

NM1 - 4

GENERAL CORRESPONDENCE

YEAR(S):
1997-1999

CHECKLIST FOR RULE 711 PERMIT APPLICATION COMPLETENESS

1. ✓ FACILITY TYPE *Commercial P. Water Evaporation
Cent Land Farm.*
2. ✓ OPERATOR NAME, ADDRESS, CONTACT PERSON AND PHONE# *James R. Maloney V. Pres.*
3. ✓ LEGAL LOCATION *SW1/4SW1/4, S16, T17S, R30E* *Ray Westall President*
4. ✓ MODIFICATION OR NEW FACILITY *Renewal* *Randall Harris / Geologist
Ph. (505) 677-2370
Ph. (505) 365-2237*
5. ✓ NAME AND ADDRESS OF THE FACILITY SITE LANDOWNER *State land lease*
6. ✓ NAME AND ADDRESS OF ALL LANDOWNERS OF RECORD WITHIN ONE MILE OF FACILITY SITE.
7. *NA* NOTIFICATION OF ALL LANDOWNERS OF RECORD WITHIN ONE MILE OF FACILITY SITE RETURN RECEIPT SUBMITTED
8. *NA* PUBLIC NOTICE IN TWO NEWSPAPERS ORIGINAL AFFIDAVIT OF PUBLICATION SUBMITTED.
9. ✓ FACILITY DESCRIPTION WITH DIAGRAMS INDICATING ALL PERTINENT FEATURES (FENCES, BERM, ROADS, PITS, DIKES, TANKS, MONITORING WELLS) *New map*
10. ✓ CONSTRUCTION INSTALLATION DESIGNS FOR PITS, PONDS, LEAK-DETECTION SYSTEMS, AERATION SYSTEMS, ENHANCED EVAPORATION SYSTEMS, WASTE TREATING SYSTEMS, SOLIDIFICATION SYSTEMS, SECURITY SYSTEMS, AND LANDFARM FACILITIES. *New map*
11. ✓ GEOLOGICAL/HYDROLOGICAL EVIDENCE THAT FACILITY WILL NOT IMPACT *on file* GROUNDWATER. DEPTH TO AND QUALITY OF GROUNDWATER INCLUDED.
12. ✓ CONTINGENCY PLAN FOR REPORTING AND CLEAN-UP OF SPILLS OR RELEASES.
13. H2S CONTINGENCY PLAN
14. ✓ ROUTINE INSPECTION AND MAINTENANCE PLAN TO ENSURE PERMIT COMPLIANCE
15. ✓ CLOSURE PLAN
16. ✓ CLOSURE COST ESTIMATE *LHWd Dirt work Est. only
85,947.00 + Tax 4,512.21*
17. BONDING AMOUNT *250,000* # TYPE DATE APPROVED
18. ANY OTHER INFORMATION AS NECESSARY TO DEMONSTRATE COMPLIANCE WITH ANY OTHER OCD RULES REGULATIONS AND ORDERS.
19. ✓ CERTIFICATION SIGNATURE AND DATE ON PERMIT

Martyn & Kuhl 5-5-99

Myk

1. Ground water monitoring of the following monitoring wells must be performed quarterly and records of the date, inspector and status of the monitor well must be maintained. Annual reports must be furnished to the OCD Santa Fe office in database form and must include a graphical plot showing water level and conductivity in each well for all preceding quarters.

MH-1, MH-2, MH-3, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9, MH-10, MH-11, MH-12 and MH-13

NOTE: Monitor wells listed in plain type are completed to 60 feet below ground surface (bgs) within the Santa Rosa Formation and screened within 4 feet of the surface. Monitor wells listed in **bold** type are completed within the top of the Rustler Formation and screened from total depth to within 4 feet of the surface. The top of the Rustler Formation was encountered at depths ranging from 239 feet to 288 feet bgs. Each monitor well is cemented from 4 feet to the surface.

The evaporation ponds were expected to leak. Waste water was expected to migrate vertically to the Rustler Formation and then follow the local and regional dip of the Rustler to the southeast and south. Waste water was not expected to migrate horizontally within the Santa Rosa Formation.

2. If fluid is present in the Santa Rosa Formation 60 foot monitor wells (MH-2, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9 and MH-10) the fluids in the pond and monitor wells must be analyzed for conductivity. If the pond and monitor well fluid conductivity analyses are similar the OCD Santa Fe and appropriate District offices must be notified within 48 hours. Within 72 hours of discovery, the permittee will submit a plan to the OCD Santa Fe and appropriate District offices for review and approval that describes what procedures will be taken to investigate the lateral extent of extent of the waste water plume.
3. If fluid is present in the Rustler Formation monitor wells (MH-1, MH-3, MH-11, MH-12, and MH-13) the fluids in the pond and monitor wells must be analyzed for conductivity. The Pond and monitor well fluid analysis will be recorded for the annual report to be furnished to the OCD.

LOCO HILLS WATER DISPOSAL PLANT

BUSINESS LEASE BL-1149

P.O. BOX 68

LOCO HILLS, NM 88255

1 MILE NORTH ON EDDY COUNTY ROAD

SEC. 16 TWP. 17S RGE 30E ACRES 40

BEFORE EXAMINER STOP
OIL CONSULVATION DIV.

EXHIBIT NO. 1

CASE NO. 8855

PIT 45'x 145'

FOR SKIM OIL

PIT 45'x 145'

