

HIP - 74

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

2001

**ACKNOWLEDGEMENT OF RECEIPT  
OF CHECK/CASH**

I hereby acknowledge receipt of check No. 01035 dated 11-2-01  
or cash received on \_\_\_\_\_ in the amount of \$ 100.<sup>00</sup>

from PNM Electric and Gas Services  
for PNM Starlake

Submitted by: Martynne Kiehl Date: 11-5-01  
(Family Name) (DP No.)

Submitted to ASD by: \_\_\_\_\_ Date: \_\_\_\_\_

Received in ASD by: \_\_\_\_\_ Date: \_\_\_\_\_

Filing Fee  New Facility \_\_\_\_\_ Renewal \_\_\_\_\_  
Modification \_\_\_\_\_ Other \_\_\_\_\_

Organization Code 521.07 Applicable FY 2001

To be deposited in the Water Quality Management Fund.

Full Payment \_\_\_\_\_ or Annual Increment \_\_\_\_\_

THE FACE OF THIS DOCUMENT HAS A MULTICOLORED BACKGROUND ON WHITE PAPER



**PNM**

Electric and Gas Services  
General Fund Account

605

CHECK NO.	DATE	AMOUNT
010355	11/2/2001	\$100. <sup>00</sup>

PAY OCD - WATER QUALITY FUND  
TO THE  
ORDER  
OF

Authorized Signature  
*John A. Pao*

⑈010355⑈ ⑆092904774⑆ 4800372⑈

FORM NO. 9713M  
Pub. No's 4,227,720 4,310,180

**ACKNOWLEDGEMENT OF RECEIPT  
OF CHECK/CASH**

I hereby acknowledge receipt of check No. 010356 dated 11-2-01  
or cash received on \_\_\_\_\_ in the amount of \$ 150.00  
from PNM Electric and Gas Services  
for \_\_\_\_\_

Submitted by: <sup>(Family Name)</sup> MARTYNE KIELING Date: <sup>(DP No.)</sup> 11-5-01  
Submitted to ASD by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received in ASD by: \_\_\_\_\_ Date: \_\_\_\_\_

Filing Fee \_\_\_\_\_ New Facility \_\_\_\_\_ Renewal \_\_\_\_\_  
Modification \_\_\_\_\_ Other Temp. Permission  
Organization Code 521.07 Applicable FY 2001

To be deposited in the Water Quality Management Fund.  
Full Payment \_\_\_\_\_ or Annual Increment \_\_\_\_\_

THE FACE OF THIS DOCUMENT HAS A MULTICOLORED BACKGROUND ON WHITE PAPER



**PNM**  
Electric and Gas Services  
General Fund Account 605

CHECK NO.	DATE	AMOUNT
010356	11/2/2001	\$150.00

**PAY** OCD - WATER QUALITY FUND  
**TO THE**  
**ORDER**  
**OF**

Authorized Signature  
*[Signature]*

FORM NO. 9713V  
Pub. Nos. 4-227, 720, 4-310, 180

**ENERGY, MINERALS AND NATURAL RESOURCES DEPT.**

-521

NO. 116742

Official Receipt

Date: 11-5-01 ~~19~~ 2001

Received from: RC PNM Electric & Gas Services

Dollar Amount \$250.00

DR CR.	AMOUNT NUMBER	CENTER NUMBER	CREDIT AMOUNT	DEPOSIT NUMBER	WORK ORDER NO.
<del>60</del>	<del>4290</del>				
60	4291				
60	3480				
60	3451				
60	3410				
60	4210				
<del>60</del>	<del>4240</del>				
60			\$ 100.00		
60			\$ 150.00		
60					
60					

TOTAL

\$ 250.00

By Martyn J. Kelly

Energy, Minerals & Natural Resources Department  
**CASH REMITTANCE REPORT (CRR)**



Location Name ①

Location Code ②

Santa Fe Env. Bureau

0701

Today's Date: 11 MONTH 05 DAY ③ 2001 YEAR

Collection Period: 11 / 05 / 2001 through 11 / 05 / 2001 ④  
MM DD YYYY MM DD YYYY

Cost Center ⑤	Revenue Code ⑥	Receipt Amount ⑦	Collected Amount ⑧
		\$ 100 <sup>00</sup>	100 <sup>00</sup>
		\$ 150 <sup>00</sup>	150 <sup>00</sup>

**Total** =====> \$ 250<sup>00</sup> ⑨ \$ 250<sup>00</sup> ⑩

Over/Short Amount \$ \_\_\_\_\_ ⑪

CRR Deposit Amount \$ \_\_\_\_\_ ⑫

Print Name: Martynne Kieling ⑬

Signature: Martynne Kieling ⑬

Print Name: Wayne Price ⑬

Signature: [Signature] ⑬

Distribution: White and Yellow copy to Accounts Receivable-ASD.  
 Pink copy retained at CRR submitting location.

**Official Use Only**

Completed by the Accounts Receivable

Date Received: \_\_\_\_\_ ①

Notes: \_\_\_\_\_ ②

Amount Received: \_\_\_\_\_ ③

State Treasurer Deposit Number: \_\_\_\_\_ ④

Verified by: \_\_\_\_\_ ⑥

Deposit Date: \_\_\_\_\_ ⑤

**NEW MEXICO ENVIRONMENT DEPARTMENT  
REVENUE TRANSMITTAL FORM**

Description	FUND	CEB	DFA ORG	DFA ACCT	ED ORG	ED ACCT	AMOUNT
1 CY Reimbursement Project _____ Tax _____	064	01					
5 Gross Receipt Tax	084	01		2329	900000	2329134	
3 Air Quality Title V	092	13	1300	1696	900000	4169134	
4 PRP Prepayments	248	14	1400	9696	900000	4989014	
2 Climax Chemical Co.	248	14	1400	9696	900000	4989015	
6 Circle K Reimbursements	248	14	1400	9696	900000	4969248	
7 Hazardous Waste Permits	339	27	2700	1696	900000	4169027	
8 Hazardous Waste Annual Generator Fees	339	27	2700	1696	900000	4169338	
10 <u>2</u> Water Quality - Oil Conservation Division	341	29		2329	900000	2329029	250. <sup>00</sup>
11 Water Quality - GW Discharge Permit	341	29	2900	1696	900000	4169029	
12 Air Quality Permits	631	31	2500	1696	900000	4169031	
13 Payments under Protest	651	33		2919	900000	2919033	
*14 Xerox Copies	652	34		2349	900000	2349001	
15 Ground Water Penalties	652	34		2349	900000	2349002	
16 Witness Fees	652	34		2349	900000	2439003	
17 Air Quality Penalties	652	34		2349	900000	2349004	
18 OSHA Penalties	652	34		2349	900000	2349005	
19 Prior Year Reimbursement	652	34		2349	900000	2349006	
20 Surface Water Quality Certification	652	34		2349	900000	2349009	
21 Jury Duty	652	34		2349	900000	2349012	
22 CY Reimbursements ( i.e. telephone)	652	34		2349	900000	2349014	
*23 UST Owner's List	783	24	2500	9696	900000	4969201	
*24 Hazardous Waste Notifiers List	783	24	2500	9696	900000	4969202	
*25 UST Maps	783	24	2500	9696	900000	4969203	
*26 UST Owner's Update	783	24	2500	9696	900000	4969205	
*28 Hazardous Waste Regulations	783	24	2500	9696	900000	4969207	
*29 Radiologic Tech. Regulations	783	24	2500	9696	900000	4969208	
*30 Superfund CERLIS List	783	24	2500	9696	900000	4969211	
31 Solid Waste Permit Fees	783	24	2500	9696	900000	4969213	
32 Smoking School	783	24	2500	9696	900000	4969214	
*33 SWQB - NPS Publications	783	24	2500	9696	900000	4969222	
*34 Radiation Licensing Regulation	783	24	2500	9696	900000	4969228	
*35 Sale of Equipment	783	24	2500	9696	900000	4969301	
*36 Sale of Automobile	783	24	2500	9696	900000	4969302	
*37 Lost Recoveries	783	24	2500	9696	900000	4969314	
*38 Lost Repayments	783	24	2500	9696	900000	4969315	
39 Surface Water Publication	783	24	2500	9696	900000	4969301	
40 Exxon Reese Drive Ruidoso - CAF	783	24	2500	9696	900000	4969242	
41 Emerg. Hazardous Waste Penalties NOV	957	32	9600	1696	900000	4164032	
42 Radiologic Tech. Certification	987	05	0500	1696	900000	4169005	
44 Ust Permit Fees	989	20	3100	1696	900000	4169020	
45 UST Tank Installers Fees	989	20	3100	1696	900000	4169021	
48 Food Permit Fees	991	28	2600	1696	900000	4169026	
43 Other							

