Holly Energy Partners
Monument Section 35 Junction
Section 35, Township 19S, Range 37E
Lea County, New Mexico

Delineation-Work Plan Report

BL-1554
June 23, 2016

NOT APPROVED

In order to consider any site for deferment it must be fully delineated. TT1, as well as the horizontal extent has not been completely characterized.

Prepared for:

Holly Energy Partners
PO Box 250
Artesia, NM 88211

By:

Safety & Environmental Solutions, Inc.
703 East Clinton Street
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(575) 397-0510

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I. Company Contacts

Representative	Company	Telephone	E-mail
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II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as SESI., was contacted by Holly Energy Partners to conduct a site assessment of the Monument Sect 35 Junction situated in Section 35, Township 19S, Range 37E of Lea County, New Mexico. According to the C-141: A 30' section of 8' pipe that ties the central Grayburg Line receiving trap, and the manifold junction that transfers into the 6' line going to Hobbs Station had a hole allowing crude to escape. Holly Energy Partners took proactive measures by immediately shutting down, locked out and tagged out of service. Vacuum trucks, together with construction crews were dispatched to the location in order to conduct preliminary clean up and repairs. Visual surface impact was scraped up and placed on a plastic liner for proper disposal. Additional repairs were scheduled for May 05, 2016. There was an approximate 29 BBL loss of fluid. The vacuum trucks recovered approximately 18 BBL. The impacted area was contained primarily to the fenced in area of HEP property. The approximate area of impact measured 5,222 sq. ft. The NMOCD, as well as the NMED were notified on May 04, 2016.

III. Surface and Ground Water

According to the topography map for Lea County the depth to ground water for Section 35, Township 19S, Range 37E is approximately 30' bgs. Further research of the New Mexico Office of the State Engineer records, indicate the average depth to groundwater for the area to be 48' bgs. (Appendix B). During investigation of a previous spill at this site, SESI advanced a monitor well and noted that top of water was found at 40.20' bgs. On April 1, 2010 the NMOCD approved the plugging of the monitor well.

IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), and 100 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 1000 mg/kg (PPM) is also required.

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	**X**
	50 feet to 99 feet	10 points	
	>100 feet	0 points	
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	**X**
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	**X**
RANKING SCORE (TOTAL POINTS)			**20**

V. Work Performed

On May 18, 2016 SESI personnel, a representative from NMOCD, together with equipment and personnel from D & D Pipeline Construction, Inc. were on site to install test trenches to determine vertical extent of contamination. However, on Test trench one (1) and two (2) the backhoe encountered a caliche layer that could not be excavated 2' BGS. Jamie Keyes, NMOCD, was called to the site to observe the two test trenches that had refusal due to the hard caliche. Mr. Keyes agreed that in order to penetrate the hard caliche layer to check for contamination, a jack hammer should be utilized. Mr. Keyes also agreed that the use of a jack hammer next to the infrastructure at this facility in TT 1 would not be safe and that the caliche layer only needed to be penetrated in TT 2 which is outside the facility boundary.

On May 20, 2016 SESI personnel, along with personnel and equipment from D & D Pipeline Construction, Inc., revisited the site in order to break through rock in TT 2 in an attempt to determine the vertical extent of contamination. Field personnel were able to advance an additional 18" BGS. Representative soil samples were retrieved at 2.5' and 3' BGS. The soil samples were properly packaged, preserved and transported to Cardinal Laboratories, Hobbs New Mexico. The representative soil samples were analyzed for Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) (Method BTEX 8021B), and Total Petroleum Hydrocarbons (Method TPH 8015M) (Appendix C). The results of the analysis are presented in the following table:

Sample Date 05/18/2016	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	TPH GRO	TPH DRO	EXT DRO
Depth								
TT-1 Surface	<2.00	3.07	5.29	19.2	27.5	3020	49100	11100
TT-1 2'	<0.100	0.277	<0.100	2.15	2.43	262	3710	997
TT-3 Surface	<0.200	0.429	1.27	5.22	6.92	615	19800	5040
TT-3 1'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	153	53.4
TT-3 2'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	159	42.4
TT-3 3'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	10.4	<10.0
TT-3 4'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0
TT-2 Surface	<2.00	4.12	9.31	35.7	49.1	4800	38500	7670
TT-2 2'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	98.6	42.3
TT-2 3'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	15.3	<10.0

At the request of the NMOCD representative, SESI personnel returned to the site in order to grab representative soil samples using a hand auger, for additional field testing of TPH. The results are recapped in the table below:

Sample Date 06/16/2016 Sample ID	**Depth**	**TPH**
AH-1	1.5’	323 mg/kg
AH-1		Refusal
AH-2	1.5’	6364 mg/kg
AH-2		Refusal
AH-3	1.5’	2318 mg/kg
AH-3		Refusal
AH-4	6”	Refusal

Auger Hole 1 was installed along the north edge of the spill area. Auger Hole 2 was installed on the west end of the excavation installed to facilitate the repair of the line. Auger Hole 3 was installed at the southern edge of the spill area. Auger Hole 4 was installed at the western edge of the spill area outside the facility. Refusal was encountered at a depth of 1.5 bgs in Auger Holes 1, 2 and 3 and at 6’ in Auger Hole 4. The refusal in all Auger Holes at approximately the same depth indicates the hard caliche layer is found throughout the spill area except in Test Trench 3. This area had been previously excavated.

VI. Action Plan

The vertical extent of contamination was determined in TT 2 and TT 3 at approximately 2’ BGS. The caliche layer in TT 1 was not disturbed because of its proximity to the infrastructure in the facility. The spill area will be excavated to the top of the caliche layer in TT 1 and TT2 and to the depth of 2’ in TT 3, where the caliche layer was not present. The horizontal extent of contamination is clearly visible in the attached Photos #1 through #8. The vertical extent of contamination in TT 2 was found to be at 2’ bgs after the hard caliche layer was penetrated using a jack hammer. We feel that the force necessary to break through the hard caliche layer near the infrastructure at this facility would present an unwarranted threat of damage to said infrastructure. For this reason, we request permission not to penetrate the caliche layer at this time and defer any TPH left to the closure of the facility.

