1R - 4-37

REPORTS

DATE:

2005



1R-437

SITE INVESTIGATION AND CLOSURE PROPOSAL

Friscoe Skelly #2 Ref. # 2004-00197

SE¼ of the NW¼ of Section 6, R37E, T17S Latitude 32°52'4.316"N and Longitude 103°17'38.146"W Elevation ~3,810'amsl

~7 miles southeast of Lovington, Lea County, New Mexico

April 2005

Prepared by

Environmental Plus, Inc.

2100 Avenue O
P.O. Box 1558
Eunice, New Mexico 88231
Tele 505.394.3481 FAX 505.394.2601



MO ACTION REVISED.



STANDARD OF CARE

Site Investigation and Closure Proposal

Friscoe Skelly #2 Ref. # 2004-00197

The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality Assurance/Quality Control Plan. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered EPI professional with a background in engineering, environmental, and/or the natural sciences.

This report was prepared by:	
Patrick W. McCasland	Date
This report was reviewed by:	
Iain Olness, PG	Date

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Company or Agency	NMOCD	NMOCD	Plains	Plains	HPI
Title	Environmental Engineer	Environmental Engineer	Environmental Supervisor	Environmental Director	
Name	Paul Sheeley	Larry Johnson	Camille Reynolds	leff Dann	E. E. C.

NMOCD - New Mexico Oil Conservation Division
Plains - Plains Pipeline, L.P.
EPI - Environmental Plus, Inc.
BLM - U.S. Department of Interior Bureau of Land Management

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1.0 Introduction and Summary

This site is located in UL-F (SE¼ of the NW¼) of Section 6, R37E, T17S at a latitude of 32°52'4.316"N and a longitude of 103°17'38.146"W, approximately 7 miles southeast of Lovington, New Mexico on property owned by the Robert C. Rice. Site and topographical maps are included in Attachment I. The estimated 10 barrel (bbl) crude oil leak attributed to internal/external corrosion, occurred in the Plains Pipeline, L.P. (Plains) Friscoe Skelly 4" steel pipeline with no fluids recovered. Approximately 338 square feet (ft2) (18' x 20') of surface area was impacted. Local groundwater is estimated to occur at approximately 73-feet below ground surface ('bgs) and is based on water level measurements of monitoring wells associated with a Plains site approximately 1,300 feet due east of the site at a similar elevation. There are no surface water bodies or domestic or agricultural water wells observed to be within a 1,000 foot radius of the site. This gives the site a 10 point New Mexico Oil Conservation Division (NMOCD) ranking score for soil from the surface to 23'bgs and 20 points for soil >23'bgs. These rankings apply the following remedial guidelines for the "constituents/contaminants of concern" (CoCs):

CONSTITUENTS/CONTAMINANTS OF CONCERN	REMEDIAL GOAL
Benzene	10 mg/Kg
BTEX (mass sum of benzene, toluene, ethylbenzene, and xylenes	50 mg/Kg
Total Petroleum Hydrocarbon 8015m (TPH ^{8015m}) Soil from the surface to 23'bgs	1,000 mg/Kg
TPH 8015m (Soil >23'bgs)	100 mg/Kg

In September 2004, Environmental Plus, Inc. (EPI) with direction from Plains, excavated 1,138 cubic yards (yd3) of impacted soil from the release area and disposed of the soil in the NMOCD approved and permitted Plains Lea Station Landfarm GW-351. Samples collected in October 2004 from the sidewalls of the 16-feet deep excavation indicated that the horizontal extent of impact had been delineated; however, contaminant levels in the floor of the excavation at 16'bgs remained above the remedial goals. In November 2004, to delineate the vertical extent of impact, a trench was excavated beneath the leak origin and sampled. Analytical results for the samples collected from the leak origin trench indicated a decreasing TPH 8015m gradient; however, the analytical results for the sample collected from the floor of the trench at 24'bgs were above the remedial goals for TPH^{8015m}. Subsequently, a leak origin soil boring (BH1) was advanced in the bottom of the excavation. The analytical results established a decreasing TPH8015m gradient (i.e., 2,070 mg/Kg at 21'bgs to an acceptable 46.8 mg/Kg at 36'bgs). However, the TPH 8015m concentration from the 41'bgs sample was 125 mg/Kg, in excess of the 100 mg/Kg remedial goal. On 12 April 2005, at the request of the NMOCD, additional samples were collected from a soil boring advanced to 46' bgs and 51' bgs adjacent to the leak origin soil boring (BH1). The TPH^{8015m} concentration from the 46'bgs sample was an acceptable 37.6 mg/Kg. The TPH8015m concentration from the 51'bgs sample was reported as non-detectable at or above the method detection limits (MDL). The results establish a consistent decreasing gradient supporting the conclusion that the groundwater has not been impacted. The benzene and BTEX data also support this conclusion, i.e.,

analytical results from the 36'bgs, 41'bgs, 46'bgs, and the 51'bgs samples were reported as not being detected at or above each analytes respective MDL.

To remediate and close the site, Plains proposes to install an oversized 20 mil thick polyethylene liner at 16'bgs over the remaining hydrocarbon source term centered beneath the leak origin. This will interrupt the vertical transport mechanism effectively isolating the crude oil residual and protecting the groundwater. Prior to liner installation, the excavation bottom will be screened in the field with a photoionization detector (PID) to determine the extent of the top of the contaminated soil column. This is necessary so that the excavation perimeter can be made to accommodate the oversized liner. Because of the rock at the site and the need to protect the liner from abrasion, the excavation bottom will be contoured with a 6 to 8-inch layer of cushioning sand prior to liner installation, similarly, a 6 to 8-inch layer of cushioning sand will be placed on top of the liner prior to backfilling with clean soil. Plains will implement this proposal upon NMOCD approval and submit a report documenting successful implementation of the proposal along with the final C-141 and a request that the NMOCD require "no further action" at the site, except follow-up reseeding of the disturbed work area and resurfacing of the caliche road, consistent with the landowner.

2.0 Environmental Media Characterization

Chemical parameters of the soil and ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) approved "General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000" and the NMOCD guidelines published in the following documents:

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants/constituents of concern (CoCs) (i.e., TPH, benzene, and the mass sum of benzene, toluene, ethylbenzene, and total xylene (BTEX)), will be determined based on the NMOCD Ranking Criteria as follows:

- Depth to Ground water (i.e., distance from the lower most acceptable concentration to the ground water),
- Wellhead Protection Area (i.e., distance from fresh water supply wells), and
- Distance to Surface Water Body (i.e., horizontal distance to all down gradient surface water bodies).

2.1 GEOLOGICAL DESCRIPTION

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico" (A. Nicholson and A. Clebsch, 1961), describes the near surface geology of south

central Lea County as an intergrade of the Quaternary Alluvium (QA) sediments (i.e., fine to medium sand) with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche.

2.2 ECOLOGICAL DESCRIPTION

The area is an intergrade of the Great Plains and the Upper Chihuahuan Desert biomes consisting primarily of flat to rolling hills with Honey Mesquite (*Prosopis glandulosa*) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's kangaroo rats, deer mice, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and Mule Deer. Reptiles, amphibians, and birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

2.3 AREA GROUND WATER

Local ground water is estimated to occur at 73 'bgs and is based primarily on November 2004 measurements of monitoring wells at a similar surface elevation, located approximately 1,300 feet east of the site at a Plains site. New Mexico Office of the State Engineer (NMOSE) Well #4712, at an elevation 10-feet lower than the site, is located approximately 0.65 mile south with a recorded water level of 75'bgs and is consistent with the November 2004 measurements. However, water well #2474 listed in the NMOSE water well database, located approximately 0.4 mile southwest of the site at a similar surface elevation, has a groundwater level of 40'bgs that was recorded in 1954, but can not be considered to be representative of the site groundwater given the distance and direction from the site. Further, the leak origin soil boring was advanced to 51'bgs and did not encounter groundwater or moist soil typically encountered when approaching the zone of saturation. According to the USGS, the ground water elevation decreases generally to the southeast.

2.4 AREA WATER WELLS

The area water wells recorded by the New Mexico Office of the State Engineer are annotated on the USGS topographical map included in Attachment I and the water well reports are included in Attachment IV.

2.5 AREA SURFACE WATER BODIES

There are no permanent or intermittent surface water bodies within a 1,000 feet radius of the site.

3.0 NMOCD SITE RANKING

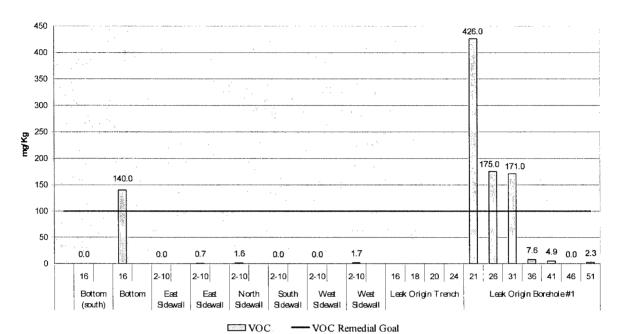
Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water, the site has an NMOCD ranking score of 10 for soil down to 23'bgs and 20 points for soil >23'bgs with the soil remedial goals highlighted below in the Site Ranking Matrix.

