2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 PROPOSED FACILITIES

The Rockies Western Phase Project would involve construction and operation of both pipeline and aboveground facilities. As discussed in section 1, the Rockies Western Phase Project would consist of facilities to be constructed by Rockies Express (the REX-West Project), TransColorado (the Blanco to Meeker Project), and Overthrust (the Wamsutter Expansion Project). The environmental analysis presented in this EIS evaluates the facilities proposed by each of the Applicants, as detailed below.

2.1.1 Pipeline Facilities

Table 2.1-1 presents a listing of the pipeline facilities proposed by the Applicants. These facilities are further described below.

TABLE 2.1-1

Proposed Pipeline Facilities – Rockies Western Phase Project

Facility and Location	Diameter (inches)	Length (miles)	Mileposts a/ From - To
Rockies Express			
Colorado	42	34.6	0.0 – 34.6
	42	80.6	67.4 – 148.0
Wyoming	42	5.8	34.6 – 40.4
	24	5.3	0.0 – 5.3 b/
Nebraska	42	27.0	40.4 – 67.4
	42	290.5	148.0 – 438.5
Kansas	42	98.5	438.5 – 537.0
Missouri	42	175.7	537.0 – 712.7
Subtotal		**718.0**	
TransColorado			
New Mexico	24	0.3	N/A
	16	0.01	N/A
Subtotal		**0.3**	
Overthrust			
Wyoming	36	77.2	0.0 – 77.2 c/
	20	0.1	N/A
Subtotal		**77.3**	
Total		**795.6** d/	

a/ Mileposts are unique to each project or project segment. Numbers are mapped mileposts used for reference and may not reflect actual surveyed distances. The REX-West pipeline would begin in northwestern Colorado and continue in an easterly direction crossing the Colorado-Wyoming border twice and then into Nebraska, Kansas, and Missouri.
b/ Refers to the proposed Echo Springs Lateral in Carbon and Sweetwater Counties, Wyoming.
c/ Mileposts along the proposed Wamsutter Expansion route in Lincoln and Sweetwater Counties, Wyoming.
d/ Any apparent discrepancies are due to the effects of rounding.

N/A - Not Applicable

2.1.1.1 Rockies Express

As a part of its REX-West Project, Rockies Express proposes to construct and operate approximately 712.7 miles of 42-inch-diameter natural gas pipeline. The pipeline would begin at the proposed Cheyenne Compressor Station in Weld County, Colorado at milepost (MP) 0.0, and proceed eastward through portions of Wyoming, Colorado, Nebraska, Kansas, and Missouri, terminating at the proposed PEPL interconnect at MP 712.7. Rockies Express' proposed facilities are shown on figure 1-1.

Rockies Express also proposes to construct and operate the Echo Springs Lateral, an approximately 5.3-mile-long, 24-inch-diameter pipeline that would begin in Sweetwater County, Wyoming and proceed southward to Carbon County, Wyoming. This new lateral would provide a connection from the existing Williams Company Echo Springs Processing Plant to the proposed Rockies Express Echo Springs Compressor Station and the Rockies Express/Entrega pipeline.

2.1.1.2 TransColorado

As a part of its Blanco to Meeker Project, TransColorado proposes to install, in parallel, approximately 392 feet of discharge line and 478 feet of suction line. Each line would be 24 inches in diameter and connect the proposed Blanco Compressor Station with a new mainline valve (MLV) on TransColorado's existing pipeline system. TransColorado's proposed facilities are shown on figure 1-1.

TransColorado also proposes to install approximately 1,300 feet of 24-inch-diameter pipeline to connect the existing Conoco Gas Plant to the proposed Blanco Compressor Station. The receipt pipeline would accommodate delivery of natural gas from the Conoco Gas Plant into the TransColorado system.

Finally, TransColorado proposes to construct approximately 60 feet of 16-inch-diameter pipeline to connect the proposed 24-inch-diameter receipt pipeline to a meter station to be constructed by El Paso Natural Gas.

All of these pipeline segments would be constructed in San Juan County, New Mexico.

2.1.1.3 Overthrust

As a part of its Wamsutter Expansion Project, Overthrust proposes to construct and operate approximately 77.2 miles of 36-inch-diameter natural gas pipeline in Sweetwater County, Wyoming. The pipeline would begin at Overthrust's proposed Rock Springs Compressor Station and proceed eastward to the Wamsutter Delivery Point where it would interconnect with the Rockies Express/Entrega Pipeline system at MP^{OT} 77.2. Overthrust's proposed facilities are shown on figure 1-1.

In Lincoln County, Wyoming, Overthrust also proposes to construct 0.1 mile of 20-inch-diameter pipeline (TL-90 Tie-in) to connect Overthrust's Rendezvous Tap with Questar's existing pipeline.

2.1.2 Aboveground Facilities

Table 2.1-2 presents a list of the aboveground facilities proposed by each Applicant. These facilities are further described below.

TABLE 2.1-2

Proposed Aboveground Facilities – Rockies Western Phase Project

	New ISO Rated Horsepower (hp)	MP a/	Location (County, State)
Rockies Express			
Compression Facilities			
New Compressor Stations			
Cheyenne Compressor Station	35,500	0.0	Weld, CO
Julesburg Compressor Station	35,000	143.8	Sedgwick, CO
Echo Springs Compressor Station	7,100	147.0[EN]	Sweetwater, WY
Steele City Compressor Station	41,000	431.5	Gage, NE
Turney Compressor Station	35,000	572.5	Clinton, MO
Previously Certificated Compressor Stations			
Meeker Hub Compressor Station	13,020 b/	0.0[EN]	Rio Blanco, CO
Wamsutter Compressor Station	10,310 b/	136.0[EN]	Sweetwater, WY
Total New Horsepower	**176,930**		
Meter Station Facilities			
Questar Interconnect (receipt)	--	0.0[EN]	Rio Blanco, CO
Echo Springs Interconnect (receipt)	--	0.0[ES]	Carbon, WY
WIC Interconnect (receipt)	--	0.0	Weld, CO
KMIGT Meter Station (delivery)	--	332.0	Franklin, NE
NGPL Meter Station (delivery)	--	423.1	Jefferson, NE
NNG Meter Station (delivery)	--	430.6	Gage, NE
ANR Meter Station (delivery)	--	497.8	Brown, KS
PEPL Meter Station (delivery)	--	712.7	Audrain, MO
TransColorado			
Compression Facilities			
New Compressor Stations			
Blanco Compressor Station	4,740	N/A	San Juan, NM
Conn Creek Compressor Station	7,100	N/A	Garfield, CO
Existing Compressor Stations			
Greasewood Compressor Station	3,550 b/	N/A	Rio Blanco, CO
Total New Horsepower	**15,390**		
Meter Station Facilities			
Blanco Hub Meter Station	--	N/A	San Juan, NM
Overthrust			
Compression Facilities (New)			
Roberson Compressor Station	30,000	N/A	Lincoln, WY
Rock Springs Compressor Station	15,000	0.0[OT]	Sweetwater, WY
Total New Horsepower	**45,000**		
Meter Station Facilities			
Blacks Fork Receipt Point Meter Station	--	N/A	Uinta, WY
Wamsutter Delivery Point Meter Station	--	77.2[OT]	Sweetwater, WY

a/ Mileposts are mapped mileposts used for reference and may not reflect actual surveyed distances.
b/ Additional compression at previously certificated station.

N/A - Not Applicable

2.1.2.1 Rockies Express

Rockies Express proposes to construct and operate the following five new compressor stations[1] as a part of its REX-West Project. The horsepower ratings are based on International Organization for Standardization (ISO) conditions.

- The *Cheyenne Compressor Station*, at MP 0.0 in Weld County, Colorado, would provide 35,500 hp of compression using two 17,500-hp electric motor-driven compressor units and one 500-hp small electric-drive compressor unit.

- The *Julesburg Compressor Station*, at MP 143.8 in Sedgwick County, Colorado, would provide 35,000 hp using two 17,500-hp electric motor-driven compressor units.

- The *Echo Springs Compressor Station*, at MP$^{\underline{EN}}$ 147.0 along the Rockies Express/Entrega Pipeline in Sweetwater County, Wyoming, would provide 7,100 hp of compression using two engine-driven reciprocating compressor units.

- The *Steele City Compressor Station*, at MP 431.5 in Gage County, Nebraska, would provide 41,000 hp using two 20,500-hp Solar Titan 130 turbine-driven compressor units.

- The *Turney Compressor Station*, at MP 572.5 in Clinton County, Missouri, would provide 35,000 hp of compression using two 17,500-hp electric motor-driven compressor units.

Rockies Express also proposes to install and operate the following four new compressor units at two previously certificated but not yet constructed compressor stations[2].

- The *Meeker Compressor Station*, in Rio Blanco County, Colorado, at MP$^{\underline{EN}}$ 0.0, would be at the beginning of the Rockies Express/Entrega Pipeline. Rockies Express would add 13,020 hp using three engine-driven reciprocating compressor units.

- The *Wamsutter Compressor Station*, in Sweetwater County, Wyoming, at MP$^{\underline{EN}}$ 136.0, would be along the Rockies Express/Entrega Pipeline. Rockies Express would add 10,310 hp using one Solar Tarus 70 turbine-driven compressor unit.

Equipment associated with each of the electrically driven compressor stations could include a lube oil cooler, electrical transformer, variable frequency drives, power control room, motor air supply blower, exhaust ducting, outdoor aboveground gas piping, inlet filter separators, and a station blowdown/silencer system. The natural gas turbine-driven station could include a lube oil cooler, turbine exhaust and turbine air intake filter systems, aboveground piping, inlet filter separators, and a station blowdown/silencer system.

[1] Rockies Express identified one additional compressor station, the Bertrand Compressor Station, which would be located at approximate MP 287.0 in Phelps County, Nebraska. This facility is part of the Rockies Eastern Phase Project (see footnote 2 in section 1.1) and would be evaluated in the EIS being prepared for that project.

[2] The Meeker and Wamsutter Compressor Stations have not been completed as of this EIS. These compressor stations were authorized by FERC in 2005 under Docket Nos. CP04-413-000, et al. Accordingly, these facilities are anticipated to be in-service by April 2007.

Rockies Express would also construct and operate 8 new meter stations (see table 2.1-2) and install 41 MLVs. Three of the meter stations would measure volumes of gas delivered into the Rockies Express system (receipt meter stations) and the remaining five would measure volumes of gas delivered out of the system (delivery meter stations).

2.1.2.2 TransColorado

TransColorado proposes to construct and operate two new compressor stations. The horsepower ratings are based on ISO conditions. The compressor stations would be automated and remotely controlled by TransColorado from an off-site location.

