



ENVIRONMENTAL PLUS, INC.
CONSULTING AND ENVIRONMENTAL REMEDIATION

23 May, 2008

Mr. Chris Williams
Environmental Engineer
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

RECEIVED

MAY 23 2008

HOBBS OCD

RE: **Closure Report**
Chesapeake Operating, Inc.
Keller 27 Federal No. 2
UL-K (NE ¼ of the SW ¼) of Section 27, T23S, R34E
Longitude: N32° 16' 25.45"; Latitude: W103° 27' 35.28"
Lea County, New Mexico
NMOCD Ref. 1RP #1846; EPI Ref. #160097A

Dear Mr. Williams:

On April 14, 2008, Environmental Plus, Inc. (EPI) was notified by Chesapeake Operating, Inc. of a release at the above referenced Site. Discovered on April 14, 2008 at 6:00 am the release comprised twenty (20) barrels of petroleum product with zero (0) barrels recovered. EPI performed GPS surveying, photographic documentation and characterization of the site. In conjunction with site assessment activities, an Emergency Response team mobilized to contain and remediate the impacted area.

On behalf of Chesapeake Operating, Inc., EPI submits the attached *Closure Report Letter* describing remedial activities undertaken to remediate the release area into conformity with New Mexico Oil Conservation Division (NMOCD) requirements. For clarity and cross reference elimination purposes, the *Closure Report Letter* offers Site Background history, Site Delineation, Remediation Activities and Conclusion.

Site Background

The Site is located in UL-K (NE ¼ of the SW ¼) of Section 27, T23S, R34E at an elevation of approximately 3,476 feet above mean sea level (amsl). The property is owned by the United States 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). No wells (domestic, agriculture or public) or bodies of surface water exist within a 1,000 feet radius of the Site (reference Figure 2). Groundwater data indicates average water depth is approximately 253 feet below ground surface (bgs). Based on available information, it was projected distance between known impacted soil and groundwater is greater than 200 vertical feet. Utilizing this information, New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this Site were determined as follows:

ENVIRONMENTAL PLUS, INC.



Parameter	Remedial Goal
Benzene	10 parts per million
BTEX	50 parts per million
TPH	5,000 parts per million

* Chloride residuals may not be capable of impacting local groundwater above NMWQCC Ground Water Standards of 250 mg/L

- A. **Site Delineation** – On April 14, 2008 EPI conducted a site assessment consisting of GPS surveying and photographing the release area. Approximately 15,220-ft² of surface area was inundated by the release with an additional 131,000-ft² of pasture land receiving overspray mist. Majority of the inundated area was contained on the caliche production pad. Three (3) minor sections of pasture land were affected (reference *Figure 3*). An EPI Emergency Response Team excavated and transported approximately 14 yds³ of surface contaminated material to EPI Landfarm for treatment. The overspray area vegetation was mowed to a manageable height utilizing a brush hog. The area was sprayed with a 6% solution of *Micro-Blaze*TM to accelerate natural attenuation of surficial TPH contaminants.
- B. **Remedial Activities** - From April 14, 2008 through April 21, 2007, approximately 676 yds³ of impacted material were excavated from combined surface area of ±17,525-ft² at depths ranging from 0.5- to 1.83-feet bgs. Impacted soil was transported to EPI and Pitchfork Landfarms for treatment. During excavation activities, soil samples were collected from sidewalls and bottom at varying depths for field analyses and confirmatory laboratory analytical results.

On April 17, 2008 fourteen (14) soil samples were collected from excavation sidewalls and bottom of three (3) minor excavations adjacent to the caliche production pad and transported to an independent laboratory for analysis of TPH constituents (reference *Figure 4*). TPH concentrations ranged from <20.0 mg/Kg to 263 mg/Kg (reference *Table 2*).

On April 22, 2008 four (4) composite soil samples were collected from the excavation located on the caliche production pad (reference *Figure 4*). TPH concentrations ranged from <20.0 mg/Kg to 261 mg/Kg (reference *Table 2*).

On April 23, 2008 excavation located on the caliche production pad was backfilled with clean caliche (~462 yds³). Backfilling activities continued through April 25, 2008 with excavated areas outside the caliche production pad filled with native topsoil (154 yds³). Both caliche and topsoil material were transported to the site from a private pit. Disturbed areas within the caliche production pad were contoured to allow vehicular traffic and promote controlled natural drainage. Contiguous areas outside the caliche production pad were similarly contoured to allow natural drainage and will be disked and seeded with a blend preferred by the BLM.



- C. **Recommendations** - Analytical data confirmed sidewalls and bottom were void of hydrocarbon impacted soil in excess of remedial threshold standards. In view of extensive efforts exerted to remediate the release area, EPI requests the NMOCD require no additional remedial activity of the site and issue Chesapeake Operating, Inc. a *Site Closure Letter*.

Please address questions, concerns and/or needs for additional technical information to David P. Duncan at (575) 394-3481 (office), (575) 441-7802 (cellular) or via e-mail at dduncan@envplus.net. Official communications should be directed to Mr. Bradley Blevins at (575) 391-1462, Ext. 6224 (office), (575) 441-0341 (mobile) or via e-mail at bblevins@chkenergy.com with correspondence addressed to:

Mr. Bradley Blevins
Field Supervisor
Chesapeake Operating, Inc.
1616 West Bender
Hobbs, New Mexico 88240

Sincerely,

Brandon Farrar
Environmental Consultant

Cc: Harlan Brown, Sr. Envr. Representative, Chesapeake Energy – Oklahoma City, OK
Bradley Blevins, Field Supervisor, Chesapeake Operating, Inc. – Hobbs, NM
Trishia C. Bad Bear, BLM – Hobbs, NM
Jim Keller, Agriculture Lessee - Oakley, KS
File

Encl: Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Site Map
Figure 4 – Excavation and Sample Map
Table 1 – Well Data
Table 2 – Summary of Excavation Soil Sample Field Analyses and Laboratory Analytical Results
Attachment I – Site Photographs
Attachment II – Laboratory Analytical Results and Chain-of-Custody Forms



Attachment III – Information and Metrics
Initial NMOCD Form C-141
Final NMOCD Form C-141