1. Gro	ound Water	2. V	Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to points	GW <50 feet: 20		' from water source, or;<200' vate domestic water source: 20	<200 horizontal feet: 20 points
If Depth to feet: 10 poin	GW 50 to 99 ts	points	vare domestic water source: 20	200-100 horizontal feet: 10 points
If Depth to	GW >100 feet: θ	I	' from water source, or; >200' vate domestic water source: 0	>1000 horizontal feet: 0 points
Ground water	Score = 10 &20	Wellhead	Protection Area Score= 0	Surface Water Score= 0
Site Rank ((1+2+3) = 20 + 0	+ 0 =	10 and 20 points	
Total S	ite Ranking So	core and	d Acceptable Remedial G	oal Concentrations
Parameter	>19 (23 to 73	'bgs)	10-19 (surface to 23'bgs)	0-9
Benzene ¹	10 ppm		10 ppm	10 ppm
BTEX1	50 ppm		50 ppm	50 ppm
TPH	100 ppm		1000 ppm	5000 ppm

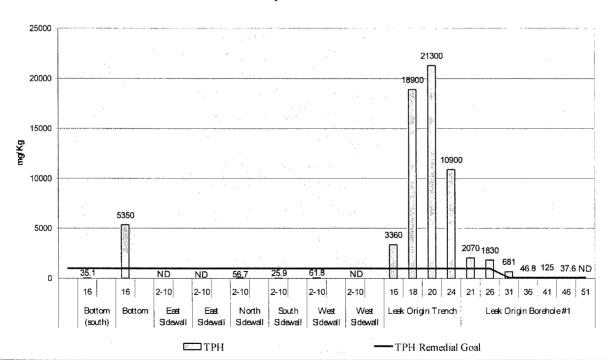
4.0 SUBSURFACE SOIL INVESTIGATION

In September 2004, Environmental Plus, Inc. (EPI) with direction from Plains, excavated 1,138 cubic yards (yd3) of impacted soil from the release area and disposed of the soil in the NMOCD approved and permitted Plains Lea Station Landfarm GW-351. Samples collected in October 2004 from the sidewalls of the 16-feet deep excavation indicated that the horizontal extent of impact had been delineated; however, contaminant levels in the floor of the excavation at 16'bgs remained above the remedial goals. In November 2004, to delineate the vertical extent of impact, a trench was excavated beneath the leak origin and sampled. Analytical results for the samples collected from the leak origin trench indicated a decreasing TPH 8015m gradient; however, the analytical results for the sample collected from the floor of the trench at 24'bgs were above the remedial goals for TPH^{8015m}. Subsequently, a leak origin soil boring (BH1) was advanced in the bottom of the excavation. The analytical results established a decreasing TPH8015m gradient (i.e., 2,070 mg/Kg at 21'bgs to an acceptable 46.8 mg/Kg at 36'bgs). However, the TPH^{8015m} concentration from the 41'bgs sample was 125 mg/Kg, in excess of the 100 mg/Kg remedial goal. On 12 April 2005, at the request of the NMOCD, additional samples were collected from a soil boring advanced to 46' bgs and 51' bgs adjacent to the leak origin soil boring (BH1). The TPH8015m concentration from the 46'bgs sample was an acceptable 37.6 mg/Kg. The TPH8015m concentration from the 51'bgs sample was reported as non-detectable at or above the method detection limits (MDL). The results establish a consistent decreasing gradient supporting the conclusion that the groundwater has not been impacted. The benzene and BTEX data also support this conclusion, i.e., analytical results from the 36'bgs, 41'bgs, 46'bgs, and the 51'bgs samples were reported as not being detected at or above each analytes respective MDL. The laboratory reports are summarized and provided in Attachment III and illustrated below.

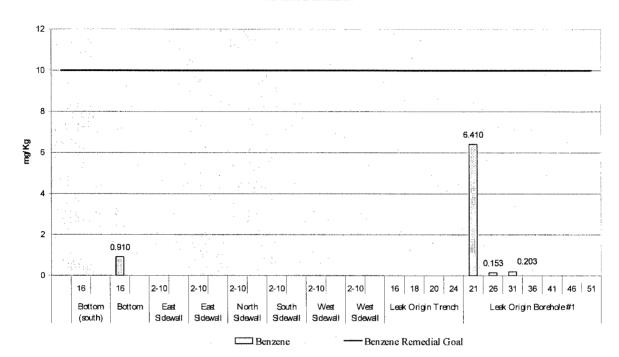
Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Volatile Organic Constituents (VOC) Delineation



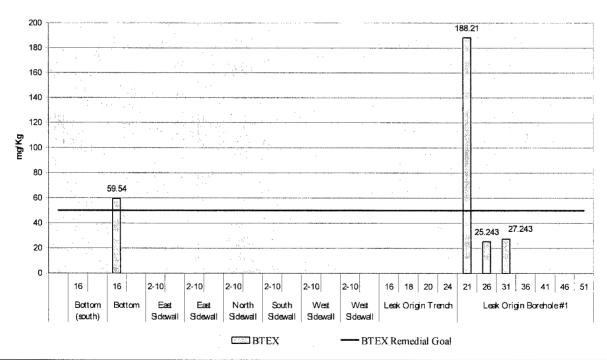
Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Total Petroleum Hydrocarbon 8015M Delineation



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Benzene Delineation



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 BTEX Delineation





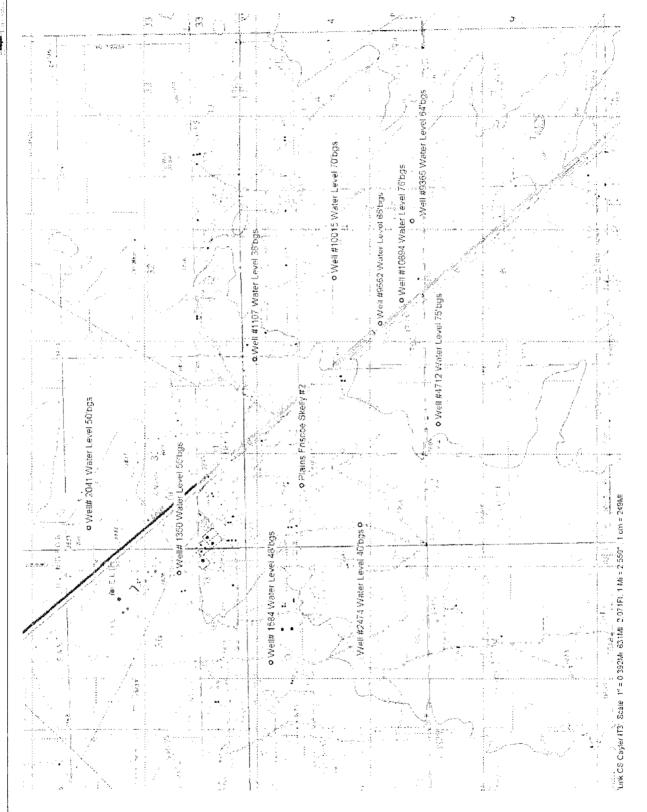
5.0 GROUND WATER INVESTIGATION

The soil investigation indicates the groundwater has not been impacted.

6.0 SOIL REMEDIATION PROPOSAL

To remediate and close the site, Plains proposes to install an oversized 20 mil thick polyethylene liner at 16'bgs over the remaining hydrocarbon source term centered beneath the leak origin. This will interrupt the vertical transport mechanism effectively isolating the crude oil residual and protecting the groundwater. Prior to liner installation the excavation bottom will be screened in the field with a PID to determine the extent of the top of the contaminated soil column. This is necessary so that the excavation perimeter can be made to accommodate the oversized liner. Because of the rock at the site and the need to protect the liner from abrasion, the excavation bottom will be contoured with a 6 to 8-inch layer of cushioning sand prior to liner installation, similarly, a 6 to 8inch layer of cushioning sand will be placed on top of the liner prior to backfilling with clean soil. Plains will implement this proposal upon NMOCD approval and submit a report documenting successful implementation of the proposal along with the final form C-141 and a request that the NMOCD require "no further action" at the site, except follow-up reseeding of the disturbed work area and resurfacing the caliche road, consistent with the landowner. Plains will also ensure that the NMOCD is notified at least 48 hours prior to liner installation.

