29 October 2010

Mr. Mike Bratcher Environmental Engineer New Mexico Oil Conservation Division 1301 West Grand Artesia, New Mexico 88210

RE: Revised Remediation Proposal

Exxon Mobil –Avalon Delaware Unit Well #238 UL-K (NE ¼ of the SW ¼) of Section 30, T 20 S, R 28 E Latitude: 32° 32' 41.21"; Longitude: 104° 13' 15.65"

Eddy County, New Mexico

EPI Ref. #190037

Dear Mr. Bratcher:

Release History

On July 28, 2009 at 12:30 p.m., produced water was released from a fiberglass injection flow line (3" dia.) when a leak developed. Approximately eighty-three (83) barrels of produced water were released with zero (0) barrels of fluid recovered. Fluids released impacted approximately 7,300 ft² of the surrounding terrain (Ref. *Figure #3*). NMOCD (M. Bratcher-Artesia) was notified of the release on July 28, 2009 at 4:15 p.m.

Site Background

The Site is located in UL-K (NE ¼ of the SW ¼) of Section 30, T 20 S, R 28 E at an approximate elevation of 3,299 feet above mean sea level (amsl). The property is owned by the State of New Mexico and managed by the New Mexico State Land Office (NMSLO). 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 (Ref. Figure 2). Subsequent drilling activities as described in Field Work indicated groundwater is greater than one hundred sixty (160) feet below ground surface (bgs), but impacted material exist to approximately one hundred-ten (110) feet bgs. Utilizing this information, New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this Site were determined as follows:

Parameter	Remedial Goal
Benzene	10 mg/Kg
BTEX	50 mg/Kg
TPH	100 mg/Kg
Chlorides	500 mg/Kg

Field Work

On July 28, 2009 EPI reacted to an Emergency Response and started preventative remediation activities on the release area. Initially EPI performed site assessment, GPS Survey and photographed the release area. During the period of July 28-29, 2009, the fiberglass injection line was located and exposed to allow roust-a-bout crews to repair it. However, eventually the injection line was temporarily abandoned in favor of a shorter route. Contaminated soil surrounding the injection line was excavated and stockpiled on plastic liners to prevent contamination of adjacent areas. From July 30 – August 03, 2009 approximately 920-cubic yards of impacted material were transported to Sundance Services, Inc., (Permit No. NM-01-0003) for disposal. Remainder of contaminated material was stockpiled on plastic liners

On July 30, 2009 eight (8) soil samples were collected from sidewalls and five (5) from bottom of excavation (Ref. *Figure #3*). Soil samples were tested in the field for chloride concentrations. As the nature of the release being produced water, analyses were not conducted for BTEX or TPH concentrations. On July 31, 2009 a test trench was excavated to a depth of twenty (20)-feet bgs. Soil samples were collected at two (2) feet intervals and field tested for chloride concentrations (Ref. *Table #2*). Due to chloride concentrations being greater than NMOCD Remedial Threshold Goals (NMOCD Goals) of 500-mg/Kg, soil samples were not submitted to an independent laboratory for analyses. A LaMotte Chloride Test Kit (Titration Method) was used for field analyses of chloride concentrations.

EPI and Straub Corporation mobilized at the Site on August 13, 2009 to direct the location and advancement of three (3) soil borings (i.e., BG-1, SB-1 and SB-2) with BG-1 serving as background comparison for chloride concentrations (ref. *Figure 4* for locations). A predetermined depth of seventy (70) vertical feet was established to prevent intrusion into suspected groundwater table. Soil samples were collected at varying intervals dependent upon chloride concentrations derived from field analyses (Ref. *Table #3* for interval ranges and chloride concentrations).

On March 3, 2010 EPI and Straub Corporation mobilized to job site for advancement of SB-3. The soil boring located near the point of release was advanced to approximately 62 feet below bottom of excavation (~ 70 feet bgs). Thirteen (13) field analyses were conducted on soil samples collected at five (5) feet intervals from bottom of excavation to total depth (TD) of soil boring. However, only portions of soil samples collected initially at five (5) feet bgs then at ten (10) feet intervals to TD were sent to an independent laboratory for analyses of chloride concentrations (Ref. *Table #3*).

Without sufficient data to correctly identify depth of groundwater, EPI and Straub Corporation mobilized to the job site on June 14, 2010 to advance an exploratory bore hole for this purpose. BG-2 was advanced to a depth of 160 feet bgs with no trace of groundwater indicated in the drill cuttings. The soil boring was covered for protection and allowed to set overnight. On June 15, 2010 a water probe was inserted into the soil boring to TD without detecting evidence of groundwater. The soil boring was plugged using bentonite, filler material and cement. Due to the soil boring being exploratory in nature, no soil samples were collected. However, well logs were kept of the underlying formations.

In an endeavor to identify depth of contaminated soil, EPI and Straub Corporation mobilized to the job site again on August 24, 2010. Locating SB-4 as near to original point of release as possible, the soil boring was advanced to approximately 110 feet bgs. Soil samples were initially collected at ten (10) feet bgs [approximately two (2) feet below bottom of excavation] then at five (5) feet intervals to thirty (30) feet bgs. From this interval to TD of the soil boring, soil

samples were collected at ten (10) feet intervals. Although impacted material at TD indicated chloride concentrations slightly above NMOCD Goals of 500-mg/Kg existed, the tendency of decreased chloride concentrations would allow extrapolation of data to locate depth of acceptable levels. The soil boring was plugged using bentonite, filler material and cement.

During advancement of all soil borings, soil samples designated for laboratory analyses were immediately placed in laboratory provided containers, appropriately labeled, placed in ice and transported to Cardinal Laboratory, Hobbs, New Mexico for quantification of chloride concentrations under Chain-of-Custody protocol.

Analytical Data

In reviewing *Table #3* (data) and *Figure #6* (location and data), it should be noted chloride concentrations greater than NMOCD Goals of 500-mg/Kg exist in some soil borings from ground surface to TD, ie., SB-3 (7,120-mg/Kg @ 62 feet bgs) and SB-4 (560-mg/Kg @ 110 feet bgs). The two (2) other soil borings come into compliance with NMOCD Goals prior to TD, i.e., SB-1 (200-mg/Kg @ 60 feet bgs) and SB-2 (448-mg/Kg @ 30 feet bgs).

Field analyses of chloride concentrations in southerly Excavation #2 indicate BH-1 (400-mg/Kg) and BH-2 (240-mg/Kg) are below NMOCD Goals. However, BH-3 (9,480-mg/Kg) is significantly above NMOCD Goals (Ref. *Figure #3* for location). Correspondingly, SW-1 (400-mg/Kg), SW-2 (240-mg/Kg), SW-3 (240-mg/Kg), SW-4 (240-mg/Kg) and SW-5 (240-mg/Kg) indicate termination of lateral extent impacted material.

Field analyses of chloride concentrations in northerly Excavation #1 indicate BH-4 (10,240-mg/Kg) and bottom of Sample Trench soil sample BH-5G (11,360-mg/Kg) are above NMOCD Goals. Sidewall soil samples SW-7 (400-mg/Kg) and SW-8A (240-mg/Kg) are below while SW-6A (800-mg/Kg) is above NMOCD Goals.

Evaluation of these values indicate impacted material surrounds the point of release and extends in a southerly direction following natural lay of the ground. The impacted area appears to terminate at the southerly tip of Excavation #2 between BH-3 and BH-2. Chloride concentrations above NMOCD Goals in bottom in Excavation #1 are known to exist to approximately one hundred-ten (110) feet bgs. However, chloride concentrations in SW-7 and SW-8 indicate NMOCD Goals have been achieved laterally in the east-west direction while SW-6 indicates extension of sidewall excavation in the northerly direction.

Site Remedial Proposal

Horizontal and vertical limits of impacted material are confined to a relatively small area as denoted above. Geological information derived from well log bores indicate a dense layer of caliche combined with clay undermines the impacted area. With groundwater depth greater than one hundred-sixty (160) vertical feet bgs, chances of groundwater contamination are remote. In view of these arguments, EPI proposes no additional vertical excavation of the release area be undertaken. The bottom of existing excavation will be cleaned of loose material and removal of major irregularities. Material breaching the two (2) excavation sites will be removed to a depth which allows smooth transition from the differential gradients. Sidewalls will be excavated to whatever width is required to achieve MNOCD Goals of 500-mg/Kg. Soil samples will be collected from sidewalls, bottom of Excavation #2 (BH-1 and BH-2) and transported to an independent laboratory for analyses of chloride concentrations. Upon receipt of laboratory results indicating NMOCD Goals have been achieved, backfill operations will commence.



Bottom of the excavation will be backfilled with select caliche to within five (5) feet of original ground surface. A minimum two (2) feet thick layer of clean top soil or cushion sand will be placed over the caliche backfill. A forty (40) mil thick layer polyethylene liner installed over the cushion material extending a minimum of two and one-half (2.5) vertical feet up sidewalls. Backfill remainder of the excavation with clean top soil free of deleterious material, rocks and clumps. This will allow a three (3) feet thick layer of top soil to establish vegetative root growth.

After backfill operations are complete, the entire disturbed area will be returned to natural surface gradient with contours preventing wind/water erosion. Disturbed areas will be seeded with a grass mixture as determined by the NMSLO. However, EPI recommends immediate drill seeding of disturbed areas with winter wheat mixture to assist in preventing wind/water erosion. This activity will be followed with drill seeding of areas with a NMSLO Mixture in late spring of 2011 when ground and weather conditions are more conducive to vegetative growth.

Upon approval of the *Remediation Proposal* with amendments as may be noted by NMOCD or NMSLO personnel, EPI will initiate remedial phase of the project. At conclusion of the project, a *Site Closure Report* will be submitted to appropriate NMOCD, ExxonMobil Corporation and NMSLO personnel.

Should you have any technical questions or concerns, please contact me at (575) 394-3481 (office), (575) 441-7802 (mobile) or via email at dduncanepi@gmail.com. Official communications should be directed to Mr. Shelby Pennington at (432) 266-1454 (mobile), (432) 596-4211 ext. 14 (office) or via email at shelby.g.pennington@exxonmobil.com. Official correspondence should be addressed to:

Mr. Shelby G. Pennington ExxonMobil Fullerton/Seminole & New Mexico Operations Foreman Work Management System Functional Lead 6810 NW 8000 Andrews, Texas 79714

Sincerely,

ENVIRONMENTAL PLUS, INC.