TOTAL 250.<sup>00</sup>

\* Gross Receipt Tax Required

-- Site Name & Project Code Required

Contact Person: Roger Anderson

Phone: 476-3490

Date: 10-16-05-01

Received in ASD By: \_\_\_\_\_

Date: \_\_\_\_\_ RT #: \_\_\_\_\_

ST #: \_\_\_\_\_

Public Service Company  
of New Mexico  
Alvarado Square MS 2104  
Albuquerque, NM 87158  
Fax 241-2376

October 1, 2001

Roger C. Anderson  
Environmental Bureau Chief  
State of New Mexico  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe NM 87505

RECEIVED



OCT 5 - 2001

OIL CONSERVATION  
DIVISION

Re: The Starlake Expansion Project  
Notice Of Intent To Hydrostaticly Test

Sir:

This letter and the attachments are to inform you of Public Service Company of New Mexico's intent to hydrostaticly test the newly constructed Starlake 24" loop gasline sometime in early November. The project is currently under construction paralleling the existing Albuquerque Mainline. Details of the proposed testing are included in the attached plan of development in section 3.8 page 11. The testing will be with clean potable water (approximately 1,688,406 gallons) obtained off site. On test completion the water will be placed in existing evaporation ponds at the existing Starlake Compressor Station on PNM property. If there are any questions or comments please feel free to contact me at my office in Albuquerque at 241-2017 or on my mobile phone 249-3262. My mailing address is as follows.

Scott Berger  
Senior Technical Project Manager  
Public Service Company of New Mexico  
Alvarado Square  
MS 2104  
Albuquerque NM 87158

Your attention to this matter would be appreciated.

Sincerely,

  
Scott Berger

Cc: Tim Cynova  
Dave Kirkland  
Greg Gill  
Maureen Gannon

OWNERSHIP PLAT FOR  
**PUBLIC SERVICE COMPANY OF NEW MEXICO**  
**ALBUQUERQUE / STAR LAKE MAINLINE**  
**EXPANSION PROJECT 2001**  
 NW/4 SEC. 34, T-20-N, R-06-W, N.M.P.M.,  
 MCKINLEY COUNTY, NEW MEXICO

LEGAL DESCRIPTION:

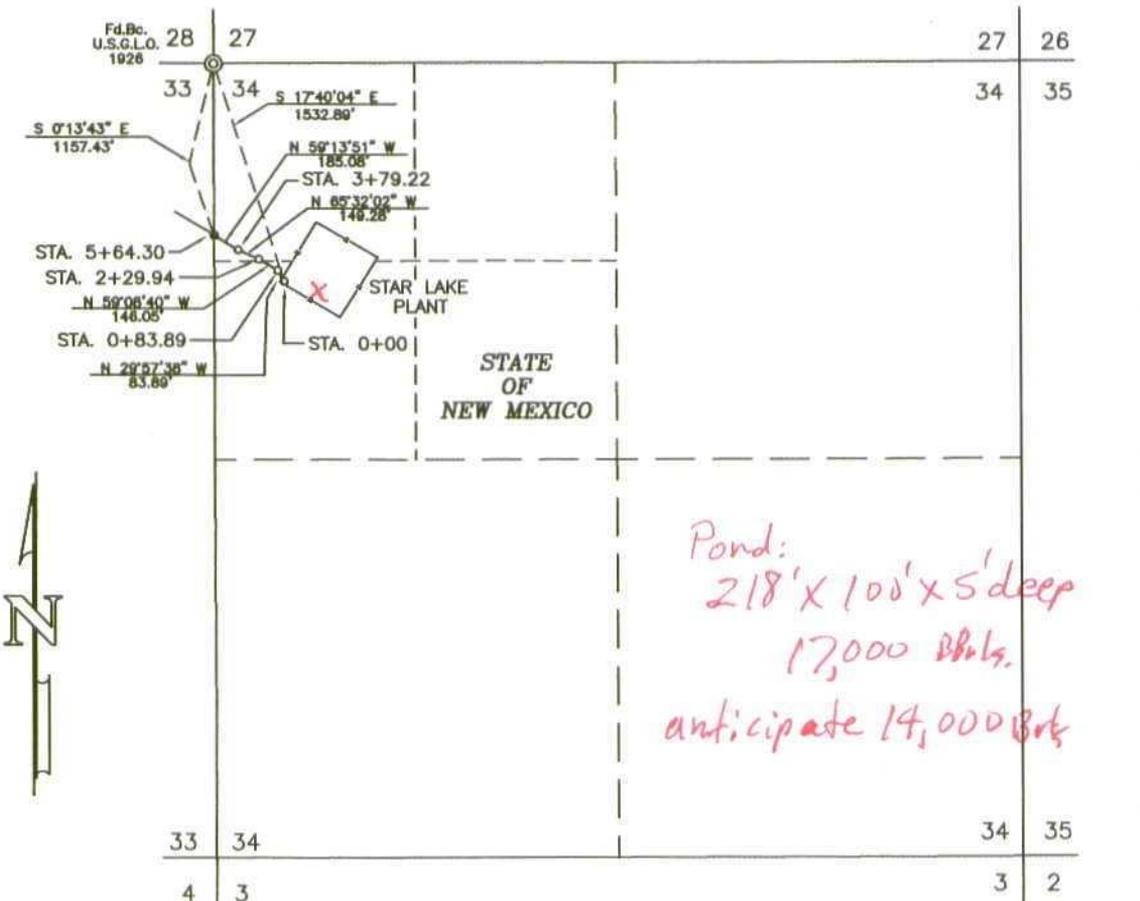
A STRIP OF LAND 50' WIDE FOR EASEMENT PURPOSES ACROSS A PORTION OF SECTION 34, TOWNSHIP 20 NORTH, RANGE 6 WEST, N.M.P.M., MCKINLEY COUNTY, NEW MEXICO, BEING 25 FEET ON BOTH SIDES AND PERPENDICULAR TO THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT A POINT LOCATED IN THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 34, SAID POINT BEARS SOUTH 17°40'04" EAST, A DISTANCE OF 1532.89 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 34;

- THENCE: NORTH 29°57'38" WEST, A DISTANCE OF 83.89 FEET;
- THENCE: NORTH 59°08'40" WEST, A DISTANCE OF 146.05 FEET;
- THENCE: NORTH 65°32'02" WEST, A DISTANCE OF 149.28 FEET;
- THENCE: NORTH 59°13'51" WEST, A DISTANCE OF 185.08 FEET TO THE END OF THE LINE AT A POINT LOCATED ON THE WEST LINE OF SAID NORTHWEST QUARTER OF SECTION 34, SAID POINT BEARS SOUTH 0°13'43" EAST, A DISTANCE OF 1157.43 FEET FROM SAID NORTHWEST CORNER OF SECTION 34.

THE ABOVE DESCRIBED STRIP OF LAND CONTAINS 34.200 RODS OR 0.648 ACRES MORE OR LESS.

IN ADDITION TO A 25' WIDE TEMPORARY USE AREA ON THE EASTERLY RIGHT-OF-WAY CONTAINING 0.324 ACRES.



