7	235.6	41.3	18.9
Carbon	831.3	554.2	6.2	2.3	191.4	20.6	18.1
Albany	481.2	320.8	6.2	2.3	110.5	7.4	19.3
Laramie	185.7	123.8	0.0	0.1	32.9	0.0	0.0
Colorado	1,562.8	1,041.8	2.2	1.2	174.8	0.0	34.7
Larmier	0.5	0.3	0.0	0.0	0.0	0.0	0.0
Weld	735.9	490.6	1.0	0.6	70.9	0.0	12.4
Morgan	67.2	44.8	0.0	0.0	5.2	0.0	0.0
Logan	89.8	59.9	0.0	0.0	22.7	0.0	0.0
Washington	264.3	176.2	1.2	0.5	24.7	0.0	22.3
Yuma	405.1	270.1	0.0	0.1	51.4	0.0	0.0
Kansas	2,371.6	1,581.1	6.9	2.6	445.3	0.0	54.4
Cheyenne	350.3	233.6	0.0	0.1	43.8	0.0	8.2
Rawlins	174.3	116.2	0.0	0.1	20.7	0.0	0.0
Thomas	223.4	149.0	1.0	0.3	25.8	0.0	16.3
Sheridan	318.2	212.1	1.5	0.3	49.1	0.0	16.2
Gove	10.1	6.7	0.0	0.0	6.3	0.0	0.0
Trego	325.5	217.0	0.0	0.1	108.8	0.0	0.0
Ellis	293.3	195.5	1.0	0.3	50.6	0.0	0.0
Russell	47.7	31.8	0.0	0.0	3.7	0.0	0.0
Barton	254.2	169.5	0.0	0.1	55.4	0.0	11.6
Ellsworth	72.0	48.0	0.0	0.0	6.5	0.0	0.0
Rice	253.7	169.1	2.2	0.8	59.8	0.0	0.0
McPherson	48.9	32.6	1.2	0.5	14.7	0.0	2.1
Total	6,908.2	4,605.5	23.6	9.7	1,220.1	82.2	154.3

[a/] Aboveground facilities include pump stations, pig launchers and receivers, and/or meter stations, and where constructed within compressor station sites, mainline valves.

1.3.5 Total Area of New Impervious Surfaces

The construction of Overland Pass' Overland Pass Project will include aboveground facilities, resulting in the creation of 23.6 acres of new impervious surfaces (e.g., building, gravel ground

cover, parking lots) due to construction activities and 9.7 acres for operation of Overland Pass' aboveground facilities.

2.0 SITE MAPS

Approximately 82 percent (621.6 miles) of the 760 miles of pipeline to be constructed will be collocated with existing pipeline, utility, or road rights-of-way. Overland Pass prepared the above-referenced project location maps (see appendix G) based on U.S.G.S. topographic maps with a National Wetland Inventory map overlay. The maps depict the location of Overland Pass' proposed pipeline and aboveground facilities, construction rights-of-way, and legal descriptions of lands that will be affected by the project.

Construction drawings illustrating typical areas of right-of-way configurations, placements of ATWS, and erosion control devices are included in appendix D.

3.0 EXISTING SITE CONDITIONS

3.1 Topography

The Overland Pass Project area consists of broad intermountain basins interrupted by isolated hills and low mountains, dissected plateaus and alluvial fans. The topography along the pipeline route ranges from gently to strongly sloping. About 72 percent (5,004 acres) of the soils along the route have average slope-ranges in the 0 to 8 percent category. Twenty-five percent (1,730 acres) of the soils range from greater than 8 to 30 percent slope. The remaining three percent (174 acres) of soils have slopes greater than 30 percent. Construction through these areas will require grading to create a safe working area. Overland Pass' aboveground facility sites are located on relatively level areas where grading will be minimal.

