



ENVIRONMENTAL PLUS, INC.

CONSULTING AND REMEDIAL CONSTRUCTION

ppm LM 0830331859

8 May 2012

Mr. Geoffrey Leking
Environmental Engineer
New Mexico Oil Conservation Division
1265 North French Drive
Hobbs, New Mexico 88240

HOBBS OCD

MAY 02 2013

RECEIVED

RE: Remediation Proposal – MCA Laguna Release Area
ConocoPhillips Corporation
UL-D (NW1/4 of the NW1/4) of Section 28, T 17S, R 32 E
Lea County, New Mexico
Latitude: 32° 48' 39.87"; Longitude: 103° 46' 28.50"
NMOCD Ref. #1RP-1991; EPI Ref. #150035

Dear Mr. Leking:

The below *Remediation Proposal (Proposal)* is designed to bring the above referenced Release Area into conformance with New Mexico Oil Conservation Division (NMOCD) Guidelines. References will be included to update NMOCD and Bureau of Land Management (BLM) representatives of previous remedial activities. For clarity and cross references elimination purposes, the *Proposal* includes *Release History, Site Background, Preliminary Field Work, Analytical Data and Procedures* and *Field Remediation Proposals*.

Release History

Release of product from an open top tank has inundated the MCA Laguna Area several times. The initial release occurred in September 2008 when sixty-four (64) barrels of crude oil products were released over an unknown area. A Form C-141 was submitted to the NMOCD on September 19, 2008.

The second release occurred in October 2008 when four hundred twenty-two (422) barrels of crude oil products were released covering a surface area of ±22,400 square feet of dry pasture land with no livestock present. In addition to pasture land, the release covered ±4,900 square feet of caliche pad and road. A Form C-141 was submitted to the NMOCD on October 25, 2008 and approved on October 29, 2008. However, other than surficial cleanup, no remedial activities were undertaken.

Site Background

The site is located in UL-D (NW1/4 of the NW1/4) of Section 28, T17S, R32E at an approximate elevation of 3,985-feet above mean sea level (amsl). The property is owned by the Department of the Interior and managed by the Bureau of Land Management (BLM). A search for water wells was completed utilizing the New Mexico Office of the State Engineers website and a database maintained by the United States Geological Survey (USGS). One monitor well (MW-8) exists approximately 570-feet northeast of the Release Area (Ref. MW-8 Exploratory Boring Log). A playa exists ±0.5-miles southwest of the Release Area. Groundwater data indicates the average

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water depth is approximately 77-feet below ground surface (bgs). Based on available information, vertical distance between impacted soil and groundwater is approximately 55-feet. Utilizing this information, NMOCD Remedial Threshold Goals (NMOCD Goals) were determined as follows:

Parameter	Remedial Goal
Benzene	10 mg/Kg
BTEX	50 mg/Kg
TPH	1,000 mg/Kg
Chlorides	250 mg/Kg

Field Work

On October 14, 2008 four (4) backhoe sample trenches (BH-1 thru BH-4) were excavated in the release area to depths not exceeding fourteen (14) feet bgs. At that elevation TPH concentrations were 11,200 mg/Kg (Ref. *Table 3*).

On January 29, 2009 three (3) soil sample trenches (BH) were excavated and five (5) hand augered soil borings were advanced to various depths not exceeding eighteen (18) feet bgs. With the exception of BS-1, all BHs and hand auger soil borings were completed to depths where TPH concentrations were within NMOCD Goals. No field or laboratory analyses were conducted for chloride concentrations. However, as BS-1 and BH-1 were advanced in the same locale, it was concluded the area was an old pit used to dispose of tank bottom waste as it is not representative of general Release Area findings. (Ref. *Table 3*).

On November 23, 2010 two (2) soil borings and eight (8) hand auger soil borings were advanced to various depths not exceeding forty (40) feet bgs. With respect to TPH and chloride concentrations, SB-1 and SB-2 came into compliance with NMOCD Goals at thirty (30) feet and ten (10) feet bgs respectively. All hand auger soil borings came into compliance with NMOCD Goals for TPH concentrations at 4-feet bgs (Ref. *Table #3*)

EPI mobilized to the Release Area on February 24, 2012 and advanced thirteen (13) hand augered soil borings to various depths. Field locations of the hand auger soil borings were coincidental with soil sample locations on October 2008, January 2009 and November 2010 soil sample events. Intent of hand auger soil borings was advancement until NMOCD Goals were achieved or penetration refusal encountered. Results of field and laboratory analyses are noted on *Table #4*.

Analytical Data and Procedures

In reviewing *Table 4, Summary of Hand Auger Soil Sample Field Analyses and Laboratory Analytical Results*, chloride concentration elevated above NMOCD Goals exists only in HA-3 to a depth of 6-feet bgs. TPH concentrations elevated above NMOCD Goals exist primarily in HA-1 through HA-7 and HA-9.



A portion of select soil samples will be field tested for organic vapors and chloride concentrations. Soil samples collected for field testing of organic vapors are placed in self sealing polyethylene bags and allowed to equilibrate to ~70° F. Soil samples tested for organic vapors utilizing a MiniRae™ Photoionization Detector (PID) equipped with a 10.6 electron-volt (eV) lamp calibrated for benzene response. Chloride concentrations will be determined via use of a LaMotte Chloride Kit (Titration Method).

