NM1 - 4

MONITORING REPORTS

YEAR(S):
1990-1984

ANA-LAB CORP.
THE COMPLETE SERVICE LAB

2600 DUDLEY ROAD — KILGORE, TEXAS 75662 — 214/984-0551

Analytical Chemistry • Waste Treatment & Disposal • Equipment Sales

10/09/90

Environmental Bureau NM Oil D.
PO Box 2088
Santa Fe, NM 87504

Sample Identification: #9008011125 MH-12
Collected By: Anderson/Olson
Date & Time Taken: 08/01/90 1125
On Site Data: Loco Hills Disposal
Other:

Water from Monitor Well MH-12. App. 6 ft. H2O on Hole Bailed 6 Gal. before sampling. Well went dry. Did not recover. Clean water.
pH 7 Water Temp. 25oC Cond. 16000

Lab Sample Number: 170086 **Received:** 08/03/90 Client: SNM1

PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
Alkalinity	95	mg/l	0930	08/14/90	EPA Method 310.1	DG
Cation-Anion Balance	365.77/ 365.86	meq/meq	1600	08/21/90		NT
Carbonate	<.05	mg/l	1200	08/20/90	APHA Method 263	DG
Chloride	12000	mg/l	1030	08/14/90	EPA Method 325.3	SW
Specific Conductance	25,000	Micromhos	1600	08/07/90	EPA Method 120.1	GS
Bicarbonate	90	mg/l	1200	08/20/90	APHA Method 263	DG
Sulfate	1040	mg/l	1100	08/16/90	EPA Method 375.4	DG
Total Dissolved Solids	20,000 ***	mg/l	1100	10/09/90	EPA Method 160.1	WJP
pH	6.8	SU	1407	08/10/90	EPA Method 150.1	LW
Dissolved Calcium	3700	mg/l	1815	08/13/90	EPA Method 215.1	GK
Dissolved Iron	<.05	mg/l	2145	08/09/90	EPA Method 236.1	GK
Dissolved Potassium	30	mg/l	1500	08/13/90	EPA Method 258.1	CD
Dissolved Magnesium	1400	mg/l	1700	08/13/90	EPA Method 242.1	GK
Dissolved Sodium	1500	mg/l	2245	08/09/90	EPA Method 273.1	GK
Acrolein	<100	ug/l	1703	09/24/90	EPA Method 8240	PM

Continued

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Analytical Chemistry • Waste Treatment & Disposal • Equipment Sales

PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
Acrylonitrile	<100	ug/l	1703	09/24/90	EPA Method 8240	PM
Benzene	49	ug/l	1703	09/24/90	EPA Method 8240	PM
Bromoform	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Bromomethane	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
Carbon Tetrachloride	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Chlorobenzene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Chloroethane	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
2-Chloroethylvinyl ether	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
Chloroform	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Chloromethane	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
Dibromochloromethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Bromodichloromethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1-Dichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,2-Dichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1-Dichloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
trans-1,2-Dichloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,2-Dichloropropane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
cis-1,3-Dichloropropene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Ethyl benzene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Methylene Chloride	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1,2,2-Tetrachloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM

Continued

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PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
Tetrachloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Toluene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1,1-Trichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1,2-Trichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Trichloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Vinyl Chloride	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
trans-1,3-Dichloropropene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Xylenes	<5	ug/l	1703	09/24/90	EPA Method 8240	PM

*** Calculated Value

Bill Peery

C. H. Whiteside, Ph.D., President

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2600 DUDLEY ROAD — KILGORE, TEXAS 75662 — 214/984-0551

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Ana-Lab Corporation Laboratory
Balance for Sample 170086 #9008011125 MH-12

Test	Name	Result (mg/l)	Cation (meq/l)	Anion (meq/l)
Cl-	Chloride	12000		338.40900
HCO3	Bicarbonate	90		1.47500
SO4	Sulfate	1040		25.98100
*CaD	Dissolved Calcium	3700	184.63100	
*FeD	Dissolved Iron	<.05	.00000	
*KD	Dissolved Potassium	30	.76700	
*MgD	Dissolved Magnesium	1400	115.13200	
*NaD	Dissolved Sodium	1500	65.24600	
			365.775	365.865

Cation/Anion % Difference is -0.01
Calculated TDS is 19760.00
Analyzed TDS is 26200.00
% Difference is 14.01

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09/27/90 90 OCT 4 AM 9 19

Environmental Bureau NM Oil D.
PO Box 2088
Santa Fe, NM 87504

RECEIVED
OCT - 4 1990
SANTA FE

Sample Identification: #9008011125 MH-12
Collected By: Anderson/Olson
Date & Time Taken: 08/01/90 1125
On Site Data: Loco Hills Disposal
Other:

Water from Monitor Well MH-12. App. 6 ft. H2O on Hole Bailed 6 Gal. before sampling. Well went dry. Did not recover. Clean water.
pH 7 Water Temp. 25oC Cond. 16000

Lab Sample Number: 170086 **Received:** 08/03/90 Client: SNM1

PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
Alkalinity	95	mg/l	0930	08/14/90	EPA Method 310.1	DG
Cation-Anion Balance	365.77/ 365.86	meq/meq	1600	08/21/90		NT
Carbonate	<.05	mg/l	1200	08/20/90	APHA Method 263	DG
Chloride	12000	mg/l	1030	08/14/90	EPA Method 325.3	SW
Specific Conductance	25,000	Micromhos	1600	08/07/90	EPA Method 120.1	GS
Bicarbonate	90	mg/l	1200	08/20/90	APHA Method 263	DG
Sulfate	1040	mg/l	1100	08/16/90	EPA Method 375.4	DG
Total Dissolved Solids	6200	mg/l	1820	08/17/90	EPA Method 160.1	GS
pH	6.8	SU	1407	08/10/90	EPA Method 150.1	LW
Dissolved Calcium	3700	mg/l	1815	08/13/90	EPA Method 215.1	GK
Dissolved Iron	<.05	mg/l	2145	08/09/90	EPA Method 236.1	GK
Dissolved Potassium	30	mg/l	1500	08/13/90	EPA Method 258.1	CD
Dissolved Magnesium	1400	mg/l	1700	08/13/90	EPA Method 242.1	GK
Dissolved Sodium	1500	mg/l	2245	08/09/90	EPA Method 273.1	GK

Continued

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PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
Acrolein	<100	ug/l	1703	09/24/90	EPA Method 8240	PM
Acrylonitrile	<100	ug/l	1703	09/24/90	EPA Method 8240	PM
Benzene	49	ug/l	1703	09/24/90	EPA Method 8240	PM
Bromoform	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Bromomethane	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
Carbon Tetrachloride	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Chlorobenzene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Chloroethane	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
2-Chloroethylvinyl ether	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
Chloroform	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Chloromethane	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
Dibromochloromethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Bromodichloromethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1-Dichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,2-Dichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1-Dichloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
trans-1,2-Dichloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,2-Dichloropropane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
cis-1,3-Dichloropropene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Ethyl benzene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Methylene Chloride	<5	ug/l	1703	09/24/90	EPA Method 8240	PM

Continued

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PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
1,1,2,2-Tetrachloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Tetrachloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Toluene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1,1-Trichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
1,1,2-Trichloroethane	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Trichloroethene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM
Vinyl Chloride	<10	ug/l	1703	09/24/90	EPA Method 8240	PM
trans-1,3-Dichloropropene	<5	ug/l	1703	09/24/90	EPA Method 8240	PM

Quality Assurance for the SET with Sample 170086

Sample #	Description	Result	Units	Dup/Std Value	Spk Conc.	Percent	Time	Date	By
				Alkalinity					
	Standard	110	mg/l	2358			0930	08/14/90	DG
				Chloride					
	Standard	72	mg/l	71		101	1030	08/14/90	SW
170373	Duplicate	27	mg/l	27		100	1030	08/14/90	SW
170373	Spike		mg/l		100	104	1030	08/14/90	SW
				Sulfate					
	Standard	95	mg/l	100		105	1100	08/16/90	DG
168771	Duplicate	240	mg/l	220		109	1100	08/16/90	DG
169932	Duplicate	12	mg/l	11		109	1100	08/16/90	DG
169932	Spike		mg/l		100	97	1100	08/16/90	DG
				Total Dissolved Solids					
	Standard	1120	mg/l	1000		111	1820	08/17/90	GS
169181	Duplicate	480	mg/l	490		102	1820	08/17/90	GS
				pH					
	Standard	Calibrate	SU	7.0			1407	08/10/90	LW
	Standard	Calibrate	SU	4.0			1407	08/10/90	LW
	Standard	6.0	SU	6.0		100	1407	08/10/90	LW
				Dissolved Calcium					
	Blank	.14	mg/l				1815	08/13/90	GK
	Blank	.12	mg/l				1815	08/13/90	GK
	Blank	.09	mg/l				1815	08/13/90	GK

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Quality Assurance for the SET with Sample 170086

Sample #	Description	Result	Units	Dup/Std Value	Spk Conc.	Percent	Time	Date	By
	Standard	.48	mg/l	.50		104	1815	08/13/90	GK
169183	Duplicate	15	mg/l	15		100	1815	08/13/90	GK
170077	Duplicate	1.4	mg/l	1.5		107	1815	08/13/90	GK
170088	Duplicate	400	mg/l	380		105	1815	08/13/90	GK
170077	Spike		mg/l		.80	94	1815	08/13/90	GK
				Dissolved Iron					
	Standard	1.8	mg/l	1.7		106	2145	08/09/90	GK
170088	Duplicate	<.05	mg/l	<.05		100	2145	08/09/90	GK
170088	Spike		mg/l		.98	104	2145	08/09/90	GK
				Dissolved Potassium					
	Blank	.09	mg/l				1500	08/13/90	CD
	Blank	.10	mg/l				1500	08/13/90	CD
	Standard	.99	mg/l	1.00		101	1500	08/13/90	CD
170088	Duplicate	6.2	mg/l	6.1		102	1500	08/13/90	CD
				Dissolved Magnesium					
	Blank	.043	mg/l				1700	08/13/90	GK
	Blank	.034	mg/l				1700	08/13/90	GK
	Blank	.038	mg/l				1700	08/13/90	GK
	Standard	.194	mg/l	.200		103	1700	08/13/90	GK
169183	Duplicate	2.2	mg/l	2.3		104	1700	08/13/90	GK
170077	Duplicate	1.2	mg/l	1.2		100	1700	08/13/90	GK
170088	Duplicate	193	mg/l	188		103	1700	08/13/90	GK
170088	Spike		mg/l		.100	94	1700	08/13/90	GK
				Dissolved Sodium					
	Blank	<4	mg/l				2245	08/09/90	GK
	Standard	10	mg/l	10		100	2245	08/09/90	GK
170088	Duplicate	1000	mg/l	1000		100	2245	08/09/90	GK
170088	Spike		mg/l		10	100	2245	08/09/90	GK

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08/27/90

Environmental Bureau NM Oil D.
PO Box 2088
Santa Fe, NM 87504

Sample Identification: #9007311400 Skim Pond
Collected By: Anderson/Olson
Date & Time Taken: 07/31/90 1400
On Site Data: Loco Hills Treating Plant
Other:
Sludge sample from North Separator Pit. Oily Sludge (Parafins)

Lab Sample Number: 170085 **Received:** 08/03/90 Client: SNM1

PARAMETER	RESULTS	UNITS	TIME	DATE	METHOD	BY
Benzene	104,000	ppb	0800	08/22/90	EPA Method 8020	KB
THE FOLLOWING ANALYSES WERE PERFORMED ON THE EXTRACT OBTAINED USING THE NEW TCLP EP TOXICITY EXTRACTION PROCEDURE.						
Silver	<.03	ppm	1415	08/14/90	EPA Method 7760	CD
Arsenic	<.005	ppm	0015	08/14/90	EPA Method 7060	GK
Barium	<.5	ppm	2300	08/13/90	EPA Method 7080	GK
Cadmium	.01	ppm	1300	08/17/90	EPA Method 7130	CD
Chromium	<.05	ppm	1100	08/16/90	EPA Method 7190	CD
Mercury	<.001	ppm	1800	08/23/90	EPA Method 7470	GK
Lead	<.2	ppm	1400	08/16/90	EPA Method 7420	CD
Selenium	<.005	ppm	0730	08/14/90	EPA Method 7740	GDG

Quality Assurance for the SET with Sample 170085

Sample #	Description	Result	Units	Dup/Std Value	Spk Conc.	Percent	Time	Date	By
				Benzene					
	Blank	<5	ppb				0800	08/22/90	KB
	Standard	58	ppb	50		115	0800	08/22/90	KB
170859	Duplicate	<5	ppb	<5		100	0800	08/22/90	KB
170859	Spike		ppb		50	112	0800	08/22/90	KB
				Silver					

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Quality Assurance for the SET with Sample 170085

Sample #	Description	Result	Units	Dup/Std Value	Spk Conc.	Percent	Time	Date	By
	Blank	(.03	ppm				1415	08/14/90	CD
	Standard	.19	ppm	.20		105	1415	08/14/90	CD
	Standard	.54	ppm	.50		108	1415	08/14/90	CD
170085	Duplicate	(.03	ppm	(.03		100	1415	08/14/90	CD
				Arsenic					
	Blank	(.005	ppm				0015	08/14/90	GK
	Standard	.091	ppm	.100		109	0015	08/14/90	GK
170085	Duplicate	(.005	ppm	(.005		100	0015	08/14/90	GK
168970	Duplicate	(.005	mg/l	(.005		100	0015	08/14/90	GK
170085	Spike		ppm		.100	99	0015	08/14/90	GK
				Barium					
	Blank	(.5	ppm				2300	08/13/90	GK
	Standard	1.0	ppm	1.0		100	2300	08/13/90	GK
170085	Duplicate	(.5	ppm	(.5		100	2300	08/13/90	GK
170085	Spike		ppm		4.0	110	2300	08/13/90	GK
				Cadmium					
	Blank	(.01	mg/l				1300	08/17/90	CD
	Blank	(.01	mg/l				1300	08/17/90	CD
	Blank	(.01	mg/l				1300	08/17/90	CD
	Blank	.4	mg/l				1300	08/17/90	CD
	Blank	(.01	mg/l				1300	08/17/90	CD
	Blank	(.01	mg/l				1300	08/17/90	CD
	Standard	.10	mg/l	.10		100	1300	08/17/90	CD
	Standard	.44	mg/l	.44		100	1300	08/17/90	CD
	Standard	1.1	mg/l	1.0		110	1300	08/17/90	CD
170085	Duplicate	.01	ppm	.01		100	1300	08/17/90	CD
170331	Duplicate	22	ppm	22		100	1300	08/17/90	CD
170479	Duplicate	.01	ppm	.02		167	1300	08/17/90	CD
170554	Duplicate	.01	ppm	.01		100	1300	08/17/90	CD
170613	Duplicate	4.0	ppm	1.3		202	1300	08/17/90	CD
170480	Duplicate	.01	mg/l	.01		100	1300	08/17/90	CD
170613	Spike		ppm		.97	96	1300	08/17/90	CD
170480	Spike		mg/l		.40	90	1300	08/17/90	CD
170085	Spike		mg/l		.40	110	1300	08/17/90	CD
170479	Spike		mg/l		.40	99	1300	08/17/90	CD
170554	Spike		mg/l		.40	102	1300	08/17/90	CD
				Chromium					
	Blank	(.05	mg/l				1100	08/16/90	CD
	Blank	(.05	mg/l				1100	08/16/90	CD
	Blank	(.05	mg/l				1100	08/16/90	CD
	Standard	1.0	mg/l	1.0		100	1100	08/16/90	CD
	Standard	.53	mg/l	.50		106	1100	08/16/90	CD
170479	Duplicate	(.05	ppm	(.05		100	1100	08/16/90	CD

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2600 DUDLEY ROAD – KILGORE, TEXAS 75662 – 214/984-0551