3.2 Vegetation

Overland Pass' pipeline route traverses a variety of vegetative communities indicative of four general ecological provinces: Intermountain semi-desert, Southern Rocky Mountain steppe/open woodland/coniferous forest/alpine meadow, Great Plains-Palouse dry steppe, and Great Plains steppe. Each of the four ecological provinces possess unique vegetation types. The dominant vegetation types identified within Intermountain semi-desert (in order of lowest to highest elevations) include: sagebrush steppe, alkali-tolerant greasewood, riparian areas of willow and sedges, and juniper woodlands. The dominant vegetation types found within the Southern Rock Mountain steppe/open/woodland/coniferous forest/alpine meadow province (in order of lowest to highest elevations) include: sagebrush, mixed grasses, mountain mahogany, ponderosa pine forests, aspen or lodgepole pine, Douglas fir, subalpine fir, Engelmann spruce, and alpine tundra. The Great Plains grasslands have scattered trees and shrubs, such as sagebrush and rabbitbrush, and support a diversity of cover from semidesert to woodlands. Dominant vegetation types within the Great Plains steppe is characterized as mixed grass steppe, with a mixture of short grass and tall grass species. All of the vegetative communities effected will be restored to its preconstruction condition after construction. Therefore, the runoff coefficients for the pipeline corridor are not expected to change after construction. Impacts to runoff associated with block, valves and other aboveground pipeline facilities will be relatively small due to the small surface areas and impervious gravel areas associated with these facilities. Therefore, they are also not expected to change existing runoff coefficients.

Minor changes in runoff coefficients will occur at the new compressor station sites due to the increased impervious areas primarily associated with new buildings. The fenced aboveground

facilities areas will require the conversion of rangeland to industrial/commercial land for each site. These modifications to the runoff coefficients are relatively minor and the areas are not large. Therefore, subsequent increases in runoff to receiving waters after construction are expected to be small and negligible.

3.3 Regional Drainage

3.3.1 Waterbodies

Overland Pass' pipeline project will occur within three regional watersheds: the Upper Colorado River Basin Watershed, the Missouri River Basin Watershed, and Arkansas Red-White Rivers Basin Watershed. The Upper Colorado watershed is comprised of a number of potential receiving river systems including the Colorado River, Blacks Fork River, Gunnison River, Escalante, Green River, Platte River, Delores River, Arikaree, and the San Juan River (EPA, 2005). The Wikimedia Foundation, Inc. (2006) determined that the Missouri River Basin Watershed is comprised of multiple river systems including the Jefferson River, Madison River, Gallatin River, Sixteenmile Creek, Dearborn, River, Smith River, Sun River, Belt Creek, Marias River, Arrow Creek, Judith River, Cow Creek, Musselshell River, Milk River, Redwater River, Poplar River, Big Muddy Creek, Yellowstone River, Little Muddy Creek, Tobacco Garden Creek, Little Missouri River, Knife River, Heart River, Cannonball RiverRepublican River, Grand River, Moreau River, Cheyenne River, Bad River, White River, James River, Vermillion River, Big Sioux River, Niobrara River, Platte River, Floyd River, Little Sioux River, Soldier River, Boyer River, Nishnabotna River, Kansas River, Blue River, Osage River. The receiving rivers comprising the Arkansas Red-White Rivers Basin Watershed include the Arkansas and Red Rivers, Bear Creek, Beaver Creek, Big Cypress Creek, Canadian, North Canadian, Cimarron and the White River. A complete table of the waterbodies that will be crossed by the proposed pipeline route is included in Appendix G.

3.3.2 Wetlands

Based on data provided by the USFWS's National Wetland Inventory (NWI), Overland Pass identified six types of wetlands that will be affected temporarily by its project: palustrine emergen, palustrine unconsolidated shoreline, palustrine scrub-shrub, riverine lower perennial unconsolidated bottom, riverine upper perennial unconsolidated bottom, and lacustrine littoral unconsolidated shore. A total of 29 wetlands will be crossed by pipeline, all of which occur in Wyoming. Approximately 17 acres of wetlands will be temporarily impacted by the construction right-of-way. No wetlands will be affected by operation of the Overland Pass Project. Appendix H includes a table that identifies the location and type of wetlands affected by the project.

3.3.3 Municipal Storm Sewers

Storm water runoff could enter municipal storm water sewers where Overland Pass' pipeline will cross improved or populated areas. Overland Pass will implement the measures outlined in its CM&R Plan to minimize sediments from flowing off-site into adjacent municipal storm water sewer systems.