Soil samples designated for laboratory analyses will be immediately inserted into laboratory provided containers, labeled, placed in coolers, iced down and transported to an independent laboratory for quantification of TPH [Gasoline Range Organics (C6-C12), Diesel Range Organics (>C12-C28) and Oil Range Organics (>C28-C35)] and chloride concentrations under Chain-of-Custody protocol.

Site Remedial Proposal

After issuance of a “One Call”, EPI will construct a temporary caliche road on the release ephemeral flow path (Release Area) from sample points HA-1 through HA-7 as noted on *Figure #4*. (Note – HA-9 is located at the junction of the flow path and an existing caliche lease road). A hydro-excavator will excavate a trench along the edge of the temporary caliche road the entire distance from HA-1 to HA-7 to expose marked and potential unmarked pipelines. Once completed, a pipe locator will be connected to each metallic line tracing and marking it the entire width of the Release Area.

During the above activity, excavation of the pit containing possible tank bottom residue will commence. Existing buried pipelines may hamper or limit excavation width and depth. In noting laboratory analytical data from SB-1 (*Table #3*), impacted material exists from ground surface to 20-30 feet bgs. Cognizant of the hazards in this locale, recommended maximum limits on depth of excavation terminate at eight (8) feet bgs with horizontal boundaries for TPH concentrations dictated by NMOCD Goals or obstacles detrimental to safety of employees. Upon completion, a minimum two (2) feet thick compacted clay barrier will be installed over the excavation bottom. Remainder of the excavation will be backfilled with loamy sandy soil to original ground surface.

Excavation and backfilling the Release Area between sample points HA-1 and HA-7 will require extreme care to avoid damaging pipelines. Portions of the Release Area which lie within the caliche pad surrounding the open top tank will not be excavated due to potential foundation instability. Whenever the open top tank is placed out of service and removed, the entire caliche pad will be reclaimed. Release Area between HA-1 and HA-4 will be excavated to a depth where TPH concentrations achieve NMOCD Goals, but not to exceed a maximum depth of eight (8) feet bgs. Should the excavation bottom display TPH concentrations elevated above NMOCD Goals at this depth, a minimum two (2) feet thick compacted clay barrier will be installed. TPH concentrations in the Release Area between HA-4 and HA-7 indicate NMOCD Goals should be achieved at a maximum depth of four (4) to six (6) vertical feet. However, if TPH concentrations do not attain NMOCD Goals at this depth, the maximum eight (8) vertical feet proposed limit and compacted clay barrier should be implemented. All impacted material will be transported to a State approved land farm.



Release Area between sample points HA-7 and HA-8 shouldn't require any excavation. Similarly, the area surrounding soil sample point HA-9 should cleanup at a depth of four (4) to six (6) vertical feet in areas east of existing caliche road. Discolored "fingers" within the caliche road will be excavated approximately two (2) vertical feet and a width which removes impacted material. Clean caliche will be placed in the excavated area, watered and wheel rolled for compaction. However, EPI is of the opinion major remediation of the north-south lease road is not warranted.

The Release Area surrounding HA-13 is a reclaimed production pit covered with an earthen cap. Due to the pit surface possibly being covered with a polyethylene liner, EPI recommends discing the entire area a maximum depth of two (2) to three (3) vertical feet and apply a six (6) percent solution of Micro-Blaze solution over the disturbed area. Seeding of the area will comply with conditions as described below.

Certain areas adjacent with the Release Area flow path contain asphaltine and soil discoloration. To induce vegetative growth, EPI recommends surficial cleanup of these areas a maximum depth of one (1) foot. Spray a six (6) percent solution of Micro-Blaze over the disturbed area and backfill the excavation with clean loamy sand. However, this procedure should apply only to those areas which are contiguous with the Release Area flow path. Discing and seeding of these areas will comply with conditions as described below.

Back fill material will be as directed by the BLM, i.e., preferably clean top soil or loamy sand from a nearby source. Whichever material is used will be free of deleterious material, large clumps or rocks. Once backfill operations are completed, the area will be contoured to natural gradient, promote adequate surface drainage and protection from wind/water erosion. Entire disturbed areas will be disced if possible. Discing over disturbed areas which contain buried or surface pipelines may not be possible. Hence, a light tractor and harrow may be used. Following harrowing or discing activities, the areas will be deep seed drilled with a blend approved by the BLM. Dependent on buried or surface pipelines, certain areas may have seed "hand sown". With near drought conditions, it is recommended seeding operations be undertaken only when ground and weather conditions are conducive to vegetative growth.

Following closure and acceptance of the area by BLM and NMOCD representatives, EPI will submit a *Final Closure Report* to BLM, NMOCD and ConocoPhillips personnel.

Should you have questions, concerns or need additional technical information, please contact me at (575) 394-3481 (office), (575) 441-7802 (cellular) or via e-mail at dduncanepi@gmail.com.