FIGURES

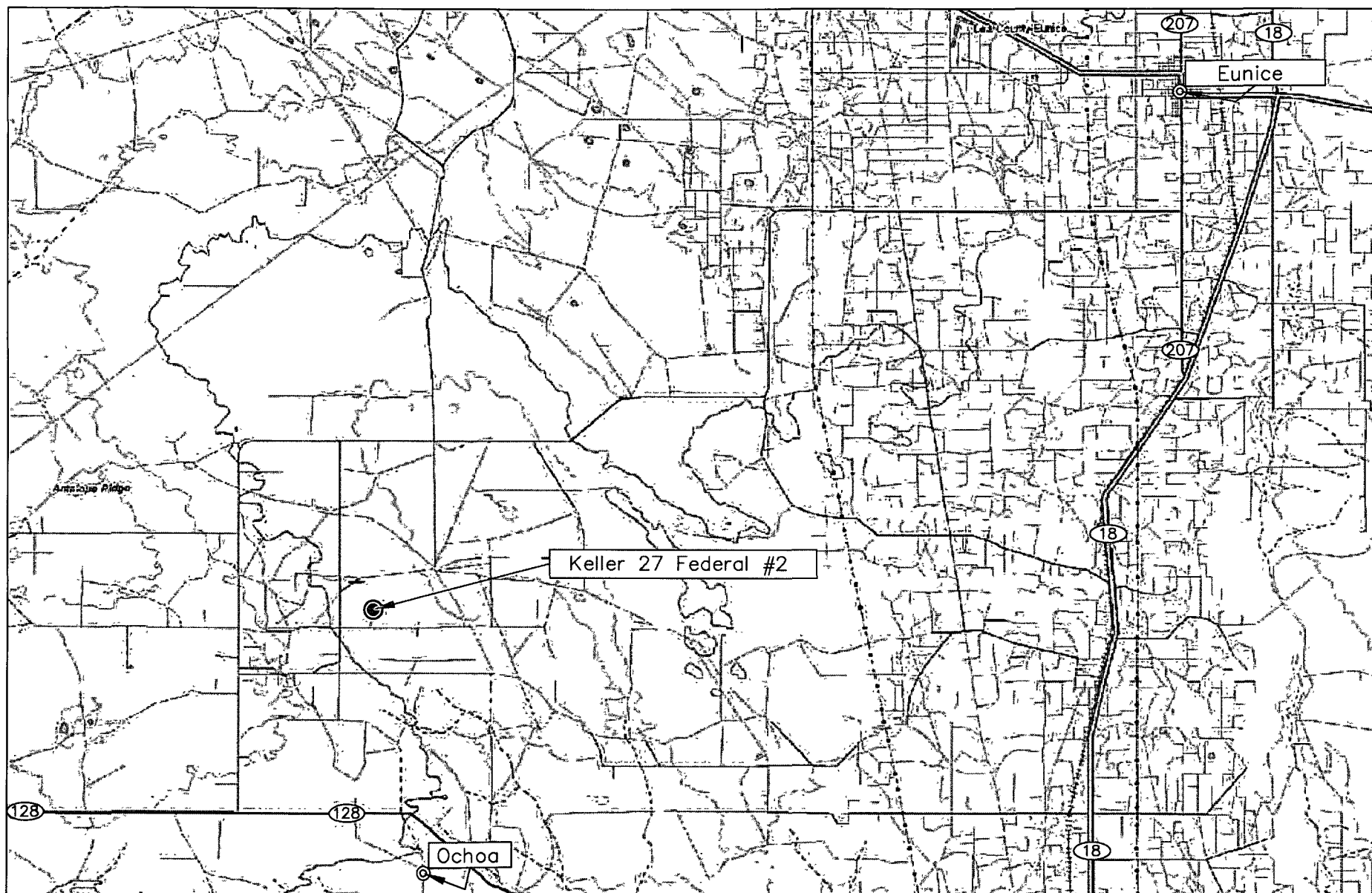


Figure 1
Area Map
Chesapeake Operating Inc.
Keller 27 Federal #2

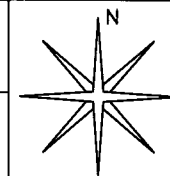
Lea County, New Mexico
NE 1/4 of the SW 1/4, Sec. 27, T23S, R34E
N 32°16' 25.45" W 103°27' 35.28"
Elevation: 3,476 feet amsl

DWG By: D Dominguez
April 2008

REVISED:



SHEET
1 of 1



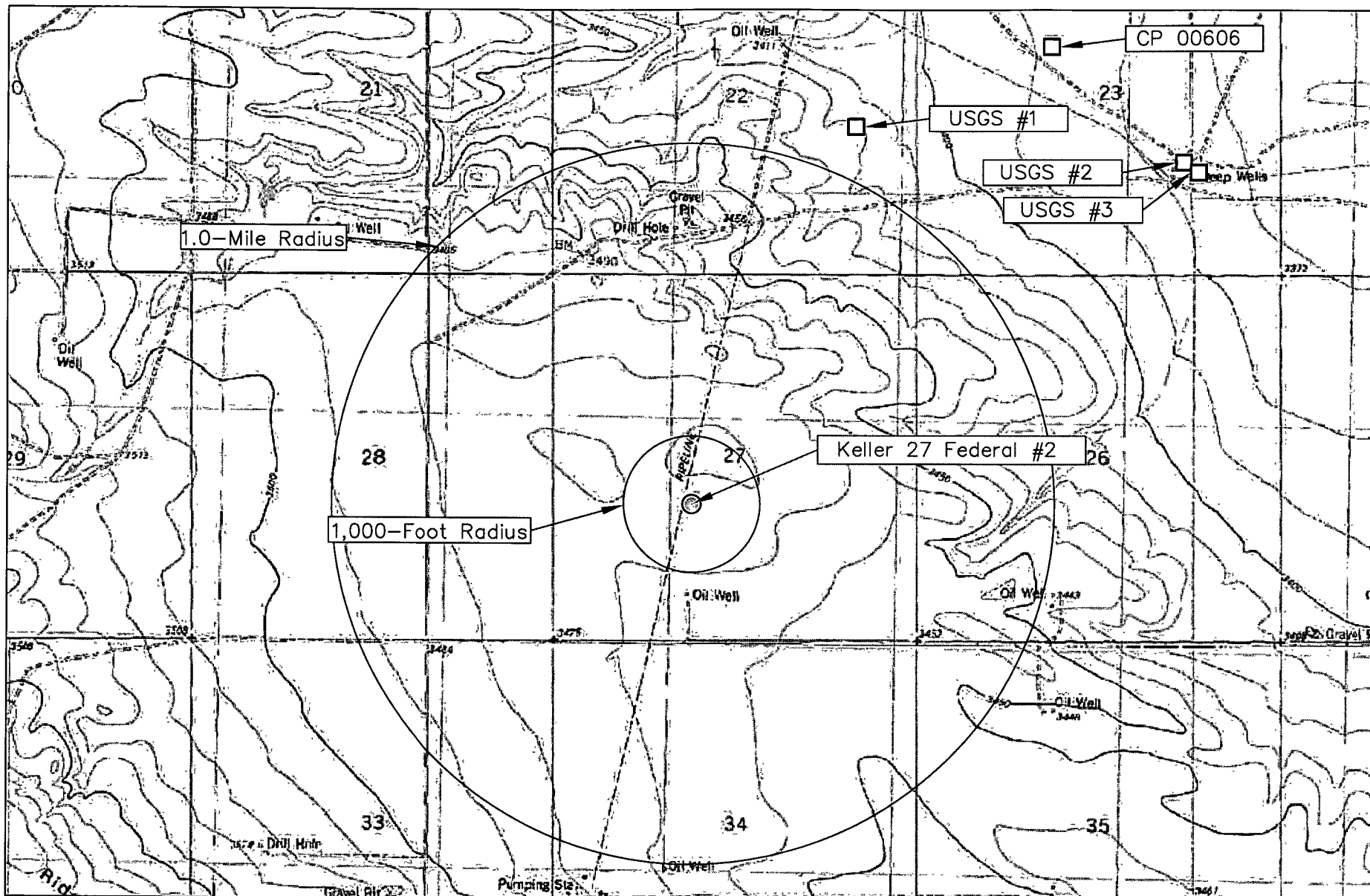
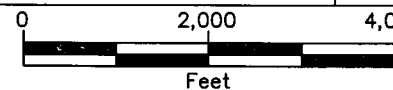


Figure 2
Site Location Map
Chesapeake Operating Inc.
Keller 27 Federal #2

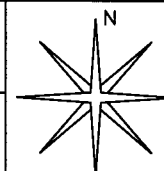
Lea County, New Mexico
NE 1/4 of the SW 1/4, Sec. 27, T23S, R34E
N 32°16' 25.45" W 103°27' 35.28"
Elevation: 3,476 feet amsl