NOTES:  
 1. BASIS OF BEARING: GRID BEARING - AS MEASURED BETWEEN THE STATION "STAR" AND BENCH MARK "13 W"

I, HENRY P. BROADHURST JR., A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAT WAS MADE UNDER MY DIRECT SUPERVISION AND THAT THIS PLAT ACCURATELY REPRESENTS THIS SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

HENRY P. BROADHURST JR. P.L.S. #11393

DATE

<b>PUBLIC SERVICE CO. N.M.</b> <b>ALBUQUERQUE .N.M.</b>		
SURVEYED: 2/27/01-3/5/01	REV. DATE:	APP. BY: H.B.
DRAWN BY: S.R.B.	DATE DRAWN: 4/11/01	FILE NAME: PHM00216
<b>UNITED</b>		P.O. BOX 3651 FARMINGTON, NM 87489 OFFICE: (505)334-0408
<b>FIELD SERVICES INC.</b>		

OWNERSHIP PLAT FOR  
**PUBLIC SERVICE COMPANY OF NEW MEXICO**  
**ALBUQUERQUE / STAR LAKE MAINLINE**  
**EXPANSION PROJECT 2001**  
 NW/4 SEC. 34, T-20-N, R-06-W, N.M.P.M.,  
 MCKINLEY COUNTY, NEW MEXICO

LEGAL DESCRIPTION:

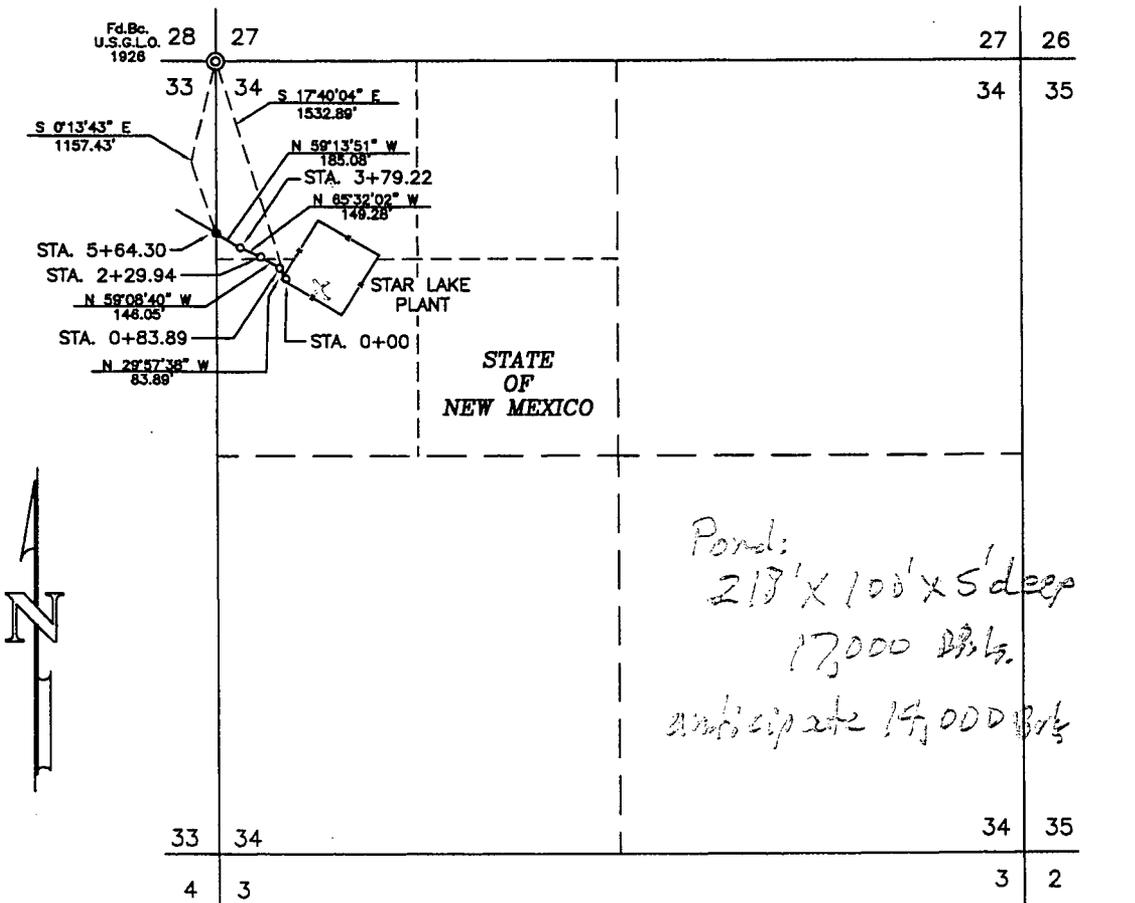
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NOTES:  
 1. BASIS OF BEARING: GRID BEARING - AS MEASURED BETWEEN  
 TRL. STATION "STAR" AND BENCH MARK "13 WR"

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HENRY P. BROADHURST JR. P.L.S. #11393

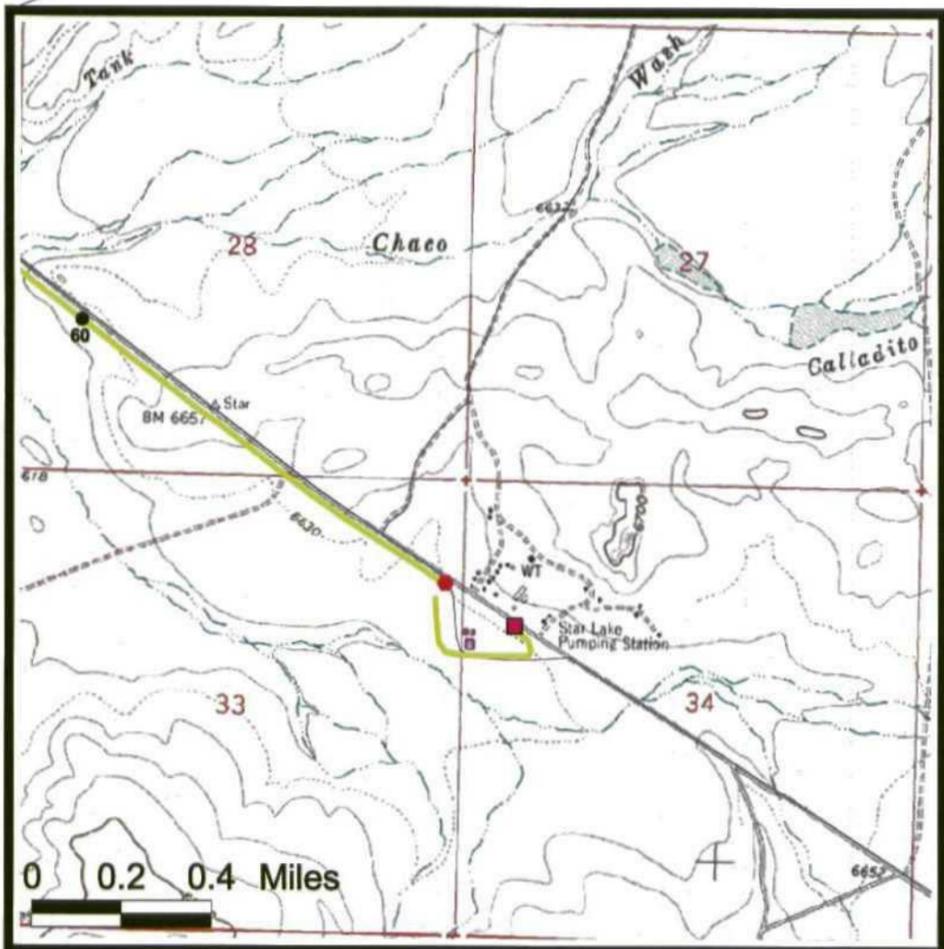
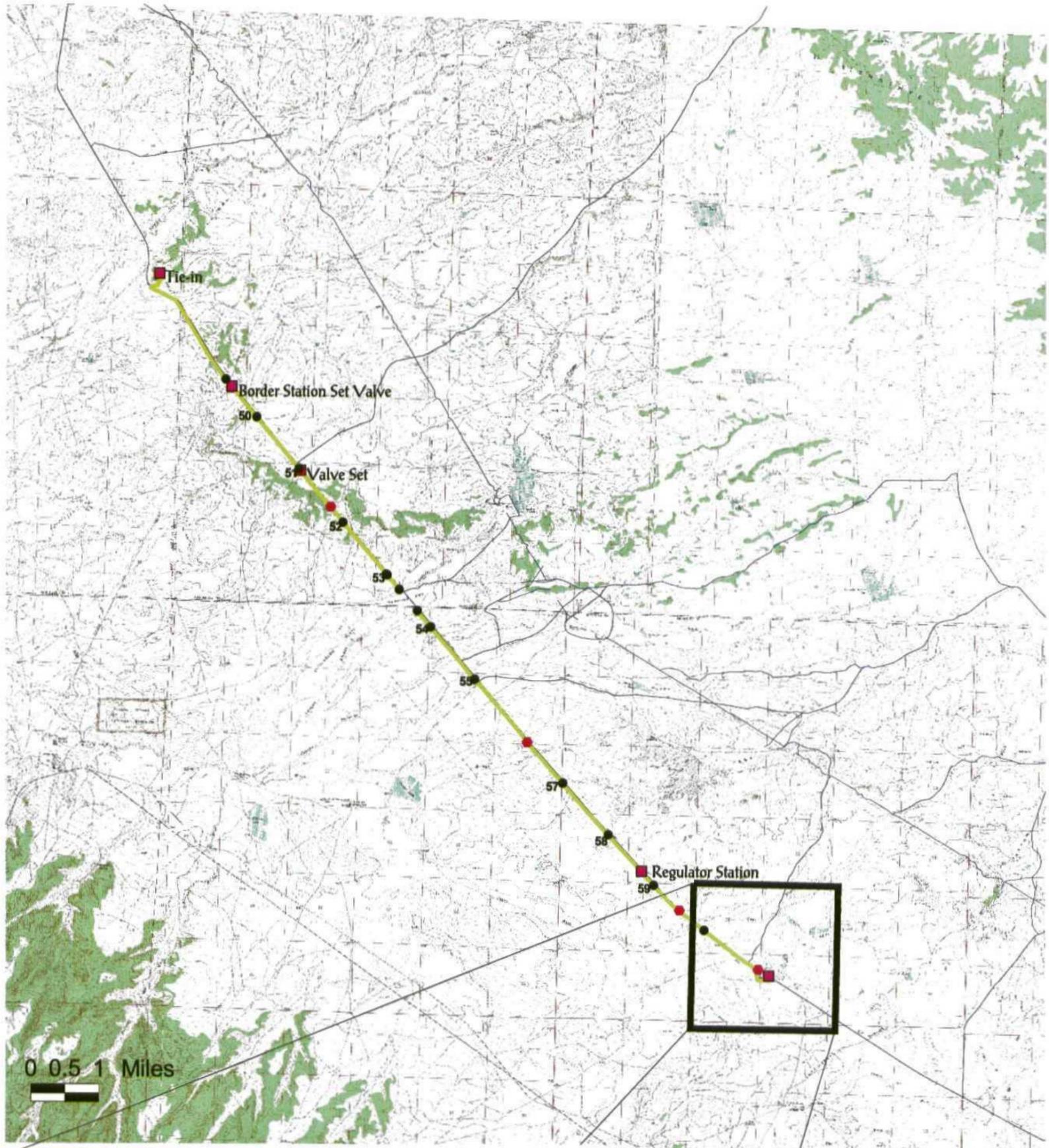
DATE