Official communications should be directed to Mr. John W. Gates at (575) 391-3158 (office), (575) 390-4821 (cellular) or via e-mail at John.W.Gates@conocophillips.com with correspondence addressed to:

Mr. John W. Gates
ConocoPhillips – HSER Lead
Permian-Buckeye Operations
29 Vacuum Complex Lane
Lovington, New Mexico 88260-9664



Sincerely,

ENVIRONMENTAL PLUS, INC.,

David P. Duncan
Civil Engineer
EPI Project Manager

Cc: John W. Gates, HSER Lead – ConocoPhillips Corporation
Ms. Trisha C. Bad Bear, Natural Resources Specialist – Bureau of Land Management
Justin Wright, Contract Person – ConocoPhillips Corporation
Cody Miller, General Manager – EPI
Roger Boone, Operations Manager – EPI

Encl: Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Release Area Site Map
Figure 4 – Soil Sample Site Map (EPI and Tetra Tech)
Table 3 – Historical Summary of Exploratory Soil Sample Field Analyses and Laboratory Analytical Results (10-14-08, 1-29-09 and 10-23-10)
Table 4 – Summary of Hand Auger Soil Samples Field and Laboratory Analytical Results (2-24-12 and 2-27-12)
Attachment I – Site Photographs (N/I)
Attachment II – Laboratory Analytical Results and Chain-of-Custody Forms (2-24-12 and 2-27-12)
Attachment III – MW-8 Exploratory Boring Log
Attachment IV – Copy of Initial NMOCD Form C-141

FIGURES



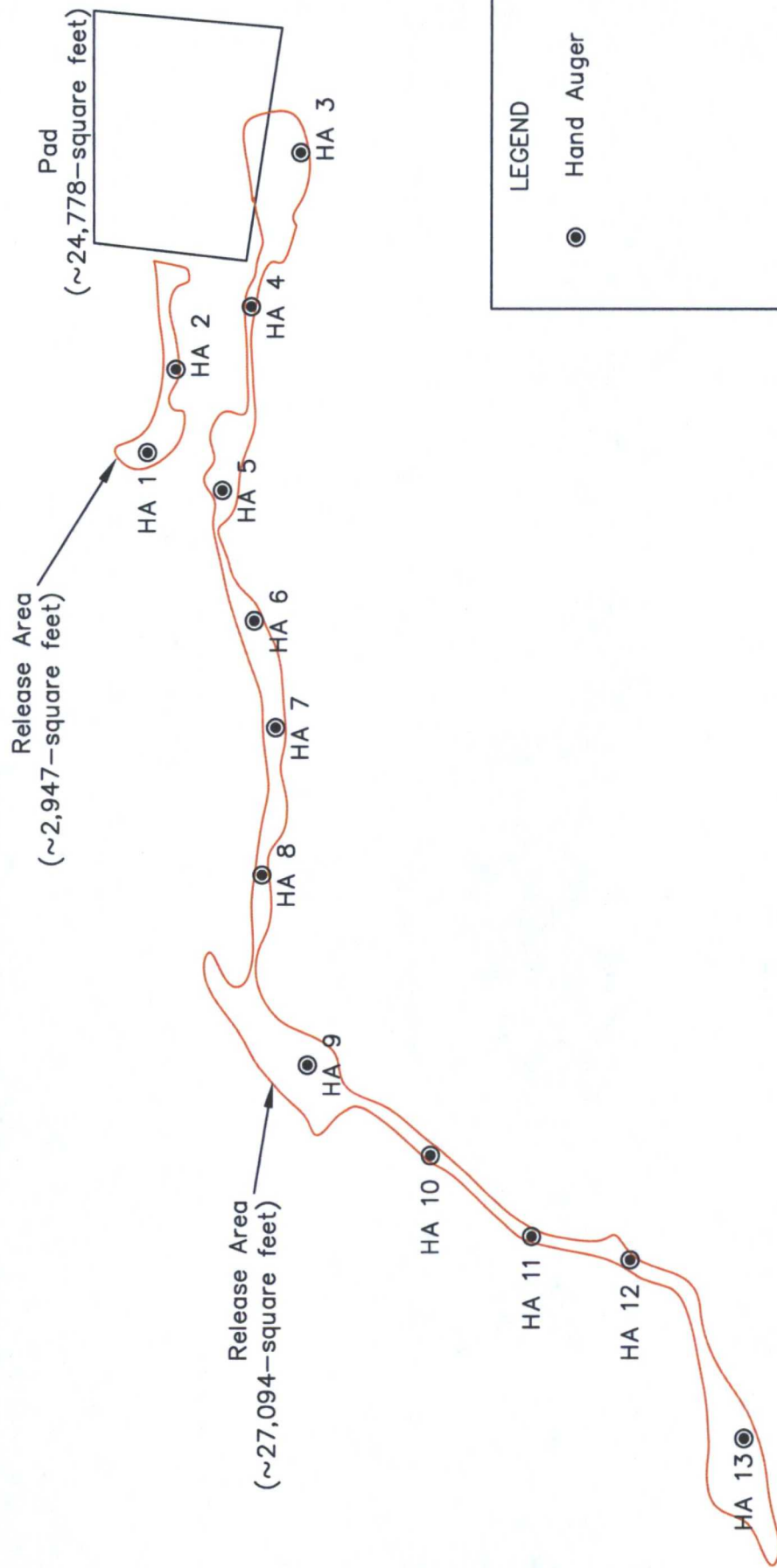


Figure 4
Hand Auger Map
ConocoPhillips
MCA Laguna

Lea County, New Mexico
NE 1/4 of the NW 1/4, Sec. 28, T17S, R32E
N 32° 48' 39.51" W 103° 46' 29.52"
Elevation: 3,991 feet amsl