3.4 Soils

Overland Pass' project will cross a variety of soil types including highly erodible, highly wind erodible, prime farmland, hydric, compaction-prone, stony/rocky, shallow bedrock, and droughty. Soils in the project area were formed from residuum on Tertiary bedrock uplands (e.g., mudstones, sandstones, siltstones, shales, marlstones) and in Quaternary alluvium and colluvium along stream and river.

Soils are generally moderately deep over sedimentary bedrock. Approximately 2,935 acres of the pipeline route is located in soils that have topsoil depth between 0 and 6 inches deep, which are present on alluvial fans, in basins, and on valley alluvium. Approximately 3,355 acres have topsoil depth of 6 to 12 inches. The effective rooting depth approximates the soil depth, except in areas of shallow bedrock. The organic matter content of the topsoil is limited due to the dry, cool (i.e., frigid) climate and nominal accumulation.

A large percentage of the soils were derived from shales, sandstones, and eolian deposits, which produced medium- to fine-texture soils (e.g., sandy loam, loam, clay loam, silt loam) and occur on all topographic positions. Heavier soils (e.g., silty clay or clay-textured soils) typically occur in alkali bottomlands and breaks and slopes. Coarse soils (e.g., sands, gravels) are present in dry washes, river washes, and floodplains.

4.0 BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs), as summarized below and described in Overland Pass' CM&R Plan, SPCC Plan, and SS&R Plan, will be used to minimize exposure of pollutants to storm water, remove excess sediments from storm water before flowing offsite, and reduce the velocity of storm water flowing offsite. Implementation of BMPs, coupled with reestablishment of existing contours and vegetation, will minimize the erosion potential or changes to the runoff coefficients.

4.1 Erosion and Sediment Control

Soil susceptibility to erosion is a complex function of characteristics such as soil texture and structure, topography, surface roughness, vegetative cover, and climate. Erosion may also be influenced by the length of time the soils are bare and by disruption of drainage and erosion control structures, such as terraces. The majority of the Overland Pass Project's pipeline route will cross range and shrublands on gently rolling to moderately steep slopes that are highly erodible by water or wind and there is considerable overlap between wind and water erosion classes in some counties.

Although accelerated erosion due to construction-related soil disturbance may occur at any stage of construction, the greatest potential for erosion within the construction right-of-way is expected after final grading is completed but before a vegetative cover is reestablished. If the ground surface is left smooth and bare during this period, winds may reach a speed where soil particles may be dislodged and rainfall intercepting bare surfaces would result in increased erosion.

Overland Pass' CM&R Plan (see appendix A) describes the erosion and sediment control practices that will be implemented by Overland Pass before, during, and after construction activities and most appropriate for the protection of environmental resources.

4.1.1 Temporary Erosion and Sediment Control

Temporary erosion and sediment control devices, including slope breakers and sediment barriers, will be installed promptly after soil disturbance and as directed by the onsite Environmental Inspector (EI). Erosion and sediment control devices will be inspected on a daily basis in areas of active construction, on a weekly basis in areas with no active construction, and within 24 hours of each 0.5-inch or greater rainfall.

Temporary slope breakers (e.g., hay bales, silt fence, earthen berms) will be constructed and maintained according to the specifications and recommendations of the applicable federal agencies.

Table 4.1.1-1 provides the spacing intervals of temporary berms by percent of slope. Berms will be installed with a 2 to 6 percent gradient and will provide a minimum depth of 18 inches. Typical temporary berm installation methods are illustrated on the drawings included in appendix D.

TABLE 4.1.1-1

Temporary Diversion Berm Spacing (verify)

Percent slope	Spacing interval
5 to 15 percent	300 feet
>15 to 30 percent	200 feet
>30 percent	100 feet

Overland Pass will install temporary sediment barriers such as silt fence or staked straw bales on either side of a waterbody channel across the width of the construction right-of-way; around spoil and topsoil stockpiles to prevent sediment runoff into a waterbody; as required at the edge of the right-of-way to contain topsoil or trench spoil and prevent flow of sediment into adjacent areas; and at locations identified by the environmental monitors. Sediment barriers will be maintained as necessary to ensure effectiveness during construction. Overland Pass' EI may modify division berm spacing on a case-by-case basis.