FOR SKIM OIL

WATER LINE
GAS LINE

ALL WATER TANKS
FIBER GLASS
ALL OIL TANKS
ALL STEEL

500 BBL
OIL
HOLDING
TANK

500 BBL
OIL
HOLDING
TANK

300 BBL
OIL
SKIM TANK

300 BBL
WATER
TANK

300 BBL
WATER
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

1000 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH COILS-
INSULATION

300 BBL
OIL
HOLDING
TANK

1000 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH
INSULATION

500 BBL
OIL SKIM
TANK

500 BBL
TREATING
WITH
INSULATION

500 BBL
OIL SKIM
TANK

OFFICE

CONTROL
BUILDING

BROILER
300 CHICKS

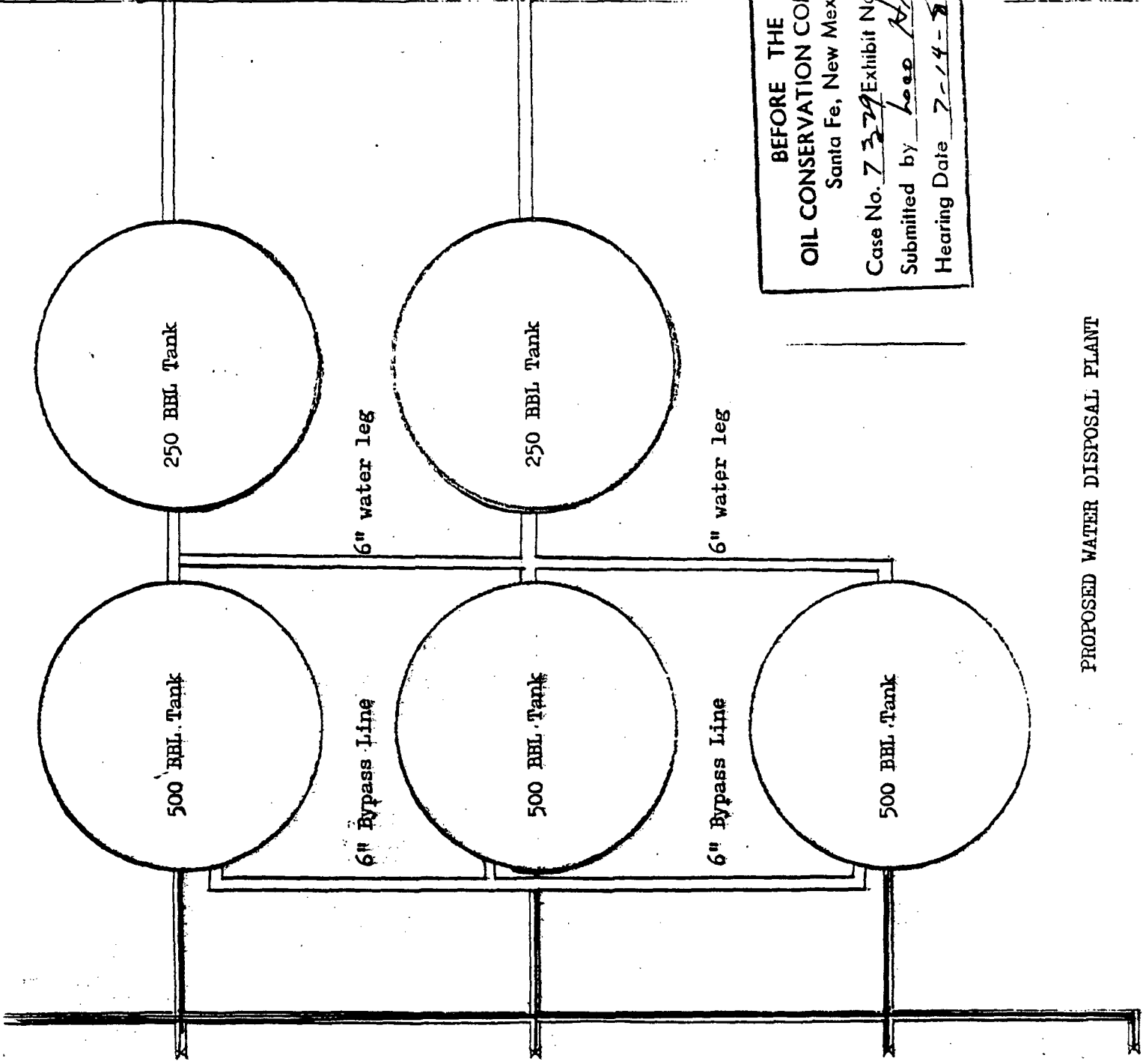
4" Load Line

4" Load Line

4" Load Line

4" Load Line

4" Load Line



SKIM PIT

BEFORE THE
OIL CONSERVATION COMMISSION

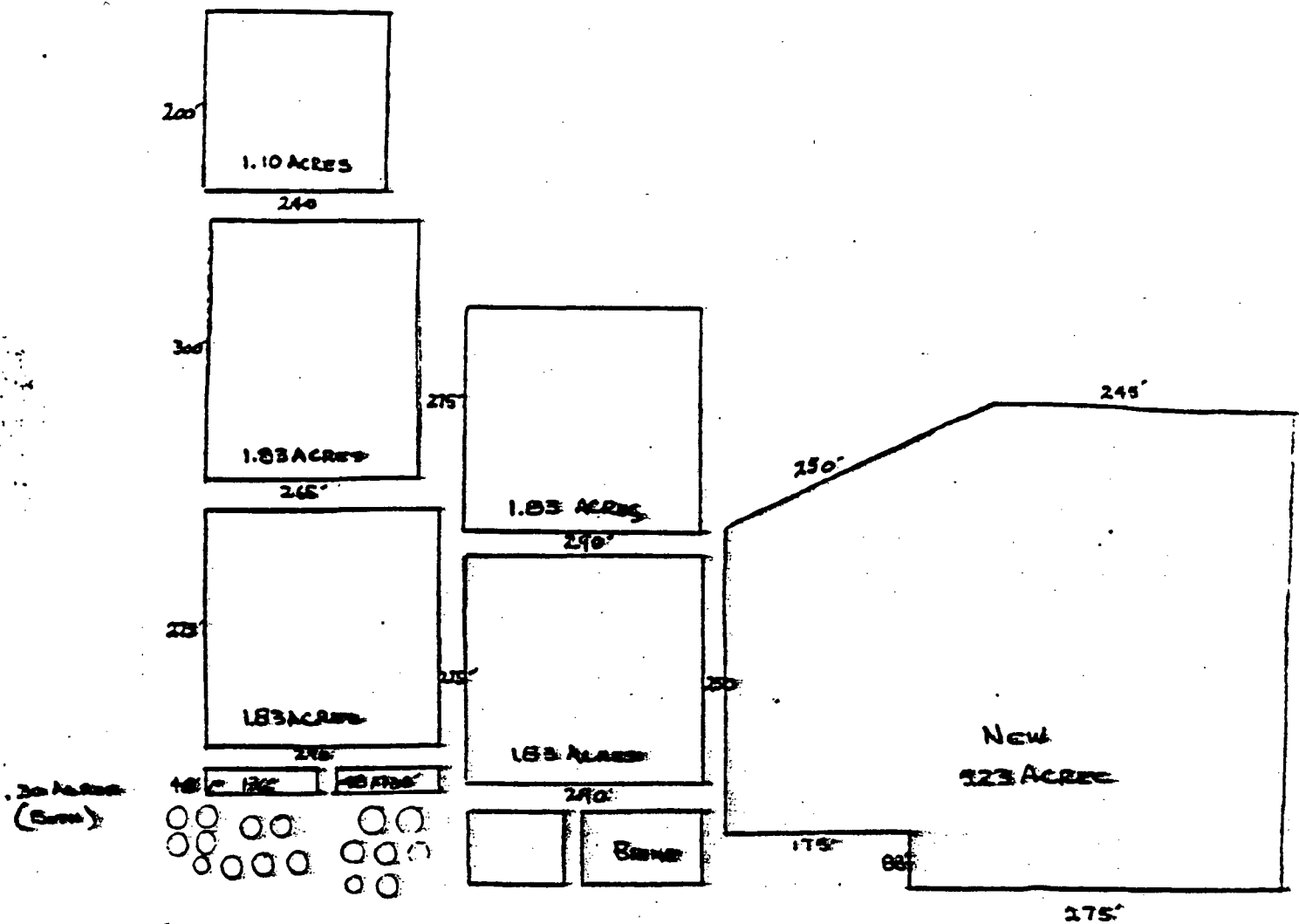
Santa Fe, New Mexico

Case No. 7329 Exhibit No. 6

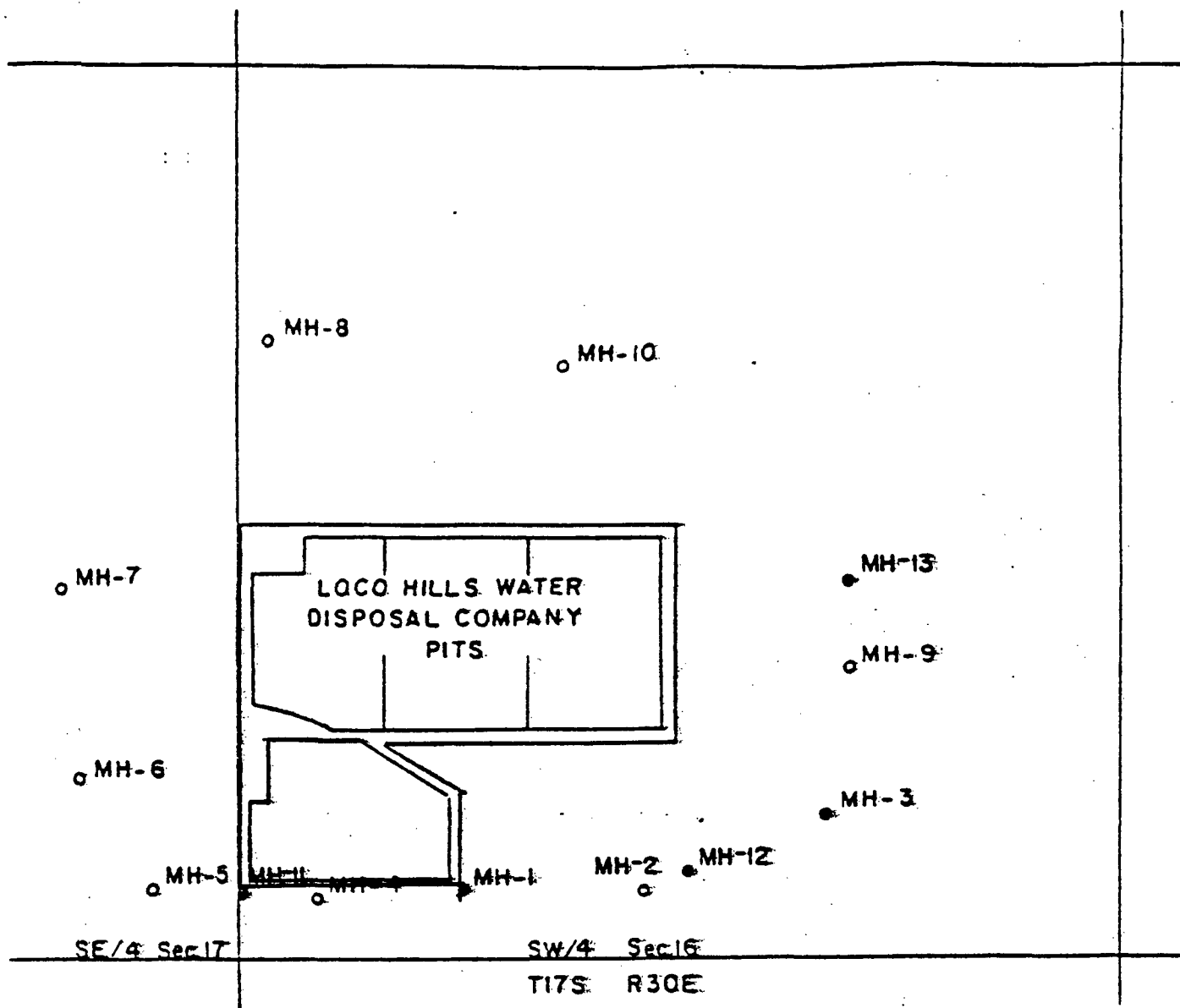
Submitted by Geo. H. Hs

Hearing Date 7-14-82

PROPOSED WATER DISPOSAL PLANT



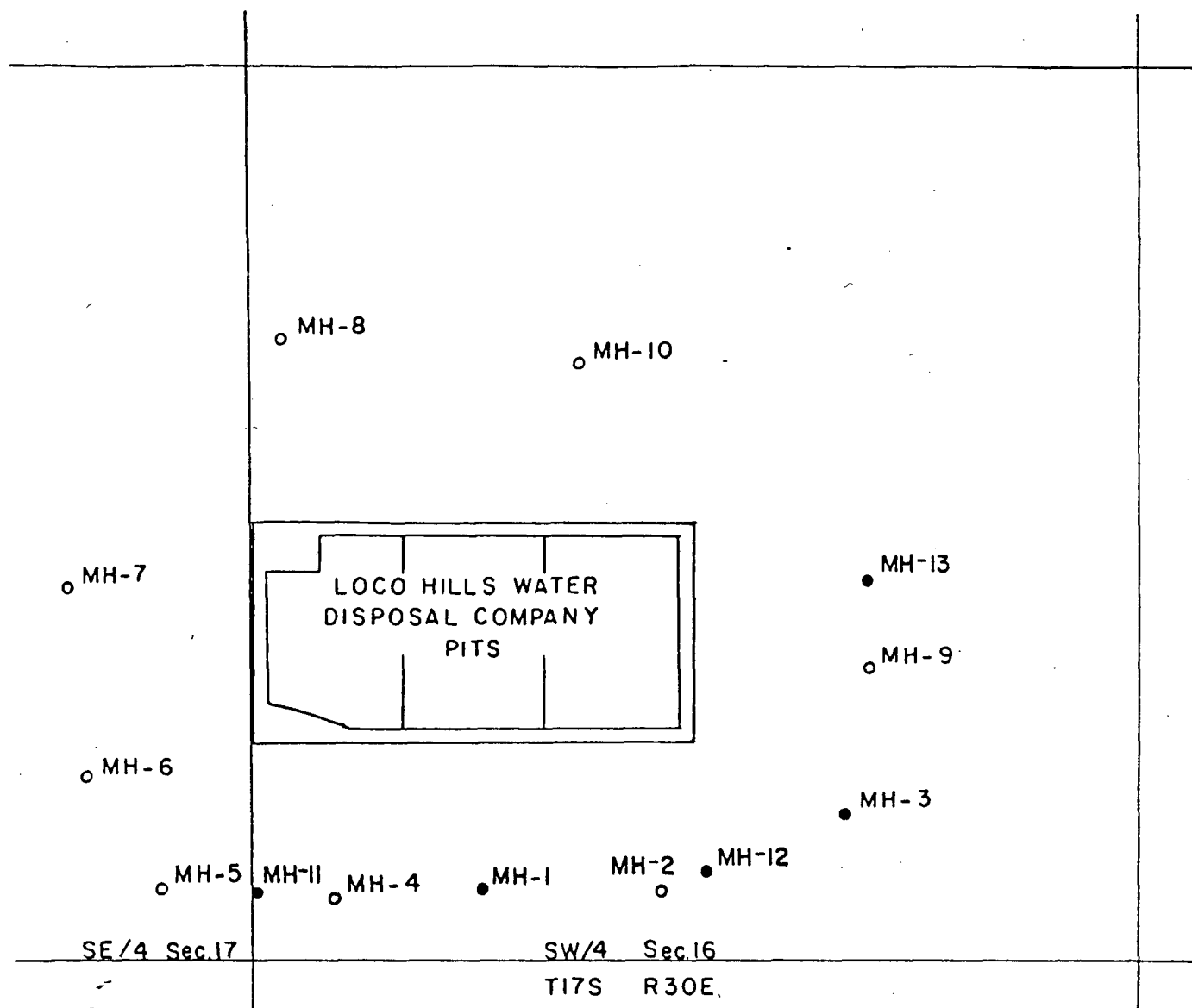
TOTAL ACRES 13.95 IN ALL PLOTS



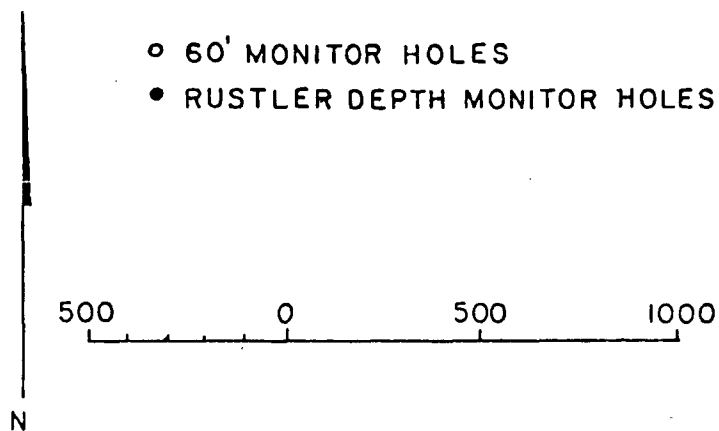
EDDY COUNTY, NEW MEXICO
MONITOR HOLE LOCATIONS
LOCO HILLS WATER DISPOSAL CO

2/2/83

ED L. REED & ASSOCIATES, INC.
CONSULTING HYDROLOGIST
MIDLAND & CORPUS CHRISTI, TEXAS



- 60' MONITOR HOLES
- RUSTLER DEPTH MONITOR HOLES



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

CLOSURE COST ESTIMATE
LOCO HILLS WATER DISPOSAL, INC.
Surface Waste Management Facility NM-01-0004
September 2, 1999

KNOWN

7.81 acres = Total surface area
17 ft. = Maximum water depth for all evaporation ponds
132.77 acre ft. = Total volume at LHWD
11.47 inches/year = Annual mean rainfall (Artesia)

CONVERSIONS

1 acre ft = 325,851 gal.
1 acre ft = 43,560 cubic ft.
42 gal = 1 bbl

$$132.77 \text{ acre ft.} * \frac{325,851 \text{ gal}}{1 \text{ acre ft.}} = 43,263,237 \text{ gal.} * \frac{1 \text{ bbl}}{42 \text{ gal.}} = 1,030,077 \text{ bbl Total Volume At LHWD}$$

1,030,077 bbl = 43,263,237 gal Total volume at LHWD to be evaporated.

Evaporation

2000 bbl/month/acre = Estimated evaporation
from Examiner Hearing Case 7329, August 26, 1981, Page 33-34

$$2000 \text{ bbl/month/acre} * \frac{12 \text{ months}}{1 \text{ year}} * \frac{1 \text{ year}}{365 \text{ days}} * \frac{42 \text{ gal}}{1 \text{ bb}} = 2762 \text{ gal/day/acre}$$

$$2762 \text{ gal/day/acre} * 7.81 \text{ acre} = 21,571 \text{ gal/day Total Evaporation at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{21,571 \text{ gal/day}} = 2006 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 5.5 \text{ years Evaporation only}$$

Infiltration

321.3 bbl/day
to = Estimated Infiltration from Examiner Hearing Case 7329, August 26, 1981,
3.7 bbl/day

$$321.3 \text{ bbl/day} * \frac{42 \text{ gal}}{1 \text{ bbl}} = 13,494 \text{ gal/day Total Infiltration at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{13,494 \text{ gal/day}} = 3206 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 8.8 \text{ Years to Infiltrate only}$$

RainFall

$$11.47 \text{ inch/year} * \frac{1 \text{ ft}}{12 \text{ inches}} * \frac{1 \text{ year}}{365 \text{ days}} = 0.002618 \text{ ft/day}$$

$$7.81 \text{ acres} * 0.002618 \text{ ft/day} * \frac{325851 \text{ gal}}{\text{acre ft}} = 6663 \text{ gal/day Total Rain at LHWD}$$

Evaporation/infiltration time and cost

$$\begin{array}{l} 21,571 \text{ gal/day Total Evaporation at LHWD} \\ 13,494 \text{ gal/day Total Infiltration at LHWD} \\ + \quad -6,663 \text{ gal/day Total Rain at LHWD} \\ \hline 28,402 \text{ gal/day Total Loss at LHWD} \end{array}$$

$$\frac{43,263,237 \text{ gal}}{28,402 \text{ gal/day}} = 1523 \text{ days} = 4.2 \text{ years to remove the water}$$

Pond status checked each week, monitored for H2S according to permit and data reporting.

1 hour per week plus 1 hour travel time for each visit

$$60 \text{ inspections} * 2 \text{ hours} * \$45.00/\text{hour} = \$5,400.00$$

Cost \$5,400.00

Haul 1,030,077 bbl of water and inject in Class 2 well

125 bbl water truck & driver \$55.00/hour
2 hours per trip
\$0.35 bbl disposal cost

$$\frac{1,030,077 \text{ bbl}}{125 \text{ bbl}} * 2 \text{ hours} * \$55.00/\text{hour} = \$906,468.00 \text{ transport cost}$$

$$\$0.35 \text{ bbl} * 1,030,077 \text{ bbl} = \$360,526.00 \text{ disposal cost}$$

\$1,266,994.00 Pond Water Disposal

Remove Fluids From All Tanks.

125 bbl water truck & driver \$55.00/hour *water truck to 130 bbl at \$55.000*
2 hours per trip
\$0.35 bbl disposal cost

1x300 bbl, 3x500 bbl, 2x1000 bbl oil tanks = **3800 bbl total oil to sell not dispose**
2x500 bbl, 1x 740, 1x300, skim tanks = **2040 bbl total**
½ treatable oil ½ disposable water or 1020 bbl
2x500 sale tanks, = **1000 bbl total oil to sell not for disposal**
2x1000 oil treatment tanks = **2000 bbl total**
2x 250 oil holding tanks = **500 bbl total oil to sell not for disposal**

= 3020 bbl of tank fluid for disposal

3020 bbl * 2 hours * \$55.00/hour = \$2,658.00 transport cost
125 bbl

\$.35 bbl * 3020 bbl = \$ 1,057.00 disposal cost

\$3,715.00 Tank Fluid Disposal

Remove Tanks, Piping and Equipment

Cost to remove = for resale of tanks piping and equipment.

\$5,000.00 Tank and Equipment Disposal

Analytical Analysis for site characterization

40 confirmatory samples taken beneath tank, sump, and skim pit locations.

State Contract Laboratory Prices per analysis:

BTEX \$ 40.00 * 40 samples = \$1,600.00

TPH	\$ 50.00	*	40 samples	=	\$2,000.00
Metals	\$200.00	*	40 samples	=	<u>\$8,000.00</u>
					\$11,600.00 Analytical

Confirmatory Sampling Time and Labor for 40 samples

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
Travel 2 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample * 40 samples) + 2 hour + 2 hours = 24 hours

24 hours * \$55.00/hour * 2 persons = **\$2,640.00 Sampling Event**

Empty Two 15' x 125' x 5' Skim Pits

18,750 cubic feet = 140,259gal = 3339 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

3339 bbl * 3 hours * \$55.00/hour = \$4,455 transport cost
125 bbl

\$.35 bbl * 3,339 bbl = \$ 1,168.00 disposal cost

\$5,623.00 Skim Pit Fluid Disposal

Empty 3'x10'x30' Facility Overflow Sump

3'x10'x30' = 900 cubic feet = 6732 gal = 160 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

125 bbl * 3 hours * \$55.00/hour = \$330.00 transport cost
160 bbl

\$.35 bbl * 160 bbl = \$ 56.00 disposal cost

\$386.00 Total sump fluid disposal

Treatment Zone Monitoring for 2 years For 5 acre Landfarm

State Contract Laboratory Prices per Analysis:

BTEX	\$ 40.00	x 8 samples	= \$320.00
TPH	\$ 50.00	x 8 samples	= \$400.00
Metals	\$200.00	x 2 samples	= <u>\$400.00</u>
			\$ 1,120.00 Analytical

Quarterly Sampling Time and Labor for One Landfarm Cell for 2 Years

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
Travel 2 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample x 1sample) + 2 hour + 2 hours = 4.5 hours

4.5 hours x \$55.00/hour x 2 persons x 8 quarters = \$3,960.00 Sampling

\$5080.00 Treatment Zone Monitoring

Disking/Tilling for Two Years Every Two Weeks for 5 Acres.

Price and Time Quotes from Equipment and Landfarm Operators:

Small tractor and operator \$30.00/hour

30 min per acre

5 acres * 30 min * 52 weeks = 130 hours

130 hours * \$30.00/hour = **\$3,900 Disking and Tilling**

NORM Survey of 12.81 acres

\$50. Per hour for certified NORM survey

12 hours

\$ 100.00/day for Ludlam 28

$$(12 \text{ hours} * \$50.00/\text{hour}) + 100.00 = \$700.00 \text{ Norm Survey}$$

Remove Sludge From Pond Bottoms

7.81 acres of area

0.5 foot estimated sludge thickness

\$47.00/hour for 12 cubic yd truck & driver

2 hours per trip

\$14.00/cubic yd disposal cost

$$7.81 \text{ acres} * 0.5 \text{ foot} * \frac{43,560 \text{ cubic ft}}{1 \text{ acre ft}} * \frac{1 \text{ cubic yard}}{27 \text{ cubic ft}} = 6,300 \text{ cubic yds}$$

$$6,300 \text{ cubic yds} * 12 \text{ cubic yd/load} * 2 \text{ hours} * \$47.00/\text{hour} = \$49,350.00 \text{ transport}$$

$$6,300 \text{ cubic yds} * \$14.00/\text{cubic yd} = \$88,200. \text{ Sludge disposal.}$$

\$137,550.00 Total Pond Sludge Removal and Disposal

Level the Berms and Contour the Site

\$85,947.00 level and contour

Revegetation for 20 acres

Equipment and labor cost

tractor and seed drill \$30.00/hour @ 30 min/acre for 20 acres = \$300.00

Materials cost

Seed \$ 10.00 /lb @ 5 lb/acre for 20 acres = \$1,000.00

$$\$300.00 + \$1,000.00 = \$1,300.00 \text{ Revegetation}$$

Loco Hills Water Disposal Inc.
Closure Cost Estimate
711 Permit NM-01-0004
September 2, 1999
Page 7

TOTAL evaporation of water 4.2 years, off site disposal of pond sludge, fill, grade and seed
 $\$148,470.00 + \$8,351.00 = \$156,821.00$

\$ 268,841.00	Total
+ <u>\$15,122.00</u>	Tax .05625
\$ 283,963.00	Total Cost



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

September 7, 1999

CERTIFIED MAIL

RETURN RECEIPT NO. P-326-936-534

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
P.O. Box 68
Loco Hills, NM 87255

RE: OCD Rule 711 Permit Approval (NM-01-0004)
Loco Hills Water Disposal, Inc.
Commercial Surface Waste Management Facility
SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico

Dear Mr. Maloney:

The permit application for the Loco Hills Water Disposal, Inc. (LHWD) commercial surface waste management facility located in the SW/4 SW/4 Section 16, Township 17 South, Range 30 East , NMPM, Eddy County, New Mexico **is hereby approved** in accordance with New Mexico Oil Conservation Division (OCD) Rule 711 under the conditions contained in the enclosed attachment. **This permit approval is conditional upon the receipt and approval by the Director of financial assurance in the amount of \$250,000.** According to the schedule outlined in the financial assurance section of the enclosed attachment, 25% of the \$250,000 bond (\$62,500) is required within thirty (30) days of the date of this letter. The application consists of the permit application Form C-137 dated April 13, 1999, inspection report response letter dated April 13, 1999, and materials from the hearing files related to Order No. R-7329, dated October 30, 1981; Order No. R-7329-De Novo, dated July 29, 1982; Order No. R-7720, dated December 30, 1982; and Order R-8855, dated May 12, 1986.

The construction, operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved treatment, evaporation and landfarm methods must receive prior OCD approval. LHWD is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this facility permit does not relieve LHWD of liability should your operation result in actual pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve LHWD of responsibility for compliance with other federal, state or local laws and/or regulations.

Mr. James R. Maloney
September 7, 1999
Page 2

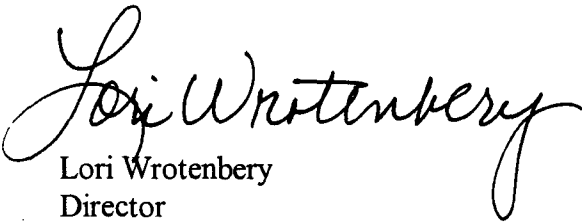
Please be advised that all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted or otherwise rendered non-hazardous to migratory birds. In addition OCD Rule 310 prohibits oil from being stored or retained in earthen reservoirs or open receptacles.

The LHWD Commercial Surface Waste Management Facility Permit NM-01-0004 will be reviewed at least once every five (5) years from the date of this approval letter. The facility is subject to periodic inspections by the OCD.

Enclosed are two copies of the conditions of approval. **Please sign and return one copy to the OCD Santa Fe Office within five working days of receipt of this letter.**

If you have any questions please do not hesitate to contact Martyne J. Kieling at (505) 827-7153.

Sincerely,



Lori Wrotenbery
Director

LW/mjk

xc with attachments:
Artesia OCD Office
Hobbs OCD Office

**ATTACHMENT TO OCD 711 PERMIT APPROVAL
PERMIT NM-01-0004
LOCO HILLS WATER DISPOSAL, INC.
SURFACE WASTE MANAGEMENT FACILITY
SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico
(September 7, 1999)**

FACILITY AND EVAPORATION POND OPERATION

1. The facility must be fenced and have a sign at the entrance. The sign must be legible from at least fifty (50) feet and contain the following information: a) name of the facility; b) location by section, township and range; and c) emergency phone number.
2. Disposal must occur through a computerized disposal system. The processing, evaporation and landfarm portion of the facility must be secured when no attendant is present.
3. All produced water must be unloaded into tanks. The produced water must reside in the tank and skimmer pit system long enough to allow for oil separation. Oil recovered must be stored in above-ground storage tanks. Per Division Rule 310, oil may not be stored or retained in earthen reservoirs or in open receptacles. Free oil must be removed regularly from the skim pits and sump.
4. All existing above-ground tanks located at the facility and containing materials other than fresh water must be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater. All above-ground tanks must be labeled as to contents and hazards.
5. All new or replacement above-ground tanks containing materials other than fresh water must be placed on an impermeable pad and be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater.
6. Below-grade sumps and below-grade tanks must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review. If sump/tank integrity has failed the OCD must be notified within 48 hours of discovery and the sump/tank contents and contaminated soils must be removed and land farmed at the facility landfarm or disposed of at an OCD-approved facility. Soil remediation must follow OCD surface impoundment closure guidelines. The permittee must submit a report to the OCD Santa Fe and Artesia offices that describes the investigation and remedial actions taken.
7. Overflow collection ditches must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review.
8. All new or replacement below-grade sumps and below-grade tanks at the facility must have impermeable secondary containment with a leak detection monitoring system. The secondary containment system must be inspected for fluids weekly. Results must be recorded and maintained for OCD review. If fluids are present they must be checked and the analyses must be furnished to the OCD

Santa Fe and Artesia offices.

9. The produced water receiving and treatment area must be inspected daily for tank, piping and berm integrity.
10. Any design changes to the surface waste management facility must be submitted to the OCD Santa Fe office for approval.
11. The evaporation ponds must have a minimum freeboard of three (3) feet. A device must be installed in the ponds to accurately measure freeboard.
12. Adequate freeboard will be maintained on all skim pits to prevent overflow.
13. The evaporation ponds may not contain any free oil.
14. The evaporation ponds and skim pits must be inspected on at least a daily basis and immediately following each consequential rainstorm or windstorm. The OCD Santa Fe and Artesia offices must be notified within 48 hours if any defect is noted. Repairs must be made as soon as possible. If the defect will jeopardize the integrity of the pond or pit, additional wastes may not be placed into the pond or pit until repairs have been completed.
15. Monitoring of the Santa Rosa Formation 60-foot monitoring wells (MH-2, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9, and MH-10) must be performed quarterly and records of the date, inspector and status of the monitor well must be maintained. If fluid is present in the Santa Rosa Formation monitor wells the fluids in the pond and monitor wells must be measured for conductivity. If the pond and monitor well fluid conductivity measurements are similar the OCD Santa Fe and Artesia offices must be notified within 48 hours. Within 72 hours of discovery of water similarities, Loco Hills Water Disposal will submit a plan to the OCD Santa Fe and Artesia offices for review and approval that describes what procedures will be taken, to investigate the lateral extent of the waste water plume.
16. Annual reports regarding quarterly monitor well sampling must be furnished to the OCD Santa Fe office in database form and must include a graphical plot showing water level and conductivity in each well for all preceding quarters.
17. Monitoring of the Rustler Formation monitor wells (MH-1, MH-3, MH-11, MH-12, and MH-13) is not required. Loco Hills Water Disposal should secure these wells from potential vandalism, dumping or injection.
18. To protect migratory birds, all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted, covered or otherwise rendered nonhazardous to migratory birds.