DWG By: D Dominguez
March 2012

REVISED:

SHEET
1 of 1

TABLES

TABLE 3

Historical Summary of Exploratory Soil Sample Field and Laboratory Analytical Results

Conoco Phillips Corporation

Project: MCA Laguna Release Area (NMOCD Ref. #IRP 1991; EPI Ref. #150035)
 UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample I.D.	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
BH-1	0.5	In Situ	14-Oct-08	--	--	0.01	0.24	1.90	2.39	4.54	450	3,000	--	3,450	ND
BH-1	4	In Situ	14-Oct-08	--	--	0.10	0.13	4.10	5.19	9.52	190	4,300	--	4490	95.1
BH-1	14	In Situ	14-Oct-08	--	--	11.0	6.60	48.0	46.0	111.6	1600	9,600	--	11,200	195
BH-2	0.5	In Situ	14-Oct-08	--	--	0.01	0.02	0.26	0.69	0.98	40.0	4,400	--	4,440	ND
BH-2	2	In Situ	14-Oct-08	--	--	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
BH-3	0.5	In Situ	14-Oct-08	--	--	ND	ND	ND	ND	ND	ND	270	--	270	ND
BH-3	4	In Situ	14-Oct-08	--	--	ND	ND	ND	ND	ND	ND	7.10	--	7.10	13.2
BH-4	0.5	In Situ	14-Oct-08	--	--	0.03	4.10	17.0	16.5	37.7	930	5,000	--	5,930	ND
BH-4	4	In Situ	14-Oct-08	--	--	ND	ND	0.01	ND	0.01	1.60	42.0	--	43.6	85.7
BS-1	18	In Situ	29-Jan-09	--	--	0.42	9.80	28.0	42.0	80.2	2,900	740	--	3,640	--
BS-3	6	In Situ	29-Jan-09	--	--	ND	ND	ND	ND	ND	ND	ND	--	ND	--
AH-4	0.5	In Situ	29-Jan-09	--	--	0.08	3.70	10.0	15.7	29.5	4,400	230	--	4,630	--
AH-4	6	In Situ	29-Jan-09	--	--	ND	ND	ND	ND	ND	31.0	ND	--	31.0	--
AH-5	0.5	In Situ	29-Jan-09	--	--	0.56	5.90	11.0	20.4	37.9	2,600	600	--	3,200	--
AH-5	6	In Situ	29-Jan-09	--	--	ND	ND	ND	ND	ND	290	0.60	--	291	--
AH-6	0.5	In Situ	29-Jan-09	--	--	0.04	0.20	0.90	7.70	8.84	3,900	260	--	4,160	--

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Conoco Phillips Corporation

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 UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample I.D.	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
AH-6	4	In Situ	29-Jan-09	--	--	ND	ND	0.002	0.003	0.005	130	0.80	--	131	--
AH-7	0.5	In Situ	29-Jan-09	--	--	0.01	0.44	1.40	3.30	5.15	4,000	14.0	--	4,014	--
AH-7	2	In Situ	29-Jan-09	--	--	ND	ND	0.004	0.030	0.034	360	4.80	--	365	--
AH-8	0.5	In Situ	29-Jan-09	--	--	ND	0.003	0.003	0.020	0.026	3,200	0.40	--	3,200	--
AH-8	2	In Situ	29-Jan-09	--	--	ND	ND	ND	ND	ND	14.0	ND	--	14.0	--
BS-9	3	In Situ	29-Jan-09	--	--	ND	ND	ND	ND	ND	ND	ND	--	ND	--
SB-1	0.5	In Situ	23-Nov-10	--	--	0.003	ND	ND	0.002	0.005	6,100	ND	--	6,100	337
SB-1	10	In Situ	23-Nov-10	--	--	0.029	0.008	0.052	0.475	0.564	4,800	7.50	--	4,808	195
SB-1	20	In Situ	23-Nov-10	--	--	0.012	0.007	0.027	0.035	0.081	3,400	3.20	--	3,403	104
SB-1	30	In Situ	23-Nov-10	--	--	0.003	ND	0.011	0.012	0.026	970	0.6	--	971	69.0
SB-1	40	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	780	ND	--	780	55.0
SB-2	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	22,000	ND	--	22,000	111.0
SB-2	10	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	55.0	ND	--	55.0	218
SB-2	20	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	880	ND	--	880	84.6
SB-2	30	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	170	ND	--	170	246
SB-2	40	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	65.0	ND	--	65.0	310