Analytical Chemistry • Waste Treatment & Disposal • Equipment Sales

Quality Assurance for the SET with Sample 170085

Sample #	Description	Result	Units	Dup/Std Value	Spk Conc.	Percent	Time	Date	By
170480	Duplicate	(.05	ppm	(.05		100	1100	08/16/90	CD
170085	Duplicate	(.05	ppm	(.05		100	1100	08/16/90	CD
170085	Spike		mg/l		.80	101	1100	08/16/90	CD
170480	Spike		mg/l		.80	92	1100	08/16/90	CD
170479	Spike		mg/l		.80	104	1100	08/16/90	CD
				Mercury					
	Blank	.005	ppm				1800	08/23/90	GK
	Blank	.004	ppm				1800	08/23/90	GK
	Blank	.003	ppm				1800	08/23/90	GK
	Standard	.010	ppm	.010		100	1800	08/23/90	GK
	Standard	.004	ppm	.005		122	1800	08/23/90	GK
170085	Duplicate	(.001	ppm	(.001		100	1800	08/23/90	GK
170554	Duplicate	(.001	ppm	(.001		100	1800	08/23/90	GK
170480	Duplicate	(.05	mg/l	(.05		100	1800	08/23/90	GK
170085	Spike		ppm		.010	106	1800	08/23/90	GK
170554	Spike		mg/l		.010	84	1800	08/23/90	GK
				Lead					
	Blank	(.2	ppm				1400	08/16/90	CD
	Blank	(.2	ppm				1400	08/16/90	CD
	Standard	1.1	ppm	1.1		100	1400	08/16/90	CD
	Standard	2.1	ppm	2.0		105	1400	08/16/90	CD
170085	Duplicate	(.2	ppm	(.2		100	1400	08/16/90	CD
170479	Duplicate	(.2	ppm	(.2		100	1400	08/16/90	CD
170480	Duplicate	(.2	ppm	(.2		100	1400	08/16/90	CD
170085	Spike		ppm		2.0	106	1400	08/16/90	CD
170479	Spike		ppm		2.0	108	1400	08/16/90	CD
170480	Spike		ppm		2.0	104	1400	08/16/90	CD
				Selenium					
	Blank	(.005	ppm				0730	08/14/90	GDG
	Standard	.101	ppm	.100		101	0730	08/14/90	GDG
170085	Duplicate	(.005	ppm	(.005		100	0730	08/14/90	GDG
170085	Spike		ppm		.100	110	0730	08/14/90	GDG

C. H. Whiteside

C. H. Whiteside, Ph.D., President

Lab No. ACCU LABS 77-521.07-123

ORGANIC ANALYSIS REQUEST FORM

15

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Sample No. 8903310825
DATE REC. _____
PRIORITY _____
PHONE(S): 827-5812

COLLECTION CITY: Loco Hills ; COUNTY: Eddy

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 8 9 0 3 3 1 1 0 8 2 5

LOCATION CODE: (Township-Range-Section-Tracts) | | | + | | + | + | | | (10N06E24342)

SUBMITTER: David Boyer

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: _____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
- ☒ P-Ice Sample stored in an ice bath (Not Frozen).
- ☐ P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- ☒ P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-6 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triasines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA: ~50,000

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Loco Hills (oilfield waste disposal)
NE corner pit #1

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): David Boyer Method of Shipment to the Lab: Freight Express

CHAIN OF CUSTODY

I certify that this sample was transferred from DB to DM
at (location) ALR on 4/5/89-1225 and that
the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ OR Seals Intact: Yes ☒ No ☐
Signatures: Louise A Malone

For OCD use: Date owner notified: 6/19/89 Phone or Letter? Initials DEB

Accu-Labs Research, Inc.

Mr. David Boyer
NM Oil Conservation Division

RE: 9649-29859-20
Date Samples Rec'd: 4-5-89
P.O. No. 77-521.07-123

REPORT OF ANALYSIS

ALR Designation	9649-29859-20-13	9649-29859-20-14	9649-29859-20-15
Sponsor Designation	8903290910	8903311035	8903310825
	3-29-89	3-31-89	3-31-89
GC/MS VOLATILE ORGANICS, µg/L:			
Chloromethane	<2000 µg/kg	<100 µg/kg	<100
Bromomethane	<2000 µg/kg	<100 µg/kg	<100
Vinyl chloride	<2000 µg/kg	<100 µg/kg	<100
Chloroethane	<2000 µg/kg	<100 µg/kg	<100
Methylene chloride	<1000 µg/kg	<50 µg/kg	<50
1,1-Dichloroethene	<1000 µg/kg	<50 µg/kg	<50
1,1-Dichloroethane	<1000 µg/kg	<50 µg/kg	<50
Total 1,2-Dichloroethene	<1000 µg/kg	<50 µg/kg	<50
Chloroform	<1000 µg/kg	<50 µg/kg	<50
1,2-Dichloroethane	<1000 µg/kg	<50 µg/kg	<50
1,1,1-Trichloroethane	<1000 µg/kg	<50 µg/kg	<50
Carbon tetrachloride	<1000 µg/kg	<50 µg/kg	<50
Bromodichloromethane	<1000 µg/kg	<50 µg/kg	<50
1,2-Dichloropropane	<1000 µg/kg	<50 µg/kg	<50
c-1,3-Dichloropropene	<1000 µg/kg	<50 µg/kg	<50
Trichloroethene	<1000 µg/kg	<50 µg/kg	<50
Benzene	2300 µg/kg	<50 µg/kg	2800
Dibromochloromethane	<1000 µg/kg	<50 µg/kg	<50
1,1,2-Trichloroethane	<1000 µg/kg	<50 µg/kg	<50
t-1,3-Dichloropropene	<1000 µg/kg	<50 µg/kg	<50
2-Chloroethylvinyl ether	<1000 µg/kg	<50 µg/kg	<50
Bromoform	<1000 µg/kg	<50 µg/kg	<50
1,1,2,2-Tetrachloroethane	<1000 µg/kg	<50 µg/kg	<50
Tetrachloroethene	<1000 µig/kg	<50 µig/kg	<50

Accu-Labs Research, Inc.

Mr. David Boyer
NM Oil Conservation Division

RE: 9649-29859-20
Date Samples Rec'd: 4-5-89
P.O. No. 77-521.07-123

REPORT OF ANALYSIS

ALR Designation	9649-29859-20-13	9649-29859-20-14	9649-29859-20-15
Sponsor Designation	8903290910	8903311035	8903310825
	3-29-89	3-31-89	3-31-89
Determination: µg/L			
Toluene	3500 µg/kg	700 µg/kg	1500
Chlorobenzene	<1000 µg/kg	<50 µg/kg	<50
Ethyl benzene	2600 µg/kg	140 µg/kg	270
Total Dichlorobenzenes	<1000 µg/kg	<50 µg/kg	<50
Total Xylenes	5000 µg/kg	580 µg/kg	410

Lab No. ACCU-LABS 27-521.07-123

ORGANIC ANALYSIS REQUEST FORM

17

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Sample No. 8903311255
DATE REC. _____
PRIORITY _____
PHONE(S): 827-5812

COLLECTION CITY: _____; COUNTY: Chaves

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) 8 9 0 3 3 1 1 2 5 5

LOCATION CODE: (Township-Range-Section-Tracts) 10N06E24342

SUBMITTER: David Boyer

SAMPLE TYPE: WATER ☒, SOIL ☐, FOOD ☐, OTHER: _____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- ☐ NP: No Preservation; Sample stored at room temperature.
- ☒ P-Ice: Sample stored in an ice bath (Not Frozen).
- ☐ P-AA: Sample Preserved with Ascorbic Acid to remove chlorine residual.
- ☒ P-HCl: Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triasines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA: ~50,000

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Broke Tank (Crosby Salt) Lake - Sample from S.E. ~~West~~ side of dike at North end of Lake

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): David A Boyer Method of Shipment to the Lab: Freight Express

CHAIN OF CUSTODY

I certify that this sample was transferred from DB to DM
at (location) ALR on 4/5/89 - 12:25 and that the statements in this block are correct. Evidentiary Seals: Not Sealed ☐ OR Seals Intact: Yes ☐ No ☐
Signatures: Conor A Mclenck

For OCD use: Date owner notified:_____ Phone or Letter? Initials____

Accu-Labs Research, Inc.

Mr. David Boyer
NM Oil Conservation Division

RE: 9649-29859-20
Date Samples Rec'd: 4-5-89
P.O. No. 77-521.07-123

REPORT OF ANALYSIS

ALR Designation	9649-29859-20-16	9649-29859-20-17	9649-29859-20-18
Sponsor Designation	8903301440	8903311255	8904032115
	3-30-89	3-31-89	Trip Blank 4-3-89
GC/MS VOLATILE ORGANICS, µg/L:			
Chloromethane	<10	<10	<10
Bromomethane	<10	<10	<10
Vinyl chloride	<10	<10	<10
Chloroethane	<10	<10	<10
Methylene chloride	<5	<5	<5
1,1-Dichloroethene	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5
Total 1,2-Dichloroethene	<5	<5	<5
Chloroform	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5
Carbon tetrachloride	<5	<5	<5
Bromodichloromethane	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5
c-1,3-Dichloropropene	<5	<5	<5
Trichloroethene	<5	<5	<5
Benzene	<5	<5	<5
Dibromochloromethane	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5
t-1,3-Dichloropropene	<5	<5	<5
2-Chloroethylvinyl ether	<5	<5	<5
Bromoform	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5
Tetrachloroethene	<5	<5	<5

Accu-Labs Research, Inc.

Mr. David Boyer
NM Oil Conservation Division

RE: 9649-29859-20
Date Samples Rec'd: 4-5-89
P.O. No. 77-521.07-123

REPORT OF ANALYSIS

ALR Designation	9649-29859-20-16	9649-29859-20-17	9649-29859-20-18
Sponsor Designation	8903301440 3-30-89	8903311255 3-31-89	8904032115 Trip Blank 4-3-89
Determination: µg/L			
Toluene	<5	<5	<5
Chlorobenzene	<5	<5	<5
Ethyl benzene	<5	<5	<5
Total Dichlorobenzenes	<5	<5	<5
Total Xylenes	<5	<5	<5

754
WPW

SCIENTIFIC LABORATORY DIVISION
ORGANIC ANALYSIS REQUEST FORM
Organic Section - Phone: 841-2570

89-41 C

REPORT TO: DAVID BOYER
N.M. OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

S.L.D. No. OR-
DATE REC. 1-19-89
PRIORITY 3
PHONE(S): 827-5812

COLLECTION CITY: Loco Hills ; COUNTY: Eddy

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|9|0|1|1|3|1|3|4|5|

LOCATION CODE: (Township-Range-Section-Tracts) |1|7|S+3|0|E+1|6+3|3|1| (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: David Boyer CODE: |2|6|0|

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ ____

RECEIVED
APR 27 1989
OIL CONSERVATION DIV.
SANTA FE

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-AA Sample Preserved with Ascorbic Acid to remove chlorine residual.
- [X] P-HCl Sample Preserved with Hydrochloric Acid (2 drops/40 ml)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes
- [ ] (774) SDWA VOC's I (8 Regulated +)
- [ ] (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: Halogenated 10ppb or less if possible

FIELD DATA: 48,000

pH= 7 ; Conductivity=_____umho/cm at 5 °C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Loco Hills Disposal - Sample from NE Corner pit #1
Some oil on W and S pit.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector) David A Boyer Method of Shipment to the Lab: StateCar

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD use: Date owner notified: 6/19/89 Phone or (Letter)? Initials MB

ANALYSES PERFORMED

LAB. No.: OR-

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Headspace (1-5 Carbons)
- ☐ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes
- ☐ (774) SDWA VOC's I (8 Regulated +)
- ☐ (775) SDWA VOC's II (EDB & DBCP)

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
* DETECTION LIMIT * ✱		+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Not Sealed ☐ Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: _____. Analyst's signature: _____

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

STATE OF NEW MEXICO HEALTH AND ENVIRONMENT DEPARTMENT
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

February 1, 1989

ANALYTICAL REPORT
SLD Accession No. OR-89-0041

Distribution
(■) Submitter
(※) SLD Files

To: NM Oil Consv. Div.
State Land Office Bldg.
P. O. Box 2088
Santa Fe, NM 87504-2088

From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A purgeable water sample submitted to this laboratory on January 19, 1989**

User:
OIL CONSERVATION DIV
State Land Office Bldg.
P. O. Box 2088
Santa Fe, NM 87504-2088

DEMOGRAPHIC DATA

COLLECTION		*LOCATION*	
On: 13-Jan-89	*By:* Boy . . .	*Township:* 17S	*Section:* 16
At: 13:45 hrs.	*In/Near:* Loco Hills	*Range:* 30E	*Tract:* 331

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable Screen

Parameter	Value	Note	MDL	Units
Halogenated Purgeables (33)	0.00	N	100.00	ppb
Benzene	1400.00		100.00	ppb
Toluene	970.00		100.00	ppb
Ethylbenzene	130.00		100.00	ppb
p- & m-Xylene	260.00		100.00	ppb
1,2-Dimethylbenzene	0.00	T	100.00	ppb

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified; T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Seals: Not Sealed [✓]; Intact: No [ ], Yes [ ] & Broken By: _____ Date: _____

Laboratory Remarks: Loco Hills Disposal

Analyst: Gary C. Eden — 1/21/89 Analysis Date
Analyst, Organic Chemistry

Reviewed By: Richard F. Meyerhein 02/01/89
Supervisor, Organic Chemistry Section

859
WNM

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 1/19/89 | LAB NO. WC-94 | USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 89/01/13 | Collection TIME 1345 | SITE INFORMATION ► Sample location Loco Hills Disposal

Collected by — Person/Agency Anderson/Boyer /OCD

Collection site description NE Corner, Pit #1 (NW pit)

RECEIVED FEB 23 1989 OIL CONSERVATION DIVISION SANTA FE

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/well code 17S-30E-16.331

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water level	Discharge	Sample type GRAB
pH (00400) 7	Conductivity (Uncorrected) 48,000 µmho	Water Temp. (00010) 5 °C	Conductivity at 25°C (00094) µmho

Field comments Oil on West side of pit

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☒ NF: Whole sample (Non-filtered) ☐ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	113526	µmho	1/27
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	6.65		1/23
☐ Other:			
☐ Other:			

A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

From NF, NA Sample:

			Date Analyzed
☒ Calcium	4000	mg/l	1/26/89
☒ Potassium	1475	mg/l	1/24
☒ Magnesium	1530	mg/l	1/26/89
☒ Sodium	42800	mg/l	1/24
☒ Bicarbonate	331	mg/l	1/23
☒ Chloride	74000	mg/l	2/2
☒ Sulfate	2375	mg/l	2/2
☒ Total Solids	> 10^5	mg/l	2/9
☒ BR	81.6	µg/l	2/07
☒ CO_3	0		1/23
☒ Cation/Anion Balance			

Analyst | Date Reported 2/16/89 | Reviewed by

Laboratory remarks

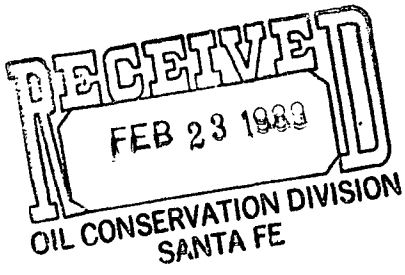
83600

FOR OCD USE -- Date Owner Notified _____ Phone or Letter? _____ Initals _____

CATIONS				ANIONS			
ANALYTE	MEQ.	PPM	DET. LIMIT	ANALYTE	MEQ.	PPM	DET. LIMIT
Ca	199.60	4000.00	<3.0	HC03	5.42	331.00	<1.0
Mg	125.67	1530.00	<0.3	SO4	49.48	2375.00	<10.0
Na	1861.68	42800.00	<10.0	CL	2087.45	74000.00	<5.0
K	37.72	1475.00	<0.3				
Mn	0.00	0.00		NO3	0.00	0.00	< 0.
Fe	0.00	0.00		C03	0.00	0.00	< 1.
				NH3	0.00	0.00	< 0.
				PO4	0.00	0.00	< 0.
SUMS	2224.67	49805.00			2142.35	76706.00	

Total Dissolved Solids= >100000
Ion Balance = 103.84%

WC No. = 8800094
Date out/By Dean 2/14/89



New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106

HEAVY METAL ANALYSIS FORM

Telephone: (505)841-2553

Date Received	1/19/89	Lab No.	ICP-20	User Code	☒ 82235	☐ Other:

COLLECTION DATE & TIME: yy 89 | mm 01 | dd 13 | hh 13 | mm 45

COLLECTED BY: Boyer/Anderson OCD

COLLECTION SITE DESCRIPTION: Loco Hills Disposal NE Corner P.T #1

TO:

OWNER:

RECEIVED
MAR 17 1989
OIL CONSERVATION DIVISION
SANTA FE

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg., PO Box 2088
SANTA FE, NM 87504-2088

ATTN: D. Boyer
TELEPHONE: 827-5812

SITE LOCATION:
County: Eddy

Township, Range, Section, Tract: (10N06E24342)
17S+30E+1 16+33 1

STATION/ WELL CODE:

LATITUDE, LONGITUDE: -

SAMPLING CONDITIONS:

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water Level:	Discharge:	Sample Type: Grab

pH(00400)	Conductivity(Uncorr.)	Water Temp.(00010)	Conductivity at 25°C (00094)
7	48,000 µmho	5 °C	µmho

FIELD COMMENTS:

SAMPLE FIELD TREATMENT Check proper boxes:		LAB ANALYSIS REQUESTED:
☒ WPN: Water Preserved w/HNO_3 Non-Filtered	☐ WPF: Water Preserved w/HNO_3 Filtered	☒ ICAP Scan Mark box next to metal if AA is required.