H₂S PREVENTION & CONTINGENCY PLAN

1. Tests of ambient H₂S levels must be conducted on a weekly basis. Test results must be recorded and retained. The tests must be conducted at four (4) locations at the top of the berm around each of the evaporation ponds and the skim pits. The wind speed and direction must be recorded in conjunction with each test.
 - a. If an H₂S reading of 1.0 ppm or greater is obtained:
 - i. a second reading must be taken on the downwind berm within one hour;
 - ii. the dissolved oxygen and dissolved sulfide levels of the pond must be tested immediately and the need for immediate treatment determined; and
 - iii. tests for H₂S levels must be made at the fence line down wind from the problem pond.
 - b. If two (2) consecutive H₂S readings of 1.0 ppm or greater are obtained:
 - i. the operator must notify the Artesia office of the OCD immediately;
 - ii. the operator must commence hourly monitoring on a 24-hour basis; and
 - iii. the operator must obtain daily analyses of dissolved sulfides in the pond.
 - c. If an H₂S reading of 10.0 ppm or greater at the facility fence line is obtained:
 - i. the operator must immediately notify the Artesia office of the OCD and the following public safety agencies:

New Mexico State Police
Eddie County Sheriff
Eddie County Fire Marshall
Loco Hills Fire Department; and
 - ii. the operator must notify of all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.
 - d. At least 1000 gallons of an H₂S treatment chemical or an equivalent amount of chemical in concentrate form to produce 1000 gallons of H₂S treatment chemical must be stored on-site at all times. H₂S treatment chemicals must not be retained for a period in excess of the manufacturer's stated shelf life. Expired H₂S treatment chemicals may be disposed of in the evaporation ponds.

LANDFARM OPERATION

1. Disposal in the landfarm will occur only when an attendant is on duty. The landfarm portion of the facility must be secured when no attendant is present.
2. All contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.
3. Soils must be spread on the surface in lifts of six (6) inches or less.
4. Soils must be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.
5. Exempt contaminated soils must be placed in the landfarm so that they are physically separate (*i.e.*, bermed) from non-exempt contaminated soils. There may be no mixing of exempt and non-exempt soils.
6. Successive lifts of contaminated soils may not be spread until a laboratory measurement of total petroleum hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations must be maintained at the facility. Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of the remediated soils.
7. Moisture must be added as necessary to enhance bioremediation and to control blowing dust. There may be no ponding, pooling or run-off of water allowed. Any ponding of precipitation must be removed within twenty-four (24) hours of discovery.
8. Enhanced bioremediation through the application of microbes (bugs) and/or fertilizers is permitted only after prior approval from the OCD Santa Fe office. Requests for application of microbes or fertilizers must include the location of the area designated for the program, the composition of additives, and the method, amount and frequency of application.
9. Contaminated soils may not be placed within twenty (20) feet of any pipelines crossing the landfarm. In addition, no equipment may be operated within ten (10) feet of a pipeline. All pipelines crossing the facility must have surface markers identifying the location of the pipelines.
10. The portion of the facility containing contaminated soils must be bermed to prevent runoff and runoff.

TREATMENT ZONE MONITORING

1. One (1) background soil sample must be taken from a clean location outside the landfarm and water disposal facility area. The background sample must be taken two (2) feet below the native

ground surface. One (1) soil sample must be taken from the center portion of the landfarm two (2) feet below the native ground surface prior to operation. The soil samples must be analyzed for total petroleum hydrocarbons (TPH), major cations/anions, volatile aromatic organics (BTEX), and eight (8) RCRA heavy metals using EPA-approved methods.

2. A treatment zone not to exceed three (3) feet beneath the landfarm native ground surface must be monitored. A minimum of one random soil sample must be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample must be taken at two (2) to three (3) feet below the native ground surface.
3. The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and eight (8) RCRA heavy metals annually.
4. After obtaining the soil samples the boreholes must be filled with an impermeable material such as cement or bentonite.

WASTE ACCEPTANCE CRITERIA

1. The facility is authorized to accept only oilfield wastes that are exempt from RCRA Subtitle C regulations and that do not contain Naturally Occurring Radioactive Material (NORM) regulated pursuant to 20 NMAC 3.1 Subpart 1403. All loads of these wastes received at the facility must be accompanied by a "Generator Certificate of Waste Status" signed by the generator.
2. The landfarm portion of the facility may accept only wastes that are generated at Loco Hills Water Disposal. Material accepted into the landfarm portion of the facility must pass the Paint Filter Liquids Test EPA SW-846 Method 9095A or equivalent.
3. At no time may any OCD-permitted surface waste management facility accept wastes that are determined to be RCRA Subtitle C hazardous wastes by either listing or characteristic testing.
4. The transporter of any wastes to the facility must supply a certification that wastes delivered are those wastes received from the generator and that no additional materials have been added.
5. No produced water may be received at the facility from motor vehicles unless the transporter has a valid Form C-133, "Authorization to Move Produced Water," on file with the Division.
6. Comprehensive records of all material disposed of at the surface waste management facility must be maintained by Loco Hills Water Disposal.

REPORTING AND RECORD KEEPING

1. Results of the quarterly testing of the monitor wells will be recorded and an annual report will be submitted to the OCD Santa Fe office for review **by September 7 of each year.**
2. Analytical results from background sampling and the quarterly treatment zone monitoring must be submitted to the OCD Santa Fe office **within thirty (30) days** of receipt from the laboratory. The analysis report must include a sample location map.
3. Results of the weekly testing of the evaporation pond for H₂S must be recorded and maintained for OCD review.
4. Results of annual inspection and maintenance on below-grade sumps and below-grade tanks must be recorded and maintained for OCD review.
5. Results of maintenance on the collection ditches, below-grade sump for the collection ditches and skim pits must be recorded and maintained for OCD review.
6. Results of weekly inspections of secondary containment at below-grade sumps and below-grade tanks must be recorded and maintained for OCD review.
7. The applicant must notify the **OCD Artesia District office within 24 hours** of any fire, break, leak, spill, blowout or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.
8. All records of testing and monitoring must be retained for a period of five (5) years.
9. The OCD must be notified prior to the installation of any pipelines or wells or other structures within the boundaries of the facility.
10. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) generator; 2) origin; 3) date received; 4) quantity; and 5) transporter.

FINANCIAL ASSURANCE

1. Financial assurance in the amount of **\$250,000** in the form of a surety or cash bond or a letter of credit, which is approved by the Division, is required from Loco Hills Water Disposal, Inc. for the commercial surface waste management facility.

By October 7, 1999 the Loco Hills Water Disposal, Inc. must submit 25% of the financial assurance in the amount of **\$62,500.**

By October 7, 2000 the Loco Hills Water Disposal, Inc. must submit 50% of the financial

assurance in the amount of **\$125,000.**

By October 7, 2001 the Loco Hills Water Disposal, Inc. must submit 75% of the financial assurance in the amount of **\$187,500.**

By October 7, 2002 the Loco Hills Water Disposal, Inc. must submit 100% of the financial assurance in the amount of **\$250,000.**

2. The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility will be reviewed by the OCD no later than five (5) years from the date of this approval. In addition the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of review. The financial assurance may be adjusted to incorporate any closure cost changes.

CLOSURE

1. The OCD Santa Fe and Artesia offices must be notified when operation of the facility is discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Upon cessation of operations for six (6) consecutive months, the operator must complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension of time is granted by the Director.
2. A closure plan to include the following closure procedures must be submitted to the OCD for approval:
 - a. When the facility is to be closed no new material will be accepted.
 - b. All evaporation ponds will be allowed to evaporate. Any water not evaporated will be hauled to an OCD-approved facility.
 - c. The evaporation ponds and skim pits will be surveyed for NORM.
 - d. Sludge will be removed from the evaporation ponds and skim pits for remediation at the facility landfarm or disposal at an OCD-approved facility.
 - e. The soils beneath the liquids receiving and treatment area and landfarm will be characterized for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) content to determine potential migration of contamination.
 - f. All above and below grade tanks will be emptied and any waste will be hauled to an OCD-approved facility. The empty tanks, piping and equipment will be removed.
 - g. Contaminated soils or existing landfarm soils will be remediated until they meet the OCD standards in effect at the time of closure or removed to an OCD-approved facility.
 - h. The area will be contoured, seeded with a native seed mix and allowed to return to its

natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place.

- i. Closure will be completed pursuant to all OCD requirements in effect at the time of closure, and any other applicable local, state and/or federal regulations.

CERTIFICATION

Loco Hills Water Disposal, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Loco Hills Water Disposal, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect ground water, surface water, human health and the environment.

Accepted:

LOCO HILLS WATER DISPOSAL, INC.

Signature _____ Title _____ Date _____

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

RECEIVED

APR 1 1999

Environmental Bureau
Oil Conservation Division

APR 1 2 1999

Environmental Bureau
Oil Conservation Division

March 31, 1999

Martyne J. Kieling
Environmental Geologist
NEW MEXICO ENERGY, MINERALS &
NATURAL RESOURCES DEPARTMENT
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

RE: Evaporation Pond and Treating Plant Inspection (NM-01-0004)

Martyne Kieling,

This is the response to the August 27, 1997 inspection of our facility and the deficiencies found at that time.

You will find attached our response to each item. Also enclosed is a copy of the new Form C-137 which is the new application.

Thank you for your consideration.

Sincerely,

LOCO HILLS WATER DISPOSAL, INC.



James R. Maloney
Vice President
Operations Manager

JRM:jb

Attachment(s)

ATTACHMENT 1
INSPECTION REPORT RESPONSE
Page 1

1. **Pond Freeboard**: In compliance as of November 07, 1997;
2. **Pond Levee**: The levee is level and the outside grade is maintained to avoid erosion. The levee has been repaired and is now in very good condition.
3. **Leak Detection System**: This is done monthly. The test results will be filed with the Artesia OCD office.
4. **Sludge Build-up**: This is in compliance.
5. **Security**: The facility is fenced and locked when closed; Personnel on site when open. Computerized disposal system is already in operation.
6. **Signs**: In compliance.
7. **Drum Storage**: This requirement has been completed and is in compliance.
8. **Process Area**: Spill collection system is cleaned and visually inspected monthly; Leak collection devise is inspected and cleaned on a routine basis. All leak collection devices have been enlarged and installed where needed.
9. **Above Ground Tank**: North end of the facility has been bermed and is now in compliance.
10. **Open Top Tanks and Pits**: These tanks and pits are netted and in compliance. The oil has been skimmed and the evaporation pond are clear. The oil sump pit will be emptied on a regular basis.
11. **Above Ground Saddle Tanks**: Impermeable pad and curb now in place.
12. **Tank Labeling**: Tanks have been labelled and the required placards are in place.
13. **Below Grade Tanks/Sumps**: Cleaning and visual inspection of the off-load area is done on a regular and routine basis. The integrity test will be done annually.
14. **Underground Process/Wastewater Lines**: No underground process or wastewater lines.
15. **Housekeeping**: Cleaned on a routine basis.
16. **Trash and Potentially Hazardous Materials**: Containers and Barrels available.

ATTACHMENT 1
INSPECTION REPORT RESPONSE
Page 2

17. **Spill Reporting**: In the event of a spill, OCD rule 116 and WQCC 1203 will be adhered to and all State Departments will be notified as required.
18. **Hydrocarbon Contaminated Solids Pit**: Please reference our letter dated November 05, 1997, item 6 which states we are waiting for the new application forms to apply for the Water Disposal, Treating Plant and Landfarm permit.
19. **Naturally Occurring Radioactive Material (NORM)**: Loco Hills Water Disposal is not at this time receiving any NORM. In the event a request is made, LHWD will obtain the required declaration from the generator. Otherwise, disposal at this facility will be refused.
20. **Application Requirements for Permit Under the New Rule 711**: Please see the enclosed copy of the Loco Hills Water Disposal, Inc. Application Form C-137.

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-137
Originated 8/8/95
Revised 6/25/97

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

APPLICATION FOR WASTE MANAGEMENT FACILITY
(Refer to the OCD Guidelines for assistance in completing the application)

☒ Commercial

☒ Centralized LANDFARM

1. Type: ☒ Evaporation ☐ Injection ☐ Other _____
☐ Solids Handling ☐ Treating Plant

2. Operator: LOCO HILLS WATER DISPOSAL COMPANY, INC.

Address: P.O. BOX 68, 1 MILE NORTH, LOCO HILLS, NEW MEXICO 88255

Contact Person: JAMES MALONEY - RAY WESTALL Phone: 505-677-2118

3. Location: SW 4 SW /4 Section 16 Township 17S Range 30E
Submit large scale topographic map showing exact location

4. Is this a modification of an existing facility? ☒ Yes ☐ No

5. Attach the name and address of the landowner of the facility site and landowners of record within one mile of the site.

6. Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.

7. Attach designs prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aerations systems, enhanced evaporation (spray) systems, waste treating systems, security systems, and landfarm facilities.

8. Attach a contingency plan for reporting and clean-up for spills or releases.

9. Attach a routine inspection and maintenance plan to ensure permit compliance.

10. Attach a closure plan.

11. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact groundwater. Depth to and quality of ground water must be included.

12. Attach proof that the notice requirements of OCD Rule 711 have been met.

13. Attach a contingency plan in the event of a release of H₂S.

14. Attach such other information as necessary to demonstrate compliance with any other OCD rules, regulations and orders.

15. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: James R. Maloney

Title: Vice- President

Signature: James R. Maloney

Date: 4/13/99

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #01

ITEM # 5 STATE OF NEW MEXICO
 SEE STATE LEASE #BL1149



State of New Mexico
Commissioner of Public Lands

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

(505) 827-5700

FAX (505) 827-5853

RAY POWELL, M.S., D.V.M.
COMMISSIONER

BILLING STATEMENT

013467
LOCO HILLS WATER DISPOSAL
PO BOX 4
LOCO HILLS, NM 88255

Mail Payment To:

STATE OF NEW MEXICO
COMMISSIONER OF PUBLIC LANDS
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

1

If Payment already sent, please disregard this Billing Statement

PLEASE FILL IN AMOUNT PAID & RETURN ONE COPY OF THE BILL WITH PAYMENT

Invoice Number	Invoice Status	Invoice Date	Due Date	Total Due	Amount Paid
51691	INITIAL	02/26/1999	04/01/1999	3,000.00	

ANNUAL BILLING, PAYMENT SHOULD BE MADE ON OR BEFORE THE ABOVE DUE DATE.

Lease Number	Source	Amount Due	Interest	Penalty	Total Due	X Amts Paid
BL 1149	BUSINESS LEASES - RENT	3,000.00	0.00	0.00	3,000.00	
	TOTAL	3,000.00	0.00	0.00	3,000.00	

7885
5070
3/17/99

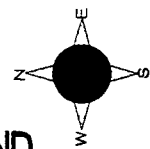
**LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137**

ATTACHMENT #2

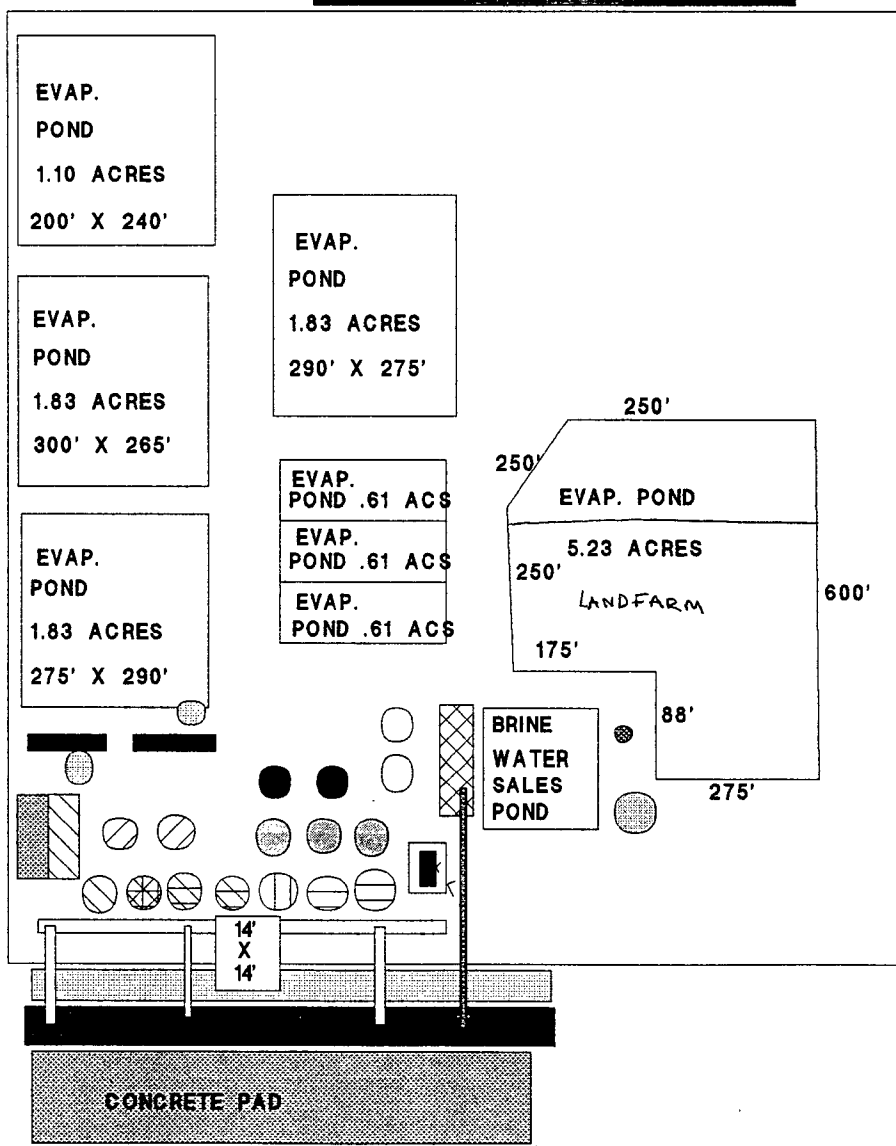
**ITEMS # 6 & 7 DESCRIPTION OF THE FACILITY WITH DIAGRAMS INDICATING
LOCATION OF FENCES, PITS, DIKES, AND TANKS. DESIGN OF
LEAK-DETECTION SYSTEM. WASTE TREATING SYSTEM,
SECURITY SYSTEM AND LANDFARM FACILITIES.**

LOCO HILLS WATER DISPOSAL CO., INC.
 BUSINESS LEASE BL-1149
 PT. OF SW4SW4, S16, T17S, R30E
 40 ACRES
 EDDY COUNTY, NEW MEXICO, N.M.P.M.