- The *Blanco Compression Station*, in San Juan County, New Mexico, would provide approximately 4,740 hp of compression using two natural gas-fueled, high-speed, Caterpillar 3608LE reciprocating compressor units.

- The *Conn Creek Compressor Station*, in Garfield County, Colorado, would provide about 7,100 hp of compression using two natural gas fueled, high-speed, Caterpillar 3612LE reciprocating compressor units.

TransColorado would also install and operate one additional 3,550 hp natural gas-fueled, high-speed, Caterpillar 3612LE reciprocating compressor unit at its existing Greasewood Compressor Station in Rio Blanco County, Colorado. This compressor station is automated and remotely controlled by TransColorado from an off-site location. In addition, TransColorado's proposed discharge-suction lines described above would connect the Blanco Compressor Station with a new MLV on TransColorado's existing pipeline system.

In addition, TransColorado would modify header and piping facilities to permit reverse gas flow at three existing compressor stations in Colorado (the Mancos Compressor Station in Montezuma County; the Redvale Compressor Station in Montrose County; and the Whitewater Compressor Station in Mesa County). No additional compression is proposed at these three locations, and no ground disturbance would be incurred. Thus, there would be no environmental impacts associated with these modifications and we do not discuss them further in this EIS.

TransColorado would construct and operate one new meter station (the Blanco Hub Meter Station) at the southern terminus of its proposed 24-inch-diameter receipt pipeline, within the Conoco Gas Plant.

2.1.2.3 Overthrust

Overthrust proposes to construct and operate two new compressor stations in Wyoming. The horsepower ratings are based on ISO conditions.

- The *Roberson Compressor Station*, located off right-of-way at T20N, R115W, Section 24, in Lincoln County, would provide approximately 30,000 hp of compression using two Solar Mars 100 compressor units.

- The *Rock Springs Compressor Station*, at $MP^{\underline{OT}}$ 0.0 in Sweetwater County, would provide 15,000 hp of compression using one Solar Mars 100 compressor unit.

The compressor stations would include one 200-barrel pipeline liquid storage tank, other compressor station ancillary facilities, and pipeline tie-in valves.

Overthrust would also construct two new meter stations in Wyoming (see table 2.1-2):

- The *Blacks Fork Receipt Point Meter Station* located off right-of-way at T18N, R112W, Section 10, in Uinta County would consist of metering and regulation facilities at the Blacks Fork Plant Tap on Overthrust's pipeline constructed under Docket No. CP06-167-000. The meter station, consisting of metering and regulation facilities, would be constructed entirely within the area to be disturbed by construction of the pipeline certificated in Docket No. CP06-167-000. Following construction, the meter station would require a 190-foot by 100-foot fenced area. The fenced site will be permanently maintained for operations. No improvements to access roads would be necessary. Because the construction work areas associated with the Blacks Fork Meter Station were evaluated in Docket No. CP06-167-000, and no additional environmental impacts would occur as a result of the construction of this facility, we do not discuss this facility further in this EIS.

- The *Wamsutter Delivery Point Meter Station*, located at the end of the proposed pipeline route (MP 77.2), would consist of metering and pig launcher/receiver facilities and would serve as an interconnect with the REX system. Construction of all aboveground facilities would be completely within a new 250-foot by 250-foot fenced area adjacent to the proposed REX Compression Facility, unless a mutual agreement can be reached between Overthrust and REX, in which case this site may be incorporated into the proposed REX Compression Facility fenced area. Existing roads will be used to provide access to the sites. No improvements to these roads will be necessary.

Overthrust also proposes to construct three new block valve assemblies, each consisting of one 36-inch-diameter block valve and two 12-inch-diameter blowdown valves at approximate MP's[OT] 19.7, 38.4, and 57.6. Construction of the valves would occur within the typical 110-foot-wide construction right-of-way to be used for the new pipeline. The valve sites would become permanent 35-foot by 50-foot fenced sites after construction. These sites would lie completely within Overthrust's new permanent right-of-way for its pipeline. Existing roads would be used to provide access to each site. No improvements to these access roads would be necessary.

Overthrust's original filing included the construction of two new receipt point meter stations located near Opal, Wyoming. On October 30, 2006, Overthrust filed supplemental information with the Commission stating that it no longer proposes to construct the receipt points near Opal, Wyoming as part of the Wamsutter Expansion Project but, instead, would construct these receipt points under its Blanket Construction Certificate issued on November 24, 1982, in Docket No. CP82-493-000. These facilities have therefore been removed from discussions in this EIS.

2.2 LAND REQUIREMENTS

Table 2.2-1 summarizes the land requirements for the pipeline and aboveground facilities proposed by the Applicants for the Rockies Western Phase Project. A more detailed discussion of land use is presented in section 4.8.

TABLE 2.2-1

Land Requirements for the Rockies Western Phase Project

Project Component	Temporary Construction Acres a/	Permanent Operation Acres
Pipeline		
Rockies Express		
Mainline Pipeline Corridor	10,799.5	4,252.6
Echo Springs Lateral	79.3	31.9
Additional Temporary Workspace	1,050.2	0.0
Contractor Yards	91.0	0.0
Access Roads	1.7	1.7
Subtotal	**12,021.7**	**4,286.20**
TransColorado		
Pipeline Corridors	3.0	2.1
Additional Temporary Workspace	0.6	0.0
Contractor Yards	0.0	0.0
Access Roads	3.1	3.1
Subtotal	**6.7**	**5.2**
Overthrust		
Mainline Pipeline Corridor	1,142.80	458
TL-90 Tie-in	1.6	0.8
Additional Temporary Workspace	11.5	0
Contractor Yards	0	0
Access Roads	222.8	0
Subtotal	**1,378.70**	**458.80**
Aboveground Facilities b/		
Rockies Express	88.9	88.9
TransColorado	12.7	7.5
Overthrust	14.9	15.0
Subtotal	**116.5**	**111.4**
Rockies Western Phase Project Total	**13,523.6**	**4,861.6**

a/ Includes areas within temporary workspace and permanent operational lands used during construction.
b/ Includes compressor stations, valves, launcher/receiver facilities, and access roads to aboveground facilities.

2.2.1 Rockies Western Phase Project Pipeline Rights-of-Way and Additional Construction Areas

Construction of the proposed pipeline facilities would disturb a total of about 13,407.1 acres of land, including the pipeline construction rights-of-way, temporary extra workspace areas, contractor yards, and support areas. Aboveground facilities are discussed in section 2.2.2.

2.2.1.1 Rockies Express

Construction Right-of-Way

Rockies Express proposes to utilize a typical 125-foot-wide construction right-of-way for installation of the 42-inch-diameter pipeline in upland areas. The proposed right-of-way configurations are provided in appendix B, sheets B-76 and B-77. This right-of-way width would accommodate large equipment and the temporary storage of topsoil and trench spoil. Depending on the type of trench

excavation equipment used, the ditch width would vary from 6 to 12 feet, or wider in some soils. The trench would range in depth from roughly 7 feet or greater, depending on site-specific factors such as drain tiles or terracing. The amount of trench spoil generated from a ditch of this size would typically require 20 to 25 feet of the right-of-way width for storage on the spoil side. To prevent spoil from falling back into the trench, the ditch spoil would be placed several feet back from the trench opening. Depending on topsoil segregation requirements, the amount of topsoil generated would typically require an additional 10 to 20 feet of the right-of-way or additional temporary workspace for storage. Where the REX-West pipeline would be collocated with existing pipelines, the edge of the REX-West permanent right-of-way on the spoil side and additional temporary workspace would be 25 feet and 5 feet offset from the existing pipeline centerline, respectively.

The REX-West pipeline would parallel about 708 miles of existing pipeline and roadway corridors (the Trailblazer pipeline right-of-way for 259 miles, the Platte pipeline right-of-way for 445 miles, the Panhandle pipeline right-of-way for 3 miles, and Audrain County Road 424 for 0.5 mile). Rockies Express received comments from Panhandle regarding its proposed offset along a 3-mile stretch where the REX-West pipeline would be collocated with Panhandle. Panhandle requested that Rockies Express increase its offset and implement certain conditions on the location and construction of the REX-West pipeline, depending on the specific configuration. Rockies Express indicated that it has initiated discussions with Panhandle on the factual and technical issues that should be addressed so that the REX-West pipeline can be constructed safely and adjacent to Panhandle, with an acceptable offset. Rockies Express is continuing its consultation with Panhandle and anticipates entering into an Encroachment Agreement with PEPL in the near term that would address construction and operations issues where these facilities would be collocated.

In addition to the soil storage requirements, Rockies Express anticipates using large sideboom tractors (CAT 594s and the newer CAT 589s) for movement of the pipe on the construction right-of-way. This equipment requires a considerable right-of-way width for safe operation (38 feet for extension of the boom and counterweight, plus additional offsets from the pipeline and construction staff). Rockies Express also plans to use automatic welding for the majority of the project. Automatic welding operations are conducted in portable shelters, commonly referred to as “sheds.” The standard width of these sheds is 10 feet and they are moved by sidebooms in a leapfrog manner during mainline welding operations. Depending on the sideboom used, movement of the sheds could require up to 30 feet of width. Additional space on either side of the equipment/sheds would be required on the construction right-of-way for safe worker and equipment movement. If there is insufficient room for the movement of the sheds in the normal construction sequence, then welding operations would have to occur in tandem operations, resulting in a slower rate of overall progress. We conclude that the information regarding construction equipment and work practices provided by Rockies Express adequately supports the use of a 125-foot-wide nominal construction right-of-way.

Rockies Express proposes to construct the 24-inch-diameter Echo Springs Lateral pipeline utilizing a 100-foot-wide construction right-of-way (appendix B sheet B-78). The Echo Springs Lateral would parallel existing pipeline corridors (Wyoming Interstate Company and two Colorado Interstate Gas pipelines) for its entire length. We note that construction of 24-inch-diameter pipeline does not typically require this wide of a right-of-way, unless site-specific factors (such as steep terrain or side slopes) or construction methods (such as full right-of-way width topsoil stripping) make a wider width necessary.

In its comments on the draft EIS, Rockies Express indicated that it is probable that the construction equipment that would be used for the construction of the lateral would be the same equipment that would be used for construction of the 42-inch-diameter mainline, thus requiring additional width to ensure safe passage of equipment and during welding operations. Rockies Express would also utilize the additional construction workspace for storage of topsoil, where necessary. Side slope terrain

along portions of the lateral would also necessitate the additional width in order to maintain a safe distance from the existing utilities. Although construction of 24-inch-diameter pipeline can typically be done within a 75-foot-wide corridor, we agree that the use of a 100-foot-wide construction right-of-way is justified for the construction of the Echo Springs Lateral.

