GW-

MONITORING REPORTS

DATE:
19



REFINING COMPANY

501 EAST MAIN STREET ° P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159 EASYLINK 62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

June 6, 1994

Mr. William Olson, Hydrogeologist Environmental Bureau Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87504

RE: Semi- Annual Sampling of Monitor Wells Around Evaporation Ponds, Navajo Refining, Eddy County, New Mexico

Dear Bill,

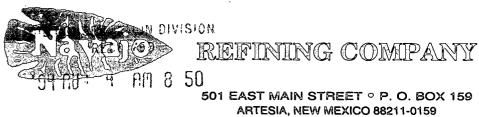
We will be sampling the monitor wells around our Evaporation Ponds on June 20, 1994. As per OCD's letter of May 22, 1990, we are required to notify OCD two weeks in advance of the sampling so that you have an opportunity to split samples. This is a flexible schedule. We would be willing to sample anytime during the week of June 20-24 to accommodate OCD.

If you have any questions, please call me at 748-3311. Thank you for your time in this matter.

Sincerely,

Daull More

Darrell Moore Environmental Specialist



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EASYLINK 62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

TELEPHONE (505) 748-3311

August 2, 1994

Mr. Roger Anderson NM Oil Conservation Division Land Office Building P.O. Box 2088 Santa Fe, NM 87501

RE: SPRING 1994 REPORT - GROUNDWATER SAMPLING AROUND EVAPORATION

PONDS

Dear Roger:

Enclosed are results from our Spring 1994 sampling of the monitor wells around the evaporation ponds. This is on a staggered schedule per your letter of October 21, 1991. The following is a summary of field observations:

Well #	Groundwater ft amsL	рН	<u>EC</u> <u>umhos</u>	Deg. C	<u>Description</u>
MW-3	3300.17	7.4	4350	23	Slight Odor,
MW-4	3299.97	6.8	4550	23	Silty, Odor
MW-5	3299.59	7.1	10720	21	Moderate odor
MW-6	3300.45	6.8	8240	22	Mod. Odor, ,
MW-7	3299.57	6.9	7680	21	Turbid Odor, Silty,
OCD-1	3302.66	7.0	7290	22	Turbid Odor,Murky
OCD-3	3300.55	7.0	9520	20	Murky, odor
OCD-5	3300.24	7.1	10550	20	Brown, Mild
OCD-7	3301.10	7.0	6400	22	odor Brown,Turbid

If you have any questions, please contact me at 748-3311, extension 281.

Respectfully yours,

Darrell Moore Environmental Specialist

	TRACEANALYSIS, INC.	
6701 Aberdeen Avenue	Lubbock, Texas 79424 806 • 794 • 1296 ANALYTICAL RESULTS FOR	FAX 806 • 794 • 1298
July 22, 1994	NAVAJO REFINING	Analysis Date: 07/22/94
Receiving Date: 06/23/94	Attention: Darrell Moore	Sampling Date: 06/21/94
Sample Type: Water	501 E. Main	Sample Condition: Intact & Cool
Project No: Semi-Annual Evap Ponds	Artesia, NM 88210	Sample Received by: BL
Project Location: NA (Wells)		Project Name: NA
	TOTAL METALS	

				•		}						
TA#	FIELD CODE	Cd (maa)	Hg (wdd)	Be (non)	v	Cu (LDCM)	Fe (nom)	nz (maa)	A1	00 (maa)	Mn (mad.)	Mo (maa.)
		/ <i>4 4</i> 1	(FF)	(EE)	(FF)	(FF)	(FE)	(FF)	(m.a.a.)	(FF)	(F.F)	(FE)
T22796	MW - 6	0.01	<0.001	<0.01	<0.05	<0.05	3.19	0.04	2.30	<0.05	0.88	<0.05
8	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT	N LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision	ion	100	100	100	100	101	100	100	101	102	100	101
% Extrac	Extraction Accuracy	91	100	97	94	86	101	97	74	70	86	88
% Instru	Instrument Accuracy	106	100	102	103	103	104	106	108	86	107	103
		Þ	Ва	Д	S	Ag						
		(bbm)	(mdd)	(bbm)	(mdd)	(mdd)					÷	
T22796	MW - 6	<0.5	0.25	0.39	<0.2	0.03						
ညွ	Quality Control	9.7	1.05	1.04	2.4	11.6						
DETECTION LIMIT	N LIMIT	0.5	0.05	0.05	0.2	0.01						
() () () () () () () () () () () () () (S.	,	a	đ	90	,						
		101))		0 0	7 7						
* Extrac	Extraction Accuracy	100	06	104	118	111						
% Instru	Instrument Accuracy	101	111	106	118	116						

METHODS: EPA 200.7, 245.1.

QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, 10.0 ppm Ag, U.

DATE

Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se;

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

	FAX 806 • 794 • 1298	Analysis Date: 07/22/94	Sampling Date: 06/21/94	Sample Condition: Intact & Cool	Sample Received by: BL	Project Name: NA	
	venue Lubbock, Texas 79424 806 • 794 • 1296 ANALYTICAL RESULTS FOR	NAVAJO REFINING	Attention: Darrell Moore	501 E. Main	Artesia, NM 88210		TOTAL METALS
	6701 Aberdeen Avenue	July 22, 1994	Receiving Date: 06/23/94	Sample Type: Water	Project No: Semi-Annual Evap Ponds	Project Location: NA (Wells)	

		ğ	НС	Ве	>	C	F.	Z	Al	පි	Mn	W
TA#	FIELD CODE	(mdd)	(mđđ)	(wdd)	(wdd)	(wdd)	(mdd)	(mdd)	(wđđ)	(wdd) .	(mdd)	(wdd)
T22797	MW - 4	0.02	<0.001	<0.01	0.29	0.08	113.0	0.28	135	<0.05	6.47	<0.05
ညွ	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION	DETECTION LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision	sion	100	100	100	100	101	100	100	101	102	100	101
% Extrac	Extraction Accuracy	91	100	61	94	86	101	6	74	70	86	83
% Instru	Instrument Accuracy	106	100	102	103	103	104	106	108	98	107	103
		Þ	Ва	Ø	Se	Ag						
		(mdd)	(mdd)	(mdd)	(mdd)	(mdd)						
T22797	MW - 4	0.7	2.14	0.84	<0.2	0.10						
ည္က	Quality Control	6.1	1.05	1.04	2.4	11.6						
DETECTION	DETECTION LIMIT	0.5	0.05	0.05	0.2	0.01						
% Precision	ion	101	86	66	108	101						
% Extrac	Extraction Accuracy	100	06	104	118	111						
% Instru	Instrument Accuracy	101	111	106	118	116						

QC: Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; METHODS: EPA 200.7, 245.1.

10.0 ppm Ag, U.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

7/22/94 DATE

	FAX 806 • 794 • 1298		Analysis Date: 07/22/94	Sampling Date: 06/21/94	Sample Condition: Intact & Cool	Sample Received by: BL	Project Name: NA	
		ANALITICAL RESOLIS FOR	NAVAJO REFINING	Attention: Darrell Moore	501 E. Main	Artesia, NM 88210		TOTAL METALS
	6701 Aberdeen Avenue	1.1.	JULY 22, 1994	Receiving Date: 06/23/94	Sample Type: Water	Project No: Semi-Annual Evap Ponds	Project Location: NA (Wells)	

TA#	FIELD CODE	(mdd)	Hg (mdd)	Be (ppm)	(wđđ)	Cu (bbm)	Fe (ppm)	zn Al (mdd) (mdd)	A1 (ppm)	Co (ppm)	(mdd)	(mdd)
3									;			
T22798	MW - 3	0.01	<0.001	<0.01	<0.05	<0.05	11.1	0.03	4.28	<0.05	3.57	<0.05
ည္လ	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
			,									
DETECTION	DETECTION LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
	!	,	(((,	((•	,	•	,
* Frecision	ston	700	100	700	001	TOT	00T	007	101	707	700	TOT
% Extrac	Extraction Accuracy	91	100	97	94	86	101	97	74	70	86	89
% Instru	Instrument Accuracy	106	100	102	103	103	104	106	108	86	107	103
		D	Ва	m	Se	Ag						
		(mdd)	(bbw)	(mdd)	(mdd)	(bbm)					-	
T22798	MW - 3	<0.5	0.14	08.0	<0.2	<0.01						
S S	Quality Control	7.6	1.05	1.04	2.4	11.6						
DETECTIO	DETECTION LIMIT	0.5	0.05	0.05	0.2	0.01						
			,									
% Precision	sion	101	86	66	108	101						•
% Extrac	Extraction Accuracy	100	06	104	118	111						
% Instru	Instrument Accuracy	101	111	106	118	116						

METHODS: EPA 200.7, 245.1.

Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U. ဦင

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

TA#	FIELD CODE	cd (bpm)	(mdd)	Be (ppm)	(wdd)	(mdd)	Fe (ppm)		A1 (ppm)	Zn Al Co (ppm) (ppm) (ppm)	(wdd)	(wdd)
T22799 QC	MW - 5 Quality Control	0.01	<0.001	<0.01 5.09	0.08	<0.05	19.6	5.54	25.3	<0.05 4.86	3.52	<0.05
DETECTION LIMIT	ON LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	100 91 106	100	100 97 102	100 94 103	101 98 103	100 101 104	100 97 106	101 74 108	102 70 98	100 98 107	101 89 103
T22799 QC	MW - 5 Quality Control	u (ppm) <0.5 9.7	Ba (ppm) 0.25 1.05	B (ppm) 1.29 1.04	Se (ppm) <0.2 2.4	Ag (ppm) 0.05						
DETECTION LIMIT	N LIMIT	0.5	0.05	0.05	0.2	0.01						
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	101 100 101	98 90 111	99 104 106	108 118 118	101 111 116						

METHODS: EPA 200.7, 245.1.

Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U. sc:

Director, Br. Blair Leftwich Director, Dr. Bruce McDonell

; INCAMUTUM LUMANUTUM MINIMANTALIA	806 • 794 • 1296 FAX 806 • 794 • 1298		Analysis Date: 07/22/94	Sampling Date: 06/21/94	Sample Condition: Intact & Cool	Sample Received by: BL	Project Name: NA	u.
	Lubbock, Texas 79424	ANALYTICAL RESULTS FOR	NAVAJO REFINING	Attention: Darrell Moore	501 E. Main	Artesia, NM 88210		TOTAL METALS
	6701 Aberdeen Avenue		July 22, 1994	Receiving Date: 06/23/94	Sample Type: Water	Project No: Semi-Annual Evap Ponds	Project Location: NA (Wells)	

TA#	FIELD CODE	cd (ppm)	Hg Be (ppm) (ppm)	Be (ppm)	V Cu (ppm)	Cu (ppm)	Fe Zn A1 Co (ppm) (ppm)	(mdd)	A1 (ppm)	Co Co	Mn (mqq)	(mdd)
T22800 QC	MW - 7 Quality Control	0.01	<0.001	<0.01 5.09	<0.05	<0.05 5.24	24.3	0.04	2.06	<0.05 4.86	1.07	<0.05
DETECTION LIMIT	N LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	100 91 106	100 100 100	100 97 102	100 94 103	101 98 103	100 101 104	100 97 106	101 74 108	102 70 98	100 98 107	101 89 103
T22800 QC	MW - 7 Quality Control	U (Dpm) <0.5 9.7	Ba (ppm) 0.07 1.05	B (ppm) 1.13 1.04	Se (ppm) <0.2	Ag (ppm) <0.01 11.6					·	
DETECTION LIMIT	Y LIMIT	0.5	0.05	0.05	0.2	0.01						
<pre>% Precision % Extraction % Instrument</pre>	<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	101 100 101	98 90 111	99 10 4 106	108 118 118	101 111 116						

Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; METHODS: EPA 200.7, 245.1. 10.0 ppm Ag, U. သိုင

0/22/54 DATE

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

	TR	RACEANALYSIS,]	YSIS,	INC					
6701 Aberdeen Avenue	ļ	Lubbock, Texas 79424 ANALYTICAL RESULTS FOR	1	806 • 794 • 1296	FAX 806 • 794 • 1298	298			
July 22, 1994	NAVAJ	NAVAJO REFINING			Analysi	3 Date:	Analysis Date: 07/22/94	ď	
Receiving Date: 06/23/94	Atten	Attention: Darrell Moore	Moore		Sampling	y Date:	Sampling Date: 06/21/94	ਰਾ	
Sample Type: Water	501 E	E. Main			Sample (Conditic	n: Inta	Sample Condition: Intact & Cool	
Project No: Semi-Annual Evap Ponds	Artes	Artesia, NM 88210			Sample	Received	Sample Received by: BL		
Project Location: NA (Wells)					Project Name: NA	Name: N	IA I		
		TOTA	TOTAL METALS						
193	HQ	ď.	Δ	ייט	22	- A	٤	Mo	

				l)						
TA#	FIELD CODE	(mdd)	Hg (mdd)	Be (ppm)	(wdd)	(mdd)	Fe (ppm)	(wdd)	A1 (ppm)	(mdd)	Mn (Ppm)	(mdd)
T22801 QC	OCD - 7 Quality Control	0.01	<0.001	<0.01 5.09	<0.05 5.27	<0.05	26.9	0.03 5.54	1.97	<0.05	5.80	<0.05
DETECTIC	DETECTION LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	100 91 106	100 100 100	100 97 102	100 94 103	101 98 103	100 101 104	100 97 106	101 74 108	102 70 98	100 98 107	101 89 103
		n (wdd)	Ba (ppm)	(wdd)	Se (ppm)	Ag (ppm)						
T22801 QC	OCD - 7 Quality Control	<0.5 9.7	0.08	1.04	<0.2 2.4	<0.01						
DETECTION LIMIT	ON LIMIT	0.5	0.05	0.05	0.2	0.01						
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	101 100 101	98 90 111	99 104 106	108 118 118	101 111 116						·

METHODS: EPA 200.7, 245.1.

Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U. ဗ္ဗ

DATE

Director, Br. Blair Leftwich Director, Dr. Bruce McDonell

S, INC. MUNICULARIAN COMPANIAN CONTRACTOR	806•794•1296 FAX 806•794•1298	Analysis Date: 07/22/94	Sampling Date: 06/22/94	Sample Condition: Intact & Cool	Sample Received by: BL	Project Name: NA	ALS	Cu Fe Zn Al Co Mn Mo	(wdd) (wdd) (wdd) (wdd) (wdd) (wdd)
ACEANALYSIS, IN			ell Moore		10		TOTAL METALS	>	(mdd)
CEAN	Lubbock, Texas 79424 ANALYTICAL RESULTS FOR	NAVAJO REFINING	Attention: Darrell Moore	. Main	, NM 88210			Ве	(mdd)
TRA		NAVAJO	Attenti	501 E.	Artesia, NM			Нg	(wdd)
	6701 Aberdeen Avenue		,94		1 Evap Ponds	(Wells)		වි	(wdd)
		July 22, 1994	Receiving Date: 06/23/94	Sample Type: Water	Project No: Semi-Annual Evap Ponds	Project Location: NA			FIELD CODE
		July	Recei	Sampl	Proje	Proje			TA#

TA#	FIELD CODE	(bpm)	(wdd)	Be (ppm)	(wdd)	Cu (ppm)	Fe (ppm)	(mdd) uz	A1 (Ppm)	Co (Ppm)	(mdd)	(mdd)
T22802 QC	OCD - 5 Quality Control	<0.01	<0.001	<0.01 5.09	<0.05	<0.05	6.95	0.04	1.81	<0.05 4.86	1.04	<0.05
DETECTION LIMIT	ON LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
<pre>% Precision % Extraction % Instrument</pre>	Precision Extraction Accuracy Instrument Accuracy	100 91 106	100 100 100	100 97 102	100 94 103	101 98 103	100 101 104	100 97 106	101 74 108	102 70 98	100 98 107	101 89 103
		n (mdd)	Ba (ppm)	B (mdd)	Se (ppm)	Ag (ppm)						
T22802 QC	OCD - 5 Quality Control	<0.5 9.7	0.11	1.24	<0.2	0.03	•				•	
DETECTION LIMIT	N LIMIT	0.5	0.05	0.05	0.2	0.01						
<pre>% Precision % Extraction % Instrument</pre>	Precision Extraction Accuracy Instrument Accuracy	101 100 101	98 90 111	99 104 106	108 118 118	101 111 116						

Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; METHODS: EPA 200.7, 245.1. 10.0 ppm Ag, U. Sc:

DATE

Director, Dr.Blair Leftwich Director, Dr. Bruce McDonell

	FAX 806 • 794 • 1298	Analysis Date: 07/22/94	Sampling Date: 06/22/94	Sample Condition: Intact & Cool	Sample Received by: BL	Project Name: NA		
TRACEANALYSIS, INC.	nue Lubbock, Texas 79424 806 • 794 • 1296 ANALYTICAL RESULTS FOR	NAVAJO REFINING	Attention: Darrell Moore	501 E. Main	Artesia, NM 88210		TOTAL METALS	
	6701 Aberdeen Avenue	July 22, 1994	Receiving Date: 06/23/94	Sample Type: Water	Project No: Semi-Annual Evap Ponds	Project Location: NA (Wells)		•

				•)						
TA#	FIELD CODE	cq (ppm)	Hg (mdd)	Be (ppm)	(wdd)	(mdd)	Fe (ppm)	(wdd)	A1 (ppm)	(mdd)	Ma (ppm)	(wdd) ow
T22803 Qc	OCD - 3 Quality Control	<0.01 5.40	<0.001	<0.01 5.09	<0.05	<0.05	7.23	0.03	8.18	<0.05	2.75	<0.05
DETECTION LIMIT	N LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	100 91 106	100	100 97 102	100 94 103	101 98 103	100 101 104	100 97 106	101 74 108	102 70 98	100 98 107	101 89 103
		n (wdd)	Ba (ppm)	8 (bdd)	Se (ppm)	Ag (mad)						
T22803 QC	OCD - 3 Quality Control	<0.5 9.7	0.25	1.00	<0.2 2.4	<0.01						
DETECTION LIMIT	N LIMIT	0.5	0.05	0.05	0.2	0.01						
<pre>% Precision % Extraction % Instrument</pre>	<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	101 100 101	98 90 111	99 104 106	108 118 118	101 111 116						

Blank Spiked with 5.0 ppm cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; METHODS: EPA 200.7, 245.1. 10.0 ppm Ag, U. : 00

DATE

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

	LTRACEANALYSIS, INC.	
6701 Aberdeen Avenue	e Lubbock, Texas 79424 806 • 794 • 1296	FAX 806 • 794 • 1298
-	ANALYTICAL RESULTS FOR	
July 22, 1994	NAVAJO REFINING	Analysis Date: 07/22/94
Receiving Date: 06/23/94	Attention: Darrell Moore	Sampling Date: 06/22/94

	6701 Aberdeen Avenue	en Avenue	Lubboc	Lubbock, Texas 79424	FOR	806 • 794 • 1296	FAX	FAX 806 • 794 • 1298	1298			
July 22, 1994	1994		NAVAJO REFINING	FINING				Analysis	s Date:	07/22/94	94	
Receivin	Receiving Date: 06/23/94		Attention:		Darrell Moore			Samplin	Sampling Date:	06/22/94	94	
Sample T	Sample Type: Water		501 E. Main	in				Sample	Conditi	Sample Condition: Intact	Ø	Cool
Project	Annual Eva	3s	Artesia, NM	NM 88210	0			Sample	Received by:		BL	
Project	Project Location: NA (Wells)	<u> </u>						Project	Project Name: NA	NA		
				H	TOTAL METALS	ALS						
		g	Вg	Be	>	ņ	Б	Zn	Al	ව	Mn	Mo
TA#	FIELD CODE	(wđđ)	(wdd)	(wđđ)	(wdd)	(wdd)	(wdd)	(wđđ)	(wdd)	(mdd)	(wdd)	(mdd)
T22804	OCD - 1	<0.01	<0.001	<0.01	0.02	<0.05	1.88	0.03	2.46	<0.05	5.20	<0.05
သူ	Quality Control	5.40	0.010	5.09	5.27	5.24	5.30	5.54	1.05	4.86	5.49	5.31
DETECTION LIMIT	N LIMIT	0.01	0.001	0.01	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05
% Precision	ion	100	100	100	100	101	100	100	101	102	100	101
% Extrac	Extraction Accuracy	91	100	97	94	86	101	64	74	70	86	89
% Instru	Instrument Accuracy	106	100	102	103	103	104	106	108	86	107	103
		Þ	Ва	М	S	Ag						
		(mdd)	(mdd)	(mdd)	(mdd)	(mdd)						
T22804	OCD - 1	<0.5	0.12	0.64	<0.2	<0.01						
၁ၓ	Quality Control	9.7	1.05	1.04	2.4	11.6						
DETECTION LIMIT	N LIMIT	0.5	0.05	0.05	0.2	0.01						
% Precision	ion	101	86	66	108	101						
% Extrac	Extraction Accuracy	100	06	104	118	111						
% Instru	Instrument Accuracy	101	111	106	118	116						

Blank Spiked with 5.0 ppm Cd, Be, V, Cu, Fe, Zn, Co, Mn, Mo; 1.0 ppm Al Ba, B; 0.010 ppm Hg; 2.0 ppm Se; 10.0 ppm Ag, U. METHODS: EPA 200.7, 245.1. QC: Blank Spiked with 5.0 I

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

Sample Condition: Intact & Cool Sampling Date: 06/21-22/94 Analysis Date: 06/27/94 Sample Received by: BL Project Name: FAX 806 • 794 • 1298 Attention: Darrell Moore NAVAJO REFINING COMPANY ANALYTICAL RESULTS FOR 88210 Lubbock, Texas 79424 Artesia, NM 501 E. Main Project No: Semi-Annual Evap Ponds (Wells) 6701 Aberdeen Avenue Receiving Date: 06/23/94 Project Location: NA Sample Type: Water June 27, 1994

				ETHYL-	M, P, O	TOTAL
		Benzene	TOLUENE	BENZENE	XYLENE	BTEX
TA#	Field Cod	(qđđ)	(qđđ)	(qđđ)	(qđđ)	(qdd)
T22796	MW - 6	42	<2	<2	<2 <2	42
T22797	MW - 4	V	~	~	< 2	~
T22798	MW - 3	^	<2>	< 5	< 5	7
T22799	MW - 5	~	<2	~	4	4
T22800	MW - 7	V	<	~	~	4
T22801	OCD - 7	< 2	<2	~	4	4
T22802	OCD - 5	~	<2	<2	<	4
T22803	OCD - 3	^ 1	^	<1	^1	<1.
T22804	OCD - 1		<2	7	~	4
೨ಥ	Quality Control	200	200	201	605	
Detection Limit		н	н	н	Н	
% Precision		66	66	100	100	
% Extraction Accuracy		66	86	100	66	
% Instrument Accuracy		100	100	100	101	

METHODS: EPA SW 846-8020.

Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS. BTEX SPIKE AND QC:

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

6701 Aberdeen Avenue

Lubbock, Texas 79424

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ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main

July 01, 1994

Artesia, NM 88210

Receiving Date: 06/23/94

Sample Type: Water

Project No: Semi-Annual Evap. Ponds

Project Location: NA

(Wells)

Analysis Date: 06/26/94

Sampling Date: 06/21/94

Sample Condition: I & C

Sample Received by: BL

Project Name: NA

	T22796	Detection	n			
EPA 8270 Compounds (ppm)	MW - 6	Limit	QC	%Р	%EA	%IA
Naphthalene	ND	0.001	0.542	NR	NR	108
2-Methylnaphthalene	ND	0.001	0.486	NR	NR	97

ND = Not Detected

	% RECOVERY
2-Fluorophenol SURR	98
Phenol-d5 SURR	128
Nitrobenzene-d5 SURR	119
2-Fluorobiphenyl SURR	126
2,4,6-Tribromophenol SURR	115
Terphenyl-d14 SURR	126

METHODS: EPA 8270.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell 2/15-194 Date 6701 Aberdeen Avenue

Lubbock, Texas 79424

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FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main

July 01, 1994

Artesia, NM 88210

Receiving Date: 06/23/94

Sample Type: Water

Project No: Semi-Annual Evap. Ponds

Project Location: NA

(Wells)

Analysis Date: 06/26/94

Sampling Date: 06/21/94

Sample Condition: I & C

Sample Received by: BL

Project Name: NA

	T 22797	Detection				
EPA 8270 Compounds (ppm)	MW - 4	Limit	QC	۴P	ŧЕА	%IA
Naphthalene	ND	0.001 0	.542	NR	NR	108
2-Methylnaphthalene	ND	0.001 0	.486	NR	NR	97

ND = Not Detected

% RECOVERY

2-Fluorophenol SURR	101
Phenol-d5 SURR	121
Nitrobenzene-d5 SURR	118
2-Fluorobiphenyl SURR	128
2,4,6-Tribromophenol SURR	107
Terphenyl-d14 SURR	103

METHODS: EPA 8270.

Director, Dr Blair Leftwich

Director, Dr. Bruce McDonell



3/94 nual Evaj	Lubbock, Fexas 79424 806 • 794 • 12 ANALYTICAL RESULTS FOR NAVAJO REFINING Attention: Darrell Moore 501 E. Main Artesia, NM 88210	806 • 794 • 1296 SSULTS FOR ING DARRELL MOORE 88210	FAX 806 • 794 • 1298 Analysis Date: 06/27/94 Sampling Date: 06/21-22/94 Sample Condition: Intact & Cool
Project Location: NA (Wells)			Project Name: NA

					ALKAL	ALKALINITY
		CHLORIDE	FLUORIDE	SULFATE	(mg/L as CaCo3	s CaCo3)
TA#	FIELD CODE	(mg/L)	(mg/L)	(mg/L)	HC03	C03
T22796	MW - 6	590	2.9	1,715	137	0
T22797	MW - 4	1,310	1.7	3,669	243	0
T22798	MW - 3	1,086	2.5	3,109	296	0
T22799	MW - 5	4,118	3.4	6,025	391	0
T22800	MW - 7	2,901	1.5	5,359	264	0
T22801	OCD - 7	1,825	2.5	4,416	581	0
T22802	OCD - 5	4,679	6.0	4,187	254	0
T22803	OCD - 3	5,194	0.8	4,095	254	0
T22804	OCD - 1	2,667	9.9	5,106	677	0
သ	Quality Control	510	1.0	10	1	 -
% Precision	ion	86	66	95	66	66
% Extrac	% Extraction Accuracy	101	115	94	 - -	!
% Instru	% Instrument Accuracy	102	96	95	!	
DETECTION LIMIT	N LIMIT	п	0.1	н	10	1

QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE. METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

2/15-184 Date THE LIMIT OF THE WORLD OF THE TRACE ANALYSIS, INC. MULLICULUM MILLING OF THE WORLD OF THE WORLD

Sample Condition: Intact & Cool Sampling Date: 06/21-22/94 07/05/94 Sample Received by: BL Project Name: NA Analysis Date: Attention: Darrell Moore ANALYTICAL RESULTS FOR Lubbock, Texas 79424 NAVAJO REFINING Artesia, NM 501 E. Main Semi-Annual Evap Ponds (Wells) 6701 Aberdeen Avenue Receiving Date: 06/23/94 Project Location: NA Sample Type: Water July 12, 1994 Project No:

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	
T22796	MW - 6	1.4	111.4	318.2	543.6	Ì
T22797	MW - 4	42.6	149.2	450.3	1,057	
T22798	MW - 3	7.6	187.0	451.6	9.966	
T22799	MW - 5	18.7	473.1	434.6	4,287	
T22800	MW - 7	7.3	250.4	479.9	3,006	
T22801	OCD - 7	5.8	281.8	727.2	2,345	
T22802	OCD - 5	43.1	310.3	774.1	2,963	
T22803	OCD - 3	43.9	367.9	1,051	2,886	
T22804	OCD - 1	8.6	245.4	0.669	2,577	
ρŏ	Quality Control	6.86	20.7	20.1		
Detection Limit		0.1	0.1	0.05	0.1	
% Precision		101	102	103	106	
% Extraction Accuracy		93	106	108	111	
% Instrument Accuracy		66	104	100	66	

METHODS: EPA 200.7.

SODIUM. QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, 7/15/64 Date

> Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

STOTABET AND TOTAL TOTAL RESULTS FOR ANALYSIS, INC. MULLILLIAN MULLIN M
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METALS
TOTAL

Project Name: NA

Project Location: NA

(Wells)

TA#	FIELD CODE	As (ppm)	Cr (ppm)	Ni (ppm)	Pp (mdd)
T22796	MW - 6	0.192	0.012	0.002	0.001
T22797	MW - 4	0.541	960.0	0.051	0.002
T22798	MW - 3	0.209	0.013	0.011	0.003
T22799	MW - 5	0.050	0.014	0.018	0.005
T22800	MW - 7	0.061	0.004	<0.001	0.003
T22801	OCD - 7	0.256	0.001	0.017	0.001
T22802	OCD - 5	0.038	0.001	0.031	0.005
T22803	OCD - 3	0.001	0.004	0.014	0.001
T22804	ocb - 1	0.048	<0.001	0.047	0.004
DĞ.	Quality Control	660.0	0.040	0.100	0.0505
Detection Limit	nit	0.001	0.001	0.001	0.001
% Precision		102	100	102	100
% Extraction Accuracy	Accuracy	111	85	86	94
* Instrument Accuracy	Accuracy	y V	76	001	TOT

TOTAL METALS QC: Blank Spiked with 0.100 ppm As, Ni; 0.050 ppm Cr, Pb. METHODS: EPA 239.2, 206.2, 218.2, 249.2.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

_	raceA	TraceAnalysis, Inc.	, <u>II</u>	1C.	_	6701 A Tel	.berde (806)	6701 Aberdeen Avenue Tel (806) 794 1296	nue 96	Lubb Fax (Lubbock, Texas 79424 Fax (806) 794 1298	79424	ČÍ	O-NIN-	F-CU	STOD	Y REC	ORD AND	CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST	S REQU	EST	
Project Manager:	NRRELL	MRRELL MOORE			<u> </u>	Phone #: 505-748	. 50S	17 - S	18-5	1188.346	2					ANA	LYSE	ANALYSIS REQUEST			SPECIAL	N. ING
Company Name &	Company Name & Address: \(\int \lambda \lamb	Refining	0																			
Project#: Ser	ni. Annua	Semi. Annual Evap Ponds (wells	1 s (lew.		Project Name :	Name							S DH 49								
Project Location:						Sampler Signature:	Signa	1 ~	3	le M	lose			Ba Cd Cr						sysb i)oc	
			<u> </u>		MATRIX	ЗІХ		PRESI MI	PRESERVATIVE METHOD	TIVE	<u> </u>	SAMPLING		sA bA				4.6				
LAB #	FIELD CODE		# CONTAINE	ЯЭТАМ	SOIL	SLUDGE	OTHER	ниоз нсг	ICE	иои Отне <i>в</i>	3TAG	ЭМІТ	38TM, X3T8	TCLP Metals	Total Metals A	TCLP Volatile	SQT	2 ^{0, ਫ} ਼ 7 ∵ ੪੦।		Turn around	WT hoge?	ploH
9622	MW - 6		4	×					×		4/12/1	10:45		-		-					4	
22747	Mw-4		1	×					×		=	13.10		-		-	<u> </u>	7	·			
22798	Mw. 3		3	X					×		=	13:40						-		:		
22794	111W-5		3	×					×		И Ж	14:00		-				J.				
2.2560	Mw-7		η	×					X		11 11	14:20					ļ	=				
108.22	7-020	•	W	×					×		11	14:40						-				
20822	000-5		M	×					×		422/44	422/4410.00								 		
22863	0C b - 3		M	×					×		:	₹:0/						ž		! :		
7282C	DCD -1	/	m	×		\exists			×		11 21	94:01						"				
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Relinanished by:		Date.	Ė				<u> </u>			\dashv				\dashv		┨.]
Danel	Jamel More	15/25/2	=	/6 ; 3/	30		<u></u>	neceived by:	: o D			KEMAKKS	S 3	E	13 W W			'	4 are anolyze	مده المرابع	1/2 (c.10	اگ م
Relinquished by:		Date:	ılT.	Times:			2	Received by:	d by:			Samples		2 2		caught	-	-	y were	رچ	kept	· _
Relinquished by:		Date: () 5 y		Times:			*	Received by Laboratory:	d by L	abora	itory:	S S	ON 100				į					



REFINING COMPANY RECE

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TELEPHONE (505) 748-3311 501 EAST MAIN STREET OP. O. BOX 159 CARTESIA, NEW MEXICO 88211-0159

(505) 746-6155 EXEC (605) 748-9077 ENGR (505) 746-4438 P/L

August 23, 1994

Mr. Roger Anderson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504

RE: 2nd Quarter 1994 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger,

Enclosed are the results of our quarterly sampling of the RO reject water in addition to the bi-weekly analysis that you have not received. This water is being put on our farm and into Eagle Draw. For this sampling period we discharged a total of 49,361,300 gallons. This is broken down as follows: 11,700,006 gallons discharged to Eagle Draw and 37,661,294 gallons discharged to the farm. Since we started discharging the RO reject water we have discharged a total of 193,180,596 gallons. This is broken down as follows: 37,908,703 gallons have been put into Eagle Draw and 155,271,893 gallons have been put on the farm.