In steep terrain, temporary sediment barriers will be installed during clearing to prevent the movement of disturbed soil off the right-of-way. Temporary slope breakers consisting of mounded and compacted soil will be installed across the right-of-way during grading. Where waterbodies or wetlands are located at the base of slopes, temporary sediment barriers will be installed where necessary until revegetation of adjacent upland areas is successful. Once revegetation is successful, sediment barriers will be removed from the right-of-way and disposed of properly.

Portions of the project area from approximately Opal, Wyoming to Laramie, Wyoming can experience high, sustained winds. To preserve topsoil during construction activities, Overland Pass will periodically apply water to topsoil piles to create a natural crust on the soil, which will facilitate keeping soil in place until backfilling begins. Overland Pass will monitor wind erosion-prone areas for exposed pipe, deflation, or dune formation and install erosion control devices, such as snow fences, where appropriate.

4.1.2 Permanent Erosion and Sediment Control

Permanent slope breakers (diversion berms) will be constructed according to federal agency and BMP standards and in accordance with Overland Pass' Plan and Procedures. Permanent slope breakers will be installed across the full width of the right-of-way where needed to prevent and divert runoff from the right-of-way to adjacent stable areas. Slope breakers will be installed to drain down slope at an approximate gradient of 2 to 6 percent and will extend 3 to 4 feet into undisturbed, stable areas at the edge of the construction right-of-way. Slope breakers will provide a minimum height of 18 inches from the up-slope channel and the berm top. Topsoil will not be used to construct diversion berms and berms will be compacted after installation. If necessary, energy dissipation devices will also be installed to prevent soil runoff or sink holes.

Diversion berms will be installed at the edges of wetland crossings and the banks of waterbodies if the approaches slope toward the waterbody or wetlands, or as directed by the EI.

In rocky areas where the surface is resistant to erosion, diversion berms may be omitted or have increased spacing. The EI will identify rocky areas that do not require diversion berms.

Spacing of diversion berm will be constructed according to table 4.1.2-1. Overland Pass' EI may modify permanent division berm spacing on a case-by-case basis.

TABLE 4.1.2-1

Permanent Diversion Berm Spacing (verify)

Percent slope	Spacing interval
2 to 5 percent	300 feet
5 to 15 percent	200 feet
15 to 25 percent	100 feet
>30 percent	100 feet or EI Recommendation

4.2 Mitigation and Reclamation Control Measures

4.2.1 Recontouring and Slope Reduction

Special attention will be given to shaping the construction right-of-way to direct runoff into existing drainages off the right-of-way. Cut and fill slopes will have the slope reduced to a 3:1 or 4:1 ratio or to match an adjacent utility right-of-way to aid in reclamation and stabilization. If necessary, energy dissipation devices may be installed at the bases of cut and fill slopes to prevent scour in adjacent steep banks not located in the construction right-of-way.

4.2.2 Mulch Crimping and Punching

Overland Pass will crimp or "punch" mulch into the topsoil. Crimping and punching involves two applications of 1.5 tons per acre of weed-free straw or non-brittle straw or covered with erosion control fabric to an area. After the first application of mulch and seed is applied, the material will be crimped into the soil by hand, or with a disk, or "punched" into the surface with a footed roller pulled by a tractor. Following the first mulch application and seeding, a second layer of mulch will be applied and anchored.

Use of a nondirectional-footed roller is the preferred method to anchor mulch. This device creates depressions in the soil surface, increases soil contact with the seed, and holds the soil

in place. Punching reduces the potential for wind erosion and provides an environment conducive for moisture retention and germination. Punching will not be used in rocky areas.

If mulch is crimped into the surface by a disk, the crimping pattern will be crosshatched to prevent the creation of down slope furrows that could channelize runoff. Mulch will not be crimped in rocky areas.

Erosion control fabrics (i.e., jute matting, straw blankets with plastic netting, or curlex) will be substituted for straw mulch on steep, unstable slopes where mulch cannot be applied by mechanical means because of safety concerns. Fabric should overlap by 4 to 6 inches and be stapled or staked into the soil.

4.2.3 Rock Mulch

Rock mulch will be used to control erosion in areas that have a native gravel, cobble, boulder, or bedrock surface. Rock salvaged and stockpiled during construction will be distributed over the construction right-of-way during restoration and seeded with a broadcast seeder. Gaps in rock will provide a microenvironment beneficial to seed germination by allowing moisture to collect and provide protection from wind. A rock cover will also blend the construction right-of-way with undisturbed areas.