Bottom and side samples will be taken and transported to Cardinal Laboratories to confirm that the horizontal extent of contaminated soil has been removed and to document any TPH left in place above the hard caliche layer.

We prefer not to install a liner at this site for the following reasons:

1. This is only a crude oil release with no chlorides.
2. A liner will trap any light end hydrocarbons left behind and not allow them to migrate to the surface and could cause them to migrate downward toward groundwater.
3. A liner will only deflect any future release and make it more difficult to identify the extent of contamination.

According to NMSLO (New Mexico State Land Office) Guidelines, the impacted pasture area is to be backfilled with fresh topsoil, and reseeded with state approved LPC #3 seed mixture. After completion the area will be monitored for successful germination as well as noxious weed control. A closure report will be prepared upon completion of the project and submitted to all parties of concern.

VII. Figures & Appendices

Figure 1 – Vicinity Map
Figure 2 – Site Plan
Appendix A – Photographs
Appendix B – Groundwater
Appendix C – Analytical Results
Appendix D – Final C141

Figure 1
Vicinity Map

Fence #1
Pipeline #3
45
Billy Walker Rd
Survey
1997
© 2016 Google
Google earth
Imagery Date: 2/13/2014 32°36'47.26" N 103°12'31.48" W elev 3606 ft eye alt 31344 ft

Figure 2
Site Plan

Holly Energy
Monument Sec. 35

TT2 Surface BTEX 49.1 GRO=4800 DRO=38,500
" 2' BGS BTEX <0.300 GRO=<10.0 DRO=98.6
" 3' BGS BTEX <0.300 GRO=<10.0 DRO=<10.0

AH-1@1.5' 323 mg/kg

Test Trench 1 @ 2'

AH-2@1.5' 6364 mg/kg

TT1 Suface BTEX 27.5 GRO=3020 DRO=49100
" 2" BGS BTEX 2.43 GRO=262 DRO=997

Test Trench 2 @ 2'

AH-4 Refusal

Test Trench 3 @ 3'

TT3 Surface BTEX 6.92 GRO=615 DRO=19,800
" 1' BGS BTEX <0.300 GRO=<10.0 DRO=153
" 2' BGS BTEX <0.300 GRO=<10.0 DRO=159
" 3' BGS BTEX <0.300 GRO=<10.0 DRO= 10.0
" 4' BGW BTEX <0.300 GRO=<10.0 DRO=<10.0

AH-3@1.5' 2318 mg/kg

Fence #1

Survey

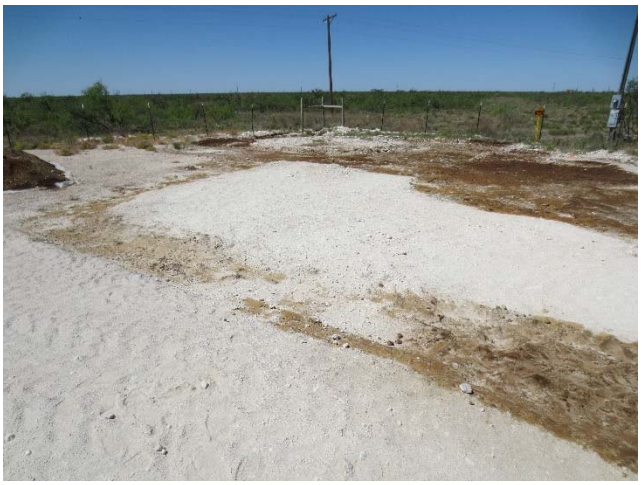
1997

Imagery Date: 2/13/2014 32°37'04.80" N 103°12'51.92" W elev 3604 ft eye alt 3883 ft