JC-1279



FACILITY PLAT

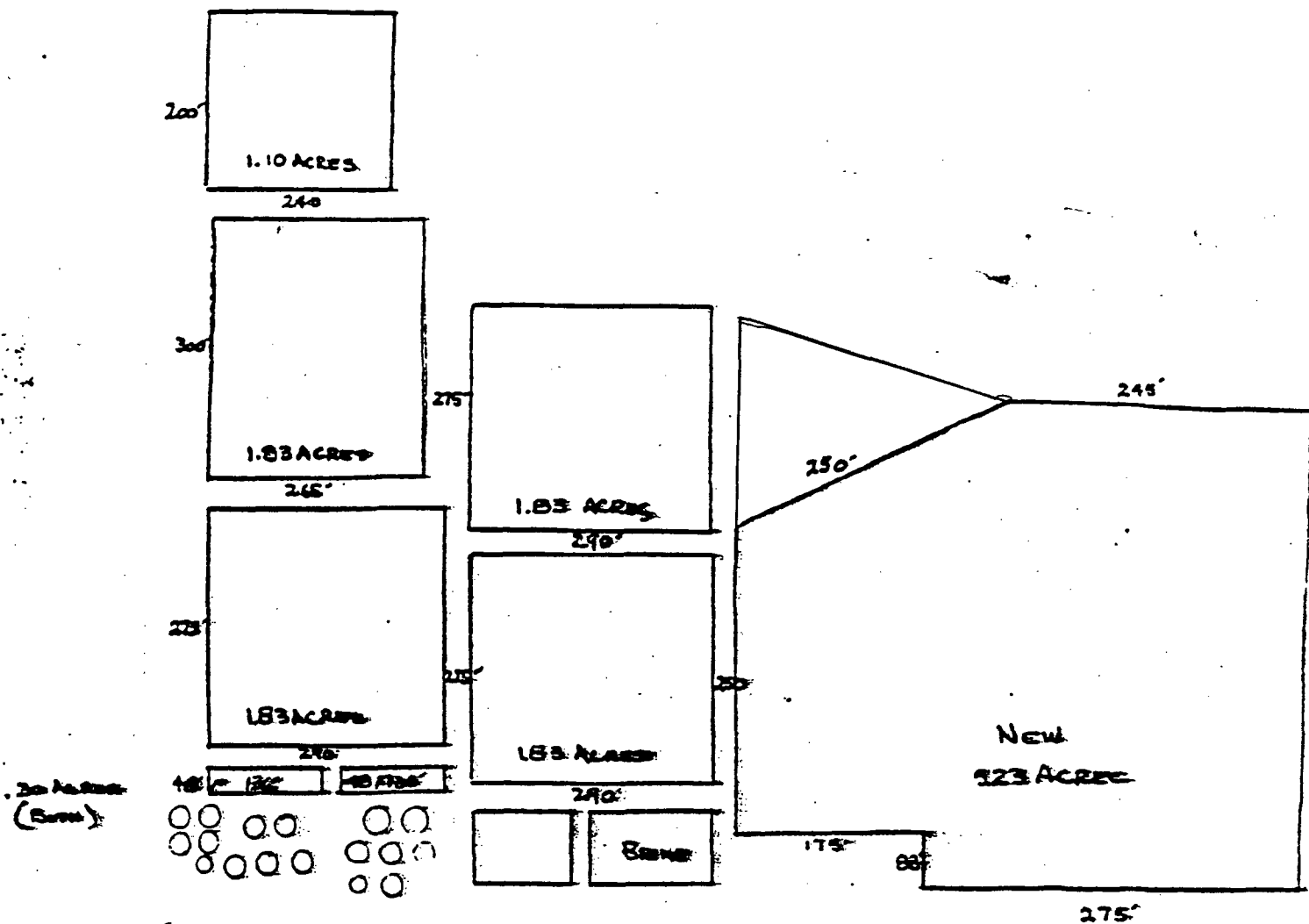


LEGEND

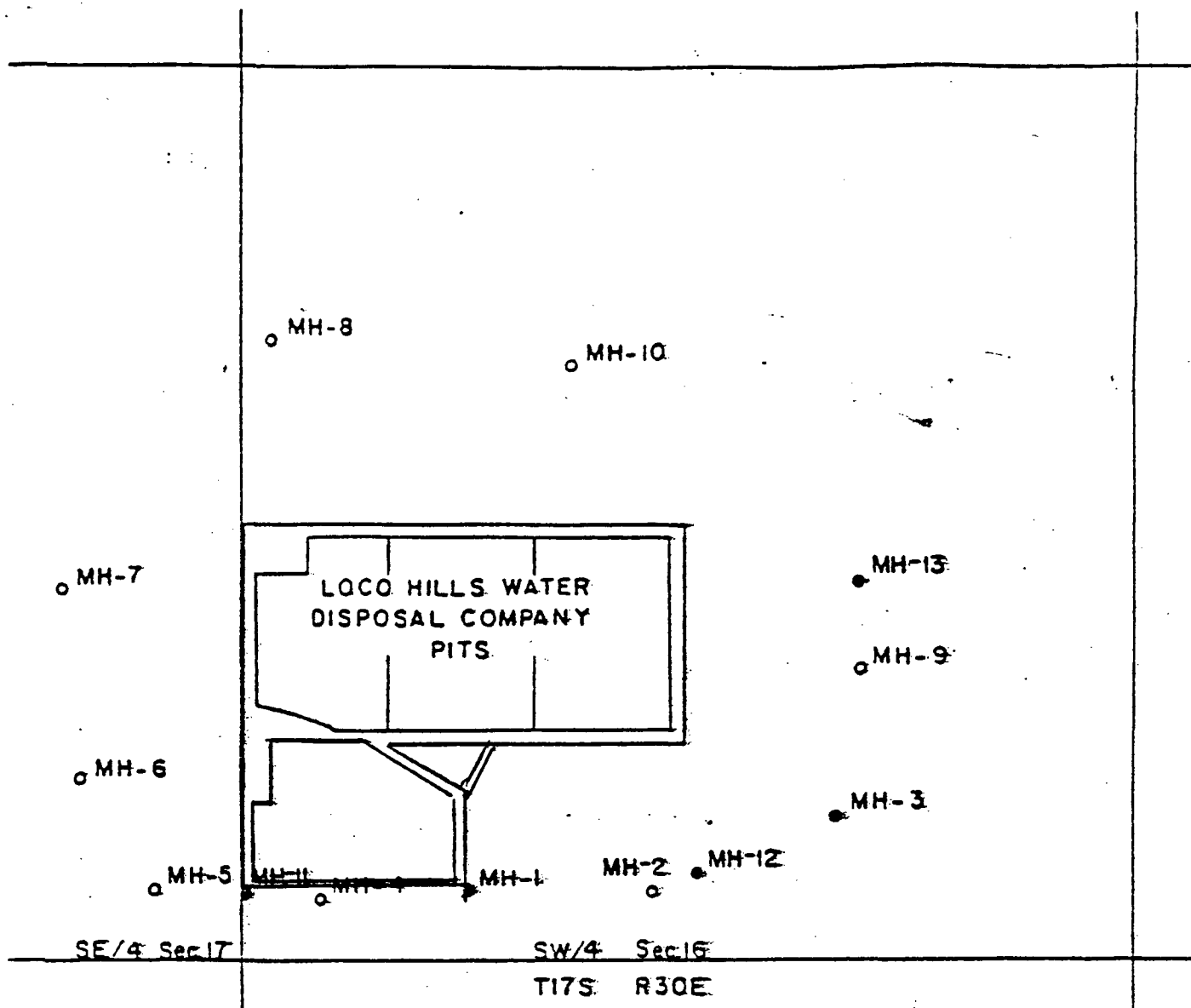
- 1,000 bbl. (new) OIL TREATMENT TANKS
- BOILER & BLDG. 15' x 20'
- 20' x 34' STORAGE BUILDING
- 300 BBL. OIL TANK
- 500BBL. SKIM TANK
- 750 BBL. SKIM TANK
- 300 BBL. SKIM TANK
- 500 BBL. OIL TANK
- 1000 BBL OIL TANK
- 500 BBL SALE TANK
- 250 BBL. OPEN TOP
- OIL SKIM PONDS
- OFFICE & SHOP
- DRAINAGE DITCH
- CATCH POND FOR UNLOADING DITCH (BURNED)
- STEAM BOILER
- BRINE WATER WELL
- BRINE WATER TANK
- UNLOADING BUILDING & INSTRUMENT ROOM
- UNLOADING PIPING, AND NEW ELECTRICAL TO UNLOADING VALVES
- SLOPED CONCRETE BERM 1 1/2' TO 0 IN 8'
- CHAINLINK FENCING
- PHOTO LOCATIONS

CR-217

DRAWING NOT TO SCALE
 DRAWN
 SEPT 23, 1997



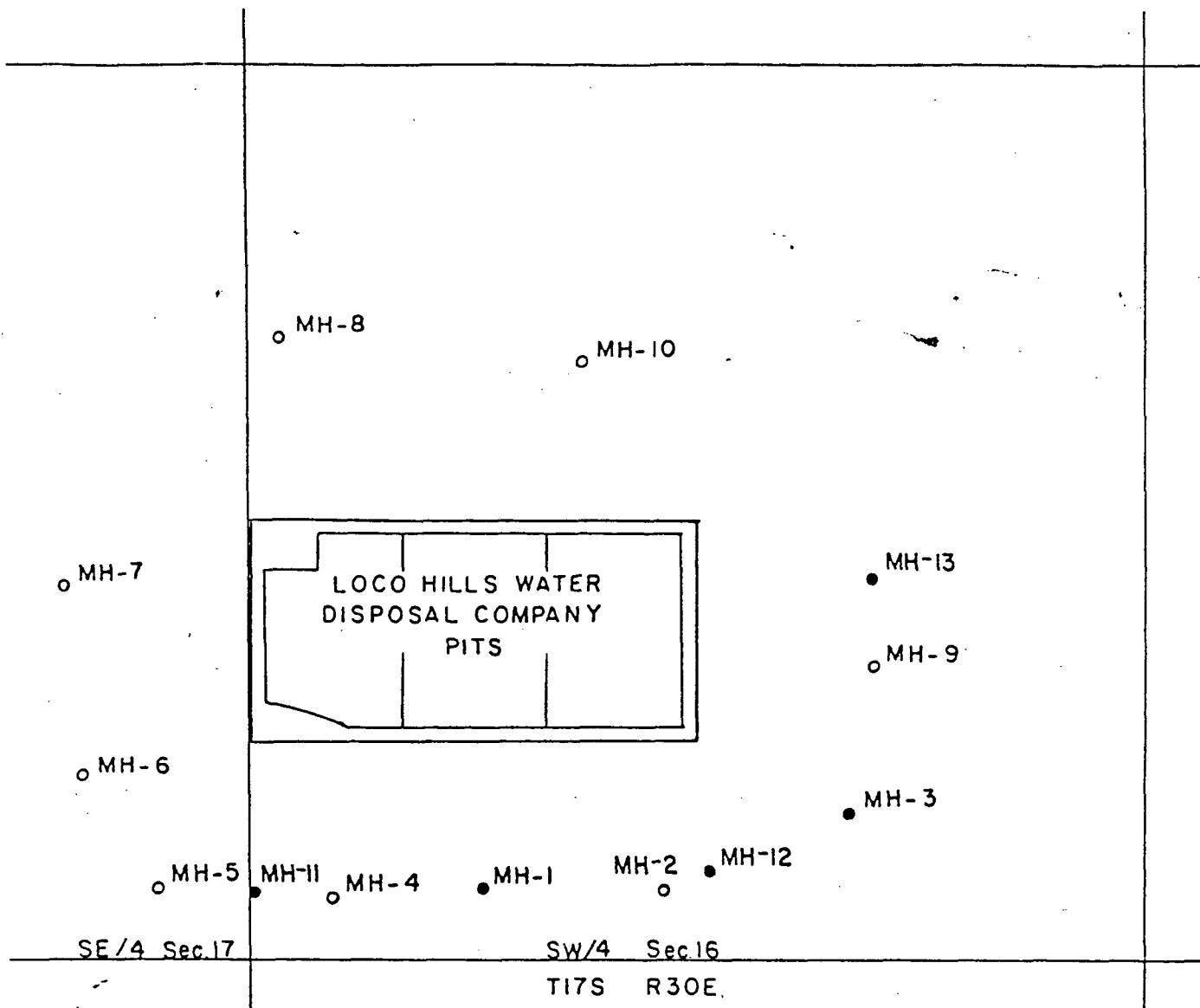
TOTAL ACRES 13.95 IN ALL PLOTS



EDDY COUNTY, NEW MEXICO
 MONITOR HOLE LOCATIONS
 LOCO HILLS WATER DISPOSAL CO.

2/2/83

ED L. REED & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 MIDLAND & CORPUS CHRISTI, TEXAS



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, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #04

ITEM #08 IN THE EVENT OF A MAJOR SPILL, THE CLEAN UP HAS BEEN CONTRACTED WITH STEVE CARTER, INC. THIS COMPANY IS EQUIPPED WITH VACUUM TRUCK AS WELL AS TRANSPORT TRUCKS. CLEAN UP WILL BE IN ACCORDANCE WITH WQCC 1203 AND OCD RULE 116. ALL AGENCIES WILL BE NOTIFIED THAT A SPILL HAS OCCURED.

**LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137**

ATTACHMENT #05

**ITEM #09 PERSONNEL IS ON LOCATION AND VISUAL INSPECTIONS
ARE DONE ON A DAILY BASIS; ROUTINE MAINTENCE IS DONE
DAILY; REPAIRS ARE DONE AS NEEDED.**

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #06

ITEM #10 THE CLOSURE OF THE DISPOSAL FACILITY WILL BE
IN ACCORDANCE WITH STATE GUIDE LINES.
ATTACHED IS A PRICE QUOTE FOR CLOSURE OF THIS FACILLITY.



SWEATT CONSTRUCTION CO.

GENERAL DIRT WORK - OIL FIELD ROADS - PITS - LOCATIONS

P.O. BOX 827 — ARTESIA, NEW MEXICO 88210
Telephone (505) 748-1238 — FAX (505) 748-1230 — Hobbs (505) 397-4541

FEDERAL ID NO. 85-0157100
CONTRACTORS LICENSE NO. 005674

Owner
W.J. SWEATT

Manager
ARCHIE TIDWELL

Foremen
BRAD LARSON
CHET ARMSTRONG

Salesman
BILL PORTER

March 16, 1999

Loco Hills Water Flood
P.O. Box 4
Loco Hills, NM 88255

ATTN: Dick Mahoney

Dear Sir:

We would like to submit the following price on your Disposal at Loco Hills in Eddy County, New Mexico.

To furnish labor, materials and equipment to level pit walls to original countour after water is gone and pits are dry and tanks are removed by others.

Price will be \$85,947.00 plus \$4,512.21 sales tax.

Thank you for the opportunity to submit a price on this project. If you have any questions, please feel free to contact our office.

Sincerely,

Archie Tidwell

Archie Tidwell

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #07

ITEM #11 ALREADY ON FILE WITH THE STATE; REFERENCE INSPECTION
REPORT DATED AUGUST 27, 1997 PAGE 6 OF 6 ITEM (b) AND (j).

LOCO HILLS WATER DIPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #08

ITEM #12 COMMISSION RULING 1982 - 1983. THE LOCO HILLS WATER
DISPOSAL FACILITY IS IN COMPLIANCE WITH THE STATE
REQUIREMENTS.

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHEMENT #09

ITEM #13 MONITORS AND BREATHERS ARE ON SITE; SIGNS WILL BE
POSTED IF H₂S IS EVIDENT; THE SITE IS MONITORED AT ALL
TIMES.

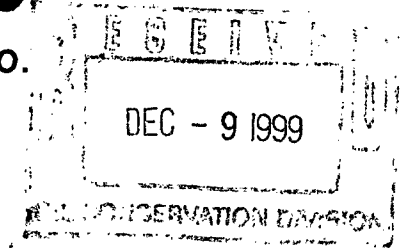
**LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137**

ATTACHMENT #10

**ITEM #14 REFERENCE THE INSPECITON REPORT DATED AUGUST 27, 1997
AND THE RESPONSES FROM LOCO HILLS WATER DISPOSAL, INC.
ALL OF THE ITEMS LISTED ARE NOW IN COMPLIANCE WITH THE
STATE REQUIREMENTS.**

LOCO HILLS WATER DISPOSAL CO.

P. O. Box 68
Loco Hills, NM 88255



December 6, 1999

Ms. Martyne J. Kieling
New Mexico Energy, Minerals
& Natural Resources Department
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Letter Dated November 1, 1999

Dear Ms. Kieling,

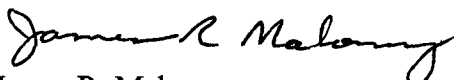
Loco Hills Water Disposal, Inc. is submitting a third party estimate of closure cost for our disposal system, located at SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM Eddy County, New Mexico, based on the totals in your document dated July 24, 1999.

- (1) Remove Fluids from Tanks, \$3,715.00; (2) Analytical Analysis, \$11,600.00;
(3) Confirmatory Sampling & Labor, \$2,640.00; (4) Empty two Skim Pits, \$5,623.00;
(5) Empty Overflow Sump, \$386.00; (6) Treatment Zone Monitoring, \$5,080.00;
(7) Discing & Tilling, \$3,900.00; (8) Additional Land Farming & Analytical, \$16,010.00;
(9) Level & Contour, \$85,947.00; (10) Re-Vegetation, \$1,300.00.

The above amounts, taken from your document, come to a total of \$136,201.00 and represents the total cost of closure. We suggest the Surety or Cash Bond should not be in excess of the above total estimated cost.

Sincerely,

LOCO HILLS WATER DISPOSAL, INC.


James R. Maloney
Vice President

JM:jb



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

November 1, 1999

CERTIFIED MAIL

RETURN RECEIPT NO. P-326-936-658

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
P.O. Box 68
Loco Hills, NM 87255

**RE: Loco Hills Water Disposal, Inc.
Commercial Surface Waste Management Facility
SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico**

Dear Mr. James R. Maloney:

The New Mexico Oil Conservation Division (OCD) has received the Loco Hills Water Disposal (LHWD) letter dated September 12, 1999 regarding surface waste management facility permitting concerns. Responses to items one through four are listed below:

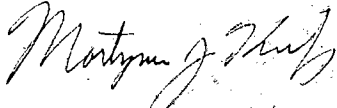
1. LHWD may submit a third party estimate for consideration to include all points outlined in the OCD closure cost estimate.
2. LHWD may submit a third party estimate of closure costs to include evaporation and landfarming of all wastes on site. During the evaporation of liquids the facility must be inspected and monitored daily by contracted personnel. In addition, the facility must be secured by fencing to prohibit unauthorized dumping until final closure is reached.
3. Surface waste disposal facilities permitted to receive liquid wastes that are within one (1) mile of a residence or within one (1) mile of a county, state, or federal highway must have stored on site at all times at least 1000 gallons of an H₂S treatment chemical or an equivalent amount of chemical in concentrate form to produce 1000 gallons of H₂S treatment chemical.
4. The LHWD permit condition has been changed to reflect the computerized disposal system as an option. Disposal may occur only when an attendant is on duty. Alternately, the facility may choose to use a computerized disposal system with PIN numbers to secure the facility from unauthorized dumping.

Mr. James R. Maloney
November 1, 1999
Page 2

Please submit a third party estimate for consideration by November 30, 1999 or sign and return the enclosed permit conditions.

If you have any questions please do not hesitate to contact me at (505) 827-7153.

Sincerely,

A handwritten signature in cursive script, appearing to read "Martyne J. Kielling".