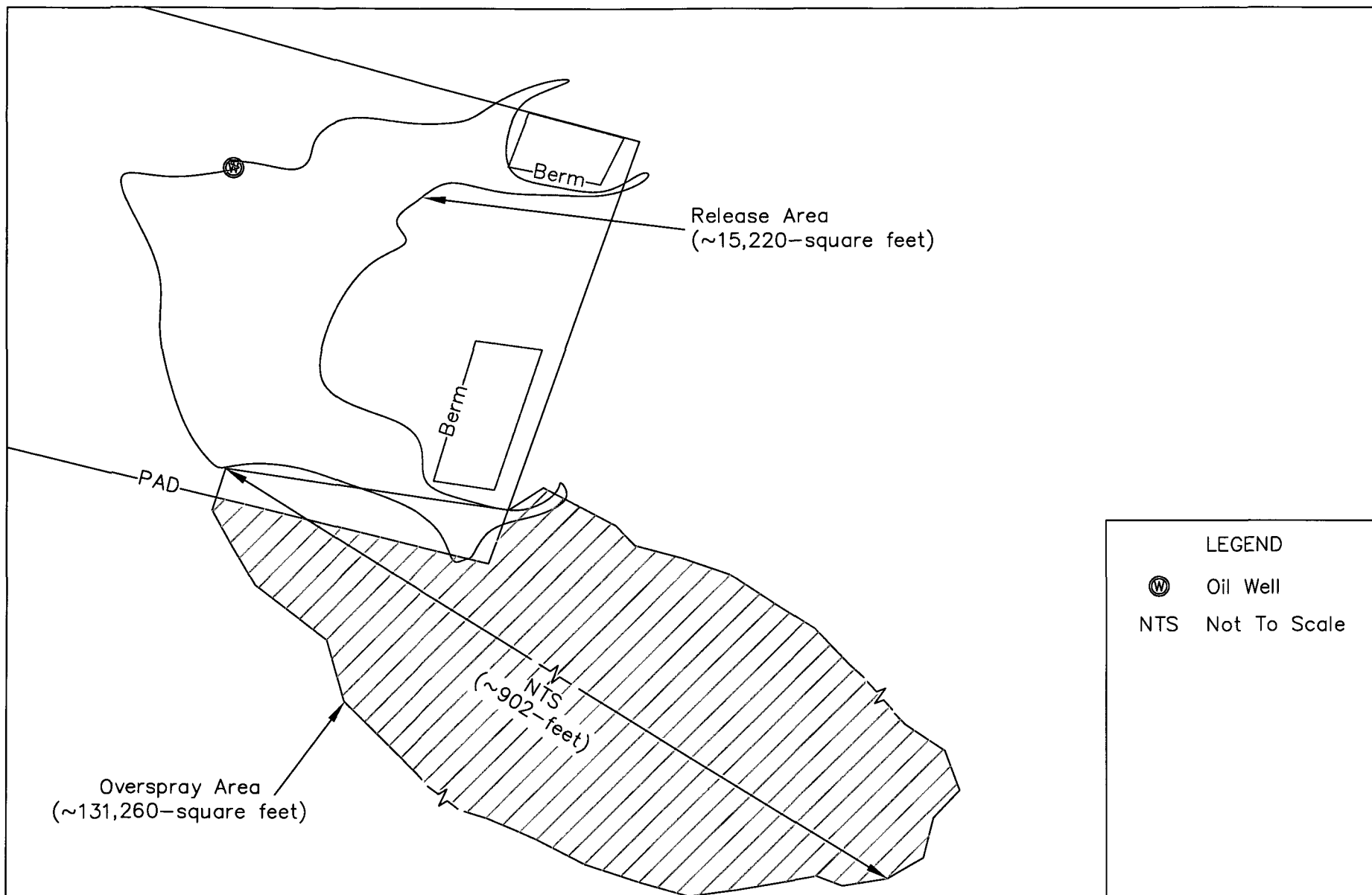
DWG By: D Dominguez
April 2008

REVISED:



SHEET
1 of 1





LEGEND

⊙ Oil Well

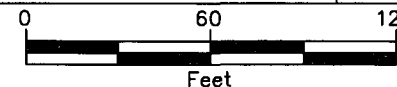
NTS Not To Scale

Figure 3
Site Map
Chesapeake Operating Inc.
Keller 27 Federal #2

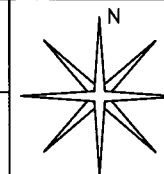
Lea County, New Mexico
NE 1/4 of the SW 1/4, Sec. 27, T23S, R34E
N 32°16' 25.45" W 103°27' 35.28"
Elevation: 3,476 feet amsl

DWG By: D Dominguez
April 2008

REVISED:



SHEET
1 of 1



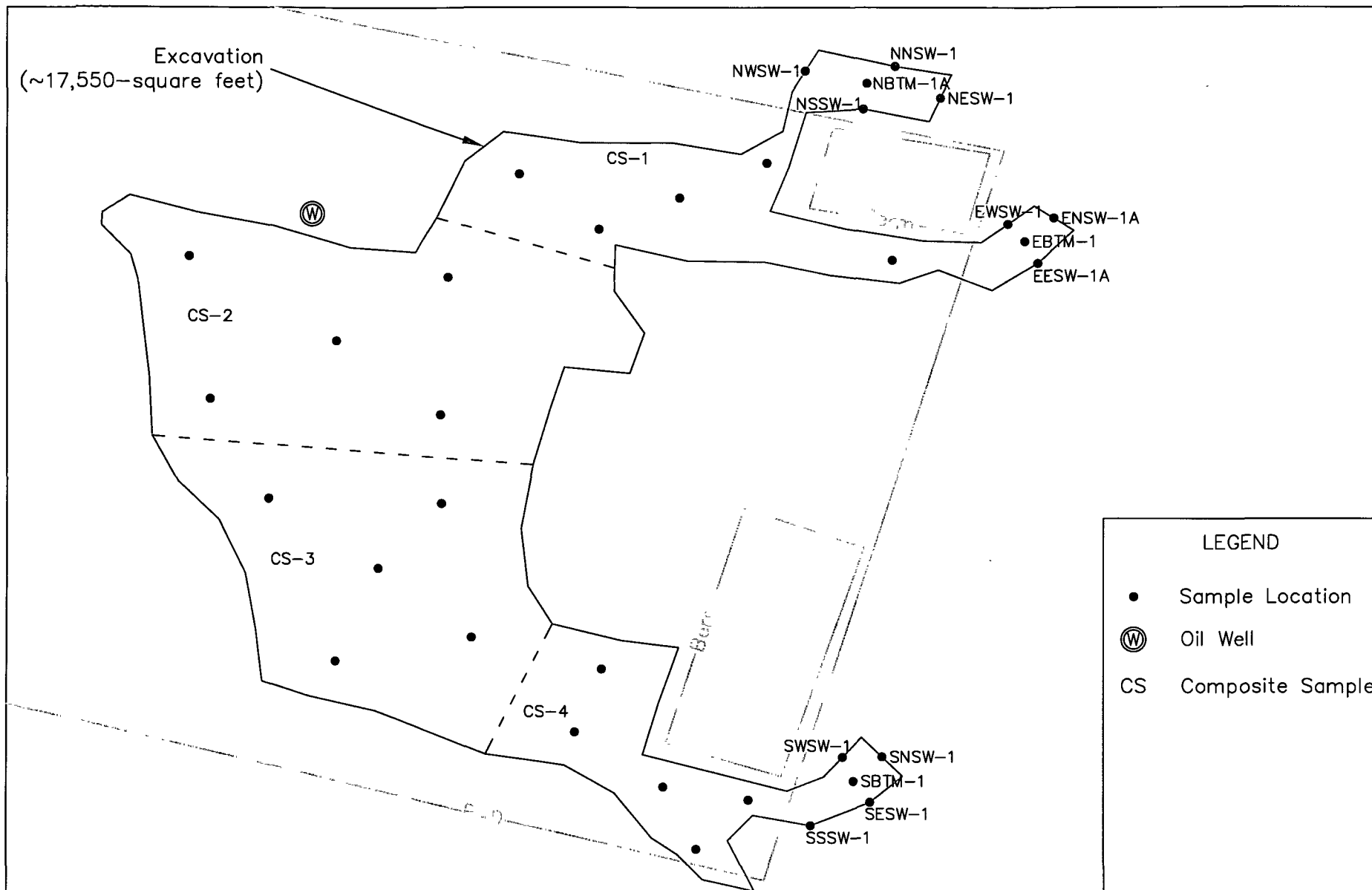
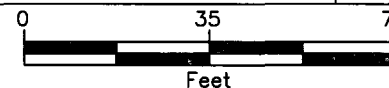