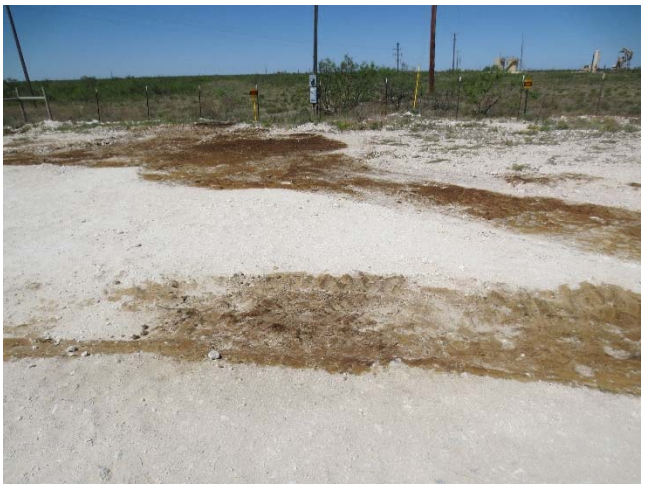
Google earth

Appendix A
Photographs

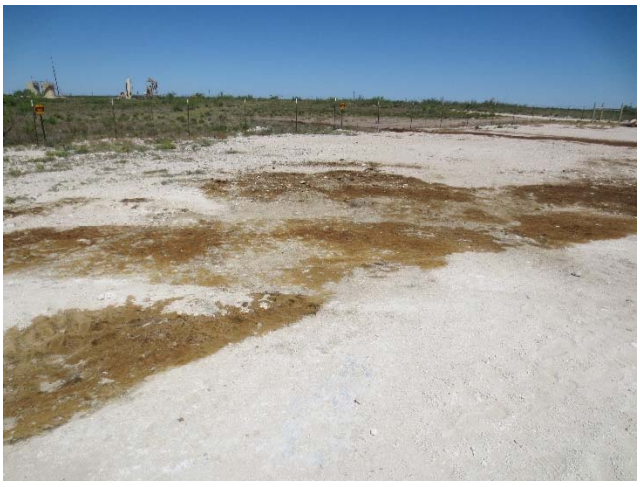
Holly Energy Partners
Sec. 35 Monument



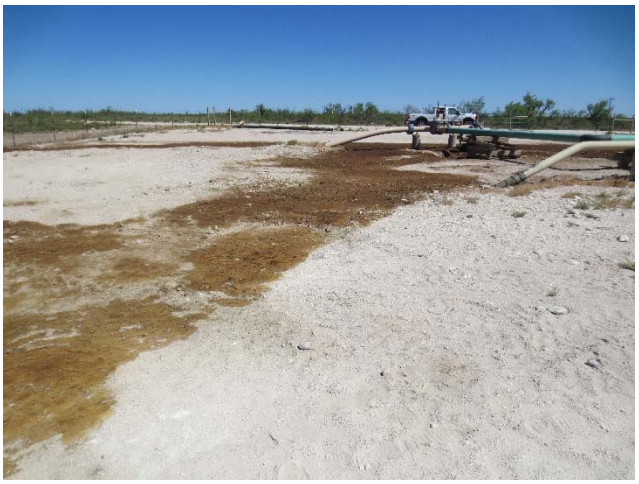
1. Spill Area looking SW



2. Spill Area looking West

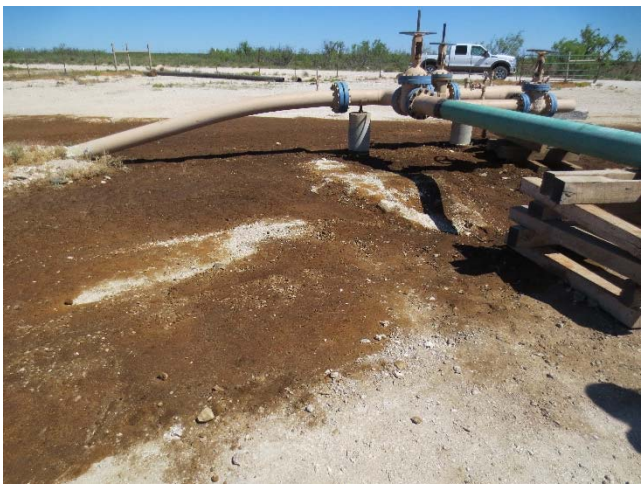


3. Spill Area lokking North



4. Spill Area looking NW

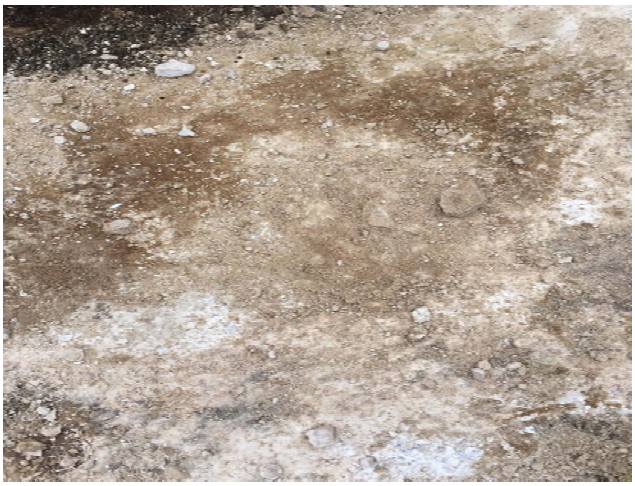
5. Spill Area near Junction



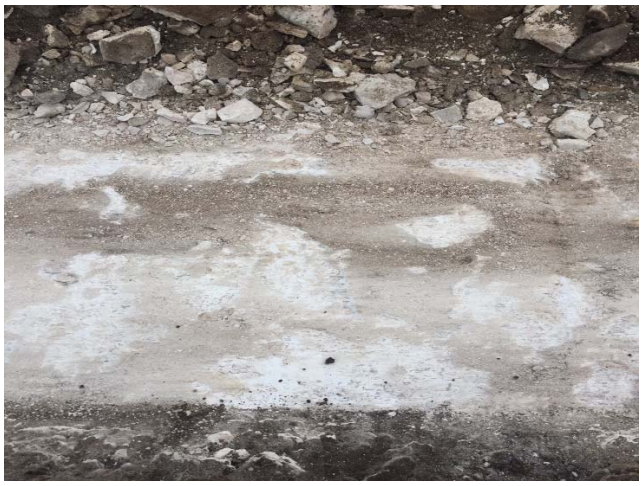
6. Spill Area Source

7. Spill Area looking NE

8. Spill Area looking NE

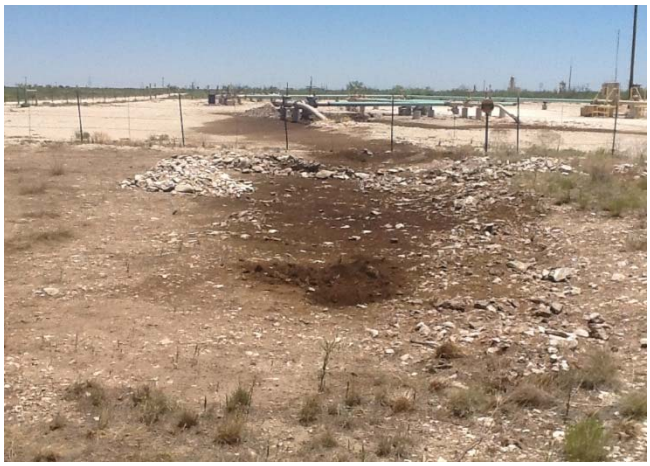


9. Test Trench 2



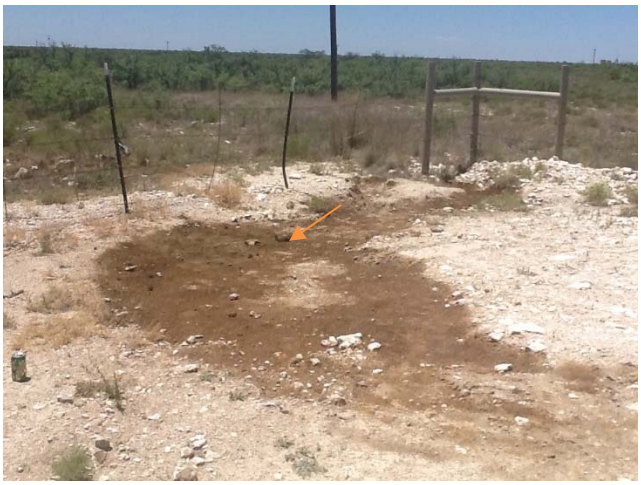
10. Bottom of Test Trench 2 after jack hammer