Martyne J. Kielling
Environmental Geologist
xc: Artesia OCD Office

ATTACHMENT TO OCD 711 PERMIT APPROVAL
PERMIT NM-01-0004
LOCO HILLS WATER DISPOSAL, INC.
SURFACE WASTE MANAGEMENT FACILITY
SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico
(September 7, 1999)

FACILITY AND EVAPORATION POND OPERATION

1. The facility must be fenced and have a sign at the entrance. The sign must be legible from at least fifty (50) feet and contain the following information: a) name of the facility; b) location by section, township and range; and c) emergency phone number.
2. Disposal may occur only when an attendant is on duty. Alternately, the facility may choose to use a computerized disposal system with PIN numbers to secure the facility from unauthorized dumping. The processing, evaporation and landfarm portion of the facility must be secured when no attendant is present.
3. All produced water must be unloaded into tanks. The produced water must reside in the tank and skimmer pit system long enough to allow for oil separation. Oil recovered must be stored in above-ground storage tanks. Per Division Rule 310, oil may not be stored or retained in earthen reservoirs or in open receptacles. Free oil must be removed regularly from the skim pits and sump.
4. All existing above-ground tanks located at the facility and containing materials other than fresh water must be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater. All above-ground tanks must be labeled as to contents and hazards.
5. All new or replacement above-ground tanks containing materials other than fresh water must be placed on an impermeable pad and be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks, whichever is greater.
6. Below-grade sumps and below-grade tanks must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review. If sump/tank integrity has failed the OCD must be notified within 48 hours of discovery and the sump/tank contents and contaminated soils must be removed and land farmed at the facility landfarm or disposed of at an OCD-approved facility. Soil remediation must follow OCD surface impoundment closure guidelines. The permittee must submit a report to the OCD Santa Fe and Artesia offices that describes the investigation and remedial actions taken.
7. Overflow collection ditches must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review.
8. All new or replacement below-grade sumps and below-grade tanks at the facility must have impermeable secondary containment with a leak detection monitoring system. The secondary

containment system must be inspected for fluids weekly. Results must be recorded and maintained for OCD review. If fluids are present they must be checked and the analyses must be furnished to the OCD Santa Fe and Artesia offices.

9. The produced water receiving and treatment area must be inspected daily for tank, piping and berm integrity.
10. Any design changes to the surface waste management facility must be submitted to the OCD Santa Fe office for approval.
11. The evaporation ponds must have a minimum freeboard of three (3) feet. A device must be installed in the ponds to accurately measure freeboard.
12. Adequate freeboard will be maintained on all skim pits to prevent overflow.
13. The evaporation ponds may not contain any free oil.
14. The evaporation ponds and skim pits must be inspected on at least a daily basis and immediately following each consequential rainstorm or windstorm. The OCD Santa Fe and Artesia offices must be notified within 48 hours if any defect is noted. Repairs must be made as soon as possible. If the defect will jeopardize the integrity of the pond or pit, additional wastes may not be placed into the pond or pit until repairs have been completed.
15. Monitoring of the Santa Rosa Formation 60-foot monitoring wells (MH-2, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9, and MH-10) must be performed quarterly and records of the date, inspector and status of the monitor well must be maintained. If fluid is present in the Santa Rosa Formation monitor wells the fluids in the pond and monitor wells must be measured for conductivity. If the pond and monitor well fluid conductivity measurements are similar the OCD Santa Fe and Artesia offices must be notified within 48 hours. Within 72 hours of discovery of water similarities, Loco Hills Water Disposal will submit a plan to the OCD Santa Fe and Artesia offices for review and approval that describes what procedures will be taken, to investigate the lateral extent of the waste water plume.
16. Annual reports regarding quarterly monitor well sampling must be furnished to the OCD Santa Fe office in database form and must include a graphical plot showing water level and conductivity in each well for all preceding quarters.
17. Monitoring of the Rustler Formation monitor wells (MH-1, MH-3, MH-11, MH-12, and MH-13) is not required. Loco Hills Water Disposal should secure these wells from potential vandalism, dumping or injection.
18. To protect migratory birds, all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted, covered or otherwise rendered nonhazardous to migratory birds.

H₂S PREVENTION & CONTINGENCY PLAN

1. Tests of ambient H₂S levels must be conducted on a weekly basis. Test results must be recorded and retained. The tests must be conducted at four (4) locations at the top of the berm around each of the evaporation ponds and the skim pits. The wind speed and direction must be recorded in conjunction with each test.
 - a. If an H₂S reading of 1.0 ppm or greater is obtained:
 - i. a second reading must be taken on the downwind berm within one hour;
 - ii. the dissolved oxygen and dissolved sulfide levels of the pond must be tested immediately and the need for immediate treatment determined; and
 - iii. tests for H₂S levels must be made at the fence line down wind from the problem pond.
 - b. If two (2) consecutive H₂S readings of 1.0 ppm or greater are obtained:
 - i. the operator must notify the Artesia office of the OCD immediately;
 - ii. the operator must commence hourly monitoring on a 24-hour basis; and
 - iii. the operator must obtain daily analyses of dissolved sulfides in the pond.
 - c. If an H₂S reading of 10.0 ppm or greater at the facility fence line is obtained:
 - i. the operator must immediately notify the Artesia office of the OCD and the following public safety agencies:

New Mexico State Police
Eddie County Sheriff
Eddie County Fire Marshall
Loco Hills Fire Department; and
 - ii. the operator must notify of all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.
 - d. At least 1000 gallons of an H₂S treatment chemical or an equivalent amount of chemical in concentrate form to produce 1000 gallons of H₂S treatment chemical must be stored on-site at all times. H₂S treatment chemicals must not be retained for a period in excess of the manufacturer's stated shelf life. Expired H₂S treatment chemicals may be disposed of in the evaporation ponds.

LANDFARM OPERATION

1. Disposal in the landfarm will occur only when an attendant is on duty. The landfarm portion of the facility must be secured when no attendant is present.
2. All contaminated soils received at the landfarm must be spread and disked within 72 hours of receipt.
3. Soils must be spread on the surface in lifts of six (6) inches or less.
4. Soils must be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.
5. Exempt contaminated soils must be placed in the landfarm so that they are physically separate (*i.e.*, bermed) from non-exempt contaminated soils. There may be no mixing of exempt and non-exempt soils.
6. Successive lifts of contaminated soils may not be spread until a laboratory measurement of total petroleum hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations must be maintained at the facility. Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of the remediated soils.
7. Moisture must be added as necessary to enhance bioremediation and to control blowing dust. There may be no ponding, pooling or run-off of water allowed. Any ponding of precipitation must be removed within twenty-four (24) hours of discovery.
8. Enhanced bioremediation through the application of microbes (bugs) and/or fertilizers is permitted only after prior approval from the OCD Santa Fe office. Requests for application of microbes or fertilizers must include the location of the area designated for the program, the composition of additives, and the method, amount and frequency of application.
9. Contaminated soils may not be placed within twenty (20) feet of any pipelines crossing the landfarm. In addition, no equipment may be operated within ten (10) feet of a pipeline. All pipelines crossing the facility must have surface markers identifying the location of the pipelines.
10. The portion of the facility containing contaminated soils must be bermed to prevent runoff and runoff.

TREATMENT ZONE MONITORING

1. One (1) background soil sample must be taken from a clean location outside the landfarm and

water disposal facility area. The background sample must be taken two (2) feet below the native ground surface. One (1) soil sample must be taken from the center portion of the landfarm two (2) feet below the native ground surface prior to operation. The soil samples must be analyzed for total petroleum hydrocarbons (TPH), major cations/anions, volatile aromatic organics (BTEX), and eight (8) RCRA heavy metals using EPA-approved methods.

2. A treatment zone not to exceed three (3) feet beneath the landfarm native ground surface must be monitored. A minimum of one random soil sample must be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample must be taken at two (2) to three (3) feet below the native ground surface.
3. The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) quarterly and for major cations/anions and eight (8) RCRA heavy metals annually.
4. After obtaining the soil samples the boreholes must be filled with an impermeable material such as cement or bentonite.

WASTE ACCEPTANCE CRITERIA

1. The facility is authorized to accept only oilfield wastes that are exempt from RCRA Subtitle C regulations and that do not contain Naturally Occurring Radioactive Material (NORM) regulated pursuant to 20 NMAC 3.1 Subpart 1403. All loads of these wastes received at the facility must be accompanied by a "Generator Certificate of Waste Status" signed by the generator.
2. The landfarm portion of the facility may accept only wastes that are generated at Loco Hills Water Disposal. Material accepted into the landfarm portion of the facility must pass the Paint Filter Liquids Test EPA SW-846 Method 9095A or equivalent.
3. At no time may any OCD-permitted surface waste management facility accept wastes that are determined to be RCRA Subtitle C hazardous wastes by either listing or characteristic testing.
4. The transporter of any wastes to the facility must supply a certification that wastes delivered are those wastes received from the generator and that no additional materials have been added.
5. No produced water may be received at the facility from motor vehicles unless the transporter has a valid Form C-133, "Authorization to Move Produced Water," on file with the Division.
6. Comprehensive records of all material disposed of at the surface waste management facility must be maintained by Loco Hills Water Disposal.

REPORTING AND RECORD KEEPING

1. Results of the quarterly testing of the monitor wells will be recorded and an annual report will be submitted to the OCD Santa Fe office for review **by September 7 of each year.**
2. Analytical results from background sampling and the quarterly treatment zone monitoring must be submitted to the OCD Santa Fe office **within thirty (30) days** of receipt from the laboratory. The analysis report must include a sample location map.
3. Results of the weekly testing of the evaporation pond for H₂S must be recorded and maintained for OCD review.
4. Results of annual inspection and maintenance on below-grade sumps and below-grade tanks must be recorded and maintained for OCD review.
5. Results of maintenance on the collection ditches, below-grade sump for the collection ditches and skim pits must be recorded and maintained for OCD review.
6. Results of weekly inspections of secondary containment at below-grade sumps and below-grade tanks must be recorded and maintained for OCD review.
7. The applicant must notify the **OCD Artesia District office within 24 hours** of any fire, break, leak, spill, blowout or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.
8. All records of testing and monitoring must be retained for a period of five (5) years.
9. The OCD must be notified prior to the installation of any pipelines or wells or other structures within the boundaries of the facility.
10. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) generator; 2) origin; 3) date received; 4) quantity; and 5) transporter.

FINANCIAL ASSURANCE

1. Financial assurance in the amount of **\$250,000** in the form of a surety or cash bond or a letter of credit, which is approved by the Division, is required from Loco Hills Water Disposal, Inc. for the commercial surface waste management facility.

By October 7, 1999 the Loco Hills Water Disposal, Inc. must submit 25% of the financial assurance in the amount of **\$62,500.**

By October 7, 2000 the Loco Hills Water Disposal, Inc. must submit 50% of the financial

assurance in the amount of **\$125,000.**

By October 7, 2001 the Loco Hills Water Disposal, Inc. must submit 75% of the financial assurance in the amount of **\$187,500.**

By October 7, 2002 the Loco Hills Water Disposal, Inc. must submit 100% of the financial assurance in the amount of **\$250,000.**

2. The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility will be reviewed by the OCD no later than five (5) years from the date of this approval. In addition the closure cost estimate will be reviewed according to prices and remedial work estimates at the time of review. The financial assurance may be adjusted to incorporate any closure cost changes.

CLOSURE

1. The OCD Santa Fe and Artesia offices must be notified when operation of the facility is discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Upon cessation of operations for six (6) consecutive months, the operator must complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension of time is granted by the Director.
2. A closure plan to include the following closure procedures must be submitted to the OCD for approval:
 - a. When the facility is to be closed no new material will be accepted.
 - b. All evaporation ponds will be allowed to evaporate. Any water not evaporated will be hauled to an OCD-approved facility.
 - c. The evaporation ponds and skim pits will be surveyed for NORM.
 - d. Sludge will be removed from the evaporation ponds and skim pits for remediation at the facility landfarm or disposal at an OCD-approved facility.
 - e. The soils beneath the liquids receiving and treatment area and landfarm will be characterized for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) content to determine potential migration of contamination.
 - f. All above and below grade tanks will be emptied and any waste will be hauled to an OCD-approved facility. The empty tanks, piping and equipment will be removed.
 - g. Contaminated soils or existing landfarm soils will be remediated until they meet the OCD standards in effect at the time of closure or removed to an OCD-approved facility.
 - h. The area will be contoured, seeded with a native seed mix and allowed to return to its

natural state. If the landowner desires to keep existing structures, berms, or fences for future alternative uses the structures, berms, or fences may be left in place.

- i. Closure will be completed pursuant to all OCD requirements in effect at the time of closure, and any other applicable local, state and/or federal regulations.

CERTIFICATION

Loco Hills Water Disposal, Inc., by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Loco Hills Water Disposal, Inc. further acknowledges that these conditions and requirements of this permit may be changed administratively by the Division for good cause shown as necessary to protect ground water, surface water, human health and the environment.

Accepted:

LOCO HILLS WATER DISPOSAL, INC.

Signature _____ Title _____ Date _____

CLOSURE COST ESTIMATE
LOCO HILLS WATER DISPOSAL, INC.
Surface Waste Management Facility NM-01-0004
September 2, 1999

KNOWN

7.81 acres = Total surface area
17 ft. = Maximum water depth for all evaporation ponds
132.77 acre ft. = Total volume at LHWD
11.47 inches/year = Annual mean rainfall (Artesia)

CONVERSIONS

1 acre ft = 325,851 gal.
1 acre ft = 43,560 cubic ft.
42 gal = 1 bbl

$$132.77 \text{ acre ft.} * \frac{325,851 \text{ gal}}{1 \text{ acre ft.}} = 43,263,237 \text{ gal.} * \frac{1 \text{ bbl}}{42 \text{ gal.}} = 1,030,077 \text{ bbl Total Volume At LHWD}$$

1,030,077 bbl = 43,263,237 gal Total volume at LHWD to be evaporated.

Evaporation

2000 bbl/month/acre = Estimated evaporation
from Examiner Hearing Case 7329, August 26, 1981, Page 33-34

$$2000 \text{ bbl/month/acre} * \frac{12 \text{ months}}{1 \text{ year}} * \frac{1 \text{ year}}{365 \text{ days}} * \frac{42 \text{ gal}}{1 \text{ bb}} = 2762 \text{ gal/day/acre}$$

$$2762 \text{ gal/day/acre} * 7.81 \text{ acre} = 21,571 \text{ gal/day Total Evaporation at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{21,571 \text{ gal/day}} = 2006 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 5.5 \text{ years Evaporation only}$$

Infiltration

321.3 bbl/day
to = Estimated Infiltration from Examiner Hearing Case 7329, August 26, 1981,
3.7 bbl/day

$$321.3 \text{ bbl/day} * \frac{42 \text{ gal}}{1 \text{ bbl}} = 13,494 \text{ gal/day Total Infiltration at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{13,494 \text{ gal/day}} = 3206 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 8.8 \text{ Years to Infiltrate only}$$

RainFall

$$11.47 \text{ inch/year} * \frac{1 \text{ ft}}{12 \text{ inches}} * \frac{1 \text{ year}}{365 \text{ days}} = 0.002618 \text{ ft/day}$$

$$7.81 \text{ acres} * 0.002618 \text{ ft/day} * \frac{325851 \text{ gal}}{\text{acre ft}} = 6663 \text{ gal/day Total Rain at LHWD}$$

Evaporation/infiltration time and cost

$$\begin{array}{r} 21,571 \text{ gal/day Total Evaporation at LHWD} \\ 13,494 \text{ gal/day Total Infiltration at LHWD} \\ + \quad -6,663 \text{ gal/day Total Rain at LHWD} \\ \hline 28,402 \text{ gal/day Total Loss at LHWD} \end{array}$$

$$\frac{43,263,237 \text{ gal}}{28,402 \text{ gal/day}} = 1523 \text{ days} = 4.2 \text{ years to remove the water}$$

Pond status checked each week, monitored for H2S according to permit and data reporting.

1 hour per week plus 1 hour travel time for each visit

$$60 \text{ inspections} * 2 \text{ hours} * \$45.00/\text{hour} = \$5,400.00$$

Cost \$5,400.00

Haul 1,030,077 bbl of water and inject in Class 2 well

125 bbl water truck & driver \$55.00/hour
2 hours per trip
\$0.35 bbl disposal cost

$$\frac{1,030,077 \text{ bbl}}{125 \text{ bbl}} * 2 \text{ hours} * \$55.00/\text{hour} = \$906,468.00 \text{ transport cost}$$

$$\$0.35 \text{ bbl} * 1,030,077 \text{ bbl} = \$360,526.00 \text{ disposal cost}$$

\$1,266,994.00 Pond Water Disposal

Remove Fluids From All Tanks.

125 bbl water truck & driver \$55.00/hour *water truck to 130 bbl at \$55.000*
2 hours per trip
\$0.35 bbl disposal cost

1x300 bbl, 3x500 bbl, 2x1000 bbl oil tanks = **3800 bbl total oil to sell not dispose**
2x500 bbl, 1x 740, 1x300, skim tanks = **2040 bbl total**
½ treatable oil ½ disposable water or 1020 bbl
2x500 sale tanks, = **1000 bbl total oil to sell not for disposal**
2x1000 oil treatment tanks = **2000 bbl total**
2x 250 oil holding tanks = **500 bbl total oil to sell not for disposal**

= 3020 bbl of tank fluid for disposal

3020 bbl * 2 hours * \$55.00/hour = \$2,658.00 transport cost
125 bbl

\$.35 bbl * 3020 bbl = \$ 1,057.00 disposal cost

\$3,715.00 Tank Fluid Disposal

Remove Tanks, Piping and Equipment

Cost to remove = for resale of tanks piping and equipment.

\$5,000.00 Tank and Equipment Disposal

Analytical Analysis for site characterization

40 confirmatory samples taken beneath tank, sump, and skim pit locations.

State Contract Laboratory Prices per analysis:

BTEX \$ 40.00 * 40 samples = \$1,600.00

TPH	\$ 50.00	*	40 samples	=	\$2,000.00
Metals	\$200.00	*	40 samples	=	<u>\$8,000.00</u>
					\$11,600.00 Analytical

Confirmatory Sampling Time and Labor for 40 samples

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
Travel 2 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample * 40 samples) + 2 hour + 2 hours = 24 hours

24 hours * \$55.00/hour * 2 persons = **\$2,640.00 Sampling Event**

Empty Two 15' x 125' x 5' Skim Pits

18,750 cubic feet = 140,259gal = 3339 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

3339 bbl * 3 hours * \$55.00/hour = \$4,455 transport cost
125 bbl

\$.35 bbl * 3,339 bbl = \$ 1,168.00 disposal cost

\$5,623.00 Skim Pit Fluid Disposal

Empty 3'x10'x30' Facility Overflow Sump

3'x10'x30' = 900 cubic feet = 6732 gal = 160 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

125 bbl * 3 hours * \$55.00/hour = \$330.00 transport cost
160 bbl

$\$.35 \text{ bbl} * 160 \text{ bbl} = \$56.00 \text{ disposal cost}$

\$386.00 Total sump fluid disposal

Treatment Zone Monitoring for 2 years For 5 acre Landfarm

State Contract Laboratory Prices per Analysis:

BTEX	\$ 40.00	x 8 samples	= \$320.00
TPH	\$ 50.00	x 8 samples	= \$400.00
Metals	\$200.00	x 2 samples	= <u>\$400.00</u>
			\$ 1,120.00 Analytical

Quarterly Sampling Time and Labor for One Landfarm Cell for 2 Years

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
Travel 2 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample x 1 sample) + 2 hour + 2 hours = 4.5 hours

4.5 hours x \$55.00/hour x 2 persons x 8 quarters = \$3,960.00 Sampling

\$5080.00 Treatment Zone Monitoring

Disking/Tilling for Two Years Every Two Weeks for 5 Acres.