ATTACHMENT I SUB-BLOWS

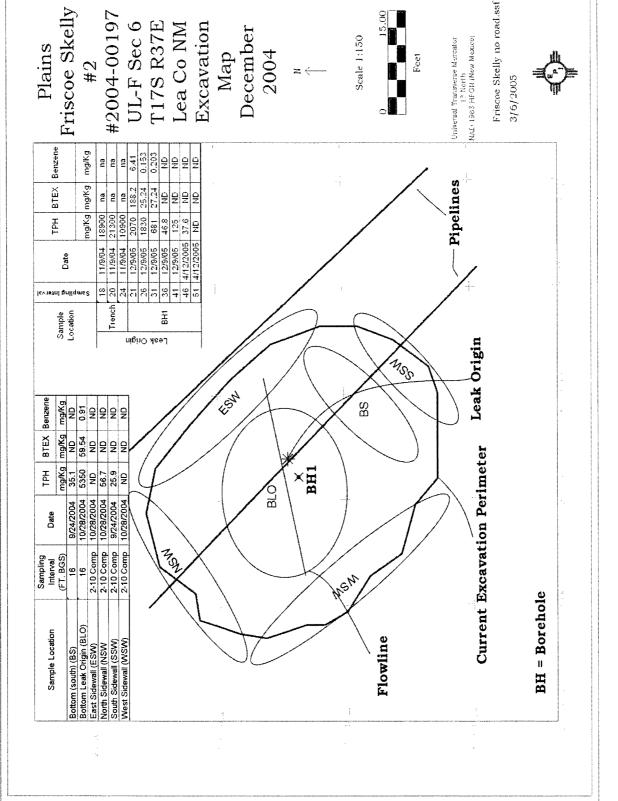


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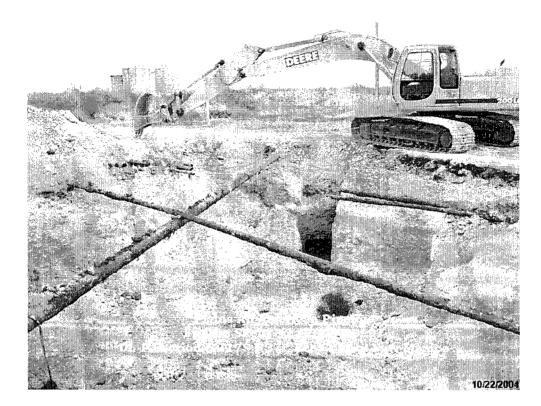


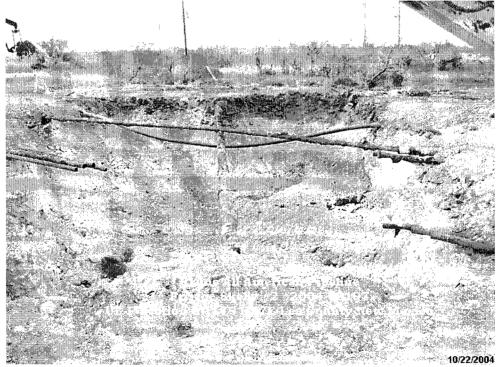
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ATTACHMENT II PROTOGRAPIC









ATTACHMENT III ANALYTICAL REPORTS AND SUBMERY

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		Friscoe Sl	Friscoe Skelly #2 #2004-00197 Soil Delineation Information	04-00197	Soil Do	.1 . elineatic	n Infor	mation						
	Vertical			,	VOC	GRO³	DRO⁴	TPH ⁵	BTEX	Benzene Tolucne	Tolucne	Ethylbenzene	Xylene (m,p)	Nylene (o)
Sample Location	Interval (FT. BGS ^t)	SAMPLE ID#	Date	Lithology	mdd	mg/Kg	mg/Kg	mg/Kg	mg/Kg mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
South Sidewall Composite	2-10	SPFS92404SSWC4'	9/24/2004	Caliche	1	<10 <10	25.9	25.9	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
East Sidewall Composite	2-10	SPFS92404ESWC4'	9/24/2004	Caliche	1	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	<0.025	< 0.025
West Sidewall Composite	2-10	SPFS92404WSWC4	9/24/2004	Caliche	ŀ	10.9	50.9	61.8	<0.025	<0.025	<0.025	< 0.025	< 0.025	< 0.025
South Bottom Composite	16	SPFS92404BHC16'	9/24/2004	Caliche	1	([67.7)	35.1	35.1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Bottom	16	SPFS102804BH	10/28/2004	Caliche	140	1190	4,160	5,350	59.5	0.91	11.1	15.3	22.3	9.93
North Sidewall Composite	2-10	SPFS102804NSW	10/28/2004	Caliche	1.6	<10	56.7	29.7	<0.025	<0.025	< 0.025	<0.025	<0.025	< 0.025
East Sidewall Composite	2-10	SPFS102804ESW	10/28/2004	Caliche	0.7	<10	<10	<10	<0.025	<0.025	< 0.025	<0.025	<0.025	<0.025
West Sidewall Composite	2-10	SPFS102804WSW	10/28/2004	Caliche	1.7	<10	<10	<10	<0.025	<0.025	< 0.025	<0.025	<0.025	<0.025
Leak Origin Trench	16	SPFS110904BH16	11/9/2004	Caliche	-	962	2,570	3,360	NA	NA	NA	NA	N.A	NA
Leak Origin Trench	18	SPFS110904BH18	11/9/2004	Caliche	1	8,060	18,900	18,900	NA	VV	Y.V.	NA	NA	NA
Leak Origin Trench	20	SPFS110904BH20	11/9/2004	Caliche	1	8,190	13,100	21,300	NA	NA	NA	NA	NA	NA
Leak Origin Trench	24	SPFS110904BH24	11/9/2004	Caliche		4,400	6,490	10,900	NA	NA	NA	NA	NA	ΝΆ
Leak Origin Borehole #1	21	F.S. BH#1-5'	12/9/2005	Caliche	426	1,020	1,050	2,070	188	6.41	55.5	43.6	0.09	22.7
Leak Origin Borehole #1	56	F.S. BH#1-10'	12/9/2005	Caliche	175	498	1,330	1,830	25.2	0.153	4.14	6.81	10.5	3.64
Leak Origin Borehole #1	31	F.S. BH#1-15'	12/9/2005	Sand	171	243	438	681	27.2	0.203	4.82	7.24	10.7	4.28
Leak Origin Borehole #1	36	F.S. BH#1-20'	12/9/2005	Sand	7.6	(8.36])	46.8	46.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Leak Origin Borehole #1	41	F.S. BH#1-25'	12/9/2005	Sand	4.9	(5.82])	125	125	<0.025	< 0.025	<0.025	<0.025	<0.025	<0.025
Leak Origin Borehole #1	46	FS041205 30'	4/12/2005	Sand	0.0	<10	37.6	37.6	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Leak Origin Borehole #1	51	FS041205 35'	4/12/2005	Sand	2.3	<10	<10	<10	< 0.025	< 0.025	<0.025	<0.025	<0.025	<0.025
New Mexico Oil Conservation Division Site Remedial Goals - Surface to 23'bgs	Division Sit	e Remedial Goals - Surfa	ice to 23'bgs		100			1,000	50	10				
New Mexico Oil Cor	nservation D	New Mexico Oil Conservation Division Site Remedial Goals - >23'bgs	als - >23'bgs		100			100	50	10				

bgs - below ground surface

GRO-Gasoline Range Organics Co-C10

⁴DRO-Diesel Range Organics C₁₀-C₃₅

TPH-Total Petroleum Hydrocarbon = GRO+DRO.

Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

Soil chloride residuals must not be capable of impacting groundwater or surface water above Water Quality Control Commission (WQCC) standard of 250 mg/L.

'NA - not analyzed

VOC - Volatile Organic Constituent/Contaminant Headspace J - Parameter detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag)



ATTACHMENT IV AREA WATER OF CORMATION

Record Count: 1

New Mexico Office of the State Engineer Well Reports and Downloads

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New Mexico Office of the State Engineer Well Reports and Downloads

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Record County 11

http://iwaters.ose.state.nm.us;7001 TWATERS/WellAndSurfaceDispatcher



New Mexico Office of the State Engineer

Pecord Court: 3

Page 1 of 1

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New Mexico Office of the State Engineer Well Reports and Downloads Township: 178 Range: 36E Sections: 1.12 NAD27 X: Zone. Search Radius: ▼ Number: Suffix: Basin: Owner Name: (First), (Last) Non-Domestie / Domestie * All Avg Depth to Water Report Well / Surface Data Report Water Column Report Clear Form WATERS Menu Help AVERAGE DEPTH OF WATER REPORT 03/09/2005 (Depth Water in Feet) Y Wells Bsn Tws Rng Sec Zone х Min Max 48 4°