David P. Duncan Civil Engineer EPI Project Manager

Cc: Shelby Pennington, Operations Foreman, ExxonMobil Corporation
 Cody Miller, General Manager, EPI
 Roger Boone, Operations Superintendent, EPI
 Myra Harrison, NMSLO District Resources Manager – Hobbs, NM
 Steven Ikeda, NMSLO Field Operation – Santa Fe, NM



Enclosures:

Figure 1 – Area Map

Figure 2 – Site Location Map

Figure 3 – Site Map with Soil Sample Locations

Figure 4 – Soil Boring Location Map

Figure 5 – Soil Sample Location Map (3-03-10)

Figure 6 - Soil Boring Location Map with Analytical Results

Table 1 – Well Data

Table 2 – Summary of Soil Boring Soil Sample Field Analysis and Laboratory Analytical Results

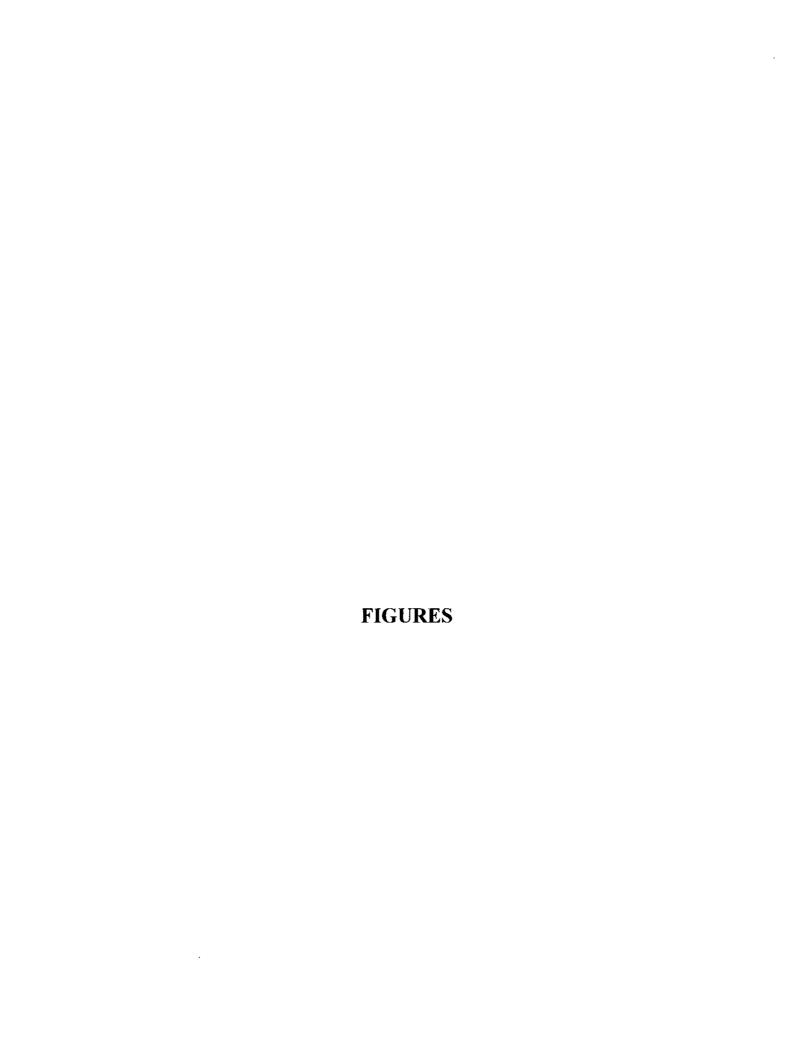
Table 3 – Summary of Excavation Soil Sample Field Analysis and Laboratory Analytical Results

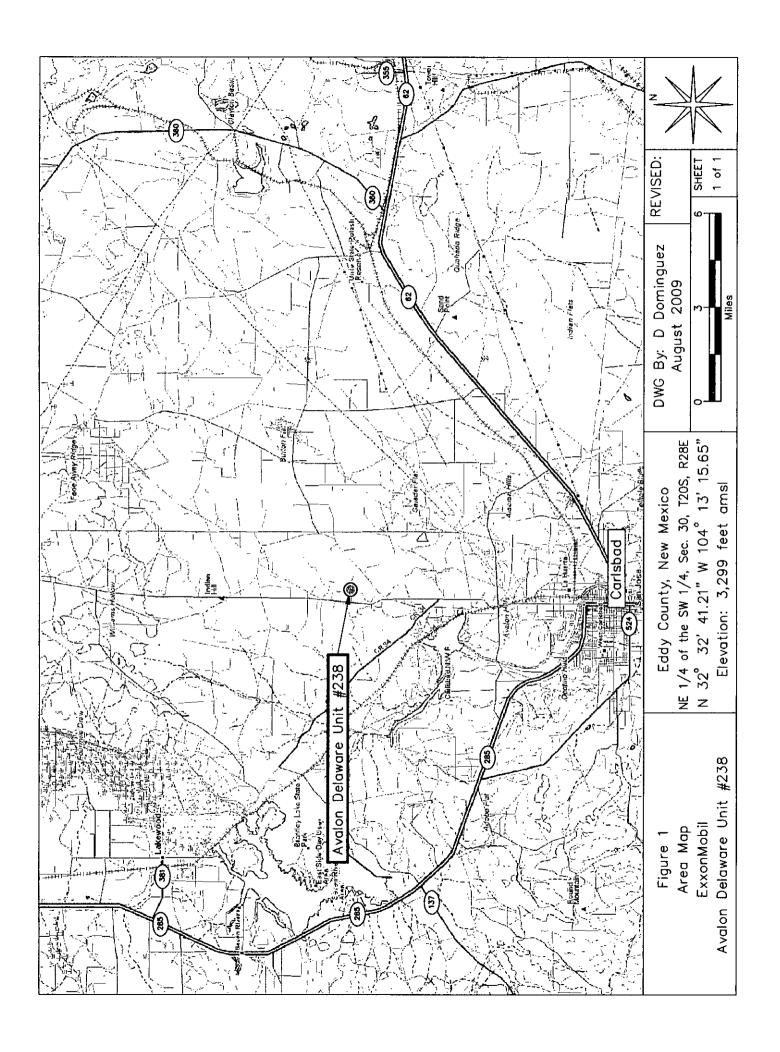
Attachment I – Site Photographs

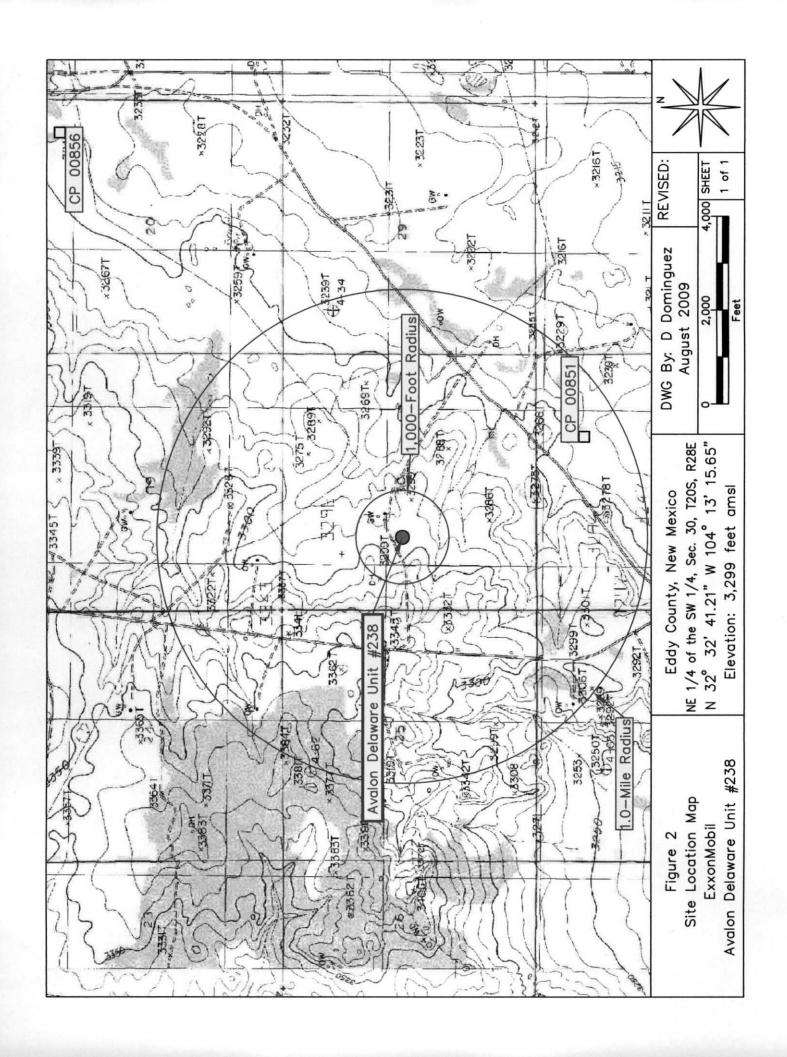
Attachment II - Laboratory Analytical Results and Chain-of-Custody Form

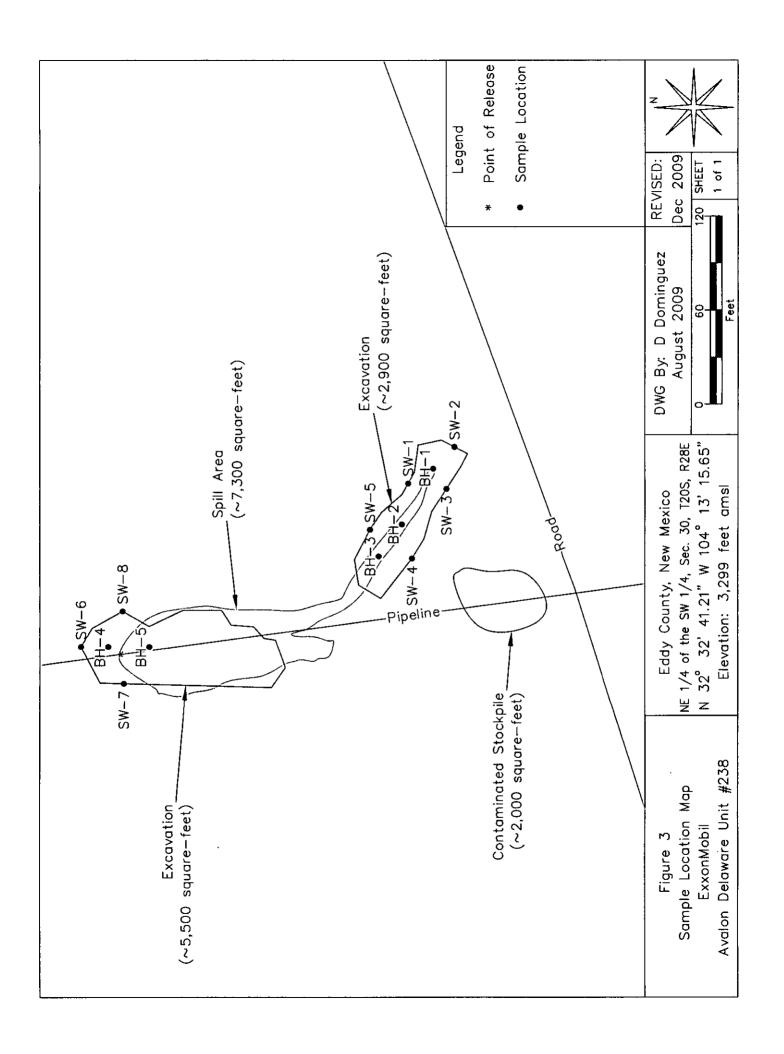
Attachment III - Soil Boring Logs

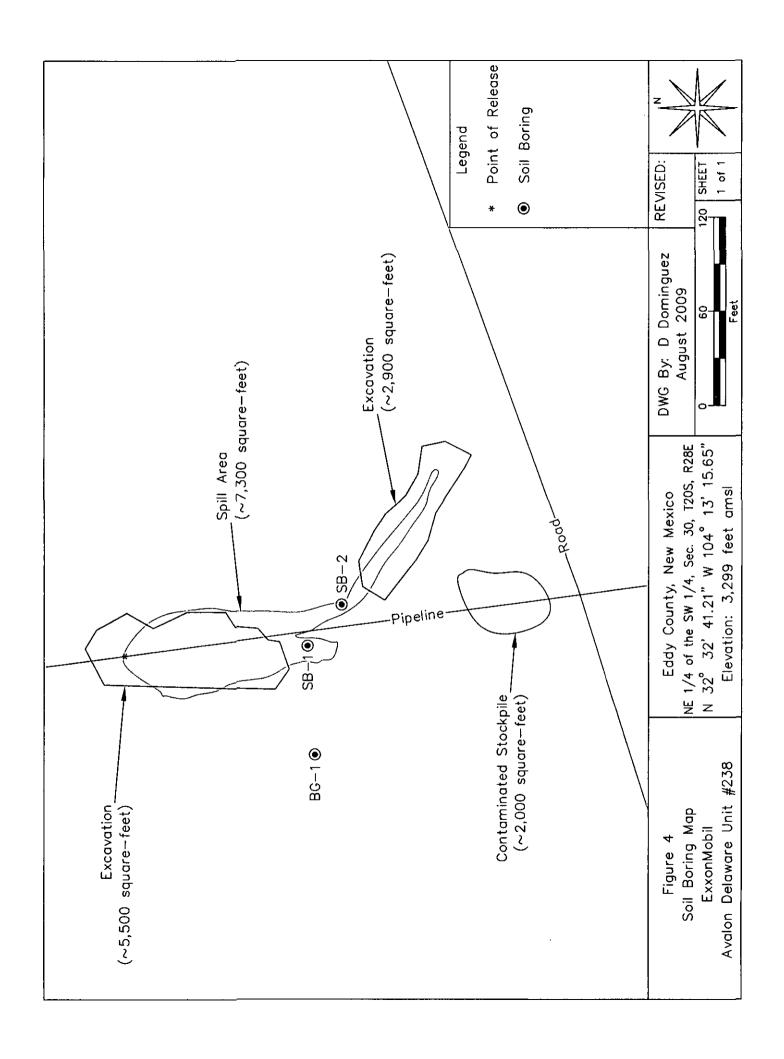
Attachment IV - Copy of Initial NMOCD Form C-141