11. AH-1 and AH-2

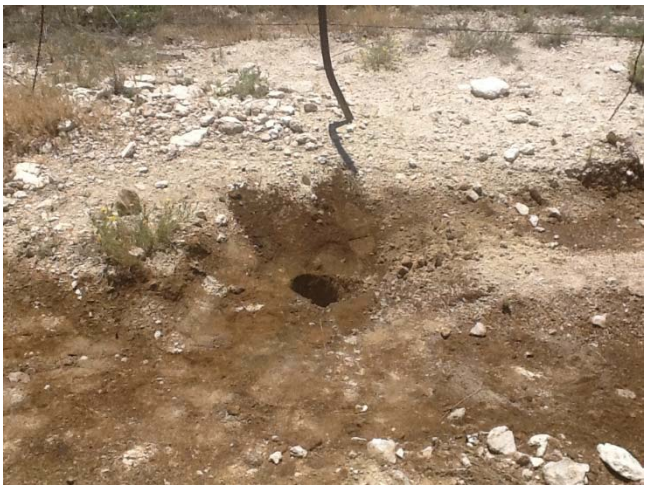


12. AH-4

Holly Energy Partners
Sec. 35 Monument



13. AH-3



14. AH-3

Appendix B
Groundwater

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 00010		L	LE		4	2	32	19S	37E	662574	3610327*			
L 00061		L	LE		3	4	18	19S	37E	660501	3614325*	100		
L 00062		L	LE		4	4	18	19S	37E	660903	3614327*	93		
L 00066		L	LE	1	3	4	21	19S	37E	663641	3612855*	55	35	20
L 00156		L	LE	1	3	3	18	19S	37E	659610	3614421*	110		
L 00157		L	LE	2	3	3	18	19S	37E	659810	3614421*	110		
L 00564		L	LE	1	3	3	07	19S	37E	659583	3616034*	142		
L 00743		L	LE	2	1	1	34	19S	37E	664677	3610858*	40	20	20
L 00743 POD6		L	LE		1	1	34	19S	37E	664578	3610759*	44	21	23
L 00743 S		L	LE		1	1	34	19S	37E	664578	3610759*	46	21	25
L 00743 S2		L	LE		1	1	34	19S	37E	664578	3610759*	46	21	25
L 00743 S3		L	LE	1	2	1	34	19S	37E	664879	3610864*	40	22	18
L 00743 S3	R	L	LE	1	2	1	34	19S	37E	664879	3610864*	40	22	18
L 00743 S4		L	LE	2	1	1	34	19S	37E	664677	3610858*	40	20	20
L 00744		L	LE	4	4	4	33	19S	37E	664294	3609447*	80	42	38
L 00744 S		L	LE	4	4	4	33	19S	37E	664294	3609447*	90	26	64
L 00744 S2		L	LE			3	34	19S	37E	664798	3609755*	50		
L 00744 S3		L	LE	2	4	4	33	19S	37E	664294	3609647*	50	27	23
L 01041		L	LE	1	2	2	02	19S	37E	667162	3618943*	90	45	45
L 01109 POD1		L	LE	4	3	1	08	19S	37E	661365	3616639*	125		
L 01251		L	LE	4	1	1	29	19S	37E	661434	3612218*	51	38	13
L 01252		L	LE	1	3	4	29	19S	37E	662058	3611223*	43		
L 01256		L	LE	3	4	4	32	19S	37E	662486	3609424*	46	32	14
L 01257		L	LE	3	1	4	07	19S	37E	660368	3616237*	120	80	40
L 01258		L	LE	4	4	1	21	19S	37E	663427	3613452*	71	71	0
L 01259		L	LE	1	2	1	19	19S	37E	660005	3614020*	85	44	41

***UTM location was derived from PLSS - see Help**

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 01267		L	LE	4	1	4	31	19S	37E	660669	3609796*	42	28	14
L 01271		L	LE	4	2	2	31	19S	37E	661059	3610606*	38	20	18
L 01273		L	LE	3	4	4	19	19S	37E	660827	3612617*	62	45	17
L 01276		L	LE	2	3	3	08	19S	37E	661378	3616035*	121	101	20
L 01277		L	LE	1	4	2	18	19S	37E	660790	3615231*	127	90	37
L 01610		L	LE	1	2	3	05	19S	37E	661547	3618050*	128	36	92
L 01611		L	LE	3	1	1	04	19S	37E	662741	3618673*	127	26	101
L 01751		L	LE		1	4	08	19S	37E	662076	3616350*	132		
L 01752		L	LE		4	2	10	19S	37E	665686	3616805*	133	30	103
L 01753		L	LE		1	2	07	19S	37E	660455	3617144*	142	43	99
L 01817		L	LE		1	4	32	19S	37E	662178	3609920*	85	12	73
L 01840	R	L	LE	3	1	2	01	19S	37E	668383	3618769*	105	36	69
L 01840 POD7		L	LE	2	4	1	01	19S	37E	668177	3618557*	170	110	60
L 01840 POD9		L	LE	4	3	2	01	19S	37E	668584	3618366*	150	40	110
L 01840 S	R	L	LE		3	2	01	19S	37E	668485	3618467*	166	28	138
L 01840 S2		L	LE	2	1	2	01	19S	37E	668583	3618969*	143	50	93
L 01840 S3		L	LE	1	3	2	01	19S	37E	668384	3618566*	145	55	90
L 01840 S4		L	LE	3	1	2	01	19S	37E	668383	3618769*	172	35	137
L 01840 S5		L	LE	2	2	2	01	19S	37E	668985	3618978*	180	34	146
L 01840 S6		L	LE	3	1	2	01	19S	37E	668383	3618769*	170	65	105
L 01841		L	LE	1	3	2	01	19S	37E	668384	3618566*	170	34	136
L 01841	R	L	LE	1	3	2	01	19S	37E	668384	3618566*	170	34	136
L 01904		L	LE	3	3	3	33	19S	37E	662888	3609430*	82	29	53
L 01968		L	LE	4	2	2	02	19S	37E	667362	3618743*	178	23	155
L 01975		L	LE		3	4	16	19S	37E	663716	3614362*	50	20	30
L 02059	R	L	LE	4	2	2	28	19S	37E	664249	3612259*	55	26	29
L 02060		L	LE	1	3	1	27	19S	37E	664458	3612063*	48	24	24
L 02182		L	LE	2	2	4	01	19S	37E	668988	3618172*	42		
L 02200	R	L	LE			2	06	19S	37E	660638	3618552*	163	24	139

