

Appendices

Appendix 3 – Turkey Track - Recycling Containments Geotechnical/Boring Report



ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965

Soils Investigation

Turkey Track Produced Water Ponds Eddy County, New Mexico



Debra P. Hicks, PE/LSI NM 10871

PREPARED FOR:

Oxy USA, Inc. Permian Central Field Location Attn: Clemente Vasquez, Project Manager Midland, TX 79705

LAB No. 17 4111 PROJECT No. 2017.1064

May 3, 2017



PREFACE

This report is generated specifically for the purpose of providing design criteria for the Turkey Track Produced Water Ponds – Eddy County, NM. Under no circumstances shall it be used for any other project on or off the site. This report is meant to provide information that will inform Oxy USA, Inc. of appropriate design criteria for the planned use. The conditions encountered in field exploration and reported herein are accurate for the test location(s), time and conditions. It is not meant to eliminate the uncertainty regarding the potential for variation or changes in subsurface conditions at the site. Subsurface descriptions contained herein are of a generalized nature to provide highlights of major strata and conditions revealed in the soil samples, however it represents only the conditions at the actual boring locations.

Jim P. Hicks

Debra P. Hicks, PE/LSI NM 10871





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Introduction

This report presents the results of the field and laboratory soils investigation for the Turkey Track Produced Water Ponds – Eddy County, NM. This investigation was performed at the direction and authorization of Mr. Clemente Vasquez of Oxy USA, Inc.

The purpose of this investigation is to determine the characteristics of the subsoils and provide recommendations for foundation design. This report provides an overview of existing geotechnical/geologic conditions at the proposed site and geotechnical design parameters for the proposed facilities. The geotechnical site conditions presented herein are based on our field exploration. This report does not include environmental site characterization, hazardous materials testing, or other environmental services.

Proposed Development

Oxy USA, Inc. proposes to build two produced water ponds 272' x 380'. Each pond will have an approximate capacity of 250,000 bbls (not including the 3' of freeboard).

Field Exploration

Five (5) exploratory borings were drilled April 4, 2017. The exploratory borings were drilled to approximate depths listed in Table 1 of this Report. Boring locations are shown on the Boring Location Map. Drilling was carried out using a truck-mounted drill rig contracted with Enviro-Drill, Inc. – Albuquerque, New Mexico. Field sampling and logging was provided by Tetra Tech. Boreholes were backfilled with bentonite grout upon completion of sampling.



Boring	Date Drilled	Depth (Feet)
BH-1	4/4/17	30'0"
BH-2	4/4/17	30'0"
BH-3	4/4/17	30'0"
BH-4	4/4/17	30'0"
BH-5	4/4/17	80'0"

TABLE – 1 Boring Dates and Depths

Subsurface materials were sampled at varying intervals by split spoon sampler and/or drill cuttings where applicable.

Air-rotary/auger drilling methods were employed to cut the test borings. During the drilling, the soils encountered were continuously examined, visually classified and, where applicable, sampled.

Standard penetration tests (SPT) were performed at varying depths. Penetration resistance was measured in accordance with ASTM D 1586 by driving a standard 2" split tube sampler having a 30" free fall drop hammer weighing 140 pounds. The penetration resistance value is a useful index in estimating the consistency, relative density or hardness of the materials encountered.

Laboratory Analysis

Representative samples were tested in the laboratory to determine certain engineering properties of the soils. Mechanical analysis and soil constant determinations were performed for classification and identification of each soil type encountered. Classifications are in accordance with the Unified Soil Classification System ASTM D 2487. The results of the laboratory tests are presented on the Logs.

The following tests were conducted on selected soil samples:

- Moisture Content
- Sieve Analysis
- Atterberg Limits



Site Conditions

The Turkey Track Ponds are located in north half of Section 8 in Township 19 South and Range 28 East. This site is currently undeveloped. The surface has native vegetation.

Subsurface Soil Conditions

Stratigraphy

In general, the site consists of up to 7' of sand. This sand is underlain by approximately 6' of caliche. Below the caliche is 6' of sand and/or clay underlain by a 20' thick layer of hard fat clay. The advantage of the thick clay layer is that upon the unlikely event of a liner leak, the clay will serve as a barrier minimizing contamination of the groundwater.

Groundwater

Groundwater was not encountered in any of the borings that were advanced to a maximum depth of 80' below ground surface.

Discussion and Recommendations

The following discussion and recommendations are based upon the results of field and laboratory testing, engineering analyses, experience with similar soil conditions, and our understanding of the proposed project.

Site Work

In general, field test results indicate that the silty sands vary from very loose at the surface to very dense in relative density as indicated by measured SPT-N Values of 4 blows in 12" to 50 blows per 2". Very dense materials (N>30) were encountered at 10'0" below ground surface. Based on the results of the field investigation, excavations within the soil matrix and cemented zones may be difficult.