http://iwaters.ose.state.im.us;7001/iWATERS/WellAndSurfaceDispatcher

AUTAGUMENT V SITE IMPORMATION 8: METRICS FORMAND INFORMATIONAL C-141



Plains Pipeline, L.F.	P. Site	Incident Date:	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NMOCD Notified:				
Information and Metr								
SITE: Friscoe Skell	y #2	Assi	gned Site Reference #:	2004-00197				
Company: Plains Pi	peline, L.P.	<u> </u>	NATIONAL RESPONS	SE CENTER - 800.424.8802				
Street Address: PO	Box 1660		Notified Date/Time					
Mailing Address: 580	05 East Highw	ay 80	Notified by:	Make work to the trade of the t				
City, State, Zip: M	sidland, Texas	79702	Person Notified:					
Representative: Camil			NRC Report#:					
Representative Teleph		93.5611						
Telephone:		***********						
Fluid volume released	(bbls): 10 b	bls	Recovered (bbls): 0	bbls				
			4 hrs and submit form C-1					
- 4	(Also appli	es to unauthorized	releases >500 mcf Natural	Gas)				
				es of 50-500 mcf Natural Gas)				
Leak, Spill, or Pit (LS								
Source of contaminati								
Land Owner, i.e., BLM		her: Robert C. R	ice					
	8' x 20'							
	338 sqft ft ²							
Location of Reference								
Location distance and		m RP						
	4.316"N							
Longitude: 103°17'3								
Elevation above mean	n sea level:	3,810'amsl						
Feet from South Sect	ion Line							
Feet from West Secti	on Line							
Location- Unit or 1/4 1/4	: SE¼ of th	e NW¼	Unit Letter	: F				
Location- Section: 6								
Location- Township:	T17S							
Location- Range: R37E								
Bocation Range. Roy E								
Surface water body wi	ithin 1000 'ra	dius of site: no	ne					
Surface water body wi								
Domestic water wells			one					
Agricultural water wel								
Public water supply w								
Public water supply w								
Depth from land surfa								
Depth of contamination		(= +)						
Depth to ground wate		DtGW) - 0						
		<u>, </u>	1 D	3. Distance to Surface Water				
1. Ground W		Z. Wellnea	d Protection Area	Body				
If Depth to GW <50	feet: 20	If <1000' from	water cource	<200 horizontal feet: 20				
points			orivate domestic water	points				
If Depth to GW 50 to	99 feet: 10	source: 20 point		200-100 horizontal feet: 10				
points				points				
If Depth to GW >100	feet: 0		water source, or;	>1000 horizontal feet: 0				
	reet. U	>200' from priv	rate domestic water					
		source: 0 points		points				
points	10 & 20		ion Area Score= 0	Surface Water Score= 0				
Ground water Score =								
•	10 ヴ 20	Site Rank (1+2+3) = 10 & 20 Total Site Ranking Score and Acceptable Concentrations						
Ground water Score = Site Rank (1+2+3) = 1		table Concentrat	.10118	0.0				
Ground water Score = Site Rank (1+2+3) = 1		table Concentrat	10-19	0-9				
Ground water Score = Site Rank (1+2+3) = 1 Total Site Ranking Sc	ore and Accep	table Concentrat	10-19					
Ground water Score = Site Rank (1+2+3) = 1 Total Site Ranking Sc Parameter Benzene ¹	ore and Accep >19 10 ppm	table Concentrat	10-19 10 ppm	10 ppm				
Ground water Score = Site Rank (1+2+3) = 1 Total Site Ranking Sc Parameter Benzene ¹ BTEX ¹	ore and Accep >19 10 ppm 50 ppm	table Concentrat	10-19 10 ppm 50 ppm	10 ppm 50 ppm				
Ground water Score = Site Rank (1+2+3) = 5 Total Site Ranking Sc Parameter Benzene ¹ BTEX ¹ TPH	ore and Accep >19 10 ppm 50 ppm 100 ppm		10-19 10 ppm	10 ppm 50 ppm 5000 ppm				

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Form C-141

Revised October 10, 2003

	K	elease N	otificat	ion an	d Correct	ive A	ction		
OPERAT					☐ Initial Report ☐ Final Report				
Name of Con	npany: Plai	ns Pipeline	, L.P.		Contact: Camille Reynolds				
		9 (3705 E F			Telephone	No.			·
Midland, Te		(79706)			505.396.33	41			
Facility Nam					Facility Typ	pe			
Friscoe Skel					4" Steel Pi				
Surface Own	er: Robe	rt C. Rice			Mineral ()wner		L	ease No.
			LOCATI	ON OF	RELEASE	Ξ			
Unit Letter: F	Section 6	Township T17S	Range R37E	from the	North/South Line	Feet from the	East/W Line	est	County: Lea
		Latitude:	32°52'4.3	16"N	Longitude	: 103°	17'38.1	46"W	,
		-	NATUR	EOF	RELEASE				·····
Type of Relea	s c		-		Volume of Re	lease		Volu	ime Recovered
Crude Oil					10 barrels				barrels
Source of Rela					Date and Hou	rof			and Hour of
4" Steel Pipe Was Immediat		u n 2			Occurrence If YES, To W	h o m 2		Disc	overy
was immediat			Not Require	d	11 11.5, 10 w	nom:			
By Whom?					Date and Hou				
Was a Waterco	ourse Reache	ed? 🔲 Yes	s 🛛 No		If YES, Volun NA	ne Impac	ting the	Wate	ercourse.
If a Watercourse was Impacted, Describe Fully.* NA						****			
Describe Caus	e of Probler	n and Remed	ial Action T	aken.* 4 "	Steel Pipelin	e The c	ause wa	as eit	her internal or
external corre	osion. Con	taminated so	oil placed o	n a plast	ic barrier.				
Describe Area									
Cooler TPH	X 20': Site	delineated.	Contamina	ated soil	disposed of i	nthe Le	a Stati	on La	andfarm. Remedial am of Benzene, Ethyl
Benzene, Tol				= IV mg	r/Kg, and B1.	EA, 1.C.,	the ma	iss su	im of Benzene, Ethyl
that pursuant notifications a acceptance of should their o ground water,	to NMOCD and perform a C-141 rep perations has surface wat	rules and reg corrective ac ort by the NN ive failed to a er, human he	gulations all etions for re MOCD mark adequately in alth or the c	operator leases wh ed as "Fi nvestigate environme	s are required ich may endar nal Report" de and remediat ent. In additione with any ot	to repor nger publ des not r se contan on, NMO her fede	t and/o lic healt elieve th nination OCD acc ral, stat	r file h or t he ope that eptan e, or	edge and understand certain release the environment. The erator of liability pose a threat to ce of a C-141 report local laws and/or
					<u>O</u>	IL CON	SERV	ATIO	<u>ON DIVISION</u>
Signature:									
Printed Name	: Camille Re	eynolds			Approved	by Distr	ict Supe	erviso	r:
E-mail Addres	s: CJReynol	ds@PAALP.c	om		Approval	Date:		-	Expiration Date:
Title: Distric	t Environme	ental Supervis	or		Condition	s of App	roval:		Attached 🔲
Date		Phone: 5		ı					

Attach Additional Sheets If Necessary



SITE INVESTIGATION AND CLOSURE PROPOSAL

Friscoe Skelly #2 Ref. # 2004-00197

UL-F (SE¼ of the NW¼) of Section 6, R37E, T17S Latitude 32°52'4.316"N and Longitude 103°17'38.146"W Elevation ~3,810'amsl

~7 miles southeast of Lovington, Lea County, New Mexico

February 2005

Prepared by

Environmental Plus, Inc.

P.O. Box 1558
Eunice, New Mexico 88231
Tele 505.394.3481 FAX 505.394.2601



NO ACTION.

NO ACTION.

NILL

WILL



STANDARD OF CARE

Site Investigation and Closure Proposal

Friscoe Skelly #2 Ref. # 2004-00197

The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality Assurance/Quality Control Plan. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered EPI professional with a background in engineering, environmental, and/or the natural sciences.

This report was prepared by:	
Jak Malan	
Patrick W. McCasland	Date
This report was reviewed by:	
Iain Olness, PG	Date

Distribution List

			The state of the s		
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leff Dann	Environmental Director	Plains	333 Clay Street Suite #1600, Houston, TX 77002	JPDann@paalp.com	
Cody Miller	EPI General Manager	EPI	P.O. Box 1558, Eunice, NM 88231	Enviplus1@aol.com	_
Sherry Miller	EPI President	EPI	P.O. Box 1558, Eunice, NM 88231	Enviplus1@aol.com	
			A CONTRACTOR OF THE CONTRACTOR		

NMOCD - New Mexico Oil Conservation Division
NMSLO - New Mexico State Land Office
Plains - Plains All American Pipeline
EPI - Environmental Plus, Inc.
BLM - U.S. Department of Interior Bureau of Land Management



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Oil Conservation Division Form C-1412	23

1.0 Introduction and Summary

This site is located in UL-F (SE¼ of the NW¼) of Section 6, R37E, T17S at a latitude of 32°52'4.316"N and a longitude of 103°17'38.146"W, approximately 7 miles southeast of Lovington, New Mexico on property owned by the Robert C. Rice. Site and topographical maps are included in Attachment I. The estimated 10 barrel (bbl) crude oil leak attributed to internal/external corrosion, occurred in the Plains All American Pipeline (Plains) Friscoe Skelly 4" steel pipeline with no bbls recovered. Approximately 338 square feet (ft2) (18' x 20') of surface area was impacted. Local groundwater is estimated to occur at approximately 73-feet below ground surface ('bgs) and is based on water level measurements of monitoring wells associated with another Plains site approximately 1,300 feet due east of the site at a similar elevation. There are no surface water bodies or domestic or agricultural water wells observed to be within a 1,000 foot radius of the site. This gives the site a 10 point New Mexico Oil Conservation Division (NMOCD) ranking score for soil from the surface to 28'bgs and 20 points for soil >28'bgs. These rankings apply the following remedial guidelines for the "constituents/contaminants of concern" (CoCs):

CONSTITUENTS/CONTAMINANTS OF CONCERN	REMEDIAL GOAL
Benzene	10 mg/Kg
BTEX (mass sum of benzene, toluene, ethylbenzene, and xylenes	50 mg/Kg
Total Petroleum Hydrocarbon 8015m (TPH ^{8015m}) Soil from the surface to 28'bgs	1000 mg/Kg
TPH ^{8015m} (Soil >28'bgs)	100 mg/Kg