***UTM location was derived from PLSS - see Help**

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(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 02200 POD3		L	LE		1	2	06	19S	37E	660431	3618754*	167	33	134
L 02200 POD4		L	LE		1	2	06	19S	37E	660431	3618754*	177	48	129
L 02200 POD5		L	LE	1	2	1	06	19S	37E	659929	3618855*	182	122	60
L 02200 POD6		L	LE	3	1	2	06	19S	37E	660254	3618718	200	72	128
L 02200 S	R	L	LE		1	2	06	19S	37E	660431	3618754*	178	36	142
L 02201		L	LE			2	06	19S	37E	660638	3618552*	173	30	143
L 02201	R	L	LE			2	06	19S	37E	660638	3618552*	173	30	143
L 02333		L	LE		4	4	08	19S	37E	662484	3615953*	110	42	68
L 02429		L	LE		3	1	04	19S	37E	662847	3618371*	50	23	27
L 02490		L	LE	2	3	1	04	19S	37E	662946	3618470*	92	40	52
L 02596		L	LE			3	29	19S	37E	661556	3611315*	50	20	30
L 02601		L	LE		3	3	06	19S	37E	659655	3617548*	115	60	55
L 02602		L	LE		1	1	16	19S	37E	662893	3615557*	96	42	54
L 02615		L	LE	2	1	3	18	19S	37E	659803	3614824*	118	68	50
L 02621		L	LE	3	2	3	21	19S	37E	663233	3613050*	83	40	43
L 02695		L	LE	3	4	3	06	19S	37E	659946	3617446*	100	50	50
L 02893		L	LE	2	2	4	01	19S	37E	668988	3618172*	100	35	65
L 02996		L	LE	3	3	3	08	19S	37E	661178	3615835*	142	54	88
L 02996 S		L	LE	4	1	1	08	19S	37E	661358	3617041*	150	70	80
L 03074		L	LE		4	2	07	19S	37E	660864	3616740*	90	65	25
L 03103		L	LE			1	03	19S	37E	664655	3618597*	110	42	68
L 03161		L	LE		2	2	14	19S	37E	667313	3615627*	80	20	60
L 03181		L	LE	2	3	3	10	19S	37E	664591	3616080*	130	35	95
L 03185		L	LE		4	2	16	19S	37E	664104	3615171*	86	45	41
L 03208		L	LE		3	1	10	19S	37E	664479	3616785*	100	35	65
L 03228		L	LE		4	4	16	19S	37E	664118	3614367*	102	42	60
L 03234		L	LE		1	1	10	19S	37E	664473	3617188*	112	26	86
L 03313		L	LE		1	1	22	19S	37E	664526	3613971*	90	40	50
L 03369		L	LE		4	3	07	19S	37E	660074	3615935*	95	45	50

***UTM location was derived from PLSS - see Help**

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 03380		L	LE	2	1	2	32	19S	37E	662265	3610822*	40	35	5
L 03387		L	LE	1	1	3	22	19S	37E	664438	3613268*	95	35	60
L 03403		L	LE		3	1	10	19S	37E	664479	3616785*	85	35	50
L 03417		L	LE		3	3	15	19S	37E	664520	3614373*	96	44	52
L 03474		L	LE		4	2	24	19S	37E	668954	3613647*	83	48	35
L 03515		L	LE		2	3	27	19S	37E	664967	3611569*	57	35	22
L 03517		L	LE		1	1	15	19S	37E	664499	3615579*	72	45	27
L 03525		L	LE			3	15	19S	37E	664721	3614574*	100	50	50
L 03557		L	LE	3	3	1	07	19S	37E	659568	3616641*	143	52	91
L 03738		L	LE		4	4	33	19S	37E	664195	3609548*	72	31	41
L 03744		L	LE				07	19S	37E	660287	3616538*	100	50	50
L 03884		L	LE				28	19S	37E	663567	3611738*	47	30	17
L 03885		L	LE				28	19S	37E	663567	3611738*	47		
L 03905		L	LE		4	4	30	19S	37E	660953	3611109*	35	20	15
L 03906		L	LE		4	4	30	19S	37E	660953	3611109*	35	20	15
L 03922		L	LE				29	19S	37E	661958	3611717*	42	22	20
L 03938		L	LE			4	32	19S	37E	662386	3609719*	40	25	15
L 03949		L	LE				29	19S	37E	661958	3611717*	36	18	18
L 03954		L	LE		4	4	30	19S	37E	660953	3611109*	35	20	15
L 03956		L	LE				29	19S	37E	661958	3611717*	40	20	20
L 03982		L	LE		3	3	28	19S	37E	662964	3611135*	43	31	12
L 03988	R	L	LE	3	3	3	33	19S	37E	662888	3609430*	75	29	46
L 03993		L	LE		3	3	33	19S	37E	662989	3609531*	75	29	46
L 03995		L	LE		4	4	30	19S	37E	660953	3611109*	35	20	15
L 04105		L	LE	3	3	1	27	19S	37E	664458	3611863*		24	
L 04108		L	LE		2	4	21	19S	37E	664138	3613163*	70	22	48
L 04313		L	LE		1	1	19	19S	37E	659718	3613919*	116	52	64
L 04405		L	LE			3	33	19S	37E	663190	3609732*	45	37	8
L 04448 POD2		L	LE	3	3	3	33	19S	37E	662888	3609430*	46	36	10