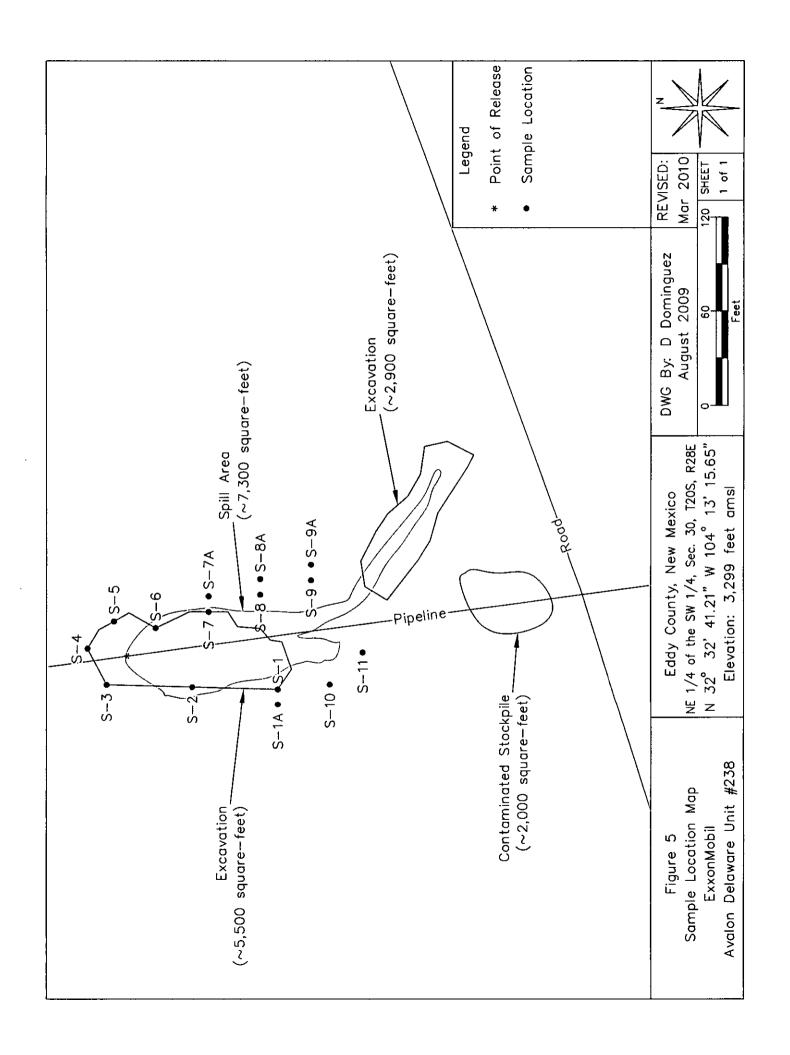


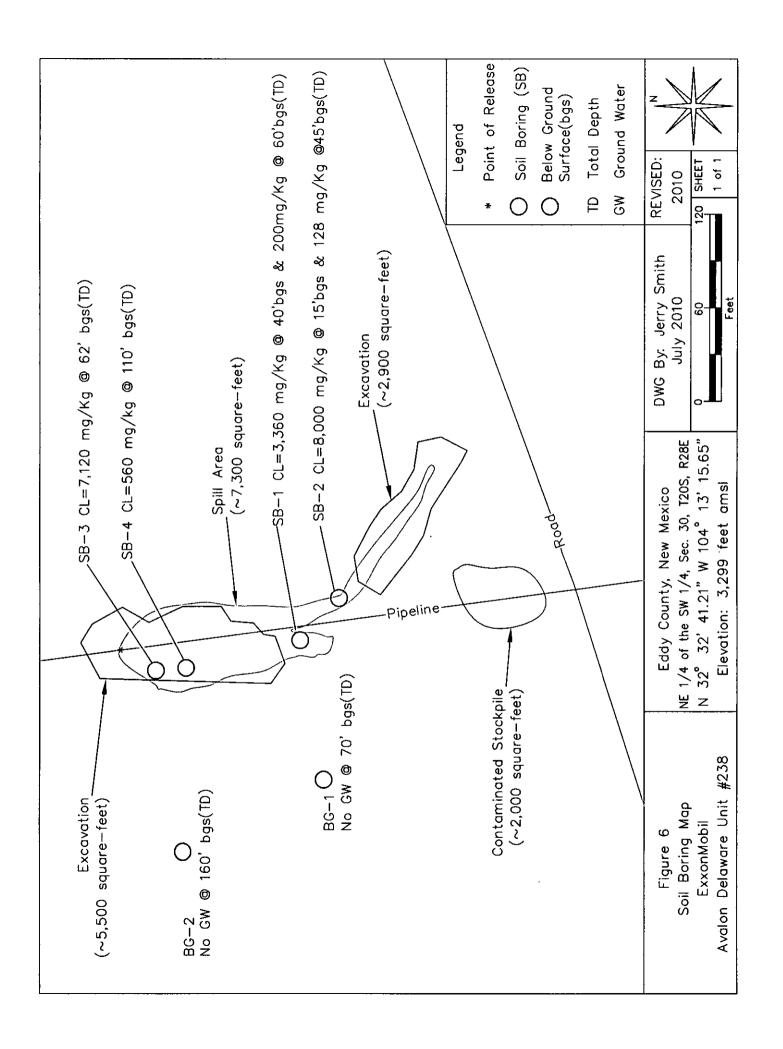












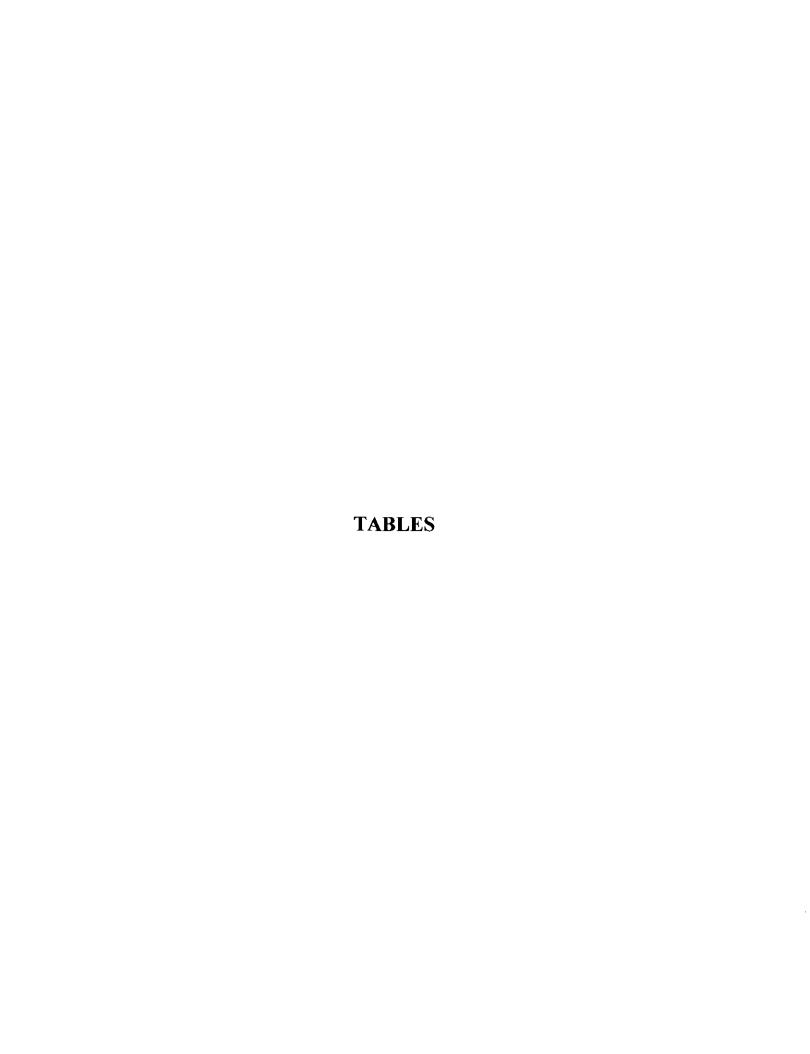


TABLE 1

WELL INFORMATION REPORT*

ExxonMobil - Avalon Delaware Unit #238 (Ref #190037)

	3.280	03-Sep-80	27E 36*4 2 N32° 31' 40.75" * : W104° 13' 41.97" 03-Sep-80	N32° 31' 40.75" * ;	36.42		. S0Z	PRO	MWJ PRODUCING COMPANY	ę.	C 01923
V	3,199		W104° 11' 56.26"	28E 32 431 N32°31'31.13" \ W104°11'56.26"	32 431	38E	20S	STK	BRUCE RIGGS *	0	CP 00746 EXP
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	3,240		W104° 11' 36.90"	28E 20 2 2 [N32° 33' 51.94"	20 2 2	38E	50S	PRO	INTERCOAST OIL & GAS	0	CP 00856
115	3,235	14-Sep-95	W104º 12' 51.09" 14-Sep-95	28E 31 2 1 4 N32º 32' 3.69"	31 2 1 4	28E	50S	SAN	EXXON CORPORATION	3	CP 00851
Depth to Water (ft bgs)	Date Surface Measured Elevation ^B	Date Measured	Longitude	Latitude	Rng Sec q q q	Rng	Twsp	Use	Owner	Diversion ^A	Well Number

* = 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 = Interpolated from USGS Topographical Map

PRO = 72-12-1 Prospecting or development of natural resource STK = 72-12-1 Livestock watering SAN = 72-12-1 Sanitary in conjunction with a commercial use

(quarters are 1=NW, 2=NE, 3=SW, 4=SE) (quarters are biggest to smallest - X Y are in Feet - UTM are in Meters) Shaded area indicates wells not shown on Figure 2

Summary Excavation Soil Sample Field Analyses and Laboratory Analytical Results Exxon Mobil - Avalon Delaware Unit #238 TABLE 2

NMOCD Ref.; EPI Ref. #190037

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Sample ID	Depth (feet)	Soil Status	Sample Date	PID Reading (ppm)	Field Chloride (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon Ranges C6-C12 (mg/Kg)	Carbon Ranges >C12-C28 (mg/Kg)	Carbon Ranges >C28-C-35 (mg/Kg)	Total TPH C6-C35 (mg/Kg)	Chloride (mg/Kg)
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TABLE 2

Summary Excavation Soil Sample Field Analyses and Laboratory Analytical Results

Exxon Mobil - Avalon Delaware Unit #238

NMOCD Ref.; EPI Ref. #190037

UL-K (NE1/4 of the SW1/4) of Section 30, T20S, R28E; Eddy County, New Mexico

Sample ID	Depth (feet)	Soil Status	Sample Date	PID Reading (ppm)	Field Chloride (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	Carbon Ranges C6-C12 (mg/Kg)	Carbon Ranges >C12-C28 (mg/Kg)	Carbon Ranges >C28-C-35 (mg/Kg)	Total TPH C6-C35 (mg/Kg)	Chloride (mg/Kg)
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85-8	5.0	Excavated	03-Mar-10	:	240	:		:	:	1	:	:	1	:	:
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TABLE 3 Summary Soil Boring Field Analyses and Laboratory Analytical Results Exxon Mobil - Avalon Delaware Unit #238