4.2.4 Final Stabilization

Final stabilization of the project area will be achieved when all soil-disturbing activities are completed and a uniform perennial vegetative cover of 80 percent is attained or other equivalent means are implemented to prevent soil failure under erosive conditions and all temporary BMPs are removed. Once final stabilization is achieved, a Notice of Termination (NOT) will be submitted to the appropriate agencies within 30 days when applicable.

4.3 Non-Storm Water Components

Dewatering the project area of ground water may be necessary to provide a safe working environment during the construction of the pipeline. Dewatering discharges will be directed into sediment control structures such as filter bags placed in well-vegetated upland areas. Water discharges will occur during hydrostatic testing of the in accordance with Overland Pass' Hydrostatic Test Plan and will include use of energy dissipation devices and sediment control structures to prevent erosion.

4.4 Waste Storage and Management

4.4.1 Solid Construction Waste

Construction waste such as packaging materials, welding and cutting materials, electrical wiring, pipe and fittings, concrete, asphalt, excavated materials (spoil, concrete, and asphalt), drilling mud, and slash could possibly be exposed to storm water discharges. Overland Pass will minimize storm water contact with wastes by disposing all wastes not native to the construction site at an appropriate off-site location. In addition, non-hazardous construction wastes will be containerized and properly disposed of off-site. Construction debris will not be placed in or adjacent to waterways and construction trash will be removed from the right-of-way each day. Overland Pass does not expect to generate hazardous wastes during construction of its project. Overland Pass and its Contractor(s) will comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. Waste management practices will be conducted in

accordance with section 3.0 (Regulated Materials Storage and Handling) of Overland Pass' SPCC Plan (appendix B).

4.4.2 Hazardous Chemical Storage and Handling

A variety of potentially hazardous chemicals associated with equipment operation, welding, and coating of pipe will be used during construction. Such substances could possibly be exposed to storm water discharges due to an accidental spill. Hazardous substances may include the materials listed in table 4.4.2-1.

TABLE 4.4.2-1

Hazardous Materials Used During Pipeline Construction (Willbros to modify/verify list)

hydraulic fluids	fusion bonded epoxy powder
motor oil	welding consumables
transmission fluid	liquid joint coating materials
cleaners and additives	primer and tape
gear grease	sandblast media
Antifreeze	paint thinner/solvents
thermite weld material	paint and primer

Overland Pass will follow its SPCC Plan procedures to ensure the proper handling and storage of these materials as summarized below:

- The Contractor will keep an accurate inventory of hazardous materials and wastes stored on site during construction and such materials will not be stored on the right-of-way overnight.
- Hazardous materials, chemicals, fuels, lubricating oils, and materials associated with concrete coating will not be stored in a wetland, or within 500 feet of any wetland boundary.
- Overland Pass will make every effort to refuel all construction equipment in an upland area at least 100 feet from a wetland or waterbody boundary, 200 feet from private water supply wells; and 400 feet from public water supply wells. If construction equipment must be refueled in a wetland or within 100 feet of any wetland or waterbody boundary, 200 feet from private water supply wells; and 400 feet from public water supply wells, the procedures outlined in Overland Pass' SPCC Plan (e.g., the use of secondary containment) will be followed.
- Spills will be promptly cleaned up and contaminated soil hauled to a disposal site approved by Overland Pass and that meets local jurisdictional requirements.
- Contaminated soils and spill clean up materials will be disposed of in approved disposal containers for later disposal in an approved waste dump.
- Construction equipment, construction work areas, and contractor yards will be regularly inspected by an EI to identify leaking equipment or containers and to ensure and document compliance with Overland Pass' SPCC Plan.

- Construction equipment will be equipped with appropriate spill clean up materials as specified in Overland Pass' SPCC Plan. The EI will periodically inspect equipment to ensure adequate supplies are available.

Additionally, the Contractor(s) will be responsible for conducting all work activities in accordance with the terms and conditions of the SPCC Plan developed by Overland Pass. Overland Pass will provide, maintain, and make available the appropriate MSDS documents for each of these materials and those for any other hazardous or controlled materials utilized on the right-of-way or in the contractor yards at a location accessible to all agencies, Contractor(s), and Overland Pass employees upon request.