***UTM location was derived from PLSS - see Help**

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 04466 POD1		L	LE		1	4	04	19S	37E	663657	3617981*	145	20	125
L 04799		L	LE				29	19S	37E	661958	3611717*	150		
L 04806		L	LE			3	33	19S	37E	663190	3609732*	60	35	25
L 04809		L	LE			3	33	19S	37E	663190	3609732*	60	35	25
L 04842		L	LE		3	3	33	19S	37E	662989	3609531*	60	35	25
L 04917		L	LE	1	1	4	04	19S	37E	663556	3618080*	120	50	70
L 04921		L	LE	2	2	2	12	19S	37E	669035	3617464	142	25	117
L 04921 X		L	LE	2	4	2	12	19S	37E	669035	3617036	132	30	102
L 04929		L	LE			3	33	19S	37E	663190	3609732*	55	27	28
L 05049		L	LE			3	32	19S	37E	661581	3609707*	50	27	23
L 05306		L	LE	4	4	2	31	19S	37E	661065	3610203*	30	20	10
L 05314		L	LE	1	3	4	29	19S	37E	662058	3611223*	34	14	20
L 05336		L	LE	4	2	1	21	19S	37E	663420	3613853*	71	30	41
L 05433		L	LE		4	1	19	19S	37E	660112	3613518*	5790	1072	4718
L 05466		L	LE	2	3	1	11	19S	37E	666187	3616910*	45	22	23
L 05500		L	LE	2	4	4	29	19S	37E	662661	3611229*	55		
L 05565 POD3		L	LE				28	19S	37E	663567	3611738*	70		
L 05569		L	LE	4	4	4	35	19S	37E	667508	3609495*	5200	1008	4192
L 05579		L	LE		4	2	31	19S	37E	660966	3610304*	35	27	8
L 05611 POD3		L	LE	2	2	3	29	19S	37E	661850	3611620*	80	28	52
L 05611 POD4	R	L	LE	2	2	1	20	19S	37E	661812	3614032*	105	53	52
L 05611 POD5		L	LE	1	1	1	18	19S	37E	659590	3615631*	134	35	99
L 05995		L	LE		4	4	30	19S	37E	660953	3611109*	40	23	17
L 06125 POD1		L	LE	3	2	3	10	19S	37E	664787	3616289*	150	65	85
L 06216		L	LE	1	1	2	04	19S	37E	663544	3618885*	166	46	120
L 06492		L	LE		1	1	32	19S	37E	661362	3610712*	50	27	23
L 06496		L	LE	3	4	3	29	19S	37E	661656	3611018*	50	27	23
L 06748		L	LE	4	3	3	31	19S	37E	659886	3609381*	80	44	36
L 06761		L	LE			3	33	19S	37E	663190	3609732*	50	27	23

***UTM location was derived from PLSS - see Help**

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

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(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 06796		L	LE		1	2	33	19S	37E	663773	3610747*	80		
L 06814		L	LE	4	2	1	03	19S	37E	664950	3618703*	100	30	70
L 06933		L	LE	3	2	4	17	19S	37E	662403	3614646*	100	65	35
L 07223		L	LE	2	3	3	28	19S	37E	663063	3611234*	60		
L 07256		L	LE			2	04	19S	37E	663852	3618584*	137	65	72
L 07513		L	LE	3	1	4	33	19S	37E	663685	3609843*	45	35	10
L 07513 S		L	LE	3	1	3	34	19S	37E	664490	3609855*	44	25	19
L 07513 S2		L	LE			4	33	19S	37E	663994	3609743*	45	35	10
L 07626		L	LE	1	1	4	32	19S	37E	662077	3610019*	30		
L 08217		L	LE	3	3	1	27	19S	37E	664458	3611863*	50	18	32
L 08501		L	LE	4	3	4	33	19S	37E	663892	3609441*	43	29	14
L 08559		L	LE	1	1	1	03	19S	37E	664348	3618897*	121	40	81
L 08803		L	LE	1	1	1	34	19S	37E	664477	3610858*	41	25	16
L 09127		L	LE	3	4	4	33	19S	37E	664094	3609447*	52	40	12
L 09128		L	LE	1	3	3	33	19S	37E	662888	3609630*	30	26	4
L 09129		L	LE		3	4	33	19S	37E	663793	3609542*	52	43	9
L 09163		L	LE	1	4	3	21	19S	37E	663239	3612849*	60	47	13
L 09631		L	LE		1	4	29	19S	37E	662153	3611526*	35		
L 09632		L	LE		1	4	29	19S	37E	662153	3611526*	35		
L 09633		L	LE		1	4	29	19S	37E	662153	3611526*	35		
L 09681		L	LE	3	1	4	33	19S	37E	663685	3609843*	52	39	13
L 09739	R	L	LE	1	2	4	01	19S	37E	668981	3618236	96	32	64
L 09768		L	LE		1	1	34	19S	37E	664578	3610759*	39	24	15
L 10166 POD1		L	LE	4	4	3	34	19S	37E	665098	3609459*	35		
L 10166 POD2		L	LE	4	4	3	34	19S	37E	665098	3609459*	35		
L 10166 POD3		L	LE	4	4	3	34	19S	37E	665098	3609459*	35		
L 10238		L	LE		4	3	21	19S	37E	663340	3612750*	60	30	30
L 10271		L	LE		1	1	18	19S	37E	659691	3615532*	137	70	67
L 10277		L	LE	2	2	4	19	19S	37E	661020	3613219*	70	40	30