**PUBLIC SERVICE CO. N.M.**  
**ALBUQUERQUE .N.M.**

SURVEYED: 2/27/01-3/5/01	REV. DATE:	APP. BY H.B.
DRAWN BY: S.R.B.	DATE DRAWN: 4/11/01	FILE NAME: PNM00216

UNITED  
 FIELD SERVICES INC.

P.O. BOX 3651  
 FARMINGTON, NM 87498  
 OFFICE: (505)334-0408



**Proposed Star Lake Gas Pipeline**

- PNM Facility
- Fence
- Pipe
- Proposed Gas Pipeline Route
- Road

7.5' Quadrangle Maps  
 Star Lake  
 Mule Dam  
 Pueblo Alto Trading Post  
 Lybrook SE  
 Fire Rock Well  
 Pueblo Pintado

**PLAN OF DEVELOPMENT**

**For the Proposed**

**PUBLIC SERVICE COMPANY OF NEW MEXICO  
ALBUQUERQUE/STAR LAKE MAINLINE EXPANSION  
NATURAL GAS PROJECT**

**Prepared By:**

**ECOSPHERE ENVIRONMENTAL SERVICES  
FARMINGTON, NEW MEXICO -  
DURANGO, COLORADO**

**JULY 2001**

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## ATTACHMENTS

ATTACHMENT A PLATS

ATTACHMENT B COMPLIANCE PLAN

ATTACHMENT C PLAN FOR HANDLING SPILLS OR RELEASES OF  
HAZARDOUS MATERIALS

ATTACHMENT D INVASIVE WEED MANAGEMENT PLAN

ATTACHMENT E STORMWATER POLLUTION PREVENTION PLAN

**PUBLIC SERVICE COMPANY OF NEW MEXICO  
PLAN OF DEVELOPMENT  
ALBUQUERQUE/STAR LAKE MAINLINE EXPANSION  
NATURAL GAS PIPELINE PROJECT**

**1.0 PROJECT DESCRIPTION**

Public Service Company of New Mexico's (PNM's) proposed Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project, approximately 71,844 feet (13.6 miles) of 24" outside diameter (O.D.) natural gas pipeline, would be constructed in McKinley, Sandoval and San Juan counties, New Mexico. The project would be located on lands administered by the Farmington Field Office (FFO) of the Bureau of Land Management (BLM), private (fee) land, State of New Mexico land, Navajo Tribal Trust land and Navajo allotments. The Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project would connect the existing PNM Star Lake Compressor Station to the Lybrook take off (Huerfano Valve Setting). The Star Lake Compressor Station and the Lybrook take off (Huerfano Valve Setting) are part of the existing PNM Albuquerque Mainline System.

**1.1 Right of Way Grant Application**

PNM has filed a right of way (ROW) application for the Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project, approximately 13.6 miles of pipeline, with the FFO/BLM. A ROW grant is also required from the Bureau of Indian Affairs (BIA) for tribal land. Should the ROW grants be approved, and the proposed temporary use area (TUA) permitted, it would allow construction of the project in McKinley, Sandoval and San Juan counties, New Mexico. PNM has applied for a 50 foot permanent ROW with a 25 foot TUA for the entire length of the pipeline. Survey plats of the entire proposed project are provided in Attachment A of this POD.

The FFO/BLM and BIA are cooperating agencies in preparing the Environmental Assessment (EA) for the proposed the Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project. Archaeological surveys and threatened/endangered/sensitive (TES) species surveys of the proposed project area were contracted out by PNM. Moore Anthropological Research (MAR) completed an archaeological survey of the proposed project area between September, 2000 and May, 2001. Ecosphere Environmental Services (Ecosphere) conducted TES surveys for this EA in May, 2001. Ecosphere also conducted a raptor survey and an invasive weed survey. PNM acknowledges the results and stipulations defined by the EA document along with the cultural and TES surveys as a condition and responsibility in the use of public lands.

## 1.2 Pre-construction Requirements

A ROW grant must be obtained from the BLM, BIA and the State of New Mexico. Temporary Use Area permitting for the proposed project is acquired from the BLM.

The proposed project requires compliance with the Clean Water Act (33 C.F.R. § 320-331). Nationwide Permit #12, pursuant to Section 404 of the Clean Water Act (33 C.F.R. § 320-331), has been requested from the U.S. Army Corps of Engineers (COE) for ephemeral wash crossings associated with the construction of the pipeline. Nationwide Permit #12 authorizes discharges of dredged or fill materials into waters of the United States for utility line backfill and bedding. On June 20, 2001, the COE assigned Action Number 2001 00414 to the proposed project. A copy of the permit summary (stipulations) is included as an attachment to Appendix A.

Additionally, water quality certification is required under Section 401 of the Clean Water Act (CWA) for the proposed project. Water quality certification for activities in non-perennial streams was issued by the New Mexico Environment Department (NMED) on June 7, 2000 for use of a nationwide permit. The portions of the proposed pipeline project on Navajo Nation land require individual water quality certification from the U.S. Environmental Protection Agency (USEPA), Region 9. PNM is required to obtain a water quality certification from the EPA prior to discharging dredged or fill material for this project on Navajo Nation land.

Section 402 of the CWA, as amended, regulates point source discharges of pollutants into waters of the United States and specifies that storm-water discharges associated with construction activity be conducted under National Pollutant Discharge Elimination System (NPDES) guidance. To minimize potential erosion impacts from construction of the proposed action, a Storm Water Pollution Prevention Plan (SWPPP), for stormwater discharges associated with construction activity under NPDES general permit, is required for the proposed project. A SWPPP is required by USEPA and enforced by the NMED for construction projects (clearing, grading, and excavation) disturbing over 5.0 acres of land. A Notice of Intent (NOI) for construction activities must be on file with the USEPA 48 hours prior to the commencement of construction. The six major phases of the SWPPP are: (1) site evaluation and design development, (2) assessment, (3) control selection and plan design, (4) certification and notification, (5) construction/implementation, and (6) final stabilization/termination. All project construction activities would utilize Best Management Practices (BMPs) including the SWPPP to reduce/eliminate pollutants. BMPs include practicing "good housekeeping" procedures, performing preventive maintenance, maintaining visual inspections, preventing and responding to spills, controlling sediment and erosion, managing runoff, training personnel, keeping records, and reporting, and any other activity-specific and site-specific storm water BMPs that apply.