Additional Temporary Workspace

Rockies Express proposes to use approximately 1,050.2 acres of additional temporary workspace for construction of the REX-West Project pipeline facilities. Additional temporary workspace areas are typically located along the construction right-of-way in areas such as the beginning and end of each construction spread for mobilization and demobilization; equipment turnaround locations; where the proposed pipeline crosses over or under other buried features (*e.g.*, other pipelines, utility lines, etc.); on both sides of road, railroad, wetland, and waterbody crossings; residential areas; and at directionally drilled crossings. Additional temporary workspace would also be required in areas with steep side slopes to allow the grading required to create a level and safe work surface across the width of the right-of-way for equipment operation and travel lanes.

Permanent Right-of-Way

Following construction, Rockies Express would retain a permanent easement of 50 feet for operation and maintenance of its facilities. The 50-foot-wide permanent easement would typically be 25 feet on either side of the pipeline centerline. However, actual placement of the pipeline within the permanent right-of-way would vary according to site-specific conditions such as presence of structures, topography, soils, etc. In most locations, the new permanent right-of-way would overlap existing, parallel, and adjacent pipeline rights-of-way by 10 feet. All MLVs would be located within the permanent right-of-way. In addition, on federal land the BLM would issue a 30-year Right-of-Way Grant pursuant to the MLA for the pipeline and all related facilities. All additional temporary workspace areas and access roads needed for construction on federal land would be authorized for up to a 3-year term with a Temporary Use Permit issued in association with the Right-of-Way Grant.

Access Roads

Rockies Express would use existing public and private roads for access to and from the construction right-of-way. Currently, the only new access roads identified by Rockies Express would be to provide access to three new compressor stations (Cheyenne, Turney, and Echo Springs) and five meter stations (KMIGT, NGPL, NNG, ANR, and Echo Springs). These eight roads would require a total of 1.7 acres of land. On BLM land, Rockies Express would require the use of five temporary access roads along the Echo Springs Lateral. None of these roads are considered primitive roads but are considered "Class A" roads (*i.e.*, paved and improved all-weather roads). Therefore, improvements may not be required. Each of the five access roads is approximately 25 feet wide. If ruts in excess of 4 inches develop along these access roads during construction, Rockies Express would coordinate with the BLM in accordance with its permit authorizations. Should improvement of existing roads or the creation of additional new access roads be necessary, Rockies Express would obtain landowner approval and conduct all necessary surveys for listed species, wetlands, and cultural resources, as required, and the information would be provided to the Director of the Office of Energy Projects (OEP) for review and written approval prior to use. Rockies Express would negotiate with landowners for the use of any suitable private roads that may be used during construction or operation.

Contractor Yards

Contractor yards would be needed during the construction phase of the REX-West Project to temporarily store stacked pipe joints and to stage equipment prior to mobilization to the right-of-way. Rockies Express has continued to identify appropriate locations for contractor yards during the development of the project. The locations of the proposed yards currently identified by Rockies Express are listed in table 2.2-2. Additional contractor yards may be identified by contractors and/or pipe suppliers during the final pre-construction planning phase. Any newly identified locations would be surveyed for listed species, wetlands, and cultural resources, as required, and the information would then provided to the Director of OEP for review and approval prior to use. Approximately 91.0 acres of land would be used temporarily for contractor yards.

TABLE 2.2-2

REX-West Contractor Yards

Contractor Yard	Size (acres)	Township, Range, Section	Location (County, State)
Ogallala	11	T-13-N, R-38-W, Sec. 19	Keith, NE
Lexington	10	T-9-N, R-21-W, Sec. 17	Dawson, NE
Upland	8	T-4-N, R-14-W, Sec. 16	Franklin, NE
St. Joseph (West)	3.3	T-57-N, R-35-W, Sec. 17	Buchanan, MO
St. Joseph (East)	15	T-57-N, R-35-W, Sec. 26	Buchanan, MO
Cameron	15	T-56-N, R-30-W, Sec. 14	Clinton, MO
Carrollton (B)	20	T-52-N, R-23-W, Sec. 8	Carroll, MO
Carrollton	3	T-52-N, R-23-W, Sec. 5	Carroll, MO
Moberly	5.7	T-54-N, R-13-W, Sec. 30	Randolph, MO
Total	**91.0**		

2.2.1.2 TransColorado

Construction Right-Of-Way

Discharge-Suction Lines

TransColorado proposes to install, in parallel, approximately 392 feet of discharge line and 478 feet of suction line. Each line would be 24 inches in diameter and connect the proposed Blanco Compressor Station with a new MLV on TransColorado's existing pipeline system. The discharge-suction lines would be offset from each other by 25 feet and constructed within a 75-foot-wide construction right-of-way. About 93 feet of the proposed discharge-suction lines would be outside the permanent compressor station facility on new right-of-way. The proposed discharge-suction lines would require approximately 0.8 acre of temporary disturbance.

Receipt Pipeline

TransColorado would utilize a 75-foot-wide construction right-of-way for the receipt pipeline for construction of the 1,300-foot-long, 24-inch-diameter pipeline connecting the Conoco Gas Plant and the new Blanco Compressor Station. The receipt pipeline would require approximately 2.0 acres of temporary disturbance.

Lateral Pipeline

TransColorado proposes to install approximately 60 feet of 16-inch-diameter lateral pipeline to connect the receipt pipeline with a proposed meter station to be constructed by El Paso Natural Gas, under its blanket certificate, within an existing El Paso compressor station site. TransColorado would utilize a 75-foot-wide construction right-of-way. The lateral would require approximately 0.1 acre of temporary disturbance.

Additional Temporary Workspace

TransColorado would require the temporary use of about 0.6 acre of land for additional temporary workspace. Of this amount, about 0.5 acre would be used for the receipt line, and less than 0.1 acre would be used for the lateral pipeline.

No additional temporary workspace would be required outside of the boundary of the right-of-way for the Greasewood Compressor Station. The Conn Creek and Blanco Compressor Stations would require about 3.5 and 1.6 acres of additional temporary workspace, respectively, and the Blanco Hub Meter Station would utilize about 0.1 acre of additional temporary workspace.

Permanent Right-of-Way

Following construction, TransColorado would retain a 50-foot-wide right-of-way over the pipelines for operation and maintenance of the facilities. Of the total 2.1 acres required, about 0.5 acre would be required for the discharge-suction lines, 1.5 acres would be required for the receipt pipeline, and 0.1 acre would be required for the lateral pipeline.

Access Roads

TransColorado indicated that upgrades would be required to existing access roads utilized for the proposed Blanco and Conn Creek Compressor Stations. While no new access road would be required at the Greasewood Compressor Station, TransColorado indicated that a new driveway would be required. The existing gravel access road at the Blanco Compressor Station would be upgraded to approximately 50 feet wide (including bar ditches) by 400 feet long, and would be built to BLM specifications. The existing gravel access road at the Conn Creek Compressor Station would be upgraded to approximately 50 feet wide (including bar ditches) by 2,336 feet long. Upgrades to these roads would require 3.1 acres of land. At both the Blanco and Conn Creek Compressor Stations, the upgraded access roads would follow the existing TransColorado pipeline right-of-way to the maximum extent possible.

Contractor Yards

TransColorado has not proposed to use any additional contractor yards for the Blanco to Meeker Project. All storage and staging of materials would take place within the construction work areas for the compressor stations.

2.2.1.3 Overthrust

Construction Right-of-Way

The Wamsutter Expansion mainline would parallel about 77 miles of existing utility corridors (*i.e.*, an existing utility corridor north of I-80 that contains up to 21 utilities for 61 miles and Questar's JL-85 right-of-way for 16 miles). Overthrust proposes to utilize a construction right-of-way width of 110

feet. When constructing adjacent to existing utilities, Overthrust proposes a typical offset of 40 feet from the existing corridors. Areas where Overthrust would use a wider right-of-way (125 to 150 feet) include rugged terrain, side slopes, deep washes, foreign pipeline crossings, or access approaches. Overthrust identified 161 locations along the Wamsutter Expansion mainline where it would require a wider right-of-way. Of this amount, 109 locations would require a 125-foot-wide right-of-way and 52 locations would require a 150-foot-wide right-of-way. These wider widths would provide enough space for full right-of-way width topsoil segregation while assuring the safe handling of materials and operation of equipment. We conclude that the information regarding terrain, access approaches, and work practices provided by Overthrust adequately supports the use of a 125- to 150-foot-wide construction right-of-way at these locations. The mainline corridor would temporarily disturb about 1,142.8 acres while the TL-90 tie-in would require about 1.6 acres of temporary disturbance.

Additional Temporary Workspace

Overthrust would require the temporary use of about 11.5 acres of land for additional temporary workspace. These areas would be used at the crossings of perennial streams, existing pipelines, and selected roadways; side hill or steep slope areas; and at tie-in locations at the beginning and ending of the mainline pipeline.

Permanent Right-of-Way

Following construction, Overthrust would retain a total of 458.8 acres of permanent easement over its pipelines for operation and maintenance purposes. Of this amount, about 458.0 acres would be required for the mainline, while 0.8 acre would be required for the TL-90 tie-in.

Access Roads

Overthrust indicated that it would use existing public roadways and oil/gas well roads to gain access to its construction right-of-way. In its comments on the draft EIS, Overthrust identified 70 roads that would be required to access the proposed project corridor (table 2.2-3), 34 of which may require upgrading or improvement prior to use. All improvement activities would be restricted to areas where biological and cultural resource surveys have been completed and the roads would be maintained throughout the duration of the project. Overthrust would monitor all access roads on federal lands for rutting. If instances occur of 4 inch or greater ruts, unless otherwise permitted by the BLM, Overthrust would prohibit use of the road until conditions allow use without additional rutting. Roads would either be returned to pre-construction condition or retained in the improved condition following construction, unless otherwise required by the BLM or landowner. Overthrust has not proposed to construct any new access roads.

Contractor Yards

Overthrust is currently evaluating potential locations for contractor yards. Overthrust submitted a draft Plan of Development to the BLM describing a proposed 8.0-acre contractor yard on federal land along I-80 east of Rock Springs. The contractor yard is located between I-80 and the railroad in a partially disturbed area that has been used for other utilities. The proposed site currently has electricity and phone service available. Once a specific location has been selected, Overthrust would file with the Secretary the location of the contractor yard, an assessment of potential impacts, and applicable correspondences.