ANALYTICAL RESULTS (MG/L)

ELEMENT	ICAP VALUE		AA VALUE
Aluminum	~~<1.0~~ <1.0 JAA		
Barium	<1.0 ~~<1.0~~ JAA		
Beryllium	<1.0 ~~<1.0~~ JAA		
Boron	28.		
Cadmium	<1.0 ~~<1.0~~ JAA	☐	
Calcium	3360.		
Chromium	<1.0 ~~<1.0~~ JAA		
Cobalt	<0.5		
Copper	<1.0		
Iron	5.5		
Lead	<1.0	☐	
Magnesium	1480.		
Manganese	1.5		
Molybdenum	<1.0		
Nickel	<1.0		

ELEMENT	ICAP VALUE		AA VALUE
Silicon	12.		
Silver	<1.0	☐	
Strontium	100.		
Tin	1.9		
Vanadium	<1.0		
Zinc	<1.0		
Arsenic		☒	<0.5
Selenium		☐	
Mercury		☒	<0.002
		☐	
		☐	
		☐	
		☐	
		☐	
		☐	

LAB COMMENTS: DIGEST

For OCD Use:
Date Owner Notified:
Phone or Letter?
Initials:

ICAP Analyst JAA
Date Analyzed 2/27/89

Reviewer John R. Meyer
Date Reveived 3/13/89

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

November 3, 1987

Mr. Ray Westall
Loco Hills Water Disposal Co,
P. O. Box 68
Loco Hills, New Mexico 88255

Dear Mr. Westall:

Enclosed are the lab analyses of samples taken from Ponds #1 and #2 on August 28, 1987. The reports show typical values for purgeable aromatics and no detectable halogenated hydrocarbons in the samples. These analyses indicate that acceptable wastes are being disposed of at your facility. If you have any questions, please contact me at (505) 827-5884.

Sincerely,

Jami Bailey
Geologist

xc: OCD-Artesia

JB:sl

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

754 wpw

87-1451-C

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 1451 A+B
DATE REC. 9-2-87
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 87 08 28 1 1 2 0 AM 8

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 17S+30E+16+3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: Please make detection limit for halogenated as low as possible. Low aromatic detection limit NOT as important.

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Pond #1 (NW Water Pond) Loco Hills Disposal Facility
Some oil on pond. Sample from North side, near center

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D L Boyd Method of Shipment to the Lab: Car, Hand carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 11/3/87 Phone or (Letter?) _____ Initials JB

ANALYSES PERFORMED

LAB. NO.: OR- 1451

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables *		halogenated purgeables +	N.D.
benzene	440		
toluene	425		
ethylbenzene	55		
p-xylene	20		
m-xylene	70		
o-xylene	36		
* DETECTION LIMIT *	10 ug/L	+ DETECTION LIMIT +	1 ug/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☑ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 9/16/87. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhein

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

87-1452-C

NEW MEXICO

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 1452 A46

DATE REC. 9-2-87

PRIORITY

PHONE(S): 827-5812

USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer

CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 8 2 8 / 1 4 0 5 CB

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Artesia CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) / 1 7 S + 2 5 E + / 1 7 + 4 / _____ (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Jim's Water Service - oily pit in truck yard

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Jamie Bailey Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified _____ Phone or Letter?_____ Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 1452

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables		halogenated purgeables +	N.D.
benzene	39		
toluene	59		
ethylbenzene	T.R.		
p-xylene	T.R.		
m-xylene	T.R.		
o-xylene	T.R.		
* DETECTION LIMIT * ✳	25 ug/L	+ DETECTION LIMIT + +	2.5 ug/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☑ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 9/16/87 . Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhein

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

87-1453-C CO

754 wpc

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088
PHONE(S): 827-5812

S.L.D. No. OR- 1453 A40
DATE REC. 9-2-87
PRIORITY
USER CODE: 82235
SUBMITTER: David Boyer CODE: 260

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 870818 / 1355 KB

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:_____ CODE:

COUNTY: Eddy ; CITY: Artesia CODE:

LOCATION CODE: (Township-Range-Section-Tracts) 17S+25E+17+41 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity= 3180 umho/cm at 24.9 °C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Jim's Water Service - Below grade tank, receives truck wash water

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Jami Bailey Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified _____ Phone or Letter?_____ Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 1453

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables *		halogenated purgeables +	N.D.
ethylbenzene	T.R.		
m-xylene	10		
o-xylene	20		
* DETECTION LIMIT *	10 ug/L	+ DETECTION LIMIT +	1 ug/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☑ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 9/16/87. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

754 wpw

87-1454-C

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088
PHONE(S): 827-5812

S.L.D. No. OR- 1454 A4B
DATE REC. 9-2-87
PRIORITY
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 8 2 8 1 1 2 5 A 4 B

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: Please make detection limit for Halogenated as low as possible. Low aromatic detection limit not as important

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Loco Hills Disposal, Pond 2 / North Side, near Center (North Center water Pond) / Little oil on pond, sample clear

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. L. Roth Method of Shipment to the Lab: Car, Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

Person Notified 11/3/87 Phone or (Letter?) _____ Initials A

ANALYSES PERFORMED

LAB. NO.: OR- 1454

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables		halogenated purgeables	N.D.
benzene	234		
toluene	2187		
ethylbenzene	26		
p-xylene	T.R.		
m-xylene	31		
o-xylene	20		
* DETECTION LIMIT * ✳	10 ug/L	+ DETECTION LIMIT + +	1 ug/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☒ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 9/16/87. Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhen

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

June 29, 1987

Mr. Ray Westall
Loco Hills Water Disposal Co.
P.O. BOx 68
Loco Hills, NM 88255

Dear Mr. Westall:

Enclosed are copies of hydrocarbon analyses for samples taken at your facility on May 1, 1987. Although halogenated hydrocarbons (solvents) were not detected in Pond 1, the laboratory detection limit was by necessity set at 200 parts per billion. This detection limit was higher than the concentration of solvents found in the previous sampling of the pond, so additional sampling will be performed by OCD to determine the continued presence of those compounds. You will be contacted when dates for sampling can be scheduled. I am sorry about the delay in reporting this, but funding constraints limit us to using the state scientific laboratory which has a long turn-around time for reporting out the sample results.

Sincerely,

Jami Bailey
Geologist

JB/ag

Enc.

xc: OCD - Artesia

87-0770-B

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 770-A
DATE REC. 5/5/87
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 7 0 5 0 1 1 1 5 0 A BB

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) _____ + _____ + _____ + _____ (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: 770-B Broken at lab — lab accident

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.) North Side near Loco Hills Disposal Facility - NW corner, Pond #1 Hydrocarbon sheen, oil on pond

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D L Kouns Method of Shipment to the Lab: State Car

This form accompanies 2 Septum Vials, ___ Glass Jugs, and/or ___ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 6/29 Phone or Letter? _____ Initials JB

ANALYSES PERFORMED

LAB. No.: OR- 770

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	see remarks		
benzene	1400		
Toluene	9000		
ethylbenzene	300		
m-xylene	246		
o-xylene	TR.		
halogenated purgeables	N.D.		
* DETECTION LIMIT * ✳	200 ug/L	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Six compounds (at 200 ppb or less) in the aromatics screen region detected by the photoionization detector but not identified. One compound at approx 100 ppb in the C3 substituted benzene region detected by the photoionization detector but not identified

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☑ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: ~~5/29~~ 6/01/87 Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K. Sherrell for R.M. JUN 11 1987

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

87-0739-C

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088
PHONE(S): 827-5812

S.L.D. No. OR- 739-A-B
DATE REC. 5/5/87
PRIORITY
USER CODE: 82235

SUBMITTER: David Boyer
CODE: 260

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 870501 1155 DB

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) _____ + _____ + _____ (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Loco Hills Disposal Pond #2, North Side near NW Corner
Hydrocarbon sheen, very black color

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. Boyer Method of Shipment to the Lab: State Car

This form accompanies 2 Septum Vials, 1 Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 6/29 Phone or (Letter?) _____ Initials DB

ANALYSES PERFORMED

LAB. No.: OR- 739

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables			
benzene	30		
toluene	37		
ethylbenzene	8		
p-xylene	T.R.		
m-xylene	7		
o-xylene	T.R.		
halogenated purgeables	N.D.		
* DETECTION LIMIT * ✳	5 ug/L	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☑ Seal(s) broken by: not sealed date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 5/28/87 Analyst's signature: Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K. Sherrill JUN 11 1987

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

February 11, 1987

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mr. Ray Westall
Loco Hills Water Disposal Co.
P. O. Box 68
Loco Hills, New Mexico 88255

Dear Mr. Westall:

Enclosed is a copy of the amended lab analysis for heavy metals for monitor hole #12, sampled on November 25, 1986. This lab report replaces the one for monitor hole #12 that was sent to you on January 19, 1987.

Following a phone request by James Jennings, I will be sending him a copy of EPA-RCRA controlled hazardous waste solvents. We do not have a list of trade names for solvents which contain these substances, however, all solvents should have labels which list the active ingredients.

If you have any questions, please contact me at 827-5884 or David Boyer at 827-5812.

Sincerely,

JAMI BAILEY
Field Representative

JB:dp

Enc.

cc: OCD-Artesia

AMENDED REPORT

Heavy Metals

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED	11 26 86	LAB NO. HM 2414	USER CODE ☐ 59300	☐ 59600	☒ OTHER: 82235
Collection DATE	11/25/86	SITE INFORM-ATION	Sample location	Laco Hills Disposal Co.	
Collection TIME	1150		Collection site description	MH-12	
Collected by — Person/Agency	BOYER / OCD				

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) μmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) μmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1	☐ NF: Whole sample (Non-filtered)	☒ F: Filtered in field with 0.45 μmembrane filter	☐ A: 2 ml H_2SO_4/L added
☐ NA: No acid added	☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed	F, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	μmho		☐ Calcium (00915)	mg/l	
☐ Total non-filterable residue (suspended) (00530)	mg/l		☐ Magnesium (00925)	mg/l	
☒ Other: ICAP			☐ Sodium (00930)	mg/l	
☒ Other: As			☐ Potassium (00935)	mg/l	
☐ Other:			☐ Bicarbonate (00440)	mg/l	
			☐ Chloride (00940)	mg/l	
			☐ Sulfate (00945)	mg/l	
			☐ Total filterable residue (dissolved) (70300)	mg/l	
			☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed	F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l		☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N total (00610)	mg/l		☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l		☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l		☐ Other:		
☐ Total organic carbon ( )	mg/l				
☐ Other:					
☐ Other:					

Analyst	Date Reported	Reviewed by
	1 13 87	Jim Ashley

Laboratory remarks: Sample digested

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter?) Initals

Amended Report 2/9/87

ICAP SCAN

SLD Lab No. HM 2414 Reviewed by: Jim Ashby

Analyst JB Date Reported: 1/23/87

Date Analyzed 1/22/87 Revised Report.

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	<0.1	
Barium	1.1	
Beryllium	<0.1	
Boron	<0.1	
Cadmium	<0.1	
Calcium	7460.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	<0.1	
Lead	0.2	
Magnesium	4060.	
Manganese	<0.05	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	8.5	
Silver	<0.1	
Strontium	230	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.030
Selenium		
Mercury		

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

January 19, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Mr. Ray Westall
Loco Hills Water Disposal Co.
P. O. Box 68
Loco Hills, New Mexico 88255

Dear Mr. Westall:

Enclosed are laboratory analyses of water samples taken from pits and monitor wells at the Loco Hills disposal facility. These partial results were discussed yesterday with your consultant, Hugh Robotham of Reed and Associates. Additional results are expected in the future.

The concentration of halogenated hydrocarbons (solvents) in pond #1 indicates substantial amounts of these cleaning compounds have been disposed of in the pit. We highly stress that these chemicals cannot be received by a facility that is not permitted under RCRA regulations as a hazardous waste disposal facility. You may want to consider sending your clients letters indicating what types of fluids will be accepted, and what will not. If you do send such a letter, please forward a copy to this office.

The following procedure should be used for purging the monitor wells that contain fluid:

(a) Water levels should be recorded in each well.

(b) To prevent cross contamination and the introduction of contaminants in the wells, only clean equipment should be used to bail or pump fluids from the monitor wells and to record water levels. The equipment should be thoroughly cleaned and rinsed to remove all traces of oil or grease prior to purging each well. You may wish to work with your consultant to determine the most expeditious way to accomplish this.

(c) Fluids removed from the monitor wells should be discharged to holding tanks and then removed to the pits.

(d) If the wells show any fluids within 24 hours, water levels should be recorded and the wells purged within the week.

(e) If the wells again fill with fluid, we must be notified so that samples can be taken for analyses.

Please send the following information to this office:

1. Previous water level measurements recorded since last fall.

2. Water levels in the monitor wells prior to purging the first time and if necessary, the second time.

3. Dates of purging wells.

4. Status of monitor wells one week after first or second purging.

5. Any notice to clients as to acceptable fluids for disposal.

Order No. R-6811-A requires "That if disposed salt water is detected in any monitor well, Case 7329 will be reopened, within 90 days, to permit the applicant to appear and show cause why the disposal authority granted by this order should not be rescinded." It is our intention to work closely with you and your consultant to determine whether the hydrocarbons and salts found in the monitor well fluids can be traced to the disposal pits and if the case must be reopened.

If you have any questions, please contact me at 827-5884 or David Boyer at 827-5812.

Sincerely,

JAMI BAILEY
Field Representative

JB:dp

cc: Reed & Associates, Inc.
OCD-Artesia

86- 1374-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT — STATE OF NEW MEXICO

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 1374 A, B
DATE REC. 11-26-86
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 1 1 2 5 1 4 2 0 A B

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ _____/_____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Pond #1, NW Corner - oil Skim
Loco Hills Disposal Co.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D Boyer Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from Willie Olson to Gary C. Eden

at (location) HED/SLD on 11/26/86 4:03PM and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures Willie Olson Gary C. Eden

For OCD Use: Date Owner Notified 1/19/87 Phone or Letter? _____ Initials JB

ANALYSES PERFORMED

LAB. NO.: OR- 1374

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
benzene	2000	trichloroethene	TR
toluene	2700		
ethylbenzene	440		
p-xylene	81		
m-xylene	330		
o-xylene	170		
1,1-dichloroethane	9		
1,1,1-trichloroethane	33		
* DETECTION LIMIT *	10ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Twelve other compounds were detected by the aromatic screen that were not identified. Trace amounts of several other halogenated compounds were detected but not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☒ No ☐. Seal(s) broken by: _____ date: 12-4 & 12-10-86

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4+10 Dec 86. Analyst's signature: _____

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500

Organic Chemistry Section

****
* ANALYTICAL REPORT *
* SLD Accession #: OR-86-1374 *
****

To:

Organic Chemistry Section
Scientific Lab. Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

A Water,Purgeable sample.