In September 2004, Environmental Plus, Inc. (EPI) with direction from Plains, excavated 1,138 cubic yards (yd3) of impacted soil from the release area and disposed of the soil in the NMOCD approved and permitted Plains Lea Station Landfarm GW-351. Samples collected in October 2004 from the sidewalls of the 16-feet deep excavation indicated that the horizontal extents of impact had been delineated; however, the excavation bottom at 16'bgs remained above the remedial goals. In November 2004, to delineate the vertical extent of impact, a trench was excavated beneath the leak origin and sampled. Results from the leak origin trench indicated a decreasing TPH8015m gradient; however, the sample collected from the floor of the trench at 24'bgs was above the remedial goals. Subsequently, a leak origin soil boring (BH1) was advanced in the bottom of the excavation. The analytical results established a decreasing TPH 8015m gradient, i.e., 2,070 mg/Kg at 21'bgs to an acceptable 46.8 mg/Kg at 36'bgs. The TPH^{8015m} concentration from the 41'bgs sample was 125 mg/Kg and is in excess of the 100 mg/Kg remedial goal. The noted increase from the 36'bgs could be due to sampling or laboratory variables, nevertheless, the results establish a consistent decreasing gradient supporting the conclusion that the groundwater had not been impacted. The benzene and BTEX data also support this conclusion, i.e., analytical results from the 36'bgs and the 41'bgs samples were reported as not being detected above the method detection limits. To remediate and close the site, Plains proposes to install an oversized 20 mil thick polyethylene liner at 16'bgs over the remaining hydrocarbon source term centered beneath the leak origin. This will interrupt the vertical transport mechanism effectively isolating

the crude oil residual and protecting the groundwater. Prior to liner installation the excavation bottom will be screened in the field with a photoionization detector (PID) to determine the exact diameter of the top of the contaminated soil column. This is necessary so that the excavation perimeter can be made to accommodate the 3-foot laterally oversized liner. Because of the rock at the site and the need to protect the liner from abrasion, the excavation bottom will be contoured with a 6 to 8-inch layer of cushioning sand prior to liner installation, similarly, a 6 to 8-inch layer of cushioning sand will be placed on top of the liner prior to backfilling with clean soil. This proposed method will effectively isolate the remaining crude oil source term, negating the vertical transport mechanism, and be protective of the local groundwater. Plains will implement this proposal upon NMOCD approval and submit a report documenting successful implementation of the proposal along with the final form C-141 and a request that the NMOCD require "no further action" be required at the site, except follow-up reseeding consistent with the landowner. Plains will also ensure that the NMOCD is notified at least 48 hours prior to sampling events and liner installation.

2.0 Environmental Media Characterization

Chemical parameters of the soil and ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) approved "General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000" and the NMOCD guidelines published in the following documents:

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants/constituents of concern (CoCs), i.e., TPH, benzene, and the mass sum of benzene, toluene, ethylbenzene, and total xylene (BTEX), will be determined based on the NMOCD Ranking Criteria as follows:

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water,
- Wellhead Protection Area, i.e., distance from fresh water supply wells, and
- Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

2.1 GEOLOGICAL DESCRIPTION

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of south central Lea County as an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche.



2.2 ECOLOGICAL DESCRIPTION

The area is an intergrade of the Great Plains and the Upper Chihuahuan Desert biomes consisting primarily of flat to rolling hills with Honey Mesquite (Prosopis glandulosa) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

2.3 AREA GROUND WATER

Local ground water is estimated to occur at 73 'bgs and is based primarily on November 2004 measurements of monitoring wells at a similar surface elevation, located approximately 1,300 feet east of the site at another Plains remediation site. New Mexico Office of the State Engineer (NMOSE) Well #4712, at an elevation 10-feet lower than the site, is located approximately 0.65 mile south with a recorded water level of 75'bgs and is consistent with the November 2004 measurements. However, water well #2474 listed in the NMOSE water well database, located approximately 0.4 mile southwest of the site at a similar surface elevation, has a groundwater level of 40'bgs that was recorded in 1954, but can not be considered to be representative of the site groundwater given the distance and direction from the site. Further, the leak origin soil boring was advanced to 41'bgs and did not encounter groundwater or moist soil typically encountered when approaching the zone of saturation. According to the USGS, the ground water elevation decreases generally to the southeast.

2.4 AREA WATER WELLS

The area water wells recorded by the New Mexico Office of the State Engineer are annotated on the USGS topographical map included in Attachment I and the water well reports are included in Attachment IV.

2.5 AREA SURFACE WATER BODIES

There are no permanent or intermittent surface water bodies within a 1,000 feet radius of the site.

3.0 NMOCD SITE RANKING

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water, the site has an NMOCD ranking score of 10 for soil down to 28'bgs and 20 points for soil >28'bgs with the soil remedial goals highlighted below in the Site Ranking Matrix.



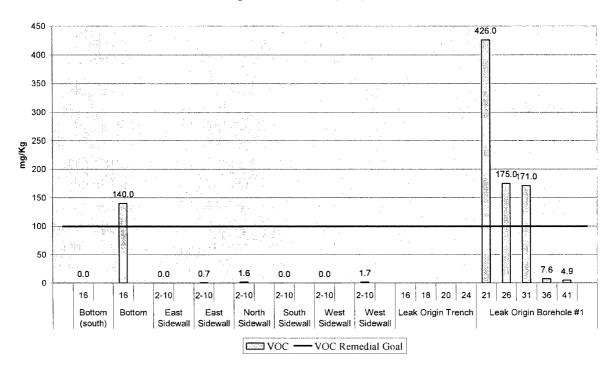
1. Gro	ound Water	2. Wellhead Protection Area		3. Distance to Surface Water Body		
points	GW <50 feet: 20 GW 50 to 99 ts	1	' from water source, or;<200' vate domestic water source: 20	<200 horizontal feet: 20 points 200-100 horizontal feet: 10 points		
If Depth to GW >100 feet: 0 points		If >1000' from water source, or; >200' from private domestic water source: 0 points		>1000 horizontal feet: 0 points		
Ground water Score = 10 & 20 Wellh			Protection Area Score= 0	Surface Water Score= 0		
Site Rank $(1+2+3) = 20 + 0 + 0 = 10$ and 20 points						
Total S	ite Ranking So	core and	d Acceptable Remedial G	oal Concentrations		
Parameter	>19 (28 to 78'bgs)		10-19 (surface to 28'bgs)	0-9		
Benzene ¹	10 ppm		10 ppm	10 ppm		
BTEX	50 ppm		50 ppm	50 ppm		
TPH	100 ppm		1000 ppm	5000 ppm		

4.0 Subsurface Soil Investigation

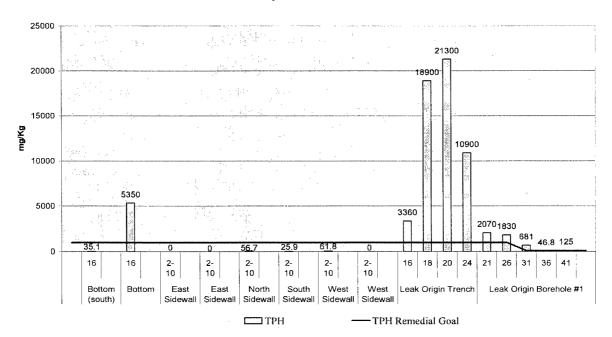
In September 2004, Environmental Plus, Inc. (EPI) with direction from Plains, excavated 1,138 yd3 of impacted soil from the release area and disposed of the soil in the NMOCD approved and permitted Plains Lea Station Landfarm GW-351. Samples collected in October 2004 from the sidewalls of the 16-feet deep excavation indicated that the horizontal extents of impact had been delineated; however, the excavation bottom at 16'bgs remained above the remedial goals. In November 2004, to delineate the vertical extent of impact, a trench was excavated beneath the leak origin and sampled. Results from the leak origin trench indicated a decreasing TPH^{8015m} gradient; however, the sample collected from the floor of the trench at 24'bgs was above the remedial goals. Subsequently, a leak origin soil boring (BH1) was advanced in the bottom of the excavation. The analytical results established a decreasing TPH^{8015m} gradient, i.e., 2,070 mg/Kg at 21'bgs to an acceptable 46.8 mg/Kg at 36'bgs. The TPH concentration from the 41'bgs sample was 125 mg/Kg and is in excess of the 100 mg/Kg remedial goal. The noted increase from the 36'bgs could be due to sampling or laboratory variables, nevertheless, the results establish a consistent decreasing gradient supporting the conclusion that the groundwater had not been impacted. The benzene and BTEX data also support this conclusion, i.e., analytical results from the 36'bgs and the 41'bgs samples were reported as non-detectable above the method detection limits. The laboratory reports are summarized and provided in Attachment III and illustrated below.