Recommendations

- CLEARING AND GRUBBING: All vegetation and other deleterious materials should be removed from the construction site prior to construction activities. Stripped materials consisting of vegetation and organic materials (estimated depth of 8") should be wasted from the site, or stockpiled for reuse during pit closure. Deleterious material should be removed from the site.
- 2) **EXISTING MATERIALS:** The pits are anticipated to be approximately 13' to 22' below ground. The general contractor will excavate the insitu soils to the depths and grades shown on the construction plans. The surface soils will be stockpiled and stored onsite while the caliche materials can be stockpiled for use in construction of berm walls, roads, pads, etc.
- 3) **SUBGRADE PREPARATION:** All soils that are to receive foundation elements including primary liner and dike should be scarified a minimum of 10" and compacted, at approximately optimum moisture (plus 2% to minus 2%), to not less than 95% of Laboratory Density as determined by ASTM D 698. The entire site should then be proofrolled to observe for unsuitable or weak soils. At least five passes with a heavy vibratory roller should be made during proofrolling. Soft materials or loose soils indicated during proofrolling should be stripped or further compacted. Areas of subgrade in which pumping or significant deflections are observed should be removed or stabilized. Use of lime, fly ash, kilm dust, cement or geotextiles could be considered as a stabilization technique.
- 4) All fill and/or backfill be placed in lifts not to exceed 8" (loose), and compacted at approximately optimum moisture (plus 2% to minus 2%), to not less than 95% of Laboratory Density as determined by ASTM D 698.
- 5) **ENGINEERED FILL:** Materials for Engineered Fill shall be composed of an appropriate combination of crushed stone, crushed or screened gravel, caliche, and/or sand to meet the specifications contained herein. Materials shall be free from vegetable matter and all other deleterious materials, including silt and clay balls.

Size	Cumulative % Passing
2″	100
1/2″	30-80
#4	20-60
#200	5-20

Liquid Limit Plasticity Index

35 max 4 min to 15 max



- 6) All imported fill material shall be from same source.
- 7) CONTROLLED FILL: Unless otherwise provided for in the specifications, materials to be used for non-load bearing dike embankment (controlled fill) shall be constructed with moisture and density control as specified herein. Materials for controlled fill shall have a maximum particle size of two and one-half (2-1/2) inches, and a plasticity index of four (4) minimum to fifteen (15) maximum. The liquid limit shall not exceed thirty-five (35).
- 8) PRIMARY LINER BEDDING: Upon completion of pit excavation and subgrade preparation, a site inspection shall be conducted to determine the need for bedding beneath the liner. In accordance with liner installation guidelines, subgrade shall be free of rocks, roots, and other protruding objects. All loose or disturbed material soil shall be removed from bearing surface. According to the New Mexico Administrative Code, geotextile is required under the liner when needed to reduce localized stress-strain or protuberances that otherwise may compromise the liner's integrity.
- 9) **SUITABILITY OF EXISTING SOILS FOR ENGINEERED FILL:** At the request of the contractor, suitability of existing soils may be determined based upon laboratory test results and the intended use.
- 10) **MOISTURE PROTECTION:** Positive drainage should be established away from the pit during and after construction. The ground immediately adjacent to the pit shall be sloped away from the dike at a slope not less than 5% for a minimum of 10'. In no case should long-term ponding of water be allowed around the perimeter of the dike.
- 11) **PORTLAND CEMENT CONCRETE:** Portland Cement Concrete shall be proportioned in accordance with ACI 211.1-81; all portland cement shall be an approved American (USA) brand conforming to ASTM C150, Type II, or Type V with Class F flyash, where concrete is to be placed against high sulfate content soils, low alkali; and, all exposed Portland Cement Concrete or Portland Cement Concrete slabs on grade shall be air entrained.
- 12) **OSHA Excavations:** Temporary construction slopes should be designed and excavated in strict compliance with the rules and regulations of the Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA), 29 CFR, Part 1926. This document was prepared to better insure the safety of workers entering trenches or excavations, and requires that all excavations conform to the new OSHA guidelines.



The contractor is solely responsible for protecting excavations by shoring, sloping, benching or other means as required to maintain stability of both the excavation sides and bottom. Pettigrew & Associates, P.A. does not assume any responsibility for construction site safety or the activities of the contractor.

For this site, the overburden soil encountered in our exploratory borings consisted of mostly sand, OSHA classification Type C. OSHA recommends a maximum slope inclination of 1.5H:1V for Type C soils. Excavation requirements will vary depending on the actual soil conditions in some areas. Temporary construction slopes should be closely observed for signs of mass movement, such as tension cracks near the crest, bulging at the toe of the slope, etc.

Construction Quality Assurance

Pettigrew & Associates shall perform construction observation and testing of the following:

- Subgrade preparation and proof-rolling;
- Suitability of Engineered fill and controlled fill;
- Backfill and compaction of excavations;
- Fill placement and compaction; and
- Compliance with the geotechnical recommendations.

Testing Frequency

Subgrade (Insitu soils) - One (1) soil density every 2500 square feet of prepared surface for dike or pit bottom and side slopes (ASTM D 698 and ASTM D 2922)

Engineered Fill/Primary Liner Bedding - One (1) soil density every 2500 square feet of prepared pit surface including bottom and side slopes per compacted lift (ASTM D 698 and ASTM D 2922)

Controlled Fill - One (1) soil density every 150 lineal feet of dike per lift of compacted material (ASTM D 698 and ASTM D 2922)

One (1) sieve analysis and plasticity index per material (subgrade, engineered fill, controlled fill) (ASTM C 136 and ASTM D 4318)

One (1) moisture density determination (proctor) per each type of material (ASTM D 698)



Closure

Our conclusions, recommendations and opinions presented herein are based upon our evaluation and interpretation of the findings of the field and laboratory investigation. If during construction, conditions are found to be other than those presented in this report, this office should be consulted.