Should the ROW grant application be approved, PNM and the construction contractor will attend a pre-construction meeting with the BLM and BIA where the stipulations of the grant, including the Plan of Development (POD), will be reviewed. At least five days prior to the meeting, PNM shall provide maps or survey plats of the project to operators of all pipelines that cross or parallel the proposed pipeline on BLM or BIA administered lands.

PNM will not initiate any construction or other surface disturbing activities on the public land portion of the ROW until after issuance of the BLM grant by the BLM Authorized Officer and the BIA. Such authorization for the BLM will consist of a written Notice to Proceed (Form 2800-15) issued by the Authorized Officer. Any Notice to Proceed shall authorize construction or use only as expressly stated therein and only for the particular location or use therein described.

Construction of the proposed project is scheduled to commence in August, 2001 and continue for approximately 84 days. An August commencement is dependent upon the acquisition of the necessary authorizations. All construction activities will be conducted within the authorized limits of the ROW and TUA.

PNM's Compliance Plan, SWPPP, Plan for Handling Spills or Releases of Hazardous Materials, and Invasive Weed Management Plan are included as attachments to this POD.

## **2.0 PROJECT DESIGN**

The State of New Mexico has not adopted any design codes applicable to the proposed project. PNM's internal construction standards will apply to this project and will incorporate a combination of industry and Department of Transportation (DOT) standards (ANSI, ASME, NACE, 49 CFR 192, etc.).

### **2.1 Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project**

The proposed pipeline would be designed to meet DOT 192 regulatory requirements. The pipeline would be constructed using 24-inch outside diameter, standard wall (or heavier), external coated, API 5L, X-42 (or stronger), ERW, steel pipe with an expected operating pressure less than 370 pounds per square inch gauge (psig) and a maximum allowable operating pressure (MAOP) of 720 psig. The Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project will connect the Star Lake Compressor Station to the Lybrook take off. Block valve sets will be installed within existing PNM ROW staging areas at the Star Lake Compressor Station and the Lybrook Take off to connect the new pipeline to the Albuquerque Mainline. An existing block valve set, located at Indian Springs within the proposed pipeline corridor, will be removed. PNM has proposed the use of the existing Star Lake Compressor Station as a laydown site for pipe.

### 3.0 PLAN OF DEVELOPMENT

This POD was assembled in coordination with the BLM, BIA and Navajo Nation and includes as many standard stipulations as possible. Special stipulations, designed specifically for the proposed action, are also included in this POD. The proposed pipeline follows an existing road/multi-pipeline corridor for the majority of its length and has the following administrative percentage break-down:

BLM	17,466 feet	(24 % of route)
State of New Mexico	15,756 feet	(22 % of route)
Navajo Tribal Trust	18,526 feet	(26 % of route)
Navajo Allotments	10,195 feet	(14 % of route)
Private (fee) land	9,901 feet	(14 % of route)

#### Construction

Once necessary authorizations are obtained, construction of the proposed pipeline would take place in McKinley, Sandoval and San Juan counties, New Mexico. A construction crew will work seven days a week, approximately 10 hours per day. It is anticipated that 1,000 feet of pipeline will be constructed per day, depending on the terrain conditions and ROW restrictions. One primary construction company from the Albuquerque area would be employed to construct the pipeline.

The work-force, anticipated to include an estimated 75 people, would include pipeline construction crews that normally utilize many different skills including laborers, equipment operators, and welders. PNM anticipates that all of the work force would be made up of people from northwest New Mexico. Construction personnel would park in designated areas within previously disturbed areas and staging areas.

Equipment, pipe and other construction materials would be hauled from various parts of the country, brought to Albuquerque, New Mexico and stored in various PNM warehouse locations until needed. Pipe would come from the mill via rail to the Thoreau rail yard. The pipe would be delivered by truck to the job site. Materials and equipment would be hauled over New Mexico (N.M.) Highway 44 (U.S. Highway 550), New Mexico Highways 197 and 371, and San Juan County Road 7900. Hauling equipment and materials would normally be restricted to weekdays for public safety. Trucks may haul during daylight hours only. An estimated 86 semi-trailer loads of equipment and materials is required for the proposed project. During construction, existing roads and the pipeline ROW would be used as access. No new roads would be constructed.

At the request of residents, the BLM, BIA and/or the Navajo Nation, unsurfaced roads that pass within one-fourth mile of dwellings would either be watered or an approved BLM/BIA/Navajo Nation dust suppressant would be applied to control the dust.

Construction equipment would include trucks, loaders, compressors, various sized dozers, shovels and backhoes, trenchers, boring machines, cranes, side-booms, generators, and bending machines. Most of the equipment would be used during construction with some dozers, blades, and backhoes being used during reclamation. Numerous private vehicles, pickups, and smaller trucks would also be used for transportation.

The following is a sequence of major construction activities associated with the construction of the pipeline:

- surveying and staking
- archeological and TES surveys and clearances
- clearing and grading of ROW
- trenching (normally 3 feet deep)
- stringing, lineup, welding and radiographic examination
- coating and wrapping
- pipe lowering
- trench backfilling
- testing and tie-ins
- cleanup and restoration

### 3.1 Surveys

Surveying and station staking of the pipeline ROW would take place after the following:

1. BLM and/or BIA performs a field review of preliminary flagging or staking (lath placed every 200 to 300 feet) and indicates preliminary acceptance of the route alignment as staked/flagged or reaches agreement with PNM on an alternate route as necessary. Any route changes will be described in the EA being prepared for the project.
2. BLM/Navajo Nation permitted contract archaeologists survey staked routes for cultural resources. If the staked route includes manifestations of cultural sites, they would assist in locating routes that would avoid these areas. The contract survey crews usually consist of a vehicle and three people each.
3. Contract biologists would conduct TES species surveys where indicated by USFWS, BLM and Navajo Nation wildlife biologists. The survey crews consist of one to three people and one or two vehicles each.

Conducting the actual centerline survey and placement of the centerline stakes would address the following, as applicable:

- a. The centerline of the proposed ROW is the suggested location for the pipeline. The pipeline may be placed closer to one side of the ROW than to the other.

b. If the pipeline is planned beneath an existing road, centerline stakes would be set a maximum of 10 feet from either edge of the road. The definition of a road is one that is or has been maintained.

c. When the proposed route follows both a road and pipeline, the placement of the line is determined by the company in consultation with BLM and is generally dictated by topography and existing facilities.

The specified ROW boundaries will be marked at 100 to 200 feet intervals with painted laths or flags of a distinctive color. These will be maintained until final cleanup and/or reclamation is completed, after which they will be removed. At a minimum, reference stakes for all angle stations (P.I.) will be set on both sides of the ROW prior to construction activities.

### 3.2 Archaeological Surveys

Archaeological surveys of the proposed project have been conducted by MAR. Resource procedures established in the Fruitland Coal Gas Gathering Memorandum of Agreement between the BLM and the New Mexico State Historic Preservation Officer will, at a minimum, be followed. Where cultural sites are in close proximity to proposed alignments, temporary fencing would be installed during construction activities on the edge of the construction ROW to protect these sites. In some cases, it may be necessary to monitor the placement of the fencing. The Cultural Resources Stipulations in Appendix D of the EA address protection of cultural sites within the project area. Details as to which sites should be fenced included in the cultural resources survey report submitted to the BLM and Navajo Nation, and ultimately determined by the BLM with SHPO concurrence.

If subsurface sites are encountered during construction, the contractor would stop all construction activities in the vicinity of the discovery and immediately notify the BLM or BIA/Navajo Nation. The site would then be evaluated. Sites determined by the BLM as eligible for inclusion in the National Register of Historic Places (NRHP) would be managed to mitigate against potential adverse effects of construction. Excavation and recovery of some sites may be directed by the BLM/BIA/Navajo Nation. The contractor would avoid No Construction Zones as indicated by the BLM/BIA/Navajo Nation.

### 3.3 Threatened/Endangered/Sensitive Species Surveys

Threatened/endangered/sensitive (TES) species and raptor surveys of the proposed project area have been completed by Ecosphere and are presented in a single Biological Evaluation submitted as Appendix C in the EA. The presence of sensitive species along the proposed ROW and/or in the project area may affect the final proposed alignment of the pipeline ROW. PNM has expressed willingness to reroute or mitigate potential impacts to T&E and other sensitive species occurring in the project area.