***UTM location was derived from PLSS - see Help**

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(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin	Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 10295		L	LE		4	3	21	19S	37E	663340	3612750*	70	30	40
L 10386		L	LE	2	2	1	34	19S	37E	665079	3610864*	34	21	13
L 10391		L	LE		1	1	34	19S	37E	664578	3610759*	44	21	23
L 10397		L	LE			1	33	19S	37E	663177	3610534*	34	13	21
L 10403		L	LE	2	1	1	34	19S	37E	664677	3610858*	41	20	21
L 10498		L	LE				29	19S	37E	661958	3611717*	60		
L 10799		L	LE	4	4	4	13	19S	37E	669039	3614352*	113	27	86
L 10799 S		L	LE	4	1	4	13	19S	37E	668561	3614659	110	100	10
L 11313		L	LE	1	2	1	03	19S	37E	664838	3618851	180		
L 11873 POD1		L	LE	1	2	1	28	19S	37E	663246	3612447*	71		
L 12457 POD1		L	LE	4	4	3	34	19S	37E	665007	3609413	74	60	14
L 13109 POD1		L	LE	4	2	1	03	19S	37E	665052	3618818	20		
L 13491 POD1		L	LE	3	1	3	32	19S	37E	661329	3609819	30		
L 13521 POD1		L	LE	4	4	3	20	19S	37E	661504	3612887	34	22	12
L 13522 POD1		L	LE	3	3	3	30	19S	37E	659988	3611366	28	21	7
L 13522 POD2		L	LE	3	3	3	30	19S	37E	660018	3611255	30	21	9
L 13523 POD1		L	LE	1	3	3	15	19S	37E	660147	3609717	46	35	11
L 13525 POD1		L	LE	4	3	4	19	19S	37E	660096	3612717	30	21	9
L 13926 POD1		L	LE	2	3	3	20	19S	37E	661484	3612874	32	21	11
L 13926 POD2		L	LE	2	3	3	20	19S	37E	661495	3612857	32	21	11
L 13926 POD3		L	LE	2	3	3	20	19S	37E	661485	3612865	32	21	11
L 14083 POD1		L	LE	3	4	2	34	19S	37E	665656	3610288	70	20	50

Average Depth to Water: **48 feet**

Minimum Depth: **12 feet**

Maximum Depth: **1072 feet**

Record Count: 193

PLSS Search:

Township: 19S **Range:** 37E

***UTM location was derived from PLSS - see Help**

Appendix C
Analytical Results

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 26, 2016

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: HEP-16-006

Enclosed are the results of analyses for samples received by the laboratory on 05/20/16 14:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-1 SURFACE (H601110-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	**3.07**	2.00	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	**5.29**	2.00	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	**19.2**	6.00	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	**27.5**	12.0	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID	*108 %*	*73.6-140*

TPH 8015M mg/kg **Analyzed By: MS** **S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**3020**	200	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**49100**	200	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**11100**	200	05/21/2016	ND					

Surrogate: 1-Chlorooctane	*236 %*	*35-147*
Surrogate: 1-Chlorooctadecane	*821 %*	*28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-1 2' BGS (H601110-02)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	**0.277**	0.100	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.100	0.100	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	**2.15**	0.300	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	**2.43**	0.600	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *130 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**262**	100	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**3710**	100	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**997**	100	05/21/2016	ND					

Surrogate: 1-Chlorooctane *120 %* *35-147*

Surrogate: 1-Chlorooctadecane *167 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-3 SURFACE (H601110-03)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	**0.429**	0.200	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	**1.27**	0.200	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	**5.22**	0.600	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	**6.92**	1.20	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS** **S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**615**	200	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**19800**	200	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**5040**	200	05/21/2016	ND					

Surrogate: 1-Chlorooctane *137 %* *35-147*

Surrogate: 1-Chlorooctadecane *494 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-3 1' BGS (H601110-04)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	<0.050	0.050	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.050	0.050	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	<0.150	0.150	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	<0.300	0.300	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**153**	10.0	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**53.4**	10.0	05/21/2016	ND					

Surrogate: 1-Chlorooctane *75.8 %* *35-147*

Surrogate: 1-Chlorooctadecane *112 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-3 2' BGS (H601110-05)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	<0.050	0.050	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.050	0.050	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	<0.150	0.150	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	<0.300	0.300	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**159**	10.0	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**42.4**	10.0	05/21/2016	ND					

Surrogate: 1-Chlorooctane *93.0 %* *35-147*

Surrogate: 1-Chlorooctadecane *112 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-3 3' BGS (H601110-06)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	<0.050	0.050	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.050	0.050	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	<0.150	0.150	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	<0.300	0.300	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**10.4**	10.0	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	<10.0	10.0	05/21/2016	ND					

Surrogate: 1-Chlorooctane *76.3 %* *35-147*

Surrogate: 1-Chlorooctadecane *98.3 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/18/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-3 4' BGS (H601110-07)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	<0.050	0.050	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.050	0.050	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	<0.150	0.150	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	<0.300	0.300	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	<10.0	10.0	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	<10.0	10.0	05/21/2016	ND					

Surrogate: 1-Chlorooctane *84.8 %* *35-147*

Surrogate: 1-Chlorooctadecane *104 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/20/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-2 SURFACE (H601110-08)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	**4.12**	2.00	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	**9.31**	2.00	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	**35.7**	6.00	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	**49.1**	12.0	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS** **S-06**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**4800**	200	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**38500**	200	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**7670**	200	05/21/2016	ND					

Surrogate: 1-Chlorooctane *307 %* *35-147*

Surrogate: 1-Chlorooctadecane *771 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/20/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-2 2' BGS (H601110-09)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	<0.050	0.050	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.050	0.050	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	<0.150	0.150	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	<0.300	0.300	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**98.6**	10.0	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	**42.3**	10.0	05/21/2016	ND					

Surrogate: 1-Chlorooctane *84.1 %* *35-147*

Surrogate: 1-Chlorooctadecane *114 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received:	05/20/2016	Sampling Date:	05/20/2016
Reported:	05/26/2016	Sampling Type:	Soil
Project Name:	HEP-16-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	NOT GIVEN		