NMOCD Ref.; EPI Ref. #190037

UL-K (NE1/4 of the SW1/4) of Section 30, T20S. R28E; Eddy County, New Mexico

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Carbon Ranges >C12-C28 (mg/Kg)		:	:	:	:	:	:	:	:	to determine de	:	••	: •	:	:			B F	ŀ.	:	;	••
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Ethylbenzene (mg/Kg)	•		;	;	:	:	;	:	;	Soil Boring #2 advanced total depth of 160 v.f. on 6/14/10; tested for water on 6-15-10; (No soil samples collected as this was an exploration soil boring to determine depth of water; BG #2 dry hole with no water depth of well)	:		;	:		:		;	:	:	:	:
Toluene (mg/Kg)	••	:	;	;	:	:	:	:	1	5-10; (No soi discov	:	:	*-	;	:	1	:	:	:	:	:	:
Benzene (mg/Kg)		•	;	;	;	:	:	:	;	water on 6-1;	:			:	:		:	:	:	:	:	;
Field Chloride (mg/Kg)	240	240	240	240	240	240	240	**	*); tested for v	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	2,640	07.2	320	>4,000	>4,000	>4,000
PID Reading (ppm)	-						:	:	:	f. on 6/14/10	:		-				**	-		:		
Sample Date	13-Aug-09	nal depth of 160 v.	13-Aug-09																			
Soil Status	Surface	In situ	ig #2 advanced tol	In situ	. nis nI	In situ	In situ	In situ	In situ													
Depth (feet)	9'0	5	01	20	30	40	50	09	02	Soil Borir	5	10	15	20	25	30	40	90	09	5	10	15
Sample ID	BG #1 - S	BG #1-1	BG #1 - 2	£-1# DB	BG #1-4	BG#1-5	BG#1-6	∠-1# ÐB	8-1#DB	BG #2	SB#1 - 1	SB#1 - 2	SB#1 - 3	SB#1 - 4	SB#1 - 5	SB#1 - 6	SB#1 - 7	SB#1 - 8	6-1#BS	SB#2 - 1	SB#2 - 2	SB#2 - 3

TABLE 3

Summary Soil Boring Field Analyses and Laboratory Analytical Results Exxon Mobil - Avalon Delaware Unit #238

NMOCD Ref.; EPI Ref. #190037

UL-K (NE1/4 of the SW1/4) of Section 30, T20S. R28E; Eddy County, New Mexico

Chloride (mg/Kg)	809	929	448	416	112	128	9,800	:	8,800	:	6,400	:	096'9	:	8,720	:	5,920	:	7,120	:	7,200	7,000
Total TPH C6-C35 (mg/Kg)	;	:	;	:	:	;	;	:	:	:	:	1	:	:	•	:	:			4 1	;	,
Carbon Ranges >C28-C-35 (mg/Kg)	-	;	;	:	:	;	:	;	,	:	:	;		:	:	:	-	:	;	:	;	;
Carbon Ranges >C12-C28 (mg/Kg)	;	:	;	;	;	:	:	1	;	;	,	:	:	;	:	:		:	1	,	:	•
Carbon Ranges C6-C12 (mg/Kg)	:	;	;	;	;	;	:	:	:		;		;	;	;	;		,	;	:	1	
Total BTEX (mg/Kg)	;	;	:	;	:	:	:	:	:	;	:	;	:	:	:	:	;	3	;	:	;	•
Total Xylenes (mg/Kg)		•-	:	:	:	:	;	:	:	:	:	:	:	:	:	;	:	:	;	;		
Ethylbenzene (mg/Kg)	:	:	;	:	:	:	:	:	:	:	:	:	;	:	:	;	:	,	;	;	;	•
Toluene (mg/Kg)	:	:	:	:	;	:	;	:	:	:	;	;	-		:	F	;	;	;	:	:	:
Benzene (mg/Kg)		:	:	:	:			:	;	:	:	;	:	:	-		:	:	:	;		:
Field Chloride (mg/Kg)	008	095	400	640	400	320	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	6,160		>4,000	>4,000
PID Reading (ppm)	••								÷	;	:	:	:	••		:	:	:	:		:	:
Sample Date	13-Aug-09	13-Aug-09	13-Aug-09	13-Aug-09	13-Aug-09	13-Aug-09	03-Mar-10	24-Aug-10	24-Aug-10	24-Aug-10												
Soil Status	In situ	Bottom of Excavation	In situ	In situ																		
Depth (feet)	20	25	30	35	40	45	5	10	15	20	25	30	35	40	45	50	55	09	62	0-7	10	15
Sample	SB#2 - 4	SB#2 - 5	SB#2 - 6	SB#2 - 7	SB#2 - 8	SB#2 - 9	SB#3 - 1	SB#3 - 2	SB#3 - 3	SB#3 - 4	SB#3 - 5	SB#3 - 6	SB#3 - 7	SB#3 - 8	SB#3 - 9	SB#3 - 10	SB#3 - 11	SB#3 - 12	SB#3 - 13	SB #4 - 0	SB #4 -1	SB #4 - 2

TABLE 3

Summary Soil Boring Field Analyses and Laboratory Analytical Results Exxon Mobil - Avalon Delaware Unit #238

NMOCD Ref.; EPI Ref. #190037

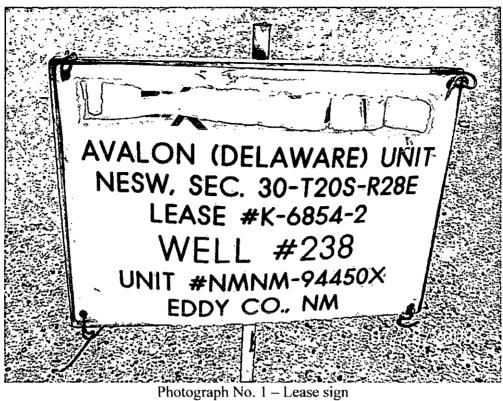
	Chloride (mg/Kg)	6,880	8,400	7,100	8,560	7,760	5,840	1,620	1,200	2/9	400	260		500
	Total TPH C6-C35 (mg/Kg)	;	:	;	:	:	;	:	:	1	:	;		1,000
	Carbon Ranges >C28-C-35 (mg/Kg)	;	:	:	:	:	:	:	:	•	:	:		
Mexico	Carbon Ranges >C12-C28 (mg/Kg)	!	;	:	:	:			:	:		:		
unty, New	Carbon Ranges C6-C12 (mg/Kg)	:	:	••	:	;	••	••		1		:		
Eddy Co	Total BTEX (mg/Kg)	:	:				••		••					50
S. R28E;	Total Xylenes (mg/Kg)	:	;	:	:	:		:	;	;	-	:		
NE1/4 of the SW1/4) of Section 30, T20S. R28E; Eddy County, New Mexico	Ethylbenzene (mg/Kg)	;	:	:	;	;	:	:	:	•	•	•		
/4) of Sec	Toluene (mg/Kg)	:		••		:		:	••		;			
f the SWI	Benzene (mg/Kg)	;	:	:	:	-:	;	:	:	:	:	;		10
	Field Chloride (mg/Kg)	>4,000	>4,000	>4,000	>4,000	>4,000	>4,000	1,440	1,040	640	400	560		
UL-K (PID Reading (ppm)	:	:	:	:	:	:	:	;	;	;	:		100
	Sample Date	24-Aug-10	24-Aug-10	24-Aug-10	24-Aug-10		ds							
	Soil Status	In situ	In situ	In situ	In situ		NMOCD Remedial Thresholds							
	Depth (fect)	20	25	30	40	20	09	20	980	06	100	110		NMOCD R
	Sample	SB #4 - 3	SB #4 - 4	SB #4 - 5	SB #4 - 6	SB #4 - 7	SB #4 - 8	SB #4 - 9	SB #4 - 10	SB #4 - 11	SB #4 - 12	SB #4 - 13		

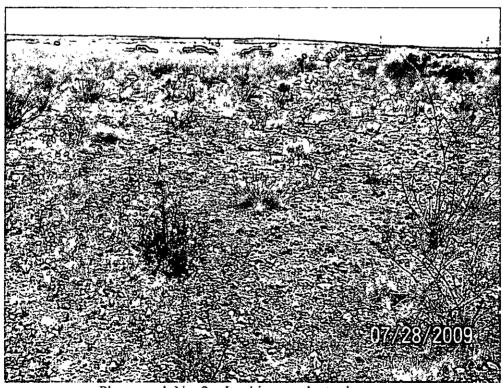
[|] Bold values exceed NMOCD remedial threshold goals

* * = Solids would not settle out due to clay particulate matter
- - = Not Analyzed
Soil Sample Nomenclature: SB = Soil Boring Hole; BG = Background Soil Boring Hole; S = Surface

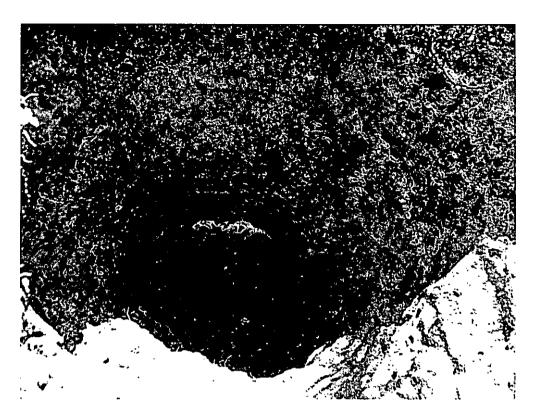


ATTACHMENT I PHOTOGRAPHS

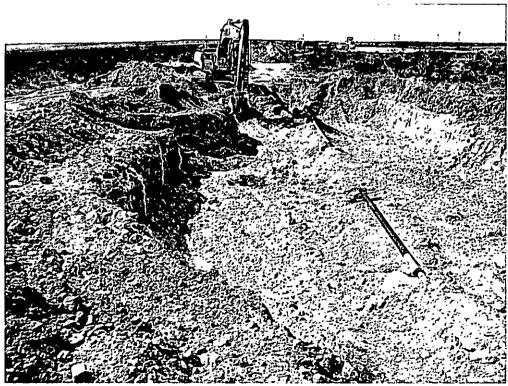




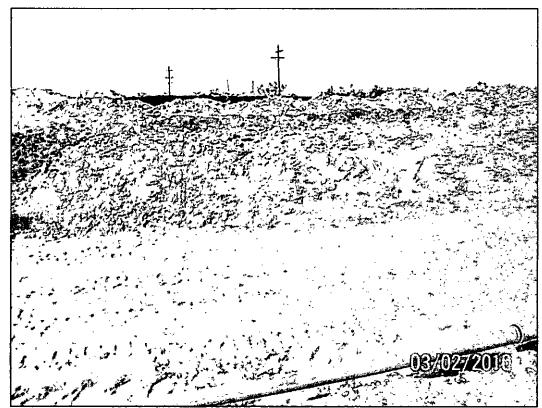
Photograph No. 2 – Looking south at release area



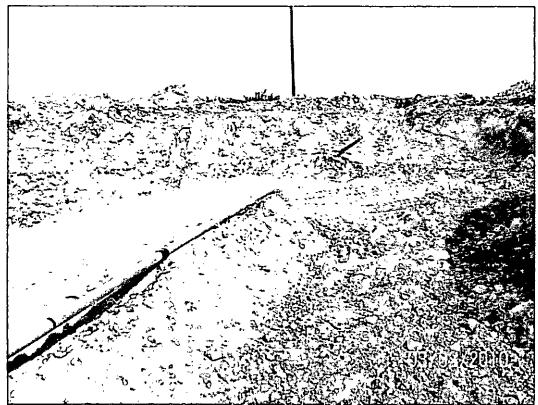
Photograph No. 3 - Looking at 3" FG Injection Line near Point of Release