Submitted: November 26, 1986

Attn: Section Files

Submitter:	User:
NM Oil Consv. Div.	OIL CONSERVATION DIV

DEMOGRAPHIC DATA:

Collected On:	25-Nov-86	Location Township:	17S
At:	1420 hrs.	Range:	30E
By:	Boy	Section:	16
In/Near:	Loco Hills	Tracts:	331

ANALYTICAL RESULTS for Aromatic/Halo. Purg. Screen:

Analysis	Value	Note	D. Lmt	Units
Benzene	2000.00		10.00	ppb
Toluene	2700.00		10.00	ppb
Ethylbenzene	440.00		10.00	ppb
1,2-Dimethylbenzene	170.00		10.00	ppb
1,3-Dimethylbenzene	330.00		10.00	ppb
1,4-Dimethylbenzene	81.00		10.00	ppb
1,1,1-Trichloroethane	33.00		10.00	ppb
See Report: Additional Data	14.00		10.00	ppb

LABORATORY REMARKS: Pond #1 NW corner-oil skim
1,1-Dichloroethane 9%; Trichloroethane Tr
12 other compounds were detected by PID but not identified
Trace amounts of several other halogenated compounds were detected but not identified

A=Approximate Value; N=None Detected above Detection Limit; P=Compound Present but not quantified; T=Trace (<Detection Limit); U=Compound Identity Not Confirmed

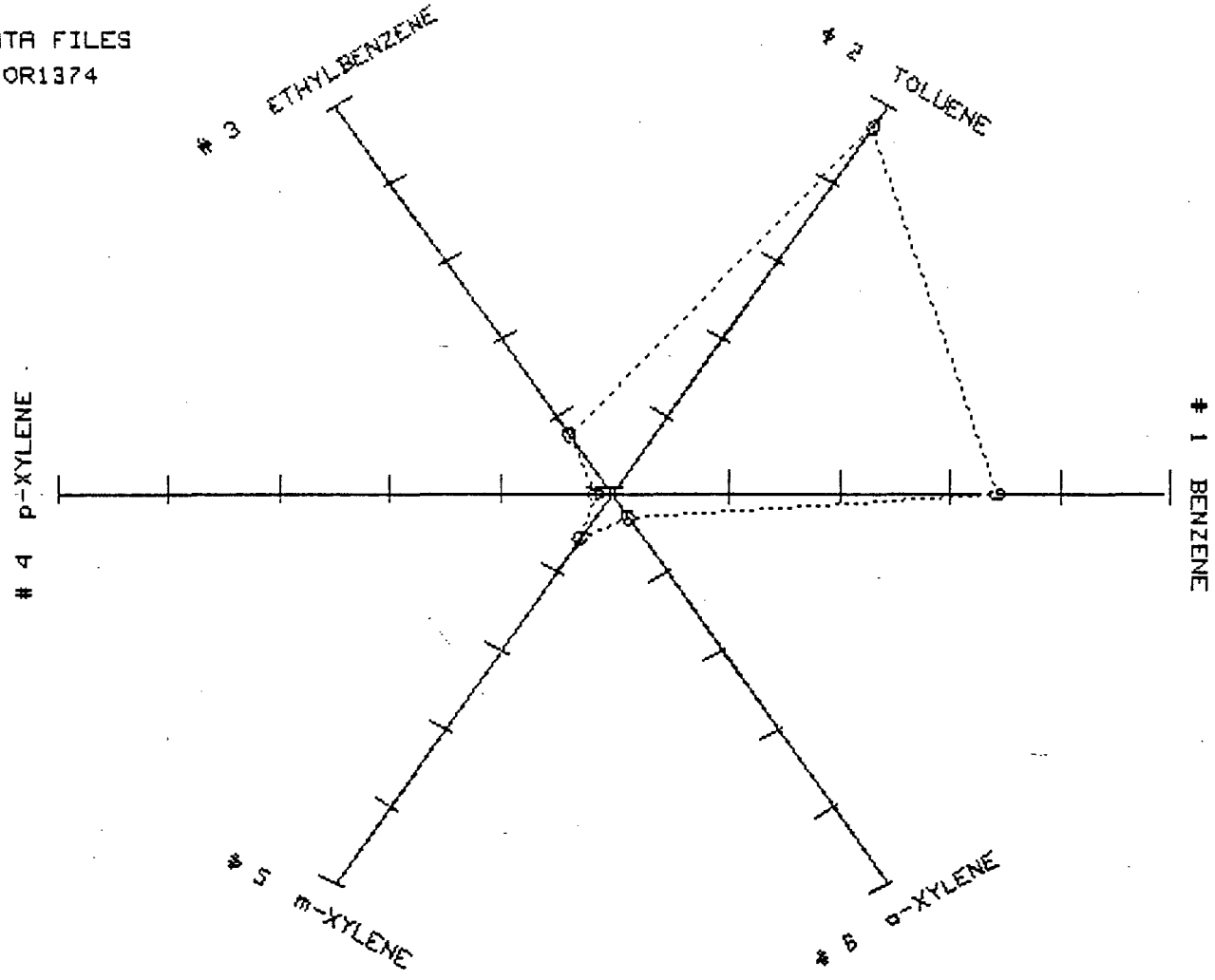
Analyst: J. Finney _____ Analysis Date

Reviewed: R. Meyerhein, Supervisor _____ Date

Distribution: [ ] User, [ ] Submitter, [ ] Report To, [*] SLD-Section

LOCO HILLS POND #1 861125142ODB

DATA FILES
OR1374



PERCENT OF TOTAL (0-50%)

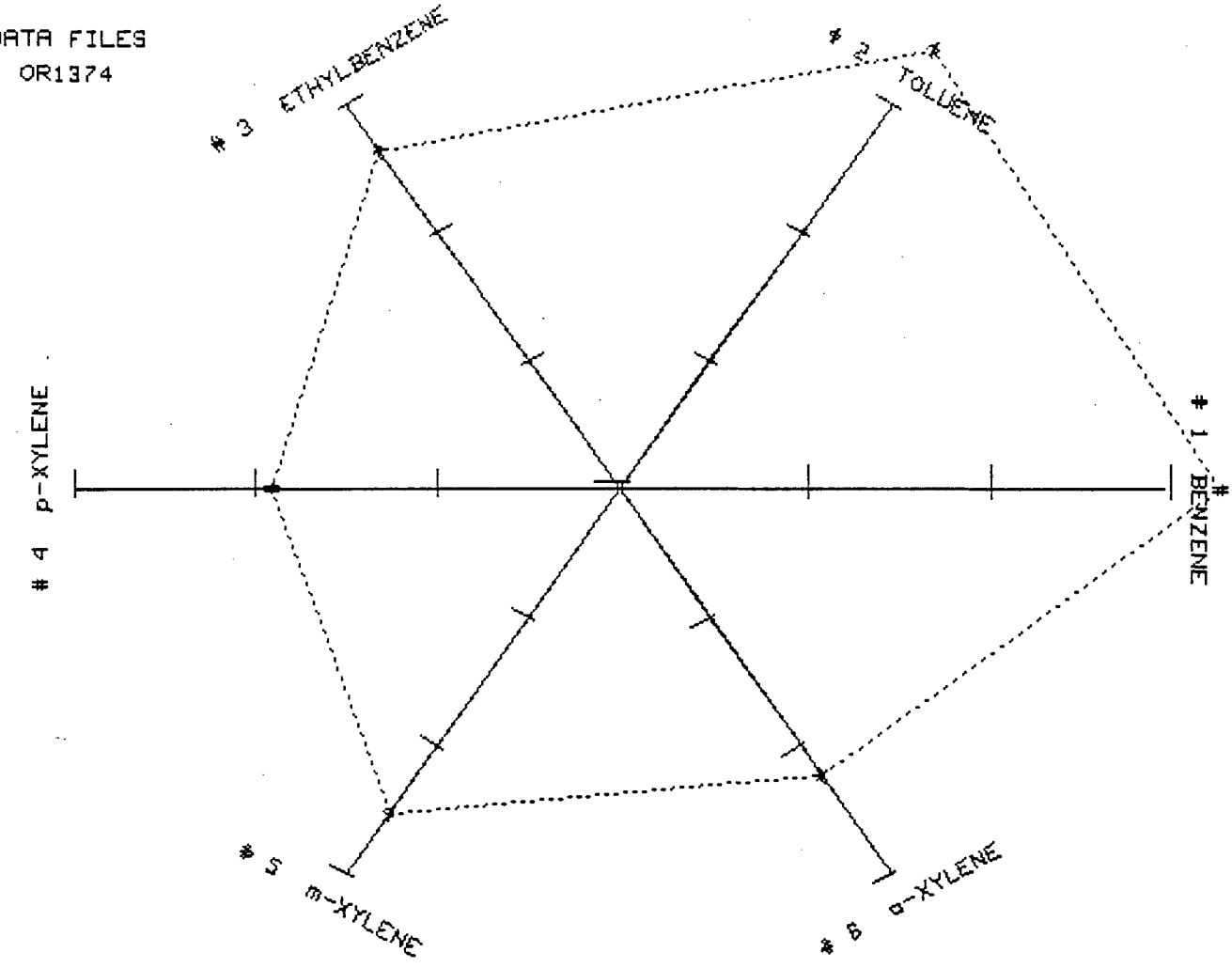
DATA FILE: OR1374

LOCO HILLS POND #1 861125142ODB

No.	NAME	VALUE	% OF TOTAL	MINIMUM	MAXIMUM	STEP
1	BENZENE	2000.00	34.96	0.00	10000.00	1000.00
2	TOLUENE	2700.00	47.19	0.00	10000.00	1000.00
3	ETHYLBENZENE	440.00	7.69	0.00	10000.00	1000.00
4	p-XYLENE	81.00	1.42	0.00	10000.00	1000.00
5	m-XYLENE	330.00	5.77	0.00	10000.00	1000.00
6	o-XYLENE	170.00	2.97	0.00	10000.00	1000.00
	TOTAL	5721.00	100.00	0.00	2700.00	

LOCO HILLS POND #1 8611251420DB

DATA FILES
OR1374



LOG PLOT (SCALE 0-1000)

DATA FILE: OR1374

LOCO HILLS POND #1 8611251420DB

No.	NAME	VALUE	% OF TOTAL	MINIMUM	MAXIMUM	STEP
1	BENZENE	2000.00	34.96	0.00	10000.00	1000.00
2	TOLUENE	2700.00	47.19	0.00	10000.00	1000.00
3	ETHYLBENZENE	440.00	7.69	0.00	10000.00	1000.00
4	p-XYLENE	81.00	1.42	0.00	10000.00	1000.00
5	m-XYLENE	330.00	5.77	0.00	10000.00	1000.00
6	o-XYLENE	170.00	2.97	0.00	10000.00	1000.00
	TOTAL	5721.00	100.00	0.00	2700.00	

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (5[redacted]41-2555

859-wt

GENERAL WATER CHEMISTRY
NITROGEN ANALYSIS

DATE RECEIVED 11 26 86 | LAB NO. WC 5440 | USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 861125 | Collection TIME 1420 | Collected by — Person/Agency BOYER /OCD

SITE INFORMATION ►

Sample location: Loco Hills Disposal Co.

Collection site description: Pond 1, NW corner

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments: Oil Skim on pond

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	85439	µmho	12/16
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH	6.96		12/8
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	2480	mg/l	12-1
☒ Magnesium (00925)	1100	mg/l	12-1
☒ Sodium (00930)	24000	mg/l	12-4
☒ Potassium (00935)	585	mg/l	12-4
☒ Bicarbonate (00440)	299	mg/l	12/8
☒ Chloride (00940)	54712	mg/l	12/2
☒ Sulfate (00945)	1720	mg/l	12/16
☒ Total filterable residue (dissolved) (70300)	88202	mg/l	12/4
☒ Other: CO_3	0		12/8
☒ Ba	* < 0.2		12/10

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12 16 86	CO

Laboratory remarks: * POSSIBLE INTERFERANCE - NO COLOR DEVELOPED

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or Letter? _____ Initals SB

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~ Heavy Metals

DATE RECEIVED 11 26 86	LAB NO. HM 2411	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86 11 25	SITE INFORMATION ►	Sample location Laco Hills Disposal Co.	
Collection TIME 1420		Collection site description Pond #1, NW Corner	
Collected by — Person/Agency Boyer / OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments: Oil skim on Pond

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☐ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP		
☒ Other: As		
☐ Other:		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst | Date Reported 1 13 87 | Reviewed by Jim Ashley

Laboratory remarks: Sample digested

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter) _____ Initals SJB

ICAP SCAN

SLD Lab No. HM 2411 Reviewed by: Jim Ashby

Analyst JB Date Reported: 1/13/87

Date Analyzed 12/10/86

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	<0.1	
Barium	0.3	
Beryllium	<0.1	
Boron	23.	
Cadmium	<0.1	
Calcium	2800.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	0.5	
Lead	<0.1	
Magnesium	1190.	
Manganese	0.63	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	7.2	
Silver	<0.1	
Strontium	83.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.27
Selenium		
Mercury		

86-1380-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
ENVIRONMENT

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088
PHONE(S): 827-5812

S.L.D. No. OR- 1380 DB
DATE REC. 86-11-26
PRIORITY
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 1 1 2 5 1 4 3 0 DB
SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____
COUNTY: Eddy ; CITY: Loco Hills CODE: _____
LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ _____/_____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
South Pond - Rainwater accumulation, West side
Center sample Loco Hills Disposal Co.

I certify that the results in this Block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. Z Boyer Method of Shipment to the Lab: Hand Carried
This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____
Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from Willie Olson to Mary C. Eden
at (location) HED/SLD on 11/26/86 - 3:55 PM and that
the statements in this Block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [X] No [ ]
Signatures Willie Olson Mary C. Eden

For OCD Use: Date Owner Notified 1/19/87 Phone or (Letter)? _____ Initials DB

ANALYSES PERFORMED

LAB. NO.: OR- 1380

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	ND		
halogenated purgeables	ND		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☒ No ☐. Seal(s) broken by: _____ date: 12-4-86

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4 Dec 86. Analyst's signature: _____

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500

Organic Chemistry Section

****
* ANALYTICAL REPORT *
* SLD Accession #: OR-86-1380 *
****

To:

Organic Chemistry Section
Scientific Lab. Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

A Water,Purgeable sample.

Submitted: November 26, 1986

Attn: Section Files

Submitter:	User:
NM Oil Consv. Div.	OIL CONSERVATION DIV

DEMOGRAPHIC DATA:

Collected On:	25-Nov-86	Location Township:	17S
At:	1430 hrs.	Range:	30E
By:	Boy	Section:	16
In/Near:	Loco Hills	Tracts:	331

ANALYTICAL RESULTS for Aromatic/Halo. Purg. Screen:

Analysis	Value	Note	D. Lmt	Units
Aromatic Purgeables (6)	0.00	N	1.00	ppb
Halogenated Purgeables (33)	0.00	N	1.00	ppb

LABORATORY REMARKS: S Pond Rainwater accumulation

A=Approximate Value; N=None Detected above Detection Limit; P=Compound Present but not quantified; T=Trace (<Detection Limit); U=Compound Identity Not Confirmed

Analyst: J. Finney _____ Analysis Date

Reviewed: R. Meyerhein, Supervisor _____ Date

Distribution: [ ] User, [ ] Submitter, [ ] Report To, [*] SLD-Section

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (5[redacted]841-2555

859 wtr

GE[redacted]RAL WATER CHEMISTRY
NITROGEN ANALYSIS

DATE RECEIVED 11 | 26 | 86	LAB NO. WC 5452	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86/11/25	SITE INFORM-ATION ►	Sample location Loco Hills Disposal Co.	
Collection TIME 1430		Collection site description South Pond, unused	
Collected by — Person/Agency BOYER /OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

RECEIVED JAN - 5 1987

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	230	µmho	12/16
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH	8.76		12/8
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	24.0	mg/l	12-1
☒ Magnesium (00925)	4.88	mg/l	12-1
☒ Sodium (00930)		mg/l	
☒ Potassium (00935)	17.6	mg/l	12-4
☒ Bicarbonate (00440)	79.1	mg/l	12/8
☒ Chloride (00940)	17	mg/l	12/5
☒ Sulfate (00945)	33	mg/l	12/16
☒ Total filterable residue (dissolved) (70300)	138	mg/l	12/9
☒ Other: CO_3	3.1		12/8
☒ Ba	< 0.2		12/10

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12 | 16 | 86	CO

Laboratory remarks Sodium not run 12-4 - DHR from CA 1/5/87

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter)? _____ Initals [illegible]

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~ Heavy Metals

DATE RECEIVED: 11/26/86	LAB NO.: HM 2418	USER CODE: ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE: 86/11/25	SITE INFORMATION ►	Sample location: Laco Hills Disposal Co.	
Collection TIME: 1430		Collection site description: South Pond, unused	
Collected by — Person/Agency: Boyer /OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ **NF:** Whole sample (Non-filtered) ☒ **F:** Filtered in field with 0.45 µmembrane filter ☐ **A:** 2 ml H_2SO_4/L added

☐ **NA:** No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP		
☒ Other: As		
☐ Other:		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst	Date Reported	Reviewed by

Laboratory remarks: Sample digested

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter) ____ Initals JB

ICAP SCAN

SLD Lab No. HM 2418 Reviewed by: Jim Bailey

Analyst JB Date Reported: 1/13/87

Date Analyzed 12/10/86

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	<0.1	
Barium	<0.1	
Beryllium	<0.1	
Boron	0.2	
Cadmium	<0.1	
Calcium	25.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	0.7	
Lead	<0.1	
Magnesium	2.9	
Manganese	<0.05	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	2.7	
Silver	<0.1	
Strontium	0.2	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		< 0.005
Selenium		
Mercury		

86-1379-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT — STATE OF NEW MEXICO

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088
PHONE(S): 827-5812
SUBMITTER: David Boyer

S.L.D. No. OR- 1379 BNB
DATE REC. 86-11-26
PRIORITY
USER CODE: 8 2 2 3 5
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 1 1 2 5 1 3 4 5 A+B

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3) (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Monitor Hole #1, Loco Hills Disposal Facility
(Approx 35' H2O)

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. G. Boyer Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from Willie Olson to Mary C. Eden

at (location) HED/SLD on 11/26/86 @ 4:00PM and that the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [X] No [ ]

Signatures Willie Olson Mary C. Eden

For OCD Use: Date Owner Notified 1/19/87 Phone or (Letter)? _____ Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 1379

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	ND		
halogenated purgeables	ND		
* DETECTION LIMIT * ✱	5ppb	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☒ No ☐. Seal(s) broken by: _____ date: 12-4-86

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4 Dec 86. Analyst's signature: JA Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen

SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500

Organic Chemistry Section

****
* ANALYTICAL REPORT *
* SLD Accession #: OR-86-1379 *
****

To:

Organic Chemistry Section
Scientific Lab. Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

A Water,Purgeable sample.