In the future, we will hold all bi-weekly analysis and send it when the quarterly results are sent. This should cut down on the amount of work each of us have to do.

If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,

Darrell Moore

Environmental Specialist

aull Moore

encl. cc:USEPA 6701 Abordoen Avenue

Lubbock, Texas 79424

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FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Artesia, NM 88210

501 E. Main

Attention: Darrell Moore

August 19, 1994

Receiving Date: 08/01/94

Sample Type: Water

Project No: NA

Project Logation: Artesia

Analysis Date: 08/01/94

Sampling Date: 07/29/94

Sample Condition: Intact & Cool

Sample Received by: BL

Project Name: RO Reject Qtrly

T24162

PARAMETERS (mg/L)	RO Reject Qtrly	ÖĊ	% P	%EA	AI\$
Phenol	0.133	0.790	94	90	99
NO3-N	2.10	0.98	98	90	98
COD	29	122	123	115	98
NH3	0.07	0.96	100	129	95
CN-	<0.02	0.02	100	130	100
BOD	<3	220	97		110
T55	<1		105	~-~	
pH (s.u.)	7.3	7.0	100	des the dip.	100
TDS	3,139		100	~-~	
EC (uMHOs/om)	3,302	1,486	100		105
Chlorine	<0.1		100	~-~	~
Fecal Coliform (s.u.)	Not Found			·	

*NR = Not Run

Methods: EPA 600/8-78-017, 330.1, 120.1, 160.1, 150.1, 160.2, 405.1, 335.2, 350.3, 410.4, 353.3, 420.2.

Director, Dr. Blair Leftwich

Director, Dr. Bruce McDonell

8-19-98

DATE

NAVAJO REFINING Qtrly RO Reject

PAGE 3 of 3

EPA 624 Compounds (ppb)	T24162 RO Reject Qtrly	Detection Limit	QC	&Р	%EA	%IA
1,3-Dichloropropane	ND	10				
Ethyl methacrylate	ND	10				
1,2,3,5-Diepoxybutane	ND	20				
1,2-Dibromoethane	ND	0.1				
2-Picoline	ND	1				
1,1,1,2-Tetrachloroethane	ND	1				
1,2,3-Trichloropropane	ND	1				
Isopropylbenzene	nd	1				
Bromobenzene	ND	1				
n-Propylbenzene	ND	• 1				
2-Chlorotoluene	ND	1				
4-Chlorotoluene	ND	1				
1,3,5-Trimethylbenzene	ND	1				
Pentachloroethane	ND	0.1				
1,2,4-Trimethylbenzene	ND	1				
tert-Butylbenzene	ND	1				
Benzyl chloride	ND	5				
sec-Butylbenzene	ND	. 1				
Isopropyl toluene	ND	1				
n-Butylbenzene	ND	1			1	
1,3-Dichloro-2-propanol	ND	5				
1,2-Dibromo-3-chloropropane	ND	5				
1,2,3-trichlorobenzene	ND	10				
Naphthalene	ND	1			•	
1,2,4-trichlorobenzene	ND	10				
Hexachlorobutadiene	ND	10				
•	% RECOVERY					
1,2-Dichloroethane-d4 SURR	95					
Toluene-d8 SURR	97					
4-Bromofluorobenzene SURR	97			•		

*ND = Not Detected METHODS: EPA 624.

Director, Dr. Blair Leftwich

Director, Dr. Bruce McDonell

DATE

8-19-94

NAVAJO REFINING Qtrly RO Reject

PAGE 2 of 3

EPA 624 Compounds	T2416	52	Detection	1			
(ppb)	RO Reject	Qtrly	Limit	ÖC	\$P	%EA	%IA
Dibromochloromothane	ND	-	i	52			104
Tetrachloroethene	ND	•	2	53			106
Chlorobenzene	ND		1	53	95	100	106
Ethylbenzene	ND		0.5	53			106
m & p-Xylene	ND		0.5	110			110
Bromoform	ДИ	•	1	53			106
Styrene	ND		0.5	52			104
o-Xylene	ND		0.5	54			108
1,1,2,2-Tetrachlorosthans	ND		1	54			108
1,4-Dichloro-2-butene	ND		. 5	50			100
1,4-Dichlorobenzene	ND	•	2	50			100
1,3-Dichlorobenzene	ND	•	2	50			100
1,2-Dichlorobenzene	ND		2	- 50			100
Acentonitrile	ND		30				
Acetone	ND		10				
3-Chloropropionitrile	מא	•	10				
Ethanol	ND		50	₹			
Acrylonitrile	ND		30				
Allyl chloride	ND	4	5				
Methyl tert-Butyl Ether	ND		10				
Propionitrile	ND		S,				
Allyl alcohol	ND		50				
Propargyl alcohol	ND		30				
Methacrylonitrile	ND	٠	10		٠		
1,2-Dichlorosthene	ND		. 10				
2,2-Dichloropropane	ND		10				
Isobutyl alcohol	ND		50				
1,1-Dichloropropens	ND		10				
2-Hydroxypropionitrile	ND		20				
Acrolein	ND		30				
2-Chloroethyl vinyl ether	ND		10				
Dibromomethane	ND		0.1				
1,4-Dioxana	ND		1				
Methyl methacrylate	ND		10				
2-Chloroethanol	ND		50				
Epichlohydrin	ND		10				
Pyridine	ND		30				

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August 19, 1994

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 B. Main

Artesia, NM 88210

Analysis Date: 08/10/94 Sampling Date: 07/29/94

Sample Condition: I & C .

Sample Received by: BL

Project Name: Qtrly RO Reject

PAGE 1 of 3

Receiving Date: 08/01/94
Sample Type: Water
Project No: NA

Project Location: Artesia, NM

	T24162	Detection				
EPA 624 Compounds (ppb)	RO Reject Qtrly	Limit	õС	%₽	&EA	RIA
Dichlorodifluoromethane	ND	1	50			100
Chloromethane	ND	1	48			96
Vinyl chloride	ND	• 2	47			94
Bromomethane	ND	1	55			110
Chloroethane	ND	1	51			102
Trichlorofluoromethane	ND	1	55			110
1,1-Dichloroethene	ND	2	52	99	102	104
Iodomethane	ND	1.	53			106
Carbon disulfide	ND	1	59		,	118
Methylene chloride	ND	1	51			102
trans-1,2-Dichloroethene	ND	1	51			102
1,1-Dichloroethane	ND	1	49			98
Vinyl acetate	· ND	1	54			108
2-Butanone	ND	20	55			- 110
Chlorotorm	ND	· 1	50			100
1,1,1-Trichlorosthans	ND	1	50		•	100
1,2-Dichloroethane	ND .	2	52			104
Benzene	ND	0.2	5 7	93	104	114
Carbon Tetrachloride	ND	10	57			114
1,2-Dichloropropane	ND	2	56			112
Trichloroethene	ND	2	52	97	86	104
Bromodichloromethane	ND	1	55			110
cis-1,3-Dichloropropene	ND	2	59			118
4-Methyl-2-pentanone	ND	10	53			106
trans-1,3-Dichloropropene	ND	2	55	95	104	110
Toluene	ND	0.5	53			106
1,1,2-Trichloroethane	ND	1	54			108
2-Hexanone	ND	10	52			104

&IA

100

101

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ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main

T24162

RO Reject

August 19, 1994

Receiving Date: 08/01/94

Sample Type: Water

Project No: NA

ORGANOCHLORINE

Project Location: Artesia, NM

Artesia, NM 88210 Analysis Date: 08/02/94

Detection

Eampling Date: 07/29/94 Sample Condition: I & C

sample Received by: BL

Project Name: RO Reject Qtrly

INSECTICIDES (ug/L)	Qtrly	Limit	QC	&P	%EA
a-BHC	ND	0.0001	0.0020	96	110
b-BHC	ND	0.0001	0.0020	100	100
g-BHC	ND	0.0001	0.0020	100	100
s-BHC	ND	0.0001	0.0020	95	110
Heptachlor -	ND	0.0001	0.0020	95	105
Aldrin	ND	0.0001	0.0020	89	115
Heptachlor epoxide	ND	0.0001	0.0020	91	115

Endosulfan-1 ND 0.0001 0.0020 120 100 88 Endosulfan-2 ND 0.0001 0.0020 93 102 100 DDE 0.0000 0.0020 90 110 100 ND Dieldrin ND 0.0001 0.0020 90 110 100 105 Endrin 0.0001 0.0020 100 ND 95 מממ 0.0001 0.0020 100 ND 95 95 Endrin Aldehyde 0.0005 0.0020 100 80 100 Endosulfan Sulphate 0.0005 0.0020 89 115 100 ND 100 DDT 0.0001 0.0020 97 90 ND 100 Methoxychlor ND 0.0005 0.0020 98 95 0.0053 105 PCB's ND 0.0001 NR NR

ND = Not Detected

Chlordane

Toxaphene

METHODS: EPA 608.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

ND

ND

8-19-94

0.0001

0.0101

102

101

95

104

DATE

0.0002

0.005

TRACEANALYSIS

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TEL: 806-7941296 ANALY HICAL RESULTS FOR

NAVAJO REFINING Attention: Darrell Moore 501 E. Main

Artesia, NM 88210

T24162

Aug 22 94

1:02 No.010 P.02

August 19, 1994 Receiving Date: 08/01/94 Sample Type: Water

Sampling Date: 07/20/94 Sample Condition: Intact & Cool Sample Received by: BL Project Location: Artesia, NM

Analysis Dale. 08/09/84

		RO Reject			Analysis Date. 0	8/09/94
EPA 626 (ppm)	DL	Qtrly	QC	%P	%EA	%IA
N-Nitrosodimethylamine	0.001	ND	0.494			99
Phenol	0.001	ND	0.501	98	119	100
bls(2-Chloroethyl)ether	0.005	ND	0.480			96
2-Chlorophenol	0.005	ND	0.518	96	117	104
1,3-Dichlorobenzene	0.001	ND .	0.504			101
1,4-Dichlorobenzene	0.001	ND	0.511	104	135	102
1,2-Dichlorobenzene	0.001	ND	0.514			103
bis(2-chlorolsopropyl)ether	0.005	ND	0.429			86
n-Nitrosodi n propytamino	0.001	ND	0.533	101	123	107
Hexachloroethane	0.001	ND	0.532			106
Nitrobenzene	0.001	ND	0.456			.91
Isophorone	0.005	ND	0.466			93
2-Nitrophenol	0.005	ND	0.428			86
2,4-Dimethylphenol	0.005	- ND	0.436			87
bis(2-Chloroethoxy)methane	0.001	ND	0.442		,	88
2,4-Dichlorophenol	0.005	ND	0.455	*.		91
1,2,4-Trichiorobenzene	0.001	ND	0.445	104	129	59
Naphthalene	0.001	ND	0.450			90
Hexachlorobutadiene	0.001	ND	0.471			94
4-Chloro-3-methylphenol	0.005	ND	0.467	97	128	93
Hexachlorocyclopentadiene	0.001	ND	0.517			103
2,1,6-Trichlorophenol	0.005	ND	0.449			90
2-Chloronaphthalene	0.001	ND	0.485			97
Dimethylphthalate	0.001	ND	0.478			96
Acenaphthylene	0.001	ND	0,474			95
2,6-Dinitrotoluene	0.001	ND	0.460			92
Acenaphthene	0.001	מא	0.479	102	108	96
2,4-Dinitrophenol	0.005	ND	0.442	98	115	88
4-Nitrophenol	0.005	ND	0.421	97	67	84
2,4-Dinitrotoluene	0.001	ND	0.481	98	115	96

TEL:806-7941296 NAVAJO REFINING

August 19, 1994

Aug 22 94

1:03 No.010 P.03 Page 2 of 2

T24162

Penn		RO Reject				
EPA 826 (ppm)	DL	Qtrly	QC	%P	%EA	%IA
Fluorene	0.001	ND	0.474			95
Diethylphthalate	0.001	ND_	0.492			98
4-Chlorophenyl-phenylether	0.001	ND	0.518			104
4,6-Dinitro-2-methylphenol	0.001	ND	0.481			96
n-Nitrosodiphenylamina	0.001	ND	0.036			104
Diphenylhydrazine	0.005	ND	0.480			96
4-Bromophenyl-phenylether	0.001	ND	0.493	. 4		99
Hexachicrobenzene	0.001	ND	0.479			96
Pontachierophsnol	0.005	ND	0,485	101	128	97
Phenanthrens	0.001	ND	0.495			88
Anthracene	0.001	ND	0.475			95
Di-n-butyiphthalate	0.001	ND	0.481			96
Fluoranthene	0.001	ND	0.500			100
Benzidine	0.01	ND	0.374			. 75
Pyrene	0.001	ND .	0.477	101	: 125	95
Butylbenzylphthalate	0.001	ND	0.456			91
Benz[a]anthracene	0.001	ND	0.433			87
3,3-Dichlorobenzidine	0.001	מא	0.417			83
Chyrsene	0.001	ND	0.444			89
ois(2-Ethylhexyl)phthalate	0.001	ND	0.455	".		91
Di-n-octiphthalate	0.001	ND	0.490			98
Benzo(b)fluoranthene	0.001	ND	0.427			85
Benzo(k)fluoranthene	0.001	ND	0.390			78
Benzo[a]pyrene	0.001	ND	0.468			94
ndeno[1,2,3-od]pyrens	0.001	ND	0,336			67
Diben2[a,h]anthracene	0.001	ND	0.403			81
Benzo(g,h,i)perylene	0.001	ND	0.403			81

ND = Not Detected

% RECOVERY

2-Fluorophenol SURR	92
Phenol-d5 SURR	106
Nitrobenzene-d5 9URR	112
2-Fluorobiphenyl SURR	96
2,4,6-Tribromophenol SURR	85
Terphenyl-d14 SURR	101
METHODS: EPA 628.	75

Director,

Dr. Blair Leftwich Dr. Bruce McDonell

August 15, 1994 Receiving Date: 08/01/94 Sample Type: Water	UULLLUILLUILLUILLUILUILUILUILUILUILUILUI	August 15, 1994 Receiving Date: 08/01/94 Sample Type: Water Sample Type: Water	IS, INC. IIIII	Analysis Date: Sample Condition	298 S Date: 08/05-12/94 Gondition: Intact & Cool	TRACEANALYSIS
Project No: NA Project Location: NA				Sample Receive Project Name:	Received by: BL : Name: RO Reject Otrly	TE
Tr.	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	WDIQOS (7/5m)	L:806-79
124162 oc	RO Reject Qtrly Quality Control	3.10	161.5	460.2	135.6	41296
Detection Limit		0.1	0.1	0.05	0.1	
<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	* *	100 107 105	102 98 99	101	101 101 99	Aug 22 94
METHODS: RPA 200.7. QC: Blank Spiked wi	DS: EPA 200.7. Blank Spiked with 100.0 mg/L PoTASSIUM;	ASSIUM; 20.0 mg/L MAGNESIUM,	CALCIUM,	SODIUM.		0:58

Director, Dr. Bruce McDonell Director, Dr. Blair Leftwich

15-51-8

Date

No.009 P.06

	NCALL LILL MANULATION LOUGH BY: BL	Project Name: NO Neject Quily ALKALINITY (mg/L) (mg/L as CaCo3) 2,078 311 0 10 102 100 100 101 101	Aug 22 94	
	DULULULULULURACEAN Species Avenue Lubbock, Texas 794 ANALYTICAL R NAVAJO REFIN Attention: 501 E. Main Artesia, NM		DETECTION LIMIT 0.1	FDB 375 4. 330 1. 340.2: 4500 Cl-B.

.05

METHODS:	% Extrac % Instru	% Precision	DETECTION LIMIT	1 2	T24162		% Instrument	% Extrac	* Precision	DETECTION LIMIT	T24162 QC	TA#		Project	Project	Sample T	August 1		
METHODS: EPA 200.7, 245.1, 239.2, 270.2, QC: Blank Spiked with 5.0 ppm As, Cr, Cd,	Extraction Accuracy Instrument Accuracy	ion	TIKIT N		RO Reject Otrly		ment Accuracy	Extraction Accuracy	ion	MINIT N	RO Reject Qtrly Quality Control	FIRLD CODE		Location: Artesia,	No: NA	Receiving Date: U8/01/94 Sample Type: Water	19, 1994	5/01/2	TRACEANALYSIS,
	8 88	93	0.05	4.82	<0.05	88	94	8	9 8	0.001	<0.001 0.049	(udd)	7	HIN	be et	ל יוט		ozot Abergeeti Avertue	
270.2, 272.2. Cr, Cd, Ba, Ni,	86 86	66	0.05	4.84	<0.05	D.	104	105	102	0.05	0.1 5.1	(ppm)	M 1		Artesia, NM	Attention: 501 E. Main	NAVAJO REFINING	_UUDUUK, 18X85 /5424 ANALYTICAL RESULTS FOR	IRAC
) , ⁷	103	99	0.05	5.23	0.14	Te.	98	92	99	0.05	0.08 4.88	(mdd)		l	NW 88210	5	FINING	_UODUUK, 18X8S /9~29 (TICAL RESULTS	EANA
B, Cu, Fe,	101	102	0.01	5. 25	0.01	d'a	110	102	102	0.0.	<0.01 5.29	(ppm)	TOTAL METALS		Ÿ	Parrell moore	4		ISAT
	100 9:	100	0.08	5.0	0.2	A1	108	101	100	0.01	<0.01 5.20	(ppm)		i				500 - 734-1250	S, INC
Zn, Al, Co, Mn, Mo; 0.050 ppm Pb;	98 105	99	0.05	5.21	<0.05	8	104	100	86	0.001	<0.001 0.104	(ppm)	â					747	INC. ALUULLA LA
, Mo; 0	10 0 107	100 ·	0.05		<0.05	Man and a second	98	100	100	0.001 0.001	<0.001 <0.001 0.98 0.010	(wdd)	\$	Project	Sample	Sample	Analysi	FHX 800 = / 34 = : Z30	
. 050 pp	98 107	101	0.05		60.05	A Mo	100	100	100			(ppn)	T	Name:	Receive	Conditi	s Date:	250	703
n Pb;	106	95	0.5	10.0	ô.5	d d	106	101	101	0.05	<0.05 5.10	<u></u>	Ħ.	Project Name: RO Reject Qtrly	Sample Received by: BL	Sample Condition: Intact & Cool	Analysis Date: 08/04-12/94		
							105	103	101	0.01	<0.05 5.09	(ppm)	E) D	ot Qtrly		ict & Co	12/94		
							106	104	99	0.05	<0.05 5.15	(mgg)	4	٦	i	<u></u>			2

975 84 O:28 NO

1EF:806-7941296

Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

TRACEANALYSIS TEL:806-7941296 Aug 22 94

6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR NAVAJO REFINING Attention: Darrell Moore 501 E. Main Artesia, NM 88210

August 19, 1994

Receiving Date: 08/01/94

Sample Type: Water

Project No: NA

Project Location: Artesia, NM

Analysis Date: 08/12/94 Sampling Date: 07/29/94 Sample Condition:Intact & Cool Sample Received by: BL

1:04 No.010 P.04

Project Name: NA

TOTAL RADIUM 226/228 (pci/liter)

TA#

FIELD CODE

(3+\~1)

<1

T24162

RO Reject Otrly

Detection Limit

1

135

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell 8-18-54

DATE

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6701 Aberdeen Avenue		Lubbock, ANALYTICAL	Lubbock, Texas 79424 YTICAL RESULTS	FOR	806•794•1296	FAX	FAX 806 • 794 • 1298	1298			
May 23, 1994		NAVAJO RE	ы				Analysis	s Date:	: 05/22/94	/94	
eivin			: Darrell	ll Moore			Sampling	ng Date		/94	
Sample Type: Water		501 E. Main	lin				Sample	Condit	Sample Condition: Intact	cact & Cool	201
Project No: NA		Artesia, NM	NM 88210	G			Sample	Receiv	Received by: JC	JC	
Project Location: NA							Project	Name:	Reverse	Project Name: Reverse Osmosis	U2
			н	TOTAL METALS	STA				Rejec	Reject Water	
	Рb	As	Ba	Cd.	Cr	o O	Ag	Į.	Ве	۷	Ħ
TA# FIELD CODE	(mgg)	(mqq)	(ppm)	(ppm)	(mgg)	(mqq)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
T21443 RO Reject Bi-Weekly	<0.1	<0.1	<0.05	<0.01	<0.01	<0.2	<0.01	<0.05	<0.05	<0.05	0.06
QC Quality Control	• 0	5.1	101	1.0	4.9	1.07	4.95	5.1	5.1	4.6	5.1
DETECTION LIMIT	0.1	0.1	0.05	0.01	0.01	0.2	0.01	0.05	0.05	0.05	0.05
% Precision	100	100	100	100	100	100	100	100	100	100	92
% Extraction Accuracy	103	101	106	100	98	96	94	100	96	99	99
% Instrument Accuracy	100	101	101	100	98	107	99	102	102	92	102
	Cu (ppm)	Fe (DDM)	nga)	A1	Co Co	maa)	(mgg)	u u	Hg		
T21443 RO Reject Bi-Weekly	<0.05	0.15	0.03	0.2	<0.05	<0.05	<0.05	<0.5	<0.001		
QC Quality Control	4.95	5.07	5.0	4.8	5.0	5.0	5.0	10.1	0.020		
DETECTION LIMIT	0.05	0.05	0.01	0.1	0.05	0.05	0.05	0.5	0.001		
Precision	100	100	100	97	100	100	100	100	100		
<pre>% Extraction Accuracy % Instrument Accuracy</pre>	99	101	100	96	100	100	100	103	100		
METHODS: EPA 200.7, 245.1. QC: Blank Spiked with 5.0 ppm As,	, Se, Mo,	o, Cr, Zn,	, cd, Pb,	Ni, Be,	Fe, Co,	Mn, V, 0	Cu, Ag;	100.0	opm Ba;	Mn, V, Cu, Ag; 100.0 ppm Ba; 10.0 ppm Al,	n Al,
B. 10 1 II. 0 000 1											

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

B; 10.1 ppm U; 0.020 ppm Hg.

5-23-94 DATE

PRACEANALYSIS, INC.

Receiving Date: 05/17/94 May 23, 1994 6701 Aberdeen Avenue Attention: Darrell Moore NAVAJO REFINING ANALYTICAL RESULTS FOR Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1298

Project Location: NA Sample Type: Water Artesia, NM 88210 501 E. Main Sampling Date: 05/16/94 Sample Received by: JC Sample Condition: Intact & Cool Project Name: Reverse Osmosis Analysis Date: Reject Water

Project No: NA

TA#	Field Code	POTASSIUM (mg/L)	MAGNESIUM (mg/L)	CALCIUM (mg/L)	SODIUM (mg/L)	
T21443	Bi-Weekly RO Reject	3.2	166	450	143	
800	Quality Control	96	21.3	20.7	20.6	
Detection Limit		1.0	1.0	1.0	1.0	
% Precision		99	99	96	100	
% Extraction Accuracy		92	110	109	102	
% Instrument Accuracy		96	107	104	103	

QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

METHODS: EPA 200.7.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

LIMINITRACEANALYSIS, INC.

Project Location: Artesia, NM Sample Type: Water Receiving Date: 05/17/94 Project No: NA May 23, 1994 6701 Aberdeen Avenue Artesia, NM 88210 501 E. Main Attention: Darrell Moore NAVAJO REFINING ANALYTICAL RESULTS FOR Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1298 Project Name: Reverse Osmosis Sample Received by: JC Sample Condition: Intact & Cool Sampling Date: 05/16/94 Analysis Date:

Reject Water

DETECTION LIMIT	<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	T21443 QC	TA#
Ħ	ccuracy ccuracy	RO Reject Bi-Weekly Quality Control	Field Code
,	97 97 100	262 491	CHLORIDE (mg/L)
0.1	9 9 9 9	2.5	FLUORIDE (mg/L)
ч	99 108 98	1,314 20	SULFATE (mg/L)
10		351	ALKALINITY (mg/L as CaCO3) HCO3 CO3
!	111	10	CaCO3)

METHODS: EPA 375.4, 310.1, 340.2, 4500 Cl-B.

QC: Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

1911

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

-23-94

Date

6701 Aberdeen Avenue

Lubbock, Texas 79424

806 • 794 • 1296

FAX 806 • 794 • 1298

Sample Type: Water Receiving Date: 06/10/94 June 22, 1994

Project No: NA

Project Location: Artesia, NM

NAVAJO REFINING

Artesia, NM 88210 501 E. Main ANALYTICAL RESULTS FOR

Attention: Darrell Moore

Analysis Date: 06/14/94

Sample Condition: Intact & Cool Sample Received by: BL Sampling Date: 06/09/94

Project Name: NA

DETECTION	<pre>% Precision % Extraction % Instrumen</pre>	T22220 QC	TA#
DETECTION LIMIT	Precision Extraction Accuracy Instrument Accuracy	RO Reject Bi-Wkly Quality Control	FIELD CODE
Į.	100 98 101	221 505	CHLORIDE (mg/L)
0.1	100 94 99	2.05	FLUORIDE (mg/L)
н	99 122 96	1,747	SULFATE (mg/L)
10	100	317	ALKAI (mg/L a HCO3
1	1 100	10	ALKALINITY (mg/L as CaCo3) HCO3 CO3
0.01	100 97 101	<0.01	CN- (mg/L)

METHODS: EPA 375.4, 310.1, 340.2, 335.2; 4500 Cl-B.

Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

Director, Dr. Bruce McDonell Director, Blair Leftwich

LIMMITRACEANALYSIS, INC...

6701 Aberdeen Avenue

Lubbock, Texas 79424

806 • 794 • 1296

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main
Artesia, NM 88210

Sample Type: Water

Project No: NA

Project Location: Artesia, NM

Receiving Date: 06/10/94

June 22, 1994

Analysis Date: 06/17/94

Sampling Date: 06/09/94
Sample Condition: Intact & Cool
Sample Received by: BL

Project Name: NA

TA# T22220 QC Detection Limit	Field Code RO Reject Bi-Wkly Quality Control	POTASSIUM (mg/L) 4.8 98.8	MAGNESIUM (mg/L) 80.5 19.98	CALCIUM (mg/L) 154.0 19.55	SODIUM (mg/L) 111.7 21.3
Detection Limit		0.1	0.1	0.05	0.1
<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>		101 102 99	98 105	99 97	99

METHODS: EPA 200.7.

QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

Date

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

HIM TRACEANALYSIS, INC.

June 22, 1994 Receiving Date: 06/10/94 Sample Type: Water Project No: NA Project Location: Artesia, NM TA# FIELD CODE T22220 RO Reject Bi-Wkly QC Quality Control 4.98	en Avenue pb (ppm) <0.1 4.98	Lubbock, Texas 79424 ANALYTICAL RESULTS NAVAJO REFINING Attention: Darrel 501 E. Main Artesia, NM 88210 TC As Ba (ppm) (ppm) <0.1 <0.05 4 4.9 206.5	Texas 794 RESUL: INING Darre n Ba (ppm)	FOR I MOOI Cd (ppm) C0.01	0.01 0.07	FAX 806 • 794 • 1298 Analysis Date: 06/17/94 Sampling Date: 06/09/94 Sample Condition: Intact & Cool Sample Received by: BL Project Name: NA Se Ag Hg Ni Be V (ppm) (ppm) (ppm) (ppm) (ppm) <0.2 2.65 <0.001 <0.05 <0.05 <0.05 5.04 9.74 0.020 5.18 5.00 4.89	FAX 806 • 794 • 1298 Analysis I Sampling I Sample Cor Sample Rec Project Na Project Na Ag H (ppm) (pr 2 2.65 < 0.44 9.74 0.44	Analysis Date: 06/17/94 Sampling Date: 06/09/94 Sample Condition: Intact Sample Received by: BL Project Name: NA Project Name: NA Ag Hg Ni B (ppm) (ppm) (ppm) (ppm) 2.65 <0.001 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <	1. 06/17/94 1. 06/09/94 1. 06/09/94 1. Intaced by: BL NA NA NA (ppm) (I	/94 /94 /94 cact & C 3L (ppm) <0.05	Cool v (ppm)
2220 RO Reject Quality Co	<0.1 4.98	<0.1 4.9	<0.05 206.5	< 0.01	<0.01	<0.2 5.04	2.65	<0.001	<0.05	<0.05	<0.05
DETECTION LIMIT	0.1	0.1	0.05	0.01	0.01	0.2	0.01	0.001	0.05	0.05	0.05
<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	100 94 100	98 93	98 107 103	100 86 100	102 88 101	101 100	100 89 97	100	101 94 104	100 98 100	100 93 98
	B (ppm)	Cu (ppm)	Fe (ppm)	Zn	A1	Co	maa)	Mo	u (npm)		
T22220 RO Reject Bi-Wkly QC Quality Control	0.05 5.58	<0.05 5.24	0.55 5.18	0.01 4.83	0.49 5.53	<0.05 4.69	0.53 4.84	<0.05 5.00	<0.5 9.9		
DETECTION LIMIT	0.05	0.05	0.05	0.01	0.1	0.05	0.05	0.05	0.5		
% Precision% Extraction Accuracy% Instrument Accuracy	101 107 112	100 99 105	101 94 104	100 93 97	102 104 111	100 86 94	99 101 97	100 100 100	99 94 101		

Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

QC: Blank Spiked with 5.0 ppm Pb, As, Cd, Cr, Se, Be, V, B, Cu, Zn, Al, Co, Mn, Mo, Ni; 200 ppm Ba; 10.0 ppm Ag;

0.020 ppm Hg; 9.8 ppm U.