TABLE 2.2-3

Wamsutter Expansion Project – Proposed Access Roads

Milepost	Name	Road Condition	Ownership	Length	Acres
0	RD 50	No improvements needed	PRIVATE	3,383.7	1.6
			BLM	570.4	0.3
1.2	RD 40	Improvements may be needed	PRIVATE	475.7	0.2
			BLM	217.2	0.1
2.5	RD 39B	No improvements needed	PRIVATE	2,049.2	0.9
2.9	Little Bitter Creek RD (RD 39 and RD 39 A)	No improvements needed	PRIVATE	5,493.8	2.5
			BLM	3,719.9	1.7
4	RD 38	Improvements may be needed	PRIVATE	7,840.5	3.6
6	RD 37A	Improvements may be needed	PRIVATE	936.0	0.4
6.3	RD 37N and RD 37S	Improvements may be needed	PRIVATE	9,984.4	4.6
			BLM	2,731.7	1.3
8.3	RD 36B	Improvements may be needed	PRIVATE	1,233.4	0.6
			BLM	388.0	0.2
8.3	RD 36	Improvements may be needed	PRIVATE	1,476.4	0.7
8.3	RD 36A	Improvements may be needed	PRIVATE	256.1	0.1
			BLM	153.8	0.1
9.6	RD 35	Improvements may be needed	PRIVATE	1,139.1	0.5
			BLM	2,998.3	1.4
11.5	RD 34	Improvements may be needed	PRIVATE	2,956.8	1.4
			BLM	5,033.6	2.3
12.4	RD 33	Improvements may be needed	PRIVATE	1,973.0	0.9
			BLM	229.2	0.1
12.5	RD 32	No improvements needed	PRIVATE	176.4	0.1
			BLM	1,041.5	0.5
13	RD 31	Improvements may be needed	PRIVATE	50.5	0.0
			BLM	2,424.2	1.1
13.2	RD 31A	Improvements may be needed	PRIVATE	289.5	0.1
			BLM	3,427.8	1.6
13.3	RD 30	Improvements may be needed	BLM	2,968.6	1.4
15	RD 29A	Improvements may be needed	PRIVATE	1,065.5	0.5
			BLM	1,214.7	0.6
15.2	RD 29B	Improvements may be needed	PRIVATE	62.7	0.0
			BLM	685.8	0.3
15.9	North Baxter RD (RD 29)	No improvements needed	PRIVATE	6,984.4	3.2
			BLM	8,195.0	3.8
21.3	RD 28	Improvements may be needed	PRIVATE	2,540.6	1.2
			BLM	4,563.0	2.1
22	RD 27	No improvements needed	PRIVATE	3,770.8	1.7
			BLM	705.7	0.3
23.5	RD 26N and RD 26S	No improvements needed	PRIVATE	22,972.5	10.5
			BLM	10,853.3	5.0
24.9	RD 25	Improvements may be needed	PRIVATE	2,924.8	1.3
			BLM	3,104.8	1.4

TABLE 2.2-3

Wamsutter Expansion Project – Proposed Access Roads

Milepost	Name	Road Condition	Ownership	Length	Acres
28.1	RD 24N	Improvements may be needed	PRIVATE	8,359.8	3.8
			BLM	5,241.4	2.4
		No improvements needed	PRIVATE	4,741.0	2.2
			BLM	1,270.3	0.6
28.5	RD 24S	Improvements may be needed	PRIVATE	7,556.0	3.5
			BLM	5,130.1	2.4
31.3	RD 23	Improvements may be needed	PRIVATE	720.2	0.3
			BLM	2,973.1	1.4
		No improvements needed	PRIVATE	3,885.6	1.8
			BLM	696.2	0.3
31.8	RD 23 SHOO-FLY	Improvements may be needed	BLM	1,235.4	0.6
35.5	RD 21	Improvements may be needed	BLM	2,107.7	1.0
		No improvements needed	BLM	1,438.7	0.7
35.5	RD 21A	No improvements needed	BLM	3,400.4	1.6
35.8	RD 20	Improvements may be needed	BLM	2,827.1	1.3
37	RD 19	Improvements may be needed	BLM	2,323.3	1.1
37.7	RD 18	Improvements may be needed	BLM	2,097.1	1.0
38.3	RD 17	Improvements may be needed	PRIVATE	27.8	0.0
			BLM	688.5	0.3
38.3	Nine Mile RD (RD 16)	No improvements needed	PRIVATE	9,589.4	4.4
			BLM	11,071.7	5.1
39.9	RD 16A	Improvements may be needed	PRIVATE	1,076.3	0.5
			BLM	1,453.4	0.7
		No improvements needed	PRIVATE	1,995.5	0.9
			BLM	1,296.0	0.6
40.1	RD 15 SHOO-FLY	Improvements may be needed	PRIVATE	9,353.7	4.3
			BLM	4,414.4	2.0
43.1	RD 15N and RD 15S	Improvements may be needed	PRIVATE	7,033.0	3.2
			BLM	4,254.4	2.0
44.7	RD 14	Improvements may be needed	PRIVATE	3,100.6	1.4
			BLM	316.7	0.1
		No improvements needed	PRIVATE	1,669.2	0.8
46.3	RD 13B	No improvements needed	PRIVATE	1,356.5	0.6
			BLM	5,408.2	2.5
		Improvements may be needed	PRIVATE	1,055.8	0.5
			BLM	181.7	0.1
47.5	RD 13A	No improvements needed	PRIVATE	2,345.8	1.1
			BLM	201.4	0.1
47.9	Bitter Creek North RD (RD 13C)	No improvements needed	PRIVATE	2,063.0	0.9
			BLM	1,067.9	0.5
48.5	RD 13	No improvements needed	BLM	4,157.7	1.9
50.7	RD 12DN and RD 12DS	No improvements needed	PRIVATE	1,437.1	0.7
			BLM	5,237.8	2.4
51	RD 12F	No improvements needed	PRIVATE	5,017.5	2.3
			BLM	337.1	0.2
51.4	RD 12E	No improvements needed	BLM	352.0	0.2

TABLE 2.2-3

Wamsutter Expansion Project – Proposed Access Roads

Milepost	Name	Road Condition	Ownership	Length	Acres
51.7	RD 12CN	No improvements needed	PRIVATE	711.3	0.3
			BLM	4,374.2	2.0
51.7	RD 12CS	Improvements may be needed	PRIVATE	4,418.0	2.0
52.2	RD 12G	No improvements needed	PRIVATE	312.6	0.1
52.6	RD 12BN and RD 12BS	No improvements needed	PRIVATE	1,772.4	0.8
			BLM	4,882.5	2.2
54.3	RD 12AN and RD 12AS	No improvements needed	PRIVATE	5,515.7	2.5
			BLM	8,006.7	3.7
56	RD 12	No improvements needed	PRIVATE	29,009.7	13.3
			BLM	19,662.6	9.0
56.5	RD 11W	No improvements needed	PRIVATE	3,062.7	1.4
			BLM	6,556.6	3.0
57.7	RD 11	No Improvements needed	PRIVATE	5,495.6	2.5
59.2	RD 10	No improvements needed	PRIVATE	2,550.8	1.2
			BLM	7,163.8	3.3
59.8	RD 9N and RD 9S	No improvements needed	BLM	3,944.0	1.8
61.9	RD 8	No improvements needed	PRIVATE	1,880.3	0.9
			BLM	124.1	0.1
64.1	Tipton North Rd (RD 7)	No improvements needed	PRIVATE	2,104.3	1.0
68.8	RD 6C	No improvements needed	PRIVATE	249.2	0.1
69.8	RD 6B	No improvements needed	PRIVATE	324.7	0.1
69.9	RD 6	No improvements needed	PRIVATE	16,280.0	7.5
70	RD 6A	No improvements needed	PRIVATE	286.0	0.1
72.1	RD 5	No improvements needed	PRIVATE	389.7	0.2
			BLM	2,346.0	1.1
73	RD 4	Improvements may be needed	PRIVATE	3,978.9	1.8
			BLM	2,731.7	1.3
73.3	RD 1	No improvements needed	PRIVATE	2,833.7	1.3
			BLM	7,438.8	3.4
		Improvements may be needed	PRIVATE	7,862.3	3.6
			BLM	5,775.6	2.7
74.9	RD 3	No improvements needed	PRIVATE	4,861.0	2.2
76.6	RD 1A	No improvements needed	PRIVATE	14,977.1	6.9
			BLM	17,302.4	7.9
76.7	RD 2	No improvements needed	PRIVATE	3,017.1	1.4
			BLM	1,815.7	0.8
77.3	RD 2A	No improvements needed	PRIVATE	1,695.9	0.8
			PRIVATE TOTAL:		121.8
			BLM TOTAL:		101.0
			GRAND TOTAL		222.8

2.2.2 Rockies Western Phase Project Aboveground Facilities

Aboveground facilities for the Rockies Western Phase Project would include compressor stations, meter stations, pig launchers and receivers, and MLVs. New land requirements for the construction and operation of the aboveground facilities would involve the acquisition of about 98.8 acres for the nine new compressor stations and the modifications at three existing compressor stations. Land requirements for all other aboveground facilities (MLVs, launcher/receiver facilities, and meter stations) total about 19.0 acres. Table 2.2-4 presents a summary of the land requirements for the project's aboveground facilities.

TABLE 2.2-4

Land Requirements for Aboveground Facilities – Rockies Western Phase Project (acres)

Project Component	Temporary Construction	Permanent Operation
Rockies Express		
Echo Springs Compressor Station	7.0	7.0
Cheyenne Compressor Station	25.0	25.0
Julesburg Compressor Station	15.5	15.5
Steele City Compressor Station	12.3	12.3
Turney Compressor Station	13.0	13.0
Meeker Compressor Station (existing)	0.0	0.0
Wamsutter Compressor Station (existing)	0.0	0.0
Mainline Block Valves	1.1	1.1
Launcher/Receiver Facilities a/	1.0	1.0
Meter Stations	15.3	15.3
Subtotal	**90.2**	**90.2**
TransColorado		
Blanco Compressor Station	5.7	4.1
Conn Creek Compressor Station	6.1	2.6
Greasewood Compressor Station (existing)	0.7	0.7
Blanco Hub Meter Station	0.2	0.1
Subtotal	**12.7**	**7.5**
Overthrust		
Roberson Compressor Station	7.6	7.6
Rock Springs Compressor Station	5.9	5.9
Black Forks Receipt Point Meter Station b/	0.0	0.0
Wamsutter Delivery Point Meter Station	1.4	1.4
Mainline Block Valves c/	0.0	0.1
Subtotal	**14.9**	**15.0**
Rockies Western Phase Project Total	**117.8**	**112.7**

a/ The current proposal sites all launcher/receiver facilities (except those at MP 286.5) within proposed compressor station locations. No additional temporary or permanent acreage would be required for these facilities. The launcher/receiver at MP 286.5 accounts for the 1.0 acre.
b/ Construction of the Blacks Fork Meter Station would occur entirely within the area authorized under Docket CP06-167.
c/ Construction acreage is accounted for as part of the pipeline construction right-of-way.