Figure 4
Excavation and Sample Map
Chesapeake Operating Inc.
Keller 27 Federal #2

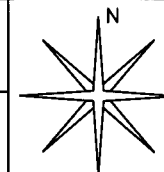
Lea County, New Mexico
NE 1/4 of the SW 1/4, Sec. 27, T23S, R34E
N 32°16' 25.45" W 103°27' 35.28"
Elevation: 3,476 feet amsl

DWG By: D Dominguez
April 2008

REVISED:



SHEET
1 of 1



TABLES

TABLE 1

Well Data**Chesapeake Operating Inc. - Keller 27 Federal #2 (EPI Ref. # 160097A)**

Well Number	Diversion ^A	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation ^B	Depth to Water (ft bgs)
CP 00606	0	NATOMAS NORTH AMERICA, INC.	PRO	23S	34E	23 1 4	N32° 17' 30.76"	W103° 26' 34.57"	26-Jul-79	3,389	265
USGS #1				23S	34E	22 4 2 1			08-Mar-96	3,420	282.2
USGS #2				23S	34E	23 4 2 3			30-Mar-81	3,375	234.91
USGS #3				23S	34E	23 4 2 3			13-Jan-71	3,375	233.06

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) and USGS Database

^A = In acre feet per annum

^B = Elevation interpolated from USGS topographical map based on referenced location.

PRO = 72-12-1 Prospecting or development of natural resource

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest

Shaded area indicates wells not shown in Figure 2

TABLE 2

Summary of Excavation Soil Sample Field Analyses and Laboratory Analytical Results

Chesapeake Energy - Keller 27 Federal #2 (EPI Ref. #160097A)

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 (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
NNSW-1	0.83	In situ	17-Apr-08	3.9	160	--	--	--	--	--	<10.0	<10.0	<20.0	--
NBTM-1	1.83	Excavated	17-Apr-08	200.3	200	--	--	--	--	--	--	--	--	--
NBTM-1A	1.83	In situ	17-Apr-08	49.7	--	--	--	--	--	--	<10.0	62.7	62.7	--
NSSW-1	0.83	In situ	17-Apr-08	33.2	180	--	--	--	--	--	<10.0	<10.0	<20.0	--
EBTM-1	1.0	In situ	17-Apr-08	23.8	240	--	--	--	--	--	<10.0	54.5	54.5	--
ENSW-1	0.5	Excavated	17-Apr-08	217.1	240	--	--	--	--	--	--	--	--	--
ENSW-1A	0.5	In situ	17-Apr-08	35.8	--	--	--	--	--	--	<10.0	<10.0	<20.0	--
EWSW-1	0.5	In situ	17-Apr-08	60.5	160	--	--	--	--	--	<10.0	263	263	--
EESW-1	10.5	Excavated	17-Apr-08	236.0	240	--	--	--	--	--	--	--	--	--
EESW-1A	0.5	In situ	17-Apr-08	31.7	--	--	--	--	--	--	<10.0	<210.0	<20.0	--
NESW-1	0.67	In situ	17-Apr-08	33.7	240	--	--	--	--	--	<10.0	<10.0	<20.0	--
NWSW-1	0.83	In situ	17-Apr-08	44.6	220	--	--	--	--	--	<10.0	<10.0	<20.0	--

TABLE 2

Summary of Excavation Soil Sample Field Analyses and Laboratory Analytical Results

Chesapeake Energy - Keller 27 Federal #2 (EPI Ref. #160097A)

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 (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
SSSW-1	0.5	In situ	17-Apr-08	20.3	--	--	--	--	--	--	<10.0	<10.0	<20.0	--
SNSW-1	0.5	In situ	17-Apr-08	48.3	--	--	--	--	--	--	<10.0	56.3	56.3	--
SESW-1	0.6	In situ	17-Apr-08	12.8	240	--	--	--	--	--	<10.0	<10.0	<20.0	--
SBTM	1.0	In situ	17-Apr-08	46.5	160	--	--	--	--	--	<10.0	<10.0	<20.0	--
SWSW-1	0.5	In situ	17-Apr-08	40.0	--	--	--	--	--	--	<10.0	<10.0	<20.0	--
CS-1	0.5	In situ	22-Apr-08	76.3	--	--	--	--	--	--	<10.0	86.8	86.8	--
CS-2	1	In situ	22-Apr-08	56.0	--	--	--	--	--	--	<10.0	92.7	92.7	--
CS-3	0.5	In situ	22-Apr-08	97.3	--	--	--	--	--	--	<10.0	261	261	--
CS-4	1	In situ	22-Apr-08	53.1	--	--	--	--	--	--	<10.0	<10.0	<20.0	--
NMOCD Remedial Thresholds				100		10				50			5,000	250 ¹

Bolded values are in excess of NMOCD Remediation Threshold Goals

BH = Bottom Hole

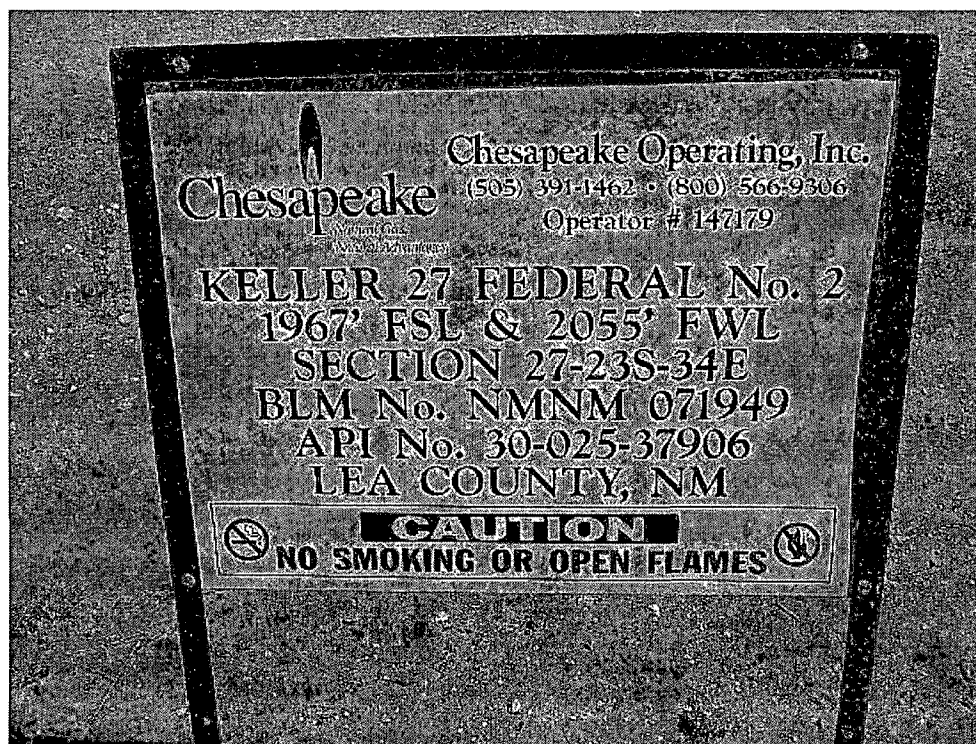
SW = Sidewall, N = North side, S = South side, W = West side and E = East side

¹ = Chloride and sulfate residuals may not be capable of impacting local groundwater above NMWQCC Groundwater Standards of 250 mg/Kg and 600 mg/Kg, respectively