Price and Time Quotes from Equipment and Landfarm Operators:

Small tractor and operator \$30.00/hour

30 min per acre

5 acres * 30 min * 52 weeks = 130 hours

130 hours * \$30.00/hour = **\$3,900 Disking and Tilling**

NORM Survey of 12.81 acres

\$50. Per hour for certified NORM survey

12 hours
\$ 100.00/day for Ludlam 28

$$(12 \text{ hours} * \$50.00/\text{hour}) + 100.00 = \$700.00 \text{ Norm Survey}$$

Remove Sludge From Pond Bottoms

7.81 acres of area
0.5 foot estimated sludge thickness
\$47.00/hour for 12 cubic yd truck & driver
2 hours per trip
\$14.00/cubic yd disposal cost

$$7.81 \text{ acres} * 0.5 \text{ foot} * \frac{43,560 \text{ cubic ft}}{1 \text{ acre ft}} * \frac{1 \text{ cubic yard}}{27 \text{ cubic ft}} = 6,300 \text{ cubic yds}$$

$$6,300 \text{ cubic yds} * 12 \text{ cubic yd/load} * 2 \text{ hours} * \$47.00/\text{hour} = \$49,350.00 \text{ transport}$$

$$6,300 \text{ cubic yds} * \$14.00/\text{cubic yd} = \$88,200. \text{ Sludge disposal.}$$

\$137,550.00 Total Pond Sludge Removal and Disposal

Level the Berms and Contour the Site

\$85,947.00 level and contour

Revegetation for 20 acres

Equipment and labor cost
tractor and seed drill \$30.00/hour @ 30 min/acre for 20 acres = \$300.00

Materials cost
Seed \$ 10.00 /lb @ 5 lb/acre for 20 acres = \$1,000.00

$$\$300.00 + \$1,000.00 = \$1,300.00 \text{ Revegetation}$$

Loco Hills Water Disposal Inc.
Closure Cost Estimate
711 Permit NM-01-0004
September 2, 1999
Page 7

TOTAL evaporation of water 4.2 years, off site disposal of pond sludge, fill, grade and seed
 $\$148,470.00 + \$8,351.00 = \$156,821.00$

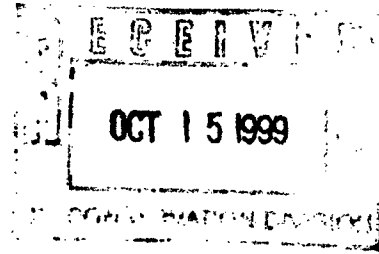
\$ 268,841.00	Total
+ <u>\$15,122.00</u>	Tax .05625
\$ 283,963.00	Total Cost

LOCO HILLS WATER DISPOSAL CO.

P. O. Box 68
Loco Hills, NM 88255

September 12, 1999

New Mexico Energy, Minerals &
Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505



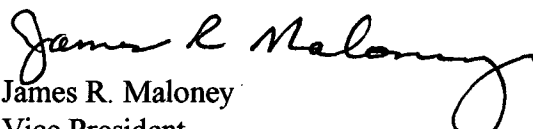
Re: Loco Hills Water Disposal Company, Inc. Surface Waste Management Facility

Dear Ms. Kieling,

In response to your letter dated September 7, 1999, as well as previous letters dated June 18, 1999 and July 24, 1999, the items listed below need clarification.

1. Your estimated closure cost figures do not total \$250,000.00. The total of your estimates is \$136,201.00. Therefore, are we to be assessed the \$250,000.00 regardless of the actual closure cost? Our estimate of \$85,000.00 previously submitted is for dirt work.
2. As a permitted Surface Disposal Facility operating in an area that has no ground water, Loco Hills Water Disposal should have the right to evaporate all ponds and not be time limited. Also, the right to land farm at our own facility. What benefit is there in hauling sludge from one facility to another?
3. Regarding H₂S. This facility does not have a history of H₂S. If the OCD Rule 711 requires this facility to maintain 1000 gallons of treating chemical and monitor all pits on a weekly schedule, then all other disposal facilities must adhere to this rule.
4. This facility has a computerized disposal system already in place and operational. If this is a Rule 711 requirement, then it should be in force on all other disposal facilities.

Sincerely,
LOCO HILLS WATER DISPOSAL CO., INC.


James R. Maloney
Vice President

JRM:jb

CLOSURE COST ESTIMATE
LOCO HILLS WATER DISPOSAL, INC.
Surface Waste Management Facility NM-01-0004
July 23, 1999

KNOWN

7.81 acres = Total surface area
17 ft. = Maximum water depth for all evaporation ponds
132.77 acre ft. = Total volume at LHWD
11.47 inches/year = Annual mean rainfall (Artesia)

CONVERSIONS

1 acre ft = 325,851 gal.
1 acre ft = 43,560 cubic ft.
42 gal = 1 bbl

$$132.77 \text{ acre ft.} * \frac{325,851 \text{ gal}}{1 \text{ acre ft.}} = 43,263,237 \text{ gal.} * \frac{1 \text{ bbl}}{42 \text{ gal.}} = 1,030,077 \text{ bbl Total Volume At LHWD}$$

1,030,077 bbl = 43,263,237 gal Total volume at LHWD to be evaporated.

Evaporation

2000 bbl/month/acre = Estimated evaporation
from Examiner Hearing Case 7329, August 26, 1981, Page 33-34

$$2000 \text{ bbl/month/acre} * \frac{12 \text{ months}}{1 \text{ year}} * \frac{1 \text{ year}}{365 \text{ days}} * \frac{42 \text{ gal}}{1 \text{ bb}} = 2762 \text{ gal/day/acre}$$

$$2762 \text{ gal/day/acre} * 7.81 \text{ acre} = 21,571 \text{ gal/day Total Evaporation at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{21,571 \text{ gal/day}} = 2006 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 5.5 \text{ years Evaporation only}$$

Infiltration

321.3 bbl/day
to = Estimated Infiltration from Examiner Hearing Case 7329, August 26, 1981,
3.7 bbl/day

$$321.3 \text{ bbl/day} * \frac{42 \text{ gal}}{1 \text{ bbl}} = 13,494 \text{ gal/day Total Infiltration at LHWD}$$

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RainFall

$$11.47 \text{ inch/year} * \frac{1 \text{ ft}}{12 \text{ inches}} * \frac{1 \text{ year}}{365 \text{ days}} = 0.002618 \text{ ft/day}$$

$$7.81 \text{ acres} * 0.002618 \text{ ft/day} * \frac{325851 \text{ gal}}{\text{acre ft}} = 6663 \text{ gal/day Total Rain at LHWD}$$

Evaporation/infiltration time and cost

21,571 gal/day Total Evaporation at LHWD
13,494 gal/day Total Infiltration at LHWD
+ -6,663 gal/day Total Rain at LHWD
28,402 gal/day Total Loss at LHWD

$$\frac{43,263,237 \text{ gal}}{28,402 \text{ gal/day}} = 1523 \text{ days} = 4.2 \text{ years to remove the water}$$

evaporate pond for 4.2 years ?? let it sit have ocd check on it. or **Cost \$0.00**

Haul 1,030,077 bbl of water and inject in Class 2 well

125 bbl water truck & driver \$55.00/hour
2 hours per trip
\$0.35 bbl disposal cost

$$\frac{1,030,077 \text{ bbl}}{125 \text{ bbl}} * 2 \text{ hours} * \$55.00/\text{hour} = \$906,468.00 \text{ transport cost}$$

$$\$0.35 \text{ bbl} * 1,030,077 \text{ bbl} = \$360,526.00 \text{ disposal cost}$$

\$1,266,994.00 Pond Water Disposal

Remove Fluids From All Tanks.

125 bbl water truck & driver \$55.00/hour *water truck to 130 bbl at \$55.000*
2 hours per trip
\$0.35 bbl disposal cost

1x300 bbl, 3x500 bbl, 2x1000 bbl oil tanks = **3800 bbl total oil to sell not dispose**
2x500 bbl, 1x 740, 1x300, skim tanks = **2040 bbl total**
½ treatable oil ½ disposable water or 1020 bbl
2x500 sale tanks, = **1000 bbl total oil to sell not for disposal**
2x1000 oil treatment tanks = **2000 bbl total**
2x 250 oil holding tanks = **500 bbl total oil to sell not for disposal**

= 3020 bbl of tank fluid for disposal

3020 bbl * 2 hours * \$55.00/hour = \$2,658.00 transport cost
125 bbl

\$0.35 bbl * 3020 bbl = \$ 1,057.00 disposal cost

\$3,715.00 Tank Fluid Disposal

Remove Tanks, Piping and Equipment

Cost to remove = for resale of tanks piping and equipment.

\$00.00 Tank and Equipment Disposal

Analytical Analysis for site characterization

40 confirmatory samples taken beneath tank, sump, and skim pit locations.

State Contract Laboratory Prices per analysis:

BTEX \$ 40.00	* 40 samples	= \$1,600.00
TPH \$ 50.00	* 40 samples	= \$2,000.00
Metals \$200.00	* 40 samples	= <u>\$8,000.00</u>
		\$11,600.00 Analytical

Confirmatory Sampling Time and Labor for 40 samples

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
Travel 2 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample * 40 samples) + 2 hour + 2 hours = 24 hours

24 hours * \$55.00/hour * 2 persons = **\$2,640.00 Sampling Event**

Empty Two 15' x 125' x 5' Skim Pits

18,750 cubic feet = 140,259 gal = 3339 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

3339 bbl * 3 hours * \$55.00/hour = \$4,455 transport cost
125 bbl

\$.35 bbl * 3,339 bbl = \$ 1,168.00 disposal cost

\$5,623.00 Skim Pit Fluid Disposal

Empty 3'x10'x30' Facility Overflow Sump

3'x10'x30' = 900 cubic feet = 6732 gal = 160 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

125 bbl * 3 hours * \$55.00/hour = \$330.00 transport cost
160 bbl

\$.35 bbl * 160 bbl = \$ 56.00 disposal cost

\$386.00 Total sump fluid disposal

Treatment Zone Monitoring for 2 years For 5 acre Landfarm

State Contract Laboratory Prices per Analysis:

BTEX	\$ 40.00	x 8 samples	= \$320.00
TPH	\$ 50.00	x 8 samples	= \$400.00
Metals	\$200.00	x 2 samples	= <u>\$400.00</u>
			\$ 1,120.00 Analytical

Quarterly Sampling Time and Labor for One Landfarm Cell for 2 Years

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
Travel 2 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample x 1 sample) + 2 hour + 2 hours = 4.5 hours

4.5 hours x \$55.00/hour x 2 persons x 8 quarters = \$3,960.00 Sampling

\$5080.00 Treatment Zone Monitoring

Disking/Tilling for Two Years Every Two Weeks for 5 Acres.

Price and Time Quotes from Equipment and Landfarm Operators:

Small tractor and operator \$30.00/hour

30 min per acre

5 acres * 30 min * 52 weeks = 130 hours

130 hours * \$30.00/hour = **\$3,900 Disking and Tilling**

Remove Sludge From Pond Bottoms

7.81 acres of area

0.5 foot estimated sludge thickness

\$47.00/hour for 12 cubic yd truck & driver

2 hours per trip

\$14.00/cubic yd disposal cost

7.81 acres * 0.5 foot * $\frac{43,560 \text{ cubic ft}}{1 \text{ acre ft}}$ * $\frac{1 \text{ cubic yard}}{27 \text{ cubic ft}}$ = 6,300 cubic yds

6,300 cubic yds * 12 cubic yd/load * 2 hours * \$47.00/hour = \$49,350.00 Transport cost

6,300 cubic yds * \$14.00/cubic yard = \$88,200. Sludge disposal..

\$137,550 Pond Sludge Removal

or

Cost To Landfarm Pond Sludge On Site

Adds an extra 2 years of tilling on to the end of the 4.2 year making the total cleanup time
6.2 years

\$16,010.00 Additional Landfarming & Analytical

Fill Dirt to Level and Fill 13 acre Pond and Landfarm Area

13 acres of pit area to fill
5 feet depth estimated amount of soil needed to level pond area
\$47.00/hour for 12 cubic yd truck & driver
1 hours estimated travel
\$3.00/cubic yd for fill dirt

13 acres * 5 ft * $\frac{43,560 \text{ cubic ft}}{1 \text{ acre ft}}$ * $\frac{1 \text{ cubic yard}}{27 \text{ cubic ft}}$ = 104,866 cubic yd

104,866 cubic yd * 12 cubic yd/load * 1 hour * \$47.00/hour = \$410,727.00 Transport Cost

104,866 cubic yd * \$3.00/cubic yd = \$314,598.00 Fill Dirt Cost

***\$725,325.00 Total fill dirt cost**

Level the Berms and Contour the Site

\$85,947.00 level and contour

Revegetation for 20 acres

Equipment and labor cost
tractor and seed drill \$30.00/hour @ 30 min/acre for 20 acres = \$300.00

Loco Hills Water Disposal Inc.
Closure Cost Estimate
711 Permit NM-01-0004
July 23, 1999
Page 7

Materials cost

Seed \$ 10.00 /lb @ 5 lb/acre for 20 acres = \$1,000.00

\$300.00 + \$1,000.00 = **\$1,300.00 Revegetation**

**TOTAL evaporation of water 4.2 years, haul & disposal of pond sludge, and fill grade
\$983,060.00**

TOTAL evaporation of water 4.2 years, landfarming pond sludge add 2 years, fill and grade
\$861,520.00

TOTAL with Hauling all of the water, landfarm on site (2 years) and fill and grade \$2,128,520.00

\$ 983,060.00 Total
+ \$55,297.00 Tax .05625
\$1,038,357.00 Total Cost

KNOWN

7.81 acres = Total surface area
17 ft. = Maximum water depth for all evaporation ponds
132.77 acre ft. = Total volume at LHWD
11.47 inches/year = Annual mean rainfall (Artesia)

CONVERSIONS

1 acre ft = 325,851 gal.
1 acre ft = 43,560 cubic ft.
42 gal = 1 bbl

$$132.77 \text{ acre ft.} * \frac{325,851 \text{ gal}}{1 \text{ acre ft.}} = 43,263,237 \text{ gal.} * \frac{1 \text{ bbl}}{42 \text{ gal.}} = 1,030,077 \text{ bbl Total Volume At LHWD}$$

1,030,077 bbl = 43,263,237 gal Total volume at LHWD to be evaporated.

Evaporation

2000 bbl/month/acre = Estimated evaporation
from Examiner Hearing Case 7329, August 26, 1981, Page 33-34

$$2000 \text{ bbl/month/acre} * \frac{12 \text{ months}}{1 \text{ year}} * \frac{1 \text{ year}}{365 \text{ days}} * \frac{42 \text{ gal}}{1 \text{ bb}} = 2762 \text{ gal/day/acre}$$

$$2762 \text{ gal/day/acre} * 7.81 \text{ acre} = 21,571 \text{ gal/day Total Evaporation at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{21,571 \text{ gal/day}} = 2006 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 5.5 \text{ years Evaporation only}$$

Infiltration

321.3 bbl/day
to = Estimated Infiltration from Examiner Hearing Case 7329, August 26, 1981,
3.7 bbl/day

$$321.3 \text{ bbl/day} * \frac{42 \text{ gal}}{1 \text{ bbl}} = 13,494 \text{ gal/day Total Infiltration at LHWD}$$

$$\frac{43,263,237 \text{ gal}}{13,494 \text{ gal/day}} = 3206 \text{ days} * \frac{1 \text{ year}}{365 \text{ days}} = 8.8 \text{ Years to Infiltrate only}$$

RainFall

$$11.47 \text{ inch/year} * \frac{1 \text{ ft}}{12 \text{ inches}} * \frac{1 \text{ year}}{365 \text{ days}} = 0.002618 \text{ ft/day}$$

$$7.81 \text{ acres} * 0.002618 \text{ ft/day} * \frac{325851 \text{ gal}}{\text{acre ft}} = 6663 \text{ gal/day Total Rain at LHWd}$$

21,571 gal/day Total Evaporation at LHWd
13,494 gal/day Total Infiltration at LHWd
+ -6,663 gal/day Total Rain at LHWd
28,402 gal/day Total Loss at LHWd

$$\frac{43,263,237 \text{ gal}}{28,402 \text{ gal/day}} = 1523 \text{ days} = 4.2 \text{ years to remove the water}$$

evaporate pond for 4.2 years ?? let it sit have ocd check on it. or **Cost \$0.00**

Haul 1,030,077 bbl of water and inject in Class 2 well

125 bbl water truck & driver \$55.00/hour
2 hours per trip
\$0.35 bbl disposal cost

$$\frac{1,030,077 \text{ bbl}}{125 \text{ bbl}} * 2 \text{ hours} * \$55.00/\text{hour} = \$906,468.00 \text{ transport cost}$$

$$\$0.35 \text{ bbl} * 1,030,077 \text{ bbl} = \$360,526.00 \text{ disposal cost}$$

~~\$1,699,526.00 Pond Water Disposal~~ \$1,266,994

Remove Fluids From All Tanks.

125 bbl water truck & driver \$55.00/hour water truck to 130 bbl at \$55.000
2 hours per trip
\$0.35 bbl disposal cost

1x300 bbl, 3x500 bbl, 2x1000 bbl oil tanks = 3800 bbl total oil to sell not dispose

2x500 bbl, 1x 740, 1x300, skim tanks = 2040 bbl total

½ treatable oil ½ disposable water or 1020 bbl

2x500 sale tanks, = 1000 bbl total oil to sell not for disposal
2x1000 oil treatment tanks = 2000 bbl total
2x 250 oil holding tanks = 500 bbl total oil to sell not for disposal

= 3020 bbl of tank fluid for disposal

$\frac{3020 \text{ bbl}}{125 \text{ bbl}} * 2 \text{ hours} * \$55.00/\text{hour} = \$2,658.00 \text{ transport cost}$

$\$.35 \text{ bbl} * 3020 \text{ bbl} = \$1,057.00 \text{ disposal cost}$

\$3,715.00 Tank Fluid Disposal *9*

Remove Tanks, Piping and Equipment

Estimate from other 711 facility closure cost *Cost to remove for cost of keeping tanks 00cost or*
~~\$5,000.00 Tank and Equipment Disposal~~ *00*

Analytical Analysis for site characterization

40 confirmatory samples taken beneath tank, sump, and skim pit locations.