METHODS: EPA 200.7, 245.1.

DÁTE

						}					
		154	7-25-84					B	>		
	[g;	20 ppm H	a; 0.02	Mn, Mo; 100 ppm Ba; 0.020 ppm Hg;	ı, мо; 1	Zn, Co, Mn	Cu, Fe, Z	V, B, pm Se,	N3	.2, 270.2, As, Cd, Cr, D50 ppm Pb;	METHODS: EPA 200.7, 245.1, 239.2, QC: Blank Spiked with 5.0 ppm As, 1.00 ppm Al; 9.8 ppm U; 0.050
		96 88	96 88	100 94 101	100 96 100	100 94 103	100 93 101	100 92 101	109 94 100	100 94 103	<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>
		0.001	0.001	0.001	0.5	0.05	0.05	0.05	0.08	0.01	DETECTION LIMIT
		Ag (ppm) <0.001 0.088	Se (ppm) <0.001 0.088	(ppm) <0.001 0.0505	(ppm) <0.5 9.8	(ppm) <0.05 5.14	Mn (ppm) <0.05 5.05	(ppm) <0.05 5.07	(ppm) 0.11 1.00	Zn (ppm) <0.01 5.16	T23038 RO Reject Bi-Wkly QC Quality Control
100 94 102	100 95 101	98 90 99	101 95 102	100 95 103	100 95 103	100 100	100 90 101	100 91 102	99 113 107	99 98 102	<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>
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<0.05 5.11	<0.05 5.04	<0.05 4.92	<0.05 5.08	<0.01 5.13	<0.05 5.16	<0.001	<0.01 5.06	<0.01 5.12	<0.05 107.2	<0.1 5.12	T23038 RO Reject Bi-Wkly QC Quality Control
Fe (ppm)	Cu (ppm)	B (ppm)	(mdd)	Be (ppm)	Ni (ppm)	Hg (ppm)	Cr (ppm)	cd (ppm)	Ba (ppm)	As (ppm)	TA# FIELD CODE
& Cool 3iWkly	H (†		Analysis Date: 07, Sampling Date: 06, Sample Condition: Sample Received by Project Name: RO 1	FAX 806 • 794 • 1298 Analysis I Sampling I Sample Cor Sample Rec Project Na	FA	806•794•1296 e	FOR 1 Moor	esul: NING Darre	Lubbock, Te ANALYTICAL 1 NAVAJO REFII Attention: 501 E. Main Artesia, NM	6701 Aberdeen Avenue A A A ia, NM	July 25, 1994 Receiving Date: 06/30/94 Sample Type: Water Project No: NA Project Location: Artesia, NM
	אוווון וווון		LILLIAM			INT	KACEAINALYSIS,	NTLYTY	LKAC		

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

DATE

Sample Type: Water Receiving Date: 06/30/94 July 25, 1994 6701-Aberdeen Avenue Lubbock, Texas 79424 Attention: NAVAJO REFINING ANALYTICAL RESULTS FOR Artesia, NM 501 E. Main Darrell Moore 88210 FAX 806 • 794 • 1298

Sample Condition: Intact & Cool

Sampling Date: 06/29/94

Analysis Date:

06/30/94

Project Name: RO Reject BiWkly

Sample Received by: McD

Project Location: Artesia, NM

Project No: NA

DETECTION LIMIT	<pre>% Precision % Extractio % Instrumen</pre>	T23038 QC	TA#
N LIMIT	Precision Extraction Accuracy Instrument Accuracy	RO Reject Bi-Wkly Quality Control	FIELD CODE
ъ	100 102 99	253 510	CHLORIDE (mg/L)
0.1	96 87 96	2.4	FLUORIDE (mg/L)
H	98 110 96	2,916	SULFATE (mg/L)
10	100	338	ALKALINITY (mg/L as CaCo3) HCO3 CO3
	100	0	ALKALINITY g/L as CaCo3) 03 CO3

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B. Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

Director, Dr. Bruce McDonell Director, Dr. Blair Leftwich

7-25-94

Date

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	14 . & Cool BiWkly			
	Analysis Date: 07/11/94 Sampling Date: 06/29/94 Sample Condition: Intact & Cool Sample Received by: MCD Project Name: RO Reject BiWkly	SODIUM (mg/L)	145.8 20.5	0.1
FAX 806 • 794 • 1298	Analysis Date: Sampling Date: Sample Conditic Sample Received	CALCIUM (mg/L)	585.7 20.6	0.05
806 • 794 • 1296 FA		MAGNESIUM (mg/L)	248.7	0.1
	SULTS FOR NG arrell Moore 88210	POTASSIUM (mg/L)	3.2	0.1
Lubbock, Texas 79424	ANALYTICAL RESULTS FOR NAVAJO REFINING Attention: Darrell Moore 501 E. Main Artesia, NM 88210			
6701 Aberdeen Avenue	0/94	Field Code	RO Reject BiWkly Quality Control	
	July 25, 1994 Receiving Date: 06/30/94 Sample Type: Water Project No: NA Project Location: NA	TA#	T23038 QC	Detection Limit

METHODS: EPA 200.7.

QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

Q+

7-25-94 Date

101 98 102

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103 106 97

% Extraction Accuracy
% Instrument Accuracy

% Precision

•

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

	RACEANALYSIS, INC.	
6701 Aberdeen Avenue	Lubbock, Texas 79424 806 • 794 • 1296	FAX 806 • 794 • 1298
	ANALYTICAL RESULTS FOR	
	NAVAJO REFINING	
July 25, 1994	Attention: Darrell Moore	Analysis Date: 07/21/94
Receiving Date: 07/20/94	501 E. Main	Sampling Date: 07/19/94
Sample Type: Water	Artesia, NM 88210	Sample Condition: Intact & Cool
Project No: NA		Sample Received by: MS
Project Location: NA		Project Name: NA

TA#	FIELD CODE	CHLORIDE (mg/L)	FLUORIDE (mg/L)	SULFATE (mg/L)	ALKAI (mg/L a: HCO3	ALKALINITY (mg/L as CaCo3) HCO3 CO3
T23726 QC	RO Reject Bi-Wkly Quality Control	218.3 496	2.59	1,772	323	0
<pre>% Precision % Extraction % Instrument</pre>	<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	100 96 100	100 112 100	98 107 92	100	
DETECTION LIMIT	LIMIT	п	0.1	п	10	1 1

QC: Blank Spiked with 500 mg/L CHLORIDE; 1.0 mg/L FLUORIDE; 10.0 mg/L SULFATE. METHODS: EPA 375.4, 310.1, 340.2; SM 4500 Cl-B.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

125/96 Date

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6701 Ab _t	6701 Aberdeen Avenue	Lubboc	Lubbock, Texas 79424		806 • 794 • 1296	FAX	FAX 806 • 794 • 1298	1298			
		ANALYTICAL RESULTS	AL RESULT	S FOR							
. August 2, 1994		NAVAJO REFINING	FINING				Analysis	is Date:	08/01/94	/94	
Receiving Date: 07/20/94		Attention:		Darrell Moore			Samplir	Sampling Date: 07/19/94	07/19/	/94	
Sample Type: Water		501 E. Ma	Main				Sample	Sample Condition: Intact	lon: Int	껗	C001
Project No: NA		Artesia, NM	NM 88210	0			Sample	Sample Received by: MS	ed by: N	4S	
Project Location: Artesia, NM							Project	Project Name: RO Reject	RO Reje	ect Bi-Wkly	٤ly
			-	TOTAL METALS	IALS						
	Pb	As	Ва	ဗ္ဗ	Cr	Se	Ag	Hg	Ni	Ве	>
TA# FIELD CODE	(wdd)	(wdd)	(wđđ)	(wđđ)	(wdd)	(wdd)	(wdd)	(wdd)	(wdd)	(wđđ)	(wdđ)
T23726 RO Reject Bi-wkly	<0.001	<0.1	0.10	<0.01	0.01	<0.001	<0.001	<0.001	<0.05	<0.01	<0.05
QC Quality Control	0.048	4.8	5.16	4.82	4.83	0.098	0.095	0.020	5.04	4.94	4.94
	0	•	0		ć		,	,	Ċ		C
DETECTION LIMIT	0.001	0.1	0.05	0.01	0.01	0.001	0.001	0.001	0.05	0.01	0.05
% Precision	102	66	100	66	66	93	101	100	66	101	. 66
% Extraction Accuracy	94	92	100	83	91	92	100	100	98	66	86
% Instrument Accuracy	97	97	103	96	97	86	95	100	101	66	66
	Ø	Cn	e e	Zn	Al	S	Mn	Mo	Þ		
	(mdd)	(bbm)	(mdd)	(mdd)	(mdd)	(mdd)	(mdd)	(mdd)	(mdd)		
T23726 RO Reject Bi-wkly	90.0	<0.05	<0.05	0.01	<0.08	<0.05	<0.05	<0.05	<0.5		
QC Quality Control	5.41	4.98	5.00	5.09	5.08	4.76	4.92	4.82	10.20		
DETECTION LIMIT	0.05	0.05	0.05	0.01	0.08	0.05	0.05	0.05	0.5		
% Precision	101	101	100	100	101	100	66	66	101		
% Extraction Accuracy	106	66	100	94	102	90	92	91	100		
% Instrument Accuracy	108	100	100	102	102	92	86	96	104		

0.050 ppm Pb; 100 ppm Ba; Cu, Fe, Zn, Co, Mn, Mo; Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell QC: Blank Spiked with 5.0 ppm As, Cd, Cr, Ni, Be, V, B, 0.100 ppm Se, Ag; 0.020 ppm Hg; 1.00 ppm Al; 9.8 ppm U.

METHODS: EPA 200.7, 245.1, 239.2, 270.2, 272.2.

DATE

8-2-94

HILL HILL WILL WILL WILL BOOK, Texas 79424 806-794-1296 FAX 806-794-1298

August 2, 1994 Receiving Date: 07/20/94 Sample Type: Water Project No: NA Project Location: RO Re	/20/94 RO Reject Bi-Wkly	ANALYTICAL RESULTS FOR NAVAJO REFINING Attention: Darrell Mo. 501 E. Main Artesia, NM 88210 POTASSIU	ESULTS FOR ING Darrell Moore 88210 POTASSIUM	MAGNESIUM	Analysis Date: 08/01, Sampling Date: 07/19/9, Sample Condition: Inta Sample Received by: MS Project Name: RO Reject	Analysis Date: 08/01/94 Sampling Date: 07/19/94 Sample Condition: Intact & Cool Sample Received by: MS Project Name: RO Reject Bi-Wkly CALCIUM SODIUM
TA#	Field Code		(mg/L)	(mg/L)	(mg/L)	(mg/L)
T23726 QC	RO Reject Bi-Wkly Quality Control		3.3	140.2	399.3 19.6	133.0 20.7
Detection Limit			0.1	0.1	0.05	0.1
<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	асу асу		98 106 104	100 104 101	103 111 98	100 100 104

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

QC: Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

METHODS: EPA 200.7.

8-2-54

Date

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Published Sunday, Tuesday Through Friday

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THURSDAY

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Navajo: No plan to tap into city sewer

By DARRELL J. PEHR Daily Press Editor

Navajo Refining officials are working to come up with an alternative way to handle wastewater from the plant, but they told city councilors Wednesday that there is no plan to use the city's sewer system.

David Griffin, supervisor of environmental affairs at Navajo, told city councilors Jose Aguilar, Nadine Copeland and Manuel Barragan that the refinery "has studied what it would take to treat our water (to be acceptable to be sent to the city's wastewater treatment plant) and we just can't get there."

Griffin spoke at a public meeting conducted by Navajo at the Artesia Public Library as part of the refinery's community relations plan, required by the Environmental Protection Agency (see related story).

The refinery is under an EPA mandate to close the series of evaporation ponds it has used for decades to dispose of wastewater. The ponds are near the Pecos River and have been declared a hazardous waste facility by the EPA because the ponds at one point contained hazardous levels of benzene. Those levels have been greatly reduced, but the EPA's designation is permanent.

As a result, the refinery must close the ponds in two and a half years, and in the meantime, find an alternative way of dealing with its wastewater.

Councilors had asked Griffin whether refinery officials intended to the into the city's existing wastewater system or if they would work with the city on a new city wastewater plant,

Griffin said the city's current wastewater plant is able to handle normal waste but is not capable of handling Navajo's wastes. City planner John Brown told councilors that the city, too, must meet EPA requirements on wastewater and so cannot accept water that it cannot adequately prepare for discharge to the river.

"If we take any water that will diminish the quality of the water that we send to the river ... then our (EPA) permit's in jeopardy," he said.

Since a Feb. 8 agreement, the city has been accepting some wastewater from the refinery, but officials said the level is limited to 900 gallons an hour. The water apparently is fairly clean and is being monitored by Navajo and city workers. Griffin said that agreement was made to give the refinery some "shelter" from regulatory agencies' requirements.

Griffin said efforts already have been made to reduce wastewater at the refinery from 1,000,000 gallons a day two years ago to the present 400,000 gallons. He expects additional efforts to reuse water will cut that figure to 200,000 gallons a day. Options being considered for the wastewater include injecting the water in deep wells; treating the water sufficiently so it can be used for farming; building an up-to-standards evaporation pond; or installing a high-tech reverse osmosis-type procedure that recovers 98.5 percent of the water.

Griffin said an investigation was done in 1985 and again recently into

the feasibility of constructing a wastewater treatment facility for Navajo, but the technology needed to treat the water to the standards required to safely return the water to the river is "very, very expensive."

Wednesday's meeting focused on the investigations Navajo has commissioned on its evaporation ponds, the three-mile ditch that leads to the ponds (and has since been replaced with a pipeline) and the truck bypass landfarm, another wastewater facility at the plant.

Griffin reported that three studies done by outside consultants on the wastewater situation have cost Navajo about \$1 million. Copies of all the reports, as well as reports done by Navajo staff members, are available for public review at the Artesia Public Library.

Griffin reported that the refinery had as many as six evaporation ponds in place at a time, covering about 100 acres, but now has closed all but three. He said the ponds haven't had any significant impact on the environment, and pointed out that migratory birds use one of the ponds as a nesting site.

Although some materials have percolated through the unlined ponds over the years, there are no hazardous materials at the ponds or leaking from them, said Griffin.

The refinery's community relations plan requires two public meetings a year. Navajo officials said the next meeting will be sometime in the fall. The meeting will be announced in the newspaper and a meeting notice will be posted at the

library.

Navajo negotiating \$7 million fine with Justice Department

By DARRELL J. PEHR Daily Press Editor

Negotiations are under way between Navajo Refinery and the U.S. Justice Department in a \$7 million suit over the refinery's handling of hazardous materials.

nazardous materials.

At a public meeting Wadnesdow of

The fine is tied to handling of hazardous

waste.

ently is still at issue.

benzene in December 1991, and he said Navajo failed to notify EPA.

"That's why EPA and the Justice Department is levying the fine against Navajo," he said.

Mayer said surprise inspections by the EPA in March 1992, the Oil Conservation Division a few weeks later oringing the city Standalpe well e Jaycee Park lay, leaving the inging on a call d the residents! conserve water

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longer under a suicide a tie in court for the e he was charged. A and waved as the van former football star courthouse garage.

cople hoping for seats began lining up outnal Courts Building at oday. A sheriff's serd about 7 a.m. with most of them: just 10 erved for the public.

chool with him at USC n several times," said nted would-be viewer, ckson, "I'm very up-'t get in. I'm enraged

o known eyewitnesses. ts, some unconfirmed, prosecutors have a cirase that relies on clues ds of hair, a ski cap and oves, bloodstains and ls showing the time of i's last telephone call. weapon has not been

refused to reveal their p, but it appeared cerinclude the person who dies, law enforcement coroner's investigators, o analyzed bloodstains idence, a caretaker at d the limousine driver npson to the airport for flight on June 12. The found at 12:05 a.m. on

lawyer, Robert Shapiro, edged that the football er will probably be or-1 trial.

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been declared a hazardous waste facility by the EPA because the ponds at one point contained hazardous levels of benzene. Those levels have been greatly reduced, but the EPA's designation is permanent.

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By DARRELL J. PEHR

Daily Press Editor

Negotiations are under way between Navajo Refinery and the U.S. Justice Department in a \$7 million suit over the refinery's handling of hazardous materials.

At a public meeting Wednesday at the Artesia Public Library (see related story), Navajo Superintendent of Environmental Affairs David Griffin reported that the fine was "the opening offer" from the Environmental Protection Agency and Justice Department after hazardous levels of benzene were found in an evaporation pond operated by Navajo.

Griffin told those at the meeting that evaporation ponds east of the refinery had been receiving waste containing benzene at 1.2 parts per million for years. EPA decided to lower the standards in 1990 to just .5 parts per million and Navajo began taking steps to achieve the lower standard.

"Not all our efforts were successful," said Griffin, and for some time after the EPA cut-off of November 1990, the levels of benzene reaching the ponds were higher than allowed.

"That's the \$7 million fine," said Griffin. He added that while Navajo reported the situation to the state, reports were not made to the EPA.

Of the fine, Griffin said, "It seems excessive to us." He said negotiations are still under way to settle the issue. The amount of the fine that ultimately will be paid, if any, appar-

The fine is tied to handling of hazardous waste.

ently is still at issue.

Griffin pointed out that the refinery has achieved a level of just one part per billion of benzene for the past two and a half years at the ponds.

Rich Mayer, EPA environmental engineer, hazardous waste materials, in Dallas, Texas, said Navajo has had a three-mile ditch running from the refinery to a series of evaporation ponds near the Pecos River for more than 50 years, handling oily water. He said the ditch was closed in 1987 and replaced by an underground pipeline.

In 1989, Mayer said Navajo applied for a hazardous materials permit. As part of the permitting process, the refinery was required to investigate the ditch, ponds and the truck bypass landfarm, another treatment facility that is located at the refinery.

The permit also requires that Navajo have public meetings twice a year to inform the public of the progress of the investigations.

He said EPA is requiring Navajo to close ponds because they are contaminating groundwater in the area.

Mayer confirmed that Navajo's own tests detected the high levels of

benzene in December 1991, and he said Navajo failed to notify EPA.

"That's why EPA and the Justice Department is levying the fine against Navajo," he said.

Mayer said surprise inspections by the EPA in March 1992, the Oil Conservation Division a few weeks later and the state Environment Department in May 1992 also detected high levels of benzene.

Mayer said EPA probably will have Navajo sample the Pecos River for traces of benzene. In the meantime, Navajo has two and a half years to find another way to handle wastewater.

"Navajo's required to find a treatment system to handle their waste and to close their lagoons down, said Mayer. The refinery is then to treat what's left in the ponds, remediate the soils at the ponds and monitor the groundwater.

'EPA feels it's time to stop the contamination," he said.

Both Griffin and Mayer said there have been no moves by EPA to suggest that the refinery be closed because of the waste situation.

"I think EPA is going to work with the refinery," said Mayer.

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Snow Bables: "Is That for Me," set of 2, "Waiting for Christmas," and "Playing Games is Fun."

THE PURPLE IRIS 1102 W. Main • 748-9840 today, which brings to mind a con-

Thanks again to the writers on the Commentary Page today.

Grown-ups and children enjoy ACT's 'Gumdrops'

By HELEN PETERS
Special to the Daily Press

The Artesia Community Theatre proved that kid stuff isn't just for kids. From the response at the opening performance of "Marmalade Cumdrops" last Saturday morning, it was clear that the grown-ups in the audience enjoyed the game of imagination played out on the stage as much as the children.

Of course, that has a lot to do with the zippy fast-paced production under the direction of Vicki Apodaca, and the considerable talents of the cast

Daniel Russell, twentysomething going on a believable 10; Glenn Collier with an English accent to match his Gov. Winthrop desk, and a roar worthy of any Lion of the Imagination; Eugene Irby's Chair and Ringmaster; Janet Daugherty's napprone though stylish Bed; Regina Garner's knowledgable Bookcase; Nanisa Pereles' Lamp and Time Machine; and Jerri Cowan's Mother with the authorative voice, kept the play moving and the interest high.

Andy Barrett added color with appropriate and well-timed sound effects.

The combined audience for Saturday and Sunday's performances

numbered more than 100 — half of which were children. It must have been satisfying for the cast to see the audience respond to the play's "participation theatre" spots with the enthusiasm it did.

The one sad note is that not every youngster in town could see the show. Wonder if there's any "angel" out there in the form of the Board of Education or the Artesia Arts Council who could get the wheels rolling for productions in the elementary schools — oh, well, just a thought.

The central idea of Marmalade Gumdrops that "imagination is like a marmalade gumdrop; once you've tasted it, you'll never settle for just one," can be used to describe the Artesia Community Theatre's productions. Once you've seen one, you'll never settle for just that. Speaking of which — don't forget to watch for the annual Melodrama which will be staged soon.

The people who put on the productions deserve our thanks. It's a commitment on everyone's part who participates, in whatever capacity—and our community is richer for their efforts.

(EDITOR'S NOTE: Helen Peters is an Artesia writer.)

Public Forum 7-29-94

Let Navajo deal with own waste

TO THE EDITOR:

Citizens of Artesia, this is a wake-up call. I just couldn't believe the article in the Artesia Daily Press June 30, 1994.

Our friends at Navajo would have us believe that they have no intention of hooking into our wastewater system. Come on, how dumb do you think we are ... 900 gallons an hour, just how much do you have to dump on us before you are using our system?

I would like to make it clear, I have nothing against Navajo at all. I have many friends and neighbors who work there. I just don't believe that Navajo is all that keeps Artesia going and they certainly are not the only ones that pay taxes in Artesia.

Why not do a study to see how many people in Artesia are retired on a fixed income? How many peo-

Lawmakers

N.M. SENATE DISTRICT 32 TIMOTHY Z. JENNINGS (D) In Roswell: P.O. Box 1797, Roswell, N.M. 88202, 623-8331, 623-9378. ple work in other business offices, stores and other places that have no connection to Navajo. You never hear about all of the people who work and make their living here, send our kids to school and pay their share of the taxes. I'd be willing to bet they outnumber the workers at Navajo. Do they not count for anything?

Does anyone in Artesia know how many people on the city council either work for Navajo or have worked for them? Maybe it would be wise to check it out.

Then (city councilors) want to put another ½-cent tax on the people for a new wastewater plant. I think we the people of Artesia are taxed enough. And I don't think we the people should pay for something we don't need. But is it just something that is wanted, by whom?

Friends and neighbors, I think we need to wake up if we don't want our water more messed up than it is now.

I believe Navajo needs their own wastewater system. Why should we pay for their mess? Why can't they clean up their own mess?...

I believe we should be trying to figure out a way to solve our own water problems (and we do have a problem) instead of trying to solve Navajo's problem.

Thank you, Vera Austin

Tour.

Assigned to cover the tour, I traveled with James and Terry Maupin because, like me, they were only going as far as Hope and Pinon.

After the festivities at Pinon came to a close, James was invited to visit James Ray Evrage's ranch in the spirit of neighbor visiting with neighbor. Now, when a rancher invites you to visit his place, he means his pastures, cows, watering holes and sheep, all of which are his pride and joy and rightfully so.

"When we first arrived at the ranch,"

James Ray told us to wait a second because he had to feed a newborn calf, who was a mother-rejected half of a set of twins. Terry got the duty of lifting the reluctant brown animal to its feet. After Terry's son Jeremy fed it milk, the calf took a liking to Terry and followed him around the yard, obviously looking for a few more sips of milk, but Terry didn't oblige.

For our tour, we climbed into an aging ranch pickup, with James Maupin riding in the cab. Terry and I, with 7-year-old Jeremy between us, climbed into the back and sat on a tool box across the back cab window.

So, with fresh cold colas in one hand — Jeremy was sipping a root beer — and with the other hand gripping the bars along the truck for safety, we set off with thoughts of a great adventure stamped in smiles across our faces.

In between our admiring the beautiful land and the hard work James Ray had put into the spread, we began a game of who could spot the various animals, plants and other oddities.

First, we spotted a refrigerator that looked like a tornado had embedded it into the ground with the door facing up. After concluding in our urban-way of thinking that James Ray must keep cool ones easily available in the fridge while working, we were informed the appliance keeps the water valves for the watering

city slicker idea o the best view. about such pett utilities and an knew what was in

"Nice place you can't drive to it,"

say.
"Yes, but look would respond.

Both Terry and I on the hills that o ley below. Jerem more interested i off the edge of the After picking ou

ing sites, we son the pickup and con "Look, there's Jeremy shouted

"Son, I think tha you need to hold Terry cautioned.

Jeremy's excitem ing hills, trees, a tracts of open land come him, and he hold onto the picki be bucked out.

"Did you see that The jack rabbit 1 tion.

'There's some de While peeking b the deer must have the odd threesome: the back of the 'professional" repo wearing my tie. T more casual, had jeans, a neatly pre fresh, clean Radio cap. Jeremy, who most boys his age but had the typical to loudly vocalize h ter spotting anythir rock.

We also spotted the cows, unlike the spotted us. They que hearty bovine tong we failed to throw to

Today in History

By The Associated Press

Today is Sunday, July 24, the 205th day of 1994. There are 160 days left in the year. Today's highlight in history:

Twenty-five years ago, on July 24, 1969, the Apollo 11 astronauts—two of whom had been the first men to set foot on the moon—splashed down safely in the Pacific.

On this date:

In 1783, Latin American revolutionary Simon Bolivar was born in Caracas, Venezuela, In 1847, Mormon leader Brigham

Young and his followers arrived at Great Salt Lake City in Utah.

In 1862, the eighth president of the United States, Martin Van Buren, died in Kinderhook, N.Y.

In 1866, Tennessee became the first state to be readmitted to the Union after the Civil War.

In 1929, President Hoover proclaimed the Kellogg-Briand Pact, which renounced war as an instrument of foreign policy.

In 1937, the state of Alabama drop-

ped charges agains accused of raping to in the "Scottsboro of In 1946, the United an atomic Atoll in the Pacific water test of the device."

In 1959, during a viet Union, Vice engaged in a "kitch Soviet leader Nikita U.S. exhibition.

In 1974, the U.S unanimously ruled Nixon had to turn White House tape Watergate special In 1979, a Mian

In 1979, a Mian Theodore Bundy of der in the slayings University sorority Bowman and Lisa

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REFINING COMPANY

62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

EASYLINK

TELEPHONE (505) 748-3311 501 EAST MAIN STREET © P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

February 25, 1994

Robert L. Myers II
Petroleum Engineering Specialist
Oil Conservation Division-Environmental Bureau
P.O. Box 2088
State Land Office Bldg.
Santa Fe, NM 87504

RECENTO

FEB 2 8 1994

OIL CONSERVATION DIV. SANTA FE

RE: Discharge Plan GW-28 Navajo Refining, Eddy County, New Mexico

Dear Mr. Myers:

Enclosed are Navajo's responses to your letter of November 9, 1993. We regret the delay in responding to this request. Your comments are listed below with Navajo's response in bold type.

- A. <u>Discharge Plan (and modifications) Reporting Requirements:</u>
- 1. <u>Annual Sampling</u> of the pipeline effluent for BTEX, major cations/anions, fluoride, WQCC metals and PAH's.

This sampling was done on January 12, 1994 and the results were forwarded to OCD.

- 2. <u>Annual split sampling (with OCD)</u> of monitoring wells for water level, pH and conductivity from field measurements, and for BTEX, major cations/anions and fluoride from laboratory analysis. Monitor wells MW-4 and MW-6 will also be analyzed for naphthalene and mononaphthalene.
 - This sampling was done December 20, 1993 and the report sent to OCD on January 12, 1994. Our understanding, based on OCD's letter of October 21, 1991, is that these wells are on a staggered schedule with basically half of the wells done in January and half in June, except that MW-4 and MW-5 are monitored semiannually.
- 3. <u>Semi-annual monitoring</u> of wells MW-4 and MW-5 for water level, pH and conductivity from field measurements, and for BTEX, major cations/anions and fluoride from laboratory analysis;
 - See #2 above.
- 4. Quarterly sampling of the RO reject water for those constituents listed in the 4/27/93 discharge plan modification (and amended fluoride standard-OCD 6/29/93);

The RO reject water was sampled for the quarterly constituents on January 12, 1994. Those results were forwarded to OCD.

- 5. <u>Bi-weekly sampling</u> of the Reverse Osmosis (RO) reject water for major cations/anions and heavy metals (request with OCD to relax this to quarterly based on analysis results);
 - This sampling is being done on a bi-weekly basis with results forwarded to OCD as they are received. Navajo still believes that there is no analytical reason for continuing the bi-weekly sampling of this reject water. The results have been consistent with very little fluctuation.
- 6. Daily monitoring and recording of the pipeline effluent discharge flow quantities;
 Navajo is monitoring the RO reject effluent to Eagle Draw and our farm on a
 daily basis but we are not aware of any requirement to monitor the pipeline
 effluent. The RO reject flow is reported quarterly when the quarterly RO
 samples are reported.
- 7. Copies of all reports and correspondence with EPA and NMED referencing refinery SWMU's.
 - The SWMU's that the refinery is aware of are the Truck-By-Pass Landfarm, the Evaporation Ponds and Three Mile Ditch. <u>All</u> reports and correspondence with EPA and NMED concerning these units would cover several shelves. Navajo would like to suggest that you come to the refinery and go over these volumes and decide what you think is important. We could then make copies of those select documents. You could do this at the next quarterly sampling when we split samples. If you do want the complete list, Navajo will send that.
- B. Unresolved Ouestions Based on File Review
- 1. What is the progress status of the closure of the oil and tank bottoms in the earthen sludge pit adjacent to Tank 835?
 - We are currently working the pit and recovering product using a contractor, Talon Industries. However, the cold weather has hampered the progress. The pit is approximately 85% completed.
- 2. A time table for the completion of integrity testing of all below grade waste piping was to be submitted after verification, which was submitted in February, 1991. The timetable is to be submitted and testing performed prior to renewal of the current discharge plan, which expires October 21, 1996. This is to include the three mile long effluent pipeline from the main refinery complex to the disposal ponds.
 - It is Navajo's understanding that this request is limited to piping and sewers over 25 years old. The only piping or sewers that are over 25 years old are in the North Plant. Navajo will evaluate and test these sewers as needed to accomplish the task by 10/21/96. Also, Navajo will test the effluent pipeline to the ponds before the October 21, 1996 deadline.
- 3. What is the progress status of closure of Pond #1?