Submitted: November 26, 1986

Attn: Section Files

Submitter:	User:
NM Oil Consv. Div.	OIL CONSERVATION DIV

DEMOGRAPHIC DATA:

Collected On:	25-Nov-86	Location Township:	17S
At:	1345 hrs.	Range:	30E
By:	Boy	Section:	16
In/Near:	Loco Hills	Tracts:	331

ANALYTICAL RESULTS for Aromatic/Halo. Purg. Screen:

Analysis	Value	Note	D. Lmt	Units
Aromatic Purgeables (6)	0.00	N	5.00	ppb
Halogenated Purgeables (33)	0.00	N	5.00	ppb

LABORATORY REMARKS: Monitor hole #1

A=Approximate Value; N=None Detected above Detection Limit; P=Compound Present but not quantified; T=Trace (<Detection Limit); U=Compound Identity Not Confirmed

Analyst: J. Finney _____ Analysis Date

Reviewed: R. Meyerhein, Supervisor _____ Date

Distribution: [ ] User, [ ] Submitter, [ ] Report To, [*] SLD-Section

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

859 - wnt

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 11 | 26 | 86	LAB NO. WC 5453	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 85 | 11 | 25	SITE INFORM-ATION ►	Sample location Loco Hills Disposal Co.	
Collection TIME 1345		Collection site description MH-1	
Collected by — Person/Agency BOYER / OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes* Pre Filtered only

No. of samples submitted 1	☐ NF: Whole sample (Non-filtered)	☒ F: Filtered in field ~~with 0.45 µmembrane filter~~	☐ A: 2 ml H_2SO_4/L added
☒ NA: No acid added	☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	18561	µmho	12/16
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH	7.15		12/8
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	364	mg/l	12-1
☒ Magnesium (00925)	307	mg/l	12-1
☒ Sodium (00930)	446	mg/l	12-4
☒ Potassium (00935)	17.1	mg/l	12-4
☒ Bicarbonate (00440)	107	mg/l	12/8
☒ Chloride (00940)	7972	mg/l	12/5
☒ Sulfate (00945)	420	mg/l	12/16
☒ Total filterable residue (dissolved) (70300)	17582	mg/l	12/4
☒ Other: CO_3	0		12/8
☒ Ba	20		12/10

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12 | 16 | 86	

Laboratory remarks Differences between Ca & Mg for GWC & ICAP discussed with lab 1/16. GWC staff says may be interference due to color. [illegible]

FOR OCD USE -- Date Owner Notified _____ Phone or Letter? _____ Initals _____

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (5[redacted]841-2555

859 - WNF

GENERAL WATER CHEMISTRY
NITROGEN ANALYSIS

DATE RECEIVED 11 26 86	LAB NO. WC 5453	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86 11 25	SITE INFORM-ATION ►	Sample location: Loco Hills Disposal Co.	
Collection TIME 1345		Collection site description: MH-1	
Collected by — Person/Agency: BOYER /OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

JAN - 5 1987

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes* Pre Filtered only

No. of samples submitted 1	☐ NF: Whole sample (Non-filtered)	☒ F: Filtered in field ~~with 0.45 µm membrane filter~~	☐ A: 2 ml H_2SO_4/L added
☒ NA: No acid added	☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	18561	µmho	12/16
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH	7.15		12/8
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	364	mg/l	12-1
☒ Magnesium (00925)	302	mg/l	12-1
☒ Sodium (00930)	446	mg/l	12-4
☒ Potassium (00935)	17.1	mg/l	12-4
☒ Bicarbonate (00440)	167	mg/l	12/8
☒ Chloride (00940)	7972	mg/l	12/5
☒ Sulfate (00945)	420	mg/l	12/16
☒ Total filterable residue (dissolved) (70300)	17582	mg/l	12/4
☒ Other: CO_3	0		12/8
☒ Ba	20		12/10

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12-16-86	

Laboratory remarks

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter) Initals

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

Heavy Metals
~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~

DATE RECEIVED 11/26/86	LAB NO. HM 2412	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86/11/25	SITE INFORMATION ►	Sample location: Laco Hills Disposal Co.	
Collection TIME 1315		Collection site description: MH-4 MH-1	
Collected by — Person/Agency: Boyer / OCD			

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088
Attn: David Boyer
Phone: 827-5812

Station/ well code
Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) μmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) μmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 μmembrane filter ☐ A: 2 ml H_2SO_4/L added

☐ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	μmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP		
☒ Other: As		
☐ Other:		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst | Date Reported: 1/13/87 | Reviewed by: Jim Ashby

Laboratory remarks
Sample digested

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter)? _____ Initals SB

ICAP SCAN

SLD Lab No. HM 2412 Reviewed by: Jim Ashley

Analyst JB Date Reported: 1/13/87

Date Analyzed 12/10/86

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	0.3	
Barium	4.5	
Beryllium	<0.1	
Boron	0.5	
Cadmium	<0.1	
Calcium	2200.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	3.0	
Lead	0.1	
Magnesium	1370.	
Manganese	2.3	
Molybdenum	<0.1	
Nickel	0.1 interference	
Silicon	8.2	
Silver	<0.1	
Strontium	7/.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	0.3	
Arsenic		0.027
Selenium		
Mercury		

86- 1367-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 1367 A,B
DATE REC. 11-26-86
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 1 1 2 5 1 2 4 5 A A

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S 3 0 E 1 6 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Monitor Hole #3 - Loco Hills Disposal Co.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. A. Boyer Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from Willie Olson to Mary C. Eden

at (location) HED/SLD on 11/26/86 4:05 PM and that the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [X] No [ ]

Signatures Willie Olson Mary C. Eden

For OCD Use: Date Owner Notified 1/19/87 Phone or (Letter?) _____ Initials RB

ANALYSES PERFORMED

LAB. No. OR- 1367

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
aromatic purgeables	ND		
chloroiodomethane	Present		
dichloroiodomethane	Present		
diiodomethane	Present		
chlorodiiodomethane	Present		
* DETECTION LIMIT * ✱	5ppb	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Trace amounts of four other compounds were detected by the halogenated screen that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☒ No ☐. Seal(s) broken by: _____ date: 12-4-86

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4 Dec 86. Analyst's signature: _____

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500

Organic Chemistry Section

****
* ANALYTICAL REPORT *
* SLD Accession #: OR-86-1367 *
****

To:

Organic Chemistry Section
Scientific Lab. Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

A Water,Purgeable sample.

Submitted: November 26, 1986

Attn: Section Files

Submitter:	User:
NM Oil Consv. Div.	OIL CONSERVATION DIV

DEMOGRAPHIC DATA:

Collected On:	25-Nov-86	Location Township:	17S
At:	1245 hrs.	Range:	30E
By:	Boy	Section:	16
In/Near:	Loco Hills MH #3	Tracts:	331

ANALYTICAL RESULTS for Aromatic/Halo. Purg. Screen:

Analysis	Value	Note	D. Lmt	Units
Aromatic Purgeables (6)	0.00	N	5.00	ppb

LABORATORY REMARKS: Iodinated Purgeables present
We are still trying to identify

A=Approximate Value; N=None Detected above Detection Limit; P=Compound Present but not quantified; T=Trace (<Detection Limit); U=Compound Identity Not Confirmed

Report Not Approved. Interim Results Only!

Tuesday -- January 6, 1987 -- 14:05

Distribution: [ ] User, [ ] Submitter, [ ] Report To, [*] SLD-Section

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (5[illegible]341-2555

859 wnt

GENERAL WATER CHEMISTRY
NITROGEN ANALYSIS

DATE RECEIVED 1|26|86	LAB NO. WC5448	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86/1/25	SITE INFORM-ATION ►	Sample location Loco Hills Disposal Co.	
Collection TIME 1245		Collection site description MH-3	
Collected by — Person/Agency BOYER/OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

RECEIVED
JAN 13 1987
OIL CONSERVATION DIVISION

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) μmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) μmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 μmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	83760	μmho	12/12
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH	7.11		12/8
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	8200	mg/l	12-1
☒ Magnesium (00925)	4100	mg/l	12-21
☒ Sodium (00930)	18000	mg/l	12-21
☒ Potassium (00935)	780	mg/l	
☒ Bicarbonate (00440)	130	mg/l	12/8
☒ Chloride (00940)	60535	mg/l	12/5
☒ Sulfate (00945)	1054	mg/l	12/16
☒ Total filterable residue (dissolved) (70300)	97408	mg/l	12/4
☒ Other: CO_3	10		12/8
☒ Ba	0.9		12/10

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12/12/86	CG

Laboratory remarks

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or Letter? _____ Initals JRS

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

Heavy Metals
~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~

DATE RECEIVED 11/26/86	LAB NO. HM 2413	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86/11/25	SITE INFORM-ATION ►	Sample location Laco Hills Disposal Co.	
Collection TIME 1245		Collection site description MH-3	
Collected by — Person/Agency Boyer /OCD			

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088
Attn: David Boyer
Phone: 827-5812

Station/ well code
Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☐ Dipped ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) μmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) μmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ **NF:** Whole sample (Non-filtered) ☒ **F:** Filtered in field with 0.45 μmembrane filter ☐ **A:** 2 ml H_2SO_4/L added

☐ **NA:** No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	μmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP		
☒ Other: As		
☐ Other:		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst | Date Reported 1/13/87 | Reviewed by Jim Ashley

Laboratory remarks Sample digested

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter) _____ Initals SB

ICAP SCAN

SLD Lab No. HM 2413 Reviewed by: Jim Ashley

Analyst JB Date Reported: 1/13/87

Date Analyzed 12/10/86

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	0.2	
Barium	0.6	
Beryllium	<0.1	
Boron	0.8	
Cadmium	<0.1	
Calcium	7700.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	0.2	
Lead	0.3	
Magnesium	4050.	
Manganese	0.15	
Molybdenum	<0.1	
Nickel	~~0.2~~ <0.1 interference	
Silicon	6.3	
Silver	<0.1	
Strontium	230.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.046
Selenium		
Mercury		

86- 1357-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

HEALTH ENVIRONMENT — STATE OF NEW MEXICO

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 1357-BAB
DATE REC. 11-26-86
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 861125111500

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: Eddy ; CITY: Loco Hills CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 17S+30E+1631 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: One bottle has bubble!

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)
Monitoring Hole - 12 Loco Hills Wales Disposal Co

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): D. Boyer Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from Willie Olson to Mary C. Eden

at (location) HED/SLD on 11/26/86 - 4:10 and that the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [X] No [ ]

Signatures Willie Olson Mary C. Eden

For OCD Use: Date Owner Notified 1/9/87 Phone or (Letter)? _____ Initials JB

ANALYSES PERFORMED

LAB. NO. OR- 1357

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☒ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
benzene	3		
toluene	TR		
o-xylene	TR		
chloroiodomethane	Present		
dichloroiodomethane	Present		
diiodomethane	Present		
chlorodiiodomethane	Present		
* DETECTION LIMIT *	1 ppb	+ DETECTION LIMIT +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Trace amounts of four other compounds were detected by the halogenated screen that were not identified. Two other compounds were detected by the aromatic screen that were not identified, but appeared in trace amounts.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☒ No ☐. Seal(s) broken by: _____ date: 12-4-86

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4Dec86. Analyst's signature: _____

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud, NE
Albuquerque, NM 87106 [505]-841-2500

Organic Chemistry Section

****
* ANALYTICAL REPORT *
* SLD Accession #: OR-86-1357 *
****

To:

Organic Chemistry Section
Scientific Lab. Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

A Water,Purgeable sample.

Submitted: November 26, 1986

Attn: Section Files

Submitter:	User:
NM Oil Consv. Div.	OIL CONSERVATION DIV

DEMOGRAPHIC DATA:

Collected On:	25-Nov-86	Location Township:	17S
At:	1150 hrs. MH-12	Range:	30E
By:	Boy	Section:	16
In/Near:	Loco Hills	Tracts:	331

ANALYTICAL RESULTS for Aromatic/Halo. Purg. Screen:

Analysis	Value	Note	D. Lmt	Units
Benzene	3.00		1.00	ppb
Toluene	0.00	T	1.00	ppb
1,2-Dimethylbenzene	0.00	T	1.00	ppb

LABORATORY REMARKS:
Also appears to contain some iodinated Trihalomethanes
We are still trying to identify.

A=Approximate Value; N=None Detected above Detection Limit; P=Compound Present but not quantified; T=Trace (<Detection Limit); U=Compound Identity Not Confirmed

Report Not Approved. Interim Results Only!

Tuesday -- January 6, 1987 -- 14:05

Distribution: [ ] User, [ ] Submitter, [ ] Report To, [*] SLD-Section

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — [redacted]841-2555

859 - unf

GENERAL WATER CHEMISTRY
NITROGEN ANALYSIS

DATE RECEIVED 11/26/86	LAB NO. WC 5449	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86/11/25	SITE INFORM-ATION ►	Sample location Loco Hills Disposal Co.	
Collection TIME 1150		Collection site description MH-12	
Collected by — Person/Agency BOYER/OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1 | ☐ NF: Whole sample (Non-filtered) | ☒ F: Filtered in field with 0.45 µmembrane filter | ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	70666	µmho	12/16
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH	7.05		12/8
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	7100	mg/l	12-1
☒ Magnesium (00925)	4400	mg/l	12-1
☒ Sodium (00930)	13000	mg/l	12/4
☒ Potassium (00935)	39	mg/l	12/4
☒ Bicarbonate (00440)	120	mg/l	12/8
☒ Chloride (00940)	47152	mg/l	12/5
☒ Sulfate (00945)	840	mg/l	12/16
☒ Total filterable residue (dissolved) (70300)	77806	mg/l	12/4
☒ Other: CO_3	0		12/8
☒ Ba	0.5		12/10

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12 16 86	

Laboratory remarks

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or Letter? Inits

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~ Heavy Metals

DATE RECEIVED 11 26 86	LAB NO. HM 2414	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86 11 25	SITE INFORMATION ►	Sample location: Laco Hills Disposal Co.	
Collection TIME 1150		Collection site description: MH-12	
Collected by — Person/Agency: Boyer / OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1	☐ NF: Whole sample (Non-filtered)	☒ F: Filtered in field with 0.45 µmembrane filter	☐ A: 2 ml H_2SO_4/L added
☐ NA: No acid added	☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP		
☒ Other: As		
☐ Other:		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst	Date Reported	Reviewed by
	1 13 87	Jim Ashley

Laboratory remarks: Sample digested

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (Letter)? Initals

ICAP SCAN

SLD Lab No. HM 2414 Reviewed by: Jim Ashley

Analyst JB Date Reported: 1/13/87

Date Analyzed 12/10/86 See next sheet for revised report DWB

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	0.4	
Barium	0.2	
Beryllium	<0.1	
Boron	0.1	
Cadmium	<0.1	
Calcium	48.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	0.4	
Lead	<0.1	
Magnesium	1.3	
Manganese	<0.05	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	8.3	
Silver	<0.1	
Strontium	<0.1	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.030
Selenium		
Mercury		

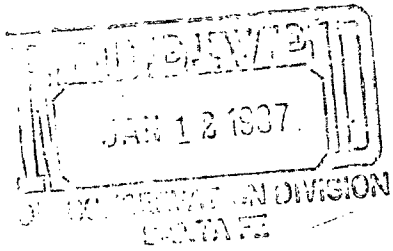
ICAP SCAN

SLD Lab No. HM2414 Reviewed by: Jim Ashley

Analyst JB Date Reported: 1/23/87

Date Analyzed 1/22/87 Revised Report.