### 3.4 Clearing

Clearing, grading, and other disturbances of soil and vegetation would be limited to the minimum area required for construction, and would address the following, as applicable:

1. Clearing of the pipeline ROW would be limited to the ROW width granted to PNM by the BLM and BIA. In some areas the cleared area may be less than the ROW width, in order to minimize potential impacts to nearby resources. Brush, woody material, and rocks cleared from the ROW would be windrowed or piled to one side inside the ROW or in the TUA for later use in reclamation.
2. No trees will be removed by the proposed pipeline project. Any rocks removed from the construction area during clearing and/or ditching operations will be stockpiled to be scattered back on the ROW in a random arrangement. Redistributing these materials on the ROW during reclamation shall be accomplished using rubber-tired equipment.
3. Clearing the ROW would consist of knocking (scalping) off the tops of brush with a motor-grader or dozer. Grass cover or low growth vegetation would not be removed except immediately over the ditch line, as required to prevent a fire hazard from welding operations, or in rough and broken terrain.
4. Clearing of the pipeline ROW and TUA width requirement during the construction phase will be as authorized by the BLM and BIA. Areas such as slopes, bladed roads, staging areas, or areas with difficult access may require additional TUAs during construction. Clearing of these areas would be the same as described above.

A 25 foot construction TUA has been requested by PNM for the entire length of the proposed pipeline. No additional TUAs have been applied for. PNM reserves the right to apply for additional TUA. The specific number and size of additional TUAs are determined by the BLM during field inspections on the pipeline ROW. There will be a 20 foot off-set from existing pipelines to the wall of the ditch of the new pipeline. Where terrain and cultural resources allow, the distance between pipelines is dictated by safety requirements (explosive potential of the gas) and potential for corrosion.

#### Fences and Range Improvements

When clearing and construction activities associated with the ROW damages or destroys a natural or man-made barrier used for livestock control, PNM will build a new fence (to BLM/BIA specifications) to contain livestock. Each fence crossed by this ROW will be braced and secured to prevent slacking of the wire, before cutting the wire for pipeline construction. The opening thus created will be temporarily closed as necessary during construction to prevent passage of livestock. PNM is responsible to contact the grazing lessee(s) prior to crossing any fence on public land or any fence between public and private land, and to offer the lessee(s) an opportunity to be present when the fence is cut so that the lessee(s) can be satisfied that the fence is adequately braced and secured.

A minimum of 10 feet of undisturbed surface will be maintained between fence lines and the pipeline, if possible and as applicable. Pipelines, for livestock water, dirt tanks and wildlife projects will be avoided during construction or immediately repaired by PNM to BLM and/or BIA specifications:

### **3.5 Top Soil Removal and Excavation**

To protect project area soils, construction and/or routine maintenance activities will abate during periods when the soil is too wet to adequately support construction equipment. If equipment creates ruts of 6 inches deep, then the soil will be deemed too wet to work in. All excavations will meet OSHA requirements as defined in 29 CFR Part 1926, Subpart P-Excavation, with appendices.

Before ditching operations begin, an average of the upper six to eight inches of soil material will be removed from all areas of the ROW that have side slopes of 10 percent or less and will be stockpiled separately from the other soil material. An exception is where sagebrush and grass areas are scalped and soil material, other than the ditch area, is not removed. Topsoil and subsoil (ditch spoil) will be placed in separate windrows on one side of the ROW only where required by the BLM and/or BIA. The space that is generally needed for the two windrows of soil would be from 10 to 25 feet depending on topsoil depth and the ditch width. Topsoil would be used for reclamation.

On sidehill slopes, a level working pad will be cut from the hillside with a dozer. Excavating for sidehill cuts will generally begin at the uphill end of the cut and continue downward until the required working width is obtained. The width of the working area on the ROW would vary. Spoil from the cut (uphill) will be graded to fill the opposite (downhill) side of the bench, where it forms the working pad. The slope of the cut, as well as the fill on the opposite side, will depend on the steepness of the natural slope and the looseness of the soil material. The steeper the slope and the looser the soil, the larger the cut will be for a given working pad width. Additional TUA may be necessary in sidehill cut areas. Slopes will be recontoured to a near natural state following pipeline construction and reseeded.

### **3.6 Ditching**

#### General

After the working area is prepared, ditching operations will begin. Ditches are excavated either with a wheel-ditcher or backhoe. The wheel-ditcher can excavate a ditch that varies from 18-inches to several feet in width. Backhoes are equipped with a bucket that can excavate a ditch that has a minimum width of 30-inches and has unlimited maximum width capabilities. In gentle topography and fine textured soils a wheel-ditcher is the preferred equipment while a backhoe can be used in almost all soils. Ditches will be open several days until the pipe is placed and back-filling completed. Care will be taken to keep bladed roads passable, during this phase of construction by using soft ditch plugs

when possible. Ramps out of the ditch will be constructed every 0.25 mile to allow wildlife or other animals that might fall into the ditch to escape. "Soft plugs" will be placed in the ditch at each obvious livestock and game trail. No more than one mile of ditch will be open at any one time.

The depth of the ditch will vary with the conditions encountered. The cover from the top of the pipe to ground level will generally be at least 36 inches. In some cases the pipeline will pass under existing pipelines in areas of consolidated rock. A minimum burial depth of 24 inches will be attempted in these areas. Burial depths will increase to five feet or more in areas where roads or other obstacles are crossed. Additional TUA may be required at a deeper excavation section where multiple pipelines exist. Construction activities in this area will comply with OSHA regulations for excavations.

In rocky terrain, unconsolidated rock would be ripped. No blasting is anticipated, however should it become necessary the following guidelines would apply. In preparation for blasting, loose material would be removed from the surface and a series of holes would be drilled into the rock using airpowered drills. The drills would generally be suspended from a side-boom tractor, which would also tow the compressor supplying the air. Self-propelled drills may also be used. Areas to be blasted will be matted or controlled blasting techniques used to constrain rock fragments. Before blasting, construction equipment would be moved from the area and local residents and grazing lessees notified to allow precautions to protect livestock and property. Explosives will not be stored on public land and will be stored in compliance with Alcohol, Tobacco, and Firearms (ATF) regulations. No blasting is anticipated for the project.

To minimize potential impacts from erosion due to ditching operations, special stipulations have been developed by the BLM for particular areas. These stipulations are included in the erosion control section of Section 3.11 in this POD.

### Wash Crossings

Crossings of ephemeral washes in the project area will be ditched using backhoe type equipment. The banks of washes will be excavated to create a gentle slope to allow equipment to progress to the floor of the wash. Bank topsoil and rock will be stockpiled away from the edge of the wash and surrounded by siltation fencing to minimize erosion into the wash.

Construction across washes will be done to minimize the amount of soil, rocks and vegetation entering the wash. Cutting banks and slopes of washes will be minimized. As much vegetation as possible will be preserved on the banks. Spoil from the banks will not be placed into the active wash channel. Straw bales, filter fabric, or other temporary measures will be used where necessary to filter sediments contained in runoff from the soil piles. After the pipe is installed, the stockpiled soil and rock will be used to restore the banks of the wash to a stable configuration. This approach may be modified to fit specific situations (i.e.: rock rip-rap or other reinforcing material may be required in large, deep washes where bank stabilization and scouring considerations may be a problem).

## Pipelines/Powerlines and Facilities Crossings

Existing pipelines and/or other buried oil and gas field facilities will be crossed by the pipeline. Prior to the centerline survey operation, survey crews locate buried facilities with metal detectors to avoid damaging them during the construction process. The pipeline discussed in this POD will cross nine (9) other known pipelines. A backhoe and hand laborer will excavate the pipeline ditch and passage necessary to place the pipeline under the existing pipeline. The existing ROW holder will be contacted prior to construction. Where powerlines would be crossed or closely paralleled by the proposed pipeline, the trench centerline will be at least 8 feet from the nearest power pole or anchor.

## Bladed Road Crossings

Crossing of unsurfaced roads will be made using a ditching machine or backhoe as described above. Approximately twenty-two (22) unsurfaced roads (of varying condition) would be crossed by the proposed action. Installations, including restoration of the surface, will usually be completed in one day. Provisions will be made to detour or control passage of traffic while construction takes place. Adequate safety precautions and traffic controls (detours, flagpeople) will be provided for traffic safety in accordance with federal, state, or county requirements.