Boring Location Map







Logs and Summaries



CLIEN	IT: ECT N	AME	Oxy : Tur	y Occidental Petroleum Cor key Track	poratio	'n					COC SUR) RDIN FACE		S: /ATIC	32.67 -104.0 N:	9650 97830 339	01.81'
PROJ DATE	ECT N	O.: LED:	201 4/4	17.1064 /17							BOR DEP	EHOI TH TO	LE DE	PTH: TER:	30'0" N/A		
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	0RATO % DASSING #10	% PASSING #40	ST DA 002#50NG %	TA FIGNID FIMIT (FF)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	qu (psf)	SHEAR STREGTH (tsf)





CLIEN PROJI PROJI DATE	IT: ECT N ECT N DRILI	AME O.: LED:	Oxy : Tur 201 4/4	y Occidental Petroleum Co key Track 17.1064 /17	rporatio	on					COC SUR BOR DEP	ORDIN FACE EHOI TH T(NATE: ELE\ LE DE D WA	S: /ATIC PTH: TER:	32.679 -104.0 DN: 30'0" N/A	9650 97830 339	91.81'
								LAB	ORATO	ORY T	EST D/	TA					
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	qu (psf)	SHEAR STREGTH (tsf)
			51		СН		100	96	89	81	51.4	51	24	27	>8,000		
20			21	Reddish Brown Silty Sand	SM		100	100	100	98	19.1	SNP	SNP	SNP	3,840		
30		<u>v N</u> 1.								.				<u> </u>	<u> </u>		<u> </u>
	\boxtimes	SPL	IT SPOOI	N SAMPLE	ARY		WAT	ER		Sł	HELB	Y SA	MPLE	1			



CLIEN PROJ PROJ	IT: ECT N ECT N	AME O.:	Oxy : Tur 201	y Occidental Petroleum Cor key Track 17.1064	poratio	'n					COO SUR BOR	RDIN FACE EHOI	IATE: ELEV E DE	S: /ATIC PTH:	32.67 -104.0)N: 30'0"	7400 97830 339	93.79'
DATE			4/4	/1/				LAR		זד עפר			JWA	IER:	N/A		
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200		PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	qu (psf)	SHEAR STREGTH (tsf)

0													
	Reddish Br Sand	own Silty Clayey	SC-SM	 100	100	100	97	30.8	23	16	7		
	3 Tan Clayey	Sand (Caliche)										2,760	
	5		SC	 100	98	96	89	39.7	43	17	26	3 350	
5												3,350	
	Red Silty S	and											
-	3											2,070	
10 - 2	0											3,620	
	4											6,700	
	POON SAMPLE		ARY	WAT	ER		SF	IELB	Y SAI	MPLE			 ·







CLIEN	IT:		Oxy	y Occidental Petroleum Cor	poratio	'n					coc	RDIN	IATES	5:	32.67 -104.0	7520 94940	
PROJ	ECT N	AME	: Tur	key Track							SUR	FACE	ELEV	/ΑΤΙΟ)N:	339	2.82'
PROJ	ECT N	MPLE RECOVERED Oms PER FOOT AME: Turkey Track O.: 2017.1064 TED: 4/4/17 MOISTURE MOISTURE PASSING 3/4 PASSING 3/4 PASSING 3/4									BOR	EHOI	E DE	PTH:	30'0"		
DATE	DRILI	LED:	4/4	/17							DEP	тн то	O WA	TER:	N/A		
								LAB	ORATO	ORY TE	EST DA	TA					
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	riguid Limit (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	du (þsf)	SHEAR STREGTH (tsf)

	Reddish Sand	n Brown Silty Clayey	SC-SM	 100	100	100	97	30.8	23	16	7			
	13 Tan Cla	yey Sand (Caliche)										2,760		
5	18		SC	 100	98	96	89	39.7	43	17	26	4,230		
	Red Silt	y Sand										>8.000		
10 - 50	0/6"											>8,000		
			SM	 100	100	100	94	12.5	SNP	SNP	SNP			
15	52											>8,000		
	SPOON SAMPL		ARY	WAT	ER		S⊦	IELB	Y SAI	MPLE			_	



ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965

CLIEN PROJE PROJE DATE	IT: ECT N ECT N DRILI	AME O.: LED:	Oxy : Tur 201 4/4	y Occidental Petroleum Co key Track 17.1064 /17	rporatio	on			0000		COC SUR BOR DEP	RDIN FACE EHOI TH T	NATE: ELE\ LE DE D WA	S: /ATIC PTH: TER:	32.67 -104.0 DN: 30'0" N/A	7520 94940 339	2.82'
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200		PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	dn (bsf)	SHEAR STREGTH (tsf)
			50/6"	Reddish Brown Silty Sand	SM		100	100	100	98	98.9	SNP	SNP	SNP	>8,000		
50	\mathbf{X}	SPL	IT SPOOI		ARY		WAT	ER		SF	IELB	Y SA	MPLE	E			



CLIEN PROJ	IT: ECT N	AME	Oxy : Tur	y Occidental Petroleum Cor key Track	poratio	'n					COC SUR	RDIN FACE		S: /ATIC	32.67 -104.0 N:	9460 95050 339	91.78'
PROJ	ECTN	0.:	201	7.1064							BOR	EHOI	E DE	PTH:	30'0"		
DATE	DRIL	LED:	4/4	/17							DEP.	тн то	O WA	TER:	N/A		
								LAB	ORATO	ORY TE	STDA	TA					
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	du (þsf)	SHEAR STREGTH (tsf)





ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965

CLIEN PROJ PROJ DATE	IT: ECT N ECT N DRILI	AME O.: _ED:	Oxy : Tur 201 4/4	y Occidental Petroleum Cor key Track 17.1064 /17	rporatio	'n					COC SUR BOR	RDIN FACE EHOI	NATE: ELE\ LE DE O WA	S: /ATIC PTH: TFR:	32.679 -104.0 DN: 30'0" N/A	9460 95050 339	91.78'
			., .					LAB	ORAT	ORY TI	EST DA	TA					
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	riguid Limit (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	du (psf)	SHEAR STREGTH (tsf)
15 		X	50/5"	Reddish Brown Silty Sand	СН	9.6	100	96	89	81	51.4	51	24	27	>8,000		
			64		SM	2.8	100	100	100	98	19.1	SNP	SNP	SNP	>8,000		
30			50/5"	Red Fat Clay	СН		100	100	100	100	98.9	60	23	37	>8,000		

WATER

SHELBY SAMPLE

AIR ROTARY

SPLIT SPOON SAMPLE



CLIEN	IT:		Oxy	ky Occidental Petroleum Corporation							COORDINATES:				32.67 -104.0		
PROJECT NAME: Turkey Track											SUR	FACE	ELEV	ΑΤΙΟ	N:	339	4.26'
PROJ	ECT N	0.:	2017.1064								BOR	EHOL	E DE	PTH:	80'0"		
DATE	DRILI	LED:	4/4	/17							DEP.	тн то	D WA	TER:	N/A		
								LAB	ORATO	ORY TE	ST DA	TA					
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	(Jsd) nb	SHEAR STREGTH (tsf)





DEFINING QUALITY SINCE 1965

SPLIT SPOON SAMPLE

AIR ROTARY

BORING NO.: BH-5

32.678530 **COORDINATES: Oxy Occidental Petroleum Corporation** CLIENT: -104.096470 **PROJECT NAME: Turkey Track SURFACE ELEVATION:** 3394.26' **PROJECT NO.:** 2017.1064 **BOREHOLE DEPTH: 80'0" DATE DRILLED:** 4/4/17 **DEPTH TO WATER: N/A** LABORATORY TEST DATA BEARING CAPACITY (psf) SOIL CLASSIFICATION PLASTICITY INDEX (PI) LITHOLOGIC SYMBOL SHEAR STREGTH (tsf) SAMPLE RECOVERED PLASTIC LIMIT (PL) **BLOWS PER FOOT LIQUID LIMIT (LL)** % PASSING #200 % PASSING #10 % PASSING #40 % PASSING 3/4" % PASSING #4 % MOISTURE DEPTH (FT) (Jsd) nb DESCRIPTION 15 Red Silty Sand 34 >8,000 20 SM 1.6 100 100 100 12.5 SNP SNP SNP 94 61 >8,000 25 Red Fat Clay 62 >8,000 30

100 E. Navajo Drive Suite 100 Hobbs NM 88240 T 575 393 9827 F 575 393 1543 Pettigrew.us

WATER

SHELBY SAMPLE



CLIEN	IENT: Oxy Occidental Petroleum Corporation								32.678530 -104.096470									
PROJ	ECT N	AME	: Tur	key Track								SUR	FACE	ELE	/ATIC	ON:	339	94.26'
		0.:	201	17.1064								BOR			PTH:	80'0"		
DATE			4/4	17					IAR	ORAT				JWA	IEK:	N/A		
																sf)		
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESC	CRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (ps	dn (bsf)	SHEAR STREGTH (tsf)
30 			50			СН	16.7	100	100	100	100	98.9	60	23	37	>8,000		
	\square	SPL	IT SPOOI	N SAMPLE		ARY		WAT	ER		Sł	IELB	Y SA	MPLE			_	



CLIEN	IT:		Ох	y Occidental Petroleum Cor	poratio	on					coc	RDI	VATE	S:	32.67 -104.0	8530 96470)
PROJ	ECT N	AME	: Tur							SUR	FACE	ELE\	/ATIC	ON:	3394.26'		
		0.: I FD·	201 ///	17.1064 //17							BOR	EHO TH T		PTH:	80'0"		
			-/-					LAB	ORAT	ORY TI	EST DA						
DEPTH (FT)		SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	ΓΙΘΝΙΡ ΓΙΜΙΤ (ΓΓ)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	du (psf)	SHEAR STREGTH (tsf)
50			50/5"	Reddish Brown Clayey Sand		4.4	100	88	77	65	26.1				>8,000		
	\boxtimes	SPL	IT SPOOI		ARY		WAT	ER		Sł	IELB	Y SA	MPLE	-		_	



CLIEN	CLIENT: Oxy Occidental Petroleum Corpora						ion					COORDINATES:				32.678530 -104.096470		
PROJ	ECT N	AME	: Tui	rkey Track								SUR	FACE	ELE\	/ATIC	DN:	339	94.26'
	ECT N	0.:	20 ⁻	17.1064								BOR			PTH:	80'0"		
			4/4						LAB	ORAT	ORY T	EST DA		JWA	I EN;			
	_					_										osf)		
	IBOL	RED	⊢			TION								E	X (PI	TY (ا		(tsf)
	SYN	OVE	.00			FICA	ш	3/4"	4	#10	#40	#200	L CL	IT (P	NDE	PAC		GTH
Ē	DIBC	REC	PER			ASSI	TUR	US N	₽ U	₿N	BN	BNG	LIMI	LIM	Σ	A D D		TRE
TH (HOLO	APLE	SWG			r Cr	VOIS	ASS	ASS	ASS	ASS	ASS	DID	STIC	STIC	RIN	(psf)	AR 9
DEF	E	SAN	BLG	DES	CRIPTION	sol	N %	% Р	% Р	% Р	% Р	% Р	ГQ	PLA	PLA	BE/	nb	BH
<u> </u>																		
			50/2"				13.5	100	97	93	84	33.3				>8,000		
	$\left \right>$	SPL		N SAMPLE	AIR ROT	ARY		WAT	ER		Sł	HELB	Y SA	MPLE	E			
	_	-																