State Contract Laboratory Prices per analysis:

BTEX	\$ 40.00	* 40 samples	= \$1,600.00
TPH	\$ 50.00	* 40 samples	= \$2,000.00
Metals	\$200.00	* 40 samples	= <u>\$8,000.00</u>
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Confirmatory Sampling Time and Labor for 40 samples

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
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Total Time = (30 min/sample * 40 samples) + 2 hour + 2 hours = 24 hours

24 hours * \$55.00/hour * 2 persons = **\$2,640.00 Sampling Event**

Empty Two 15' x 125' x 5' Skim Pits

18,750 cubic feet = 140,259 gal = 3339 bbl
100 bbl water truck & driver \$65.00/hour *cha 125 bbl at 55\$*
3 hours per trip

3339 bbl * 3 hours * \$65.00/hour = \$6,630 transport cost *\$4,455*
100 bbl *55*
125

\$.35 bbl * 3,339 bbl = \$ 1,168.00 disposal cost

~~\$7,798.00~~ Skim Pit Fluid Disposal *5,623*

Empty 3'x10'x30' Facility Overflow Sump

3'x10'x30' = 900 cubic feet = 6732 gal = 160 bbl
125 bbl water truck & driver \$55.00/hour
3 hours per trip

125 bbl * 3 hours * \$55.00/hour = \$330.00 transport cost
160 bbl

\$.35 bbl * 160 bbl = \$ 56.00 disposal cost

\$386.00 Total sump fluid disposal

Treatment Zone Monitoring for 2 years For 5 acre Landfarm

State Contract Laboratory Prices per Analysis:

BTEX	\$ 40.00	x 8 samples	= \$320.00
TPH	\$ 50.00	x 8 samples	= \$400.00
Metals	\$200.00	x 2 samples	= <u>\$400.00</u>
\$ 1,120.00 Analytical			

Quarterly Sampling Time and Labor for One Landfarm Cell for 2 Years

Labor 2 personnel \$55.00/hour
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Total Time = (30 min/sample x 1 sample) + 2 hour + 2 hours = 4.5 hours

4.5 hours x \$55.00/hour x 2 persons x 8 quarters = \$3,960.00 Sampling

\$5080.00 Treatment Zone Monitoring

Disking/Tilling for Two Years Every Two Weeks for 5 Acres.

Price and Time Quotes from Equipment and Landfarm Operators:

Small tractor and operator \$30.00/hour

30 min per acre

5 acres * 30 min * 52 weeks = 130 hours

130 hours * \$30.00/hour = **\$3,900 Disking and Tilling**

\$ 37,944
(32,944)

Remove Sludge From Pond Bottoms

7.81 acres of area

0.5 foot estimated sludge thickness

\$47.00/hour for 12 cubic yd truck & driver

2 hours per trip

\$14.00/cubic yd disposal cost

Cost land farm on site added time

+2 years
\$16,010.00

7.81 acres * 0.5 foot * $\frac{43,560 \text{ cubic ft}}{1 \text{ acre ft}}$ * $\frac{1 \text{ cubic yard}}{27 \text{ cubic ft}}$ = 6,300 cubic yds

6,300 cubic yds * 12 cubic yd/load * 2 hours * \$47.00/hour = \$49,350.00 Transport cost

6,300 cubic yds * \$14.00/cubic yard = \$88,200. Sludge disposal..

\$137,550 Pond Sludge Removal

Fill Dirt to Level and Fill 13 acre Pond and Landfarm Area

13 acres of pit area to fill

5 feet depth estimated amount of soil needed to level pond area

\$47.00/hour for 12 cubic yd truck & driver

1 hours estimated travel

\$3.00/cubic yd for fill dirt

13 acres * 5 ft * $\frac{43,560 \text{ cubic ft}}{1 \text{ acre ft}}$ * $\frac{1 \text{ cubic yard}}{27 \text{ cubic ft}}$ = 104,866 cubic yd

1 acre ft

27 cubic ft

104,866 cubic yd * 12 cubic yd/load * 1 hour * \$47.00/hour = \$410,727.00 Transport Cost

104,866 cubic yd * \$3.00/cubic yd = \$314,598.00 Fill Dirt Cost

\$725,325.00 Total fill dirt cost

Level the Berms and Contour the Site

\$85,947.00 level and contour

Revegetation for 20 acres

Equipment and labor cost

tractor and seed drill \$30.00/hour @ 30 min/acre for 20 acres = \$300.00

Materials cost

Seed \$ 10.00 /lb @ 5 lb/acre for 20 acres = \$1,000.00

\$300.00 + \$1,000.00

=

\$1,300.00 Revegetation

\$ 850,516

16,010

\$ 866,526

TOTAL with evaporation and without fill dirt \$277,575.00

\$ 25,774
\$ 262,741.00

TOTAL evaporation of water 4.2 years and fill dirt \$1,002,900.00

2 years Land Farming

16,010.

\$ 988,890

TOTAL with Hauling all of the water and with fill dirt \$2,702,426.00

\$277,575.00 Total

+ \$15,613.00 Tax .05625

\$293,188.00 Total Cost

268,259

2,545,642

and Farming (No Hauling Soil)

\$1,002,900.00 Total

+ \$65,413.00 Tax .05625

\$1,059,313.00 Total Cost

2,128,520

866,526

Treatment Zone Monitoring for 2 years For 5 acre Landfarm

State Contract Laboratory Prices per Analysis:

BTEX	\$ 40.00	x 8 samples	= \$320.00
TPH	\$ 50.00	x 8 samples	= \$400.00
Metals	\$200.00	x 2 samples	= <u>\$400.00</u>
			\$ 1,120.00 Analytical

Quarterly Sampling Time and Labor for One Landfarm Cell for 2 Years

Labor 2 personnel \$55.00/hour
Sample 30 min per sample
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Total Time = (30 min/sample x 1sample) + 2 hour + 2 hours = 4.5 hours

4.5 hours x \$55.00/hour x 2 persons x 8 quarters = \$3,960.00 Sampling

\$5080.00 Treatment Zone Monitoring

Disking/Tilling for Two Years Every Two Weeks for 5 Acres.

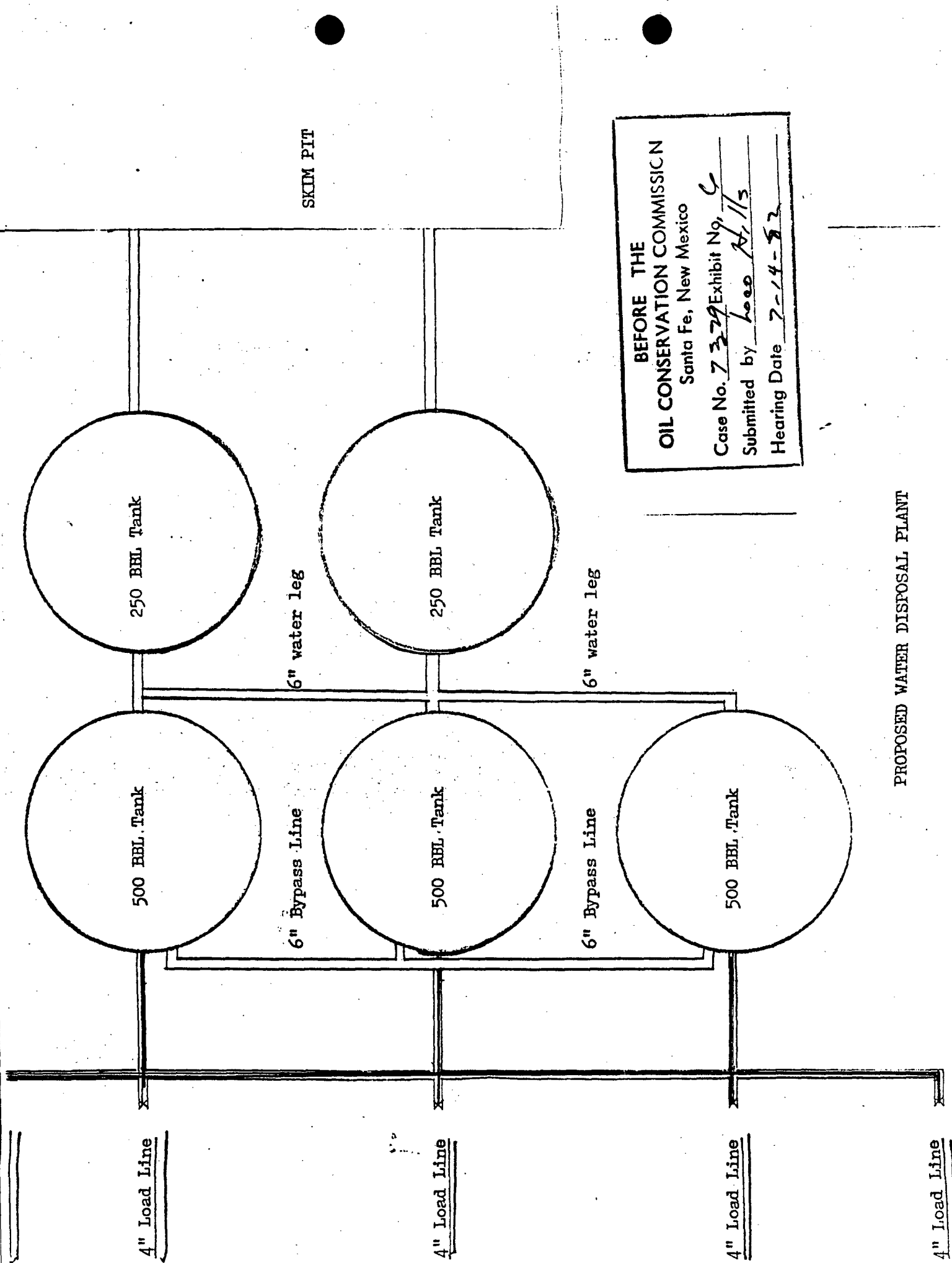
Price and Time Quotes from Equipment and Landfarm Operators:

Small tractor and operator \$30.00/hour
30 min per acre

5 acres * 30 min * 52 weeks = 130 hours

130 hours * \$30.00/hour = **\$3,900 Disking and Tilling**

5,400.00	3,900
3,715.00	700
5,000	137,550
11,600	85,947.00
2,640	1300
5,623	<u>\$ 268,841.00</u>
386.	16,802.00
5,080	\$ 15,122.00
	<u>\$ 283,963</u>
	.05625



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7 329 Exhibit No. 6
Submitted by 1000 A/113
Hearing Date 7-14-82

PROPOSED WATER DISPOSAL PLANT



TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

April 16, 1985

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

Les Clements
District Supervisor
Oil Conservation Division
P. O. Drawer DD
Artesia, New Mexico 88210

Re: Case No. 7329
Order No. R-6811-A

Dear Les:

Attached is a map and a plat of the Loco Hills Water Disposal System showing the recent pit added on the South side of the installation.

As the total pit area is confined within the southwest quarter of the section and does not exceed 15 acres, this change falls within the authority for disposal granted under Order No. R-6811-A as amended.

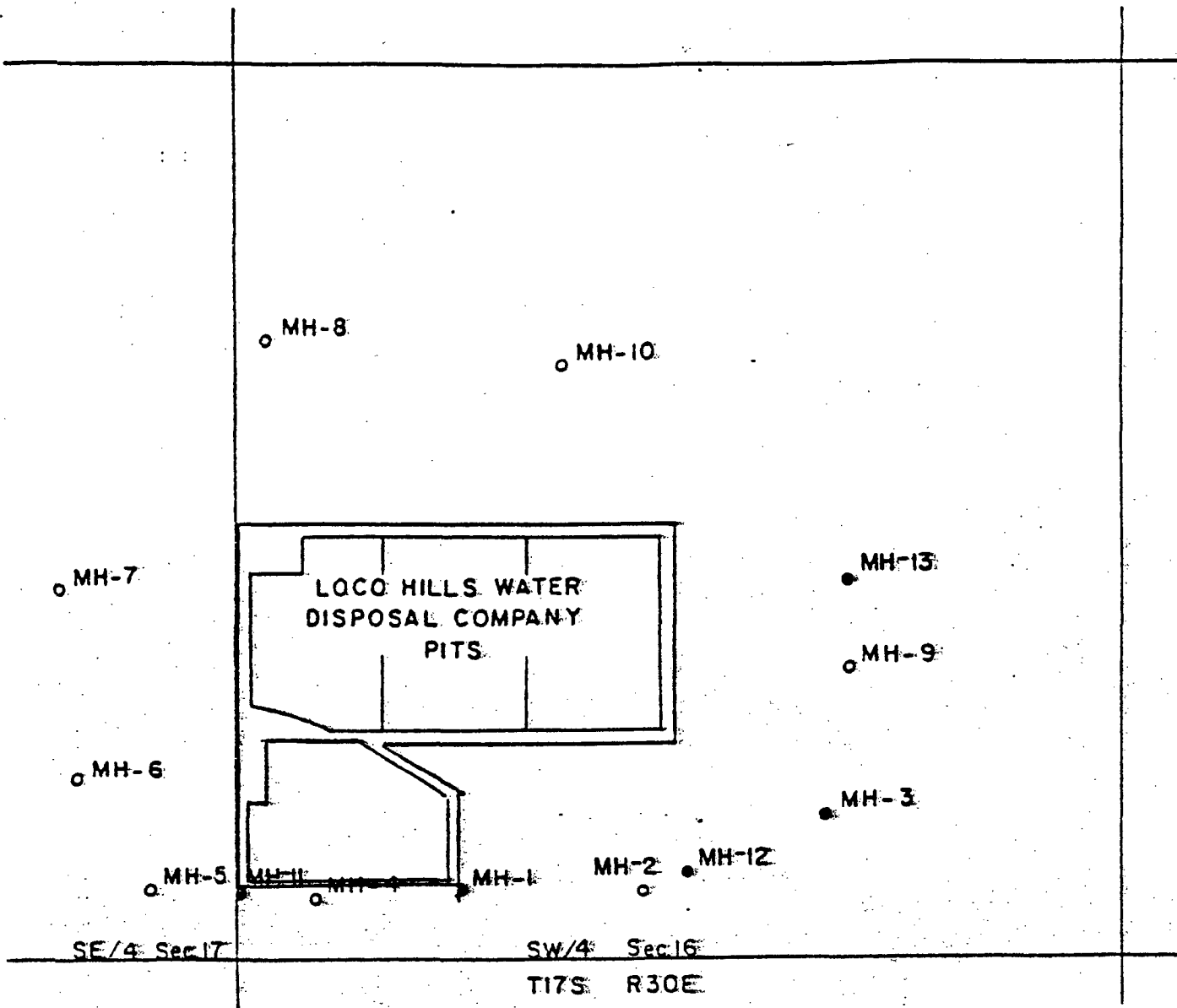
Because of the proximity of the new pit to some of the monitor wells, I would like our field people to witness the testing of these holes twice a year. If any water shows up in these wells or if the layout differs from the plat attached to this letter, please let me know immediately.

Sincerely,

R. L. STAMETS
Director

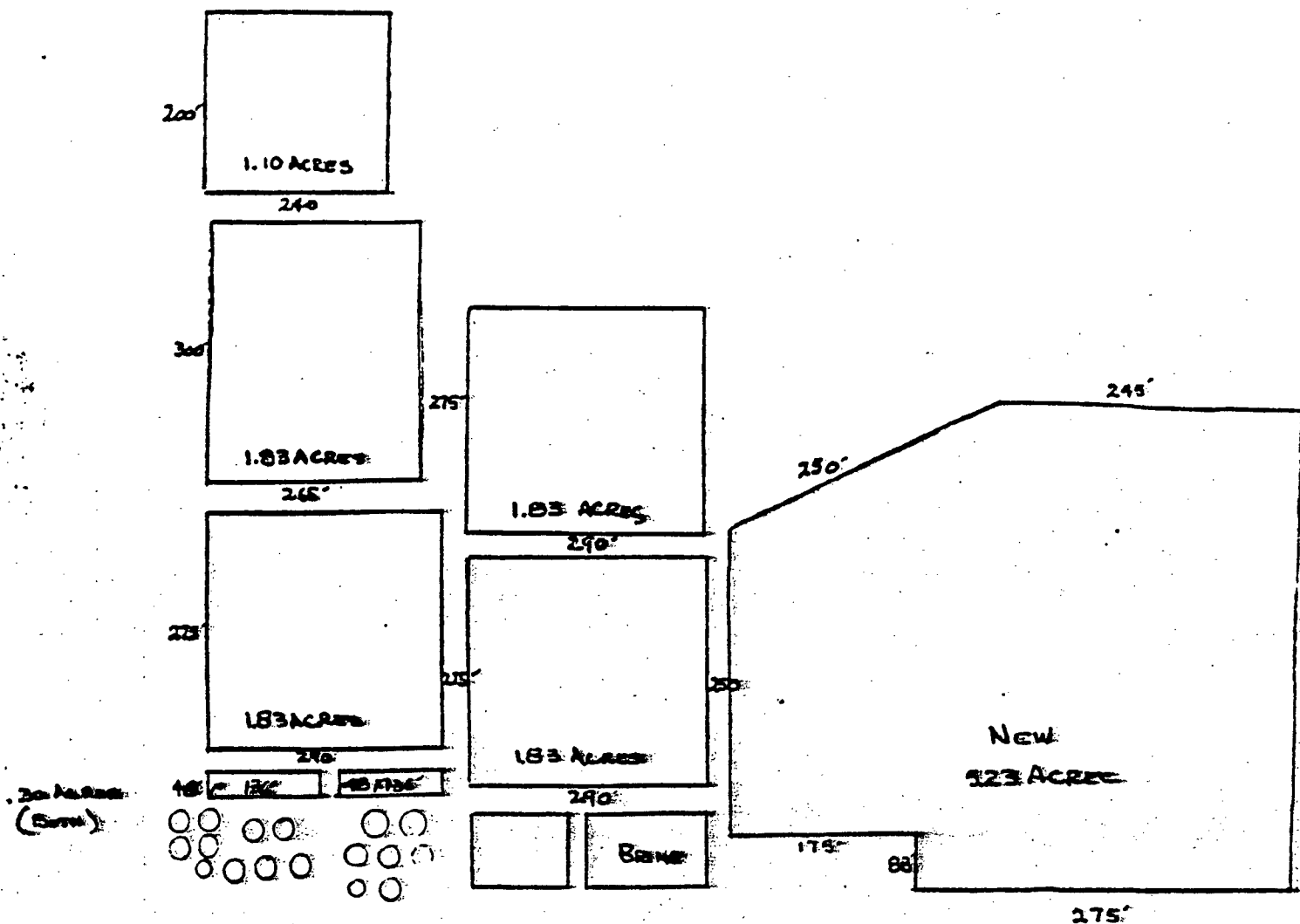
RLS/fd
enc.

cc: Jim Jennings - Roswell
✓ Case File



EDDY COUNTY, NEW MEXICO
MONITOR HOLE LOCATIONS
LOCO HILLS WATER DISPOSAL CO
2/2/83

ED L. REED & ASSOCIATES, INC.
CONDUCTING HYDROLOGIST
MIDLAND & CORPUS CHRISTI, TEXAS



TOTAL ACRES 13.95 IN ALL PLOTS

Ed L. Reed and Associates, Inc.

Consulting Hydrologists

MIDLAND - CORPUS CHRISTI
TEXAS

ED L. REED, P.E.
CHAIRMAN OF THE BOARD

A. JOSEPH REED
PRESIDENT

CHESTER F. SKRABACZ
VICE PRESIDENT FIELD OPERATIONS

1109 N. BIG SPRING
MIDLAND, TEXAS 79701
915 682-0556

V. STEVE REED
EXECUTIVE VICE PRESIDENT

708 GUARANTY BANK PLAZA
CORPUS CHRISTI, TEXAS 78475
512-833-1353

February 8, 1983

Mr. James Jennings
Jennings & Christy
P.O. Box 1180
Roswell, New Mexico 88202-1180

Dear Mr. Jennings:

In accordance with the Oil Conservation Division Order R-6811-B, three Rustler-depth monitor holes have been completed near the Loco Hills Disposal Facility. These monitor holes were drilled in late January, 1983. The sample logs and completion forms are enclosed.