 The soil in pond #1 is being turned over regularly by trac-hoes belonging to Sweat Construction and contracted to Navajo. In addition, the pond is tilled on a regular basis. These measures enhance biological activity

and at this time approximately 80% of the pit is degraded with patches in the corners needing additional attention. Navajo estimates the remaining 20% of the pit will require 6 months to a year to be completed. EPA has requested a more structured closing of the pond and we have also done additional testing of the TPH in the pond #1 soils at EPA's request.

- 4. Has the catchment and drainage for tanks 130, 132, 133, and 135 been installed as per the drawings submitted to OCD in July 1990?
 - The catchment and drainage for these tanks was never installed. These tanks are not in use now and they will be removed in the near future.
- C. <u>Cleanup and Containment Needs</u>
- 1. The muratic acid saddle tank and the oil /water drum in the Asphalt Loading Area need cleaned up and contained.
 - The muratic acid tank has not been used for several years and is on schedule to be taken out and disposed of. The drums at the Asphalt Loading Rack are used to hold discarded test asphalt and any spills in the area that are picked up. Navajo's position on these barrels is that since they contain asphalt, no containment is warranted. However, we will be happy to work with OCD on this question.
- 2. Transfer pumps and open drums containing oil at the Asphalt Tank Farm need cleaned up and contained.
 - Again, these pumps and drums are used to hold and move asphalt which is used to pave roads. Navajo feels no containment is needed. Again, we would be glad to discuss this with you.
- 3. Pumps at the South Plant Cooling Tower area, and transfer pumps and spills throughout the Vacuum Tower area need cleaned up and contained. The diesel saddle tank in this area needs cleaned up and curbs added to pad to contain spills. Drip trays for pumps and compressors should be monitored and drained before they spill over.
 - Navajo will schedule these through our maintenance department to be taken care of.
- 4. At the South Plant Water Treating Area, numerous pump pads need cleaned up and leaks contained, and spill trays are overflowing.
 - These will be taken care of as #3 above.
- 5. The pad containing treatment chemicals at the South Plant Distillation Tower needs some type of containment to prevent leaks or spills from running off the pad.
 - This area contains I-pac containers which are on cement without lips. Lips will be added to the pad.
- 6. The area north of the Distillation Tower has contaminated soils which need to be cleaned up and the source determined.
 - Navajo will clean up the soil and determine the source of the contamination.
- 7. The old oil/water Separator in the South Plant should be closed out.

 Talon Industries, which is the company that is cleaning the pit at Tank 835,

will move to this separator when the pit at 835 is finished. This pit has heavy oil in it which will be recovered and put back through our processes. Navajo would like to keep this separator available for future use. Therefore, we would like to refrain from closing it at this time.

8. Drums in the Product Tank Farm need to be contained and empty drums stored properly.

This is being taken care of plant wide as part of our Storm Water Pollution Prevention Plan (SWPPP).

- 9. Cleanup and improved containment is needed for the Hazardous Waste Press storage area for the temporary storage of the hazardous waste drums.

 The plate press is no longer here at the refinery and the area referenced has been cleaned up. As for the barrels you referred to, Navajo has never stored hazardous waste in drums. These are probably the chemicals that were used by the plate press which are polymers used in the dewatering process. These are also cleaned up.
- 10. The area around the frac tanks storing sludge needs cleaned up and leaks contained.

This was taken care of and the waste that was picked up was put in a roll-off bin and sent for incineration.

- 11. The chemical additive saddle tanks in the Gasoline Loading Area need cleaned up and leaks contained.
 - Navajo agrees and will comply.
- 12. Leaks from the pumps in the Reverse Osmosis Unit are overflowing the pads. **See #11 above.**
- 13. The compressor dryers in the North Plant Process Area need to be cleaned up and containment installed.
 - Navajo agrees and containment will be installed.
- 14. Drums placed throughout the North Plant Process Area to capture drips need to be emptied before they overflow.
 - This is being taken care of as part of our SWPPP.
- 15. Soils under the FCC Area pipes and valves just north of the cooling tower need to be cleaned up.
 - This area has been targeted to be cleaned and paved as part of our Storm Water Pollution Prevention Plan (SWPPP).
- 16. The pump building in the tank farm area at the northwest end of the facility needs cleaned up and containment installed for the pumps sitting on gravel. Also, the drums at this site should be placed on containment.
 - Our maintenance department will schedule this area for clean-up and the drums will be taken care of under the SWPPP.
- 17. The transfer pumps west of the tank farm need containment.
 - Navajo agrees and this will be scheduled.
- 18. The Truck Loading Area, the Rail Loading Area and the Diesel Tank Transfer Area all need cleaned up and containment.

The Truck Loading Area and Rail Loading Area have containment and those drawings are enclosed. The day before this inspection, we had a spill at the Rail Loading Rack and that has been cleaned up.

19. The storage tanks around the Maintenance Shop need surrounding soils cleaned up and leaks contained.

This will be cleaned up. These units are not storage tanks, but clay filters for the product in the adjacent tank farm.

D. <u>Cleanups Around Tanks</u>

The Following tanks (by area) were noted to have excessive spillage and/or oil-stained soils around the structures, valves and transfer pumps, and may also need improved containment for the overflow sumps.

- -Tanks 132, 133, and 135
- -Tanks 417 and 418
- -Tanks 110, 411 and 438
- -Tanks 437 and 439
- -Tank 54
- -Tank 810
- -Tank 838

These will be cleaned up.

E. Annual Inspections for Below-Grade Sumps and Tanks

During the May 1993 OCD inspection, it was noted that numerous below-grade sumps and tanks were not equipped with secondary containment or leak detection. Navajo should submit a method(s) and schedule for testing the integrity of <u>ALL</u> sumps and tanks. If any of the sumps or tanks require replacement in the future, or new ones are installed, leak detection must be integrated into the design. The particular sumps and tanks identified during the inspection include:

- -Asphalt Loading Area loading pad sump,
- -South Plant TCC Tower sumps,
- -South Plant Water Treating Area sumps,
- -South Plant Distillation Tower sump,
- -Tank sumps at the tank farm north of the South Plant,
- -Product Tank Farm Tank 110 sump and Tank 438 below-grade tank,
- -North Plant Process Area sumps,
- -FCC Area Wastewater Separator below-grade tank,
- -Northwest tank farm pump house sumps,
- -Rail Loading Area sump,
- -Diesel Tank 837 below-grade tank,
- -Below-grade separator north of Tank 838, and
- -Maintenance Shop sumps.

Due to my inexperience in the refinery when this inspection took place, I misidentified several sewer boxes as sumps when Bill Olson asked me about them. Of the above mentioned locations, only the Asphalt Loading Area, tank farm North of the South Plant, Tank 110, Tank 438, Northwest tank farm Slinger House, Rail Loading Area, Tank 837, and Tank 838 actually have sumps. The other "sumps" are actually sewer boxes. Navajo will test

these sumps and tanks by filling with water and checking levels over a 24 hour period to see if it falls. This will be done as needed to accomplish by October 21, 1996.

F. Truck By-Pass Landfarm

Roger Anderson has confirmed the verbal permission for the one-time disposal of cooling tower sludge from the Lovington refinery at the Truck-By-Pas Landfarm. However, my file review shows no record of this landfarm being permitted to accept any wastes, whether from the Artesia refinery or the Lovington refinery. In order to bring this landfarm into compliance with WQCC regulations, Navajo shall submit an application to modify Discharge Plan GW-28 to include operation of this landfarm. This application shall include:

- 1. Initial date of operation of the landfarm;
- 2. An inventory of all wastes placed on the landfarm, including origin, quantity and date of emplacement of each batch, and records of any tests confirming the non-hazardous nature of each batch;
- 3. A description of the landfarming procedures being practiced, including spreading rates, lift thicknesses and discing frequencies; and
- 4. Results of any monitoring data to demonstrate that contaminants are not migrating from the landfarm area.

To assist in the submittal of this application, I have enclosed a copy of OCD's Guidelines for Permit Application, Design, and Operation of Centralized & Commercial Landfarms.

Navajo is in the process of contracting with Waste Management in Rio Rancho to take our non-hazardous waste and landfill it. This should be accomplished by the end of March and further use of the Truck-By-Pass-Landfarm will be discontinued. We will continue to fertilize and disc the landfarm but no additional waste will be applied. For your information, EPA is investigating the Truck-By-Pass Landfarm as part of our RFI into the ponds and ditch. We have done sampling and verification sampling on this unit during the last 6 months.

I hope this adequately answers your concerns about the facility. We are working diligently on these matters and a lot of them dove-tail in with our SWPPP. If you have any questions, please feel free to call me at 748-3311. Thank you for your time in this matter.

Regards,

Darrell Moore

Environmental Specialist

encl.



OIL CONSERVE ON DIVISION RECE VED

l.S. Department of Transportation

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Research and **Special Programs Administration**

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400 Seventh Street, S.W.

Washington, D.C. 20590

September 23, 1994

Certified Mail - Return Receipt Requested /P 324 956 796

Navajo Pipeline Company P.O. Drawer 159 Artesia, NM 88210

Attention: Georgia Raga

Re: RSPA Tracking Numbers 380-383

Dear Ms. Raga:

Enclosed please find a corrected Page 29 (FRP Review Protocol No. 8.1, Response Resources: Certification) for the facility response plan review findings transmitted August 15, 1994 from the Research and Special Programs Administration (RSPA) for the sequence numbers referenced above. During our telephone discussion on September 21, it was confirmed that Navajo Pipeline Company submitted certification that it has obtained, "through contract or other approved means," sufficient private personnel and equipment to respond to a worst case discharge (49 CFR § 194.119(e)), as the enclosed replacement page indicates. Please disregard Page 29 from the Minimal Adequacy Review dated 8/11/94 and replace it with the enclosed.

I regret any inconvenience that this error may have caused and appreciate your patience. If you have any questions or reason to believe that other noted deficiencies are in error please contact me at (202) 366-8053.

Sincerely

Christopher J. Hoidal, P.E.

Response Plans Officer

Enclosure

Mr. Don Smith, Region VI. EPA

Mr. Steve Calanog, Region IX, EPA

Mr. Scott Benton, Texas General Land Office

Ms. Mary McDaniel, Railroad Commission of Texas

Mr. Roger Anderson, New Mexico Oil Conservation Division

Checklist: FRP Review Protocol No. 8.1

Response Resources: Certification For Sequence Number: 0380, 0381, 0382, 0383

1. Does the FRP include certification that the operator has obtained, through contract or other approved means, the personnel and equipment to respond to a worst case discharge? (49 CFR § 194.119(e)) (Yes/No/NA): Yes

Page Ref.:

Comment:

2. Is the certification signed by the Qualified Individual, an appropriate corporate officer, or other person qualified to enter into contractual agreements? (49 CFR § 194.119(e)) (Yes/No/NA): Yes

Page Ref.:

Comment: .

U.S. Department of Transportation

Research and Special Programs Administration

400 Seventh St., S.W. Washington, D.C. 20590

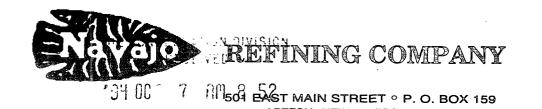
Official Business Penalty for Private Use \$300



Mr. Roger Anderson Environmental Bureau Chief New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87504-2088 Hallellellenderlan

TELEPHONE (505) 748-3311

EASYLINK 62905278



FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

October 3, 1994

ARTESIA, NEW MEXICO 88211-0159

Mr. Roger Anderson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87504

RE: 3rd Quarter 1994 Report on RO Reject Water, Navajo Refining Co., Eddy County, NM

Dear Roger,

Enclosed are the results of our quarterly sampling of the RO reject water in addition to the bi-weekly analysis for this quarter. This water is being put on our farm and into Eagle Draw. For this sampling period we discharged a total of 11,914,778 gallons. This is broken down as follows: 5,681,741 gallons discharged to Eagle Draw and 6,233,037 gallons discharged to the farm. Since we started discharging the RO reject water we have discharged a total of 205,095,374 gallons. This is broken down as follows: 43,590,444 gallons have been put into Eagle Draw and 161,504,930 gallons have been put on the farm.

If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Regards,

Daull More

Darrell Moore Environmental Specialist

encl. cc:USEPA 6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR NAVAJO REFINING COMPANY Attention: Darrell Moore

501 E. Main

Artesia, NM 88210

September 30, 1994

Receiving Date: 09/10/94

Sample Type: Water

Project No: NA

Project Location: Artesia

Analysis Date: 08/01/94 Sampling Date: 09/09/94

Sample Condition: Intact & Cool

Sample Received by: McD

Project Name: NA

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PARAMETERS (mg/L)	RO Reject Qtrly.	1 '	QC	%₽ [†] ,	%EA	%IA
Phenol	<0.002		0.39	100	81	100
NO3-N	0.83		1.09	90	110	110
COD	98	,	75	100	91	106
NH3	0.08	*	0.97	94	91	96
CN-	<0.02	*,	0.05	100	98	100
BOD	<3 .		216	98		108
TSS	<1			98		·
pH (s.u.)	7.1		7.0	100		100
TDS	2,928			100		'''
EC (uMHOs/cm)	3,102		1,367	. 99		97
Chlorine	0.1			100		
Fecal Coliform (100mL)	Not Found					

Methods: EPA 600/8-78-017, 330.1, 120.1, 160.1, 150.1, 160.2, 405.1, 335.2, 350.3, 410.4, 353.3, 420.2.

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Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell 9-30-94

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Receiving Date: 09/10/94		Attention:		Darrell Moore			Sampling			, 76	1614 1614
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Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

DATE

6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR NAVAJO REFINING COMPANY Attention: Darrell Moore 501 E. Main Artesia, NM 88210

September 30, 1994

Receiving Date: 09/10/94

Sample Type: Water

Project No: NA

Project Location: Artesia, NM

Analysis Date: 09/23/94 Sampling Date: 09/09/94

Sample Condition: Intact & Cool

Sample Received by: McD

Project Name: NA

TOTAL RADIUM 226/228 (pci/liter)

TA#

FIELD CODE

T25716

RO Reject Qtrly.

<1

Detection Limit

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Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

DATI

9-30-94

6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR NAVAJO REFINING COMPANY

Attention: Darrell Moore

501 E. Main

Artesia, NM 88210

PAGE 1 of 3

The second secon

September 30, 1994 Receiving Date: 09/10/94

Sample Type: Water

Project No: NA

Project Location: Artesia, NM

Analysis Date: 09/16/94 Sampling Date: 09/09/94 Sample Condition: I & C Sample Received by: McD Project Name: NA 1 1 March 1 1 1111

T25716

amentaria kumalari da ayante	RO Reject	Detection	.· .·	1		
EPA 624 Compounds (ppb)	Qtrly.	Limit	QC	&P	%EA	%IA
Dichlorodifluoromethane	ND	1	54			108
Chloromethane That L COLD	ND	1.	66			132
Vinyl-chloride	ND	2	60			120
Bromomethane 80 Tract Cart	ND	1	· · 53			106
Chloroethane	ND	1	57			114
Trichlorofluoromethane	ND	1	51		•	102
1,1-Dichloroethene	ND	2	44	100	114	88
Iodomethane	ND	1	47			94
Carbon disulfide	ND	1 -	46		100	92
Methylene chloride	ND	1	53			106
trans-1,2-Dichloroethene	ND	1	46			92
1,1-Dichloroethane	ND	1	54			108
Vinyl acetate	ND	1	45			90
2-Butanone	ND	20	56			112
Chloroform	ND	1 ·	53			106
1,1,1-Trichloroethane	ND	· 1	52			104
1,2 Dichloroethane	ND	2	- 53			106
Benzene	ND	0.2	55	100	110	110
Carbon Tetrachloride	ND	10	51			102
1,2-Dichloropropane	ND	2	54			108
Trichloroethene	ND	· 2	49	99	98	98
Bromodichloromethane	ND	1	49			. 98
cis-1,3-Dichloropropene	ND	2	42			84
4-Methyl-2-pentanone	ND	10	51			102
trans-1,3-Dichloropropene	ND	2	52	101	84	104
Toluene	ND	0.5	56			112
1,1,2-Trichloroethane	ND	1	52			104
2-Hexanone	· - ND	. 10	_ 46			92

NAVAJO REFINING COMPANY Project Location: Artesia, NM

		T2571	L6								, 1 <u>,</u> 49
EPA 624 Compounds		RO Re			De	tecti	.on		:		1.1
(bbp)		Qtrly	-			Limit	:	QC	&P	%EA	%IA
Dibromochloromethane		ND				1		45			90
Tetrachloroethene		ND				2		50		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100
Chlorobenzene		ND				1		57	99	110	114
Ethylbenzene		ND				0.5		54			108
m & p-Xylene		ND			* .	0.5	1.	109	e e e e e e e e e e e e e e e e e e e		109
Bromoform		ND				1		43 -			86 -
Styrene		ND		•		0.5		60			120
o-Xylene	(x,y) = (x,y) + (y,y) = 0	ND				0.5		61			122
1,1,2,2-Tetrachloroethane		ND			•	1		47	1		94
1,4-Dichloro-2-butene		ND				5	'	48			96
1,4-Dichlorobenzene		ND				2		54			108
1,3-Dichlorobenzene	•	ND				2		54			108
1,2-Dichlorobenzene		ND		•		2		57		: *	114
Acentonitrile		ND	ļ.			30					
Acetone	•	ND			٠.	10	,	- :			18 W 18 W
3-Chloropropionitrile		ND	• •			10					
Ethanol	•	ND				50			and Arrest		i i i i i i i i i i i i i i i i i i i
Acrylonitrile		ND	. ' .	•		30					
Allyl chloride	\mathcal{Y}_{i}	ND				5					
Methyl tert-Butyl Ether		ND	`*			10		andrija Serveta	4		
Propionitrile		ND				5				1.00	1
Allyl alcohol	*	ND	i deri	•		50			1. 生产	3 - 4 3	
Propargyl alcohol		ND				30		3.3		pilk!	
Methacrylonitrile		ND	·			10					
1,2-Dichloroethene		ND	*			10		4	1 4. 1 4.		
2,2-Dichloropropane		ND.	9 43	F.,		10	,,				
Isobutyl alcohol	. ,	ND	The state of the s	t .		50	÷.		A Company		234.3
1,1-Dichloropropene		ND				10		٠.			
2-Hydroxypropionitrile		ND		4	. ::	. 20				ia,	
Acrolein		ND			n e	30		;	10 m 15	•	
2-Chloroethyl vinyl ether		ND				10	•				
Dibromomethane		ND			31 1 m	0.1	1 6	• 1	70 AN	or way	4
1,4-Dioxane		ND				1					
Methyl methacrylate		ND				10	_	1			· · ·
2-Chloroethanol		ND				50					,
Epichlohydrin		ND	7	4-		10					
Pyridine		ND	•			30		÷.	3		
										1 11	1

NAVAJO REFINING COMPANY

Project Location: Artesia, NM Town of Location: Restocks, in

PAGE 3 of 3

•		÷				4
,	T25716					
EPA 624 Compounds	RO Reject	Detection				•
(ppb)	Qtrly.	Limit	QC	ъР	%EA	%IA
			٠.		7:31_	نون بونو ته
1,3-Dichloropropane	ND	10				
Ethyl methacrylate	MD ND	_10	- 25			90
1,2,3,5-Diepoxybutane	: AND	20	٠٠,			100
1,2-Dibromoethane	ND	0.1		<u>.</u> .		
2-Picoline	ND	. 1	5			_11 }
1,1,1,2-Tetrachloroethane	ND	1				2.56
1,2,3-Trichloropropane	ND	1	+ 62			30
Isopropylbenzene	ND	· 1	73			120
Bromobenzene	····ND	0.01	v <u>;</u>			122
n-Propylbenzenel ognauh me	ND	i. 1	~;			94
2-Chlorotolueneoussne	LIM ND	3 1	.2			95
4-Chlorotoluene-) ND	3. 1	E (1)			103
1,3,5-Trimethylbenzene	_,⇔ ND	î 1	2.3			108
Pentachloroethane	ND	0.1				114
1,2,4-Trimethylbenzene	ND	1		٠,		
tert-Butylbenzene	ND	. 1	, ,	1, 1, 1	.*	
Benzyl chloride	ND	5				
sec-Butylbenzene	. ND	1	•			
Isopropyl toluene	ND .	.1	:			
n-Butylbenzene	1. 2 ND	1 1				•
1,3-Dichloro-2-propanol	:::::N D	; ´5				
1,2-Dibromo-3-chloropropane	J ™ND	5	,			
1,2,3-trichlorobenzene	(19 ND	10				,
Naphthalene month	2-0 ND	· · · 1				
1,2,4-trichlorobenzene	HI ND	10			,	
Hexachiorobutadiene	nd.	10				
easgonnomeas	290	,				
the straightful alleged	% RECOVERY	:				
1,2-Dichloroethane-d4 SURR	108			1 .		
Toluene-d8 SURR	107	 	٠,			,

*ND = Not Detected METHODS: EPA 624.

· -Leins

i kirangan di didamin dasa Kirangan bansan bad Titu di Bada, dasa

4-Bromofluorobenzene SURR

Land to the first that

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

107

DATE

	6701 Aberdeen Avenue	Lubbock, Texas 79424	806 • 794 • 1296	FAX 806 • 794 • 1298
		ANALYTICAL RESULTS FOR	'S FOR	
		NAVAJO REFINING COMPANY	OMPANY	
September 30, 1994		Attention: Darrell Moore	ll Moore	Analysis Date: 09/12-13/94
Receiving Date: 09/10/94		501 E. Main		Sampling Date: 09/09/94
Sample Type: Water		Artesia, NM 88210	0.	Sample Condition: Intact & Cool
Project No: NA				Sample Received by: McD
Project Location: Artesia,	NM	٠	-	Project Name: NA
1				

					ALKAI	ALKALINITY
		CHLORIDE	FLUORIDE	SULFATE	(mg/L a	(mg/L as CaCo3)
TA#	FIELD CODE	(mg/L)	(mg/L)	(mg/Γ)	HC03	C03
T25716 QC	RO Reject Qtrly. Quality Control	227.6	2.5	2,080	322.8	0
% Precision	ion	101	102	102	100	
% Extrac	% Extraction Accuracy	94	104	. 06	-	!
% Instru	% Instrument Accuracy	86	66	86		
				.·*		
	E + 22 + 4	•	,	•	9	
DETECTION LIMIT	TIWIT N	-1	1.0	-	2	! ! !

Blank Spiked with 500 mg/L CHLORIDE; 1.0 mg/L FLUORIDE; 10.0 mg/L SULFATE. METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B. ö

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

9-30-94

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6701 Aberdeen Avenue	Lubbock, Texas 79424 806	806 • 794 • 1296	FAX 806 • 794 • 1298
September 30, 1994 Receiving Date: 09/10/94 Sample Type: Water Project No: NA	ANALYTICAL RESULTS FOR NAVAJO REFINING COMPANY Attention: Darrell: Moore: 5010E. Mainin Artesia; NMW-88210		Analysis Date: 09/13/94 Sampling Date: 09/09/94 Sample Condition: Intaction Cool Sample Received by: McD NCD Project Name: NA
TA# Field Code	THE SPOTASSIUM (Mg/L)	C MAGNESIU)	C MAGNESIUM CONTCIUM CONTCIUM (mg/L) (mg/L) (mg/L)
QC 325716 Quality Control	3.7 Ap. 51.0	188.3	2 002523.2 .52. 146.0 E 7 19.9 20.0
Detection Limit	0.1 X	4	0.05 ±! 0.1
% Precision		66	
<pre>% Extraction Accuracy % Instrument Accuracy</pre>	109 101	97 100	94 102 99 101

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

MAGNESIUM SPIKE AND QC: Sample spiked with 194.2 mg/L MAGNESIUM and Blank Spiked with 20.0 mg/L MAGNESIUM.

POTASSIUM SPIKE AND 'QC:

METHODS: EPA 200.7.

CALCIUM SPIKE AND QC:

SODIUM SPIKE AND QC:

Sample spiked with 361.6 mg/LMCALCIUM and Blank Spiked with 20.0 mg/L CALCIUM. Sample spiked with 183.0 mg/L SODIUM and Blank Spiked with 20.0 mg/L SODIUM.

Sample spiked with 29.4 mg/L POTASSIUM and Blank Spiked with 50.0 mg/L POTASSIUM.

Date

6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1298 ANALYTICAL RESULTS FOR NAVAJO REFINING COMPANY Attention: Darrell Moore 501 E. Main

Artesia, NM 88210

T25716 RO Reject September 30, 1994
Receiving Date: 09/10/94
Sample Type: Water
Sampling Date: 09/09/94
Sample Condition: Intact & Cool
Sample Received by: McD
Project Location: Artesia, NM
Analysis Date: 09/14/94

		RO Reject		<u> </u>	Analysis Date: (09/14/94
EPA 625 (ppm)	DL	Qtrly.	QC	%P	%EA	%IA
N-Nitrosodimethylamine	0.001	ND	0.471			94
Phenol	0.001	ND	0.483	100	76	97
bis(2-Chloroethyl)ether	0.005	ND	0.484			97
2-Chlorophenol	0.005	ND	0.506	100	88	101
1,3-Dichlorobenzene	0.001	· ND	0.501			100
1,4-Dichlorobenzene	0.001	ND	0.493	100	108	99
1,2-Dichlorobenzene	0.001	ND	0.503			101
bis(2-chloroisopropyl)ether	0.005	ND	0.374	~~~		75
n-Nitrosodi-n-propylamine	0.001	ND	0.503	100	100	101
Hexachloroethane	0.001	ND	0.502			100
Nitrobenzene	0.001	ND	0.470	· · · · · · · · · · · · · · · · · · ·		94
Isophorone	0.005	ND	0.467		·	93
2-Nitrophenol	0.005	ND	0.430			86
2,4-Dimethylphenol	0.005	ND	0.454			91
bis(2-Chloroethoxy)methane	0.001	ND	0.450			90
2,4-Dichlorophenol	0.005	ND	0.469			94
1,2,4-Trichlorobenzene	0.001	ND	0.476	99	110	95
Naphthalene	0.001	ND	0.456			91
Hexachlorobutadiene	0.001	ND	0.504			101
4-Chloro-3-methylphenol	0.005	ND	0.471	99	78	94
Hexachlorocyclopentadiene	0.001	ND	0.444			89
2,4,6-Trichlorophenol	0.005	ND	0.439			88
2-Chioronaphthalene	0.001	ND	0.465	,		93
 Dimethylphthalate	0.001	ND	0.473			95
Acenaphthylene	0.001	ND	0.458			92
2,6-Dinitrotoluene	0.001	ND	0.432			86
Acenaphthene	0.001	ND	0.476	98	89	95
2,4-Dinitrophenol	0.005	. ND	0.331	-		66
4-Nitrophenol	0.005	ND	0.293	99	80	59
2,4-Dinitrotoluene	0.001	ND	0.471	99	80	· 94

記.September 30, 1994 行 より紹介合社 さ

Sand State of the	1 4- 1 7	Coptember 30	T25716		· · · · · ·		and the second
		1 <u>3 6.34</u>	RO Reject			w <u>i</u> ndian	
EPA 625 (ppm)		· DL	≟≘ · Qtrly.	QC	%P	. %EA	. %IA ::::
luorene		0.001	ND	0.470		m; 17 (4:	94
Diethylphthalate		0.001	ND ND	0.472			94
4-Chlorophenyl-phenylether		0.001	ND	0.516	- 24	ru v rusudi	103
4,6-Dinitro-2-methylphenol		0.001	ND	0.343			69
n-Nitrosodiphenylamine		0.001	ND .	100.02		7 ·	_100
Diphenylhydrazine	-	0.005	ND	0.451			90
4-Bromophenyl-phenylether		0.001	ND	0.527		<u>. 61</u>	105
-lexachlorobenzene		0.001	ND	_ 0.522			104
Pentachlorophenol		0.005	ND	0.475	- 99	· 66·-	95
Phenanthrene		0.001	ND	0.520			104
Anthracene		0.001	ND	0.512			102
Di-n-butylphthalate		0.001	NĎ	0.496			99
luoranthene	· ·	- 0.001	NÓ	0.511			102
3enzidine		0.01	ND	0.211	:	;	42 42
Pyrene	!	0.001	ND	0.533	105	-136	107
Butylbenzylphthalate		0.001-	ND	0.496			99
Benz[a]anthracene	•	0.001	NĎ	0.439		·	88
3,3-Dichlorobenzidine		0.001	ND	0.362			72
Chyrsene	,	0.001	ND	0.453			91
pis(2-Ethylhexyl)phthalate		- 0.001	NĎ	0.467			93
Di-n-octiphthalate		-0.001-	NĎ	0.544			109
Benzo[b]fluoranthene	; 	- 0.001-	ND	0.417			83
Benzo[k]fluoranthene	· · · · ·	0.001 -	ND	0.466			93
Benzo[a]pyrene		0.001	ND	0.472			94
ndeno[1,2,3-cd]pyrene		0.001	ND	0.355			71
Dibenz(a,h)anthracene		0.001	ND	0.333			67
Benzo[g,h,i]perylene	-	0.001	ND-	0.349	, , , , ,		70

ND = Not Detected in the same of

% RECOVERY

2-Fluorophenol SURR		86
Phenol-d5 SURR	a si assame are e	96
Nitrobenzene-d5 SURR		98
2-Fluorobiphenyl SURR	en e en la la la companya de la comp	96
2,4,6-Tribromophenol SURR		82

Terphenyl-d14 SURR

METHODS: EPA 625.