Photograph No. 4 – Looking south at excavation and 3" dia. FG Injection Line



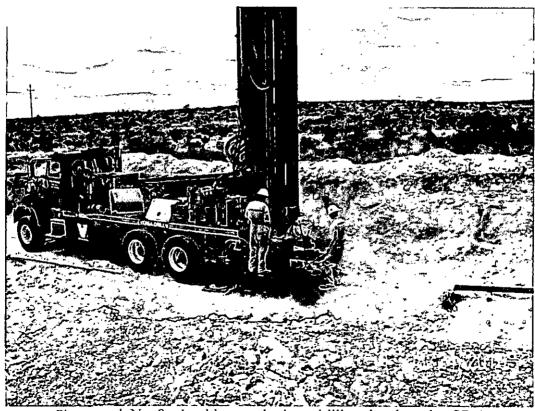
Photograph No. 5 – Looking westerly at excavation bottom, sidewalls and new 3" FG Injection Line



Photograph No. 6 – Looking northerly at excavation bottom, sidewalls, new 3" FG Injection
Line and ingress/egress ramp



Photograph No. 7 – Looking easterly at excavation bottom, sidewalls, 3" FG Injection Line and ingress/egress ramps



Photograph No. 8 - Looking southerly at drilling rig advancing SB-4

ATTACHMENT II LABORATORY ANALYTICAL RESULTS AND CHAINOFCUSTODY FORMS

ATTACHMENT III SOIL BORING LOGS



FILE NUMBER

LOCATION

	POD NUM	BER (WEL	L NUMBER)				OSE FILE NU	(BER(S)			
Z	AVALO	N DEL	AWARE UNIT	T#238 SB-1							
OCATION	WELL OW	NER NAM	E(S)			· · · · · · · · · · · · · · · · · · ·	PHONE (OPTI	ONAL)			
	MOBIL	EXXO	N								-
	WELL OW	NER MAII	ING ADDRESS				CITY		STATE		ZIP
AND WELL I							MIDLAND) 	TX		•
Q	WEL	L		DEGREES	MINUTES S	SECONDS					
L A	LOCAT	ION	LATITUDE	32	32	40.00 N	* ACCURACY	REQUIRED ONE TEN	ITH OF A SEC	COND	
GENERAL	(FROM	GPS)	LONGITUDE	104	13	16.00 W	* DATUM REG	QUIRED: WGS 84			
1. GEN				10N TO STREET ADDRE 2/180, TURN R		-	LIEF RD 8	TURN R ON I	LAKE A\	/ALON F	RD.
ris promi	(2.5 AC	RE) /	(10 ACRE)	(49 ACRE)	(160 ACRE)	SECTION		TOWNSHIP		RANGE	
4		1 /4	4	1/4	1/4				SOUTH		□ EAST
OPTIONAL	SUBDIVIS	ION NAMI	E			LOT NUM	IBER	BLOCK NUMBER		UNIT/TRA	
PTI									0.9		
2. C	HYDROGI	taphic su	JRVEY				•	MAP NUMBER		TRACT N	JMBER
		,									
12.14	LICENSE 1		1	ENSED DRILLER				NAME OF WELL DR			
		1478	EDWARD		• • • • • • • • • • • • • • • • • • •			STRAUB CO			
	DRILLING		9 DRILLING EN 8-13-09		PLETED WELL (FT)	II	LE DEPTH (FT)	DEPTH WATER FIR			
Š	8-1	3-09	0-13-0		0		70'	STATIC WATER LE	N/A		LI AEED
3. DRILLING INFORMATION	COMPLET	ED WELL	IS: ARTESIA	N	SHALLOW (L	UNCONFINED)		STATIC WATER LE	N/A		LC(F1)
FO	DRILLING	FLUID	✓ AIR	MUD	ADDITIVES -	- SPECIFY:					
CID	DRILLING	METHOD	: ✓ ROTARY	HAMMER	CABLE TOOL	. Потне	R - SPECIFY				
Z N	DEPT	H (FT)	BORE HO	E (CASING	CON	IECTION	INSIDE DIA.	CASING	WALL	SLOT
BRII	FROM	то	DIA. (IN)	М.	ATERIAL	TYPE	(CASING)	CASING (IN)	THICKN	ESS (IN)	SIZE (IN)
္က	0	70	5		N/A	!	N/A	N/A	N	/A	N/A
				,	···				<u> </u>		
	~~~	 	_						ļ		
i.				<u></u>					!		
. ₹		H (FT)	THICKNES (FT)	SS FO	ORMATION DESC			ATER-BEARING S R FRACTURE ZON			YIELD (GPM)
Z.	FROM	10	(7.1)		(INCEDIAL WAT	I.K-DLAKING	CAVITIES OF	CIRACIORE ZOIL			(41.11)
ES		ļ. 			·						<u></u>
Z							· · · · · ·				
EAR								_			
RB					· · · · · · · · · · · · · · · · · · ·		•				<u> </u>
WATER BEARING STRATA	METHOD (JSED TO E	STIMATE YIELD OF	WATER-BEARING STRA	ATA			TOTAL ESTIMATED	WELL YIEL	D (GPM)	· · · · · · · · · · · · · · · · · · ·
*											
					· · · · · ·						
	FOR OS	EINTER	NAL USE					WELL RECO	ያስ ል ነ ሰር	(Version 6)	/0/08\

POD NUMBER

TRN NUMBER

PAGE 1 OF 2

a	TYPE O	F PUMP:	☐ SUBMER		☐ JET	☐ NO PUMP – WELL NOT EQUIPPED ☐ OTHER – SPECIFY:					
Š					L CYLINDER	UTHER-SPECIFY:	1				
SEAL AND PUMP	ANNI	JLAR	DEPTH FROM	t (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)		OD OF MENT		
3	SEAL	AND	0	2	5	.5 BAG OF CEMENT		TOPL	OAD		
S. SI	GRAVE	L PACK	2	70	5	17 BAGS OF 3/8 PLUG		TOPL	_OAD		
								<u></u>			
17.47	DEPT	H (FT)	THICK	NESS		COLOR AND TYPE OF MATERIAL ENCOUN	ERED	WA'	TER		
9	FROM	то	(FT	Γ)	(INCL	JDE WATER-BEARING CAVITIES OR FRACT	URE ZONES)	BEAR			
N	0	3	3	;		BROWN FINE SAND - CALICHI		☐ YES	Ø NO		
	3	41	38	3	T	AN FINE SAND - SANDSTONE - CA	LICHE	☐ YES	Ø NO		
	41	53	12	2	TA	N SANDSTONE (MED) DENSE - CA	ALICHE	☐ YES	☑ NO		
	53	59	6			GREENISH - TAN CLAY		☐ YES	✓ NO		
3.000 1.000	59	70	1.	1	R	ED SILTY CLAY & RED VERY FINE	SAND	☐ YES	Ø NO		
VEL	TD	70					·	☐ YES	Ои		
O.E.		,						☐ YES	. 🗆 ио		
90								☐ YES	□ио		
CI								☐ YES	□ NO		
9							278	☐ YES	□ NO		
GEOLOGIC LOG OF WELL	,							YES	□ NO		
9								☐ YES	□ио		
15-850 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-								☐ YES	□ NO		
								☐ YES	□ио		
								☐ YES	□ио		
Version of								☐ YES	□ио		
								☐ YES	□ №		
			ATTACH	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL	•			
METHOD: □ BAILER □ PUMP □ AIR LIFT □ OTHER – SPECIFY:											
NAL INFO	WELL	TEST	TEST RESU	LTS - ATTA	CH A COPY OF D	ATA COLLECTED DURING WELL TESTING,	INCLUDING START TI	ME, END TI	ME,		
ML			AND A TAB	LE SHOWI	NG DISCHARGE	AND DRAWDOWN OVER THE TESTING PERI	OD.				
			IENTS OR EXPL								
& ADDITI	SOIL B	ORING	ONLY- SOI	IL BORIN	G WAS PLUG	GED AND ABANDONED UPON CO	MPLETION OF SA	MPLING			
्र र X											
ST											
7. TEST											
433											
l u						ST OF HIS OR HER KNOWLEDGE AND BELI THAT HE OR SHE WILL FILE THIS WELL R					
5						ON OF WELL DRILLING:	SCORD WITH THE BITH	TE LIVORVE	EKTUE		
SIGNATURE		18.	14:			al la					
8. SI		~(~)~	ont			<u> </u>					
			SIGNATUR	E OF DRILL	.ER	/ фате					
								•			

FOR OSE INTERNAL USE		WELL RECORD & LOG	(Version 6/9/08)
FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION	·		PAGE 2 OF 2



FILE NUMBER

LOCATION

z	S	•	LL NUMBER) G2- (GS)						OSE FILE NU	MBER(S)			
CATIC	WELL OW	NER NAM	AE(S)			 ,			PHONE (OPTI	ONAL)			· <u>·</u>
GENERAL AND WELL LOCATION	WELL, OW	NER MAI	LING ADDRESS NFELD, ST				 -	,	cny MIDLANE)	STATE TX	79	zir 9701
2	===				DEGREES	MINUTES		ONDS					
Z	WEL	- 1								PROUBED, ONE TE	mu oe a ce	COND	
7	LOCAT	L	LATITUDE		32	32	4	и 00.0		REQUIRED: ONE TEN	VIII OF A SEA	COND	
ER	(FROM	GPS)	LONGITUDE		104	13	1	7.00 W	* DATUM RE	QUIRED: WGS 84			
E N	DESCRIP	TION REL	ATING WELL LOC	ATION I	O STREET ADDRE	SS AND COMMON	LAND	MARKS					
1, (FROM	HWY	206 GO E F	OR .5	MILES TUR	NR.1THM	TUF	RN R TO	SITE.	·			
	(2.5 AC	RE)	(10 ACRE)	T	(40 ACRE)	(160 ACRE))	SECTION		TOWNSHIP	☐ NORTH	RANGE	☐ EAST
ادا		1/4	1/4		1/4	1/4					SOUTH	ĺ	□ west
Ž	SUBDIVIS	ION NAM	Ė			_		LOT NUM	BER	BLOCK NUMBER		UNIT/TRA	
OPTIONAL													
ō	HYDROGE	APHIC ST	JRVEY		·					MAPNUMBER		TRACT NU	MBER
7													
-	LICENSE !	NUMBER	NAME OF L	ICENSE	D DRILLER					NAME OF WELL DE	ULLING COM	IPANY	
r l		1478	EDWAR	D BR						STRAUB CO			
	DRILLING				DEPTH OF COM	PLETED WELL (ET))	1	E DEPTH (FT)	DEPTH WATER FIR		• •	
z	6/1	4/10	6/14/	10		0]	160		N/A		
DRILLING INFORMATION	COMPLET	ED WELL	IS: ARTES	IAN	DRY HOLE	SHALLOW	(UNC	ONFINED)		STATIC WATER LE	VEL IN COM		L (FT)
NFOR	DRILLING	FLUID:	 ✓ AIR		MUD	ADDITIVE	s - spe	ECIFY:		· · · · · · · · · · · · · · · · · · ·			
<u>5</u>	DRILLING	METHOD	: V ROTAR	Y	HAMMER	CABLE TO	OL	OTHE	R - SPECIFY:		 -		
	DEPT	H (FT)	BORE H	OLE		CASING		CONN	ECTION	INSIDE DIA.	CASING	WALL	SLOT
2	FROM	TO	DIA. (1	N)		ATERIAL			CASING)	CASING (IN)	THICKN		SIZE (IN)
3.0	0	160	5			N/A		1	V/A	N/A	N	/A	N/A
l						 _					 		
1		 _						 			 		
ļ	-							 			 		
	DEDI	11 (FT)	771107(2)			DMATTON DE	COLIN	MON OF N	DESCRIPTION OF THE PROPERTY OF	ATTO OF ADDICE	TDATA		
<	FROM	н (ғт) то	THICKN (FT)		FC					ATER-BEARING S R FRACTURE ZON			YIELD (GPM)
\$ }	1.KOM	10	- 			(INCEODE W	*****	BEAUCITO		TICKE TOTAL BOTT			(41.11)
E													
ğ		<u> </u>	<u> </u>										
										·			
E E													
WATER BEARING STRATA													
YA'	METHOD L	ISED TO E	STIMATE YIELD)F WATI	ER-BEARING STRA	TA			<u> </u>	TOTAL ESTIMATED	WELL YIEL	D (GPM)	
*													
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	FOR OSE	INTER	NAL USE							WELL RECO	RD & LOG	(Version 6/	9/08)

POD NUMBER

TRN NUMBER

PAGE 1 OF 2

₽	ТҮРЕ С	F PUMP:	SUBMER		☐ JET ☐ CYLINDER	☐ NO PUMP – WELL NOT EQUIPPED	HER SPECIFY: AMOUNT METHOD OF					
PCR												