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 UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample I.D.	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
HA-9	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	0.010	0.010	2,800	0.80	--	2,801	14.8
HA-9	2	In Situ	23-Nov-12	--	--	ND	ND	ND	0.03	0.03	2,000	0.70	--	2,001	8.1
HA-9	4	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	210	ND	--	210	10.1
HA-10	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	920	ND	--	920	1,600
HA-10	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	500	ND	--	500	939
HA-10	4	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	ND	ND	--	ND	134
HA-11	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	2,700	ND	--	2,700	1,400
HA-11	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	1,300	ND	--	1,300	1,840
HA-11	4	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	200	ND	--	200	2,370
HA-12	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	3,100	ND	--	3,100	10.7
HA-12	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	150	ND	--	150	37.0
HA-12	4	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	25.0	ND	--	25.0	83.7
HA-14	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	1,800	ND	--	1,800	12.4
HA-14	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	210	ND	--	210	10.0
HA-15	0.5	In Situ	23-Nov-12	--	--	ND	ND	ND	ND	ND	2,500	ND	--	2,500	6.50
HA-15	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	14.0	ND	--	14.0	9.20

TABLE 3

Historical Summary of Exploratory Soil Sample Field and Laboratory Analytical Results

Conoco Phillips Corporation

Project: MCA Laguna Release Area (NMOCD Ref. #1RP 1991; EPI Ref. #150035)

UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample I.D.	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
HA-15	4	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	60.0	ND	--	60.0	36.5
HA-16	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	10,000	0.10	--	10,000	17.5
HA 16	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	450	ND	--	450	13.0
HA-17	0.5	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	7,600	ND	--	7,600	8.25
HA-17	2	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	47.0	ND	--	47.0	14.7
HA-17	4	In Situ	23-Nov-10	--	--	ND	ND	ND	ND	ND	560	ND	--	560	2,430
NMOCD Remedial Threshold Goals															250
															1,000
															50

Bold values are in excess of NMOCD Remediation Threshold Goals

Nomenclature: BH & BS = Backhoe; SB = Soil Boring; AH & HA = Hand Auger

J = Detected, but below Reporting Limits. Therefore, result is an estimated concentration (CLP J-Flag)

-- = Not Analyzed; ND = Not Detected

TABLE 4

Summary of Hand Auger Soil Sample Field and Laboratory Analytical Results

ConocoPhillips Corporation

Project: MCA Laguna Release Area (NMOCD Ref. #1RP 1991; EPI Ref. #150035)
 UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample I.D.	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
HA-1	2	In Situ	24-Feb-12	103.0	160	--	--	--	--	--	190	6,580	--	6,770	<16.0
HA-1	4	In Situ	24-Feb-12	58.0	160	--	--	--	--	--	<10.0	71.7	--	71.7	<16.0
HA-1	6	In Situ	24-Feb-12	14.0	160	--	--	--	--	--	<50.0	1,250	--	1,250	16.0
HA-2	2	In Situ	24-Feb-12	11.8	160	--	--	--	--	--	<50	1,990	--	1,990	<16.0
HA-3	2	In Situ	24-Feb-12	54.4	720	--	--	--	--	--	<100	360	--	360	848
HA-3	4	In Situ	24-Feb-12	45.0	400	--	--	--	--	--	<100	1,140	--	1,140	352
HA-3	6	In Situ	24-Feb-12	6.1	240	--	--	--	--	--	<100	2,590	--	2,590	240
HA-4	2	In Situ	24-Feb-12	6.3	160	--	--	--	--	--	<50.0	605	--	605	16.0
HA-5	2	In Situ	24-Feb-12	18.1	480	--	--	--	--	--	<50.0	369	--	369	<16.0
HA-5	4	In Situ	24-Feb-12	13.6	240	--	--	--	--	--	<10.0	29.0	--	29.0	<16.0
HA-6	2	In Situ	24-Feb-12	16.8	160	--	--	--	--	--	<10.0	11.1	--	11.1	<16.0
HA-7	2	In Situ	24-Feb-12	59.1	240	--	--	--	--	--	<100	4,240	--	4,240	<16.0
HA-7	4	In Situ	24-Feb-12	24.4	160	--	--	--	--	--	<10.0	207	--	207	<16.0
HA-8	2	In Situ	27-Feb-12	33.6	240	--	--	--	--	--	<50.0	257	--	257	<16.0
HA-8	4	In Situ	27-Feb-12	36.4	160	--	--	--	--	--	<10.0	17.5	--	17.5	<16.0
HA-9	2	In Situ	27-Feb-12	60.3	240	--	--	--	--	--	<100	4,300	--	4,300	<16.0