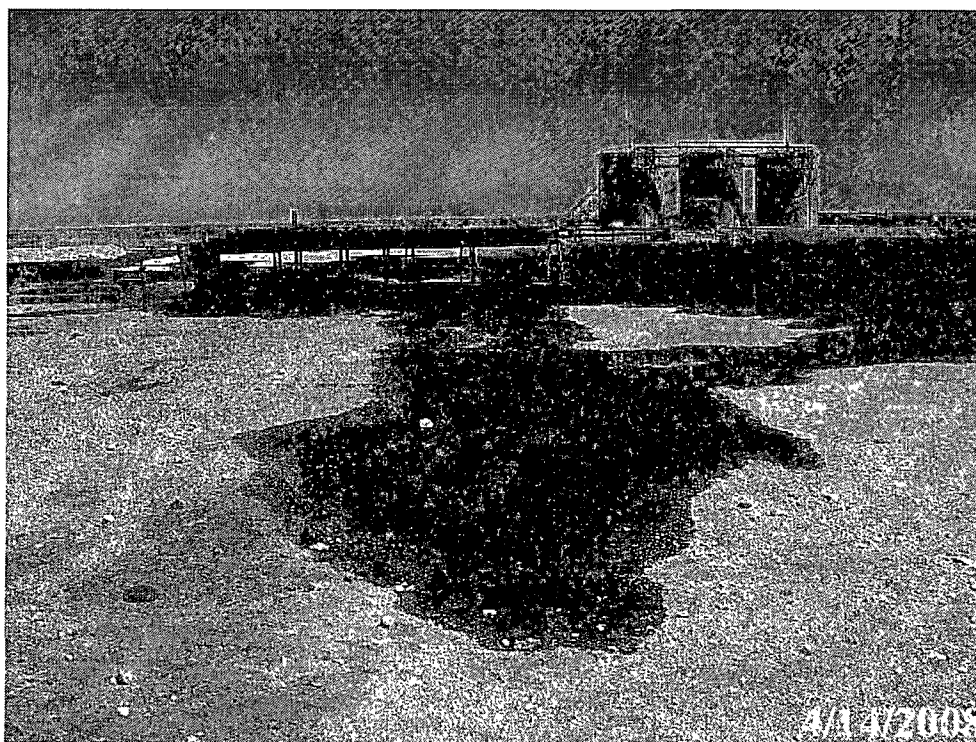
Shaded areas indicate soil samples collected from In-situ sample points

ATTACHMENTS

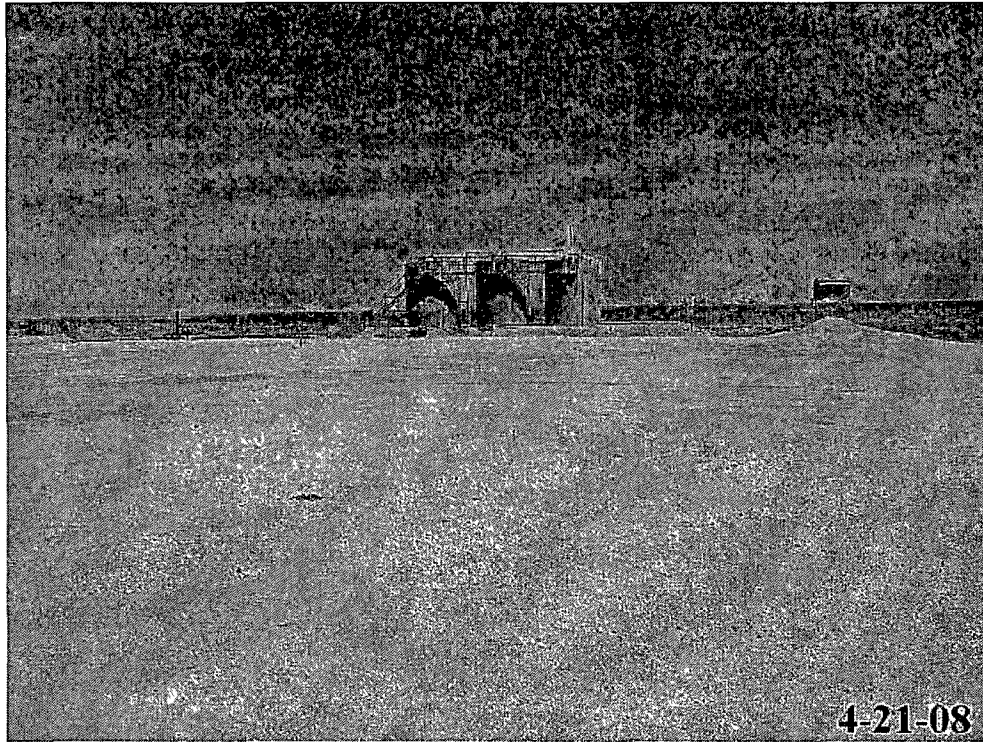
**ATTACHMENT I
SITE PHOTOGRAPHS**



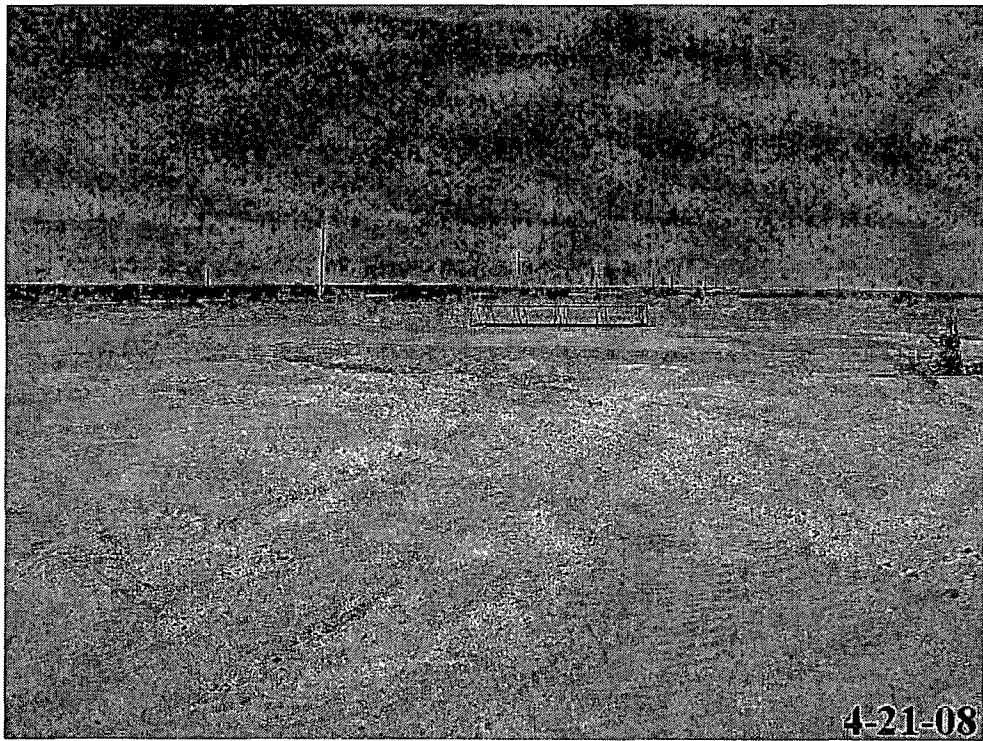
Photograph No. 1 – Lease Sign.



Photograph No. 2 – Looking southeasterly across release area.



Photograph No. 3 – Looking southeasterly across excavation area.



Photograph No. 4 – Looking northwesterly across excavation area.