SEAL AND PUMP			DEPTH FROM	TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)		OD OF EMENT			
Š	SEAL	ULAR L AND	0	2	5	2 BAG OF CEMENT		TOP	LOAD .			
S. S.	GRAVI	EL PACK	2	160	5	40 BAGS OF 3/8 PLUG		TOPI	OAD			
	DERT			<u> </u>	<u> </u>			<u> </u>				
	FROM	H (FT)	THICK (FT	-,	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				TER UNG?			
	0	2	2		(III-CEC	☐ YES	☑ NO					
	2	21	19		T	☐ YES	Ø NO					
	21	33		· ····	17	AN FINE SAND - SANDSTONE - CAL	JUNE	 				
			12			TAN FINE SAND - SANDSTONE		YES	Ø NO			
	33	39	6			TAN FINE SAND - MED SANDTON		☐ YES	Ø NO			
	39	42	3		(DENSE) SANDSTONE - TAN FINE SAND				<u>∄</u> №			
	42	60	18	3	(DENSE) SANDSTONE - CALICHE				■ NO			
,	60	64	. 4			RED SILTY CLAY - SILTY SAND	_ 	☐ YES	Ø NO			
1	64	65	1		TAN SILTY CLAY				₽ NO			
;	65	78	13	3		RED SILTY CLAY - RED SILTY SAN	1D	☐ YES	<u>₫</u> №			
6. GEOLOGIC LOG OF WELL	78	94	16	} 		TAN SILTY SAND - TAN SILTY CLA	<u>Y</u>	☐ YES	Ø NO			
	94	138	44	ļ		TAN SILTY SAND - TAN SILTY STO	NE	☐ YES	₽ NO			
	138	140	2			RED SILTY CLAY (DRY)		☐ YES	ON 🖸			
	140	142	2			☐ YES	₽ NO					
	142	144	2			☐ YES	E NO					
	144	148	4			☐ YES	D NO					
	148	150	2		RED	☐ YES	В ио					
	150	TD160	10)		☐ YES	ON 🔽					
	·	•	ATTACH	ADDITION.	AL PAGES AS NEI	EDED TO FULLY DESCRIBE THE GEOLOGIC L	OG OF THE WELL					
			METHOD:	BAILE	R PUMP	☐ AIR LIFT ☐ OTHER – SPECIFY:						
	WELL	. TEST	TEST RESUL	TS - ATTA LE SHOWIN	CH A COPY OF DA	ATA COLLECTED DURING WELL TESTING, IN. ND DRAWDOWN OVER THE TESTING PERIO	ICLUDING START T	IME, END T	ME,			
WELL TEST TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD. ADDITIONAL STATEMENTS OR EXPLANATIONS: SOIL BORING ONLY- SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING												
THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN TO DAYS AFTER COMPLETION OF WELL DRILLING:												

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FOR OSE INTERNAL USE		WELL RECORD & LOG (Version 6/9/08)	
FILE NUMBER	POD NUMBER	TRN NUMBER	
LOCATION		PAGE 2 OF 2	
			

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z	i				#23	8 SB-2			,		······································			
Ţ	WELL OW	NER NAM	IE(S)			 				PHONE (OPTI	ONAL)			
ÿ	МОВІЦ	EXXC	N											
7	WELL OW	NER MAI	LING	ADDRESS						CITY	 	STATE		ZIP
WELL LOCATION LATITUDE 32 32 40.00 N *ACCURACY REQUIRED, ONE TENTH OF THE CALCETION OF THE									TX					
N	WEL	L T			DE	GREES	MINUTES	SECO	NDS				<u> </u>	
T.A	į		LAT	TUDE		32	32	4	0.00 _N	• ACCURACY	REQUIRED, ONE TEN	TH OF A SEC	COND	
ER	(FROM C	GPS)	LON	GITUDE		104	13	1	6.00 W	* DATUM REC	QUIRED; WGS 84			
EN	DESCRIPT	TON REL			от то	STREET ADDRE	SS AND COM							
	FROM	новв	SG	O W ON 6	2/180), TURN R	ON THE	CALRLS	BAD RE	LIEF RD 8	TURN R ON I	AKE AV	ALON F	RD.
						*** • Open	1		1					
-				`	'		(IOU A		SECTION		TOWNSHIP	☐ NORTH	RANGE	☐ east
NAL						1/4		1/4	LOT MILE	DED	DI COL MINDER	SOUTH	1 DUTTED A	☐ west
IIO	SOBDIAIS	ION NAM	E						LUINUM	BER	BLOCK NUMBER UNIT/TRACT			
Q.	HYDROGE	APHIC S	URVE	· · · · · · · · · · · · · · · · · · ·									TRACT NU	IMBER
				• •							Maria Maria			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	LICENSEN	RIMBER		NAME OF LICE	MEEN	DDII I ED	······································		·		NAME OF BELL OF	II I DIC COL	DAND	
			ь				PLETED WELI	L (FT)	BORE HOL	E DEPTH (FT)				
8-13-09 8-13-09 0 60' N/A														
TIO											STATIC WATER LE	VEL IN COM	LETED WEI	JL (FT)
MA	COMPLET	ED WELL	. 15	ARTESIAN	1	DRY HOLE	☐ SHAL	TOM (QUC	ONFINED)			N/A		
FOF	DRILLING	FLUID:		✓ AIR		MUD	☐ ADD	ITIVES - SPE	CIFY:					
11 5	DRILLING	метног) :	V ROTARY		☐ HAMMER	САВІ	LE TOOL	OTHE	R - SPECIFY.				
LIN	DEPT	H (FT)		BORE HOL	E	(CASING		CONN	IECTION	INSIDE DIA.	CASING	WALL	SLOT
RIL	FROM	то		DIA. (IN)		M	ATERIAL					THICKN		SIZE (IN)
3. I	0	60		5			N/A		ı	N/A	N/A	N	/A	N/A
]			. **			ļ					
					_									
		L					•••							
ارا					s	F								YIELD
AT.	FROM	то		(r:) -			(INCLUD	E WATER	BEARING	CAVITIES OF	R FRACTURE ZON	ES)		(GPM)
STR				<u> </u>	-									
SC	.				\dashv									
ARI														
S BE			-		\dashv									
TEI	METHOD	ISSINTO	ESTI	CATE VIELD OF	WATER	R-BEARING STRA	NTA				TOTAL ESTIMATED	WELL VIEL	D (GPM)	
××	MEIRODI	JJED IU	۱۱۵ دند	man and the control of the control o	**************************************	· JEIMIN GIR					TOTAL ESTIMATED	want ilik	C (O: HI)	
₹								<u> </u>					<u> </u>	
	FOR OSI	מזרוו :	NAI	USE							WELL RECO		(Version 6/	9/08)

POD NUMBER

FILE NUMBER

LOCATION

TRN NUMBER

PAGE 1 OF 2

<u> </u>		SUBMER	SIBLE	□ JET	☐ NO PUMP – WELL NOT EQUIPPED				
TYPE O	F PUMP:	☐ TURBINI		CYLINDER	OTHER - SPECIFY:				
		DEPTH	```	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)		OD OF	
ANN		FROM 0		5	.5 BAGS OF CEMENT	(COBIC F1)	TOPI		
GRAVE		2	60	5	13 BAGS OF CEMENT		TOPI		
					10 B/100 O/ 0/01 E00		1		
DEPT	H (FT)	THICK	NESS	C	OLOR AND TYPE OF MATERIAL ENCOUNT	OR AND TYPE OF MATERIAL ENCOUNTERED			
FROM	то	(FT)	(INCLU	DE WATER-BEARING CAVITIES OR FRACTU	JRE ZONES)	BEARING?		
0	3	3	•		BROWN FINE SAND - CALICHE		☐ YES	ОМ ⊡	
3	3 20 17		7		TAN FINE SAND - W/CLAY		☐ YES	Ø NO	
20 52		32	2		TAN FINE SAND - SANDSTONE		☐ YES	Ø NO	
52	60	8			TAN FINE SAND		YES	Ø NO	
TD	60						☐ YES	□ио	
							☐ YES	□ NO	
							☐ YES	. 🗌 NO	
							☐ YES	□ №	
							☐ YES	□ №	
						<i>‡4</i>	☐ YES	□ №	
							☐ YES	□ NO	
							☐ YES	□ NO	
							☐ YES	□ №	
							☐ YES	□ №	
							☐ YES	□ №	
							☐ YES	□ №	
							☐ YES	□ №	
	ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL								
		METHOD:	BAILE	R DUMP	☐ AIR LIFT ☐ OTHER – SPECIFY:				
WELI	TEST				ATA COLLECTED DURING WELL TESTING, I		IME, END T	ME,	
		AND A TAB	LE SHOWI	NG DISCHARGE A	ND DRAWDOWN OVER THE TESTING PERIC	DD.			
ADDITIO	IAL STATE	MENTS OR EXPL	ANATIONS						
SOIL B	ORING	ONLY- SOI	L BORIN	G WAS PLUG	GED AND ABANDONED UPON COM	MPLETION OF S	AMPLING		
1									
THE UN	DERSIGN	ED HEREBY C	ERTIFIES	THAT, TO THE BES	ST OF HIS OR HER KNOWLEDGE AND BELIE	F, THE FOREGOING	IS A TRUE A	ND	
CORRECT THE PER	T RECOR	D OF THE AB	OVE DESC	RIBED HOLE AND	THAT HE OR SHE WILL FILE THIS WELL RE ON OF WELL DRILLING:	CORD WITH THE ST	ATE ENGINI	EER AND	
CORRECT THE PER	20-	e De			8/20/09				
.		SIGNATUR	E OF DRILL	LER	DATE				
<u> </u>		····				······································			

FOR OSE INTERNAL USE							
FILE NUMBER	POD NUMBER	TRN NUMBER					
LOCATION	:		PAGE 2 OF 2				



FILE NUMBER

LOCATION

	POD NUM	DED /WE	I NT	(LIDED)			<u> </u>			OCE EL E MU	(DED(C)				
Z				/ARE UNIT	#238 SB-3	3				OSE FILE NU	NBCK(S)				
GENERAL AND WELL LOCATION	WELL OW									PHONE (OPT)	ONAL)				
CO	MOBIL										-				
LL	WELL OW	NER MAI	LING	ADDRESS						CITY		STATE		ZIP	
VEL										MIDLAND)	TX			
(D V		. 1		· · · · · · · · · · · · · · · · · · ·	DEGREES		MINUTES	SECO	NDS	<u> </u>		•			
. 4	WEL LOCAT				32		32		0.00 N	* ACCURACY	REQUIRED: ONE TEN	ITH OF A SEC	COND		
RAI	(FROM	· · · L	-	ITUDE	104	•	13		6.00 W	* DATUM REG	QUIRED. WGS 84				
ENE				GITUDE			<u> </u>		J.00						
1. G							SS AND COMMON L ON THE CAL			LIEF RD 8	TURN R ON	LAKE A\	/ALON F	RD.	
	(2.5 AC	RE) ;		(10 ACRE)	(40 ACRE)	(160 ACRE)		SECTION		TOWNSHIP	NORTH	A SECOND TILL RANGE FAST WLST WLST UNIT/TRACT TRACT NUMBER COMPANY RATION OUNTERED (FT) W/A COMPLETED WELL (FT) W/A SING WALL SLOT SIZE (IN N/A N/A N/A A YIELD (GPM)		
	!	1/4		1/4	1/2	ı	1/4					SOUTH		☐ wisi	
Ö	SUBDIVIS	ON NAM	E						LOT NUM	BER	BLOCK NUMBER		UNIT/TRA	ст	
Ē											:	• 19			
7	SUBDIVISION NAME LOT NUMBER BLOCK NUMBER UNIT/TRAC HYDROGRAPHIC SURVEY MAP NUMBER TRACT NUMBER TRACT NUMBER TRACT NUMBER									JMBER					