Director, Dr. Blair Leftwich Dr. Bruce McDonell

6701 Aberdeen Avenue

Lubbock, Texas 79424

806 • 794 • 1296

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING COMPANY

Attention: Darrell Moore

T25716

RO Reject

ND

ND

ND

ND

ND

ND

ND

501 E. Main

September 30, 1994

Receiving Date: 09/10/94

Sample Type: Water

Project No: NA

ORGANOCHLORINE

Project Location: Artesia, NM

Artesia, NM 88210 Analysis Date: 09/14/94

Sampling Date: 09/09/94

Sample Condition: I & C

Sample Received by: McD

Project Name: NA

Detection

0.0005

0.0005

0.0001

0.0005

0.0001

0.0002

0.005

0.0040

0.0040

0.0040

0.0040

0.0049

0.0020

0.0200

109

100

104

99

101

102

94

95

97

100

95

80

105

103

100

100

100

100

96

100

100

INSECTICIDES (mg/L)	Qtrly.	Limit	QC	%P	%EA	%IA
a-BHC	ND	0.0001	0.0040	99	100	100
b-BHC	ND	0.0001	0.0040	101	102	100
g-BHC	ND	0.0001	0.0040	99	100	100
s-BHC	ND	0.0001	0.0040	98	100	100
Heptachlor	ND	0.0001	0.0040	103	100	100
Aldrin	ND	0.0001	0.0040	107	95	100
Heptachlor epoxide	ND	0.0001	0.0040	105	97 ່	100
Endosulfan-1	ND	0.0001	0.0040	105	100	100
Endosulfan-2	ND	0.0001	0.0040	101	100	100
DDE	ND	0.0001	0.0040	100	97	100
Dieldrin	ND	0.0001	0.0040	101	100	100
Endrin	ND	0.0001	0.0040	103	97	100
DDD	ND	0.0001	0.0040	101	95	100

ND = Not Detected

Endrin Aldehyde

Methoxychlor

Total PCB

Chlordane

Toxaphene

DDT

Endosulfan Sulphate

METHODS: EPA 608.

Director, Dr. Blair Leftwich

Director, Dr. Bruce McDonell

September 12, 1994 September 12, 1994 Sample Type: Water Project No: NA Project Location: Artesia, NM	6701 Aberdeen Avenue Lubbock, Texas 79424 806 ANALYTICAL RESULTS FOR NAVAJO REFINING COMPANY Attention: Darrell Moore 501 E. Main Artesia, NM 88210	SIS, INC. MILES OR I RANY MOOFE	FAX 806 • 794 • 1298 Analysis Date Sampling Date Sample Condit Sample Receiv Project Name:	10100000000000000000000000000000000000	
TA# Field Cod	(Aga)	BENZENE TOLUENE	ETHYL- E BENZENE (Ppb)	M,P,O TOTAL XYLENE BTEX (ppb)	
T25717 QC Quality Control	<1 01 211		<1 <1 05 208	<1 <1 623	
Detection Limit				:::3 :::::::::::::::::::::::::::::::::	
<pre>% Precision % Extraction Accuracy % Instrument Accuracy</pre>	99 2000 2000 2000 2000 2000 2000 2000 2	0. 2007 100 104 104 109 100 100 100 100 100 100 100 100 100	100	101 106 104	
METHODS: EPA SW 846-8020. BTEX SPIKE AND QC: Sample and Blank	k Spiked With 200 ppb EACH	Volatife organics			·
Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell	101 101 100	100 100 100 100 100 100 100 100 100 100	100		. * • • • • • • • • • • • • • • • • • • •

FIGURE FAME 15. STATE ST	TraceA	TraceAnalysis, Inc.		•	6701 Aberdeen Avenue Tel (806) 794 1296	11 Aberdeen Avenu Tel (806) 794 1296	en A	cnue	Lui	lbbock, 1	Lubbock, Texas 79424 Fax (806) 794 1298	} 	IVIN	OF-C	UST	Kac	RECC	RD AL	CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST	ALYSE	S REC	JUES .	_	
Project Nume: Project Nume: Project Nume: Project Nume:	Project Manager:	sore.			hone f		55-		5	311					*	NAL	VSIS I	EQUE	TS:			SPECIAL HANDLING	SPECIAL	ا ي ا
Project Name: Sampler Signature: Sampler Signature: Sampler Signature: A WATRIN WETHOD AIR AND AND AND AND AND AND AND AN	Company Name & Address: $\int\!$		$\frac{c}{c}$																				<u></u>	
FIELD CODE FIELD CODE FIELD CODE FIELD CODE FIELD CODE MATRIX MA	Project #:		į		roject	Name						1												
HELD CODE HELD CODE MATRIX A SOIL AND OTHER CE HOO3 BIEX MTBE TIME: A WOUNGENED AS AS I TO DATE A COUT Metals Ag As I TO DATE A COUT METALS A COUT		NM		J , J	ald mp/	Sign X	uture:		1/6	700											sysb f	126	100	
FIELD CODE FIELD CODE A RECEIVED THE REMARKS NECE TO PARENTE THREE TIMES: A SOIL A NATER		S4:		MAT	RIX		PRE	SERV	ATIV		MAPLING	T				olatiles							un o	···-
20 Received by: 20 Received by: 10 Received by: 20 Received by: 11 Received by: 21 Received by: 22 Received by: 23 Received by: 24 Received by: 25 Received by: 26 Received by: 27 Received by: 28 Received by: 29 Received by: 20 Received by: 21 Received by: 22 Received by: 23 Received by: 24 Received by: 25 Received by: 26 Received by: 27 Received by: 28 Received by: 29 Received by: 20 Received by: 21 Received by:		, , , ,	nomA\amulo	ОІГ		тнев	<u> </u>] 38TM ,X3T					CI				ırn aroun	AASA XB	WT hoge blo	
$\mathcal{M} \mathcal{M}_{\mathcal{WL}} = \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2576 A R. 12. 10+		^	s		0			۷ § ×	6/6	3		_											
M Mare 5/9/94 Times: Received by: REMARKS Necd	17 1214 2123			×			-	+	×	1							1			<u> </u>	:	-	-	
M Marc 9/9/94 Times: Received by: Received by: Received by:							-																	
W Wedge 9/9/94 Times: Received by: Received by: Received by:							-														_	+		
$WW_{OMC} = \frac{1}{4} \frac{1}{4} \frac{1}{4} = \frac{1}{4} \frac{1}{4} = \frac{1}{4} \frac{1}{4} = \frac$			1		-		-	<u> </u>				+				\pm	-				1		-	
$WW = \frac{5/9}{9} = \frac{7}{100} = \frac{1}{100}$ Times: Received by: Received by:																								
W Made 7/9/94 Times: Received by: REMARKS Necely Date: Times: Received by:					-							-		-										
Where $9/9/9$ Times: Received by: REMARKS $Necc$																							+	
Date: Times:		Date: 9/9/94	Times:	7	 ก		Recei	ved by].		REM	ARK		1 22		Z	્	ઇ	G0C \	_ \ _ \				
		Date:	Times:				Recei	ved by			<u></u>													
Date:	Relinquished by:	Date:	Times:				Recei		Labo	oratory:	, dd d	W							ļ					

JILLA TRACEANALYSIS, INC.

6701 Abera	6701 Aberdeen Avenue	Lubbo	Lubbock, Texas 79424		806 • 794 • 1296	FAX 806 • 794 • 1298	298		
70,07 in might assure		LOCOMPTON ANALYHICAL	ANALYTIC	RESU	rs for	Purit I	# 186 CO		
August 29, 1994		Arreas to	O'Attention:	on: Darrell	ell Moore		Analysis Date:	e: 08/15,	5/94
Receiving Date: 08/12/94		Birogia.	10501 E. Main	-			Sampling Date: (e: 08/11/94	/94
Sample Type: Water			Artesiá	, NM 88210			Sample Condition: Intact & Cool Sample Received by: BL	ved by:	tact & Cool
Project Location: Artesia, NM	X				: 1.	-	Project Name: RO Reject Biwkly	RO Reje	ect Biwkly
	. F. 7.	7: 0:	Ĩ.a ·	ě.		*	•		
C. 19	强恶	(m,ch)	(month)	f. K	(2)40) (2)4)	* 5 .			が行う
1000 C - 400 C 1000 C 1000 C	50.00E	×0.1	C. 10	CHLORIDE	FLUOR IDE OUT	O SULFATE	mg/L as CaCo3)	CaCo3)	
TA# FIELD CODE	្រ ក្នុង ន	i et †		(mg/L)				.;co3	
T24505 RO Reject Biwkly				222.9	2.5	1,577	323	0	• .
on QC+ Cor W Quality Control	(, col	Ç ,,	0.05	473	010.950.300	⊕ 9.2		्र	
	£05	96	501	<i>3</i> 1	100 200			•	₹
	200	ಕಾರ	÷0.3		27		÷		278 - 3 - 3 - 3
% Precision	n Gr	160	104	100	U1 100 15	. 98	100		
% Extraction Accuracy				91	106	90	!	1	
% Instrument Accuracy	ţ.	* 10 Pr	편 ()	95	.£ 96	. 91		 	
		1000							
	3.75	3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	\$. \$. 11',	5. 2.	Section 1981	É	7. 		
DETECTION LIMIT		5 ·			0.1	Þ	10	-	
	. 0	0 00	3. O.s.		2 3			•	
METHODS: EPA 375.4, 310.1,	340.27, 4500 CLTB	00 cl+B.					-		•

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

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The state of the sail

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QC: Blank Spiked with 500 mg/L CHLORIDE; 20.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

303

Date

-29-56

MATRACEANALYSIS, INC.

6701 Aberdeen Avenue

Johnsk Texas 79424

ANALYTICAL RESULTS FOR

806 • 794 • 12

FAX 806 • 794 • 1298

August 29, 1994
Receiving Date: 08/12/94
Sample Type: Water
Project No: NA
Project Location: Artesia, NM

NAVAJO REFINING
Attention: Darrell Moore
501 E. Main
Artesia, NM 88210

Analysis Date: 08/25/94
Sampling Date: 08/11/94
Sample Condition: Intact & Cool
Sample Received by: BL
Project Name: RO Reject Biwkly

101	% Extraction Accuracy 102 84 78	% Precision 96 97 100	Detection Limit 0.1 0.05	QC Quality Control 100.9 20.2 19.39	4505 RO Reject Biwkly 3.6 258	(mg/L)	POTASSIUM MAGNESIUM CALCIU
			0.05	.2 19.39			SIUM CALCIUM
95	89	100	1.0	19.0	169.5		SODIUM
			,	,			

ETHODS: EPA 200.7.

Blank Spiked with 100.0 mg/L POTASSIUM; 20.0 mg/L MAGNESIUM, CALCIUM, SODIUM.

8-25-54

Director, Dr. Blair Leftwich
Director, Dr. Bruce McDonell

Date

	0.100 ppm se, Ag; 0.020 ppm	nk Spiked with 5	METHODS: EPA 200.7, 245.1,		% Instrument Accuracy	% Extraction Accuracy and the	% Precision	DETECTION LIMIT	The second secon	QC Suguality Control	T24505 🐍 RO Reject Biwkly		. •			% Extraction Accuracy	% Precision	DETECTION LIMIT	all and a second a	* * * * * * * * * * * * * * * * * * * *	Quality Co	T24505 RO Reject Biwkly	TA# FIELD CODE		· 有人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人,不是一个人	Project No: NA Project Location: Artesia,	ype: Water	ina T	August 29, 1994	6/01	
Director	ppm Hg; 1.00 /ppm	~	239.2, 270.2,		97	194 PC	99	0.05		4.85	<0.05	(mdd)	ᄧ		97	104	100	100100100±	A COUNTY CANADA	!	0.048	<0.001	(mqq)	ਰੰਕ		MN				6/01 Aberdeen Avenue	
Dr.	1.00 ppm A1;39,8;ppm U	nji Ni, Be	272.2.	- A	102	F-1-12-12-16-6-11.1/	100	0.05		5.08	<0.05	(mgg)	ဌ		101	100	101	0.1	100	•	5.3	<0.1	(ppm)	As		Artesia	501 E. Ma		NAVAJO REF	Lubboc	
Bláir Leftwich Bruce McDonell	Dom u	ω,		À¢ Ŋ	104	/ibeoort	100	0.05	٠	51 N	<0.05	(mqq)	편 0		100	89	99	0.05			4.98	0.15	(ppm)	Ba	13	NM88210	-50	`````	FINING	_) A 4 A A A A A
ich (Cu, Fe, Z			102	. 98	99	0.01		5.10	0.01	(mgg)	Zn	7	106	99	100	0.01	7		5.28	C<0.01	(ppm)	G C	TOTAL METALS	0.2 4.7	2 1 8 600 2	11 Moore	FOX	S S	1
		Zn, Co, Mı			96	11.5,94	100	0.08		4.8	∞	(mgg)	Al		106	100	100	0.01	· :a		5.29 (a)	<0.01CW	(ppm)	Cr	ALS		क्री १५			806 • 794 • 1296	
•		Mn, Mo; C			100	2.11.923	100	0.05	*	5.0		(ppm)	8		.~	. 92	96	20.0.001	: :3 : :0 : :0		90,0099	<0.001	(mqq)	S G						FAX	
•	20	0.050 ppm Pb;		,	106	103	100	0.05	٠.	υ • ښ		(mgg)	Mn		94	108	100	0.001-0.001		;	0.094 70.01	<0.001 <0.001 <0.05	(ppm)	Ag		Sample Received by: BL Con Project Name: RO Reject Biwkly		Sampling Date: 08/11/94	Analysis Date:	FAX 806 • 794 • 1298	
DATE	25-54	n Pb; 100			105	98	101	0.05		5.23	•	(mqq)	Mo		100	100	100				0.01	0.001	(ppm)	Hg		Received	Condition: Intact & Cool	n Date:	s Date:	298	ורשטשאטו
		0 ppm:Ba;	<u>-</u>		106	99	101	0.5	,	10.4	<0.5	(mgg)	٦		100	98	101	0.05	14.00 ·	•		-	(ppm)	Ni		1 by: BI Rejec	on: Inta	08/11/9	08/25/94		7407000
٠.		}a;													104	99	101	0.01		· ·	5.18	<0.01	(ppm)	Be	のなるない	t Biwki	TCT & CC	4	4		יאלורו מוושו
		. :	14				٠.		٠	:				٠,	104	79	91	0.01		a design and a	5.2	<0.01	(ppm)	۷	**	Y 2.	ğ		•	•	אויאוריוייר

6701 Aberdeen Avenue

Lubbock, Texas 79424

ANALYTICAL RESULTS FOR

806 • 794 • 1296

FAX 806 • 794 • 1298

Receiving Date: 08/31/94 September 08, 1994

Sample Type: Water

Project No:

Project Location: Artesia, NM

501 E. Main Attention:

NAVAJO REFINING Darrell Moore

Artegia, NM 88210

Sample Received by: YL Sample Condition: Intact & Cool Sampling Date: 08/30/94 Analysis Date: 08/31/94

Project Name: RO Reject BiWkly

DETECTION LIMIT T25272 Precision Extraction Accuracy Instrument Accuracy Quality Control RO Reject BiWkly FIELD CODE CHLORIDE (mg/L)100 95 488 218 86 FLUORIDE (mg/L)0.94 0.1 ۰ 5 104 100 95 SULFATE (mg/L)2,830 100 100 100 346 HC03 1 (mg/L as CaCo3) 10 ALKALINITY 100

200

TA#

METHODS: EPA 375.4, 310.1, 340.2; 4500 Cl-B.

Blank Spiked with 500 mg/L CHLORIDE; 2.0 mg/L FLUORIDE; 20.0 mg/L SULFATE.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

Date

6701 Aberdeen Avenue

Lubbock, Texas 79424

ANALYTICAL RESULTS FOR

FAX 806 • 794 • 1298

Non Receiving: Date: 08/31/94 September 08, 1994 Sample · Type: Water Project Location: NA ..Project No: NA

> Artesia, NMMM 88210 a 5010E.EMainin Attention: .: Darrell Moore NAVAJO REFINING

Project Name: RO Reject BiWkly (William) Sample Received by: YL Sample Condition: Intact, & Cool (Co.) Sampling Date: 08/30/9433 34 Analysis Date: : 09/06/94:/94

<pre>% Precision % Extraction Accuracy</pre>	Detection Limit	T25272ko kajana RO Reject BiWkly QC Quality Control	TA# 1828 GOV Field Code
101 113	10 0.1	210 3.6 6mc 100.8	CHIC POTASSIUM
100 97	0.1	2.3 186 0.54 20.4	
99 92	0.05	า,630 523.1 ∄ มียั่ 19.1	MAGNESIUM MALLA CALCIUM SODIUM
100	0.1	132 (19.8	SODIUM (mg/L)

METHODS: EPA 200.7.

% Instrument Accuracy % Extraction Accuracy

100 113

102

97

100 99

QC: Blank Spiked with 100.0 mg/LDPOTASSIUM; 1.20.00 mg/L MAGNESIUM, CALCIUM, SODIUM.

1900 C. -R.

Director, Dr. Bruce McDonell Director, Dr. Blaim, Leftwich

Lubbock, Texas 79424		m Pb;).050 pp	Co, Mn, Mo; 0.050 ppm Pb;	Al, Co, M	Fe, Zn, A	B, Cu, F	Be, v,	cd, Ba, Ni,	As, Cr, 9.8 ppr	QC: Blank Spiked with 5.0 ppm 0.100 ppm Se, Ag; 0.010 ppm Hg;
### FIELD CODE Percision P	TRECTION LIMIT 10.05 0.0				•				• · · · · · · · · · · · · · · · · · · ·	272	EPA 200.7, 239.2,
### FIELD CODE (ppm) (ppm) (ppm) (ppm) **Precision Accuracy** 100 Aberdeen Avenue Lubbock leaves 794.74 806*934*1236 FAX **Precision Entrol	### FIELD CODE (ppm) (pp	10	101	98	101	108	98	102	98	121	Instrument
### PIELD CODE Co.001 Co.0	# FIELD CODE (ppm)	89	87	93	92	114	88	94	100	133	
## FIELD CODE (ppm) (ppm) (ppm) (ppm) (ppm) 5272 Ro Reject BiWkly 20.001	### FIBLD CODE (ppm) (ppm) (ppm) TECTION LIMIT** Tection limi	10	97	96	95	, 103	96	97	94	101	
### FIELD CODE Dem) Cppm Co.001	## FIELD CODE (ppm) (ppm	0	0.05	0.05	0.05	_	0.01	0.05	0.05	0.05	DETECTION LIMIT
### FIELD CODE Date: Se Pb As Ba Co Co.001	### FIELD CODE									man p	
## FIELD CODE 100 10	### FIELD CODE Control	9.9	5.19	4.96	5.20	5.7	4.94	5.19	4.96	6.06	Quality
### FIELD CODE Co. 100 Co. 1 Co. 100 C	### FIELD CODE CPPm	<0.5	<0.05		<0.05	0.3	0.07	0.08	<0.05	0.28	RO Reject
# FIELD CODE Ppm Co.001 Co.01 Co.001 Quality Control Quality Control Quality Control Quality Control Quality Control Do.00 Settraction Accuracy 96 100 86 101 86 87 108	## FIELD CODE Control Quality Control Date: 08 1904 Analysis, INC Mission Navigation Navigati	(mqq)	(mgg)	(mada)	(mdd)	(mqq)	(mgg)	(mdd)	(mgg)	(mdd)	
### FIELD CODE Pb As Ba Cd Cr Countrol Co	## FIELD CODE CO.001 CO.01 CO.01 Co.001 Quality Control Quality Control Co.001 q	Mo	M	8	A1	Zn	Fe	Cu	m 10, 5,1		
## FIELD CODE Control Quality Control O.001 O.	## FIELD CODE Pb As Ba Cd Cr Se FIELD CODE Co.001 Quality Control Quality Control Co.001 Co.001 Quality Control Co.001 99	100	99	95	101	98	104	100	96		
## FIELD CODE Epm Co.001 Quality Control Co.001 Quality Control D.001 Quality Control D.001	TECTION LIMIT 6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX ANALYTICAL RESULTS FOR NAVAJO REFINING Artention: Darrell Moore 501 E. Main oject No: NA oject Location: Artesia, NM Pb As Ba Cd Cr Se FIELD CODE (ppm) (p	91	100	108	108	87	86	101	86	100	
## FIELD CODE Co.001 Co.00	TECTION LIMIT TACHANALYSIS, INC. I	96	100	99	100	100	96	100	96	100	% Precision
brill Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX: ANALYTICAL RESULTS FOR NAVAJO REFINING Ceiving Date: 08/30/94 Attention: Darrell Moore 501 E. Main Oject No: NA Oject Location: Artesia, NM Pb As Ba Cd Cr Se FIELD CODE (ppm) (ppm) (ppm) (ppm) (ppm) # FIELD CODE (ppm) (ppm) (ppm) (ppm) (ppm) Quality Control 0.048 5.1 5.20 4.93 5.22 0.095	# FIELD CODE (ptember 08, rependen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX **ANALYTICAL RESULTS FOR NAVAJO REFINING **ANALYTICAL RESULTS	0.05	0.001	0.001	0.001	_	0.01	0.05	0.1	0.001	DETECTION LIMIT
tember 08, 1994 eiving Date: 08/30/94 ple Type: Water ject No: NA ject Location: Artesia, NM Pb As Ba Cd Cr Se FIELD CODE (ppm) (ppm) (ppm) (ppm) (ppm)	TRACFANALYSIS, INC	<0.05 5.00	0.010		0.095		<0.01 4.93	0.10 5.20	<0.1 5.1	<0.001 0.048	5272 RO Reject Quality Cc
6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX analytical results for NAVAJO REFINING Ing Date: 08/30/94 Attention: Darrell Moore Type: Water 501 E. Main L NO: NA Artesia, NM 88210 L Location: Artesia, NM TOTAL METALS	Type: Water Type: Water Location: Artesia, NM 6701 Aberdeen Avenue Lubbock, Texas 79424 ANALYTICAL RESULTS FOR NAVAJO REFINING Attention: Darrell Moore 501 E. Main Artesia, NM Artesia, NM Artesia, NM TOTAL METALS	Ni (ppm)	Hg (ppm)	Ag (ppm)	Se (ppm)	Cr (ppm)	Cd (ppm)	Ba (ppm)	As (ppm)	Pb (ppm)	
6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX over 08, 1994 ing Date: 08/30/94 Type: Water ing Nater 501 E. Main Location: Artesia, NM Artesia, NM Artesia, NM Artesia, NM	6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX: ANALYTICAL RESULTS FOR NAVAJO REFINING Ing Date: 08/30/94 Attention: Darrell Moore Type: Water No: NA Location: Artesia, NM Artesia, NM 88210					ALS	POTAL MET				
6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1296 ANALYTICAL RESULTS FOR NAVAJO REFINING Ing Date: 08/30/94 Attention: Darrell Moore Sampling Type: Water No: NA Artesia, NM 88210 Sample	6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794• ANALYTICAL RESULTS FOR NAVAJO REFINING Ing Date: 08/30/94 Attention: Darrell Moore Sampling Type: Water Figure 1994 Sample Soi E. Main Artesia, NM 88210 Sample	RO H	t Name:	Project						K	Location: Artesia,
6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1296 ANALYTICAL RESULTS FOR OR, 1994 INDICATE POR NAVAJO REFINING Analysi Ing Date: 08/30/94 Attention: Darrell Moore Sampling Type: Water Type: Water Sol E. Main	6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794• analytical results for Navajo refining Date: 08/30/94 Attention: Darrell Moore Sampling Sample: Water Sole. Main	ş P	Receive	Sample			O		Artesia,		No:
6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX ANALYTICAL RESULTS FOR 08, 1994 NAVAJO REFINING Date: 08/30/94 Attention: Darrell Moore	6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX O8, 1994 Date: 08/30/94 NAVAJO REFINING Attention: Darrell Moore	on:	Conditi					ain	501 E. Ma		Type:
6701 Aberdeen Avenue Lubbock, Texas 79424 806 • 794 • 1296 FAX 806 • 794 • 1298 ANALYTICAL RESULTS FOR O8, 1994 NAVAJO REFINING Analysis Date:	6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298 ANALYTICAL RESULTS FOR NAVAJO REFINING NAVAJO REFINING Analysis Date:	08/	ng Date:	Samplir			11 Moore		Attention		Receiving Date: 08/30/94
Lubbock, Texas 79424 806•794•1296	Lubbock, Texas 79424 806•794•1296	09/06/94	is Date:	Analysi				FINING	NAVAJO RE		08,
	LTRACEANALYSIS, INC. III		1298	(806•794•		6 • 794 • 1296	2	ck, lexas /942	Lubboc	berdeen Avenue	6/01

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell



State of New Mexico ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT Santa Fe, New Mexico 87505

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

Telephone Personal	Time 1050	Dat	9/17/94
Originating Party			Other Parties
Parel More - Navajo (of ning	Bill O	son - Envir Burenn
Subject			
1	1 00		· · · · · · · · · · · · · · · · · · ·
Spill at Navajo A	tesia Refin	N	
Discussion	Λ		
Spill at 100 46/s	of crude	oil from	Tenk 437
Tank drain left open			
		spilled unto	ground
A-1 0 ///	dike,		
Agarox. 85 hhls	recovered	1	
Vill excepte continuetor	1 1	to recover	additional Plaid
Will excepte contaminate		requester t	na contirmation saupling
Will ship offste to	Haqueste Di	sposa Faci	1th,
Conclusions or Agreements		V	
/ / /	irnation son	ples for	TPH, BTEX and
submit to OCD for	- applove	<u> </u>	/ 0.00
The will submit writte		region	to OCK
Distribution		gned /	000
Lle		(1.51)	V (XSm
RCA			



REFINING COMPANY

62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

EASYLINK

501 EAST MAIN STREET ° P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

September 26,1994

Mr. Bill Olson Oil Conservation Division Environmental Bureau Land Office Bldg. P.O. Box 2088 Santa Fe, NM 87504

RE: SPILL AT TANK 437, NAVAJO REFINING CO., EDDY COUNTY, NEW MEXICO

Dear Bill,

Enclosed is the report for the spill at Tank 437 that I called you about on September 19, 1994. This spill has been cleaned up and the contaminated soil is being sent to USPCI's Lone Mountain landfill. A composite sample has been taken from the area and is being analyzed for BTEX and TPH. A final report will follow when lab results are finalized and will include a copy of each manifest from each load sent to Lone Mountain.

If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time.

Sincerely,

Darrell Moore

Environmental Specialist

ll More

Encl.

SPILL REPORT (SR-1) (5 bbl. or Greater)

1.	Time of Spill 10 MAM)PM Date 9-17.94
2.	Time Spill Contained / / AM/PM Date 4-/7-94
3.	Location of Spill 437 Tank water Sump
4.	Type of Spill (Material) Crvde
5.	Quantity of Spill 140 bbl. Size of Spill (area) $25' \times 30'$
6 .	Disposition of Spilled Material Property back to Cruste tank
7.	How was the Spill Contained 5hut value off a pumped out with pumper truck
8.	Did spill get into any drainage ditch, creek, arroyo, river, or waste water stream? YES NO
9.	If yes, did the spill leave company property or right-of-ways? YES NO
10.	Corrective action taken to prevent further spills: Make Some Arain Valve is not open while taking Care of unit problems in Refinery
11.	Name of person on duty at time of spill Felix Fierre Tr,
12.	Physical location of responsible person at the time of spill N.D. What King an Sour water Stripper transmitted making nounday Department Shift Foreman
14.	Supervisor's Signature

- NOTE -

In order to comply with federal laws, the Navajo Refining Company must report all spills within 24 hours to the regional office of the EPA. This form must be filled out completely and returned to the office of the Chief Environmentalist whenever a spill occurs. If, due to location, you cannot return this form within 24 hours, call the information to the Chief Environmentalist Office and then forward the form.



REFINING COMPANY

62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

EASYLINK

TELEPHONE (505) 748-3311

501 EAST MAIN STREET ° P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

August 16, 1994

Mr. Roger Anderson
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87501

RECEIVED

JUL 1 9 1994

OIL CONSERVATION DIV. SANTA FE

RE: Modification to GW-28, Navajo Refining Co. Eddy County, New Mexico

Dear Roger,

In separate letters dated April 27, 1993 and July 25, 1994, OCD approved, with conditions, for Navajo Refining Company to discharge our RO reject water and our air stripped trench water to an adjacent farm that is owned by Navajo. This farm has been planted in rye and has used the water for a beneficial purpose.

Navajo is now seeking a modification to our discharge plan (GW-28) to allow us to discharge the above referenced waters to other farms that Navajo owns near our Artesia refinery. Those farms are shown on the enclosed map. In addition, we would like the option to build a holding tank on the west side of the farm so the farmer can use the water in a more controlled fashion. As you are aware, Navajo is actively pursuing options that will allow us to discontinue the use of the evaporation ponds in the near future. The recovered water from our trenches makes up approximately 20% or more of our total. Since this water can be put to beneficial use on these farms, we feel this is an excellent application for this resource.

Let me know if there is anything we can do to speed this process along. Thank you for your time in this matter.