2.3 CONSTRUCTION PROCEDURES

The proposed facilities would be designed and constructed in accordance with 49 CFR Part 192 Transportation of Natural Gas and Other Gas by Pipeline; Minimum Federal Safety Standards; as well as other applicable federal and state regulations. Rockies Express and Overthrust have each submitted their own *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan). In addition, Rockies Express had submitted its own *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures). These documents are based on the Plan and Procedures developed by the FERC, with certain proposed modifications each Applicant believes appropriate to its specific project. We have included Rockies Express' Plan and Procedures in appendices C-1 and C-2, respectively, and Overthrust's Plan in appendix D. For clarity of presentation, in this EIS we reference "the Plan" or "the Procedures" (or, the "Applicant's Plan/Procedures") to refer to the documents in appendices C-1, C-2, and D. Overthrust proposes to use the FERC Procedures without modification, and TransColorado proposes to use the FERC Plan and Procedures without modification. The FERC Plan and Procedures can be accessed at the FERC website (www.ferc.gov).

2.3.1 General Pipeline Construction Procedures

Construction of the pipeline facilities would incorporate conventional overland construction techniques for large diameter pipelines. The construction of the pipelines would follow a set of sequential operations, as shown in figure 2.3-1. In the typical pipeline construction scenario, the construction spread (crew and equipment) would proceed along the pipeline right-of-way in one continuous operation. As the spread moves along, construction at any single point along the pipeline, from initial surveying and clearing to backfilling and finish grading, would typically last about 8 to 12 weeks. The entire process would be coordinated in such a manner as to minimize the total time a tract of land is disturbed and therefore exposed to erosion and temporarily precluded from normal use. With minor variations (discussed where applicable in this EIS), the Applicants would construct the Rockies Western Phase Project utilizing these general pipeline construction practices.

Staking the Construction Right-of-Way

The initial step in the preparation for construction, prior to clearing, is staking of the construction right-of-way by survey crews. Survey crews would stake the outside limits of the construction right-of-way, the centerline of the proposed pipeline trench, and temporary extra workspace areas. Sensitive areas to be avoided would be flagged, as appropriate, and wetland boundaries would be clearly marked using easily identifiable temporary signage. Before construction begins, One-Call systems for the various states would be contacted so that buried utilities can be identified and flagged by the facility owners.

Clearing and Grading

Clearing and grading would remove trees, large rocks, brush, and roots from the construction work area and level the surface of the right-of-way across its width to allow operation of construction equipment. Trees would only be removed when necessary for construction purposes. Timber and other vegetative debris may be chipped for use as erosion-control mulch, burned, cut and stacked along the right-of-way, or otherwise disposed of in accordance with applicable regulations.

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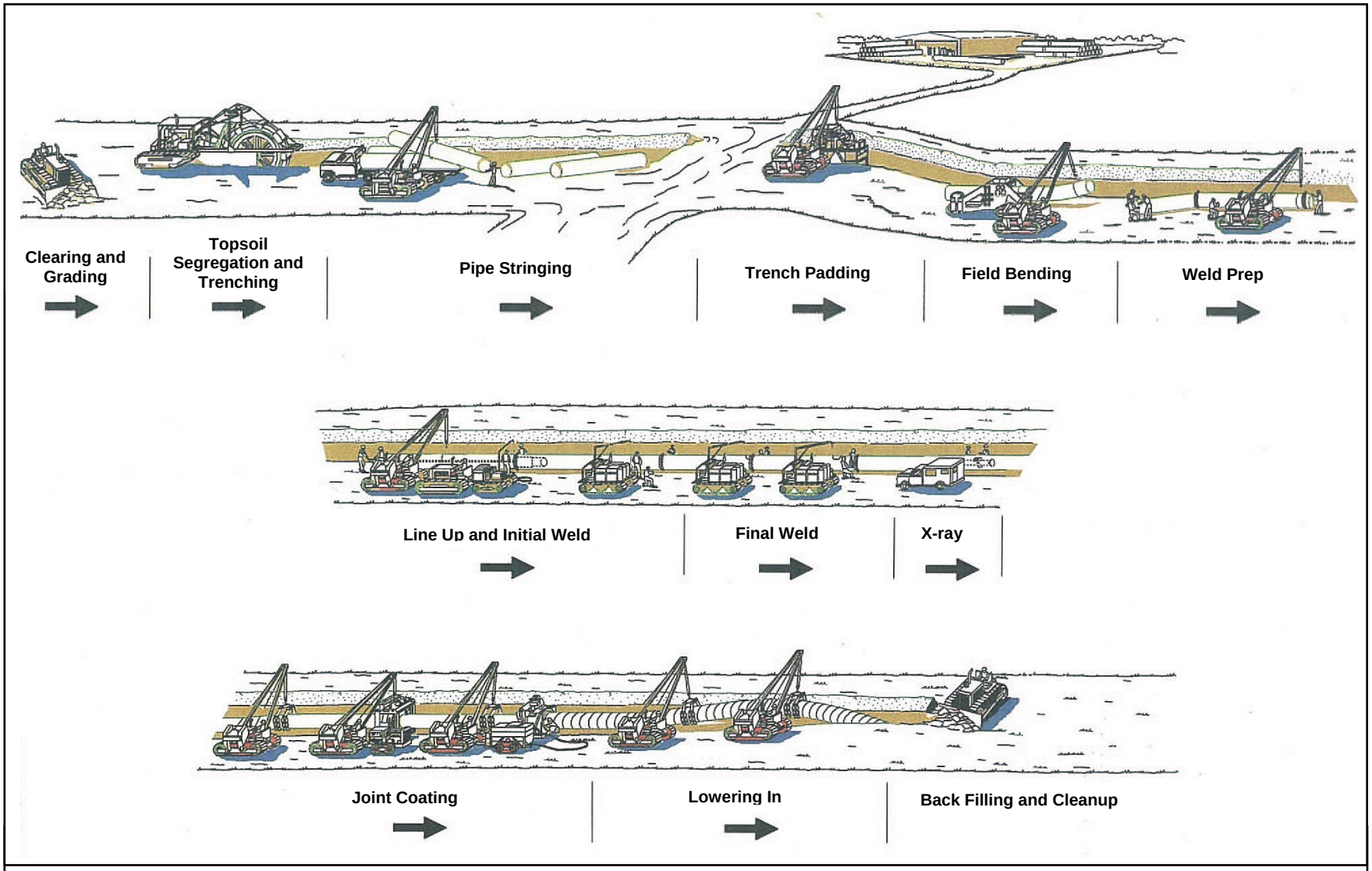

Figure 2.3-1
Typical Pipeline Construction Sequence
Rockies Western Phase Project

Burning of brush would be conducted in such a manner as to minimize fire hazard and prevent heat damage to surrounding vegetation. No brush or debris would be burned on federal land. Fences would be cut and braced along the right-of-way and temporary gates installed to provide access to the right-of-way. Segregated topsoil would be windrowed along the right-of-way in a manner allowing for access, material transport, and pipe assembly.

Temporary erosion control measures such as sediment barriers (silt fences) and temporary slope breakers would be installed during the clearing and grading phase. After installation, temporary erosion control measures would be regularly inspected and maintained throughout the duration of construction or until permanent erosion control measures are installed and the temporary measures are no longer needed.

Trenching

The trenching crew would excavate a ditch to a sufficient depth to ensure the minimum cover required by U.S. Department of Transportation (DOT) specifications, and to allow for a minimum of 3 feet of cover between the top of the pipe and the final land surface after backfilling, although about 2 feet of cover would be provided in areas of consolidated rock. Provisions for additional depth of cover are further discussed in section 4.2 of this EIS. The Applicants would use a combination of trackhoes, backhoes, trenching machines, and mechanical rippers to excavate the pipeline trench. Little, if any, blasting is anticipated; however, any necessary blasting would be conducted in accordance with all applicable laws and company standards. Where rock substrates are found, the rock would either be segregated during trenching or during backfill activities using segregating machines.

In agricultural and residential areas, subsoil and rock would be stockpiled separately from topsoil. Topsoil segregation is important because the mixing of topsoil with subsoil, particularly in agricultural lands, can leave less productive soil in the root zone, which lowers soil fertility and the ability of disturbed areas to revegetate successfully. The Applicants would prevent or minimize the mixing of topsoil with subsoil through full right-of-way topsoil stripping or the ditch-plus-spoil-side method, depending on the type of land crossed and/or at the landowner's or land managing agency's request. Generally, the decision of which separation method to use is made by the landowner. Excavated topsoil and trench spoil would be segregated and typically stockpiled along the right-of-way away from the construction traffic and pipe assembly area.

The sides of the trench would be sloped, depending upon the stability of the native soils, as required for safety and to minimize sloughing of topsoil into the ditch.

Stringing

The steel pipe sections that would be used for the proposed pipeline would be brought to the construction right-of-way in 40-foot to 80-foot lengths. Stringing trucks would transport the pipe joints from the pipe storage yards to the right-of-way. The stringing trucks would travel along the right-of-way and lay, or string, the individual pipe joints on temporary supports (skids) along the working side of the trench in preparation for subsequent bending, line-up, welding, joint coating, lowering-in, backfill, and associated inspection activities. Load restrictions on highways would be observed when transporting the pipe.

Pipe Bending

The majority of pipe would be delivered to the project site in straight sections. Some factory-bent pipe also may be delivered to specific project locations (*e.g.*, at waterbody crossings). A hydraulic pipe-bending machine would be used onsite to best fit sections or joints as necessary to conform to ground

contours and directional changes in the pipeline alignment. Any required pipe bending would be completed prior to pipe line-up and welding.

Pipe Line-Up and Welding

Following stringing and bending, the pipe joints would be lined up and welded together using multiple passes for a full penetration weld. Welders would be qualified according to applicable American National Standards Institute, American Society of Mechanical Engineers (ASME), and American Petroleum Institute (API) Standards, including those in 49 CFR Part 192 (49 CFR 192) and API 1104. After the pipeline is welded, it would be placed back on temporary supports adjacent to the trench.

Radiographic Inspection and Weld Repair

To ensure that the assembled pipe would meet or exceed the design strength requirements, the welds would be visually inspected by a qualified inspector and non-destructively examined using radiographic (X-ray) or other approved Non-Destructive Technology test methods, in accordance with 49 CFR 192, API 1104 and ASME standards. Weld repair or cut-out would be accomplished in accordance with these standards.

Coating Field Welds, Inspection, and Repair

Following welding, the construction field welds and pipe joint ends would be coated in the field with a similar epoxy material or other approved material that is compatible with the factory installed pipeline coating. Before the pipeline is lowered into the trench, the pipeline coating would be inspected for defects. Coating defects would be repaired prior to lowering-in.

Pipe Lowering-In

After the welds and pipe coating have been inspected and approved, the pipeline would be lowered into the trench using side-boom tractors and/or backhoes. Prior to lowering-in, the trench would be inspected to ensure that all foreign material has been removed. If the bottom of the trench is rocky, the trench bottom would be padded or the pipe would be lowered onto sandbag or foam pipe supports.