1															
179	LICENSE N	UMBER		NAME OF LICE	NSED DRILLER						NAME OF WELL DR	ILLING COM	PANY		
	WD	1478		EDWARD	BRYAN						STRAUB COI	RPORAT	TON		
	DRILLING		>	DRILLING END		F COM	PLETED WELL (FT)			E DEPTH (FT)	DEPTH WATER FIR				
Z	8-13-09 8-13-09						0			45		N/A			
3. DRILLING INFORMATION	COMPLETED WELL IS: ARTESIAN			I ✓ DRY	HOLE	SHALLOW	(UNCO	NFINED)		STATIC WATER LE	VEL IN COMI N/A		.L (FT)		
FO	DRILLING	FLUID.		✓ AIR	□ ми	······································	ADDITIVES	- SPE	CIFY:						
. E	DRILLING	METHOD);	✓ ROTARY	Пнах	MER	CABLE TOO	DL.	ОТНЕ	R - SPECIFY:				•	
3	DEPT	Ή (FT)		BORE HOL	F		CASING		COM	IECTION	INSIDE DIA.	CASDIC	WALL	CI OT	
RIL	FROM	то	\dashv	DIA. (IN)	_		ATERIAL		,	(CASING)	CASING (IN)			SIZE (IN)	
3. D	0	45		5	<u> </u>		N/A			V/A	N/A	N	/A	N/A	
					,										
.															
: ; .	DEPT	H (FT)		THICKNES	s	F	DRMATION DESC	CRIPT	TION OF P	RINCIPAL W	ATER-BEARING S	TRATA		YIELD	
¥	FROM	TO		(FT)			(INCLUDE WA	TER-	BEARING	CAVITIES O	R FRACTURE ZON	ES)			
3				 								-			
ç			ļ												
2															
BEA															
ER		<u>. </u>					<u> </u>								
WATER BEARING STRATA	METHOD U	JSED TO	ESTIN	MATE YIELD OF	WATER-BEARIN	G STRA	ITA .				TOTAL ESTIMATED	WELL YIEL	D (GPM)		
2.															
												······································			
	FOR OSE	INTER	NAI	USE							WELL RECO	RD & LOG	(Version 6/	9/02)	

POD NUMBER

TRN NUMBER

PAGE 1 OF 2

TYPE OF PUMP: SUBMERSIBLE JET NO PUMP - WELL NOT EQUIPPED											
NO.			TURBIN		CYLINDER	☐ OTHER – SPECIFY:					
SEAL AND PUMP	ANNI	ULAR	DEPTH FROM	TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	1	OD OF MENT		
3	SEAL	AND	0	2	5	.5 BAG OF CEMENT		TOPI	OAD		
S.	GRAVE	L PACK	2	45	5	11 BAGS OF 3/8 PLUG		TOPL	.OAD		
12.42.								<u> </u>			
	DEPT	H (FT)	тніск	NESS		COLOR AND TYPE OF MATERIAL ENCOUNTE	ERED	WA:			
	FROM	· TO	(F1	<u> </u>	(INCL	JDE WATER-BEARING CAVITIES OR FRACTU	RE ZONES)	BEAR	ING?		
	0	3	3			BROWN FINE SAND - CALICHE		☐ YES	Ø NO		
	3	13	10)		TAN FINE SAND - W/CLAY		☐ YES	Ø NO		
	13	22	9			TAN FINE SAND - SANDSTONE		☐ YES	Ø NO		
1000 N	22	45	23	3	Т	AN FINE SAND - SANDSTONE- CAL	ICHE	☐ YES	Ø NO		
1	TD	45						☐ YES	□ио		
OF WELL								☐ YES	□ №		
Ö		,						☐ YES	. □ NO		
Š								☐ YES	Ои		
GEOLOGIC LOG								☐ YES	□ио		
0.0							#108	☐ YES	□ №		
								☐ YES	□ио		
•								☐ YES	□ №		
								☐ YES	□NO		
								☐ YES	ОИ		
								YES	Ои		
6-3-16-1 (1-1-18)								YES	Пио		
9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								☐ YES	Пио		
25.5			ATTACH	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL				
2	wer	теет	METHOD:	BAILE		☐ AIR LIFT ☐ OTHER — SPECIFY:					
NAL INFO	WELL	1531				ATA COLLECTED DURING WELL TESTING, II AND DRAWDOWN OVER THE TESTING PERIO		ME, END TI	ME,		
O.			CENTS OR EXPLA								
TEST & ADDITIO	SOIL B	ORING (ONLY- SOI	L BORIN	G WAS PLUG	GED AND ABANDONED UPON COM	IPLETION OF SA	MPLING			
(A.A.											
เรา											
7.1											
2 35 154 2 5 4 4 4	THE TAX	DEDOLOS	m Henense	EDTICIES ~	THE TOTTLE	er or the on the grade and a second	777770000000000000000000000000000000000				
JRE	CORREC	T RECOR	D OF THE AB	OVE DESCR	RIBED HOLE AND	ST OF HIS OR HER KNOWLEDGE AND BELIEF THAT HE OR SHE WILL FILE THIS WELL RE	ORD WITH THE STA	TE ENGINE	ER AND		
SIGNATURE	THE PER	MIT-NOL	DER WITHIN :	ZU DAYS AI	FTER COMPLETION	ON OF WELL DRILLING:					
SIGN	/	5/-	& Da			8/20/09					
တ်		- (SIGNATUR	Ę OF DRILL	ER	BATE					
									:		

FOR OSE INTERNAL USE	WELL RECORD & LOG (Version 6/9/					
FILE NUMBER	POD NUMBER	TRN NUMBER				
LOCATION	,		PAGE 2 OF 2			

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Z.	1		LNUMBER) AWARE UNIT 2	238 BH-4			OSE FILE NU	MBER(S)			
ĭ	WELL OW					· .	PHONE (OPT)	(MAT)			
C			STATE LAND	OCEICE			1				
2							685-9020	, 			
3			ING ADDRESS				CITY		STATE		ZIP
WE	310 OL	_D SAI	NTA FE TRAIL				SANTA F	Ε	NM	87	7504
GENERAL AND WELL LOCATION	WELI	, т		DEGREES	MINUTES	SECONDS					
ĮĄ,	LOCATI	L.		32	32	41.00 N	- ACCURACY	REQUIRED ONE TEN	TH OF A SEC	COND	
₹ .	(FROM C	<u>L</u>	LATITUDE				J . D . TV . L D .	QUIRED, WGS 84			
. 2	(i Kom s		LONGITUDE	104	13	16.00 W					
GE	DESCRIPT	TION REL	VING WELL LOCATION	N TO STREET ADDRES	SS AND COMMON	LANDMARKS					
	5 MI NO	ORTH (ON CO RD 206	CARLSBAD N	M.						
	(2.5 AC)	RE)	(10 ACRE)	(40 ACRE)	(160 ACRE	SECTION	· ·	TOWNSHIP	Noatii	RANGE	□ past
۷ľ		%		1/4	1/4			<u> </u>	□ soctii	!	☐ MENT
NO	SUBDIVISI	ION NAMI			LOI NU	MBER	BLOCK NUMBER		UNIT TRA	.CT	
OPTIONAL											
2.0	HYDROGR	RAPHIC SU	IRVEY					MAP NUMBER		TRACT NU	MBÉR
										}	
	LICENSEN	ULIMBER	NAME OF LICEN	CED DBH (ED				NAME OF WELL DR	TI LING COV	19.555	
		1478	MARTIN ST					STRAUB CO			
	DRILLING					. Luonett	OLE DEPTH (FT)				
		3-10		DEPTH OF COM	PLETED WELL (FT) BOKE HO		DEPTH WATER FIR	STENCOUN	TEKED(FI)	
NO	3-0	3-10	3-3-10		0		62				
ATI	COMPLET	er mer i	IS: ARTESIAN	✓ DRY HOLE		V (UNCONFINED)		STATIC WATER LE			LL(FT)
RM	COMPLET	CD ALTE	AKTESIAN	[V] DRY HOLE		V (UNCONFINED)		1	N/A		
] &	DRILLING	FLUID:	✓ AIR	∭ MUÐ	ADDITIVI	ES - SPECIFY;					
3. DRILLING INFORMATION	DRILLING	METHOD	ROTARY	HAMMER	CABLETO	OOL OTH	ER - SPECIFY:				
TT	DEPT	rh (FT)	BORE HOLE		CASING	CON	INECTION	INSIDE DIA.	CASING	3 WALL	SLOT
I N	FROM	TO	DIA. (IN)	Mz	ATERIAL	TYPE	(CASING)	CASING (IN)	THICKN	ESS (IN)	SIZE (IN)
3. L	0	62	6		N/A		N/A	N/A	N	/A	N/A
	-						и.		1		
								<u> </u>	· · · · · · · · ·		-
	UEDA	TH (FT)			DMATION IN	CONTINUOU OF	DDINCIDAL	ATER-BEARING S	T'D A T' A		MIGLE
<	FROM	то	THICKNESS (FT)	F				R FRACTURE ZON			YIELD (GPM)
	FROM	10			(IIICEODE II	ATTAC BEATCH	3 C/11/11/12/3 O		····		(,
STF								<u> </u>			
Ş											
IS.	, 				<u></u>	***					
BEARI											
ER BEARI											
ATER BEARI	METHOD I	USED TO	ESTIMATE YIELD OF W	ATER-BEARING STRA	(TA			TOTAL ESTIMATE	WELL YIEL	.D (GPM)	
t. WATER BEARII	метноо і	USED TO	ESTIMATE YIELD OF W	ATER-BEARING STRA	(TA			TOTAL ESTIMATED	WELL YIEL	.D (GPM)	
4. WATER BEARING STRATA	метноо і	USED TO	ESTIMATE YIELD OF W	ATER-BEARING STRA	(TA			TOTAL ESTIMATED	WELL YIEL	.D (GPM)	
4. WATER BEARI				ATER-BEARING STRA	YTA						/9/08)
4. WATER BEARI		E INTER	ESTIMATE YIELD OF W	ATER-BEARING STRA		IUMBER		WELL RECO	RD & LOG		/9/08)

	TYPE O	F PLIMP	☐ SUBMER	SIBLE	☐ JET	☐ NO PUMP – WELL NOT EQUIPPED				
i i			TURBINI	£	CYLINDER	OTHER - SPECIFY:				
SEAL AND PUMP	ANINI	II AD	DEPTH FROM	(FT)	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METH PLACE		
W.	ANNU SEAL		62	2	6	19 BAGS OF 3/8 HOLEPLUG		TOPL	.OAD	
S. SE	GRAVE	L PACK	2	0	6	1 BAGS OF CEMENT		TOPL	.OAD	
	DEPTI	H (FT)	THICK	NESS	COLOR AND TYPE OF MATERIAL ENCOUNTERED				ΓER	
	FROM	то	(FT)	(INCL	UDE WATER-BEARING CAVITIES OR FRACTI	JRE ZONES)	BEAR		
	0	9	9			CALICHE & TAN SILTY SAND		☐ YES	☑ NO	
	9	33	24	J	TAN PINK SILTY SAND & SANDSTONE					
	33	56	23	3] т	AN RED SILTY SAND & GYPSUM LA	YERS	☐ YES	☑ NO	
	56	59	3		т.	AN FED SILTY SAND & GYPSUM LA	YERS	☐ YES	☑ NO	
=	59	62	3		TAN	RED SILTY SAND & SANDSTONE	LAYERS	☐ YES	ØN ⊡	
WE	TD	62					·	☐ YES	□ NO	
OF.								☐ YES	□ NO	
00								☐ YES	□ NO	
1 25								☐ YES	□ NO	
100								☐ YES	□ NO	
6. GEOLOGIC LOG OF WELL								☐ YES	□ NO	
9.9								YES	□ NO	
								☐ YES	□NO	
								YES	□ NO	
								☐ YES	□ NO	
								YES	□ NO	
								☐ YES	Ои	
			ATTACII	ADDITION	AL PAGES AS NE	EDED TO FULLY DESCRIBE THE GEOLOGIC	LOG OF THE WELL	•		
٥			METHOD:	BAILE	R □ PUMP	☐ AIR LIFT ☐ OTHER – SPECIFY:				