5.0 INSPECTION AND MAINTENANCE

Overland Pass' SWPPP will be retained in the Contractor's construction management field office and in Overland Pass' management office under the supervision of the Project Manager, Environmental Manager, or Construction Manager/Chief Inspector. The plan will be made available to the public or state and federal agencies upon request. An on-site employee(s) designated to implement the SWPPP will be responsible for inspection, maintenance, and repair of control structures. The designee will be on site during construction activities to ensure and document compliance with this plan. The designee will have peer status with all other activity inspectors and authority to stop activities that violate the environmental conditions of the Storm Water General Permits or other authorization and order corrective action.

5.1 Inspection Procedures

The EIs will be responsible for inspecting BMPs, which will include:

- verifying proper marking of authorized construction work area limits;
- identifying stabilization needs;
- locating control structures to ensure they will not direct sediment into known cultural resource sites or locations of sensitive species;
- ensuring proper installation and maintenance on a daily basis, if necessary, of temporary erosion controls;
- at a minimum, inspecting temporary erosion control measures on a daily basis in areas of active construction or equipment operation, on a weekly basis in areas with no construction or equipment operation, or within 24 hours of each 0.5-inch of rainfall or snow melt or any rainfall or snow melt that causes surface erosion;
- ensuring repair of all ineffective temporary erosion control measures within 24 hours of identification; and
- during active construction and restoration, maintaining records of compliance with the environmental conditions of the applicable federal or state environmental permits.

5.2 Maintaining BMPs

If an erosion control structure is damaged or clogged, deteriorates, fails, or requires maintenance, the Contractor will repair or install replacement structures within 24 hours after deficiencies are identified, weather and soil conditions permitting.

The Contractor and EIs will monitor regional National Weather Service forecasts and reports for storm advisories. In the event of forecasted impending heavy precipitation, all temporary erosion control devices requiring repair or new installation will be repaired or installed immediately. During such a period, the Contractor will provide additional personnel, vehicles, and materials, if necessary, to repair erosion control structure damage where noted during an inspection.

5.3 Records of Maintenance

The EI will document all erosion control inspections in the Environmental Daily Inspection Report. The reports will include information regarding the timing of all major construction activities. Once construction and restoration of the right-of-way is complete, a Storm Water NOT will be completed and submitted to the appropriate agencies. All such information will be maintained on site or with the permitee, as required by the permits.

6.0 SIGNATORY REQUIREMENTS

6.1 Responsible Parties

Table 6.1-1 provides contact information for the site owner (Overland Pass) and other parties with responsibility for compliance with the project's permits and plans.

TABLE 6.1-1 **Responsible Parties Contact List**			
Name	Title	Contact Information	
	Construction Manager	Phone:	
		Cell Phone:	
		Fax No:	
		Address:	
		E-mail:	
	Environmental Inspector Spread 1	Phone:	
		Cell Phone:	
		Fax No:	
		Address:	
		E-mail:	
	Environmental Inspector Spread 2	Phone:	
		Cell Phone:	
		Fax No:	
		Address:	
		E-mail:	
	Environmental Compliance Manager	Phone:	
		Cell Phone:	
		Fax No:	
		Address:	
		E-mail:	

6.1.1 Site Owner

Overland Pass will be responsible for submitting Section 404 permits required by the Army Corp of Engineers (COE) districts crossed and submitting the Notices of Intent to the WDEQ, CDPHE, and KDHE to obtain coverage under the General Permits issued by the EPA and the states of Wyoming, Colorado, and Kansas. Furthermore, ensuring that Overland Pass' SWPPP and related plans and drawings are available at the Overland Pass field office(s) throughout construction; providing an EI to monitor performance and ensure compliance with this SWPPP and related plans; and providing training about project sediment and pollution control measures.

6.1.2 Contractor

The Contractor Superintendent will be responsible for committing all necessary labor and equipment to implement and maintain the BMPs identified in this SWPPP and related plans; conducting additional workforce training as necessary; and performing regular inspection, maintenance, and repair of BMPs.

6.1.3 Environmental Inspector

The EI will be responsible for training staff on sediment and pollution control measures, conducting and documenting regular inspection of BMPs, and requiring and documenting necessary BMP repair and maintenance work to be undertaken by the Contractor.