ELEMENT	ICAP VALUE(mg/l)	AA VALUE(mg/l)
Aluminum	<0.1	
Barium	1.1	
Beryllium	<0.1	
Boron	<0.1	
Cadmium	<0.1	
Calcium	7460.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	<0.1	
Lead	0.2	
Magnesium	4060.	
Manganese	<0.05	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	8.5	
Silver	<0.1	
Strontium	230	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.030
Selenium		
Mercury		



January 9, 1987

Ms. Jami Bailey, Field Representative
Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Water Analyses, Loco Hills
Water Disposal System

Dear Ms. Bailey:

Enclosed please find the results of the chemical analyses for MW-1, MW-3, MW-12 and Pit No. 1 that were obtained on November 24, 1986 at the Loco Hills Water Disposal site. About one foot of water was found in MW-1 so I took a sample from it. I also sampled the sludge in the salt water pit.

The levels of organics found in the monitor wells occur in trace amounts and are below the New Mexico WQCC standards for these compounds. The pit had levels of benzene, toluene and xylene which are above the WQCC standards. However, only trace amounts of chlorinated organics were found and are in concentrations which are below the WQCC standards. The sludge in the bottom of the pit contained levels of organics which are above the WQCC standards. The fact that the sludge contains higher levels of these compounds than the pit water is not unexpected since these organics are quite heavy and tend to settle to the bottom.

Based on the levels of organics found in the pit water and in the sludge, it is our opinion that the presence of the chlorinated compounds is due to a bad load of water which was dumped at the site. We do not believe that the low levels of organics found in the monitor wells is of major concern at this time.

The next step in our investigation is to pump the water out of the monitor wells and observe the recovery of the water level. This should provide some clue as to the origin

of the water in these wells. Based on the chemical analyses, it appears that the pit water and the water in the monitor wells are of similar character.

We will keep you informed concerning the pumping of the monitor wells. If you have any questions regarding this matter, please do not hesitate to contact me.

Very truly yours,

Hugh B. Robotham

Hugh B. Robotham

SwL SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

119904

File No. 3485000

Report No. 38574

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-1, Sampled 11-24-86 by Hugh Robotham

	mg/L
Calcium	1536
Magnesium	1180
Sodium	304
Potassium	17
Carbonate	None
Bicarbonate	188
Sulfate	488
Chloride	5780
Total Dissolved Solids @ 180° C	10140
Total Hardness (as Ca CO_3)	8700
pH	6.62

Standard Methods, 16th Edition

Technician: LYN,GMB

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Burch

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119904

File No. 3485000

Report No. 38574

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-1, Sampled 11-24-86 by Hugh Robotham

		PPM
Vinylidine Chloride	*	0.001
Dichloromethane		0.023
1,1-Dichloroethane	*	0.001
Chloroform	*	0.001
1,1,1-Trichloroethane	*	0.001
cis-1,2-Dichloropropene	*	0.001
Perchloroethylene	*	0.001
Chlorobenzene	*	0.001
Unknown, RT-33.31, Calculated as PCE	*	0.010
Unknown, RT-38.82, Calculated as PCE	*	0.010

* Denotes "less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

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119904

File No. 3485000

Report No. 38574

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-1, Sampled 11-24-86 by Hugh Robotham

		PPM
Benzene		0.01
Toluene		0.03
Ethyl Benzene	*	0.01
Xylenes	*	0.01
Other Petroleum Hydrocarbons		1.8

* Denotes "less than"

Method: SW-846/5020

Technician: REL

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119904

File No. 3485000

Report No. 38575

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-3, Sampled 11-24-86 by Hugh Robotham

	mg/L
Calcium	7920
Magnesium	4445
Sodium	19500
Potassium	63
Carbonate	None
Bicarbonate	143
Sulfate	1198
Chloride	56023
Total Dissolved Solids @ 180° C	92440
Total Hardness (as CO_3)	38100
pH	6.67

Standard Methods, 16th Edition

Technician: LYN,GMB

Copies 2 cc Reed & Associates

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119904

File No. 3485000

Report No. 38575

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-3, Sampled 11-24-86 by Hugh Robotham

		PPM
Vinylidine Chloride	*	0.001
Dichloromethane		0.016
1,1-Dichloroethane	*	0.001
Chloroform	*	0.001
1,1,1-Trichloroethane	*	0.001
cis-1,2-Dichloropropene		0.035
Perchloroethylene	*	0.001
Chlorobenzene		0.004
Unknown, RT-33.31, Calculated as PCE		0.024
Unknown, RT-38.82, Calculated as PCE		0.111

* Denotes "less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Larry M. Burch

SwL SOUTHWESTERN LABORATORIES

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119904

File No. 3485000

Report No. 38575

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-3, Sampled 11-24-86 by Hugh Robotham

		PPM
Benzene		0.07
Toluene		0.03
Ethyl Benzene	*	0.01
Xylenes	*	0.01
Other Petroleum Hydrocarbons		0.7

* Denotes "less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Bunch

SwL SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

119904

File No. 3485000

Report No. 38576

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-12, Sampled 11-24-86 by Hugh Robotham

	mg/L
Calcium	7280
Magnesium	4202
Sodium	13000
Potassium	48
Carbonate	None
Bicarbonate	134
Sulfate	673
Chloride	43967
Total Dissolved Solids @ 180° C	70990
Total Hardness (as $CaCO_3$)	35500
pH	6.92

Standard Methods, 16th Edition

Technician: LYN, GMB

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Burch

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119904

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Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-12, Sampled 11-24-86 by Hugh Robotham

		PPM
Vinylidine Chloride	*	0.001
Dichloromethane	*	0.010
1,1-Dichloroethane	*	0.001
Chloroform	*	0.001
1,1,1-Trichloroethane	*	0.001
cis-1,2-Dichloropropene		0.098
Perchloroethylene	*	0.001
Chlorobenzene		0.011
Unknown, RT-33.31, Calculated as PCE		0.059
Unknown, RT-38.82, Calculated as PCE		0.067

* Denotes "less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Burch

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Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

119904

File No. 3485000

Report No. 38576

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, MW-12, Sampled 11-24-86 by Hugh Robotham

	PPM
Benzene	0.17
Toluene	0.04
Ethyl Benzene	* 0.01
Xylenes	* 0.01
Other Petroleum Hydrocarbons	1.1

* Denotes " less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Amy M. Burch

SwL SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

File No. 3485000

Report No. 38577

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, Pit No.1, Sampled 11-24-86 by Hugh Robotham

	mg/L
Calcium	2520
Magnesium	1239
Sodium	25500
Potassium	840
Carbonate	None
Bicarbonate	378
Sulfate	1916
Chloride	48931
Total Dissolved Solids @ 180° C	84210
Total Hardness (as $CaCO_3$)	11400
pH	7.98

Standard Methods, 16th Edition

Technician: LYN,GMB

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Bunch

SwL SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

119904

File No. 3485000

Report No. 38577

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, Pit No.1, Sampled 11-24-86 by Hugh Robotham

		PPM
Vinylidine Chloride	*	0.001
Dichloromethane	*	0.010
1,1-Dichloroethane		0.005
Chloroform		0.021
1,1,1-Trichloroethane		0.022
cis-1,2-Dichloropropene	*	0.001
Perchloroethylene	*	0.001
Chlorobenzene	*	0.001
Unknown, RT-33.31, Calculated as PCE	*	0.010
Unknown, RT-38.82, Calculated as PCE	*	0.010

* Denotes "less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Burnett

SwL SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

119904

File No. 3485000

Report No. 38577

Report Date 12-10-86

Report of tests on: Water

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, Pit No.1, Sampled 11-24-86 by Hugh Robotham

	PPM
Benzene	1.60
Toluene	1.74
Ethyl Benzene	0.46
Xylenes	0.67
Other Petroleum Hydrocarbons	10.7

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Bunch

SwL SOUTHWESTERN LABORATORIES

119904

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. 3485000

Report No. 38578

Report Date 12-10-86

Report of tests on: Sludge

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, Pit No.1, Sampled 11-24-86 by Hugh Robotham (Sludge)

		PPM
Vinylidine Chloride	*	0.001
Dichloromethane		0.059
1,1-Dichloroethane		0.010
Chloroform		0.735
1,1,1-Trichloroethane		0.518
cis-1,2-Dichloropropene	*	0.001
Perchloroethylene	*	0.001
Chlorobenzene	*	0.001
Unknown, RT-33.31, Calculated as PCE	*	0.010
Unknown, RT-38.82, Calculated as PCE	*	0.010

* Denotes "less than"

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Gary M. Bunch

SwL SOUTHWESTERN LABORATORIES

Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue (915 - 683-3348) • P.O. Box 2150 • Midland, Texas 79701

119904

File No. 3485000

Report No. 38578

Report Date 12-10-86

Report of tests on: Sludge

Date Received 11-25-86

Client: Reed & Associates

Delivered By R & A

Identification: Eddy County, New Mexico, Loco Hills Water Disposal, Pit No.1, Sampled 11-24-86 by Hugh Robotham (Sludge)

	PPM
Benzene	4.47
Toluene	9.38
Ethyl Benzene	5.53
Xylenes	9.69
Other Petroleum Hydrocarbons	337

Method: SW-846/5020

Technician: REL

Copies 2 cc Reed & Associates

SOUTHWESTERN LABORATORIES

Mary M. Burnett

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

November 7, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501-2088
(505) 827-5800

Mr. Ray Westall
Loco Hills Water Disposal Co.
P. O. Box 68
Loco Hills, New Mexico 88255

Dear Mr. Westall:

Enclosed are analyses of samples taken from two evaporation ponds and from monitor wells #3 and #12. General water chemistry analyses have not yet been received by this office.

Resampling is scheduled for November 24, after which jetting of any monitor wells containing fluid will be requested. I have already contacted Hugh Robotham of Reed & Associates about splitting samples on November 24.

Sincerely,

Jami Bailey

JAMI BAILEY
Field Representative

Enc.

cc: OCD, Artesia

86-1156-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 (505) 841-2570

STATE OF NEW MEXICO
ENVIRONMENT

RECEIVED
OCT 30 1986
OIL CONSERVATION DIVISION
SANTA FE

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 86-1156 A-B
DATE REC. 10-8-86
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5

SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 1 0 2 9 / 1 3 4 5 AR

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:_____ CODE: ___

COUNTY: EDDY ; CITY: LOCO HILLS CODE: ____

LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: LOCO HILLS EVAPORATION POND
(Pond at Separator - NW Pond)

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): J Barley Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, 1 Glass Jugs, and/or _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 11/7/86 Phone or (Letter) _____ Initials AS

ANALYSES PERFORMED

LAB. No.: OR- 1156

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☒ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
benzene	570		
toluene	610		
ethylbenzene	92		
p-xylene	[illegible]	trace	
m-xylene	70		
o-xylene	[illegible]	trace	
[illegible]			
[illegible]			
dichloromethane	approx. 20		
1,1,1-trichloroethane	approx. 20		
* DETECTION LIMIT *	* 20 ppb	+ DETECTION LIMIT +	+

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: Oct 10, 1986 10-21-86. Analyst's signature: [signature]

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: [signature]

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 10 | 8 | 86 LAB NO. WC-4840 USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 9 | 29 | 86
Collection TIME 1345
Collected by — Person/Agency BAILEY/OLSON/OCD

SITE INFORMATION ►
Sample location: LOCO HILLS
Collection site description: EVAP POND - NW Pond at Separator

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088
Attn: David Boyer
Phone: 827-5812

RECEIVED
NOV 24 1986
OIL CONSERVATION DIVISION

Station/well code: SANTA FE
Owner:

SAMPLING CONDITIONS

☒ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) μmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) μmho

Field comments:

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 μmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	>100,000	μmho	11/12
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	7.15		10/27
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	3600	mg/l	10-21
☒ Magnesium (00925)	30451	mg/l	"
☒ Sodium (00930)	58190	mg/l	"
☒ Potassium (00935)	1033	mg/l	"
☒ Bicarbonate (00440)	513	mg/l	10/27
☒ Chloride (00940)	38360	mg/l	10/30
☒ Sulfate (00945)	3320	mg/l	10/30
☒ Total filterable residue (dissolved) (70300)	132,726	mg/l	11/5
☒ Other: CO_3	0		10/27

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst | Date Reported 11 | 12 | 86 | Reviewed by

Laboratory remarks:

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified ✓ 11/25 Phone or letter? Phone Initials CB

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

HEAVY METALS
GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 10 8 86	LAB NO. HM-2008	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 9 29 86	SITE INFORMATION ►	Sample location LOCO HILLS	
Collection TIME 1345		Collection site description EVAP POND - NW Pond at separator	
Collected by — Person/Agency BAILEY/OLSON/OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED DEC 30 1986 OIL CONSERVATION DIVISION SANTA FE

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ **NF:** Whole sample (Non-filtered) ☒ **F:** Filtered in field with 0.45 µmembrane filter ☐ **A:** 2 ml H_2SO_4/L added

☐ **NA:** No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)		µmho	
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: ICAP			
☐ Other: As			
☐ Other: Se			

F, NA		Units	Date analyzed
☐ Calcium (00915)		mg/l	
☐ Magnesium (00925)		mg/l	
☐ Sodium (00930)		mg/l	
☐ Potassium (00935)		mg/l	
☐ Bicarbonate (00440)		mg/l	
☐ Chloride (00940)		mg/l	
☐ Sulfate (00945)		mg/l	
☐ Total filterable residue (dissolved) (70300)		mg/l	
☐ Other:			

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	12 22 86	JPA

Laboratory remarks digested

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 1/19/87 Phone or (letter?) _____ Initials JB

Lab Number: MM 2008 Sample Code: Evap Pond

Date Submitted: 10/8/86 Date Analyzed: 10/20/86

By: Bailey/Olson Reviewed By: Jim Ashley

Date Reported: 12/22/86

Element	ICAP VALUE (MG/L)	AA VALUE (MG/L)
Aluminum	<0.1	
Barium	0.3	
Berylium	<0.1	
Boron	28.	
Cadmium	<0.1	
Calcium	3000.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	0.8	
Lead	<0.1	
Magnesium	1250.	
Manganese	0.60	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	7.1	
Silver	<0.1	
Strontium	65.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.23
Selenium		<0.05 matrix interference.
Mercury		

86-1155-C

754 WPH

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 86-1155 A-B
DATE REC. 10-8-86
PRIORITY

PHONE(S): 827-5812
USER CODE: 82235
SUBMITTER: David Boyer
CODE: 260

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 860929140 ~~00~~ 08

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____

COUNTY: EDDY ; CITY: LOCO HILLS CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 17S+30E+1631 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: LOCO HILLS EVAP ~~POND~~ - ~~Sample~~
(RAINWATER) South Pond - currently unused

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): _____ Method of Shipment to the Lab: Hand carried
This form accompanies 2 Septum Vials, 1 Glass Jugs, and/or _____ _____
Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 11-7-86 Phone or (Letter) _____ Initials JB