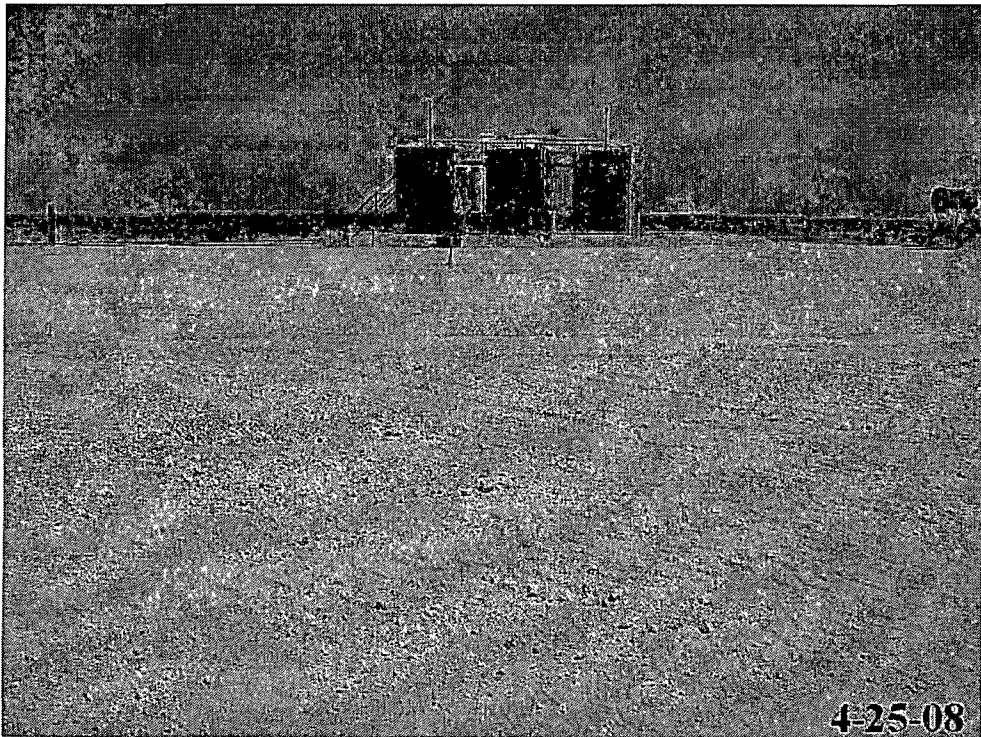
Photograph No. 5 – Looking northerly across excavation area.



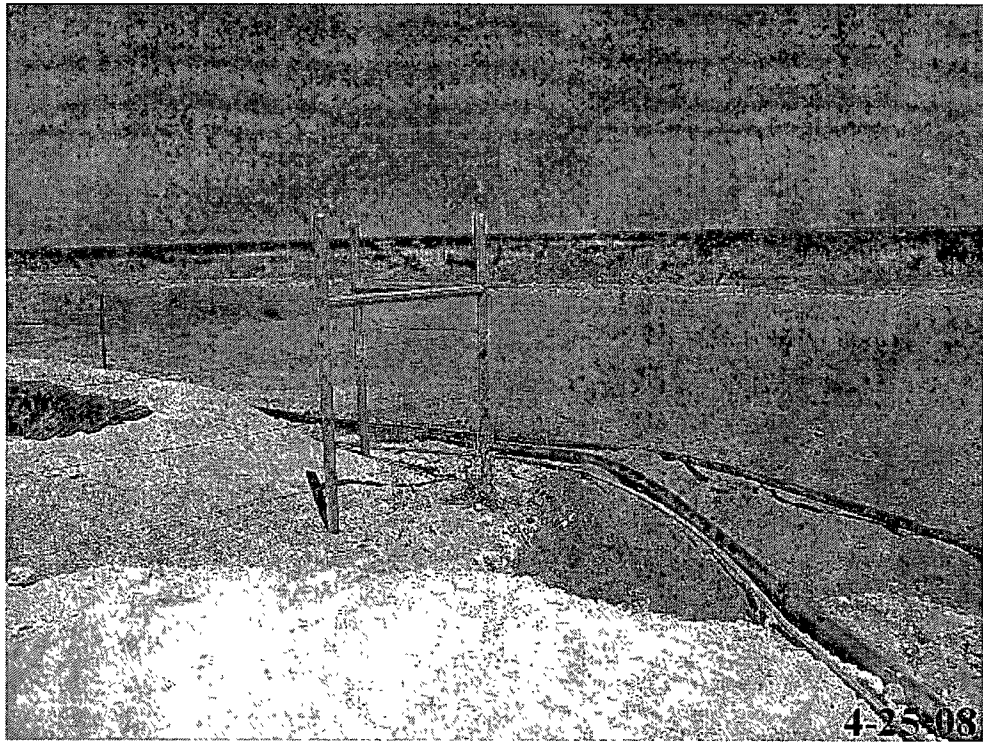
Photograph No. 6 – Looking northeasterly across excavation area.



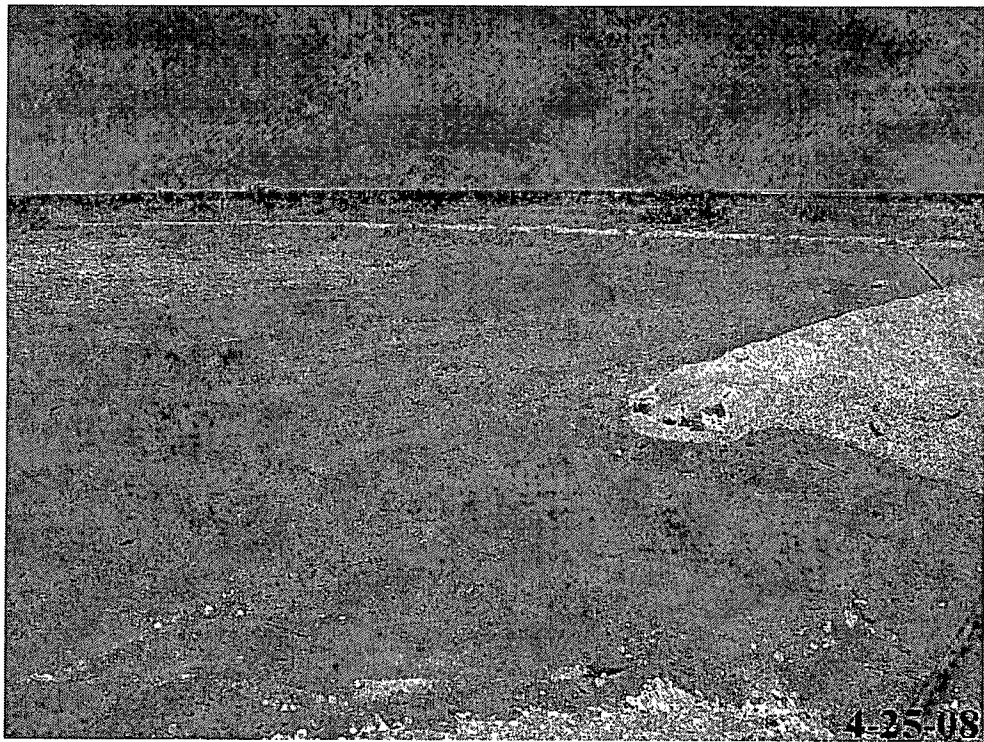
Photograph No. 7 – Looking easterly across excavation area.



Photograph No. 8 – Remediated site.



Photograph No. 9 – Remediated site.



Photograph No. 10 – Remediated site.