TABLE 4

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ConocoPhillips Corporation

Project: MCA Laguna Release Area (NMOCD Ref. #IRP 1991; EPI Ref. #150035)
 UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample I.D.	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
HA-9	4	In Situ	27-Feb-12	45.6	160	--	--	--	--	--	<10.0	152	--	152	16.0
HA-10	2	In Situ	27-Feb-12	50.8	320	--	--	--	--	--	<10.0	<10.0	--	<20.0	<16.0
HA-10	4	In Situ	27-Feb-12	44.6	240	--	--	--	--	--	<10.0	<10.0	--	<20.0	<16.0
HA-11	2	In Situ	27-Feb-12	78.2	160	--	--	--	--	--	<10.0	72.3	--	72.3	<16.0
HA-11	4	In Situ	27-Feb-12	15.7	160	--	--	--	--	--	<10.0	22.9	--	22.9	<16.0
HA-12	2	In Situ	27-Feb-12	48.1	480	--	--	--	--	--	<10.0	31.5	--	31.5	16.0
HA-12	4	In Situ	27-Feb-12	52.6	320	--	--	--	--	--	<10.0	15.5	--	15.5	224
HA-12	6	In Situ	27-Feb-12	47.3	240	--	--	--	--	--	<10.0	35.2	--	35.2	160
HA-13	2	In Situ	27-Feb-12	55.8	320	--	--	--	--	--	<10.0	57.3	--	57.3	16.0
HA-13	4	In Situ	27-Feb-12	58.3	320	--	--	--	--	--	<10.0	11.1	--	11.1	16.0
NMOCD Remedial Threshold Goals															250
															100
															50

Field values are in excess of NMOCD Remediation Threshold Goals

Nomenclature: SP = Sample Point (Bottom of Excavation); SW- Sidewall (N = North, S = South, E = East and W = West)

J = Detected, but below Reporting Limits. Therefore, result is an estimated concentration (CLP J-Flag)

-- = Not Analyzed; ND = Not Detected; SB- Soil Boring; BG - Background Soil Boring



TABLE 3

Summary of Hand Auger Soil Sample Field and Laboratory Analytical Analyses

GeoMonitoring Services (Danberry Corp.)

Project: MCA Laguna Release Area (NMOCED Ref. #1RP 1991; EPI Ref. #150035)

UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample ID	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
HA-1	2	In Situ	24-Feb-12	103.0	160	--	--	--	--	--	190	6,580	--	6,770	<16.0
HA-1	4	In Situ	24-Feb-12	58.0	160	--	--	--	--	--	<10.0	71.7	--	71.7	<16.0
HA-1	6	In Situ	24-Feb-12	14.0	160	--	--	--	--	--	<50.0	1,250	--	1,250	16.0
HA-2	2	In Situ	24-Feb-12	11.8	160	--	--	--	--	--	<50	1,990	--	1,990	<16.0
HA-3	2	In Situ	24-Feb-12	54.4	720	--	--	--	--	--	<100	360	--	360	848
HA-3	4	In Situ	24-Feb-12	45.0	400	--	--	--	--	--	<100	1,140	--	1,140	352
HA-3	6	In Situ	24-Feb-12	6.1	240	--	--	--	--	--	<100	2,590	--	2,590	240
HA-4	2	In Situ	24-Feb-12	6.3	160	--	--	--	--	--	<50.0	605	--	605	16.0
HA-5	2	In Situ	24-Feb-12	18.1	480	--	--	--	--	--	<50.0	369	--	369	<16.0
HA-5	4	In Situ	24-Feb-12	13.6	240	--	--	--	--	--	<10.0	29.0	--	29.0	<16.0
HA-6	2	In Situ	24-Feb-12	16.8	160	--	--	--	--	--	<10.0	11.1	--	11.1	<16.0
HA-7	2	In Situ	24-Feb-12	59.1	240	--	--	--	--	--	<100	4,240	--	4,240	<16.0
HA-7	4	In Situ	24-Feb-12	24.4	160	--	--	--	--	--	<10.0	207	--	207	<16.0
HA-8	2	In Situ	27-Feb-12	33.6	240	--	--	--	--	--	<50.0	257	--	257	<16.0
HA-8	4	In Situ	27-Feb-12	36.4	160	--	--	--	--	--	<10.0	17.5	--	17.5	<16.0
HA-9	2	In Situ	27-Feb-12	60.3	240	--	--	--	--	--	<100	4,300	--	4,300	<16.0
HA-9	4	In Situ	27-Feb-12	45.6	160	--	--	--	--	--	<10.0	152	--	152	16.0

TABLE 3

Summary of Hand Auger Soil Sample Field and Laboratory Analytical Analyses

GeoMonitoring Services (Danberry Corp.)

Project: MCA Laguna Release Area (NMOCD Ref. #1RP 1991; EPI Ref. #150035)

UL-D (SW1/4 of the NW1/4) of Section 28, T17S, R32E; Lea County, New Mexico

Sample ID	Depth (feet)	Soil Status	Sample Date	PID Field Analysis (ppm)	Field Chloride Analyses (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH (C6-C10) (mg/Kg)	TPH >(C10-C28) (mg/Kg)	TPH (C28-C35) (mg/Kg)	Total TPH (C6-C35) (mg/Kg)	Chloride (mg/Kg)
HA-10	2	In Situ	27-Feb-12	50.8	320	--	--	--	--	--	<10.0	<10.0	--	<20.0	<16.0
HA-10	4	In Situ	27-Feb-12	44.6	240	--	--	--	--	--	<10.0	<10.0	--	<20.0	<16.0
HA-11	2	In Situ	27-Feb-12	78.2	160	--	--	--	--	--	<10.0	72.3	--	72.3	<16.0
HA-11	4	In Situ	27-Feb-12	15.7	160	--	--	--	--	--	<10.0	22.9	--	22.9	<16.0
HA-12	2	In Situ	27-Feb-12	48.1	480	--	--	--	--	--	<10.0	31.5	--	31.5	16.0
HA-12	4	In Situ	27-Feb-12	52.6	320	--	--	--	--	--	<10.0	15.5	--	15.5	224
HA-12	6	In Situ	27-Feb-12	47.3	240	--	--	--	--	--	<10.0	35.2	--	35.2	160
HA-13	2	In Situ	27-Feb-12	55.8	320	--	--	--	--	--	<10.0	57.3	--	57.3	16.0
HA-13	4	In Situ	27-Feb-12	58.3	320	--	--	--	--	--	<10.0	11.1	--	11.1	16.0
NMOCD Remedial Threshold Goals															250
				100		10				50				100	