ADDITIONAL INFO	WELL.	TEST				ATA COLLECTED DURING WELL TESTING, I		ME, END TI	ME,	
N.	ADDITION	AL STATEM	IENTS OR EXPLA	NATIONS:						
TIG						GED AND ABANDONED UPON COM	APLETION OF SA	MPLING		
S. S.										
TEST										
;;						ST OF HIS OR HER KNOWLEDGE AND BELIE OTHAT HE OR SHE WILL FILE THIS WELL RE				
Į Į						ON OF WELL DRILLING:	cold with migori			
SIGNATURE	n	1,1	t- 1t	المنا		3-24-10				
% %		y w	SIGNATUR	F OF DRILL	<u>•</u>	DATE				
			JOHATOK	. Or Okini.		DATE				

FOR OSE INTERNAL USE	WELL RECORD & LOG (Version 6						
FILE NUMBER	POD NUMBER	TRN NUMBER :-					
LOCATION			PAGE 2 OF 2				

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==	POD NUMBER (W	ELL MIMBER				OSE FILE N	LIMBER(S)			
Z	ADU # 238									
ΣĽ	WELL OWNER NA	AME(S)				PHONE (OF	TIONAL)			
ည	EXXON/MO	BIL								
ָ רר	WELL OWNER MA	AILING ADDRESS	··········			CITY		STATE		ZIP
WEL	503 S MARII	ENFELD, ST				MIDLAN	ID	TX	79	701
2	WELL		DEGREES	MINUTES	SECONDS					
LA	LOCATION	LATITUDE	32	32	41.00	N - ACCURA	CY REQUIRED, ONE TEX	TH OF A SE	COND	
GENERAL AND WELL LOCATION	(FROM GPS)	LONGITUDE	104	13	15:00	_W. * DATUM I	REQUIRED: WGS 84			
GEN	DESCRIPTION RE	LATING WELL LOCAT	ION TO STREET ADDR	ESS AND COMMON	V LANDMARKS					
-	FROM HWY	/ 206 GO E FO	R .5 MILES TUI	RN R .1TH M	II TURN R	TO SITE. EI	DDY COUNTY			
	(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE	E) SEC	TION	TOWNSHIP	MORTH	RANGE	□ EAST
Z.	1/4	1/4	1/4	1/4				Sour		☐ WF×E
Š	SUBDIVISION NA	ME			LOT	NUMBER	BLOCK NUMBER		UNIT/TRA	CT
OPTIONAL	HYDROGRAPHIC	Clinical					MAP NUMBER		TRACT NL	's 10 CO
4	HYDROGRAPHIC	SCRVET					NAT NUMBER		IRACTAL	MIDER
	LICENSE NUMBE	P NAME OF LIC	ENSED DRILLER		NAME OF WELL DE	III LING COV	IPANY			
	WD1478	1			STRAUB CO					
3. DRILLING INFORMATION	DRILLING START			APLETED WELL (F)	T) BOR	E HOLE DEPTH (FT	<u> </u>			
	6/24/10	6/24/10)	0		110		N/A		
					<u></u>		STATIC WATER LE			.L(FT)
RMA	COMPLETED WELL IS. ARTESIAN DRY HOLE SHALLOW (UNCONFINED) N/A									
NFO	DRILLING FLUID: AIR MUD ADDITIVES - SPECIFY:									
152	DRILLING METHO	DD: ROTARY	HAMMER	CABLE T	oor 🗌	OTHER - SPECIFY:				
LLİ	DEPTH (FT) BORE HO	LE	CASING		ONNECTION INSIDE DIA. CASING W/				SLOT
DRI		O DIA. (IN) //	MATERIAL	T	YPE (CASING)	CASING (IN)	THICK	SIZE (IN)	
بع.	0 1	10 5		N/A		N/A	N/A	<u> </u>	VA	N/A
	ļ								****	
			_					 	_	
	DEPTH (FT) THICKNE	20 1	EORMATION DE	SCRIPTION	OF PRINCIPAL	WATER-BEARING S	TRATA		YIELD
ΤΛ		O (FT)					OR FRACTURE ZON			(GPM)
STRATA										
SO										
KE N			·							
BEA					· · · · · · · · · · · · · · · · · · ·					
rer										
WATER BEARING	METHOD USED TO	O ESTIMATE YIELD OF	WATER-BEARING STE	KATA			TOTAL ESTIMATE	O WELL YIE	.D (GPM)	
4	<u> </u>									
	FOR OSE INTE	ERNAL USE					WELL RECO	RD & LOC	(Version 6	/9/08}
	FILE NUMBER			POD !	NUMBER	<u> </u>	TRN NUMBI			
	LOCATION					-	····		PAGE 1	OF 2

5. SEAL AND PUMP	TYPE OF PUMP:		SUBMER	RSIBLE	☐ JET ☐ NO PUMP – WELL NOT EQUIPPED							
			TURBINI	E	CYLINDER OTHER - SPECIFY:							
			DEPTH (FT)		BORE HOLE	MATERIAL TYPE AND SIZE	AMOUNT	METHOD OF				
	ANNU		FROM	TO	DIA. (IN)		(CUBIC FT)	PLACEMENT				
	SEAL AND GRAVEL PACK		0	2	5	.5 BAG OF CEMENT		TOPLOAD				
			2	110	5	5 23 BAGS OF 3/8 PLUG			TOPLOAD			
 						COLOR AND TYPE OF MATERIAL ENCOUNT	1	<u> </u>				
	DEPTH (FT)		THICKNESS		(INCL)	WATER BEARING?						
	FROM TO		(FT)		(INCL)							
	0	3	3			YES	☑ NO					
	3	10	7		7	YES	☑ NO					
	10	55	45			YES	Ø NO					
	55	63	8			YES	Ø NO					
l III	63	67	4		0	☐ YES	☑ NO					
F. IV	67	72	5			YES	Ø NO					
00	72	73	1			YES	Ø NO					
27	73	78	5			YES	☑ NO					
8	78	94	10	-	TA	YES	☑ NO					
GEOLOGIC LOG OF WELL	94	110	10	<u> </u>		CALCRETE		YES	Ø NO			
6. GE	TD 110							YES	□ NO			
						YES	□NO					
								☐ YES	□ NO			
	 			 .				YES	□ NO			
								☐ YES	□ NO			
				<u>, </u>			☐ YES	□ NO				
	ATTACUA							YES	□ NO			
	ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL											
ၟႍ	METHOD: BAILER PUMP AIR LIFT OTHER - SPECIFY: WELL TEST TEST RESULTS ATTACH A CORV OF DATA COLLECTED DUBING WELL TESTING INCLUDING START THAT END TIME.											
ADDITIONAL INFO	WELL.	11:21				ATA COLLECTED DURING WELL TESTING, I AND DRAWDOWN OVER THE TESTING PERIC		ME, END TI	ME,			
š	ADDITIONAL STATEMENTS OR EXPLANATIONS											
<u> </u>	SOIL BORING ONLY- SOIL BORING WAS PLUGGED AND ABANDONED UPON COMPLETION OF SAMPLING											
😽												
TEST												
7												
Li Li	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND											
8. SIGNATURE	CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:											
8	1 11 0 1/2					a/s/p						
8. S.	6	4	SIGNATION	E OE DDIL!	7/2/10							
SIGNATURE OF DRILLER / DATE												

FOR OSE INTERNAL USE						
FILE NUMBER	POD NUMBER	TRN NUMBER				
LOCATION	NOIT					

ATTACHMENT IV COPY OF NMOCD FORM C-141

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 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

						OPERATOR							
Name of Company ExxonMobil						Contact To			-				
		58, Houston,			Telephone No. 281-654-1133								
Facility Name Avalon Delaware Unit #238						Facility Type Injection line							
Surface Owner State Of New Mexico Mineral Owner						r Lease No. API#3001528659							
LOCATION OF RELEASE													
						th Line Feet from the West Line County							
K	30	20S	28E	2301			1485			Eddy			ļ
<u></u>]	<u> </u>	ļ			<u> </u>					
Latitude 32 32.641 Longitude 104 13.243													
NATURE OF RELEASE													
Type of Rele	ase :Produc	ed Water				Volume of Release 83 bbls of Volume 0 bbls							
Source of Re	leace 3" Fil	berglass inject	ion line			produced water Date and Hour of Occurrence Date and Hour of Discovery 7/28					8/09		
Source of Re	icase 5 en	ocigiass inject	ion inc			Date and Hour of Occurrence Date and Hour of Discovery 7/ 12:00 pm					7720	5/07	
Was Immedia	ate Notice C		· –			If YES, To	Whom? NM	OCD A	rtesia Offic	ce Answering	Mac	ine-M	like
		IXI	Yes _	No 🗌 Not Re	quired	Bratcher							
By Whom?	Shelby Penr	ington				Date and H	lour 7/28/09 4:1	15					·
Was a Water	course Reac					If YES, Volume Impacting the Watercourse.							
			Yes 🗵	No		}							
If a Watercou	irse was Im	pacted, Descri	be Fully.*	No watercourse i	n area			· ·····					
]
•													ļ
Describe Cau					_			. –					
3 Fiberglass	line develo	ped leak. Leak	c was isola	ated and repaired.	Emerg	ency crew was	s sent to site to be	gin rem	ediation				- 1
]
Describe Area				en.* ncy crew was sent	. ea ciea				lasii Cita	itt ba datim			1
							vation of nighty s	aturatec	I SOII. SILE	will be deline	ated a	ina a	l
remediation plan will be submitted for approval to the NMOCD Artesia office.										}			
													Ì
I hereby certif	fy that the in	formation giv	en above	is true and comple	ete to t	he best of my l	knowledge and ur	nderstan	nd that pur	suant to NMC	CD n	iles an	id
regulations al	l operators a	are required to	report an	d/or file certain re	lease n	otifications an	d perform correct	tive acti	ons for rel	eases which i	nay er	dange	r
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.													
						OIL CONSERVATION DIVISION							
Signature:	The man	260.7											
						Approved by Dietriat Supervigory							
Printed Name: Kevin M. Dillow						Approved by District Supervisor:							
Title: Compliance Supervisor						Approval Date	:	E	Expiration Date:				
E-mail Address: Kevin.m.dillow@exxonmobil.com						Conditions of Approval:				Attached			
Date:		Phone: 281-	-654-1557	,	İ								[
Attach Additi	ional Shoot								·				