### **3.7 Laying Pipe**

The ditching operation will be followed by pipe stringing, bending, lining up, welding, radiographic examination, wrapping, coating and burial. Before the pipe is placed in the ditch, selected fill material may be used to pad the pipe in areas where there are rocks in the ditch bottom or in the fill material. The pipe will be lowered into the ditch by side-boom tractors, strung directly off trucks. After the pipe is placed in the ditch, more of the selected fill material may be used to pad the pipe before the ditch is back filled. Usually padding material is obtained from soil excavated from the ditch, but sand or other rock free material is occasionally obtained from other sources. Because the amount of rock free material that will be encountered during ditching is not known, the amount of outside materials is not known. Sales contracts or permits will be obtained from the affected surface managing agency prior to obtaining padding material from offsite.

After the pipe is in the ditch, it will be pressure tested. Any leaks that are found will be repaired before the pipeline is put into operation.

### 3.8 Pipeline Testing

Hydrostatic testing will be conducted on all pipeline sections of the project and at all of the valve assemblies to ensure structural integrity prior to being placed in service. Fresh water would be acquired from a BLM approved source and trucked to the project site. After completion of the test, test water will be disposed of in compliance with State of New Mexico Oil Conservation Division (NMOCD) regulations concerning the discharge of hydrostatic test water. PNM has applied for a general permit to discharge hydrostatic test waters in a discharge pond at the Star Lake Compressor Station. Hydrostatic test water will not be discharged into drainages (e.g. washes, creeks, etc.). A temporary containment/settling pond may be constructed using visqueen and hay bales (certified weed free) on a flat upland area within the proposed ROW. Test water will be allowed to percolate through the hay bales separating out solids from the test water and minimizing the velocity of water coming into contact with the land. The containment structure materials will be removed from the site when the water has entirely drained and the surrounding ground is dry. After the pipe segments are buried in the ditch, the entire pipeline would be pressure tested to a MAOP of 792-820 psig using sweet gas from existing, adjacent PNM pipelines.

### 3.9 Pipeline Protection

The pipeline will be protected from rust and corrosion (pitting) by the pipeline coating and cathodic protection. The cathodic protection system will include impressed current rectifiers and anode ground beds at various locations. Rectifiers will be located near existing power distribution lines and mounted on a pole adjacent to the ROW; associated anodes will be buried. The exact locations of these cathodic protection devices cannot be determined until the pipeline is installed and the proper tests conducted.

Test leads will be attached to the line at fence lines, roads, pipeline crossings and highways to monitor the cathodic protection system. Each set of test leads will be brought to a junction box that will be mounted on a short post and situated to not interfere with existing land uses.

#### Above Ground Structures

Above ground pipe for connections to block valves, pressure control valves, scrubbers, meters and receivers experience slight movement. The pipe supports provide the necessary anchor and allow for pipe movement necessary to minimize the danger of the pipe becoming over-stressed. Where above ground valve structures are near roadways, protective rail type fences will be placed around the structures. All above ground structures will be painted to match existing facilities and the natural terrain. The paint color will be Carlsbad Brown.

### 3.10 Invasive Weed Protection

All construction equipment, excluding trucks that haul pipe, will be washed prior to leaving the state it was last used or stored in, if it is outside of New Mexico. The parts of the construction equipment that are in contact with the soil (blades, buckets, crawler tracks, tires, etc.) will be washed or otherwise cleaned of all soil and visible seeds after having been used for the removal of 12 inches of soil in area with identified invasive weeds and prior to the movement of the construction equipment into an area free of invasive weeds. An Invasive Weed Management Plan for the project is provided as an attachment to this POD. At the direction of the BLM and/or BIA, the proposed ROW will be spot sprayed for invasive weeds before construction commences. Specific locations (if any) to be spot sprayed are identified in the Invasive Weed Management Plan.

### 3.11 Resource Issues

#### Cultural Resources

Cultural resources will be protected during construction, operation and maintenance procedures. During construction activities, resource protection and mitigation procedures established in the Fruitland Coal Gas Gathering Memorandum of Agreement between the BLM and the New Mexico State Historic Preservation Officer will, at a minimum be followed. Where cultural sites are in close proximity to the proposed alignment, temporary fencing and an archaeological monitor will be stationed during construction activities on the edge of the construction ROW to protect these sites. In some cases it may be necessary to monitor the placement of the fencing. Details as to which sites should be fenced and where monitors should be situated will be included in the stipulations provided by the BLM and/or BIA. The BLM or BIA may, at their discretion, require additional monitoring or fencing of cultural site areas.

If subsurface sites are encountered during construction, the contractor would stop all construction activities in the vicinity of the discovery and immediately notify the BLM and/or the BIA. The site would then be evaluated. Sites determined by the BLM as eligible for inclusion in the NRHP would be managed to mitigate against potential adverse effects of construction. The contractor would avoid No Construction Zones as indicated by the BLM and/or BIA. Cultural stipulations specific to this proposed project are provided in Appendix D. Listed below are three general BLM stipulations designed to protect cultural resources.

1. Discovery of Cultural Resources in the Absence of Monitoring: If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM, BIA and Navajo Nation (depending on land status). The BLM, BIA or Navajo Nation would then specify what action is to be taken. If there is an approved "discovery plan" in the place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of

the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization or data recovery may be performed by the BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is successfully completed. Failure to identify the BLM/BIA/Navajo Nation about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 ( as amended).

2. Discovery of Cultural Resources During Monitoring: If the monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM/BIA/Navajo Nation (depending on land status). The BLM/BIA/Navajo Nation would then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM/BIA/Navajo Nation would evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM/BIA/Navajo Nation or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

3. Damage to Sites: If, in its operations, operator/holder damages, or is found to have damaged, any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM/BIA/Navajo Nation approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resource Protection Act of 1979 (as amended).

#### Threatened, Endangered, Candidate and Species of Concern

Threatened/endangered/sensitive species and raptor surveys of the proposed project area were conducted in May, 2001. The results of these surveys are provided in the Biological Evaluation included as Appendix C in the EA. There are no known federal TES species residing in the project area.

Should a sensitive species be discovered during construction of the proposed project, all construction activities in the vicinity of the discovery will cease and the BLM/Navajo Nation will be immediately notified. The BLM/Navajo Nation will provide guidance as to how discovered sensitive species will be protected.

### Paleontological Resources Protection

No paleontological resources have been identified on the surface of the proposed project area. Should any surface or subsurface paleontological resources be discovered during construction of the project, all construction activities in the vicinity of the discovery will cease and the BLM and/or BIA will be immediately notified. The BLM and/or BIA will provide guidance as to how discovered resources will be protected.

### Aquatic Resources Protection

To minimize potential impacts to surface water quality, PNM will strictly adhere to all USCOE CWA permitting stipulations for crossing project area washes. During construction in areas other than at the proposed wash crossings, and during operation of the pipeline, erosion control measures outlined in PNM's SWPPP will be followed.

### Invasive Weed Protection

At the request of the BLM, an Invasive Weed Management Plan for the project has been prepared and is included as an attachment to this POD. An invasive weed survey of the proposed project area was conducted by Ecosphere in May, 2001. The results of the survey are presented in the Biological Survey Report in Appendix C of the EA. PNM will control invasive weed infestations on disturbed areas within the limits of the ROW and TUA. PNM will consult with the BLM for acceptable weed control methods within limits imposed in the grant stipulations.

### Wildlife Protection

Open ditches for pipeline construction represent an impediment to big game. Escape ramps or crossing plugs will be placed every 0.25 mile on open ditches (open longer than 48 hours), to allow wildlife or other animals that might fall into the ditch to escape. "Soft plugs" will be placed in the ditch at each obvious livestock and game trail. No more than one mile of trench will be open at any one time. All gates used to access the project area would be kept closed.

### Road Improvements

All disturbed roadways will be repaired by grading and compacting (or replacing asphalt if needed) or replaced to maintain transportation networks. All public and private roadway crossings and access points will be restored to safe and acceptable conditions.

### Fences and Range Improvements

PNM is responsible for contacting grazing lessees prior to crossing any fence on public land or any fence between public and private land. Additionally, PNM will offer the lessee the opportunity to be present when the fence cut(s) is made so that the lessee can be satisfied that the fence is adequately braced and secured. Each fence crossed by the proposed ROW will be braced and secured to prevent slacking of the wire in sections

other than where the wire is cut. The opening thus created will be kept closed as often as possible during construction to prevent passage of livestock. Any gaps in natural barriers for livestock created by construction activities will be fenced according to BLM/BIA or the private landowner's specifications (within reason).