Trench dewatering may be necessary at certain times during the lowering-in process. Any trench dewatering would be accomplished in a manner designed to prevent heavily silt-laden water from flowing into wetlands or waterbodies. Additionally, the Applicants would take care when dewatering trenches in agricultural areas to minimize erosion and/or crop damage by various means including controlling discharge rates, and/or dewatering to filter bags, existing canals, or ditches.

Padding and Backfilling

After the pipe is lowered into the trench, the trench would be backfilled. Previously excavated materials would be pushed back into the trench using bladed equipment, backhoes, or auger type backfilling machines. Backfill material generally consists of the material excavated from the trench. If necessary due to rocks, padding or other protective coating would be used to prevent damage to the pipe coating. This padding would typically consist of subsoil removed from the trench that has been screened to remove rocks. Alternatively, other suitable material (*e.g.*, soil or sand) may be imported to the site. Topsoil would not be used for padding. In agricultural lands and other areas where the topsoil has been segregated, trench subsoil would be placed in the trench first and the topsoil placed on top of the trench subsoil. Following backfilling, a small crown of material may be left to account for any future soil settling that might occur over the trench.

Trench breakers would be installed around the pipeline in the trench as needed to minimize the potential for subsurface water flow around the pipe. Trench breakers also would be installed at the base of slopes adjacent to waterbodies and wetlands in accordance with each Applicant's Procedures.

Hydrostatic Testing and Final Tie-in

Each pipeline would be hydrostatically tested before being put into service to verify its integrity and to ensure its ability to withstand the maximum allowable operating pressure (MAOP). Hydrostatic test water would be obtained in compliance with state regulations and existing water rights. Topography and the availability of test water would determine the length of each test segment. Pipeline test segments would be capped and filled with water then pressurized in accordance with DOT regulations. Any loss of pressure that cannot be attributed to other factors, such as temperature changes, would be investigated. Any leaks detected would be repaired and that section of pipeline re-tested.

Upon completion of the test, the water may be pumped to the next segment for testing, or discharged. The test water would be discharged in accordance with the National Pollutant Discharge Elimination System (NPDES) hydrostatic discharge permit requirements, administered by the individual states. Test water would contact only new pipe and no chemicals would be added. Once a segment of pipe has been successfully tested and dried, the test cap and manifold would be removed and that section of the pipe would be connected to the remainder of the pipeline. Preliminary locations of test water uptake and discharge sites have been identified and are provided in table 4.3.1-5. Water would be discharged through energy dissipating devices (*e.g.*, hay bale filters, sediment bags) to control erosion and sedimentation.

We received several comments on the draft EIS about the need for additional details regarding the Applicants' plans for hydrostatic testing of the pipelines. Rockies Express' and the FERC Procedures require that certain information related to hydrostatic test water be filed prior to construction (*i.e.*, source or discharge locations, screening of intake structures, maintaining downstream flows). In order to fully evaluate the any issues associated with hydrostatic test water withdrawal and discharge, **we recommend that each Applicant develop a Hydrostatic Testing Plan that includes, but is not limited to, the following information:**

- **a. a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location;**
- **b. the screen size proposed for use on intake hoses to prevent entrainment of fish;**
- **c. documentation of consultation with appropriate federal and state agencies regarding the establishment of water withdrawal rates that would ensure that these withdrawals would have minimal impact on flows, fisheries, and downstream water users; and**
- **d. documentation from private or municipal water systems regarding the proposed purchase and use of water for hydrostatic testing.**

This Hydrostatic Testing Plan should be filed with the Secretary, for the review and written approval of the Director of OEP, prior to initiation of any hydrostatic testing.

Clean-up and Restoration

Clean-up operations including final grading, topsoil replacement, and installation of permanent erosion control structures would commence following backfill operations in accordance with time frames presented in each Applicant's Plan and Procedures. If seasonal or other weather conditions, including wet soil conditions, prevent compliance with these time frames, the Applicants would maintain the temporary

erosion controls (temporary slope breakers and sediment barriers) until conditions allow completion of clean-up.

Construction debris would be removed from the right-of-way and disposed of in accordance with applicable regulations. The Applicants would grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for revegetation. Decompaction would be completed as necessary in accordance with the Plan, recommendations of the National Resource Conservation Service (NRCS) or other agriculture agencies, or landowner requirements. Permanent erosion and sediment control measures, including diversion terraces, would be installed; and reseeding or other forms of revegetation would be conducted as required. Private and public property, such as fences, gates, driveways, and roads disturbed by the pipeline construction would be restored to original or better condition.

2.3.2 Special Construction Procedures

Construction across roads and railroads; wetlands and waterbodies; residential, commercial, and industrial areas; pipelines; and rugged terrain would involve special construction techniques which are described below.

Road and Railroad Crossings

Construction of pipelines across major paved highways, railroads, and unpaved roads where traffic cannot be interrupted would be accomplished by boring under the roadbed. Most smaller, unpaved roads and drives would be crossed by open trenching and then restored to pre-construction or better condition. If an open-cut road requires extensive construction time, provisions would be made for detours or other measures to permit traffic flow during construction. The Applicants would work with landowners to determine the best way to cross privately owned roads. The Applicants would repair all road damage caused by construction of the pipeline. The pipelines would be buried to the depth required by applicable road crossing permits/approvals and would be designed to withstand anticipated external loadings. Railroad crossings would be installed (typically using a bore) in accordance with the requirements of the railroad.

Wetland Crossings

Wetlands crossed by the pipeline facilities would be crossed following the methods outlined in each Applicant's Procedures. These wetland construction methods are briefly outlined below.

During clearing, sediment barriers, such as silt fence and staked straw bales, would be installed and maintained adjacent to all wetlands and within additional temporary workspace areas as necessary to minimize the potential for sediment runoff. Sediment barriers would be installed across the full width of the right-of-way and extra workspaces at the base of slopes, where adjacent to wetland boundaries. The method of pipeline construction used in the wetland would depend largely on the stability of the soils at the time of construction. Where wetlands are saturated and the trench fills with water, the pipeline segment would be assembled in an upland area and installed using the push-pull or float technique. Where wetland soils are stable enough to support the pipe, it would be assembled in the wetland similar to conventional construction technique. The amount of time that the excavated ditch is kept open would be minimized, as practicable, to minimize the effect on wetland soils. For those wetlands occurring in actively cultivated or rotated cropland, construction would progress using techniques similar to conventional upland cross-country construction.

The construction right-of-way may be used for access when the wetland soil is firm enough to support equipment or the construction right-of-way has been appropriately stabilized (*e.g.*, with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing would use access roads located in upland areas. In areas where no reasonable access exists, construction equipment would be permitted one pass through the wetland using the construction right-of-way. The top 1 foot of topsoil would be segregated from the trench area, except where standing water is present or soils are saturated or frozen. Segregated topsoil would be immediately restored to its original location after backfilling is complete.

Restoration of wetland contours to pre-construction levels would be accomplished during backfilling. Prior to backfilling, trench breakers would be installed where necessary to prevent the subsurface drainage of water from the wetland. The Applicants would monitor and record the success of wetland revegetation annually for the first 3 years after construction or until wetland revegetation is successful. Additional information on wetland crossings is presented in section 4.3 of this EIS.

Rockies Express' Procedures, as originally filed (and presented in the draft EIS), included several mitigation measures designed to minimize the overall effects of the project on wetlands. Examples of these measures include:

- reducing the width of the nominal construction right-of-way from 125 feet to 75 feet through non-cultivated wetlands; (a wider right-of-way may be requested on a site-specific basis);
- limiting the operation of construction equipment within wetlands to that equipment essential for clearing, excavation, pipe installation, backfilling, and restoration;
- minimizing the time the trench is open in wetlands;
- using the push-pull crossing method in wetlands, where possible;
- installing trench breakers at the boundaries of wetlands as needed to prevent draining of a wetland and to maintain original wetland hydrology;
- prohibiting storage of hazardous materials, chemicals, fuels, and lubricating oils within a wetland or within 100 feet of a wetland boundary; and
- restricting annual maintenance of vegetation to a 10-foot-wide strip of grasses centered over the pipeline and trees less than 15 feet in height within 15 feet of the pipeline centerline.

In its January 18, 2007 supplemental comments on the draft EIS, Rockies Express revised its wetland procedures. Rockies Express determined that its originally proposed 75-foot-wide right-of-way would not provide adequate space to install its 42-inch-diameter pipeline across most wetlands unless other construction methods were varied as well. Rockies Express states that, in general, it can not minimize both the surface area of construction disturbance within wetlands *and* the amount of time the trench is open in wetlands. Rockies Express now proposes to use a 100-foot-wide right-of-way. Further, Rockies Express requested guidance on which wetland construction methods would be "acceptable" to the FERC.

We do not dictate which construction methods an applicant or contractor should use when constructing through wetlands. Instead, we apply a performance-based standard designed to ensure impacts on wetlands are minimized <u>to the maximum extent practicable</u>. Some standard performance-based measures are qualitative and vary in applicability and are subject to wetland type and other site-specific factors. In general, minimizing impacts on wetlands requires foregoing standard upland construction methods when in wetlands. It is incumbent upon the applicant to develop a construction plan that meets these performance standards to minimize wetland impacts.

Rockies Express has submitted several options for wetland construction that would use a 100-foot-wide right-of-way. Based on the size of the construction equipment Rockies Express would use to install its 42-inch-diameter pipeline and the need for storage of segregated topsoil, we agree that a 100-foot-wide right-of-way is appropriate for non-saturated emergent wetlands. This is also appropriate for wetlands with unconsolidated sandy soils that necessitate a wider trench. We note that this is a reduction of 20 percent from the 125-foot-wide nominal right-of-way used for the upland portions of the project. However, we do not agree that a 100-foot-wide right-of-way is appropriate for palustrine forested wetlands because of the long-term impact of construction. In addition, in saturated wetlands, companies typically use a "push-pull" method of floating the pipe in that does not require topsoil segregation or an equipment passing lane. We believe such saturated wetlands can and should be crossed with a 75-foot-wide right-of-way.

Therefore, **we recommend that Rockies Express revise its Procedures to:**

- **use a 100-foot-wide right-of-way for non-saturated emergent and scrub-shrub wetlands; and**
- **use a 75-foot-wide right-of-way for forested and saturated wetlands.**

Rockies Express should incorporate these revisions in its pre-construction planning, revising the REX-West construction alignment sheets, as necessary, to accommodate the revised work areas. For any forested or saturated wetland Rockies Express believes requires a right-of-way width greater than 75 feet, Rockies Express should file site-specific justification in its implementation plan for the project. Any such requests would be approved/disapproved on a case-by-case basis by the Director of OEP.