ANALYSES PERFORMED

LAB. No.: OR- 1155

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
halogenated purgeables	ND		
benzene	280		
toluene	460		
ethylbenzene	75		
p-xylene	TR < 20		
m-xylene	63		
o-xylene	TR < 20		
* DETECTION LIMIT * *	20 ppb	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Two other compounds were detected by the aromatic screen that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: Oct 10, 1986. Analyst's signature: M K Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Meyerhen

New Mexico Health and E[illegible]ment Department
SCIENTIFIC LABORATOR[illegible]VISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 10 | 8 | 86 LAB NO. WC-4839 USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 9 | 29 | 86
Collection TIME 1400
Collected by — Person/Agency BAILEY / OLSON NMOCD

SITE INFORMATION ►

Sample location LOCO HILLS
Collection site description EVAP POND (RAIN WATER)
South Pond - Currently unused

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088
Attn: David Boyer
Phone: 827-5812

RECEIVED
NOV 24 1986
OIL CONSERVATION DIVISION

Station/well code
Owner

SAMPLING CONDITIONS

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	80,750	µmho	11/12
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	7.38		10/27
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	1800	mg/l	10-21
☒ Magnesium (00925)	1868	mg/l	"
☒ Sodium (00930)	36700	mg/l	"
☒ Potassium (00935)	663	mg/l	"
☒ Bicarbonate (00440)	454	mg/l	10/27
☒ Chloride (00940)	53540	mg/l	10/30
☒ Sulfate (00945)	543	mg/l	11/7
☒ Total filterable residue (dissolved) (70300)	85454	mg/l	11/5
☒ Other: CO_3	0		10/27

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst | Date Reported 11 | 13 | 86 | Reviewed by

Laboratory remarks

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 11/25 Phone or letter? Phone Initials GB

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

HEAVY METALS

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 10 8 86	LAB NO. HM-2007	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 9 29 86	SITE INFORM-ATION ►	Sample location LOCO HILLS	
Collection TIME 1400		Collection site description EVAP POND (RAINWATER)	
Collected by — Person/Agency BAILEY/OLSON/OCD		South pond currently unused	

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg., PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED
DEC 30 1986
OIL CONSERVATION DIVISION
SANTA FE

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1	☐ NF: Whole sample (Non-filtered)	☒ F: Filtered in field with 0.45 µmembrane filter	☐ A: 2 ml H_2SO_4/L added
☐ NA: No acid added	☐ Other-*specify:*	☐ A: 5ml conc. HNO_3 added	☒ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA	Units	Date analyzed	F, NA	Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	µmho		☐ Calcium (00915)	mg/l	
☐ Total non-filterable residue (suspended) (00530)	mg/l		☐ Magnesium (00925)	mg/l	
☒ Other: ICAP			☐ Sodium (00930)	mg/l	
☒ Other: AS			☐ Potassium (00935)	mg/l	
☒ Other: Se			☐ Bicarbonate (00440)	mg/l	
			☐ Chloride (00940)	mg/l	
			☐ Sulfate (00945)	mg/l	
			☐ Total filterable residue (dissolved) (70300)	mg/l	
			☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed	F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l		☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N total (00610)	mg/l		☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l		☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l		☐ Other:		
☐ Total organic carbon ( )	mg/l				
☐ Other:					
☐ Other:					

Analyst	Date Reported	Reviewed by
	12 22 86	Jim Ashley

Laboratory remarks digested added 5 mls HNO_3 12/9/86

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 1/9/87 Phone or (letter)? _____ Initials JB

Lab Number: H 2007 Sample C e: Evap Pond

Date Submitted: 10/8/86 Date Analyzed: 10/20/86

By: Bailey / Olson Reviewed By: Jim Ashley

Date Reported: 12/22/86

Element	ICAP VALUE(MG/L)	AA VALUE(MG/L)
Aluminum	0.3	
Barium	0.5	
Berylium	<0.1	
Boron	20.	
Cadmium	<0.1	
Calcium	1650.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	1.0	
Lead	<0.1	
Magnesium	850.	
Manganese	0.22	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	7.5	
Silver	<0.1	
Strontium	47.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.28
Selenium		<0.05 matrix interference.
Mercury		

86-1157-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
ENVIRONMENT

RECEIVED
OCT 30 1986
OIL CONSERVATION DIVISION
SANTA FE

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 86-1157 A-B
DATE REC. 10-8-86
PRIORITY

PHONE(S): 827-5812
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0

SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 0 9 2 9 1 3 0 0

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:_____ CODE: _____

COUNTY: EDDY ; CITY: LOCO HILLS CODE: _____

LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: MONITOR WELL 3 ATW 185'
LOCO HILLS

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): _____ Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, 1 Glass Jugs, and/or _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 11-7-86 Phone or (Letter) _____ Initials _____

ANALYSES PERFORMED

LAB. No.: OR- 1157

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☒ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
benzene	approx. 5		
toluene	approx. 5		
dichloromethane	TR		
2 ppb * DETECTION LIMIT *	*	+ DETECTION LIMIT +	+

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Four compounds were detected by the aromatic screen and GC/MS that appear to be iodinated hydrocarbons. Four other compounds were also detected in trace amounts that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 10-10-86, 10-21-86. Analyst's signature: _____

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: _____

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 10 | 8 | 86 LAB NO. WC-4836 USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 9 | 29 | 86

Collection TIME 1,300

SITE INFORMATION ►

Sample location: LOCO HILLS

Collected by — Person/Agency: BAILEY / OLSON / OCD

Collection site description: MW 3

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED
NOV 24 1986
OIL CONSERVATION DIVISION

Station/well code: SANTA FE

Owner:

SAMPLING CONDITIONS

☒ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level DTW 185'	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) μmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) μmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 μmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:* ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	85,366	μmho	11/12
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	7.19		10/27
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	8400	mg/l	10-21
☒ Magnesium (00925)	4440	mg/l	"
☒ Sodium (00930)	23000	mg/l	"
☒ Potassium (00935)	1000	mg/l	"
☒ Bicarbonate (00440)	134	mg/l	10/27
☒ Chloride (00940)	56520	mg/l	10/30
☒ Sulfate (00945)	280	mg/l	10/30
☒ Total filterable residue (dissolved) (70300)	96486	mg/l	11/5
☒ Other: CO_3	0		10/27

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4		
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst | Date Reported 11 | 12 | 86 | Reviewed by

Laboratory remarks

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 11/25 Phone or letter? Phone Initials

86-1158-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

STATE OF NEW MEXICO
HEALTH ENVIRONMENT

RECEIVED
OCT 30 1986
OIL CONSERVATION DIVISION
SANTA FE

REPORT TO: David Boyer
N.M. Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR-86-1158-A-B
DATE REC. 10-8-86
PRIORITY
PHONE(S): 827-5812
USER CODE: 8 2 2 3 5
SUBMITTER: David Boyer
CODE: 2 6 0
SAMPLE COLLECTION CODE: (YYMMDDHHMMIII) 8 6 0 9 2 9 1 1 3 0 GB
SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____ CODE: _____
COUNTY: EDDY ; CITY: LOCO HILLS CODE: _____
LOCATION CODE: (Township-Range-Section-Tracts) 1 7 S + 3 0 E + 1 6 + 3 3 1 (10N06E24342)

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Purgeables (1-3 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: MONITOR WELL 12 DTW 206.6'
LOCO HILLS

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Jamie Bailey Method of Shipment to the Lab: Hand carried

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____

Samples were preserved as follows:

- [X] NP: No Preservation;- Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

For OCD Use: Date Owner Notified 11/7/86 Phone or Letter? _____ Initials GB

ANALYSES PERFORMED

LAB. No.: OR- 1158

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☒ (754) Aromatic & Halogenated Purgeables
- ☒ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☐ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☐ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
benzene	approx 5		
toluene	approx. 5		
dichloromethane	TR		
* DETECTION LIMIT * ✱	2 ppb	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: Four compounds were detected by the aromatic screen and GC/MS that appear to be iodinated hydrocarbons. Four other compounds were also detected ~~that were not identified~~ in trace amounts that were not identified.

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 10-10-86, 10-16-86. Analyst's signature: M Finney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: L Meyerhein

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 11 0 | 8 | 86	LAB NO. WC-4835	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 9 | 29 | 86	SITE INFORM-ATION ►	Sample location LOCO HILLS	
Collection TIME 1230		Collection site description MW 12	
Collected by — Person/Agency BAILEY / OLSON / OCD			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87504-2088

Attn: David Boyer

Phone: 827-5812

RECEIVED
NOV 24 1986
OIL CONSERVATION DIVISION
SANTA FE

Station/ well code

Owner

SAMPLING CONDITIONS

☒ Bailed ☐ Dipped ☐ Pump ☐ Tap	Water level DTW 206.6	Discharge	Sample type
pH (00400)	Conductivity (Uncorrected) µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☐ NF: Whole sample (Non-filtered) ☒ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-specify: ☐ A: 5ml conc. HNO_3 added ☐ A: 4ml fuming HNO_3 added

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	69,092	µmho	11/12
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: Lab pH	7.05		10/27
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	7472	mg/l	10/21
☒ Magnesium (00925)	4372	mg/l	"
☒ Sodium (00930)	12800	mg/l	"
☒ Potassium (00935)	560	mg/l	"
☒ Bicarbonate (00440)	137	mg/l	10/27
☒ Chloride (00940)	45900	mg/l	10/30
☒ Sulfate (00945)	374	mg/l	11/7
☒ Total filterable residue (dissolved) (70300)	77588	mg/l	11/5
☒ Other: CO_3	0		10/27

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	11 | 12 | 86	CD

Laboratory remarks

SLD 726 (12/84)

FOR OCD USE -- Date Owner Notified 11/25 Phone or letter? Phone Initials CB

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 8:45 AM	Date 11/5/86

Originating Party	Other Parties
Hugh Robothom - Reed + Assoc.	Jami Bailey

Subject: Loco Hills Analyses from Samples taken 9/24/86

Discussion: Robothams reported the following results of analyses by Southwestern Lab (Midland, TX):

MW3: Chloroform .005 ppm
cis 1,2 dichloropropene .077
perchloroethylene .002
Chlorobenzene .006

MW12: Benzene .01 ppm
Toluene .01
Ethylbenzene <.01
Chloroform .025
cis 1,2 dichloropropene .073
Chlorobenzene .012
perchloroethylene .018

Evap. Pond: Benzene .89
Toluene .79 ppm
Ethylbenzene .26
Xylene .4
Pyridine .016
1,1 dichloroethane .004
Chloroform .006
1,1,1 trichloroethane .064
perchloroethylene .001

Conclusions or Agreements: Another sampling trip is scheduled for Nov. 24, + we'll again split samples with Reed + Assoc.

Distribution: Roger Anderson File

Signed: Jami Bailey

STATE OF NEW MEXICO
ENVIRONMENT

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

86-52-C

REPORT TO: DAVID G. BOYER
PLEASE PRINT
NEW MEXICO OIL CONSERVATION DIV.
P.O. BOX 2088
SANTA FE, NM 87501

S.L.D. No.: OR-52-1,5
DATE REC. :
SLD PRIORITY #:

PHONE(S): 827-5812

USER CODE: 8|2|2|3|5

SUBMITTER: David Boyer

SUBMITTER CODE:

SAMPLE TYPE: WATER [X], SOIL [ ], OTHER

SAMPLE TYPE CODE:

COLLECTED: 86/01/09 (DATE) - 15:30 (TIME) BY DGB (INITIALS)

CODE: Y Y M M D D H H M M I I I

SOURCE: Settling Pond

CODE: AQUIFER DEPTH

NEAREST CITY: Loco Hills

CODE:

LOCATION: Loco Hills Disposal

CODE: TOWNSHIP RANGE SECTION TRACTS

pH=_____; Conductivity= 855 scale umho/cm at _____ °C; Chlorine Residual=_____

Dissolved Oxygen=_____ mg/l; Alkalinity=_____; Flow Rate=_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Final East Disposal Pond, N. Side. Dipped

I certify that the statements in this block accurately reflect the results of my field analyses, observations and activities. David G Boyer

Method of shipment to the Laboratory Hand Carried

This form accompanies ___Septum Vials, ___Glass Jugs, _____

Containers are marked as follows to indicate preservation:

- [ ] NP: No preservation; sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (not frozen).
- [ ] P-$Na_2S_2O_3$; Sample preserved with $Na_2S_2O_3$ to remove chlorine residual.

I (we) certify that this sample was transferred from _____ to _____ at (location) _____ on __/__/__ - __:__ (DATE AND TIME) and that the statements in this block are correct.

Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

(we) certify that this sample was transferred from _____ to _____ at (location) _____ on __/__/__ - __:__ (DATE AND TIME) and that the statements in this block are correct.

Evidentiary Seals: Not Sealed [ ] Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

ANALYSES REQUESTED

LAB. No.: ORG- 52

PLEASE CHECK THE APPROPRIATE BOXES BELOW TO INDICATE THE TYPE OF ANALYTICAL SCREENS REQUIRED. WHENEVER POSSIBLE LIST SPECIFIC COMPOUNDS SUSPECTED OR REQUIRED.

QUALITATIVE	QUANTITATIVE	PURGEABLE SCREENS
		ALIPHATIC HYDROCARBON SCREEN
X	X	AROMATIC HYDROCARBON SCREEN
X	X	HALOGENATED HYDROCARBON SCREEN
		GAS CHROMATOGRAPH/MASS SPECTROMETER
		SPECIFIC COMPOUNDS

QUALITATIVE	QUANTITATIVE	EXTRACTABLE SCREENS
		ALIPHATIC HYDROCARBONS
		CHLORINATED HYDROCARBON PESTICIDES
		CHLOROPHENOXY ACID HERBICIDES
		HYDROCARBON FUEL SCREEN
		ORGANOPHOSPHATE PESTICIDES
		POLYCHLORINATED BIPHENYLS (PCB's)
		POLYNUCLEAR AROMATIC HYDROCARBONS
		TRIAZINE HERBICIDES
		SPECIFIC COMPOUNDS

REMARKS:

ANALYTICAL RESULTS

COMPOUND	[PPB]	COMPOUND	[PPB]
halo. purg. screen ⊗	none detected		
benzene *	450		
toluene *	380		
ethylbenzene *	26		
p-xylene *	5		
m-xylene *	19		
o-xylene *	7	⊗ DETECTION LIMIT	60 ppb
		* DETECTION LIMIT	5 ppb

REMARKS:

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ___ NO X. Seal(s) broken by: _____ date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements in this block and the analytical data on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 4 Feb & 10 Feb 86. Analyst's signature: R Tunney

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block. Reviewers signature: K Meyerhoff

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

NN

GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS

DATE RECEIVED 1/27/86	LAB NO. WC 239	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 86/01/09	SITE INFORM-ATION ►	Sample location Loco Hills Disposal Company	
Collection TIME 1530		Collection site description North Side of Final (East) Settling Pond	
Collected by — Person/Agency Boyer/Bailey OCD			

SEND FINAL REPORT TO ►
ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87501
Attn: David Boyer

OIL CONSERVATION DIVISION
SANTA FE

Station/ well code
Owner

SAMPLING CONDITIONS

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level —	Discharge —	Sample type GRAB
pH (00400) —	Conductivity (Uncorrected) off scale µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments: Black color, little or any sheen

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☒ NF: Whole sample (Non-filtered) ☐ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:*

ANALYTICAL RESULTS from SAMPLES

NF, NA		Units	Date analyzed
☒ Conductivity (Corrected) 25°C (00095)	7150,000	µmho	2/24
☐ Total non-filterable residue (suspended) (00530)		mg/l	
☒ Other: pH (Lab)	7.64		1/29
☐ Other:			
☐ Other:			

F, NA		Units	Date analyzed
☒ Calcium (00915)	3457	mg/l	1/27
☒ Magnesium (00925)	1,697	mg/l	"
☒ Sodium (00930)	67850	mg/l	"
☒ Potassium (00935)	1443	mg/l	"
☒ Bicarbonate (00440)	651.8	mg/l	1/29
☒ Chloride (00940)	85253	mg/l	2/6
☒ Sulfate (00945)	2633	mg/l	2/5
☒ Total filterable residue (dissolved) (70300)	142,928	mg/l	2/24
☒ Other: CO_3	0.0		1/29

NF, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N total (00630)		mg/l	
☐ Ammonia-N total (00610)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Chemical oxygen demand (00340)		mg/l	
☐ Total organic carbon ( )		mg/l	
☐ Other:			
☐ Other:			

F, A-H_2SO_4			
☐ Nitrate-N +, Nitrate-N dissolved (00631)		mg/l	
☐ Ammonia-N dissolved (00608)		mg/l	
☐ Total Kjeldahl-N ( )		mg/l	
☐ Other:			

Analyst	Date Reported	Reviewed by
	2/25/86	

Laboratory remarks

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

NN Heavy Metal Analyses

~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~

DATE RECEIVED 1 27 86	LAB NO. HM 112	USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235	
Collection DATE 26 01 09	SITE INFORM-ATION ►	Sample location Loco Hills Disposal Company	
Collection TIME 1530		Collection site description North side of Funiel (East of Long Road)	
Collected by — Person/Agency Boyer/Bailey			

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87501

Attn: David Boyer

Station/ well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☐ Pump ☒ Dipped ☐ Tap	Water level —	Discharge —	Sample type Grab
pH (00400)	Conductivity (Uncorrected) Off Scale µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments: Black color, little oily sheen

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted 1

☒ NF: Whole sample (Non-filtered) ☐ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:*

ANALYTICAL RESULTS from SAMPLES

NF, NA Heavy Metal	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP SCAN		
☐ Other:		
☐ Other:		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4	Units	Date analyzed
☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst | Date Reported 2 10 86 | Reviewed by Jim Ashley

Laboratory remarks: Added 3ml HNO3 — NFF 1/27/86 Digested 2/4

SLD 726 (12/84) *DISTRIBUTION:* **WHITE** — EID, GW&HW Bureau **CANARY** — WS System **PINK** — EID Local Office **GOLDENROD** — SLD

Lab Number: #[redacted]112

Sample [redacted]de: Loco Hills Disposal Co.