ENGINEERING | SURVEYING | TESTING DEFINING QUALITY SINCE 1965

CLIENT: Oxy Occidental Petroleum Corpor							n COORDINATES: -104.0						3530 96470				
PROJ	ECT N	AME:	Tur	key Track							SUR	FACE	ELE\	ΑΤΙΟ	DN:	339	4.26'
PROJ	ECT N	0.:	20 1	7.1064							BOR	EHOI	E DE	PTH:	80'0"		
DATE	DRIL	LED:	4/4	/17							DEP	тн то	O WA	TER:	N/A		
								LAB	ORATO	ORY TI	EST DA	TA					
DEPTH (FT)	LITHOLOGIC SYMBOL	SAMPLE RECOVERED	BLOWS PER FOOT	DESCRIPTION	SOIL CLASSIFICATION	% MOISTURE	% PASSING 3/4"	% PASSING #4	% PASSING #10	% PASSING #40	% PASSING #200	riguid Limit (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	BEARING CAPACITY (psf)	(Jsd) nb	SHEAR STREGTH (tsf)
-			50/2"												>8,000		

WATER

SHELBY SAMPLE

AIR ROTARY

SPLIT SPOON SAMPLE



APPENDIX A – UNIFIED SOIL CLASSIFICATION

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE-GRAINED SOILS (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

Descriptive Terms Very loose	Relative Density 0 to 15 %	SPT Blow Count
Loose	15 to 35 %	4 to 10
Medium dense	35 to 65 %	10 to 30
Dense	65 to 85 %	30 to 50
Very dense	85 to 100 %	> 50

FINE-GRAINED SOILS (major portions passing on No. 200 sieve); includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

Unconfined Compressive

GENERAL NOTES

1. Classifications are based on the United Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.

2. Surface elevations are based on topographic maps and estimated locations.

3. Descriptions on these boring logs apply only at the specific boring locations and at the time the borings were made. they are not guaranteed to be representative of subsurface conditions at other locations or times.

		Descri	ptive Te	rms Strength kPa	SPT Blow Count									
		Very Soft Med Stiff Very	ium stiff	< 25 25 to 50 50 to 100 100 to 200 200 to 400 ~ 400	< 2 2 to 4 4 to 8 8 to 15 15 to 30									
L.	1ajor Divis	ions	Group Symbols	Typical Names	- 50	Laboratory Classification Criteria	1							
	action is size)	gravel no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	sieve)	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \overline{D_1}$	(D ₃₀) ² 0 ^{x D} 60 between 1 and 3		sizes	200		lo #10	10 #4	
SIBVE SIZE	rels coarse fra 4 sieve s	Clean (Little or	GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines	ze aurve, i No. 200 i	Not meeting all gradation requirem	nents for GW		Sieve	∧ ₩	• 00c #	# 40	#10	
Na. 200	Grav an hait of than No	ith fines ciable of fines)	GM* d u	Silty gravels, gravel-sand-silt mixtu	an grain at aller than	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are	icle Size						_
ained soils arger than	(more the larger	Gravel w (Appre arriount o	GC	Clayey gravels, gravel-sand-silt mixtures	gravel fro gravel fro raction si follows: SW, SP SM, SP	Atterberg limits below "A"	requiring use of dual symbols	Part						
oarse-Gr aterial is	action is size)	sands no fines)	sw	Well-graded sands, gravelly sands, little or no fines	sand and of times (t assified a GW, GP,	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6: $C_c = \overline{D_1}$	(D ₃₀) ² 0 ^{x D} 60 between 1 and 3		шш	¢ D.D74	10 0 01	42 to 2.00	00 to 4.76	
o mail the m	ids coarse fre o. 4 sieve	Clean (Little or	SP	Poorly-graded sands, gravelly sand little or no fines	find the second	Not meeting all gradation requirem	ents for SW				0	0	2.	
re than h	Sar an half of ar than Ne	ith fines ciable of fines)	SM* d	Silty sands, sand-silt mixtures	ne percer ng on per grained s nan 5 per	Atterberg limits below "A"	Above "A" line with P.I. between 4 and 7 are		5	Clay				-
ош)	(more the smalle	Sands wi (Appre amount (sc	Clayey sands, sand-clay mixtures	Determir Dependin Coarse-g	Atterberg limits below "A" line or P.I. greater than 7	requiring use of dual symbols		Male	Sill or (Sand	Medium	Coarse	
esize)			ML	Inorganic silts and very fine sands, rock floor, silty or clayey fine sands clayey silts with slight plasticity	or 80,		, 				r.	4	-	ri L
1. 200 sieve	and Clar	ss than 60	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clay silty clays, lean clays	, 70-	FOR CLARED AION OF HERCHARED SOL AND			Sieve		#4 to 3/4 ii	4 in. to 3	in. ta 12	? in. ta 36
oils er tham No	Sit .		OL	Organic silts and organic silty clays low plasticity		CHO		ticle Size			*	e la	ŝ	12
Grained s i is small	B	()g	мн	Inorganic silts, micaceous or diato- maceious fine sandy or silty soils, organic silts				Par			19.1	76.2	304.8	914.4
Fine- e materia	a and Clar	afer than t	сн	Inorganic clays of high plasticity, fa clays	971 20 10	MH or	он		шш		4.76 to	19.1 to	76.2 to	304.8 to
an half th	Silt	grea	он	Organic clays of medium to high plasticity, organic silts	0	0 10 20 30 40 50 60 70 80	90 100 110					Be	_	ars
(more the	Highly	Sais	Pt	Peat and other highly organic soils		Plasticity Chart			AIGIN	Grave	Fine	Coa	Cobble	Boulde
	Division	of GM a	nd SM a	roups into subdivisions of d and u are for	oads and airfields only. Su	ubdivision is based on Atterberg limits;								