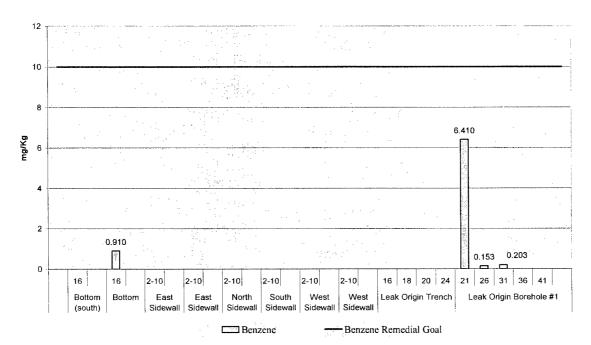
Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Volatile Organic Constituents (VOC) Delineation



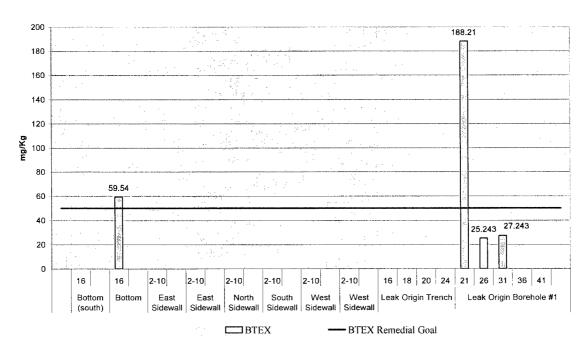
Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Total Petroleum Hydrocarbon 8015M Delineation



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Benzene Delineation



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 BTEX Delineation





5.0 GROUND WATER INVESTIGATION

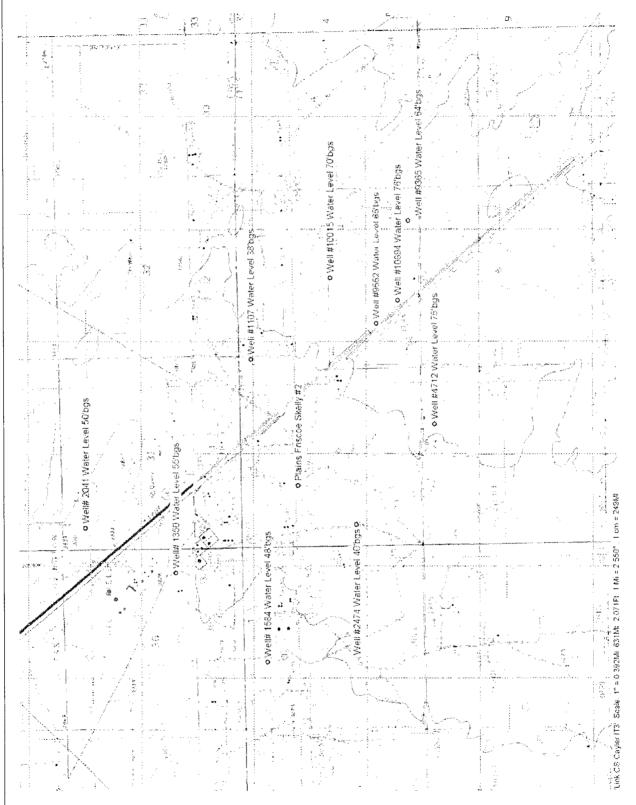
The soil investigation indicates the groundwater has not been impacted.

6.0 SOIL REMEDIATION PROPOSAL

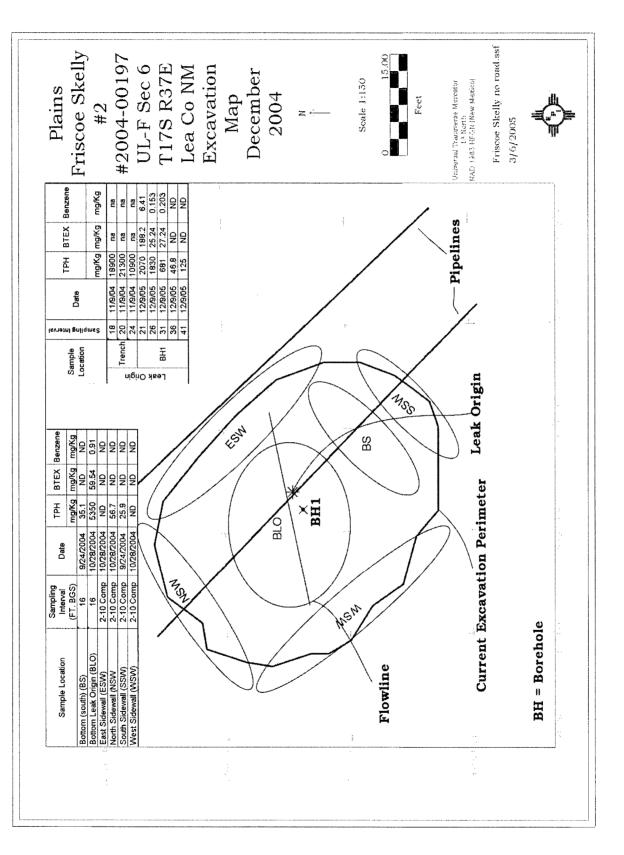
To remediate and close the site, Plains proposes to install a 3-foot oversized 20 mil thick polyethylene liner at 16'bgs over the remaining hydrocarbon source term centered beneath the leak origin. This will interrupt the vertical transport mechanism effectively isolating the crude oil residual and protecting the groundwater. Prior to liner installation the excavation bottom will be screened in the field with a PID to determine the exact diameter of the top of the contaminated soil column. This is necessary so that the excavation perimeter can be made to accommodate the 3-foot laterally oversized liner. Because of the rock at the site and the need to protect the liner from abrasion, the excavation bottom will be contoured with a 6 to 8-inch layer of cushioning sand prior to liner installation, similarly, a 6 to 8-inch layer of cushioning sand will be placed on top of the liner prior to backfilling with clean soil. This proposed method will effectively isolate the remaining crude oil source term, negating the vertical transport mechanism, and be protective of the local groundwater. Plains will implement this proposal upon NMOCD approval and submit a report documenting successful implementation of the proposal along with the final form C-141 and a request that the NMOCD require "no further action" be required at the site, except follow-up reseeding consistent with the landowner. Plains will also ensure that the NMOCD is notified at least 48 hours prior to sampling events and liner installation.



ATTACHMENT 1: STIF MAPS

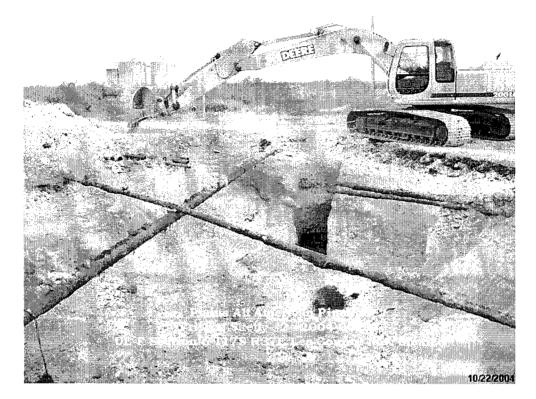


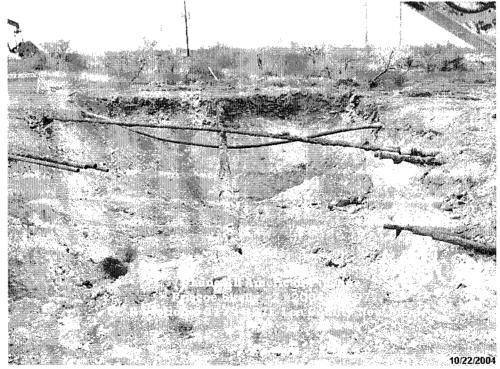
FRISCOE SKELLY #2 #2004-00197





ATTACHMENT II: PHOTOCRAPHS







ATTACHMENT III: ANALYTICAL REPORTS AND SUMMARY



Plains All American Pipeline Friscoe Skelly #2 #2004-00197 Soil Delineation Information

		AA011 +	comment in	1000	771			issue onch il a il and the contraction in the information			-			
	Vertical				VOC9	GRO³	DRO⁴	TPH³	BTEX	Benzene	Toluene	Ethylbenzene	Xylene (m,p)	Xylene (υ)
Sample Location	Interval (FT. BGS ¹)	SAMPLE ID#	Date	Lithology	mdd	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
South Sidewall Composite	2-10	SPFS92404SSWC4'	9/24/2004	Caliche	;	ΩN	25.9	25.9	ON	ΩN	ΩÑ	ON	ND	ND
East Sidewall Composite	2-10	SPFS92404ESWC4'	9/24/2004	Caliche	1	ND	ON	ND	ON	ND	ON	QN	ND	ND
West Sidewall Composite	2-10	SPFS92404WSWC4"	9/24/2004	Caliche		10.9	50.9	61.8	OIN	QN	ND	GN	ND	ND
South Bottom Composite	16	SPFS92404BHC16'	9/24/2004	Caliche	-	(le2.7)	35.1	35.1	CZ	QN	GN	ON	ND	ON
Bottom	16	SPFS102804BH	10/28/2004	Caliche	140.0	1190	4160	5350	59.540	0.910	11.100	15.300	22.300	9.930
North Sidewall Composite	2-10	SPFS102804NSW	10/28/2004	Caliche	1.6	ND	56.7	56.7	ND	QN	ND	ND	ND	ND
East Sidewall Composite	2-10	SPFS102804ESW	10/28/2004	Caliche	0.7	UN	ON	ND	QN	QN	ΩN	ON	ND	ND
West Sidewall Composite	2-10	SPFS102804WSW	10/28/2004	Caliche	1.7	ND	ND	ND	ON	ND	ND	ND	ND	ND
Leak Origin Trench	16	SPFS110904BH16	11/9/2004	Caliche		962	2570	3360	na	na	na	na	เกล	na
Leak Origin Trench	18	SPFS110904BH18	11/9/2004	Caliche		8060	18900	18900	na	na	na	na	na	na
Leak Origin Trench	20	SPFS110904BH20	11/9/2004	Caliche		8190	13100	21300	na	na	ากล	na	na	na
Leak Origin Trench	24	SPFS110904BH24	11/9/2004	Caliche	1	4400	6490	10900	na	na	na	na	na	na
Leak Origin Borehole #1	21	F.S. BH#1-5'	12/9/2005	Caliche	426.0	1020	1050	2070	188.210	6.410	55.500	43.600	60.000	22.700
Leak Origin Borehole #1	26	F.S. BH#1-10'	12/9/2005	Caliche	175.0	498	1330	1830	25.243	0.153	4.140	6.810	10.500	3.640
Leak Origin Borehole #1	31	F.S. BH#1-15'	12/9/2005	Sand	171.0	243	438	681	27.243	0.203	4.820	7.240	10.700	4.280
Leak Origin Borehole #1	36	F.S. BH#1-20'	12/9/2005	Sand	7.6	(8.36])	46.8	46.8	CIN	ND	ND	ND	ND	ON
Leak Origin Borehole #1	41	F.S. BH#1-25'	12/9/2005	Sand	4.9	(5.82])	125	125	ND	ON	ND	ND	ΩN	ND
New Mexico Oil Conservation Division Site Remedial Goals	ion Division Site	Remedial Goals - Surfa	 Surface to 28'bgs 		100			1,000	50	10				
New Mexico Oil C	Conservation Div	New Mexico Oil Conservation Division Site Remedial Go:	ial Goals - >28'bgs		100			100	50	10				