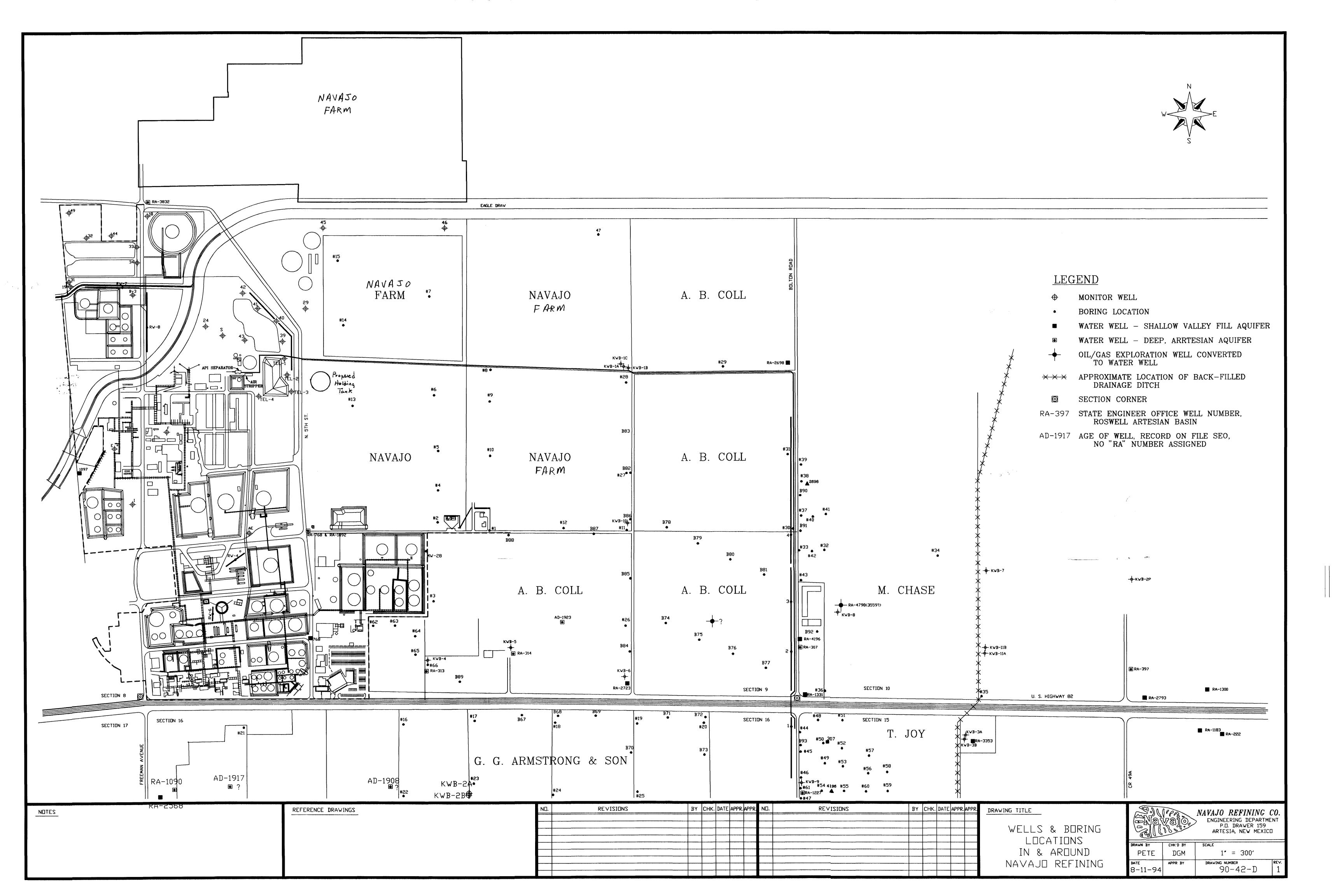
Sincerely,

Darrell Moore

Environmental Specialist

auell Moore

Encl.





REFINING COMPANY

EASYLINK 62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P/L

TELEPHONE (505) 748-3311

501 EAST MAIN STREET ° P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

August 16,1994

Mr. Chris Eustace
Oil Conservation Division
Environmental Bureau
Land Office Bldg.
P.O. Box 2088
Santa Fe, NM 87501

RE: Hydrotesting of Tank 835, Navajo Refining Co., Eddy County, New Mexico

Dear Chris,

Navajo Refining is in the process of working over our Tank 835 which was in crude service. This includes cleaning the inside of the tank by sandblasting, removing the old floor, and replacing the floor with new materials. This tank will be returned to JP-4 service so that Navajo can supply the Air Force's fuel needs in the coming exercises at Roswell.

We will hydrotest this tank by filling it with approximately 54000 bbls. of well water. We would like to dispose of the water by discharging it to one of our adjacent farms. I have enclosed a map showing the location of our farms. Which farm the water will be applied to depends on the farmers needs. The water will be sampled and analyzed for volatiles, semi-volatiles and metals. We should be able to collect the sample by August 17 and get results to OCD by August 22. If at all possible, we would appreciate a responce on these results by August 24.

Your prompt attention to this matter will be greatly appreciated. If you have any questions, please call me or David Griffin at 748-3311. Thank you for your time.

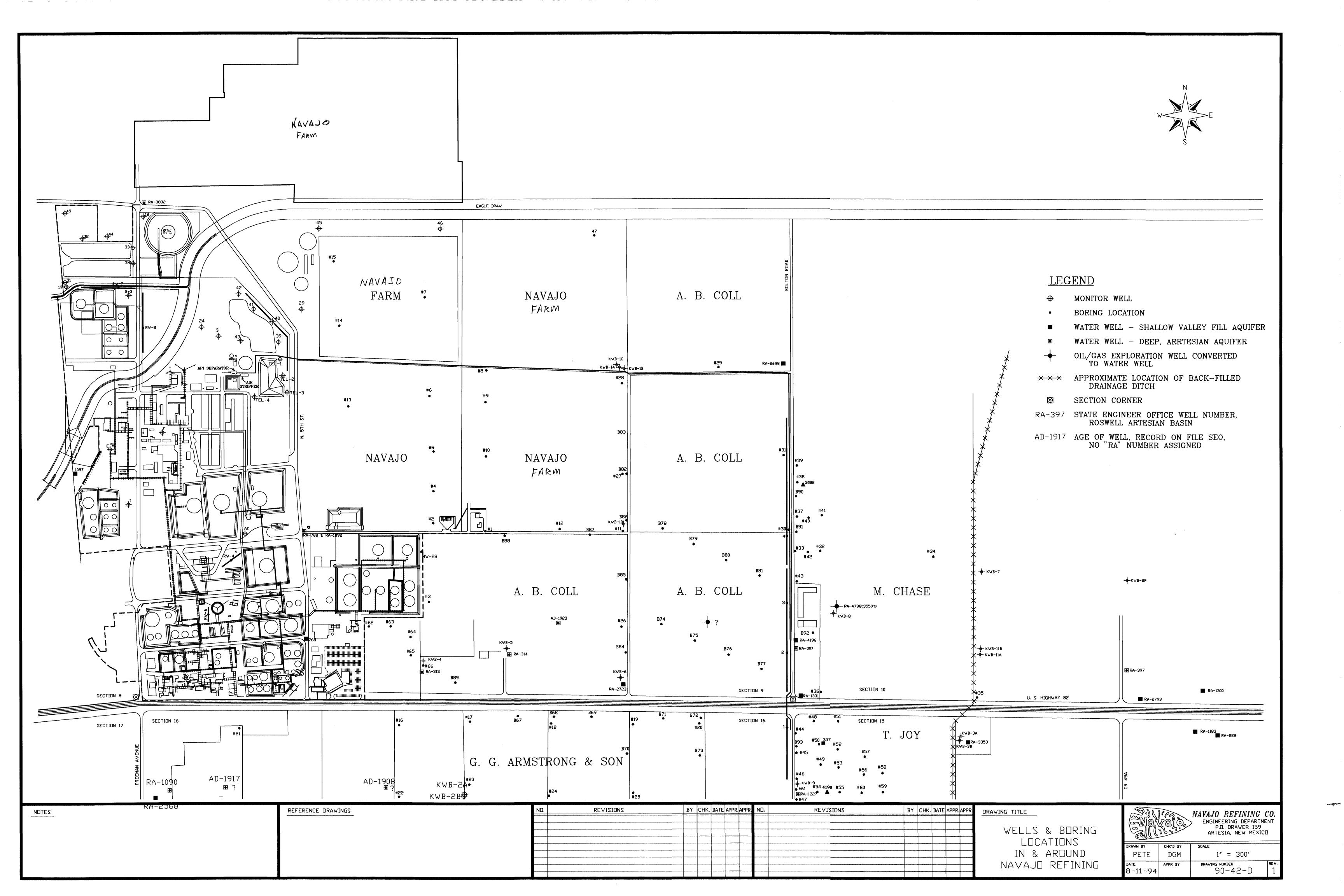
Regards,

Darrell Moore

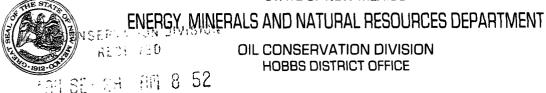
Daviell Moore

Environmental Specialist

Encl.



STATE OF NEW MEXICO



BRUCE KING

POST OFFICE BOX 1980 HOBBS, NEW MEXICO 88241-1980 (505) 393-6161

NMOCD Inter-Correspondence

To:

Roger Anderson-Environmental Bureau Chief

From:

Wayne Price-Environmental Engineer District I

Date:

September 26, 1994

Reference:

Navajo Refining Co.-Lea Refining DP-GW-14

Subject:

Disposal of non-exempt waste resulting from spill

at tank 104B which contained AGO's.

Comments:

Dear Roger,

Since the District handled this situation thur verbal communication with you and your staff and in keeping with NMOCD policy of all non-exempt waste dispositions and clean-up activities associated with discharge plan facilities are to be reviewed by your staff; I am therefore forwarding you the necessary chronological documentation for your review and files.

Since Navajo's Discharge Plan does not explicitly spell out this particular waste stream, we had requested Navajo to supply us this documentation. We also requested documentation for the results of the final clean-up activities.

Please find enclosed the following documentation for your files:

- 1. Fax dated Aug 12, 1994 "knowledge of process" letter and analytical results to support waste determination.
- Wayne Price's field reports-2



3. Letter Dated September 7, 1994 from Darrell Moore Navajo's Environmental specialist to Wayne Price NMOCD District I Environmental Engineer. This letter provided information and manifest on the final disposition of the contaminated soil that was removed from the spill area and provided documentation in the form of analytical results on the remaining contaminants in the soil.

Also included was Navajo's plans for future restoration of the effected area.

If you have any questions or need additional information please don't hesitate to call or write.

cc: Jerry Sexton-District I Supervisor



MEMORANDUM OF MEETING OR CONVERSATION

Telephone	Personal	Time ≈ /0100 AF	n	Date	8/18/94
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STEVE TI	FREY				
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8/12/94

NEW MEXICO OIL CONSERVATION COMMISS

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E = Indicates-some-form-of enforcement action-taken-in-the-field-(abov-imediately below-the-letter-U,-R er-0)



REFINING COMPANY

EASYLINK 62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

TELEPHONE (505) 748-3311

501 EAST MAIN STREET • P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159

September 7, 1994

Mr. Wayne Price Oil Conservation Division P.O. Box 1980 Hobbs, NM 88240

RE: SPILL AT TANK 104B, LEA REFINING CO., LEA COUNTY, NM

Dear Mr. Price,

Enclosed are the test results from the soil samples that were collected on August 18, 1994 around tank 104B at our Lovington facility. As you can see, this composite sample came back at 867 ppb or .8 ppm TRPHC. This area has been allowed to sit in the open air with the sun baking it for the last three weeks, so we feel very confident that no adverse environmental effects have or will occur.

We shipped six roll-off bins containing 211,980 lbs. of this material to USPCI's Lone Mountain facility in Waynoka, Oklahoma. I have enclosed the manifests from each of those shipments for your records.

We are going to go ahead and regrade the area of the spill with caliche and put the area back in shape for our operations. This should be accomplished in the next two weeks. If you have any questions concerning this matter, please call me at 505-748-3311. Thank you for your time in this matter.

Regards,

Darrell Moore

Environmental Specialist

Encl.

•8701 Aberdeen Avenue Lubbock, Texas 79424

806 • 794 • 1296

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main

Artesia, NM 88210

August 24, 1994

Receiving Date: 08/19/94

Sample Type: Soil Project No: NA

Project Location: Lea Refining, Lovington

Analysis Date: 08/19/94

Sampling Date: 08/18/94

Sample Condition: Intact & Cool

Sample Received by: JW

Project Name: NA

TA#	FIELD CODE	TRPHC (ppb)
T24829	TK 104B Spill	867
QC	Quality Control	916
% Precision		96
% Instrument	t Accuracy	92
DETECTION L	IMIT	10

METHODS: EPA Modified 8015.

TRPHC QC: Blank spiked with 1,000 ppb TRPHC.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

TraceA	TraceAnalysis, Inc.	Inc.		I Al Tel (11 Aberdeen Avenu Tel (806) 794 1296	n Av 94 1	6701 Aberdeen Avenue Tel (806) 794 1296	3 £	Lubbock, Texas 79424 Fax (806) 794 1298	xas 79424 4 1298	<u>_</u>	N [AIN	-0F	SOC	(do)	' REC	ORD	AND	ANA	CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST	SRE	QUE	T.	
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Form Approved	OMR No.	2050-0039	Expires 9-30-94

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Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, 1L 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.



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Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, 1L 60646 (800)621-5808

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	55702		AM# 194-05	301	60					
	15. Special Handling Instructions and Add	litional Information 24hr. Ph				8-3	<i>53</i>	11		
	16. GENERATOR'S CERTIFICATION: I hereby dec proper shipping name and are classified, packe according to applicable international and nation if I am a large quantity generator. I certify the economically practicable and that I have set future threat to human health and the environ the best waste management method that is av	ed, marked, and labeled, a nal government regulation that I have a program in dected the practicable mannent; OR, if I am a s	and are in all respects. place to reduce the lethod of treatment mail quantity gener	ne volume and storage, or o	endition for tr d toxicity of disposal cur	ansport waste grently a	by highw enerated vailable	I to the de	ch minimi:	zes the present and
V	Printed/Typed Name Steve H TERRY		Signatu	Dev	ell l	le	NY		/	Month Day Year 01811181914
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N S P O		EEN eceipt of Materials		School	HC 1	blu				0151/181919
TRANSPORTER	Printed/Typed Name		Signatu	ire					i	Month Day Year
	19. Discrepancy Indication Space							· · · · · ·		
FACI								6	74-	7983
۲.	20 Facility Owner or Operator: Certification	on of receipt of hors	rdous motorials	coursed by	Al- : :4				4 40	

PRINTED ON RECYCLED PAPER PRINTED WITH USING SOYBEAN NK.

Printed/Typed Name

Style F15 REV-6 Labelmaster, An American Labelmark Co., Chicago, IL 60646 (800)621-5808

Month Day Year

Signature

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A		UNIFORM HARES TO SWASTE MANIFEST	1. Generator's US N.M.T.3.6.		No. Mani Docu 03670	ment No.	i .	is not r		the shaded areas by Federal law.
	3. (Generator's Name and Mailing Address	- A Dags	1 . 91	C 0			tate Manifest Do	cument	Number
	4. (Generator's Phone (505) フィビー	RO.D.RAW: Artesia,	N.M.	88210		B. S	tate Generator's	ID	
	5. 1	Transporter 1 Company Name		6.	US EPA ID Numb	er	c. s	tate Transporter	s ID	3405
	LT	-RIAD TRANS PORT		OKD	981588	1.7.9.1	D. T	ransporter's Pho	ne 4/2	3-426-475
$\ $	7.	Transporter 2 Company Name		8.	US EPA ID Numb		E. S	tate Transporter	s ID '	
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	l	Designated Facility Name and Site Addres ようアベエームルら <i>MT</i> よて <i>2 Gの</i> メ170	SS	10.	US EPA ID Numb	er		tate Facility's ID	02	
	1 :	AYMOKA, OK. 7.3860	1	DKD	065438		<u>. </u>	acility's Phone 405-69		3500
G	11.	US DOT Description (Including Proper Sh				12. Conta	Type		14. Unit Wt/Vol	Waste No.
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0	b.									
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Ш		55743	_		94-053	•				
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Ш	15.	Special Handling Instructions and Addition	onal Information				*			
		J	4 hr. 81	LUNE	# 505	-748	- 3	5311		
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		future threat to human health and the environment	nent; OR, if I am a :	smali quant						
$\ \cdot\ $	-	the best waste management method that is available Printed/Typed Name	to me and that I d		Signature (2					Month Day Yea
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A		Pripted/Typed Name			Signature		0:1	<u> </u>		Month Day Yea
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PORT	18.	. Transporter 2 Acknowledgement of Rec Printed/Typed Name	eipt of Materials	т	Signature	V				Month Day Yes
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	19.	. Discrepancy Indication Space								
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1	20.	Facility Owner or Operator: Certification	of receipt of haz			this mani	est ex	cept as noted in	item 19	
Į.	1 1	Printed Typed Name	20		Signature	. ~	H	\ (`\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\sim	Month Day Yes
<u>_</u>	1-515	REV.6 I shakmastar An Amarkan I shakmark Co. Chicag	- N 60646 (900)634 66	<u>.</u>		\sim 1 \	4	VI CONT		10 2/1

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID		ifest ument No.	2. Page 1 of	Informat is not rec	ion in the	shaded	areas
3. Generator's Name and Mailing Address	Late A war to the A first			A. State M	anifest Doc	ument Nu	ımber	
4. Consequence Observed		e jed		B. State G	enerator's II)		
Generator's Phone () Transporter 1 Company Name	6.	US EPA ID Numb	Or .	C. State T	ransporter's	ID		
5. Transporter Toompany Name	ı .	OS EFA ID NUMB	ei 		orter's Phon		11200	47.00
7. Transporter 2 Company Name	8.	US EPA ID Numb	er		ransporter's			
,	1				orter's Phon			
9. Designated Facility Name and Site Addr	ess 10.	US EPA ID Numb	er	G. State F	acility's ID			
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11. US DOT Description (Including Proper S	Shipping Name, Hazard Clas	s and ID Number)	12. Conta	1	13. Total uantity	14. Unit Vt/Vol	l. Waste	No.
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15. Special Handling Instructions and Add	litional Information	······································					·	
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Printed/Typed Name	·7-·	Signature	· , /	12.			onth Da ` ≻	y Yea
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19. Discrepancy Indication Space		*************************************	· · · · · · · · · · · · · · · · · · ·	*				
20. Facility Owner or Operator: Certification	on of receipt of hazardous	materials covered by	v this manife	est except a	s noted in It	em 19		
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UNIFORM HAZARDOUS	Generator's US EPA ID No.	Manifest Document No	2. Page 1		he shaded areas
WASTE MANIFEST	V. 11 T		of Of	anifest Document	by Federal law.
Generator's Name and Mailing Address			A. State Me	innest Document	Mullipar
Generator's Phone ()	Had be a second	,	B. State Ge	enerator's ID	
. Transporter 1 Company Name	6. US EF	A ID Number	C. State Tr	ansporter's ID	777.5
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16. GENERATOR'S CERTIFICATION: I hereby deck proper shipping name and are classified, packed according to applicable international and national if I am a large quantity generator, I certify the economically practicable and that I have selected.	tional Information are that the contents of this consignment at 1, marked, and labeled, and are in all respect in government regulations. at I have a program in place to reduce in the content of the	re fully and accurately detects in proper condition for the volume and toxicity (nl. storage. or disposal o	transport by high of waste generate currently available	d to the degree I ha to me which minimi	izes the present an
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EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

Month Day

Year



Printed/Typed Name

Signature

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

TELEPHONE (505) 748-3311



REFINING COMPANY

525Q527g FAX (805) 746-5410

EASYLINK

501 EAST MAIN STREET . P. O. DRAWER 159

ARTESIA. NEW MEXICO 88210

FAX NUMBERS:			
ACCOUNTING OFFICES:	505/746-6410	MARKETING OFFICES:	505/746-615
REFINING/ENGINEERING:	505/748-9077	PIPELINE DIVISION:	305/746-443
	**************************************	*****	
PLEASE DELIVER //	PAGES, INCL	UDING THIS COVER SHEE	ET
To: Jerry Sexton		PHONE:	
COMPANY/DEPARTMENT:	<u>: D</u>		
MESSAGE: Here's 4	he analysis	with our logi	`c
·			
FROM: Darrell Moore	9 DA	TE: 8/12/94	
If you do not receive a	all pages, please	call	at
505/748-3311, ext.			

NOTE: Unless otherwise indicated or obvious from the nature of the transmittal, the information contained in this facsimile message is privileged and confidential information intended for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error or are not sure whether it is privileged, please immediately notify us by telephone, and return the original message to us at the above address via the U. S. Postal Service. Thank you.

August 12, 1994

Jerry,

Here are the analysis' that we have pertaining to our Lovington refinery. The analysis titled crude contaminated soil is a composite sample of several different spills from that refinery which would include components of Atmospheric Gas Oil (AGO). The second analysis titled 439 TK is from our crude tank here at Artesia that is fed directly from Lovington.

In the past, we have always been able to use process knowledge, in addition to some analysis, to show that these spills are non-hazardous. For instance, we know that AGO has a very high boiling point, between 650 and 850 degrees F, so that no benzene will be found. Also, this material has never been through the cracking process so no cresols could be formed. We also know that the metals will concentrate in the heavy cuts of which there are two heavier cuts than AGO, vacuum gas oil and vacuum recid (asphalt).

The analysis marked TK 439 is the bottoms from a crude tank fed from Lovington. Our position is that this is the nastiest hydrocarbon waste we have and it is non-hazardous as the analysis shows. This information, along with the analysis of contaminated soil from Lovington and our process knowledge have enabled us to get this material accepted at USPCI's landfill in Waynoka, Oklahoma as a non-hazardous waste.

After you have looked this over, give me a call and we can go over it. Our number is 748-3311.

Thanks,

Dauell Moore

MILLE CONTINUE CONTIN		RACEANALYSIS, IN	SIS, INC.	UNITED TO THE WALLE OF THE WALL	
3	6701 Aberdeen Avenue	Lubbock, Texas 79424	806 - 794 - 1296	FAX 806 • 794 • 1298	
	BNALYTI	ANALYTICAL RESULTS FOR			
	NAVAJO	REFINING CO.			
	Attenti	Attention: Darrell Moore			
	501 E.	Main			
	Artesia	I, NM 88210			
June 20, 1994				Analysis Date: 06/16/94	
Receiving Date: 06/10/94				Sampling Date: 06/07/94	
Sample Type: Soil				Sample Condition: Intact & Cool	
Project No: NA				Sample Received by: MS	
Project Location: Lovington, NM	MN			Project Name: NA	

TR#	RE Field Code	Reactivity	IVITY SULFIDES (Ppm)	CYANIDES (PPm)	CYANIDES CORROSIVITY (Ppm)	hd (8.u.)	IGNITABILITY
122219 QC	Crude Contaminated Soil Non-reactive Quality Control	-reactive	<10.0	42.5	Noncorrosive	7.73	Monignitable
& Precision	ion	100	100	100	100	100	100
& Extract	\$ Extraction Accuracy	*	-	:	1 1	1	!
& Instru	& Instrument Accuracy	! !	1	1	!	101	[

METHODS: EPA SW 846-2.1.3, 2.1.2, 2.1.1.

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

8-20-54

			RACEANALYSIS, INC.	ANALY	SIS. I	NC.				<
June 20, 199 Receiving Da Sample Type: Project No: Project Loca	G701 Aberdeen Avenue June 20, 1994 Receiving Date: 06/10/94 Sample Type: Soil Project No: NA Project Location: Lovington, NM	Ачепие	Lubbock, Texas 79424 ANALYTICAL RESULTS FOR NAVAJO REFINING CO. Attention: Darrell Mod 501 E. Main Artesia, NM 88210	ds 79424 BU6• RESULTS FOR INING CO. Darrell Moore n M 88210	806•794•1296 30R Moore	1296	FAX 806 • 794 • 1298 Analysis Date: 06/17/94 Sampling Date: 06/07/94 Sample Condition: Intact Sample Received by: MS Project Name: NA	298 late: 06/17/94 late: 06/07/94 ldition: Intac	7/94 17/94 ntact & Cool MS	
			•	TCLP METALS	ζĵ					
TA#	Field Code	As (ppm)	Se (ppm)	Cr (Ppm)	Cd (bpm)	Pb (M/d)	Ba (ppm)	Ag (Ppm)	(wdd) 5H	
#2221Q	EPA LIMIT =	5.0	1.0	5.0	1.0	5.0	100	5.0	0.20	
00 00	Quality Control	8.57	1.84	8.38	1.64	8.83	1.2 194.6	8.87	0.020	
Detecti	Detection Limit	0.1	0.2	0.1	0.1	0.1	1.0	0.01	0.001	
<pre>% Precision % Extraction % Instrumen</pre>	Precision Extraction Accuracy Instrument Accuracy	98 103 86	99 127 92	99 84	99 82 82	100 93 88	99 100 97	99 93 89	100 100 100	
		•								

Blank Spiked with 5.0 ppm As, Cr, Pb, Ag; 1.0 ppm Se, Cd; 100 ppm Ba; 0.020 ppm Hg. METHODS: EPA SW 846-1311, 6010, 7471. TCLP METALS QC:

S

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell

Date

8-20-94

6701 Aberdeen Avenue

Lubbock, Texas 79424

806 • 794 • 1296

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING CO.

Attention: Darrell Moore

501 E. Main

June 20, 1994

Artesia, NM 88210

Receiving Date: 06/10/94

Sample Type: Soil

Project No: NA

Project Location: Lovington, NM

Analysis Date: 06/14/94

Sampling Date: 06/07/94

Sample Condition: Intact & Cool

Sample Received by: MS

Project Name: NA

T22219

		Crude					
	EPA	Contaminated	Detection	ŀ			
TCLP VOLATILES (ppm)	LIMIT	Soil	Limit	ÕС	₹P	%EA	\$IA
Vinyl chloride	0.20	ND	0.002	0.067	115	166	134
1,1-Dichloroethene	0.70	ND	0.002	0.056	95	114	112
Methyl Ethyl Ketone	200.0	ND	0.020	0.059	108	166	118
Chloroform	6.00	ND	0.020	0.052	105	106	104
1,2-Dichloroethane	0.50	ND	0.002	0.042	110	94	84
Benzene	0.50	ND	0.002	0.058	98	118	116
Carbon Tetrachloride	0.50	ND	0.020	0.045	98	86	90
Trichloroethene	0.50	ИD	0.002	0.041	96	82	82
Tetrachloroethene	0.70	ND	0.002	0.050	97	102	100
Chlorobenzene	100.00	ND	0.002	0.042	94	86	84
1,4-Dichlorobenzene	7.50	ND	0.002	0.043	94	86	86

* Recovery

1,2-Dichloroethane 105 Toluene-d8 97 4-Bromofluorobenzene 93

ND = Not Detected

METHODS: EPA SW 846-1311, 8240.

Director, Dr. Blair Leftwich

Director, Dr. Bruce McDonell

6-20-94

6701 Aberdeen Avenue

Lubbock, Texas 79424

ANALYTICAL RESULTS FOR NAVAJO REFINING CO.

806 • 794 • 1296

Attention: Darrell Moore

FAX 806 • 794 • 1298

June 20, 1994

An

501 E. Main Artesia, NM 88210

Receiving Date: 06/10/94

Receiving Date: 05/10

Sample Type: Soil Project No: NA

Project Location: Lovington, NM

Analysis Date: 06/13/94

Sampling Date: 06/07/94

Sample Condition: I & C Sample Received by: MS

Project Name: NA

T22219

			Crude				
TCLP Semi-Volatiles	EPA	Detection	Contaminated				
(mg/L)	Limit	Limit	Soil	%P	%EA	QC	%IA
Pyridine	5.0	0.001	ND	101	104	0.577	115
1,4-Dichlorobenzene	7.5	0.001	ND	100	97	0.602	120
o-Cresol	200.0	0.001	ND	101	105	0.650	130
m,p-Cresol	200.0	0.001	ND	101	98	1.234	123
Total Cresol	200.0	0.001	ND	101	101	1.884	126
Hexachloroethane	3.0	0.001	ND	101	101	0.644	128
Nitrobenzene	2.0	0.001	ND	101	105	0.541	108
Hexachlorobutadiene	0.5	0.001	ND	101	102	0.599	119
2,4,6-Trichlorophenol	2.0	0.001	ND	105	97	0.610	122
2,4,5-Trichlorophenol	400.0	0.001	ND	104	107	0.557	111
2,4-Dinitrotoluene	0.13	0.001	ND	104	96	0.630	126
2,4-D	10.0	0.01	ND	95	104	0.553	110
Hexachlorobenzene	0.13	0.001	ND	102	90	0.566	113
2,4,5-TP	1.0	0.01	ND	103	103	0.473	94
Pentachlorophenol	100.0	0.001	ND	103	91	0.580	116
Lindane	0.4	0.001	ND	102	78	0.492	98
Total Heptachlor	0.008	0.001	ND	102	82	0.847	85
Endrin	0.02	0.001	ND	95	70	0.519	103
Methoxychlor	10.0	0.001	ND	99	82	0.457	91
Chlordane	0.03	0.0002	ND	102	120	0.0015	75
Toxaphene	0.5	0.005	ND	102	106	0.0152	76

•	BESTATION	
	DECUMENT	

2-Fluorophenol SURR	113
Pheno1-d5 SURR	104
Nitrobenzene-d5 SURR	105
2-Fluorobiphenyl SURR	109
2,4,6-Tribromophenol SURR	104
Terphenyl-d14 SURR	116

Methods: EPA SW 846-1311, 8270, 8080.

ND - Not Detected

Blair Leftwich

Director, Dr. Blair Leftwich Director, Dr. Bruce McDonell 6-20-94

TraceA	TraceAnalysis, Inc.		2		670	Abe FI (8	7 (9) 7:	6701 Aberdeen Avenue Tel (806) 794 1296	3 2 6	Lubl	Lubbock, Texas 79424 Fax (806) 794 1298	1298	5	[AIN	ŌF.4	CIEST	Auo.	REC	CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST	D ANALA	SIS KI	3003	52	
Lairell Moore	Moore			_	Phone #: .523* FAX #: 52:5 -	* * .	# :525 \$255-	346	- (~	9012					}	,	LNA	VSIS	ANALYSIS REQUEST	<u> </u>		RA.	SPECTAL. HANDE, ING	S & C
A Address:	Company Name & Address:	9																-						
					Pruject Name :	Ž	<u> </u>									20 Eu c						<u> </u>		
Project Location:	a Kin1				Sampler Signature:	S L	gasta C. C.	ature:	2	12	130			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1 14 14 14					SVBD		10	
		 		MAT	FREX		<u>-</u>	RESE	ESERVAT	PRESERVATIVE METHOD	_	SAMPLING									0#1		alie :	
FIELD CODE		# CONTAINE	ABTAW	ROIL	SLUDGE	узнто.	нсг	ЕОИН	E ICE	NONE	ETAG	aMIT	BTEX. MTBE	HQT	TCLP Metals	TCLP Volatile	V imas 9JOT	TDS RCI			วักบดาธ กานไ	9A2A x67	Report TWC	PloH
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Retinguished by:	Date: 6-10-94	Times:	Ë				\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	reived	J.	Labora	Received by Laboratory	·												

Receiving Date: 04/01/94

6701 Aberdeen Avenue

Lubbock, Texas 79424

806 • 794 • 1296

April 06, 1994

Sample Type: Solid Project No: NA

Project Location: NA

FAX 806 • 794 • 1298

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main

Artesia, NM 88210

Analysis Date: 04/02/94

Sampling Date: NA

Sample Condition: Intact & Cool

Sample Received by: McD

Project Name: NA

		•					
	EPA	T20016	Detection	.			
TCLP VOLATILES (ppm)	LIMIT	FFE #21 43 <i>9</i> T K	Limit	QC	%P	₹EA	%IA
Vinyl chloride	0.20	ND	0.002	0.052	100	128	104
1,1-Dichloroechene	0.70	иD	0.002	0.059	100	74	118
Methyl Ethyl Ketone	. 200.0	ND	0.020	0.052	100	110	104
Chloroform	6.00	ND	0.020	0.056	100	113	112
1,2-Dichloroethane	0.50	ND	0.002	0.054	100	109	108
Benzene	0.50	0.364	0.002	0.054	100	86	104
Carbon Tetrachloride	0.50	ND .	0.020	0.051	- 100	93	102
Trichloroethene	0.50	ND	0.002	0.038	100	76	76
Tetrachloroethene	0.70	ND	0.002	0.051	100 /	99	102
Chlorobenzene	100.00	ND	0.002	0.049	100	97	98
1,4-Dichlorobenzene	7.50	ND	0.002	0.048	100	90	96 🔭

	₩.	Recovery
1,2-Dichloroethane		95
Toluene-d8		109
4-Bromofluorobenzene		99

EPA SW 846-1311, 8240.