Sample ID: TT-2 3' BGS (H601110-10)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/23/2016	ND	2.10	105	2.00	0.0424	
Toluene*	<0.050	0.050	05/23/2016	ND	2.02	101	2.00	0.393	
Ethylbenzene*	<0.050	0.050	05/23/2016	ND	1.82	90.9	2.00	0.650	
Total Xylenes*	<0.150	0.150	05/23/2016	ND	5.77	96.2	6.00	1.07	
Total BTEX	<0.300	0.300	05/23/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.6-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/21/2016	ND	193	96.3	200	1.82	
DRO >C10-C28	**15.3**	10.0	05/21/2016	ND	202	101	200	6.77	
EXT DRO >C28-C35	<10.0	10.0	05/21/2016	ND					

Surrogate: 1-Chlorooctane *83.6 %* *35-147*

Surrogate: 1-Chlorooctadecane *97.7 %* *28-171*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Safety and Environmental Solutions
Project Manager:	Bob Allen
Address:	703 East Clinton, PO Box 1613
City:	Hobbs State: NM Zip: 88240
Phone #:	575 397-0510 Fax #: 575 393-4388
Project #:	HEP-16-006 Project Owner:
Project Name:	
Project Location:	
Sampler Name:	

BILL TO

P.O. #:	
Company:	Same
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	BTEX	TPH (8015M)
H601110-																
1	TT-1 Surface	G	1			X					X		05/18	0830	X	X
2	TT-1 2FT. BGS	G	1			X					X		05/18	0900	X	X
3	TT-3 Surface	G	1			X					X		05/18	0915	X	X
4	TT-3 1FT. BGS	G	1			X					X		05/18	0920	X	X
5	TT-3 2FT. BGS	G	1			X					X		05/18	0935	X	X
6	TT-3 3FT. BGS	G	1			X					X		05/18	1000	X	X
7	TT-3 4FT. BGS	G	1			X					X		05/18	1020	X	X

Relinquished By:	Date: 05/20/16	Received By:	
Relinquished By:	Time: 3:35	Received By:	
	Date:		
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 6.8°c

Sample Condition: Cool: ☐ Yes ☐ No; Intact: ☑ Yes ☐ No

CHECKED BY: (Initials) BF

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Safety and Environmental Solutions
Project Manager:	Bob Allen
Address:	703 East Clinton, PO Box 1613
City:	Hobbs State: NM Zip: 88240
Phone #:	575 397-0510 Fax #: 575 393-4388
Project #:	HEP-16-006 Project Owner:
Project Name:	
Project Location:	
Sampler Name:	

BILL TO

P.O. #:	
Company:	Same
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST: BTEX, TPH (8015M)

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH (8015M)
H601110- 8	T-2 Surface	G	1			X					X		05/20	1000	X	X
9	T-2 2ft BGS	G	1			X					X		05/20	1000	X	X
10	T-2 3ft BGS	G	1			X					X		05/20	1130	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 05/20/16	Received By: Brittney Fell	
Relinquished By:	Time: 1400	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool ☐ Yes ☑ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials) BF	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

6.8°C

Appendix D
C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company HOLLY ENERGY PARTNERS	Contact MELANIE ISENBERG
Address 1602 W MAIN ST	Telephone No. 214-605-8303
Facility Name MONUMENT SECT 35 JUNCTION	Facility Type CRUDE OIL MANIFOLD/PIG STATION

Surface Owner COMMISSIONER OF PUBLIC LANDS NEW MEXICO	Mineral Owner STATE OF NEW MEXICO	API No. BL-1554

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	35	19 S	37 E					LEA

Latitude 32.61825 **Longitude** -103.21436

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 29 Barrels	Volume Recovered 18 Barrels
Source of Release UNDERGROUND PIPELINE	Date and Hour of Occurrence 5/4/2016 UNKNOWN	Date and Hour of Discovery 5/4/2016 1333
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD AND NMED	
By Whom? MELANIE ISENBERG	Date and Hour 5/4/2016 NOTIFICATIONS COMPLETED TO BOTH AGENCIES BY 1610.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.* A 30FT SECTION OF 8' PIPE THAT TIES THE CENTRAL GRAYBURG LINE RECEIVING TRAP AND THE MANIFOLD JUNCTION THAT TRANSFERS INTO THE 6' LINE GOING TO HOBBS STATION HAD A HOLE. ABO AND CENTRAL BATTERIES WERE IMMEDIATELY SHUT DOWN, LOCKED OUT AND TAGGED OUT OF SERVICE. VACUUM TRUCKS ALONG WITH CONSTRUCTION CRES WERE DISPATCHED TO LOCATION TO BEGIN THE PROCESS OF CLEAN UP AND REPAIRS. PIPING WAS REMOVED, FLANGES WERE BLINDED OFF AND REPAIRS WERE SCHEDULED FOR 5/5/16. SURFACE CONTAMINATION WAS GATHERED ONTO PLASTIC FOR DISPOSAL AND/OR REMEDIATION.

Describe Area Affected and Cleanup Action Taken.* THE AREA AFFECTED IS MAINLY CONTAINED TO THE FENCED IN AREA OF HEP PROPERTY. APPROXIMATE SQUARE FOOTAGE OF SPILL AREA IS 5,222 SQFT. SITE ASSESSMENT WAS CONDUCTED BY AN ENVIRONMENTAL DEPARTMENT REPRESENTATIVE FROM HEP AND BOB ALLEN OF SAFETY AND ENVIRONMENTAL SOLUTIONS, INC (SESI). SESI WILL CONDUCT A DELINEATION OF THE SITE AND FILE APPROPRIATE DELINEATION REPORT AND PROPOSED WORKPLAN WITH AGENCY. WILL INITIALLY GATHER THE MOST HIGHLY CONTAMINATED SOIL.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Melanie Isenberg	OIL CONSERVATION DIVISION	
Printed Name: MELANIE ISENBERG	Approved by Environmental Specialist:	
Title: ENVIRONMENTAL ASSOCIATE	Approval Date:	Expiration Date:
E-mail Address: MELANIE.ISENBERG@HOLLYENERGY.COM	Conditions of Approval:	Attached ☐
Date: 5/17/16 Phone: 214-605-8303		

* Attach Additional Sheets If Necessary