Waterbody Crossings

Conventional Open-cut Waterbody Crossings

The open-cut crossing method is proposed for most minor waterbody crossings. As proposed, these crossings would involve excavation of the pipeline trench across the waterbody, installation of the pipeline, and backfilling of the trench with no effort to isolate flow from construction activities. Excavation and backfilling of the trench would be accomplished using backhoes or other excavation equipment working from the banks of the waterbody. Trench spoil would be stored at least 10 feet from the banks (topographic conditions permitting). A section of pipe long enough to span the entire crossing would be fabricated on one bank and either pulled across the bottom to the opposite bank, floated across the stream, or carried into place and submerged into the trench. The trench would then be backfilled and the bottom of the watercourse and banks restored and stabilized. Sediment barriers, such as silt fencing, staked straw bales, or trench plugs would be installed to prevent spoil and sediment-laden water from entering the waterbody from adjacent upland areas.

Dry Waterbody Crossings

According to Rockies Express' Procedures, a "dry-ditch" crossing method is appropriate for some minor and intermediate waterbodies.

A flumed crossing involves installation of a temporary dam and a flume pipe to divert the entire stream flow over the construction area and allow for trenching of the crossing in dry or nearly dry conditions. Dams would be constructed of sand bags alone, sand bags with plastic sheeting, inflatable bladders, or similar materials to direct the flow into the flume pipe. Spoil removed during the trenching would be stored at least 10 feet away from the water's edge (topographic conditions permitting). A

section of pipe long enough to span the entire crossing would be fabricated on one bank and slipped under the flume pipe to the opposite bank. The trench would be backfilled and the bottom of the watercourse and banks restored and stabilized before the flume pipe and dams are removed. Sediment barriers, such as silt fencing, staked straw bales, or trench plugs would be installed to prevent spoil and sediment-laden water from entering the waterbody from adjacent upland areas.

The dam-and-pump dry-ditch crossing method would involve damming the stream with sandbags or equivalent materials on both sides of the construction work area and pumping the stream flow around the construction zone. Excavation of the trench, installation of the pipeline, and restoration would be similar to that described above for the flumed crossing.

Horizontal Directional Drill Crossings

A horizontal directional drill (HDD) is a trenchless installation process by which a pipeline is installed beneath obstacles or sensitive areas. The primary advantage to HDD is that there is minimal disturbance of the ground surface between the entry and exit points of the HDD. The length of pipeline that can be installed by HDD depends upon such factors as access to the entry and exit points, subsurface conditions (geology), and pipe diameter.

An HDD is a multi-stage process that consists of establishing a small diameter pilot hole along a crossing profile, followed by enlargement of the pilot hole (reaming) to accommodate pullback of the pipeline. The pilot hole is drilled using rotation cutting and/or jetting with a jetting assembly attached to the drill pipe. The cutting action of the drill head is remotely operated to control its orientation and direction. Bentonite drilling fluid (bentonite, a non-toxic, naturally occurring sedimentary clay, is composed of weathered and aged volcanic ash) is delivered to the cutting head through the drill string to provide the hydraulic cutting action, lubricate the drill bit, help stabilize the hole and remove cutting spoil as the drilling fluid is returned to the entry point. Drilling fluid is also used during the reaming process to remove cutting spoil. The position of the drill string is electronically monitored and directional corrections made as necessary to ensure that the drill string maintains the desired alignment.

Enlarging the pilot hole is an incremental process accomplished with multiple reaming passes, depending on the pipeline diameter and subsurface geology to increase the hole diameter. Upon successful completion of the reaming operation, a cylinder shaped swab is pulled through the hole to ensure the integrity of the completed hole and prepare for pullback of the pipe. The pre-assembled, hydrostatically tested section of pipeline is then pulled into the completed hole.

Rockies Express proposes to use an HDD to cross three major waterbodies, the Missouri River, Big Creek, and Little Blue River. Overthrust would use the HDD method to cross Deadman Wash.

Bored Crossings

All major highways and railroads would be bored. Some waterbodies may also be bored. Boring involves pushing the pipe through a hole below the waterbody, road, or railroad. A bore pit is dug on one side of the crossing and a receiving pit is dug on the other side of the crossing, and both are excavated to a depth equal to the depth of the ditch. The bore pit is then graded so that the bore is at the proper elevation for installation of the pipe. A boring machine is then lowered to the bottom of the bore pit and placed on supports. The machine cuts a shaft under the crossing using a cutting head mounted on an auger. The pipeline is then pushed through behind the auger.

Residential Areas

Where residences are within 50 feet of the construction work area, the Applicants would implement specialized residential construction techniques. This would include notifying the landowner prior to construction and arranging work hours to take landowners' needs into consideration. Dust minimization techniques would be used on site, and all litter and debris would be removed daily from the construction work area. During construction, the edge of the work area would be fenced for safety purposes to a distance of 100 feet on either side of the residence. Mature trees and landscaping would be preserved to the extent possible while ensuring the safe operation of construction equipment. Site-specific construction drawings depicting the temporary and permanent rights-of-way and noting special construction techniques have been be prepared for all residential structures within 50 feet of the construction area. See section 4.8 and appendix G for further discussion.

Where residences are less than 25 feet from the construction work area, the pipe section would be welded and inspected, and welds would be coated prior to any trench excavation. The trench would not be excavated until the pipe is ready for installation, and the trench would be backfilled immediately after pipe installation. Every effort would be made to excavate the trench, lower the pipeline, make tie-ins, and backfill the trench in 1 day. Immediately after backfilling the trench, all lawn areas and landscaping within the construction work area would be restored.

Commercial/Industrial Areas

Approximately 331.3 acres of industrial or commercial land would be affected by the project. Impacts on commercial and industrial areas (which include existing natural gas facilities and other utility infrastructure as well as other types of businesses) would be limited to the construction and post-construction restoration periods when construction activities could inconvenience business owners, employees, and customers. The Applicants would maintain close coordination with business owners to maintain access, decrease construction duration, and generally minimize impacts.

Foreign Pipeline Crossings

The proposed Rockies Western Phase Project is in an active oil and gas producing area. As a result, the pipeline facilities would cross numerous foreign pipelines. Project pipelines crossing existing pipeline facilities would be installed at an appropriate depth to meet soil cover and separation requirements, whether crossing under or over these existing facilities. Temporary extra workspace would be required at foreign pipeline crossings to accommodate the increased excavation depths and avoid placing the spoil or construction equipment over the existing pipelines, for safety reasons.

Rugged Terrain

Rugged topography is primarily limited to areas in the western portion of the Project. Where severe side slopes are encountered, the upslope side of the construction right-of-way would be cut during grading. The material removed from the cut would be used to fill the downslope edge of the right-of-way to provide a safe and level surface from which to operate the heavy equipment. Side hills may require additional temporary workspace downslope to accommodate the fill material. During grade restoration, the spoil would be placed back in the cut and compacted to restore original contours. Any springs or seeps found in the cut would be carried downslope using restoration techniques such as the installation of drainpipes and/or gravel french drains. The final determination of the most appropriate method to ensure downhill flow of groundwater seeps or springs in sidehill situations would be made in the field during construction.

Blasting

Should subsurface rock be encountered that cannot be excavated using mechanical means such as ripping or using a rock hammer, blasting for ditch excavation may be necessary. In such areas, care would be taken to prevent damage to underground structures (*e.g.*, cables, conduits, and pipelines) or to springs, water wells, or other water sources in accordance with all applicable regulations. Blasting mats or soil cover would be used as necessary to prevent the scattering of loose rock. Any blasting would be conducted during daylight hours and would not begin until occupants of nearby residences, buildings, stores, or places of business, and ranchers or farmers had been notified.

2.3.3 Aboveground Facility Construction

Typical construction activities associated with compressor stations are summarized below. General construction activities and storage of construction materials and equipment would be confined to areas within the approved compressor station construction sites. Debris and wastes generated from construction would be disposed of appropriately.

Installation of the meter stations and MLVs would meet the same standards and requirements established for the compressor stations and pipeline construction. Valves would be installed within the permanent pipeline right-of-way and proposed compressor stations, and would not require additional space.

Foundations

Excavation would be performed as necessary to accommodate the reinforced concrete foundations required for the new compressor units. Forms would be set, rebar installed, and the concrete poured and cured in accordance with applicable standards. Concrete pours would be randomly sampled to verify compliance with minimum strength requirements. Backfill would be compacted in place, and excess soil would be used elsewhere or distributed around the site.

Equipment

The compression equipment would typically be shipped to the site by truck and stored onsite. The compressors would be offloaded and when ready for installation, positioned on the foundation, leveled, grouted, and secured.

Piping

All pipe connections associated with the new compressors that are not flanged or screwed would be welded. All welders and welding procedures would be qualified in accordance with API Standards. All welds in gas piping systems would be x-rayed (or verified by another non-destructive testing method) to ensure compliance with code requirements.

Hydrostatic Testing

All components in high-pressure natural gas service would be hydrostatically tested prior to being placed into service. Also, before being placed in service, all controls and safety equipment and systems, including emergency shutdown, relief valves, gas and fire detection, engine overspeed, and vibration would be checked or tested.

Launchers and Receivers

With the exception of one pig launcher and receiver site located at MP 286.5 of the REX-West mainline, all other launchers and receivers would be within the compressor stations sites and not require any additional land for construction. The installation of the pig launchers and receivers would meet the same standards and requirements established for the compressor station and pipeline construction.

2.4 CONSTRUCTION SCHEDULE

Rockies Express and Overthrust propose to begin construction of facilities in May 2007, with an in-service date for all facilities of January 1, 2008.

TransColorado proposes to begin construction of its facilities in May 2007 and complete construction in October 2007.

2.5 ENVIRONMENTAL INSPECTION, COMPLIANCE MONITORING, AND POST-APPROVAL VARIANCES

2.5.1 Environmental Inspection

Under the NGA, the FERC may impose conditions on any Certificate it grants for the Rockies Western Phase Project. These conditions could include additional requirements and mitigation measures recommended in this EIS to minimize the environmental impacts that would result from the construction and operation of the Project (see section 5.2 for a list of such recommendations). We will recommend that these additional requirements and mitigation measures (bold type in the text) be included as specific conditions to any approving Certificate issued for the Rockies Western Phase Project. We also will recommend that each Applicant be required to implement the mitigation measures that it has proposed as part of its respective project unless specifically modified by other Certificate conditions (see recommendation 5 in section 5.2).

In accordance with the MLA, the BLM would require Rockies Express, TransColorado, and Overthrust to furnish a bond or other security to ensure that each Applicant would comply with the terms and conditions of its BLM Right-of-Way Grant. While there would be some jurisdictional differences between the FERC's and the BLM's requirements, the environmental inspection and compliance monitoring programs for the Rockies Western Phase Project would address requirements placed on the project by federal and other agencies.