Director, Dr. Blair Leftwich

Director, Dr. Bruce McDonell

4-6-94

6701 Aberdeen Avenue

Lubbock, Texas 79424

806 • 794 • 1296

FAX 806 • 794 • 1298

April 06, 1994

Receiving Date: 04/01/94

Sample Type: Solid

Project No: NA

Project Location: NA

ANALYTICAL RESULTS FOR

NAVAJO REFINING

Attention: Darrell Moore

501 E. Main

Artesia, NM 88210

Analysis Date: 04/02/94

Sampling Date: NA

Sample Condition: I & C Sample Received by: McD

Project Name: NA

TCLP Semi-Volatiles	EPA	Detection	T20016	. ,		•	
(bbw)	Limit	Limit	FFE #21	, &P	%EA	QC	\$IA
Pyridine	5.0	0.001	ND "	100	109	0.561	. 112
1,4-Dichlorobenzene	7.5	0.001	ND	100	101	:0.589	117
o-Cresol	200.0	0.001	ND	100	113	0.545	109
m,p-Cresol	200.0	0.001	ND	100	108	1.231	123
Total Cresol	200.0	0.001	KD	100	110	1.776	·118
Hexachloroethane	3.0	0.001	ND	100	118	0.605	121
Nitrobenzene	2.0	0.001	ND	100	92	0.578	115
Hexachlorobutadiene	0.5	0.001	ND 1.	100	94	0.565	113
2,4,6-Trichlorophenol	2.0	0.001	ND	100	92	0.608	121
2,4,5-Trichlorophenol	400.0	0.001	ND	100	96	0.482	96
2,4-Dinitrotoluene	0.13	0.001	ND	100	. 85 .	0.576	115
2,4-D	10.0	0.01	ND	100	85	0.430	86
Hexachlorobenzene	0.13	0.001	ND	100	97	0.599	119
2,4,5-TP	1.0	0.01	ND	100	94	0.490	98
Pentachlorophenol	100.0	0.001	ND	100	78	0.448	89 1
Lindane	0.4	0.001	ND	100	79	0.477	
Potal Heptachlor	0.008	0.001	ND	100	90	1.091	109
Endrin	0.02	0.001	ND	100		0.583	116
Methoxychlor	10.0	0.001	ND	100	88	0.436	87
Chlordane Commission of the	0.03	0.0002	ND	100	95	0.0020	100
Coxaphene	0.5	0.005	ND	100		0.0209	104
		in the standard					
	. *	& RECOVERY) }	1
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* · · · · · · · · · · · · · · · · · · ·	* RECOVERY
2-Fluorophenol SURR	89
Phenol-d5 SURR	93
Nitrobenzene-d5 SURR	104
2-Fluorobiphenyl SURR	98
2,4,6-Tribromophenol SURR	88
Terphenyl-d14 SURR	107

Methods: EPA SW 846-1311, 8270.

ND - Not Detected

15

Director, Dr. Blair Leftwich

4-6-94

DATE

raftering in Malaysian in a telephological suggests.

Director, Dr. Bruce McDonell

TRACEANALYSIS, INC

			**		igelia. Sinte	
LEAL MANDEN TO THE MENTING	03/94	Intact & Cool: McD	Hg (mdd)	0.20 <0.001 0.020	0.001	100 100 100
	1298		Ag (ppm)	5.0	0.01	100 100 104
	FAX 806-794-1298	Sample Condition: Sample Received by Project Name: NA	Ba (ppm)	100.1	0.1	100 101 100
INC	1296		(mgd)	5.0 <0.1 5.1	0.1	100
RACEANALYSIS, INC.,	806 • 794 • 1296 FOR 1. Moore	LS	Cd (bpm)	1.040.11.0	0.1	100 106 99
ANAL	Lubbock, lexas 79424 806 NALYTICAL RESULTS FOR AVAJO REFINING TTENETION: Darrell Moore 01 B: Main rtesla. NM 88210	TOLP METAL	(bbm)	5.0 0.1 5.1	0.1	100 102 102
[RACE	Lubbock lexas 79424 ANALYTICAL RESUL NAVAJO REFINING Attention: Darr 501 E. Main Artesla. NM 882		Seg (pod)	1.0 -0.2 1.0	\$0.5 \$0.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1	100
	en Avenue		As (ppm)	5.0 <0.1 5.1	0.1	100 k 104 102
	ovu Aueraeen Avenue					
	04/01/94	td . NA		74439 Ontrol		racy racy
	April 06, 1994 Receiving Date: 04/01/94	Sample Type: Solid Project No: NA Project Location: NA	Field Code	r20016 FFE #21 77.439 QC Quality Control	on Limit	* Precision * Extraction Accuracy * Instrument Accuracy
	April 0	Sample Project Project		T20016 OC	Detection Limit	* Precision * Extraction * Instrument

1-6-50

Director, Dr. Blair Leftwich

Since of Director, Dr. Bruce McDonell

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Sample Received by: WCD Sample				a a a a a a a a a a a a a a a a a a a
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ISIS, INC. 1236	r. yanides	72.5		
CEANAL MATICAL RESULT MAJO REFINITE MAJO REFINIT	REACTIVITY Sulfided	25.0		
MALINSIS I BOOK				EELLD
Sond Abbeides	(01/94 NA	That Field Code That Free #21 Frooting the Free Free Control OC 200	Precision Accuracy Extraction Accuracy Finatrument Accuracy	METHODS: EPA SW 846-2-1-3-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-1-2-1-2-1-1-2-
	April 06, 1994 04/01/94 April 06, Date: 04/01/94 Receiving Date: Solid Sample Type: NA Project Location: NA Project Location:	The Field Code The Free #21 Front Control OC # Free #21 Control	Precision Extraction Filmstrument	· sqoman
	Received Samp	4 120		TOTAL P.O



State of New Mexico ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT Santa Fe, New Mexico 87505

STATE OF NEW MEXICO OIL CONSERVATION OIVISION

MEMORANDUM OF MEETING OR CONVERSATION

Telephone Personal	Time 1445		Date	8/24/94				
Originating Party	<u>, </u>		01	ther Parties				
Derrell Moore - Navijo 1	Petinery	Bill	Obon	- Envir Byen				
Subject								
Tank 835 Hydrotes	+ Wischer	38.						
Discussion			,					
Novaja regusting versel of hydrotest water scound water Anal	of hydrotest water from trade 835. Water used was fresh							
OCD on 8/22/94.	/	7						
								
Conclusions or Agreements		^ /		. ()				
I save verbal approva	with the	Pollowin	4 (19	nditions				
1) water be applied	such that	pondin	dse	s not occur				
2) vater be applied	such that		s ho	runold into				
a water way	at 11.5.			\sim				
Distribution Navajo file Darrell Moore - Nava	Sto	gned /	ill (Deon				
Darrell Moore - Nova	12 Retinery	/ A.)						



REFINING COMPANY

62905278 FAX (505) 746-6410 ACCTG (505) 746-6155 EXEC (505) 748-9077 ENGR (505) 746-4438 P / L

EASYLINK

501 EAST MAIN STREET © P. O. BOX 159 ARTESIA, NEW MEXICO 88211-0159 February 9, 1994

Mr. Bill Olsen Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87502

RE:

UST Discovered on Property Acquired by Navajo

Dear Bill:

Navajo Refining acquired a piece of property located within the refining area from Mr. J. N. Hightower in 1988. This property had been a farm equipment maintenance facility, which Navajo converted into a welder-pipefitter shop. While excavating around the building on February 3, 1994, Navajo discovered a buried tank (UST). When contacted, Mr. Hightower informed us that he had forgotten about the UST, but that years ago the tank had been used to store gasoline. The tank is a small 500 gallon tank, which Navajo discovered had many holes in it.

Upon discovery of the tank, Navajo contacted the UST Bureau at NMED. NMED sent Ms. Teresa McMillan from Roswell to inspect the site and witness the removal of the tank. A copy of her inspection report is enclosed. Navajo's Safety Department inspected the tank prior to removal and determined it to be empty and vapor free. Following removal, Ms. McMillan documented the hoses in the tank and found indications of a prior release of product from the tank. Navajo collected a sample of soil from the 1 to 1.5 foot level, beneath the tank and in the area impacted by the release. A copy of the analyses is attached, indicating that there is BTEX and TPH present, but at very low concentrations perhaps indicative of the age and magnitude of the release.

Fortunately, this tank was located approximately 100 foot upgradient from one of Navajo's oil recovery wells, which has been in place for the last 10 years. It appears likely that product lost from this tank was recovered several years ago by Navajo, as part of a much greater effort to remediate product lost by the refinery. Once the tank was removed to Navajo's bone yard, the soil beneath the tank that showed signs of hydrocarbon release was removed to Navajo's truck bypass landfarm. Navajo believes that the actions taken to date have successfully resolved the discovery of this UST. The tank itself will remain in Navajo's bone yard until Navajo schedules its next sale of scrap metal for re-smelting. Upon completion of the original work that lead to the discovery of the tank, the hole will be back-filled with clean fill.

If you have any questions or need additional information please contact me at 748-3311.

Sincerely,

David G. Griffin

Supt. Environmental Affairs & Quality Control

		LYNIN, INCA	
570: Aberteen Avenue	nue Lubbock, Texas 79424	806 • 794 • 1296	FAX 806 • 794 • 1258
	ANALYTICAL RESULTS FOR	SULTS FOR	
	NAVAJO REFINING	NG	
	Attention: Darrell Moore	arrell Moore	
February 07, 1994	501 E. Main		Analysis Date: 02/06/94
Receiving Date: 02/05/94	Artesia, NM	88210	Sampling Date: 02/04/94
Sample Type: Soil			Sample Condition: Intact & Cool
Project No: NA			Sample Received by: McD
Project Location: NA			Project Name: NA
			BIHIL- M.P.O TOTAL
		amount to an amount of a comme	vand and too andened a

						KTHYL-	M, P, O	TOLE
		TRPHC	MTBE	BENZENB	TOLUENE	BENZENE	XYLENB	BTEX
TAF	FIELD CODE	(qdd)	(qdd)	(qđđ)	(qdd)	(qdd)	(qdd)	(qdd)
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DØ.	Quality Control	164,457	208	204	203	201	. 601	
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Detection Limit	lit	2,000	Ħ	eri	Ħ	H	r!	•
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& Precision		16	100	. 93	66	109	. 112	
% Extraction Accuracy	Accuracy	102	104	86	66	£6	90	
% Instrument Accuracy	Accuracy	100	104	102	101	100	.100	
•		.,•			•			

METHODS: EPA SW 846-8020; EPA 418.1.

Sample Spiked with 327,760 ppb TRPHC and Blank Spiked with 163,880 ppb TRPHC. Sample and Blank Spiked with 200 ppb RACH VOLATILE ORGANICS. TRPEC SPIKE AND QC: BTEX SPIKE AND OC:

Blair Leftwich Director, Dr. Bruce McDonell Director, Dr.

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Lubbock, Texas 79424 Fax (806) 794 1298	İ				SAMPLING							\dashv	-	1,	:		-	2		100 m
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T Marie		Company Name	Project #:	Project Location:	3.4	LAB#					総合	色		8		* 1. * 1.		Retinguished by: Dull Mage	Relinguished by:	Relinquished by:
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INITIAL INCIDENT REPORT FORM District # Field Strice CONTACT INFORMATION rey are handling Caller: McMillan Phone: (Facility Name: Wolden 2 Pipatter County Address East 544 (PUT CHECK MARK IN FRONT OF PRINCIPLE CONTACT IF ONE IS DESIGNATED) X Facility Owner J N. Hantourn Phone Address 908 South MM 88911) ning CoPhone -Facility Operator DISCHARGE INFORMATION (check one) Suspected Release Confirmed release Cause of Discharge holes me in tank Date/Time of discharge unk Duration wolume lost unk Circle one; Unleaded gasoline Regular gasoline Waste Oil Other rank Has further discharge been prevented? If so, describe yes Romaind Have fire authorities been notified? If so, give name/phone wo Has P/I inspector informed RP of immediate responsibilities? Are highly contaminated soils present? Describe Removal NV) HYDROGEOLOGIC INFORMATION : 5-6++ Depth to water $_{-}$ \gamma Direction of GW flow Surface water endangered NO POSSIBLE IMPACTS FROM DISCHARGE $_{-}$ Soil types $\underline{\mathcal{C}}$ Well locations, depths, types _____ Utility Corridors Vapors in Homes, buildings ; FEB 1 1 1994 Other OIL CONSERVATION DIV. SANTA FE Call received by **************** Assignment Date Phone #

Revised 1/9/92

TANK CLOSURE WORKSHEET

Tank Owner J. N. Heat Town Phone
Address 9128 South 5th Anteria DM 88210
Contractor Name Navayo Rolining Phone Address Po Box 159 Andress Din 87210 Contractor Name Phone Address
Tank Closure Date 2-4-9-4 *********************************
I. Tank Closure Initial Procedures (Check measures complied with): Obtain recommended safety equipment for all personnel Contact Fire Marshall or other fire officials Bond or ground equipment Drain product from piping and tank Tank Was empty
How did you assess site for leakage? Sampled Salvage Picks in Closure report kept at NOTE: Immediately report any evidence of leakage to NMED at 827-0188.
I hereby state that the above information is correct Signature of owner or contractor performing work ***********************************
FOR NMED USE ONLY Notificaton Received Approved By Inspection Date Inspector



State of New Mexico

SECRETARY

RON CURRY DEPUTY SECRETARY

ENVIRONMENT DEPARTMENT

BRUCE KING GOVERNOR Date:

Owner/Operator Name, Address: Nawa

Inspection by the undersigned has confirmed that a petroleum hydrocarbon release has occurred from the UST System. As owner or operator, you are responsible to take certain steps to investigate and correct this release as outlined in the UST Regulations, Parts XII and XIII.

First Step

Upon confirmation or identification of a release involving a petroleum UST system, the owner and operator of the UST system shall:

- notify the UST Bureau within 24 hours by calling (505) 827-2629;
- b. notify local fire authorities, when available, and;
- immediately prevent any further release from the UST system by whatever means necessary, including removing product from the UST system, or any part of the UST system which is known to leak or is suspected of leaking. If necessary, the UST system should be removed from service.

Note: At this point it is advisable to seek the assistance of an environmental consultant that is familiar with the requirements of the UST Regulations. Environmental consulting firms are listed in the phone book under "Environmental Engineering", or "Geologists".

Second Step

Make a verbal report within 72 hours after discovery of the release by calling (505) 827-2629 with the following information:

- list of any private water supplies within a 1000 foot radius of your facility, any public water supplies within a one mile radius, any surface water courses within 500 feet and whether these water sources have been impacted. If any are contaminated, you may be responsible for advising consumers and providing them with safe drinking water; Note: Water supply information is available at the State Engineer's Office listed in the phone book or the local water utility authority.
- b. determination of any vapor hazards in buildings, utility corridors, or other surface or subsurface structures on or adjacent to the release site. If potentially harmful or explosive levels of vapors are discovered, you may have to provide a venting system or evacuation.

Third Step

Submit a written report within 7 days after discovery of the release to the address below with the following:

- a. the information about private and public water supplies discovered in the first step above;
- b. well logs, construction and location information for any on-site wells;
- c. information about any known or suspected water supply impacts and any actions taken to abate such impacts;
- d. information, including test results, about vapors detected in the vicinity of the site. If potentially explosive or harmful vapors were detected, information about actions taken to abate the vapors and any plans for further actions;
- e. information about other fire and safety hazards and actions taken to abate such hazards, and;
- f. information about current and past ownership of the UST system, substance(s) stored in the system, and the property on which the UST system is located.

By the time you have completed the above requirements you should have received a letter that will further instruct you as to specific requirements from the New Mexico Environment Department representative assigned to this case. Please note that it is in your best interest to initiate all required investigations and submit reports on these investigations in a timely manner pursuant to the UST Regulations. In so doing you will avoid the possibility of a cost recovery action by NMED against you if and when the Groundwater Protection Act (GWPA) Program allocates state funds for cleanup of your site. It should be further noted that you are designated to comply with the UST Regulations regardless of the receipt of correspondence from the Department.

If you have any questions about your responsibilities please contact the UST Bureau at (505) 827-2629.

Inspector, Prevention/Inspection Program:

Owner/Operator(eircle one)signature:

Your signature is an acknowledgment that you received this letter, not an admission that a petroleum hydrocarbon release occurred.

Mail correspondence to: New Mexico Environment Department

Underground Storage Tank Bureau Harold Runnels Building

1190 St. Francis Dr./P.O. Box 26110

Santa Fe, New Mexico 87502



NM Environment Department Underground Storage Tank Bureau Prevention/Inspection Section P.O. Box 26110

Santa Fe, New Mexico 87502-6



Page 1 of two pages

	(505) 82	7-0216	lu n					
DATE	4-94	1	CASE NUMBER	2005		OPENING CONFERE	ENCE TIME - 35 ar	
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Facility Name				<u></u>	Facility No.		Phone No.	
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Owner Name	~ A1	11:-1	i		Owner No.		Phone No.	
Address	80 IV	- HIGO	to we	·			ZIP Code	
908	C Ž	5th		Arte	sia	m	780	
3. QQQ	· · · · · · · · · · · · ·	\overline{Q}	. (•		10-1-	Phone No.	
Address	20 10	1010010	a co.				ZIP Code	
60 B	0x 15	<u> </u>		1/2	Installer No.	MU	880	10
Contractor Name 4.				·	installer No.		Phone No.	
Address						· · · · · · · · · · · · · · · · · · ·	ZIP Code	
								
TANK NO.	SIZE	CONTENTS	INSTALLATION DATE	TANK CONSTRUCTION	PIPING CONSTRUCTION	TANK RELEASE DETECTION	PIPING RELEASE DETECTION	TANK Status
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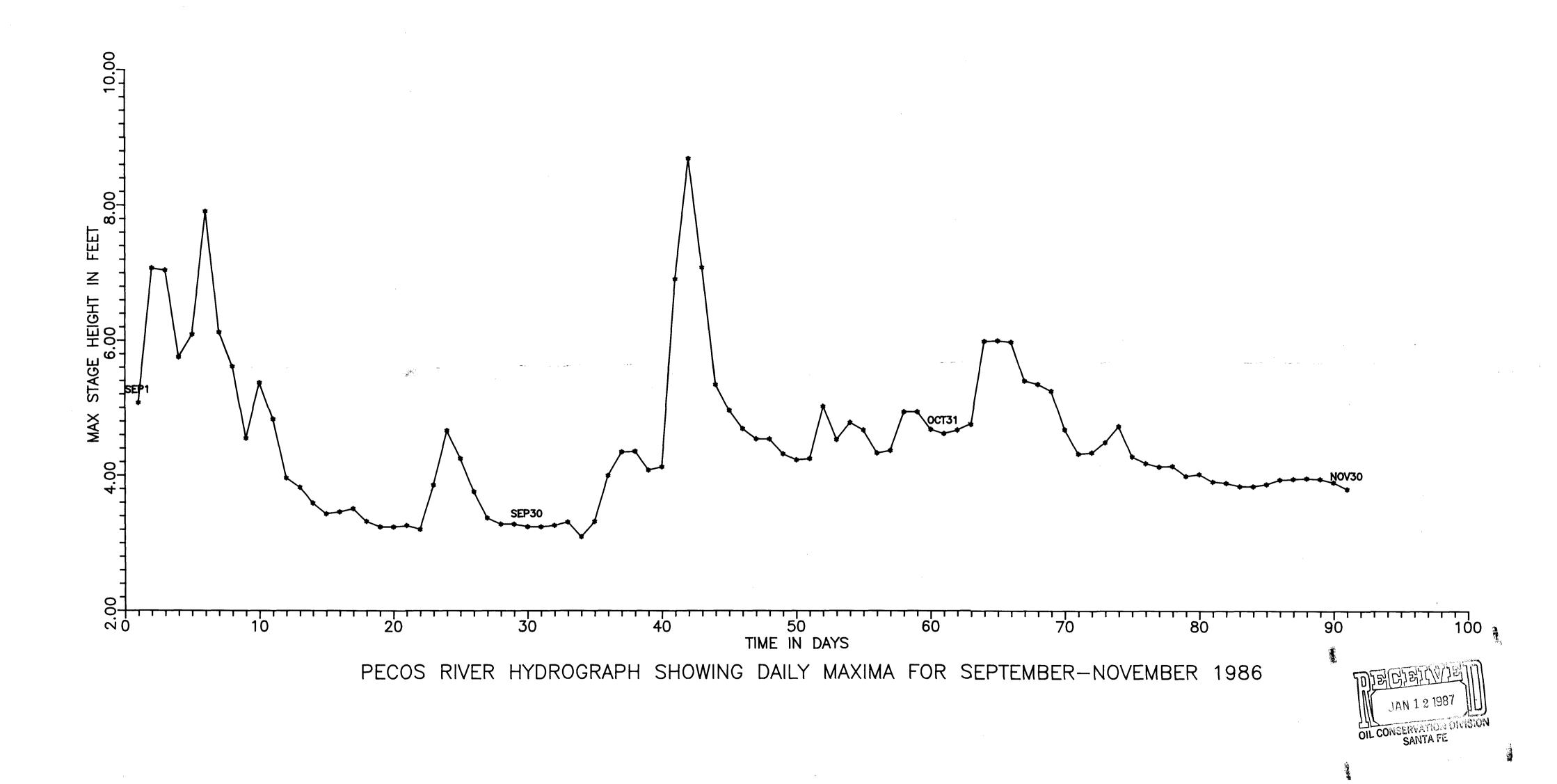
		-		_	كنسوسي		
, •			Yes	No	Unk.	N/A	
1.	All applicable tanks on site are registered.	۱. ا		X			
2.	Proper notification was made for the following:	2.					•
	a. Closure wave 30 day notice).	X			Ø	
	b. Installation	2				X	
	c. Modification	2				X	
	d. Repair	1.				X	
(3,)	Tanks closed properly.	3.					
4.	Tanks installed properly.	<u>.</u>				\vee	
_5.	Tanks repaired/modified properly.	<u>.</u>				×	
6.	Release detection — tanks.	<u>i</u>			X		
<u>7.</u>	Release detection — piping. Six ctar	<u>, </u>			X		
_8.	Record keeping:	3.					1
	a. Cathodic protection monitoring.	1.				1	
	b. Impressed current monitoring.	2				X	
	c. Tank tightness test.				1		
	d. Line tightness test. Suction of	<u>.</u>			<u> </u>	,	
	e. Line leak detector test. Suction	2.			Ø	X	
	f. Release detection performance claims, tests.	f.			X		
	g. Release detection sampling/testing results.	<u>.</u>			X		
	h. Inventory records.	<u>.</u>			X		
	i. Permanent closure records.	i.			ļ.,	×	
	j. Proof of financial responsibility.	į.	√		X		
9.	Evidence of release/spill.).					
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A	resolves stored in the tank. Tank	ΔC	$rac{1}{2}$	Mu	$\Delta \Omega$	مم	۵۰
5	incoran holes on ends & sides		 .				
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Con	poliance Officer's Signature	38/	RIGIDAL	re //	. M	ં ⊅	ate / / /