Bold values are in excess of NMOCD Remediation Threshold Goals

Nomenclature: SP = Sample Point (Bottom of Excavation); SW- Sidewall (N = North, S = South, E = East and W = West)

J = Detected, but below Reporting Limits. Therefore, result is an estimated concentration (CLP J-Flag)

-- = Not Analyzed; ND - Not Detected; SB- Soil Boring; BG - Background Soil Boring

Laguna Battery



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

2
3
4?

Analytical Results For:

Environmental Plus, Inc.
David P. Duncan
P.O. Box 1558
Eunice NM, 88231
Fax To: (505) 394-2601

Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/24/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-1 (2') (H200521-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	190	100	03/01/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	6580	100	03/01/2012	ND	187	93.6	200	7.89	
Surrogate: 1-Chlorooctane	118 %	55.5-154							
Surrogate: 1-Chlorooctadecane	92.1 %	57.6-158							

Sample ID: HA-1 (4') (H200521-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/28/2012	ND	416	104	400	0.00	
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	03/01/2012	ND	177	88.4	200	8.22	*
DRO >C10-C28	71.7	10.0	03/01/2012	ND	187	93.6	200	7.89	
Surrogate: 1-Chlorooctane									
	87.4 %	55.5-154							
Surrogate: 1-Chlorooctadecane									
	96.0 %	57.6-158							

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Environmental Plus, Inc.
David P. Duncan
P.O. Box 1558
Eunice NM, 88231
Fax To: (505) 394-2601

Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/24/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-1 (6') (H200521-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/01/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	1250	50.0	03/01/2012	ND	187	93.6	200	7.89	

Surrogate: 1-Chlorooctane 93.4 % 55.5-154
Surrogate: 1-Chlorooctadecane 147 % 57.6-158

Sample ID: HA-2 (2') (H200521-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/01/2012	ND	177	88.4	200	8.22	
DRO >C10-C28	1990	50.0	03/01/2012	ND	187	93.6	200	7.89	

Surrogate: 1-Chlorooctane 98.0 % 55.5-154
Surrogate: 1-Chlorooctadecane 181 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/24/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-3 (2') (H200521-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	360	100	03/01/2012	ND	190	95.1	200	8.05	
Surrogate: 1-Chlorooctane		91.1 %	55.5-154						
Surrogate: 1-Chlorooctadecane		98.9 %	57.6-158						

Sample ID: HA-3 (4') (H200521-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	1140	100	03/01/2012	ND	190	95.1	200	8.05	
Surrogate: 1-Chlorooctane		74.0 %	55.5-154						
Surrogate: 1-Chlorooctadecane		84.7 %	57.6-158						

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Analytical Results For:

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 Fax To: (505) 394-2601

 Received: 02/28/2012
 Reported: 03/05/2012
 Project Name: MCA LAGUNA RELEASE AREA
 Project Number: CONOCO PHILLIPS 150035
 Project Location: UL-D, SEC 28, T17S, R32E

 Sampling Date: 02/24/2012
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: HA-3 (6') (H200521-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	2590	100	03/01/2012	ND	190	95.1	200	8.05	

Surrogate: 1-Chlorooctane 88.4 % 55.5-154

Surrogate: 1-Chlorooctadecane 98.1 % 57.6-158

Sample ID: HA-4 (2') (H200521-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/28/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	605	50.0	03/01/2012	ND	190	95.1	200	8.05	

Surrogate: 1-Chlorooctane 66.4 % 55.5-154

Surrogate: 1-Chlorooctadecane 108 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/24/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-5 (2') (H200521-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	369	50.0	03/01/2012	ND	190	95.1	200	8.05	
Surrogate: 1-Chlorooctane		64.2 %	55.5-154						
Surrogate: 1-Chlorooctadecane		102 %	57.6-158						

Sample ID: HA-5 (4') (H200521-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	416	104	400	0.00	
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	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	29.0	10.0	03/01/2012	ND	190	95.1	200	8.05	
Surrogate: 1-Chlorooctane		73.2 %	55.5-154						
Surrogate: 1-Chlorooctadecane		82.1 %	57.6-158						

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/24/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-6 (2') (H200521-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/29/2012	ND	416	104	400	0.00		
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	03/01/2012	ND	195	97.3	200	14.9		
DRO >C10-C28	11.1	10.0	03/01/2012	ND	190	95.1	200	8.05		

Surrogate: 1-Chlorooctane 77.5 % 55.5-154
Surrogate: 1-Chlorooctadecane 88.6 % 57.6-158