Solution of an and only groups into subortrains of a and a final of the and a middle any, subortrains descriptions of groups softix di used when LL is greater than 25. Borderline classifiactions used for soils possessing characteristics of two groups are designeted by combinations of groups. For example; GW-GC, well-graded gravel-sand mixture with day binder. ... symbols.



APPENDIX B – TERMINATION

TERMINOLOGY USED TO DESCRIBE THE RELATIVE DENSITY, CONSISTENCY, OR FIRMNESS OF SOILS

The terminology used on the boring logs to describe the relative density, consistency, or firmness of soils relative to the standard penetration resistance is presented below. The standard penetration resistance (N) in blows per foot is obtained by ASTM D1586 procedure using 2" O.D., 1-3/8" I.D. samplers.

1. Relative Density. Terms for description of relative density of cohesionless, uncemented sands and sand-gravel mixtures.

N	Relative Density
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
50+	Very Dense

2. Relative Consistency. Terms for the description of clays which are saturated or near saturation.

N	Relative Consistency	Remarks
0 - 2	Very Soft	Easily penetrated several inches with fist
3 - 4	Soft	Easily penetrated several inches
5 - 8	Medium Stiff	Can be penetrated several inches with thumb with moderate effort
9 - 15	Stiff	Readily indented with thumb, but penetrated only with great effort
16 - 30	Very Stiff	Readily indented with thumbnail
30+	Hard	Indented only with difficulty with thumbnail

3. Relative Firmness. Terms for the description of partially saturated and/or cemented soils which commonly occur in the Southwest including clays cemented granular materials, silts, and silty and clayey granular soils.

Ν	Relative Firmness
0 - 4	Very Soft
5 - 8	Soft
9 - 15	Moderately Firm
16 - 30	Firm
31 - 50	Very Firm
50+	Hard



Appendices

Appendix 4 – Turkey Track - Recycling Containments Engineering Drawings





TURKEY TRACK **RECYCLING CONTAINMENT** OXY U.S.A. INC.

EDDY COUNTY, NEW MEXICO **S8 T19S R29E**





CONTACTS

<u>OWNER</u> CLEM VASQUEZ Sr. FACILITIES ENGINEER OXY PERMIAN RESOURCES **DELAWARE BASIN OPERATIONS** 1502 W. COMMERCE DRIVE CARLSBAD, NM 88220 C: (575)-200-7356 I O: (575)-628-4133 clemente_vasquez@oxy.com

INDEX OF DRAWINGS

C-001 - COVER SHEET CS-100 - OVERALL SITE LAYOUT CS-101 - SITE GRADING PLAN AND GENERAL NOTES SEDIMENT CONTROL AND EROSION PROTECTION PLAN CS-301 - SECTIONS CS-501 - DETAILS CS-502 - DETAILS

CIVIL ENGINEERING PETTIGREW & ASSOCIATES, P.A. 100 E NAVAJO DRIVE, SUITE 100 HOBBS, NM 88240 (575) 393-9827 CLAUDIUS SANCHEZ CZYZEWSKA, PE

PETTIGREW & ASSOCIATES PA ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965 100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240 T 575 393 9827 F 575 393 1543 Pettigrew.us
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PROJECT ENGINEER: Claudius Sanchez Czyzewska, PE PROJECT DESIGNER: Juan C. Saenz, EIT DRAWN BY: JCS
REVISIONS
No. DATE DESCRIPTION
COVER SHEET
TURKEY TRACK RECYCLING CONTAINMENT OXY U.S.A. INC.
PROJECT NUMBER: 2017 1064
SHEET:
C-001