Date Submitted: 1/27/86

Date Analyzed: 2/5/86

By: Boyer/Bailey

Reviewed By: Jim Ashby

Date Reported: 2/10/86

Element	ICAP VALUE(MG/L)	AA VALUE(MG/L)
Aluminum	<0.1	
Barium	0.3	
Berylium	<0.1	
Boron	33.	
Cadmium	<0.1	
Calcium	3300.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	<0.1	
Lead	<0.1	
Magnesium	1700.	
Manganese	0.76	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	5.2	
Silver	<0.1	
Strontium	95.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		
Selenium		
Mercury		

* Very high Sodium also.

New Mexico Health and Environment Department
SCIENTIFIC LABORATORY DIVISION
700 Camino de Salud NE
Albuquerque, NM 87106 — (505) 841-2555

NN Heavy Metal Analyses
~~GENERAL WATER CHEMISTRY and NITROGEN ANALYSIS~~

DATE RECEIVED 1 27 86 | LAB NO. HM 112 | USER CODE ☐ 59300 ☐ 59600 ☒ OTHER: 82235

Collection DATE 26 01 09

Collection TIME 1530

SITE INFORMATION ►

Sample location: Loco Hills Disposal Company

Collection site description: North side of Field (East) settling pond

Collected by — Person/Agency: Boyer/Bailey

SEND FINAL REPORT TO ►

ENVIRONMENTAL BUREAU
NM OIL CONSERVATION DIVISION
State Land Office Bldg, PO Box 2088
Santa Fe, NM 87501

Attn: David Boyer

Station/well code

Owner

SAMPLING CONDITIONS

☐ Bailed ☒ Dipped ☐ Pump ☐ Tap	Water level: —	Discharge: —	Sample type: Grab
pH (00400)	Conductivity (Uncorrected): OFF Scale µmho	Water Temp. (00010) °C	Conductivity at 25°C (00094) µmho

Field comments: Black color, little oily sheen

SAMPLE FIELD TREATMENT — *Check proper boxes*

No. of samples submitted: 1

☒ NF: Whole sample (Non-filtered) ☐ F: Filtered in field with 0.45 µmembrane filter ☐ A: 2 ml H_2SO_4/L added

☒ NA: No acid added ☐ Other-*specify:*

ANALYTICAL RESULTS from SAMPLES

NF, NA — Heavy Metal	Units	Date analyzed
☐ Conductivity (Corrected) 25°C (00095)	µmho	
☐ Total non-filterable residue (suspended) (00530)	mg/l	
☒ Other: ICAP SCAN		
☐ Other: As		
☐ Other: Hg		

F, NA	Units	Date analyzed
☐ Calcium (00915)	mg/l	
☐ Magnesium (00925)	mg/l	
☐ Sodium (00930)	mg/l	
☐ Potassium (00935)	mg/l	
☐ Bicarbonate (00440)	mg/l	
☐ Chloride (00940)	mg/l	
☐ Sulfate (00945)	mg/l	
☐ Total filterable residue (dissolved) (70300)	mg/l	
☐ Other:		

NF, A-H_2SO_4

☐ Nitrate-N +, Nitrate-N total (00630)	mg/l	
☐ Ammonia-N total (00610)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Total organic carbon ( )	mg/l	
☐ Other:		
☐ Other:		

F, A-H_2SO_4

☐ Nitrate-N +, Nitrate-N dissolved (00631)	mg/l	
☐ Ammonia-N dissolved (00608)	mg/l	
☐ Total Kjeldahl-N ( )	mg/l	
☐ Other:		

Analyst | Date Reported: 2 10 86 | Reviewed by: JTA

Laboratory remarks: Added 3ml HNO3 — NFF 1/27/86 Digested 2/4

SLD 726 (12/84) *DISTRIBUTION:* WHITE — EID, GW&HW Bureau CANARY — WS System PINK — EID Local Office GOLDENROD — SLD

Lab Number: HM 112

Sample Code: Loco Hills Disposal Co.

Date Submitted: 1/27/86

Date Analyzed: 2/5/86

By: Boyer/Bailey

Reviewed By: JJA

Date Reported: 2/10/86

Element	ICAP VALUE(MG/L)	AA VALUE(MG/L)
Aluminum	<0.1	
Barium	0.3	
Berylium	<0.1	
Boron	33.	
Cadmium	<0.1	
Calcium	3300.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	<0.1	
Lead	<0.1	
Magnesium	1700.	
Manganese	0.76	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	5.2	
Silver	<0.1	
Strontium	95.	
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		0.47
Selenium		
Mercury		<0.0005

subsequent Request. JJA. Reported 5/2/86

* Very high Sodium also.

Feb. 24, 1986

Dear Mr. Boyer,

Enclosed please find a copy of sample # 112 for heavy metals results.
This is simply the confirmation of Strontium by flame AA.

Jeanne Barrera

Lab Number: [redacted] #M 112 Sample Code: [redacted] Loco Hills Disposal Co.

Date Submitted: 1/27/86 Date Analyzed: 2/5/86

By: Boyer Bailey Reviewed By: JJA

Date Reported: 2/10/86

Element	ICAP VALUE(MG/L)	AA VALUE(MG/L)
Aluminum	<0.1	
Barium	0.3	
Berylium	<0.1	
Boron	33.	
Cadmium	<0.1	
Calcium	3300.	
Chromium	<0.1	
Cobalt	<0.1	
Copper	<0.1	
Iron	<0.1	
Lead	<0.1	
Magnesium	1700.	
Manganese	0.76	
Molybdenum	<0.1	
Nickel	<0.1	
Silicon	5.2	
Silver	<0.1	
Strontium	95.	93. by AA flame 2/21/86
Tin	<0.1	
Vanadium	<0.1	
Zinc	<0.1	
Arsenic		
Selenium		
Mercury		

* Very high Sodium also.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
(505) 748-1283

August 20, 1986

Mr. Richard L. Stamets, Director
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Stamets:

This letter is in regard to the recent discovery of water in some of the monitor wells around the Loco Hills Salt Water Disposal facility. Attached is a plat of the facility with the location, depth, and water status of the monitor wells.

Until July, 1986, no water had been detected in any of the wells. However, on my visit of July 7, 1986, water was found in MH-1 and MH-12. These were checked at 4000 and 8000 mg/l of chlorides respectively. Since the area had just received 8 inches of rain in the preceeding 10 days, it was thought that the water was attributable to this.

On my next visit of August 7, 1986, water was found in MH-1, MH-12, and MH-3 with chloride readings of 21,000 mg/l, 39,000 mg/l and 55,000 mg/l, respectively. All other holes were dry. A sample of water from the pits checked out at 79,000 mg/l chlorides.

As you can see on the plat, MH-1, MH-12, and MH-3 are all deep (Rustler) wells. Using a crude measuring device, we came up with values of 20' of water in MH-1, 60' in MH-12 and 40' in MH-3. Since these wells only penetrate the Rustler from 2 to 5 feet, it's unlikely this water is from the Rustler. Since the shallow wells are all dry, it is my opinion that the fluid is percolating down to the deep clay at approximately 150 feet and then moving horizontally into the deep wells.

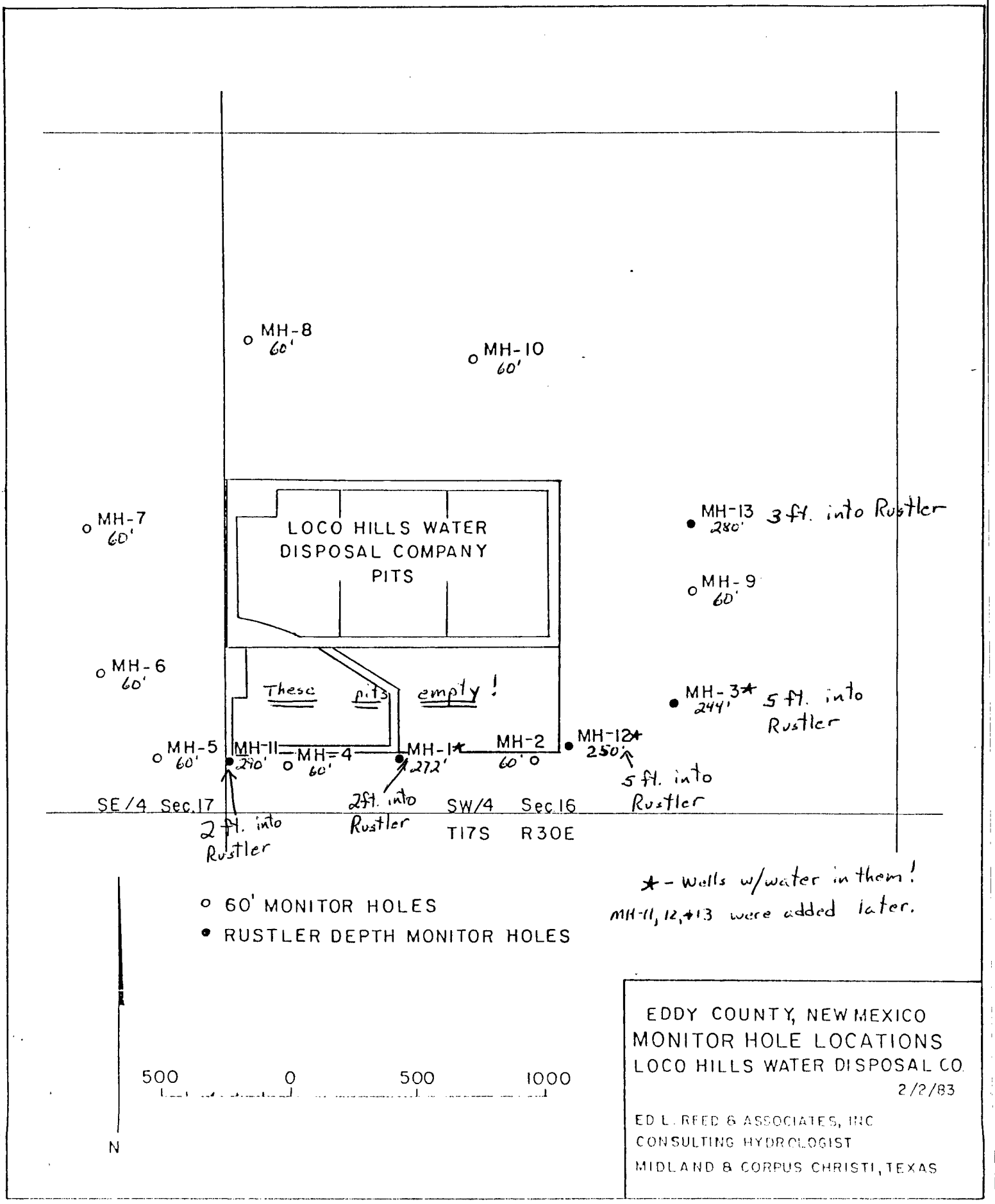
Should you need any additional information, I will be glad to assist in any way possible.

Sincerely,

Darrell Moore

Darrell G. Moore
Geologist

DGM/acs


MH-8
60'
MH-10
60'
MH-7
60'
LOCO HILLS WATER
DISPOSAL COMPANY
PITS
MH-13
280'
3 ft. into Rustler
MH-9
60'
MH-6
60'
These
pits
empty!
MH-3*
244'
5 ft. into
Rustler
MH-5
60'
MH-11
280'
MH-4
60'
MH-1*
272'
MH-2
60'
MH-12*
250'
5 ft. into
Rustler
2 ft. into
Rustler
2ft. into
Rustler
SE/4 Sec. 17
SW/4 Sec. 16
T17S R30E
* - Wells w/water in them!
MH-11, 12, +13 were added later.
60' MONITOR HOLES
RUSTLER DEPTH MONITOR HOLES
500
0
500
1000
N
EDDY COUNTY, NEW MEXICO
MONITOR HOLE LOCATIONS
LOCO HILLS WATER DISPOSAL CO.
2/2/83
ED L. REED & ASSOCIATES, INC
CONSULTING HYDROLOGIST
MIDLAND & CORPUS CHRISTI, TEXAS

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

January 16, 1986

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in December, 1985 and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
President

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

August 15, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in July, 1985 and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

July 14, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in June, 1985 and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

June 14, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in May, 1985 and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

May 14, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in April, 1985 and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

April 15, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in March, 1985 and there is no fluid of any kind.

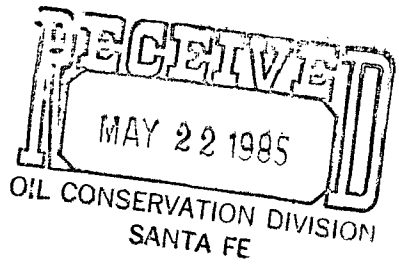
Yours Truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255



March 15, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in February, 1985 and there is no fluid of any kind.

Yours Truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

February 14, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

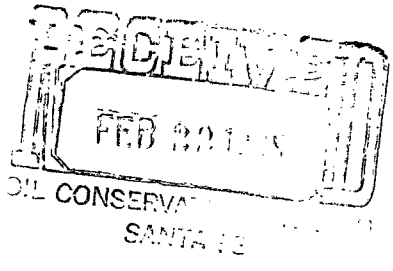
We have checked the monitor wells in January, 1985 and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl



LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

January 15, 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in December and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

DEC 31 1984

RECEIVED

December 16. 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in November and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

DEC 31 1984

November 16, 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in October and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

October 12, 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in September and there is no fluid of any kind.

Yours truly,

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

September 14, 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked our monitor wells in August and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

August 14, 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in July and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

July 11, 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in June and there is no fluid of any kind.

Yours truly,

Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

June 3, 1984

Oil Conservation Divison
P. O. Box 2088
Santa Fe, N. M. 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in May and there is no fluid of any kind.

Yours truly,

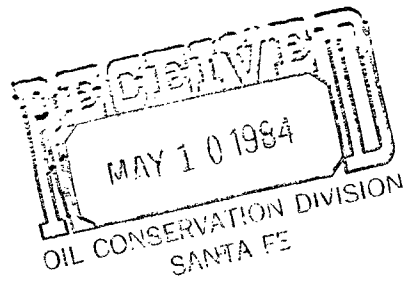
Ray Westall

Ray Westall
Director

RW/wl

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

May 8, 1984



Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in April and there is no fluid of any kind.

Yours Truly,

Ray Westall

Ray Westall
Director

RW/wl

HUGHES HOT OIL SERVICE
P. O. BOX 68 / (505) 677-3113
LOCO HILLS, NEW MEXICO 88255

April 16, 1984

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Loco Hills Water Disposal

Gentlemen:

We have checked the monitor wells in March and there is no fluid of any kind.

Yours Truly

Ray Westall

Ray Westall
Director

RW/wl