### Survey Monuments

PNM will protect all survey monuments found within the ROW. Survey monuments include, but are not limited to, General Land Office (GLO) and BLM Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil survey monuments.

In the event of obliteration or disturbance of any of the above, PNM will immediately report the incident in writing, to the BLM Authorized Officer and the respective installing authority (if known). Where GLO and BLM ROW monuments or references are obliterated during operations, PNM will secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments or references. Resurveying must adhere to the "Manual of Surveying Instructions for the Survey of Public Lands in the United States" protocol.

PNM will record such surveys in the appropriate county and send a copy to the BLM Authorized Officer. If the Bureau cadastral survey or other Federal surveyors are used to restore the disturbed survey marker, PNM will be responsible for the survey cost.

### Air Quality

At the request of residents or BLM/BIA, unsurfaced roads in the construction area of influence that pass within one quarter mile of dwellings will either be watered with fresh water or other means satisfactory to BLM/BIA will be applied to control dust. These dust abatement procedures shall also be used at all times when working within 500 feet of power transmission ROW, unless waived by the owner/operator of the power line. Proper permits will be acquired prior to drawing water for this purpose. Federal, State, and local air quality standards will be met during construction and operation of the project.

### Visual Impacts

During pre-project planning and consultations, PNM and the BLM/BIA may develop special stipulations to minimize potential visual impacts in the project area. Recontouring of disturbed areas, or designated sections of the ROW, by grading to restore the site to approximately the original contour of the ground, will be evaluated by the BLM Authorizing Officer. All earthwork will be obliterated by removing embankments, backfilling excavations and grading to reestablish the approximate original contours of the land. All above ground structures will be painted by PNM to match existing facilities and the natural surroundings. The paint color for the proposed project is Carlsbad Brown.

## Noise

Noise from construction will be distributed over the section of the project being constructed. Noise caused by engines and earth removal equipment will be more concentrated where excavation and ditching are taking place. No compressors are proposed for the project.

## Public Safety

PNM will provide for the safety of the public potentially entering the ROW. This includes, but is not limited to, barricading open trenches, stationing flag people with communication systems for single-lane roads without inter-visible turnouts, and attended gates for blasting operations (should blasting become necessary). Traffic control will be provided as needed when road boring takes place and in congested areas.

## Sanitation

The construction project area will be maintained in a sanitary condition at all times. Waste materials will be disposed of promptly at a state permitted waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil, petroleum products, filters, welding rods or equipment. PNM will comply with all applicable federal laws and regulations existing or hereafter promulgated, including the Toxic Substances Control Act of 1976, as amended (U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated or stored on the proposed ROW. Disposal of all liquid and solid waste produced during the operation of the proposed ROW shall be done in an approved manner to minimize impacts to soil, water, vegetation and wildlife. Portable toilets will be available on the work site.

## Erosion Control

No construction activities will be performed when the soil is too wet to support construction equipment as evidenced by the creation of ruts on access roads in excess of six inches deep. PNM will implement a SWPPP in compliance with USEPA regulations during construction. The SWPPP is included as an attachment to this POD. A NOI will be filed with the EPA 48 hours prior to the start of construction. Wash crossings will be constructed in adherence to COE stipulations of Nationwide Permit #12, pursuant to Section 404 of the CWA. A summary of Nationwide Permit #12 is included as an attachment to Appendix A of the EA.

During pre-project planning and consultations, PNM and the BLM/BIA/Navajo Nation may develop special stipulations to minimize erosion impacts in the project area. Special stipulations to minimize erosion may include, terracing, hydromulching, and applying thatching or fiber blankets in areas of high erosion potential.

### 3.12 Reclamation

The final phase of construction is cleanup and reclamation. Within this section are special stipulations agreed upon between PNM and the BLM during pre-project planning and consultations. Additional stipulations may be agreed upon during the pre-construction meeting. The BLM requires PNM to reclaim the pipeline project area immediately after construction to maximize vegetation regrowth and to minimize adverse impacts to wildlife.

Back-filling will be completed using the spoil previously excavated from the ditch. The ditch will be compacted using heavy equipment during the back-filling operations. A small berm no more than 12 inches in height will be formed over the ditch (except at road crossings, in drainages, and heavy use areas) to compensate for some settling. The disturbed surface will be restored to as close as possible to the original contour of the land. Recontouring of disturbed areas, or designated sections of the ROW, by grading to restore the site to approximately the original contour of the ground, will be evaluated by the BLM Authorizing Officer. All earthwork will be obliterated by removing embankments, backfilling excavations and grading to reestablish the approximate original contours of the land. This includes moving all the fill material back into the sidehill cuts that were necessary to construct the pipeline.

To minimize the potential for introducing invasive weeds to the project area, all reclamation equipment, including seeding equipment, will be washed prior to leaving the state it was last used or stored in, if it is outside of New Mexico. The parts of the construction equipment that are in contact with the soil (blades, buckets, crawler tracks, tires, etc.) will be washed or otherwise cleaned of all soil and visible seeds after having been used for the removal of 12 inches of soil in area with identified invasive weeds and prior to the movement of the construction equipment into an area free of invasive weeds.

Water diversions will be constructed as needed to control surface water and soil erosion. To accomplish this, water bars or "kicker dikes" will be constructed on the contour across disturbed areas. Water bars will be constructed to simulate the imaginary contour lines of the slope and to provide drainage from the disturbed area of the ROW to areas undisturbed along the ROW. All such structures will be constructed according to BLM specifications at the following general spacing intervals:

<u>Percent Slope</u>	<u>Spacing Interval</u>
Less than 2%	120'
2 - 5%	100'
5 - 10%	75'
10% - 20%	50'
20% or greater	30'

Exceptions to this would be as follows: If the ROW has a side slope one-third or more of the slope along the length of the ROW, water bars will not be constructed. For example, if the ROW slopes six percent along its length and less than two percent across the width, water bars are not necessary. However, if the side slope is two percent or more, the pipe

ditch berm will be cut to ground level at 50 yard intervals and at each drainage crossing. Culverts may be required in areas of extreme erosion and sediment transfer.

Any rocks removed from the construction area and stockpiled during clearing and/or ditching operations shall be scattered back on the ROW in a random arrangement and not in groups. Redistributing these materials on the ROW during reclamation activities shall be accomplished by using rubber-tired equipment and/or by laborers by hand. If roads and the project ROW are parallel to each other, reclamation would include separating the road from the ROW with either a water bar cut or a berm.

Seeding

All disturbed areas, with the exception of the road surface and shoulder, will be reseeded with a BLM seed mixture and to the specifications given prior to the placement of slash, chipping or rocks on the disturbed areas. The BLM seed mix will be used on the entire ROW unless the BIA or Navajo Nation have specific project seeding stipulations. There shall be no primary or secondary weeds in the seed mixture. Seed will be tested and viability test of seed will be done in accordance with applicable laws. Commercial seed will be certified seed and will be used within 12 months of testing to assure seed viability. The seed mixture container will be tagged in accordance with State laws and available for inspection by the BLM Authorized Officer. The seed mix shall be applied at a rate of 1 pound per acre and in late fall (October/November).

Species shall be planted in pounds of Pure Live Seed (PLS) per acre:

$$\text{Percent Pure Live Seed} = \text{Purity} \times \text{germination} / 100$$

Two lots of seed can be compared on the basis of PLS as follows:

<u>Source # One (poor quality)</u>		<u>Source # Two (better quality)</u>	
Purity	50%	Purity	80%
Germination	40%	Germination	63%
% PLS	20%	% PLS	50%
5 lb. bulk seed required to make		2 lb. bulk seed required to make	
1 lb. PLS		1 lb. PLS	

Below is the FFO/BLM Seed Mixture #1 – Brush/Grassland for the Albuquerque/Star Lake Mainline Expansion Natural Gas Pipeline Project:

Bottlebrush squirreltail ( <i>Sitanion hystrix</i> )	0.5 lb.
Galleta grass ( <i>Hilaria jamesii</i> )	1 lb.
Fourwing saltbush ( <i>Atriplex canescens</i> )	1 lb.
Alkali sacaton ( <i>Sporobolus airoides</i> )	0.25 lb.
Indian ricegrass ( <i>Oryzopsis hymenoides</i> )	3 lbs.
Western wheatgrass ( <i>Agropyron smithii</i> )	2.5 lbs.
Common sunflower ( <i>Helianthus annuus</i> )	1 lb.
Blue flax ( <i>Linum lewissii</i> )	0.25 lb.