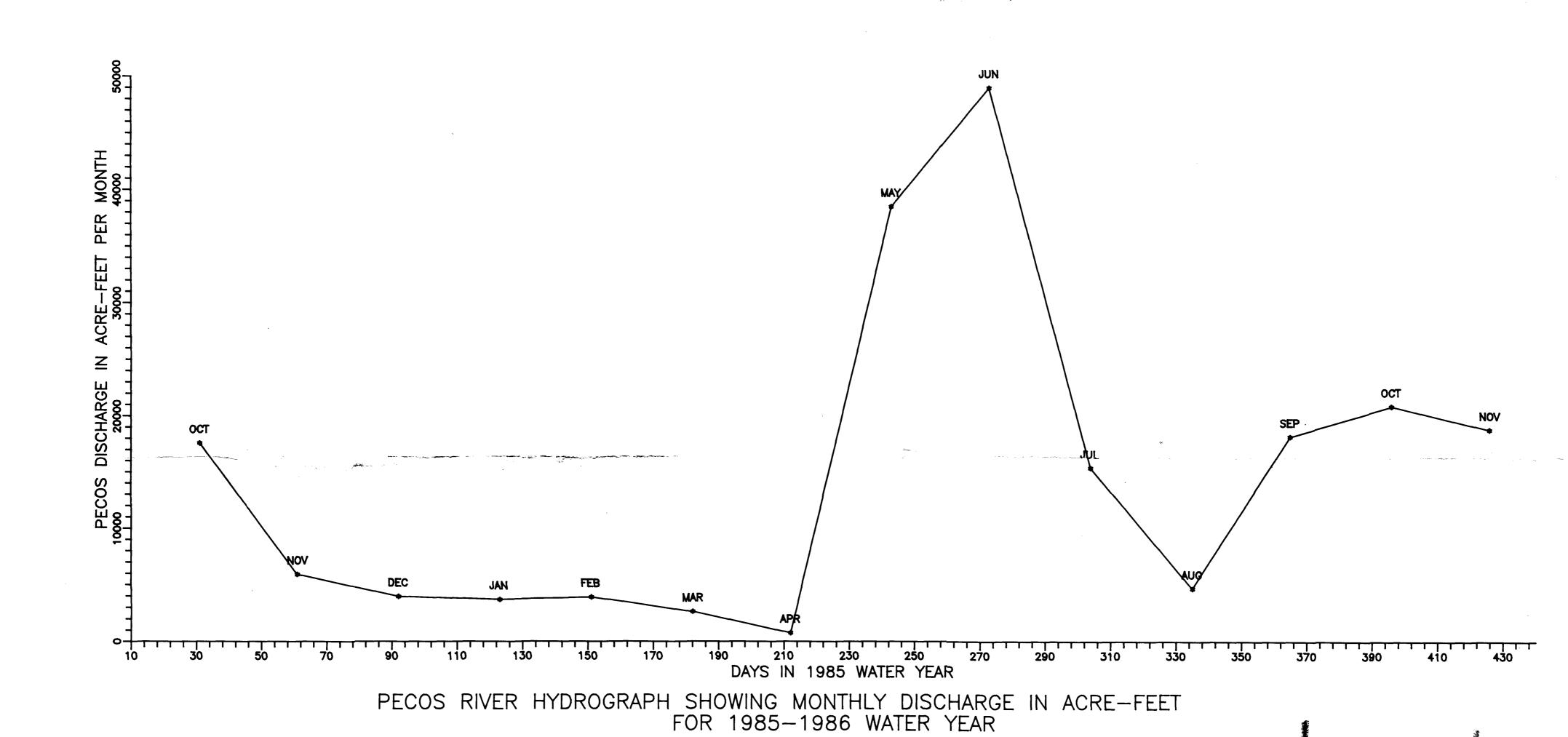
DISTRIBUTION: WHITE - Owner

CANARY - Operator

On/site Representative's Signature Date

GOLDENHOD - Compliance Officer

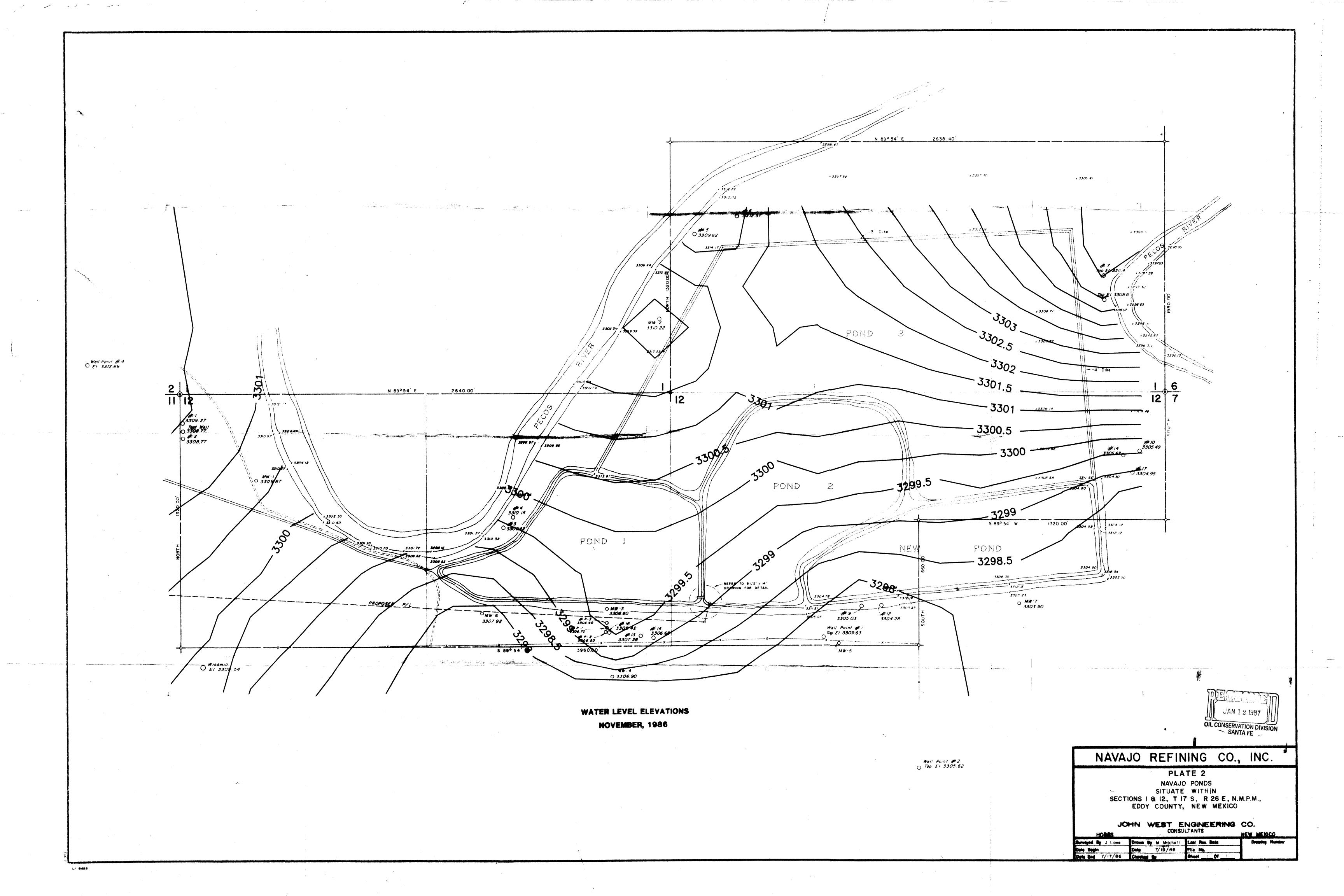


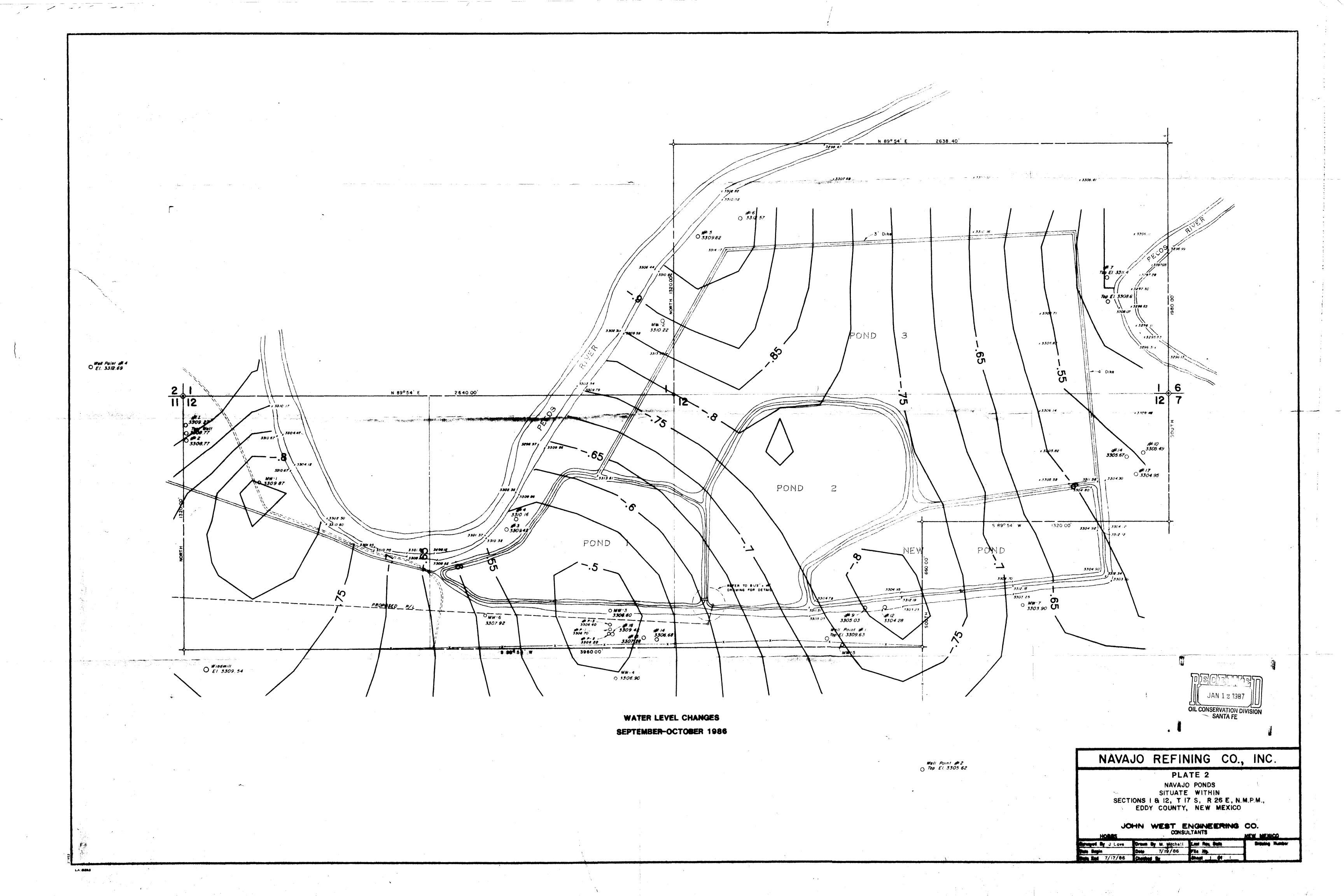


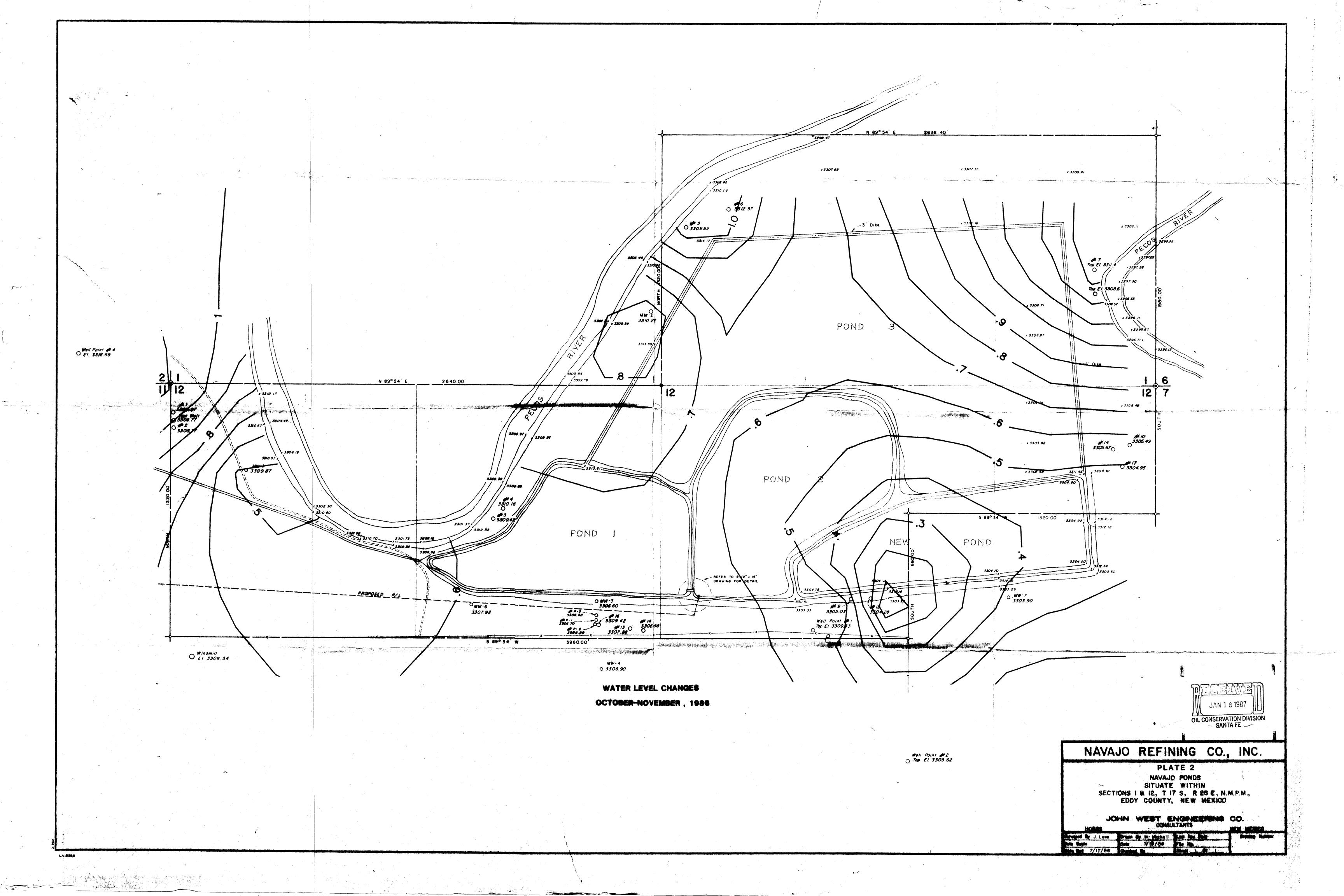
Decision in

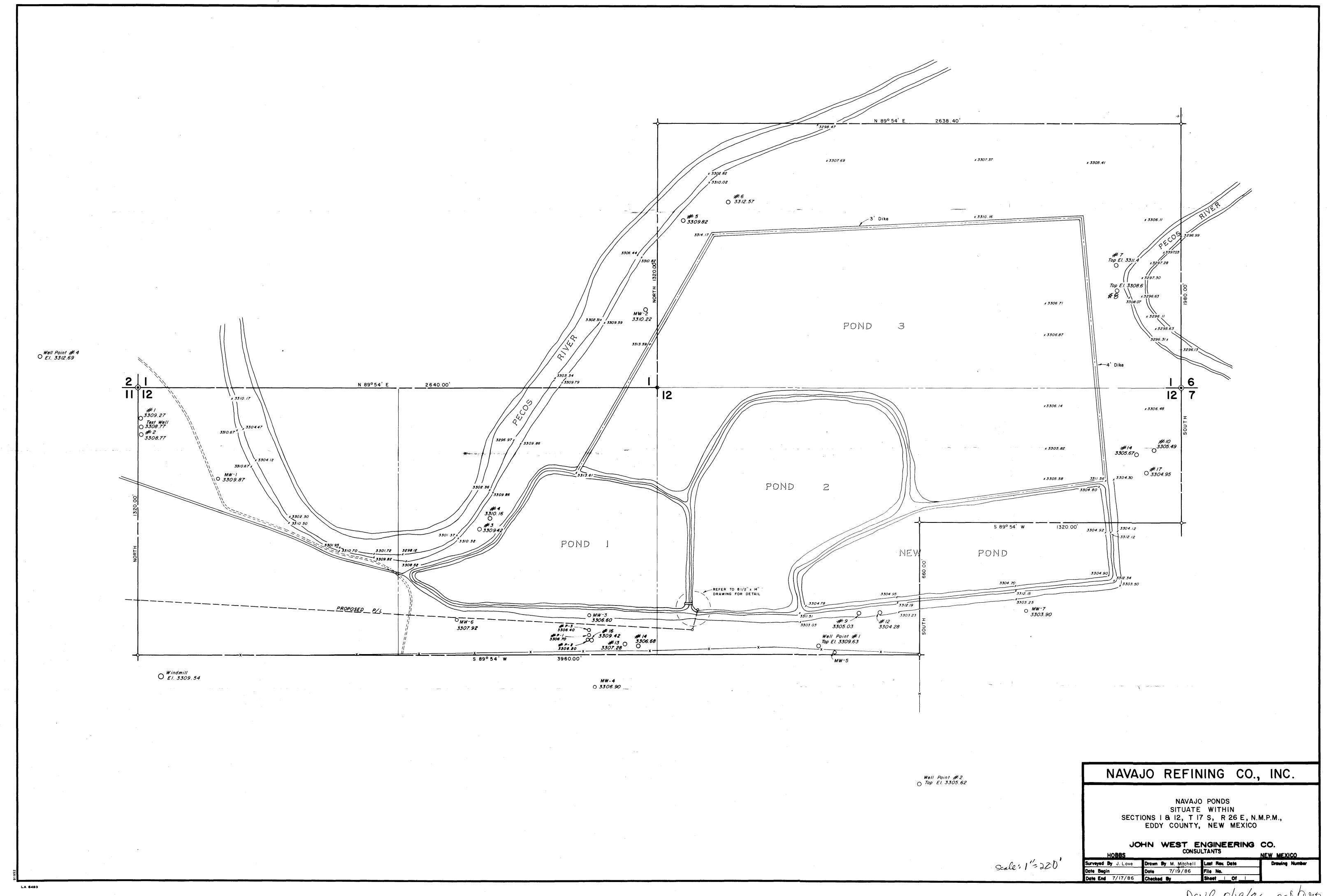
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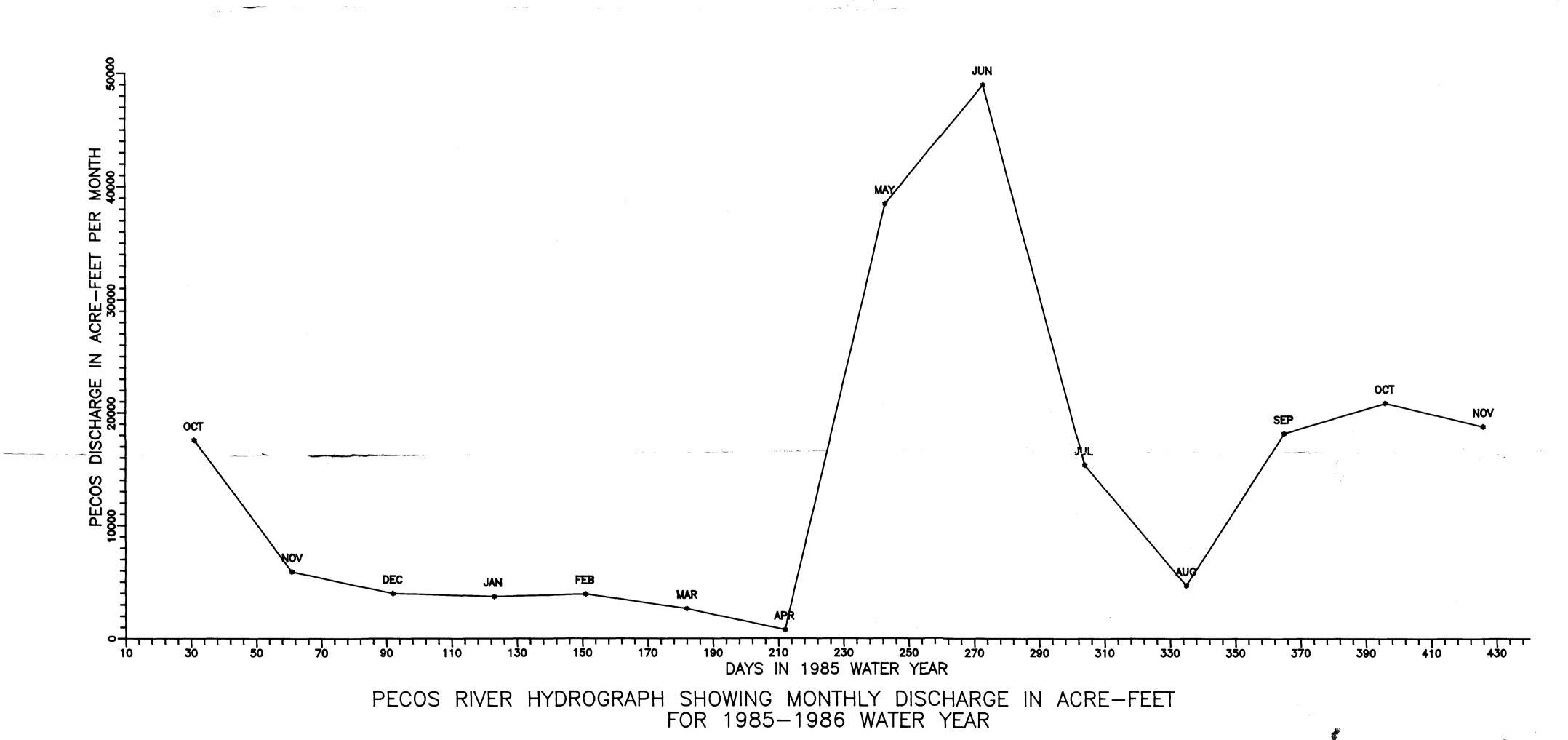
OIL CONSERVATION DIVISION SANTA FE





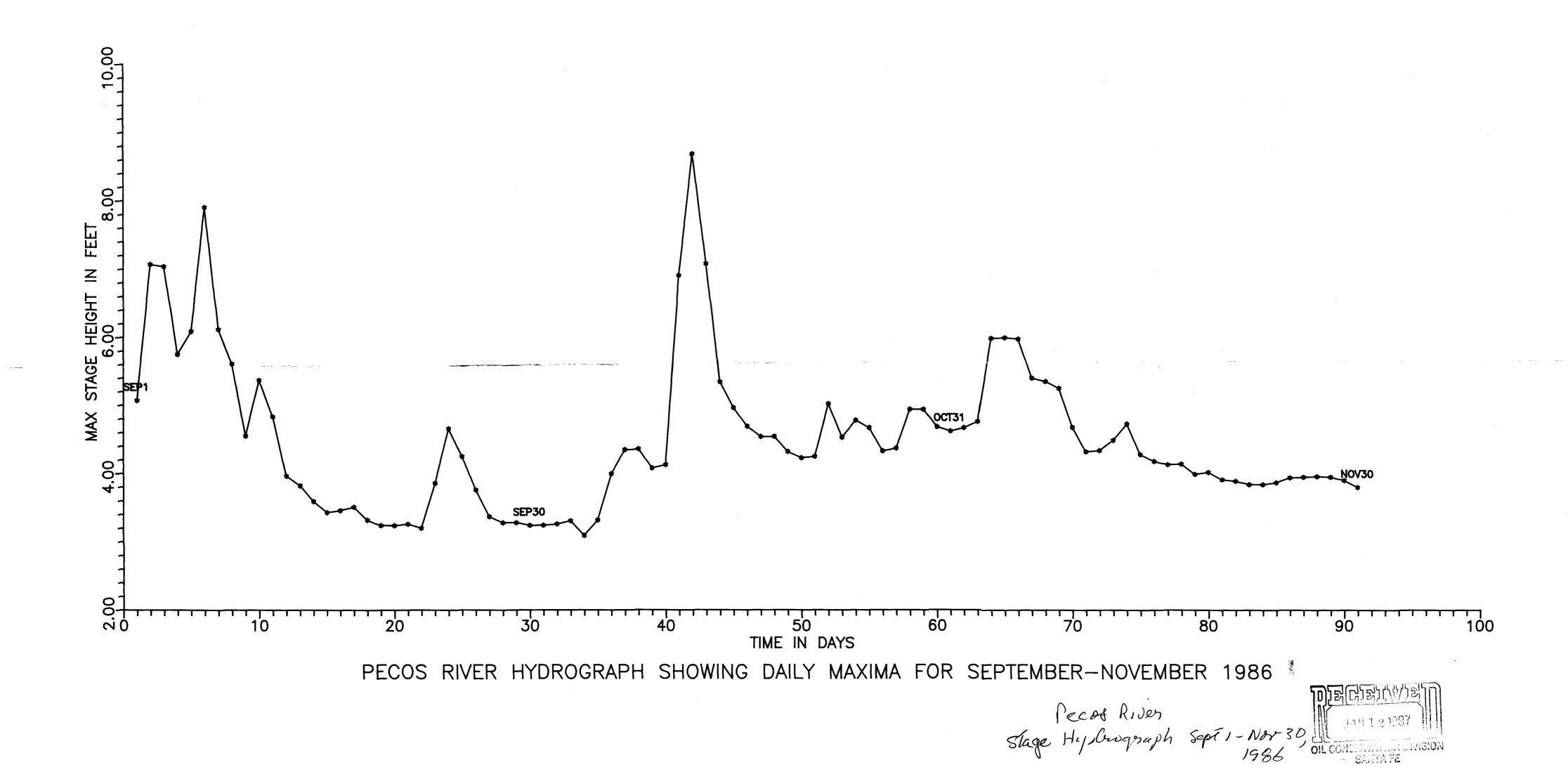


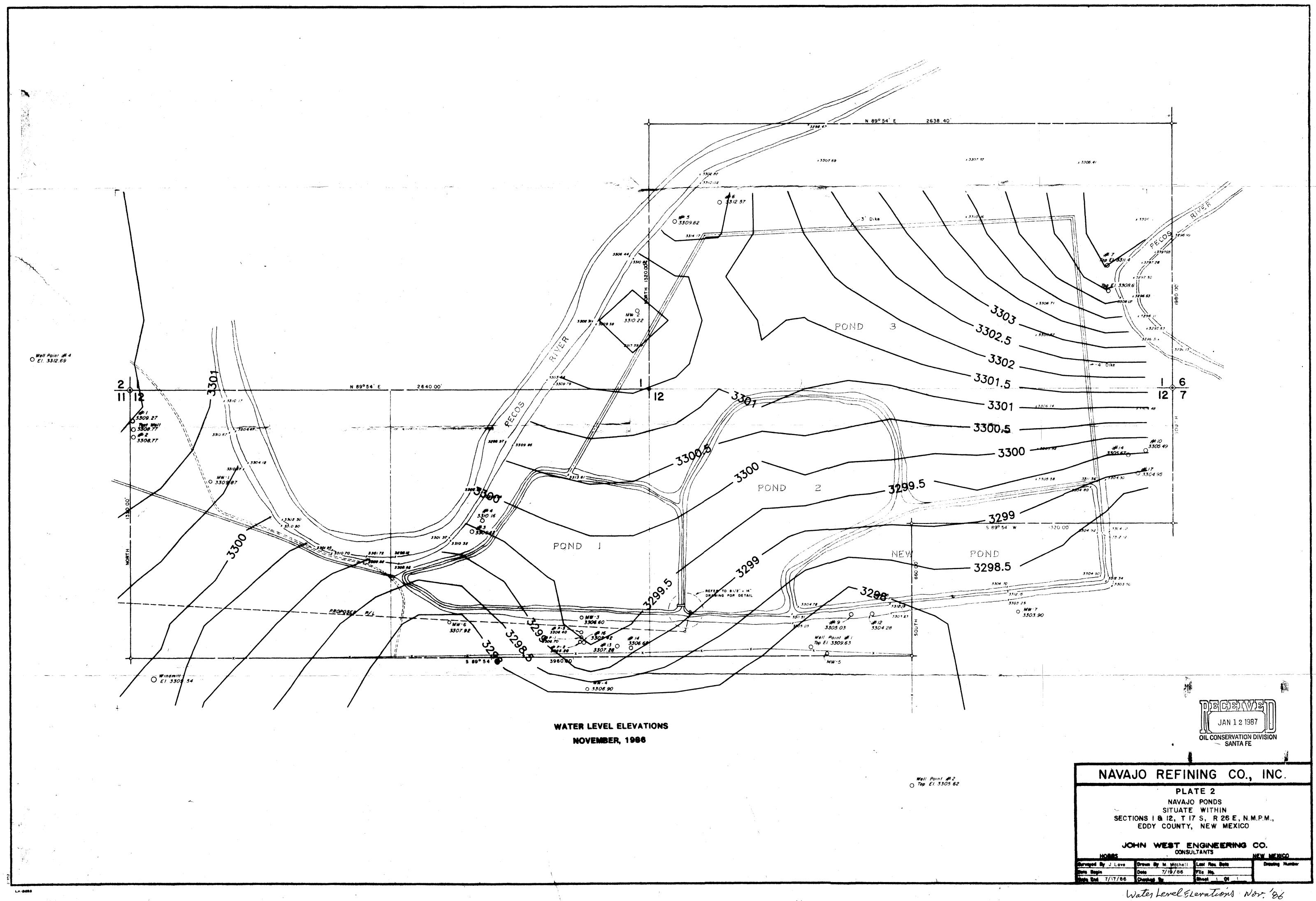


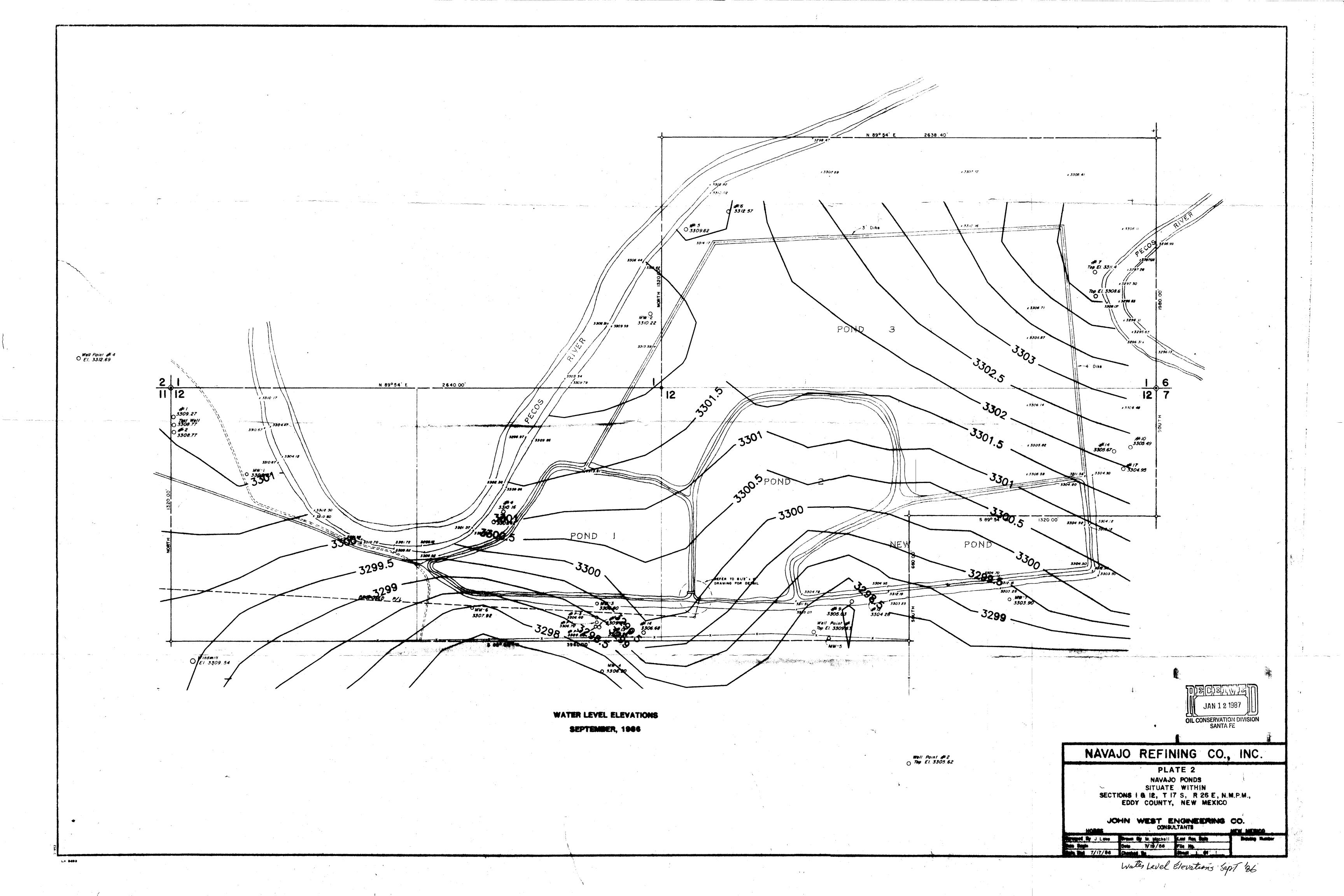


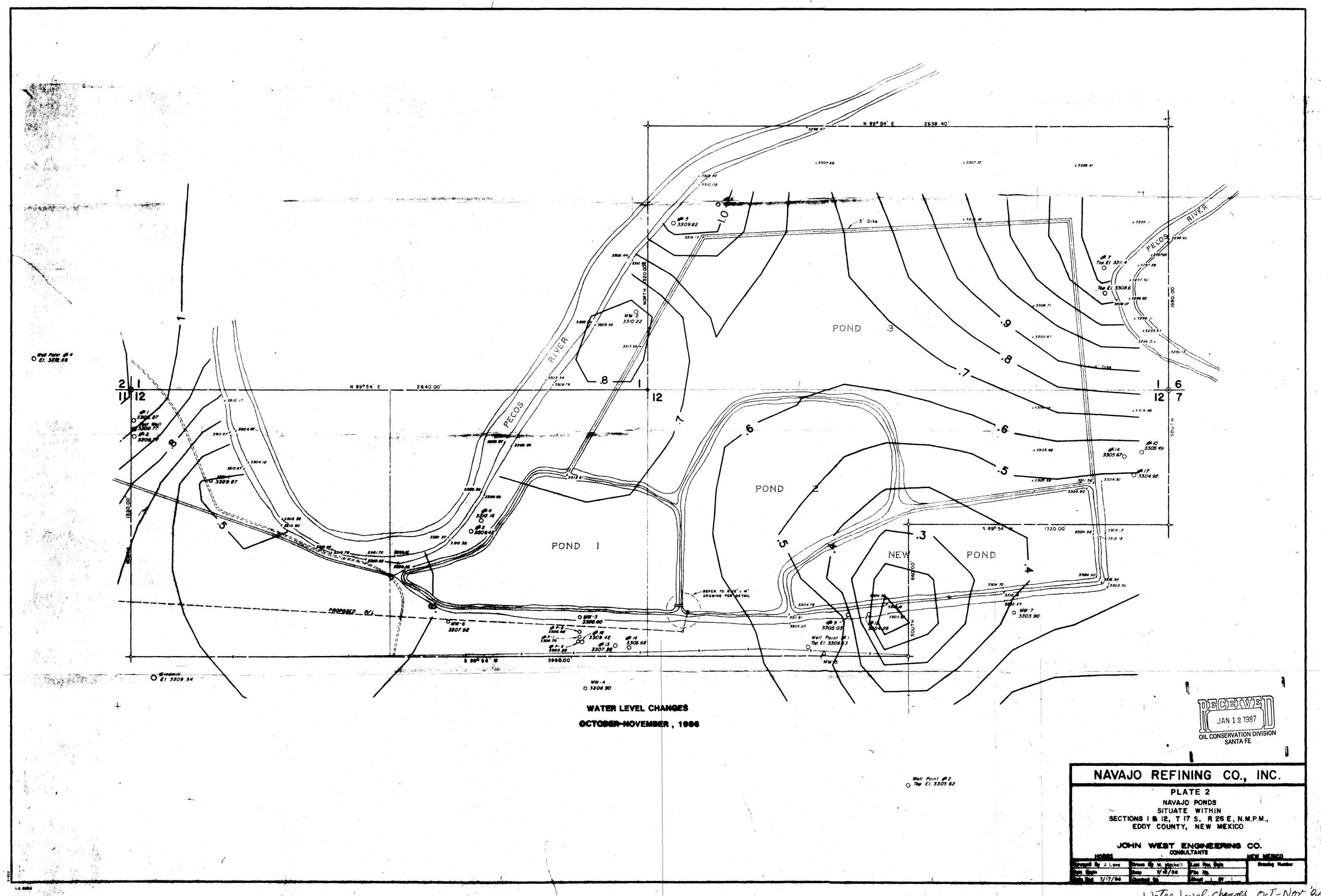
Pecos River Discharge Hydrograph Wateryan 85-86

OIL CONSERVATION DIVISION SANTA FE









Water Level Changes Oct-Nov. 86