The Applicants propose to assign Environmental Inspectors (EIs) to each construction spread during construction. TransColorado would have at least two EIs available during construction. The responsibilities of the EIs are outlined in section II of the Plan (see appendix C) and are summarized below. Rockies Express also plans to augment its inspection program by using third-party agency environmental monitors (see section 2.5.2 below).

Rockies Express would construct its facilities using 7 construction spreads that would range in length from 86 to 120 miles; TransColorado would use 3 crews, one at each compressor station site; and Overthrust would use 1 spread to construct its 77.4 mile pipeline and related facilities. To adequately inspect all construction and mitigation activities over a 50-mile segment of right-of-way and perform the other duties outlined above, Rockies Express and Overthrust have agreed to employ a team of EIs (*i.e.*, 2 or more) on each construction spread. The EIs:

a. would monitor and ensure compliance with all mitigation measures required by the Commission's Order and other grants, permits, certificates, or other authorizing documents;

b. would be responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract and any other authorizing document;

c. would be empowered to order correction of acts that violate the environmental conditions of the Commission's Order, and any other authorizing document;

d. would be a full-time position, separate from all other activity inspectors;

e. would document compliance with the environmental conditions of the Commission's Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies;

f. may also oversee cultural resource monitors and/or biological monitors that may be required to monitor and evaluate construction impacts on resources as specified in this EIS;

g. would be responsible for maintaining status reports that would be available to agencies for review;

h. would report to the Applicant's Chief Inspector, but have independent status; and

i. would have stop-activity authority in the event of a noncompliance issue that requires corrective action.

In addition, because about 59 percent of the land that would be temporarily affected by the REX-West Project (about 7,148 acres) includes agricultural land, Rockies Express would retain a qualified agricultural inspector (AI) on each construction spread that crosses agricultural land. The AI position would be separate and in addition to the EIs, and would include many of the same duties. The AI would inspect on-site construction and restoration efforts in agricultural areas and would be knowledgeable of central plains and midwestern agricultural practices, such as terracing, pivot irrigation, and drain tile repair. The AI would report directly to the lead EI.

Inspectors from the FERC and BLM (where applicable) would conduct field inspections during construction. Other federal and state agencies also may oversee or monitor inspection to the extent determined necessary by the individual agency.

After construction is completed, the FERC and BLM would continue to oversee inspection and monitoring. If it is determined that any of the proposed monitoring timeframes are not adequate to assess the success of restoration, the Applicants would be required to extend post-construction monitoring programs. The BLM would retain the Applicants' bond or other security until the BLM is satisfied with reclamation efforts.

2.5.2 Compliance Monitoring

Rockies Express has agreed to use a third-party agency environmental monitoring program. We believe that the third-party independent Environmental Compliance Monitoring and Reporting Program (ECMR Program) provides a number of benefits, both to agencies themselves and to applicants. The overall objective of an ECMR Program is threefold: to assess environmental compliance during construction in order to achieve a high level of environmental compliance throughout the project, to assist the FERC staff in screening and processing variance requests during construction, and to create and maintain a database of daily reports documenting compliance and instances of non-compliance. The

BLM will also take part in the ECMR Program for the REX-West Project and will oversee the program on federal land.

Although Overthrust has not proposed to use the ECMR Program for the Wamsutter Expansion Project, it has acknowledged that the BLM intends to require it for that project. Through use of this program, the BLM would be able to monitor Overthrust's environmental inspection program during construction and insure compliance with the terms and conditions of the BLM Right-of-Way Grant.

Therefore, on the Wamsutter Expansion Project there would be a joint ECMR Program that would involve the use of full-time third-party compliance monitors representing both agencies at each construction spread to monitor compliance with project mitigation measures and requirements throughout construction. These monitors would provide continuous feedback on compliance issues to both agencies, as well as to Rockies Express and Overthrust's personnel, and track and document progress of construction by the preparation and submittal of reports to the FERC and BLM staffs on a regular and timely basis.

2.5.3 Post-approval Variance Process

Surface disturbance locations and acreages identified in this EIS are anticipated to be sufficient for the construction and operation (including maintenance) of the Rockies Western Phase Project and all ancillary improvements. However, route realignments and other project refinements often continue past the project review phase and into the construction phase. As a result, work area locations and disturbed acreages described in this EIS may require refinement after project approval. These changes frequently involve minor route realignments or shifting approved extra workspace, adding new temporary workspace, and adding access roads to work areas and associated temporary workspace areas. This section describes the procedure used for assessing impact on workspace areas outside those evaluated in this EIS and for approving their use.

Analyses in this EIS covers more area than would be required for the proposed facilities. For example, although the project would temporarily disturb up to 13,523.6 acres, additional acres were surveyed for biological and cultural resources. When an extra workspace is shifted along the right-of-way or additional workspace is requested, they would typically be within the previously surveyed area. Such requests would be analyzed using a variance process.

The request for new or additional workspace locations and a copy of the survey results would be documented and forwarded to the FERC (and the BLM, as applicable) in the form of a "variance request." The FERC would take the lead on reviewing the request, depending on the ownership status of the subject land. Typically no further agency consultation is required if the request is within previously surveyed areas. At the conclusion of the project, as-built drawings would be provided to the FERC and BLM. Implementation of a post-approval variance process would allow the BLM to address any minor project changes in an efficient and timely manner without the need to issue additional temporary use permits or amendments to the Right-of-Way Grant.

The procedures used for assessing impact on workspace areas outside those evaluated in this EIS and for approving their use are similar. Additional inventory and evaluation would be performed to ensure that impact on biological, cultural, and other resources would be avoided or minimized to the maximum extent practicable and that landowner approval has been obtained. After any additional consultations are completed, the new workspace location and survey results would be documented and forwarded to the FERC (and the BLM, as applicable) in the form of a variance request, which would be evaluated in the manner described above. Appropriate agency consultations and approvals would be conducted and obtained prior to approval of the variance. At the conclusion of the project, as-built

drawings would be provided to the FERC and BLM. The BLM would use the information in the as-built survey to determine if an amendment to the long term Right-of-Way Grant on federal land is necessary.

2.6 OPERATION AND MAINTENANCE

Operational activities on the pipeline would be limited to maintenance of the right-of-way and inspection, repair, and cleaning of the pipeline. Periodic aerial and ground inspections by pipeline personnel would assist in identification of the following conditions: soil erosion that may expose the pipe, surface visual clues that may indicate a leak in the line, conditions of the vegetative cover and erosion control measures, unauthorized encroachment on the right-of-way, excavation activities in the vicinity of the right-of-way, and other conditions that could present a safety hazard or require preventative maintenance or repairs. The pipeline cathodic protection system also would be monitored and inspected by pipeline personnel periodically to ensure proper and adequate corrosion protection. Appropriate corrective action to conditions observed during inspection would be taken as necessary.

2.6.1 Right-of-Way Monitoring and Maintenance

In order to maintain accessibility of the right-of-way and to accommodate pipeline integrity surveys, vegetation on the permanent right-of-way (50 feet wide) would be maintained by mowing, cutting, and trimming in all areas except for active agricultural areas (including rangeland and pasture), Conservation Reserve Program (CRP) areas, and wetlands. The right-of-way would be allowed to re-vegetate; however, large brush and trees would be periodically removed as described in each Applicant's Plan and Procedures. Trees or deep-rooted shrubs could damage the pipeline's protective coating, obscure periodic surveillance and inspection, or interfere with potential repairs and thus would not be allowed to grow within 10 feet in uplands (15 feet in wetlands) of either side of the pipeline. Such vegetation maintenance would not normally be required in agricultural or grazing areas. The pipeline facilities would be clearly marked at line-of-sight intervals and at crossings of roads, railroads, and other key points. Efforts would be made to minimize the number of markers located in actively cultivated fields, particularly those where pivot irrigation is utilized. Wherever possible, markers would be placed at fence lines or field margins. The markers would clearly indicate the presence of the pipeline and provide a telephone number and address where a company representative can be reached in the event of an emergency or prior to any excavation in the area of the pipeline by a third party. The Applicants would participate in all One-Call systems.

2.6.2 Pipeline and Compressor Station Integrity

The Applicants' pipeline facilities would be operated and maintained in accordance with the federal safety standards of 49 CFR 192. Operation and maintenance of the Rockies Western Phase Project facilities would be performed by or at the direction of the Applicants. The pipeline would be inspected periodically from the air and on foot as operating conditions permit, but no less frequently than as required by 49 CFR 192. These surveillance activities would provide information on possible encroachments and nearby construction activities, erosion, exposed pipe, and other potential concerns that may affect the safety and operation of the pipeline. Evidence of population changes would be monitored and class locations changed as necessary. The Applicants also would inspect MLVs annually and document the results.

Compressor station crews would operate and maintain the station equipment. Station personnel would perform routine checks of the facilities including calibration of equipment and instrumentation, inspection of critical components, and scheduled and routine maintenance of equipment. Safety equipment, such as pressure relief, fire detection, and gas detection systems would be tested periodically for proper operation. The Applicants would take corrective action for any identified problem.

The compressor stations would be equipped with combustible gas and fire detection alarm systems, and with an emergency shutdown system. The compressor stations also would be equipped with relief valves or pressure protection devices to protect the station piping from overpressure if station or unit control systems fail. A telemetry system would notify operations personnel locally and at the gas control headquarters of the activation of safety systems and alarms that would in turn dispatch maintenance personnel to investigate and take proper corrective actions.

2.7 FUTURE PLANS AND ABANDONMENT

The proposed pipelines are projected to have a minimum 50-year useful life. However, this is an economic, not physical, limitation. The supply of gas and the market need are the major factors in determining the life of the project. Properly maintained, the pipeline can be expected to operate for 50 years and more.

As presented in its initial pre-filing request, Rockies Express anticipates seeking additional authorization for construction of facilities from Audrain County, Missouri, to a terminus at or near Clarington, Ohio, if market conditions support such development. Rockies Express is currently in the FERC Pre-Filing Process for this potential future project (Rockies Eastern Phase Project; FERC Docket No. PF06-30-000). Any plans for these additional facilities would require a separate environmental review and a separate authorization from the Commission.

In its REX-West filing, Rockies Express identified a future compressor station site at MP 287.0 in Phelps County, Nebraska. This “Bertrand Compressor Station” is part of Rockies Express’ Eastern Phase Project and, as such, is being evaluated in the EIS under preparation for that project.

Neither TransColorado nor Overthrust has identified any reasonably foreseeable plans for abandonment or expansion beyond the facilities proposed in the current applications. In the event that future market demands warrant expansion of one of these systems, then, at that time, the company would seek the appropriate FERC approval.