bgs - below ground surface

GRO-Gasoline Range Organics Co-C10

TPH-Total Petroleum Hydrocarbon = GRO+DRO. DRO-Diesel Range Organics C10-C35

Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

Soil chloride residuals must not be capable of impacting groundwater or surface water above Water Quality Control Commission (WQCC) standard of 250 mg/L.

na - not analyzed

VOC - Volatile Organic Constituent/Contaminant Headspace

- Parameter detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag)

FRISCOE SKELLY #2 2004-00197





ATTACHMENT IV: AREA WATER INFORMATION



New Mexico Office of the State Engineer Well Reports and Downloads

Township: 17	S Range: 37E		AZPT T P Z V T T T T T T T T T T T T T T T T T T
NAD27 N:	Y;]	Zone:	Search Radius:
County:	Basin:	Numl	per: Suffix:
Owner Name: (First)	(L:	ust)[○ Non-Domestic ○ Domestic
		◆ All	:
Well/	Surface Data Report		h to Water Report
	Clear Form	er Column Report WATERS Menu	Help

AVERAGE DEPTH OF WATER REPORT 03/09/2005

								(nebru	water in	reet;
Bsn	Tws	Rng	Sec	Zone	x	Y	Wells	Min	Max	Avg
Ĺ	378	378	\$25x				1.5	3.3	7.6	62
ĺ,	1.73	2.78	13				3	40	4 ?	44.
Ĭ.	173	37E	\$1°				ñ	33	75	65
ĭ.,	175	376	00				:	4. 3	4.0	5.0

Record Count: 20

New Mexico Office of the State Engineer Well Reports and Downloads

Township: 168		Sections: 31,32	addiana haada haabaa dhaa aa aa dhaa a
NAD27 X:	Y;	Zone:	Search Radius:
County:	Basin:	∑ Numl	ber: Suffix:
Owner Name: (First)	(La	**	² ← Non-Domestic ← Comes
Well/\$	urface Data Report	Avg Dep	oth to Water Report
		er Column Report	
	Clear Form	WATERS Menu	Help
			·

AVERAGE DEPTH OF WATER REPORT 03/09/2005

								(Depth	water in	reet;
Bsn	Tws	Rng	Sec	Zone	x	Y	Wells	Min	Max	Avg
£,	1,65	AZE	21				8	50	7.2	500
Ĭa	1,66	1.48	32				ŝ	35	4.5	3.6

Peroxd Count: 11



New Mexico Office of the State Engineer

Record Count: A

Page 1 of 1

	•	yji <i>ce of the State Ex</i> oorts and Download	*./	
Township: 168	Range: 36E	Sections: 36		CLA COURTMANAN
NAD27 X:	Y:	Zone:	Search Rad	ius:
County:	3asin: ∮	Num	ber:	Suffix:
Owner Name: (First)	(1.8	st)	° ⊂ Non-Don	nestic C Domestic
Well / Su	rface Data Report	Avg Dep	oth to Water Rep	ort
Nymanobaosta 1,1 minotomata	Wat	er Column Report		
	Clear Form	WATERS Menu	Help	
Bsn Tws Rng Sec Zon		Y Wells Mi		Avg
Bsn Tws Rng Sec Zon 1 188 35E 34	e X		in Max 10 257	Avg 116

http://iwaters.ose.state.nm.us;7001/iWATERS/WellAndSurfaceDispatcher

3/9/2005



New Mexico Office of the State Engineer

Page 1 of 1

New Mexico Office of the State Engineer Well Reports and Downloads Township: 175 Range: 36E Sections: 1.12 NAD27 X: Y: Zone: ✓ Search Radius: County: ✓ Basin: ✓ Number: Suffix: Owner Name: (First) (Last) ← Non-Domestic ← Domestic All

Well / Surface Data Repor	
Wa	iter Column Report
Clear Form	WATERS Menu Help

AVERAGE DEPTH OF WATER REPORT 03/09/2005

Bsn	Tws	Rna	Sec	Zone	x	Y	Wells	Min	Max	
L	178	3.56	61				- 5		110	
\$3	2.73	2.345	12				3	45	\$ 3	4.6

Record Count: 9



ATTACHMENT V: SITE INFORMATION & METRICS FORM AND INFORMATIONAL NEW MEXICO OIL CONSERVATION DIVISION FORM C-141

District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

	F	lelease N	otificat	tion an	d Correc	tive A	ction		
OPERA'						nitial R			Final Report
Name of Cor	npany: Plai	ins All Amer	ican Pipe	line	Contact:			d s	
Address	• • • • • • • • • • • • • • • • • • • •		•		Telephone				
PO Box 1660	5805 Eas	t Highway 8	0		505.393.56	511			
Midland, Te	xas 79702								
Facility Nam					Facility Ty	pe			
Friscoe Skel					4" Steel P				
Surface Own	er: Robe	rt C. Rice			Mineral	Owner		L	ease No.
			LOCATI	ON OI	RELEAS	E			
Unit Letter:	Section	Township	Range	Feet	North/South	Feet	East/W	est	County: Lea
F	6	T17S	R37E	from the	Line	from	Line		
		Latitude:	32°52'4.		Longitud		°17'38.14	46"W	
		Zattiude: _			RELEASE		1, 30.1	10 11	
Type of Relea	se				Volume of Ro			Volu	me Recovered
Crude Oil					10 bbls bar			0 1	bbls barrels
Source of Rel	ease				Date and Ho	ur of		Date	and Hour of
4" Steel Pipe					Occurrence			Disc	overy
Was Immediat	te Notice Gi	ven?	1571 V		If YES, To W	/hom?			
No 🗌 Not	Required		⊠ Yes						
By Whom?					Date and Ho	ur			
Was a Waterc	ourse Reach	ed? Nes	s 🛛 No		If YES, Volu NA	me Impa	icting the	Wate	ercourse.
If a Watercou NA	rse was Imp	acted, Descri	be Fully.*						
Describe Caus		ne The	cause wa	as eit	her internal or				
Describe Area					tie balliel.				
					disposed of	in the L	Lea Statio	on La	andfarm. Remedial
Goals: TPH	8015m = 10	00&100 mg/K	g, Benzen	$e = 10 m_s$	g/Kg, and BT	TEX, i.e	., the ma	iss su	m of Benzene, Ethyl
		Xylenes = 50			_				
I houghy posti	for the the i	- for	and a house	1	d	the bea	* o.f	1 .	dee and understand
									edge and understand certain release
									the environment. The
									erator of liability
									pose a threat to
									ce of a C-141 report
1	ve the oper	ator of respon	sibility for	: compliar	ice with any o	ther fed	eral, state	e, or	local laws and/or
regulations.	T					TT CO	A T CYST WAY T	A PENT CO	AT TATTOTAL
Signature:					<u></u>	<u>ul co</u>	NSER VA	AHO	<u>ON DIVISION</u>
Printed Name	: Camille R	evnolds							
		,			Approved	d by Die	trict Supe	rviso	er.
					прргосс	a by D13	erret oupe	1	
E-mail Addre	ss: CIRevn	olds@PAAI	P.com		Approval	Date:		1	Expiration Date:
	- J J			•					
Title: Distric	t Environm	ental Supervis	sor		Conditio	ns of Ap	proval:		Attached 🔲
Date:		Phone: 5	505.393.561	1					