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CONSTRUCTION LATEST EDITION SHALL APPLY TO THIS PROJECT. ALL DATA SHOWN HEREIN CONCERNING EXISTING PRIVATE AND/OR PUBLIC OWNED UTILITIES HAVE BEEN OBTAINED FROM THE OWNERS AND/OR FIELD OBSERVATIONS. THESE MAY OR MAY NOT BE ASSOCIATED WITH THIS EFFORT IS INCIDENTAL TO THE PROJECT. 4. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND SUPPLY WATER FOR THE PROJECT. THE BOTTOM OF PIT SHALL BE SLOPED AT A MINIMUM 1.5% AS SHOWN. THE PERIMETER OF THE SITE SHALL BE ENCLOSED WITH CHAINLINK FENCE AS PRESCRIBED BY DESIGN/CONSTRUCTION PLAN IN REGISTRATION/PERMIT APPLICATION. REGISTRATION/PERMIT) SHALL APPLY TO THIS PROJECT. THE RECYCLING CONTAINMENT SHALL HAVE A PROPERLY CONSTRUCTED FOUNDATION AND INTERIOR SLOPES CONSISTING OF A FIRM, UNYIELDING BASE, SMOOTH AND FREE OF ROCKS, DEBRIS, SHARP PROTUBERANCES THAT OTHERWISE MAY COMPROMISE THE LINER'S INTEGRITY. X 10-9 CM/SEC. LINER COMPATIBILITY SHALL MEET OR EXCEED THE EPA SW-846 METHOD 9090A OR SUBSEQUENT RELEVANT PUBLICATIONS. 10. LINER SEAMS SHALL BE MINIMIZED AND ORIENTED UP AND DOWN, NOT ACROSS, A SLOPE OF THE LEVEE. FACTORY WELDED SEAMS SHALL BE USED WHERE POSSIBLE. 11. EXPANSION WRINKLE SHALL BE INSTALLED INSIDE OF PIT CONTAINMENT FOR THERMAL EXPANSION / CONTRACTOR. SHALL BE NO HORIZONTAL SEAMS WITHIN FIVE FEET OF THE SLOPE'S TOE. QUALIFIED PERSONNEL SHALL PERFORM FIELD WELDING AND TESTING. DAMAGE. EXTERNAL DISCHARGE OR SUCTION LINES SHALL NOT PENETRATE THE LINER. THE OPERATOR SHALL POST AN UPRIGHT SIGN NO LESS THAN 12 INCHES BY 24 INCHES WITH LETTERING NOT LESS THAN TWO INCHES IN HEIGHT IN A CONSPICUOUS PLACE ON THE FENCE SURROUNDING TH OPERATOR'S NAME, THE LOCATION OF THE SITE BY QUARTER-QUARTER OR UNIT LETTER, SECTION, TOWNSHIP AND RANGE, AND EMERGENCY TELEPHONE NUMBERS. 15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT NEW MEXICO 811 (FORMERLY NEW MEXICO ONE CALL) A MINIMUM OF 48 HOURS BEFORE EXCAVATION. PRIOR TO CONSTRUCTION, THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. DURING CONSTRUCTION OF THE CONTAINMENT, THE CONTRACTOR WILL REPORT AND RESPOND TO ANY SPILLS OF HAZARDOUS MATERIALS SUCH AS GASOLINE, DIESEL, MOTOR OILS, SOLVENTS, CHEMICALS

- WILL BE RESPONSIBLE FOR REPORTING AND CLEANUP OF ANY SPILL ASSOCIATED WITH PROJECT CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPORTING ANY DISCOVERIES OF PAST SPILLS OR CURRENT SPILLS NOT ASSOCIATED WITH CONSTRUCTION. 17. CONTRACTOR MUST OBTAIN CLIENT PERMISSION BEFORE SALVAGING ANY ITEMS SPECIFIED FOR REMOVAL AND DISPOSAL AFTER COMPLETION OF CONSTRUCTION OF THE CONTAINMENT.
- OBTAINED BEFORE DISPOSAL.
- ALL MATERIALS SHALL BE APPROVED BY OXY CONSTRUCTION REPRESENTATIVES PRIOR TO PURCHASING AND SHALL BE DISCLOSED IN BID.
- 20. LINER INSTALLATION SHALL BE PERFORMED PER INDUSTRY BEST PRACTICES, STANDARDS AND OXY PROVIDED GUIDELINES.

KEYED NOTES

- 1
 POND SUMP PLAN VIEW PER DETAIL 1, SHEET CS-501
- (2) LEAK DETECTION SYSTEM PER DETAILS 1, 2 AND 3, SHEET CS-501
- (3) 3' FREEBOARD DEPTH (ELEV. 3394.00')
- $\langle 4 \rangle$ ANCHOR TRENCH PER DETAIL 4, SHEET CS-501
- (5) CONTAINMENT FENCE WITH NETTING (BY OTHERS)
- 6 6' CHAINLINK FENCE WITH BARBED WIRE PER DETAIL 6, SHEET CS-501
- (7) INSTALL 2-12" HDPE PIPE PER DETAIL 1, SHEET CS-502
- (8) INSTALL 1-18" CMP PIPE PER DETAIL 2, SHEET CS-502

RECYCLING CONTAINMENT A TOP OF BERM ELEVATION HIGH WATER ELEVATION BOTTOM OF POND ELEVATION SUMP ELEVATION TOTAL CONTAINMENT VOLUME TOTAL FLUID VOLUME BELOW 3' FREEBOARD ELEVATION

RECYCLING CONTAINMENT B

TOP OF BERM ELEVATION	
HIGH WATER ELEVATION	
BOTTOM OF POND ELEVATION	
SUMP ELEVATION	
TOTAL CONTAINMENT VOLUME	
TOTAL FLUID VOLUME BELOW 3' FREEBOARD ELEVATION	

ESTIMATED CUT/FILL QUANTITIES*

CUT (Cu. Yd.)	FILL (Cu. Yd.)	NET (Cu. Yd.)								
103,100.00**	20,800.00	82,300.00 (EXCESS)								
T AND FILL FACTORS NOT APPLIED. ALL QUANTITIES ARE "IN PLACE".										

GENERAL NOTES

THE PROPOSED DESIGN IS BASED ON TOPOGRAPHIC AND BOUNDARY INFORMATION OBTAINED FROM JOHN WEST SURVEYING COMPANY, W.O. No.: 17110364 DATED 05/01/2017.