Sample ID: HA-7 (2') (H200521-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/29/2012	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<100	100	03/01/2012	ND	195	97.3	200	14.9		
DRO >C10-C28	4240	100	03/01/2012	ND	190	95.1	200	8.05		

Surrogate: 1-Chlorooctane 85.6 % 55.5-154
Surrogate: 1-Chlorooctadecane 260 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Environmental Plus, Inc.
David P. Duncan
P.O. Box 1558
Eunice NM, 88231
Fax To: (505) 394-2601

Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/24/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-7 (4') (H200521-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	416	104	400	0.00	
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	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	207	10.0	03/01/2012	ND	190	95.1	200	8.05	
Surrogate: 1-Chlorooctane	78.2 %	55.5-154							
Surrogate: 1-Chlorooctadecane	89.6 %	57.6-158							

Sample ID: HA-8 (2') (H200521-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	257	50.0	03/01/2012	ND	190	95.1	200	8.05	
Surrogate: 1-Chlorooctane	70.2 %	55.5-154							
Surrogate: 1-Chlorooctadecane	76.5 %	57.6-158							

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/27/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-8 (4') (H200521-15)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	432	108	400	3.64	
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	03/01/2012	ND	195	97.3	200	14.9	
DRO >C10-C28	17.5	10.0	03/01/2012	ND	190	95.1	200	8.05	

Surrogate: 1-Chlorooctane 83.2 % 55.5-154
Surrogate: 1-Chlorooctadecane 92.0 % 57.6-158

Sample ID: HA-9 (2') (H200521-16)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	432	108	400	3.64	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	03/01/2012	ND	202	101	200	9.46	
DRO >C10-C28	4300	100	03/01/2012	ND	201	101	200	9.80	

Surrogate: 1-Chlorooctane 88.3 % 55.5-154
Surrogate: 1-Chlorooctadecane 106 % 57.6-158

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 Received: 02/28/2012
 Reported: 03/05/2012
 Project Name: MCA LAGUNA RELEASE AREA
 Project Number: CONOCO PHILLIPS 150035
 Project Location: UL-D, SEC 28, T17S, R32E

 Sampling Date: 02/27/2012
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: HA-9 (4') (H200521-17)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/29/2012	ND	432	108	400	3.64	
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	03/01/2012	ND	202	101	200	9.46	
DRO >C10-C28	152	10.0	03/01/2012	ND	201	101	200	9.80	
Surrogate: 1-Chlorooctane		73.0 %	55.5-154						
Surrogate: 1-Chlorooctadecane		84.6 %	57.6-158						

Sample ID: HA-10 (2') (H200521-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/29/2012	ND	432	108	400	3.64	
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	03/01/2012	ND	202	101	200	9.46	
DRO >C10-C28	<10.0	10.0	03/01/2012	ND	201	101	200	9.80	
Surrogate: 1-Chlorooctane	83.4 %	55.5-154							
Surrogate: 1-Chlorooctadecane	90.8 %	57.6-158							

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/27/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-10 (4') (H200521-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	<10.0	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 82.3 % 55.5-154
Surrogate: 1-Chlorooctadecane 92.5 % 57.6-158

Sample ID: HA-11 (2') (H200521-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	72.3	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 83.7 % 55.5-154
Surrogate: 1-Chlorooctadecane 90.6 % 57.6-158

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/27/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-11 (4') (H200521-21)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	22.9	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 81.1 % 55.5-154
Surrogate: 1-Chlorooctadecane 91.1 % 57.6-158

Sample ID: HA-12 (2') (H200521-22)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/29/2012	ND	432	108	400	3.64	
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	03/02/2012	ND	202	101	200	9.46	
DRO >C10-C28	31.5	10.0	03/02/2012	ND	201	101	200	9.80	

Surrogate: 1-Chlorooctane 82.3 % 55.5-154
Surrogate: 1-Chlorooctadecane 89.0 % 57.6-158

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Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/27/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-12 (4') (H200521-23)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	15.5	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 81.4 % 55.5-154
Surrogate: 1-Chlorooctadecane 88.0 % 57.6-158

Sample ID: HA-12 (6') (H200521-24)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	35.2	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 74.2 % 55.5-154
Surrogate: 1-Chlorooctadecane 81.5 % 57.6-158

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Analytical Results For:

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Fax To: (505) 394-2601

Received: 02/28/2012
Reported: 03/05/2012
Project Name: MCA LAGUNA RELEASE AREA
Project Number: CONOCO PHILLIPS 150035
Project Location: UL-D, SEC 28, T17S, R32E

Sampling Date: 02/27/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: HA-13 (2') (H200521-25)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	57.3	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 82.3 % 55.5-154
Surrogate: 1-Chlorooctadecane 97.1 % 57.6-158

Sample ID: HA-13 (4') (H200521-26)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/29/2012	ND	432	108	400	3.64		
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	03/02/2012	ND	202	101	200	9.46		
DRO >C10-C28	11.1	10.0	03/02/2012	ND	201	101	200	9.80		

Surrogate: 1-Chlorooctane 75.9 % 55.5-154
Surrogate: 1-Chlorooctadecane 84.0 % 57.6-158

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Celey D. Keene, Lab Director/Quality Manager

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.
- 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

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