ATTACHMENT II
LABORATORY ANALYTICAL RESULTS
AND
CHAIN-OF-CUSTODY FORMS



ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: DAVID P. DUNCAN
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (575) 394-2601

Receiving Date: 04/17/08
Reporting Date: 04/21/08
Project Owner: CHESAPEAKE ENERGY (160097A)
Project Name: KELLER 27 FED. #2
Project Location: UL-D, SECT. 27, T 23 S, R 34 E

Sampling Date: 04/17/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: CK

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
------------	-----------	--	--

ANALYSIS DATE	04/19/08	04/19/08
H14676-1 NNSW-1 (0.83')	<10.0	<10.0
H14676-2 NSSW-1 (0.83')	<10.0	<10.0
H14676-3 EBTM-1 (1')	<10.0	54.5
H14676-4 EWSW-1 (0.5')	<10.0	263
H14676-5 NESW-1 (0.67')	<10.0	<10.0
H14676-6 NWSW-1 (0.83')	<10.0	<10.0
H14676-7 ENSW-1A (0.5')	<10.0	<10.0
H14676-8 EESW-1A (0.5')	<10.0	<10.0
H14676-9 SSSW-1 (0.5')	<10.0	<10.0
H14676-10 SNSW-1 (0.5')	<10.0	56.3
H14676-11 SESW-1 (0.5')	<10.0	<10.0
H14676-12 SBTM-1 (1')	<10.0	<10.0
H14676-13 SWSW-1 (0.5')	<10.0	<10.0
H14676-14 NBTM-1A (1.83')	<10.0	62.7
Quality Control	223	182
True Value QC	200	200
% Recovery	112	91.0
Relative Percent Difference	7.5	4.4

METHODS: TPH GRO & DRO: EPA SW-846 8015 M


Chemist


Date

H14676T EPI

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 client for 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 thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

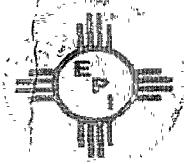
Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form

LAB: Cardinal

Company Name		Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST																										
EPI Project Manager		David P. Duncan		 <p>Attn: David P. Duncan P.O. Box 1558 Eunice, NM 88231</p>																												
Mailing Address		P.O. BOX 1558																														
City, State, Zip		Eunice New Mexico 88231																														
EPI Phone#/Fax#		505-394-3481 / 505-394-2601																														
Client Company		Chesapeake Energy																														
Facility Name		Keller 27 Fed. #2																														
Location		UL-D, Sect. 27, T 23 S, R 34 E																														
Project Reference		160097A																														
EPI Sampler Name		Kendall McCasland																														
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			SAMPLING		BTX 8021B	TPH 8015M	CHLORIDES (Cl ⁻)	SULFATES (SO ₄ ²⁻)	pH	TCLP	OTHER >>>	PAH										
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME																		
H14676-1	1 NNSW-1 (0.83')	G	1			X					X		17-Apr-08	10:10		X																
2	2 NSSW-1 (0.83')	G	1			X					X		17-Apr-08	10:22		X																
3	3 EBTM-1 (1')	G	1			X					X		17-Apr-08	9:00		X																
4	4 EWSW-1 (0.5')	G	1			X					X		17-Apr-08	9:26		X																
5	5 NESW-1 (0.67')	G	1			X					X		17-Apr-08	10:25		X																
6	6 NWSW-1 (0.83')	G	1			X					X		17-Apr-08	10:30		X																
7	7 ENSW-1A (0.5')	G	1			X					X		17-Apr-08	10:48		X																
8	8 EESW-1A (0.5')	G	1			X					X		17-Apr-08	10:58		X																
9	9 SSSW-1 (0.5')	G	1			X					X		17-Apr-08	13:23		X																
10	10 SNSW-1 (0.5')	G	1			X					X		17-Apr-08	12:34		X																
Sampler Relinquished:		04/17/08		Received By:		E-mail results to: dduncan@envplus.net																										
Relinquished by:		04/17/08		Received By: (lab staff)																												
Delivered by:		Sample Cool/Intact		Checked By:																												
		Yes No		MCB																												

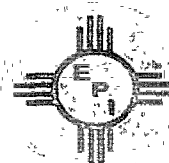
Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form

LAB: Cardinal

Company Name		Environmental Plus, Inc.		Bill To										ANALYSIS REQUEST														
EPI Project Manager		David P. Duncan		 <p>Attn: David P. Duncan P.O. Box 1558 Eunice, NM 88231</p>																								
Mailing Address		P.O. BOX 1558																										
City, State, Zip		Eunice New Mexico 88231																										
EPI Phone#/Fax#		505-394-3481 / 505-394-2601																										
Client Company		Chesapeake Energy																										
Facility Name		Keller 27 Fed. #2																										
Location		UL-D, Sect. 27, T 23 S, R 34 E																										
Project Reference		160097A																										
EPI Sampler Name		Kendall McCasland																										
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			SAMPLING		BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO ₄)	pH	TCLP	OTHER >>>	PAH						
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME														
H14676-11	11 SESW-1 (0.5')	G	1			X					X		17-Apr-08	13:40		X												
-12	12 SBTM-1 (1')	G	1			X					X		17-Apr-08	13:43		X												
-13	13 SWSW-1 (0.5')	G	1			X					X		17-Apr-08	13:45		X												
-14	14 NBTM-1A (1.83')	G	1			X					X		17-Apr-08	13:20		X												
15																												
16																												
17																												
18																												
19																												
20																												

Sampler Relinquished:		04/17/08	Received By:	E-mail results to: dduncan@envplus.net	
Time 0420					
Relinquished by:		04/17/08	Received By: (lab staff)		
Time 0420					
Delivered by:		Sample Cool & Intact Yes No		Checked By: 40213	



ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: DAVID P. DUNCAN
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (575) 394-2601

Receiving Date: 04/22/08
Reporting Date: 04/23/08
Project Owner: CHESAPEAKE ENERGY (160097A)
Project Name: KELLER 27 FED. #2
Project Location: UL-D, SECT. 27, T 23 S, R 34 E

Sampling Date: 04/22/08
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: CK/AB

LAB NUMBER SAMPLE ID		GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE		04/22/08	04/22/08
H14694-1	CS-1 (0.5')	<10.0	86.8
H14694-2	CS-2 (1')	<10.0	92.7
H14694-3	CS-3 (0.5')	<10.0	261
H14694-4	CS-4 (1')	<10.0	<10.0
Quality Control		578	514
True Value QC		500	500
% Recovery		116	103
Relative Percent Difference		2.6	9.5

METHODS: TPH GRO & DRO: EPA SW-846 8015 M

Date _____

H14694T EPI

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 client for 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 thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.


Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form

LAB: Cardinal

Company Name		Environmental Plus, Inc.		Bill To										ANALYSIS REQUEST											
EPI Project Manager		David P. Duncan		 <p>Attn: David P. Duncan P.O. Box 1558 Eunice, NM 88231</p>																					
Mailing Address		P.O. BOX 1558																							
City, State, Zip		Eunice New Mexico 88231																							
EPI Phone#/Fax#		575-394-3481 / 575-394-2601																							
Client Company		Chesapeake Energy																							
Facility Name		Keller 27 Fed. #2																							
Location		UL-D, Sect. 27, T 23 S, R 34 E																							
Project Reference		160097A																							
EPI Sampler Name		Danny Deaton																							
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING		BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO ₄)	pH	TCLP	OTHER >>>	PAH				
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE											TIME	
H14694-1	1 CS-1 (0.5')	G	1			X					X		22-Apr-08	10:00		X									
-2	2 CS-2 (1')	G	1			X					X		22-Apr-08	10:10		X									
-3	3 CS-3 (0.5')	G	1			X					X		22-Apr-08	10:20		X									
-4	4 CS-4 (1')	G	1			X					X		22-Apr-08	10:30		X									
	5																								
	6																								
	7																								
	8																								
	9																								
	10																								

Sampler Relinquished:		04/22/08	Received By:		E-mail results to: dduncan@envplus.net NOTE: Please analyze soil samples at your earliest convenience. Thank You	
Time 0100		Time 0708				
Relinquished by:		Received By: (lab staff)				
Delivered by:		Sample Cool & Intact		Checked By:		
		Yes No		MCTB		

ATTACHMENT III
INFORMATION AND METRICS FORM
INITIAL NMOCD FORM C-141
FINAL NMOCD FORM C-141



Information and Metrics

Incident Date

14 April 2008

NMOCD Notified:

15 April 2008

Site: Keller 27 Federal No. 2		Assigned Site Reference : #160097A	
Company: Chesapeake Energy			
Street Address: 1616 West Bender			
Mailing Address: P.O. Box 190			
City, State, Zip: Hobbs, New Mexico 88240			
Representative: Bradley Blevins			
Representative Telephone: (575) 391-1462 ext. 6224			
Telephone:			
Fluid volume released (bbls): 20-bbls		Recovered (bbls): Zero (0)	
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)			
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)			
Leak, Spill, or Pit (LSP) Name: Keller 27 Federal No. 2			
Source of contamination: Petroleum products			
Land Owner, i.e., BLM, ST, Fee, Other: BLM			
LSP Dimensions:			
LSP Area: Release Area ~15,220 s.f; Overspray Area ~ 131,260 s.f.			
Location of Reference Point (RP):			
Location distance and direction from RP:			
Latitude: N 32° 16' 25.45"			
Longitude: W 103° 27' 35.28"			
Elevation above mean sea level: 3,476 feet			
Feet from South Section Line: 1967'			
Feet from West Section Line: 2055'			
Location- Unit or ¼: NE 1/4 of the SW 1/4		Unit Letter: K	
Location- Section: 27			
Location- Township: T23S			
Location- Range: R34E			
Surface water body within 1000' radius of site: none			
Domestic water wells within 1000' radius of site: none			
Agricultural water wells within 1000' radius of site: none			
Public water supply wells within 1000' radius of site: none			
Depth from land surface to groundwater (DG): ~253 feet			
Depth of contamination (DC): unknown			
Depth to groundwater (DG - DC = DtGW): <253 feet			
1. Groundwater		2. Wellhead Protection Area	
If Depth to GW <50 feet: 20 points		If <1000' from water source, or; <200' from private domestic water source: 20 points	
If Depth to GW 50 to 99 feet: 10 points			
If Depth to GW >100 feet: 0 points		If >1000' from water source, or; >200' from private domestic water source: 0 points	
3. Distance to Surface Water Body			
<200 horizontal feet: 20 points			
200-1000 horizontal feet: 10 points			
>1000 horizontal feet: 0 points			
Site Rank (1+2+3) = 0+0+0 = 0			
Total Site Ranking Score and Acceptable Concentrations			
Parameter	>19	10-19	0-9
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1,000 ppm	5,000 ppm
¹ 100 ppm field VOC headspace measurement may be substituted for lab analysis			

District I
1625 N. French Dr., Hobbs, NM 88201
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87401
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

RECEIVED

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised October 10, 2003

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

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

APR 22 2008
HOBBS OGD

Release Notification and Corrective Action

OPERATOR



Initial Report



Final Report

Name of Company: Chesapeake Energy	Contact: Bradley Blevins
Address: P.O. Box 190, Hobbs, NM 88240	Telephone No.: (575) 391-1462 ext. 6224
Facility Name: Keller 27 Federal #2	Facility Type: Production Well

Surface Owner: BLM	Mineral Owner:	Lease No.:
--------------------	----------------	------------

LOCATION OF RELEASE

API 30 025 37906

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	27	23S	34E	1967	FSL	2055	FWL	Lea

Latitude: N 32° 16' 25.45" Longitude: W 103° 27' 35.28"

NATURE OF RELEASE

Type of Release: Petroleum	Volume of Release: 20 bbls	Volume Recovered: none
Source of Release: Casing valve	Date and Hour of Occurrence: 4-14-08 @ 6:30 AM	Date and Hour of Discovery: 4-14-08 @ 6:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Chris Williams, NMOCD - District 1	
By Whom? Bradley Blevins	Date and Hour: 4-15-08 via e-mail @ 8:25 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: Not Applicable	

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Depth to water: ~253 bgs

Describe Cause of Problem and Remedial Action Taken.* Valve (without attached handle) located on the well head casing was opened by unauthorized individuals creating a possible case of vandalism

Describe Area Affected and Cleanup Action Taken.* Approximately 15,220 s.f. of surface area was inundated by the release of ±20-barrels of petroleum product (no recovery) with ±131,260 s.f. of pasture land receiving overspray mist. Majority of the inundated area was on the production and tank battery caliche pad. Three (3) minor sections of pasture land were affected. An EPI Emergency Response Team excavated and transported approximately 14 c.y. of surface contaminated material to EPI Land Farm for treatment. The overspray area vegetation was mowed to a manageable height by use of a brush hog. This area will receive a 6% solution of Micro-Blaze™ to accelerate natural attenuation of surficial TPH contaminants. Three (3) minor sections of pasture land will be excavated to size (depth and width) necessary for remediation. Topsoil will be replaced and area seeded with a blend approved by the BLM. Caliche pad will be excavated a minimum six (6) inches depth and disturbed areas overlain with non-contaminated caliche. Contaminated caliche will be disposed at a State approved facility. Described remediation activities are contingent on NMOCD approval.

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:	OIL CONSERVATION DIVISION <i>[Signature]</i>	
Printed Name: Bradley Blevins	Approved by District Supervisor ENVIRONMENTAL ENGINEER	
Title: Field Supervisor	Approval Date: 4-28-08	Expiration Date: 6-28-08
E-mail Address: bblevins@chkenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 4-15-08 Phone: (575) 391-1462 ext. 6224		1 RP# 1846

* Attach Additional Sheets If Necessary

PCOHO 812339439

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

Form C-141
Revised October 10, 2003

MAY 23 2008

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

HOBBS OCD

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Chesapeake Energy	Contact: Bradley Blevins
Address: P.O. Box 190, Hobbs, NM 88240	Telephone No.: (575) 391-1462 ext. 6224
Facility Name: Keller 27 Federal #2	Facility Type: Production Well

Surface Owner: BLM	Mineral Owner:	API No.: 30-025-37906
--------------------	----------------	-----------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	27	23S	34E	1967	FSL	2055	FWL	Lea

Latitude: N 32° 16' 25.45" Longitude: W 103° 27' 35.28"

NATURE OF RELEASE

Type of Release: Petroleum	Volume of Release: 20 bbls	Volume Recovered: none
Source of Release: Casing valve	Date and Hour of Occurrence: 4-14-08 @ 6:30 AM	Date and Hour of Discovery: 4-14-08 @ 6:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Chris Williams, NMOCD - District 1	
By Whom? Bradley Blevins	Date and Hour: 4-15-08 via e-mail @ 8:25 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: Not Applicable	

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Depth to water: ~253 bgs

Describe Cause of Problem and Remedial Action Taken.* Valve on well head casing opened by unauthorized individuals (possible vandalism).

Describe Area Affected and Cleanup Action Taken.* Approximately 15,220-ft² of surface area was inundated by the release with 131,000-ft² of pasture land receiving overspray mist. The overspray area vegetation was mowed to a manageable height utilizing a brush hog. The area was sprayed with a 6% solution of Micro-Blaze™ to accelerate natural attenuation of surficial TPH contaminants. From April 14, 2008 through April 21, 2007, approximately 676 yds³ of impacted material were excavated from a combined surface area of ±17,525-ft² at depths ranging from 0.5- to 1.83-feet bgs. Impacted soil was transported to EPI and Pitchfork Landfarms for treatment. During excavation activities, soil samples were collected from sidewalls and bottom at varying depths for field analyses and confirmatory laboratory analytical results. Upon satisfactory laboratory analytical results confirming TPH constituents were below NMOCD remedial threshold standards, the excavation located on the caliche production pad was backfilled with clean caliche (~462 yds³) on April 23, 2008. Backfilling activities continued through April 25, 2008 with excavated areas outside the caliche production pad filled with native topsoil (154 yds³). Both caliche and topsoil material were transported to the site from a private pit. Disturbed areas within the caliche production pad were contoured to allow vehicular traffic and promote controlled natural drainage. Contiguous areas outside the caliche production pad were similarly contoured to allow natural drainage and will be disked and seeded with a blend preferred by the BLM.

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: <i>Bradley Blevins</i>	OIL CONSERVATION DIVISION <i>[Signature]</i>	
Printed Name: Bradley Blevins	Approved by District Supervisor: ENVIRONMENTAL ENGINEER	
Title: Field Supervisor	Approval Date: 5.23.08	Expiration Date: —
E-mail Address: bblevins@chkenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 5-21-08 Phone: (575) 391-1462 ext. 6224		IRP-1846

* Attach Additional Sheets If Necessary