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT CONSTRUCTION PLANS OF THE REGISTRATION/PERMIT. NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS

ACCURATE. THE CONTRACTOR IS CAUTIONED THAT HE IS RESPONSIBLE FOR THE EXACT LOCATION AND PROTECTION OF ALL LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING, IN ADVANCE OF HIS/HER CONSTRUCTION OPERATIONS, IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC. ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION. ANY COST

STRIP AND STOCKPILE TOP SOIL FOR FUTURE CLOSURE USE. NEW MEXICO ADMINISTRATIVE CODE 19.15.34 AND (DESIGN AND CONSTRUCTION SPECIFICATIONS FOR A RECYCLING CONTAINMENT IN

EDGES OR IRREGULARITIES TO PREVENT THE LINER'S RUPTURE OR TEAR. GEOTEXTILE IS REQUIRED UNDER AND OVER THE LINER WHEN NEEDED TO REDUCE LOCALIZED STRESS-STRAIN OR

AS DESCRIBED IN THE DESIGN/CONSTRUCTION PLANS OF THE REGISTRATION/PERMIT, ALL PRIMARY (UPPER) LINERS IN A RECYCLING CONTAINMENT SHALL BE GEOMEMBRANE LINERS COMPOSED OF AN IMPERVIOUS, SYNTHETIC MATERIAL THAT IS RESISTANT TO ULTRAVIOLET LIGHT, PETROLEUM HYDROCARBONS, SALTS AND ACIDIC AND ALKALINE SOLUTIONS. ALL PRIMARY LINERS SHALL BE 30-MIL FLEXIBL PVC, 45-MIL LLDPE STRING REINFORCED OR 60-MIL HDPE LINERS. SECONDARY LINERS SHALL BE 30-MIL LLDPE STRING REINFORCED OR EQUIVALENT WITH A HYDRAULIC CONDUCTIVITY NO GREATER THAN 1

UNLESS DIFFERENTLY STATED IN THE CONSTRUCTION PLAN OF THE REGISTRATION PERMIT, THE OPERATOR SHALL ENSURE FIELD SEAMS IN GEOSYNTHETIC MATERIAL ARE THERMALLY SEAMED. PRIOR TO FIELD SEAMING, THE OPERATOR SHALL OVERLAP LINERS FOUR TO SIX INCHES. THE OPERATOR SHALL MINIMIZE THE NUMBER OF FIELD SEAMS AND CORNERS AND IRREGULARLY SHAPED AREAS. THERE

13. AT A POINT OF DISCHARGE INTO OR SUCTION FROM THE RECYCLING CONTAINMENT, THE OPERATOR SHALL INSURE THAT THE LINER IS PROTECTED FROM EXCESSIVE HYDROSTATIC FORCE OR MECHANICAL

CONTAINMENT. THE OPERATOR SHALL POST THE SIGN IN A MANNER AND LOCATION SUCH THAT A PERSON CAN EASILY READ THE LEGEND. THE SIGN SHALL PROVIDE THE FOLLOWING INFORMATION: THE

CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL DESIGNATED UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE

TOXIC OR CORROSIVE SUBSTANCES, ETC. A SPILL IS DEFINED AS ANY RELEASE OF A CORROSIVE, HAZARDOUS, TOXIC OR RADIOACTIVE SUBSTANCE THAT MAY BE A THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT. REPORTS OF SPILLS WILL BE MADE IMMEDIATELY TO BOTH THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM (505-827-9329 OR 866-428-6535). THE CONTRACTOR

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING DISPOSAL SITES THAT ARE ENVIRONMENTALLY SUITABLE FOR DISPOSAL OF ITEMS NOT SPECIFIED TO BE SALVAGED. THE CONTRACTOR IS EXPECTED TO ABIDE BY ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS IN OBTAINING THE NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES AND/OR PRIVATE PROPERTY OWNERS. ALL COSTS ASSOCIATED WITH OBTAINING THESE PERMITS SHALL BE INCIDENTAL TO THE COMPLETION OF THE PROJECT AND NO DIRECT MEASUREMENT OR PAYMENT SHALL BE MADE THEREFORE. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH COPIES OF ALL PERTINENT INFORMATION, AGREEMENTS, AND PERMITS RELATED TO DISPOSAL SITES UTILIZED. BORROW MATERIAL, ROCK WASTE, AND VEGETATIVE DEBRIS SHALL NOT BE PLACED IN WETLANDS, ARROYOS, OR AREAS THAT MAY IMPACT THREATENED OR ENDANGERED SPECIES. ARCHEOLOGICAL AND ENVIRONMENTAL CLEARANCES MUST BE

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ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 60" ACROSS TWO POSTS, AS SHOWN. D IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE IDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE. HE END POSTS AND SECURE WITH 3 TIES. E SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT UPSTREAM SIDE FIRST. COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.	LEGEND EXIST. GRADE 1.0' CONTOUR EXIST. GRADE 5.0' CONTOUR FINISHED GRADE 1.0' CONTOUR FINISHED GRADE 5.0' CONTOUR DRIVING SURFACE 3' FREEBOARD DEPTH
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AIN A COPY OF THE SWPPP ON-SITE AT ALL TIMES, AND SHALL COMPLY WITH THE T IS INCIDENTAL TO CONSTRUCTION.	
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ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM	
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EDDY COUNTY, NEW MEXICO							
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