Site Information and Metrics Plains All Amexican Pipeline SITE: Frisco Skelly #2	Plains All A	merican Pipeline [Incident Date:		NMOCD Notified:
Company: Plains All American Pipeline National Response Center - 800.424.8802			Plains All America	n Pipeline	
Company: Plains All American Pipeline National Response Center - 800.424.8802	SITE: Frisco	oe Skelly #2	Assigne	d Site Reference #:	2004-00197
Street Address: PO Box 1660 Notified Date/Flime: Mailing Address: \$805 East Highway 80 Notified by:				, · · · · · · · · · · · · · · · · · · ·	
City, State, Zip: Midland, Texas 79702 Person Notified:				Notified Date/Time:	
City, State, Zip: Midland, Texas 79702 Person Notified:	Mailing Addre	ss: 5805 East Highw	av 80		
Representative Camille Reynolds Representative Telephone: Floid volume released (bbts): 10 bbts		p: Midland, Texas	79702		
Representative Telephone: 505.393.5611 Telephone: Fluid volume released (5bls): 10 bbls Recovered (5bls): 0 bbls Fluid volume released (5bls): 10 bbls Recovered (5bls): 0 bbls Fluid volume released (5bls): 10 bbls Recovered (5bls): 0 bbls Fluid volume released (5bls): 10 bbls Recovered (5bls): 0 bbls Fluid volume released (5bls): 10 bbls Fluid volume released (5bls): 10 bbls Recovered (5bls): 0 bbls Fluid volume released (5bls): 10 bbls Fluid volume release		e: Camille Revnolds			
Telephone: Plaid volume released (bbls): 10 bbls Recovered (bbls): 0 bbls 225 bbls: Nonity NNOCD verbally within 24 hrs and submit farm C-141 within 15 days. (Also applies to manufactived releases 2500 mef Natural Gas) 5-25 bbls: Numit form C-141 within 15 days. (Also applies to unauthorized releases of 50-300 mef Natural Gas) Leak, Spill, or Pit (LSP) Name: Friscoe Skelly #2 Source of contamination: 4" Steel Pipeline Land Owner, i.e., BLM, ST, Fee, Other: Robert C. Rice LSP Dimensions 18" x 20" LSP Area: 338 sqft fc2 Location of Reference Point (RP) Location of Reference Point (RP) Location of Reference Point (RP) Location distance and direction from RP Latitude: 32'52'4.316"N Longitude: 103'17'38.146"W Elevation above mean sea level: 3,810'amsl Feet from South Section Line Location: Unit or Wa: SEW of the NWW Unit Letter: F Location Section: 6 Location: Township: T17S Location-Range: R37E Location-Section: 6 Location-Township: T17S Location-Range: R37E Surface water body within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 100			93.5611	111111111111111111111111111111111111111	
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Section Section Care Ca		released (bbls): 10 b	bls I	Recovered (bbls): 0 b	phls
(Alio apples to unauthorized releases >500 met Natural Gas) 5-25 bbls: Submit form C-141 within 15 days (Mas applies to unauthorized releases of 50-500 met Natural Gas) Leak, Spill, or Pit (LSP) Name: Friscos Skelly #2 Source of contamination: "Steef Pipeline Land Owner, i.e., BLM, ST, Fee, Other: Robert C. Rice LSP Dimensions 18' x 20' Location of Reference Point (RP) Location of Reference Point (RP) Location of stance and direction from RP Latitude: 32'52'4.316"N Longitude: 103'17'38.146"W Elevation above mean sea level: 3.810'amsl Feet from South Section Line Feet from West Section Line Location- Section: 6 Location- Rosetion: 6 Location- Nowship: T178 Location- Range: R37E Surface water body within 1000' radius of site: none Surface water body within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water s	Time Volume	>25 bbls: Notify NMOC	D verbally within 24 h		
Leak, Spill, or Pit (LSP) Name: Friscos Skelly #2 Source of contamination: 4" Steef Pipeline Land Owner, i.e., BLM, ST, Fee, Other: Robert C. Rice LSP Dimensions 18' x 20' Location of Reference Point (RP) Location of stance and direction from RP Latitude: 32'52'4.316"N Longitude: 103'17'38.146"W Elevation above mean sea level: 3.810'amsl Feet from South Section Line Feet from West Section Line Location- Section: 6 Location- Soction: 6 Location- Range: R37E Surface water body within 1000' radius of site: none Surface water body within 1000' radius of site: none Surface water body within 1000' radius of site: none Public water supply wells within 1000' ra		(Also appli	ies to unauthorized rele	ases >500 mcf Natural (Gas)
Source of contamination: 4" Steel Pipeline	5-25 bbls:	Submit form C-141 within	1 15 days (Also applies	to unauthorized release	s of 50-500 mcf Natural Gas)
Land Owner, i.e., BLM, ST, Fee, Other: Robert C. Rice					
LSP Dimensions 18' x 20' LSP Area: 338 sqft ft² Location of Reference Point (RP) Location of Reference Point (RP) Location of Stance and direction from RP Latitude: 32'52'4316"N Longitude: 103'17'38.146"W Elevation above mean sea level: 3,810'amsl Feet from South Section Line Feet from West Section Line Location- Section: 6 Location- Section: 6 Location- Range: R37E Surface water body within 1000 ' radius of site: none Surface water body within 1000 ' radius of site: none Agricultural water wells within 1000' radius of site: none Agricultural water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none				<u></u>	
LSP Area: 338 sqf: ft²			ther: Robert C. Rice	***************************************	
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Elevation above mean sea level: 3,810'ams Feet from South Section Line	Latitude:	32°52'4.316"N			
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Feet from West Section Line Location Unit or ¼½: SE¼ of the NW¼			3,810'amsl		
Location- Unit or %4: SE4 of the NW4	Feet from Sou	uth Section Line		1.00	
Location- Unit or %4: SE4 of the NW4	Feet from We	st Section Line			
Location - Section: 6			ne NW¼	Unit Letter:	F
Location- Township: T178 Location- Range: R37E Surface water body within 1000 ' radius of site: none Surface water body within 1000 ' radius of site: Domestic water wells within 1000' radius of site: none Agricultural water wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: Depth from land surface to ground water (DG) ~78 'bgs Depth of contamination (DC) - Depth to ground water (DG – DC = DtGW) - 0 1. Ground Water If Depth to GW <50 feet: 20 points If <1000' from water source, or; <200' from private domestic water source: 20 points If Depth to GW >100 feet: 0 points If >1000' from water source, or; >200' from private domestic water source: 20 points Stite Rank (1+2+3) = 10 & 20 Surface Water Score = 10 & 20 Surface Water Score = 0 Surface W					
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Agricultural water wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: none Public water supply wells within 1000' radius of site: Depth from land surface to ground water (DG) ~ 78 'bgs Depth of contamination (DC) — Depth to ground water (DG – DC = DtGW) - 0 1. Ground Water 2. Wellhead Protection Area If Depth to GW < 50 feet: 20 points If Depth to GW 50 to 99 feet: 10 points If Depth to GW > 100 feet: 0 points If Depth to GW > 100 feet: 0 points Ground water Score = 10 & 20 Wellhead Protection Area Score = 0 Site Rank (1+2+3) = 10 & 20 Total Site Ranking Score and Acceptable Concentrations Parameter > 19 Benzene¹ 10 ppm 10 ppm 50 ppm TPH 100 ppm 100 ppm 50 ppm 100 ppm 50 ppm 100 ppm 50 ppm 100 ppm 50 ppm 100 ppm 50 ppm 100 ppm 5000 ppm 100 ppm 61eld VOC headspace measurement may be subtituted for lab analysis State of Nature Moving					
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Depth from land surface to ground water (DG) ~78 'bgs				TOTIC	
Depth of contamination (DC) - Depth to ground water (DG - DC = DtGW) - 0				as a	
Depth to ground water (DG - DC = DtGW) - 0			water (DG) -76 D	gs	
1. Ground Water 2. Wellhead Protection Area 3. Distance to Surface Water Body 1f Composition 1f Co			- D+CW) 0		
If Depth to GW <50 feet: 20 Depth to GW <50 feet: 20 Depth to GW 50 to 99 feet: 10 Depth to GW 50 to 99 feet: 10 Depth to GW >100 feet: 0 Depth		, , , , , , , , , , , , , , , , , , , ,	T		3 Distance to Surface Water
If Depth to GW < 50 feet: 20 Depth to GW < 50 feet: 20 Depth to GW 50 to 99 feet: 10 Depth to GW 50 to 99 feet: 10 Depth to GW > 100 feet: 0 Depth to GW > 100	1. G	round Water	2. Wellhead I	Protection Area	I I
Steel and Parameter Some and Acceptable Concentrations Parameter Param	If Depth to G	W < 50 feet: 20	TC <10002 C		<200 horizontal feet: 20
Site Rank (1+2+3) = 10 & 20 Source: 20 points 200-100 horizontal feet: 10 points 200-100 horizontal feet: 10 points 200-100 horizontal feet: 10 points 200' from water source, or; >200' from private domestic water source: 0 points 200 moints 200 moin	l . •				points
Source: 20 points points points	If Depth to C	W 50 to 99 feet: 10	or; < 200° from priv	ate domestic water	200-100 horizontal feet: 10
If Depth to GW > 100 feet: 0 points Ground water Score = 10 & 20 Site Rank (1+2+3) = 10 & 20 Total Site Ranking Score and Acceptable Concentrations Parameter >19 10-19 0-9 Benzene¹ 10 ppm 10 ppm 10 ppm 10 ppm 50 ppm 50 ppm 50 ppm 50 ppm 50 ppm 1000 ppm 1000 ppm 1000 ppm 5000 ppm			source: 20 points		1
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Source: 0 points Points		rW >100 feet: 0			
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1100 ppm field VOC headspace measurement may be substituted for lab analysis District 1 State of New Moving					
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