These monitor holes were drilled with water to a depth sufficient to encounter the top of the Rustler Formation. The Rustler Formation was encountered at depths ranging from 245 feet in monitor hole #12 to 288 feet in monitor hole #11. After the holes were drilled they were cased with 4-inch PVC which was slotted with 1/8-inch cuts from total depth to 4 feet below the surface. Each of the monitor holes was jetted for 40 minutes. There was no indication that either the Triassic or the upper Rustler was producing water. These three monitor holes will now be part of a system which includes five Rustler depth and eight 60 foot deep monitor holes.

Please review these data and submit a copy to the Oil Conservation Division. If you have any questions, please call.

Very truly yours,

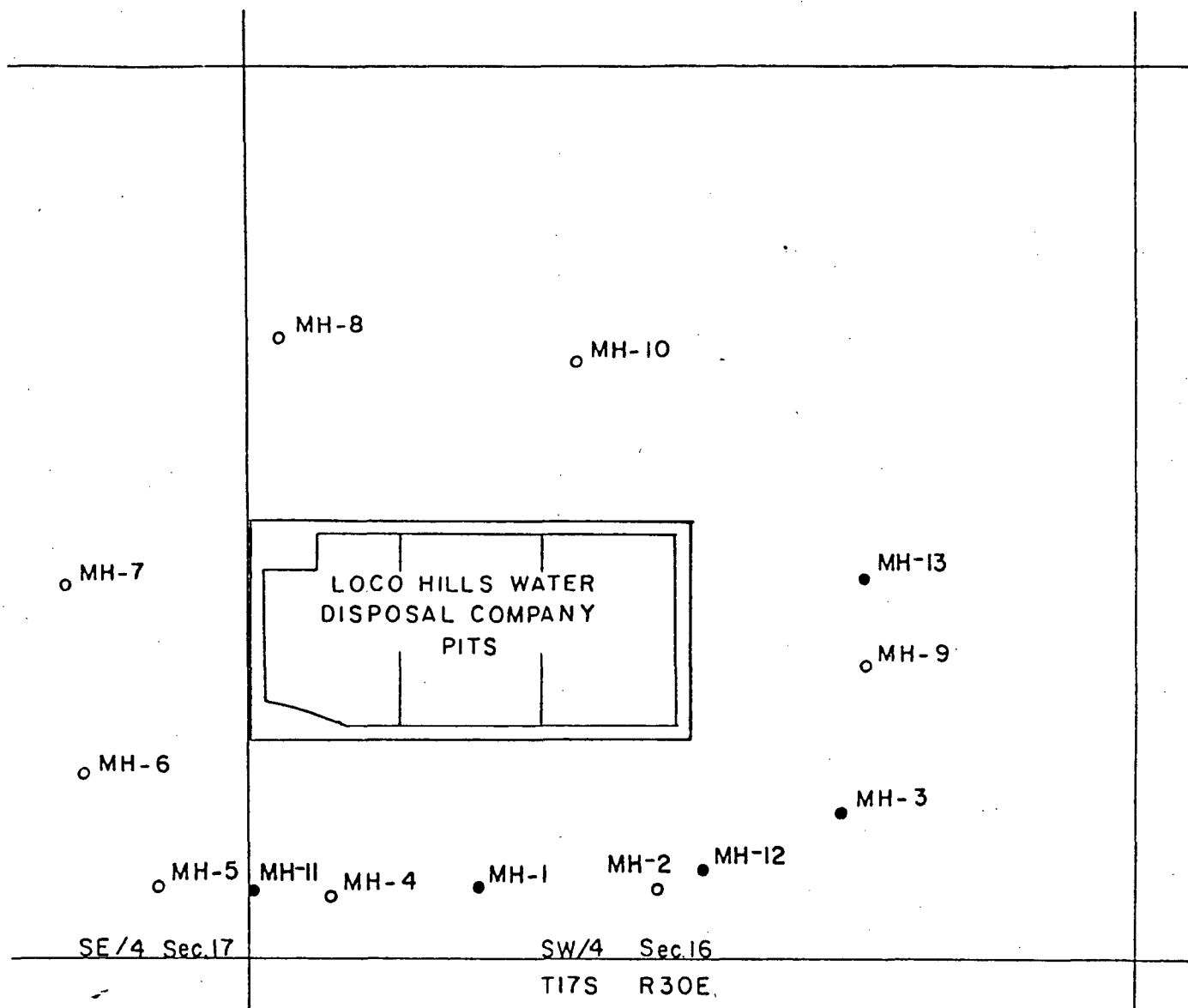
ED L. REED & ASSOCIATES, INC.



V. Steve Reed

VSR:ljs

Enclosures



- 60' MONITOR HOLES
- RUSTLER DEPTH MONITOR HOLES

N

500 0 500 1000

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

BUSINESS LEASE BL-1149

P.O. Box 68

LOCO HILLS, N M 88255

1 MILE NORTH ON EDDY COUNTY ROAD

Sec. 16 TWP. 17S RGE 30E ACRES 40

PIT 45'x 145'

For SKIN OIL

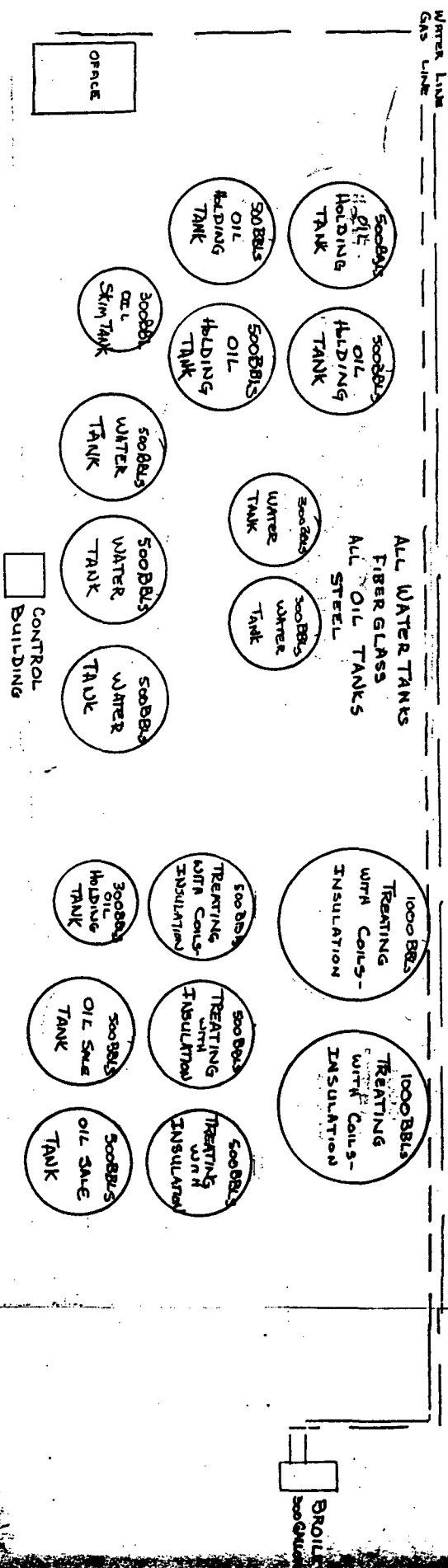
PIT 45' x 145'

For Skin Oil

BEFORE EXAMINER STOCK
OIL CONSERVATION DIVISION

EXHIBIT NO. 1

CASE NO. 8855



Loco Hills Water Disposal Plant

P.O. Box 68

Loco Hills, NM 88255

1 Mile North on Eddy County Road

Sec. 16 Twp 17S Rge 30E Acres 40

Business Lease BL-1149

BEFORE EXAMINER STOP
OIL CONSERVATION DIVISION

EXHIBIT NO. 1

CASE NO. 8855

PIT 45' x 145'

FOR SKIM OIL

PIT 45' x 145'

FOR SKIM OIL

Water Line
Gas Line

ALL WATER TANKS
FIBERGLASS
ALL OIL TANKS
STEEL

500 BBL
OIL
HOLDING
TANK

500 BBL
OIL
HOLDING
TANK

50 BBL
OIL
HOLDING
TANK

500 BBL
OIL
HOLDING
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

300 BBL
OIL
SKIM TANK

CONTROL
BUILDING

OFFICE

BROIL
300 GALLONS

1000 BBL
TREATING
WITH COILS-
INSULATION

1000 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH COILS-
INSULATION

300 BBL
OIL
HOLDING
TANK

300 BBL
OIL SKE
TANK

300 BBL
OIL SKE
TANK

Loco Hills Water Disposal Plant

BUSINESS LEASE BL-1149

P.O. Box 68
Loco Hills, NM 88255

1 MILE NORTH ON EDDY COUNTY ROAD

Sec. 16 TWP. 17S RGE 30E ACRES 40

BEFORE EXPIRATION OF
OIL CONVEYANCE AGREEMENT

EXPIRATION DATE

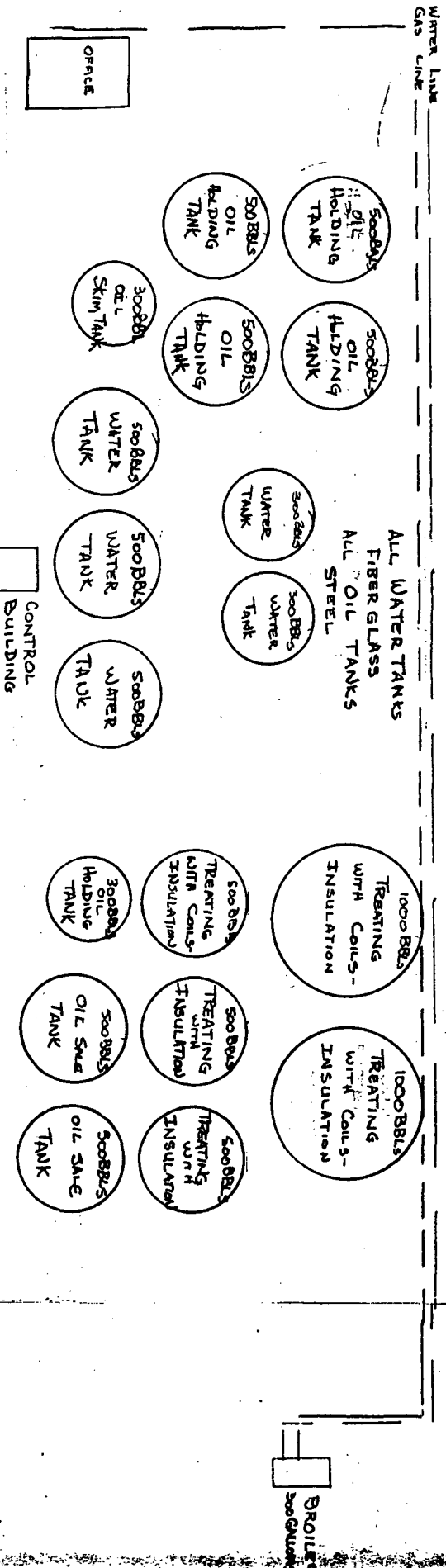
CASE NO. 8855

PIT 45'x 145'

FOR SKIM OIL

PIT 45'x 145'

FOR SKIM OIL



May 14, 1999

CERTIFIED MAIL

RETURN RECEIPT NO. P-326-936-532

Mr. Phillip C. Nobis
Tierra Environmental Company, Inc.
P.O. Drawer 15250
Farmington, New Mexico 87401-5250

**RE: OCD Rule 711 Permit Approval NM-01-0010
 Tierra Environmental Company, Inc.
 Commercial Surface Waste Management Facility
 NW/4 SE/4, Section 2, Township 29 North, Range 12 West , NMPM,
 San Juan County, New Mexico**

Dear Mr Nobis:

241 The permit application for the Tierra Environmental Company, Inc. (Tierra) commercial surface waste management facility located in the NW/4 SE/4, Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico **is hereby approved** in accordance with New Mexico Oil Conservation Division (OCD) Rule 711 under the conditions contained in the enclosed attachment. This permit approval is conditional upon the receipt and approval by the Director of financial assurance in the amount of \$33,000. According to the schedule outlined in the financial assurance section of the enclosed attachment, A \$25,000 financial assurance bond is required within thirty (30) days of the date of this permit approval letter. The application consists of the permit application Form C-137 dated June 15, 1998, the inspection report response letter dated October 1, 1997, materials from the hearing file related to Order No. R-9772 dated November 17, 1992, and materials submitted in conjunction with subsequent permit modifications dated February 18, 1993; May 25, 1993; July 15, 1993; and February 8, 1996.

The construction, operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved treatment, evaporation and landfill methods must receive prior OCD approval. Tierra is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this facility permit does not relieve Tierra Environmental Company, Inc.

Design to Monitor
Vertical Flow

Page 37
Line 5

Santa Rosa Triassic wells could be Dry

Rustler wells that have water show vertical migration

Rustler did not have Fresh water at this location 10,000 TDS

Nearest Rustler with Low TDS Fresh water

- ① Sec 21 R 30 East T 17 South "Anadarko"
~~at~~ at one time produced water From Rustler

Very Good - ② Sec 26 T 18 S, R 30 E 215' Triassic most likely Fresh TDS 123
Six miles South walterslake well 220 230' Cl 170 Sulfate 315
And one other well in same Section is Fresh Depth Unknown
Chloride < 250 mg/l

- ④ Sec 22, T 17 S, R 29 E NW Corner Triassic wells
TDS 2722 mg/l 110' Depth 80 ppm Cl
- Double wells Section ⑤

Closest water Fresh ⑤ Sec 35, T 17 S, R 29 E Abundant water supply well. Cl 4000 ppm
4 miles From Facility American Republic well

- ⑥ Sec 10, T 18 S, R 29 E Stock windmill Triassic
TDS 6882 mg/l

- ⑦ other wells that have produced Fresh water < 10,000 TDS mg/l
in T 18 S, R 30 E

- ⑧ Sec 29, T 17 S, R 29 E Bishop well 100' 230 ppm Cl

- ⑨ Sec 32, T 18 S, R 30 E TDS 3,326 ppm 1975 year
Cl 277 ppm Sulfate 1812 ppm

OIL CONSERVATION DIVISION

Hobbs District Office

Post Office Box 1980

Hobbs, New Mexico 88240

ATTN: Chris Williams, District Supervisor

OIL CONSERVATION DIVISION

Hobbs District Office

Post Office Box 1980

Hobbs, New Mexico 88240

ATTN: Chris Williams, District Supervisor

OIL CONSERVATION DIVISION

Hobbs District Office

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Hobbs, New Mexico 88240

ATTN: Chris Williams, District Supervisor

OIL CONSERVATION DIVISION

Hobbs District Office

Post Office Box 1980

Hobbs, New Mexico 88240

ATTN: Chris Williams, District Supervisor

OIL CONSERVATION DIVISION

Hobbs District Office

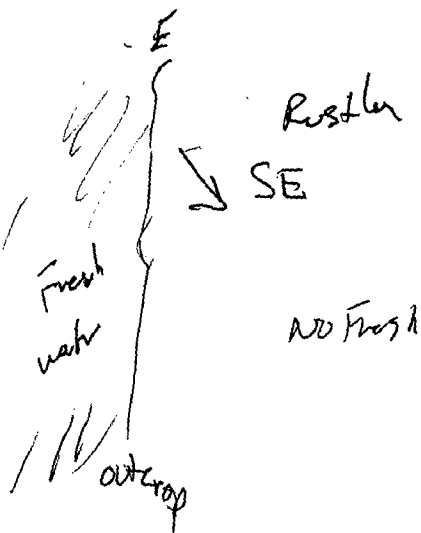
Post Office Box 1980

Hobbs, New Mexico 88240

ATTN: Chris Williams, District Supervisor

(16) See 25 TBS R 25 E TDS 1295 M main well
CL 25
Salt 7.7

* Infiltration Rate of 471 barrels / day
14,130 per month
10-15 yr to reach the Rustler Below



2000 to 2500 Barrels per month
" 66 to 83 barrels per day



Vault

Salt
Plymouth

8-17-99

LHWD

1000 gal H₂S.

or Equivalent of mixable chemical
5 gal to 5 Barrels - :

26 yr. Mercaptain Vapor Draw,

Calculation to Justify Less
Supplier in Loco Hills



MSDS

* Change Permit For 1000 wordage

Fill Dirt

140,000

P- Aztec Bond.

983
225
258

MEMORANDUM OF MEETING OR CONVERSATION



Telephone



Personal

Time

Date

Originating Party

Other Parties

Marlyn Kieley

Dick Mabong

LHWD

SOS 677-2118

Subject

Bonding + H₂S Monitoring and Prevention

Discussion

H₂S Killer Backin

Hydrogen Peroxide

Shelf life/Cost ~~2 years~~

Potassium Permanganate

Local Availability

Sodium Chlorite

2 year Shelf life

1000,

4

Conclusions or Agreements

Distribution

Signed



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

~~June 18, 1999~~
July 23, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-562

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
Box 68
Loco Hills, NM 87255

**RE: Closure Cost Estimate
Loco Hills Water Disposal, Inc.
Commercial Surface Waste Management Facility
SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico**

Dear Mr. James R. Maloney:

Enclosed please find the revised Oil Conservation Division closure cost estimate breakdown for Loco Hills Water Disposal, Inc. This revised estimate took into consideration the more accurate tank volumes and truck hauling capacities that we discussed on July 14, 1999. According to Rule 711 the financial assurance for LHWD will be no greater than \$250,000.

If you have any questions please do not hesitate to contact me at (505) 827-7153.

Sincerely,

Martyne J. Kieling
Environmental Geologist



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

June 18, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-544

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
Box 68
Loco Hills, NM 87255

RE: DRAFT OCD Rule 711 Permit
Loco Hills Water Disposal, Inc.
Commercial Surface Waste Management Facility
SW/4 SW/4 Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico

Dear Mr. James R. Maloney:

Enclosed please find a draft copy of the Loco Hills Water Disposal, Inc. (LHWD) permit. Please be advised that this is not a final version, there may still be some administrative changes made prior to the Oil Conservation Division Directors approval. In addition, I have enclosed the Oil Conservation Division closure cost estimate breakdown for LHWD. According to Rule 711 the financial assurance for LHWD will be no greater than \$250,000.

If you have any questions please do not hesitate to contact me at (505) 827-7153.

Sincerely,

Martyne J. Kielling
Environmental Geologist

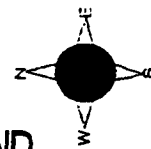
MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 11:40	Date 6-14-99
<u>Originating Party</u> LHW Marilyn Kieling		<u>Other Parties</u> Loco Hills Water Disposal
<u>Subject</u> Cost Estimates For Produced Water For Disposal. \$.45 a BBL For Brine		
<u>Discussion</u> \$.35 a bbl For Disposal of Produced Water.		
<u>Conclusions or Agreements</u>		
<u>Distribution</u>	Signed	

Site 4 11.47 7
 Site 30 Annual precip 15.38 mean 5 Inches mean 340

LOCO HILLS WATER DISPOSAL CO., INC.
 BUSINESS LEASE BL-1149
 PT OF SW4SW4, S16, T17S, R180E
 40 ACRES
 EDDY COUNTY, NEW MEXICO NM PM

JC-1279

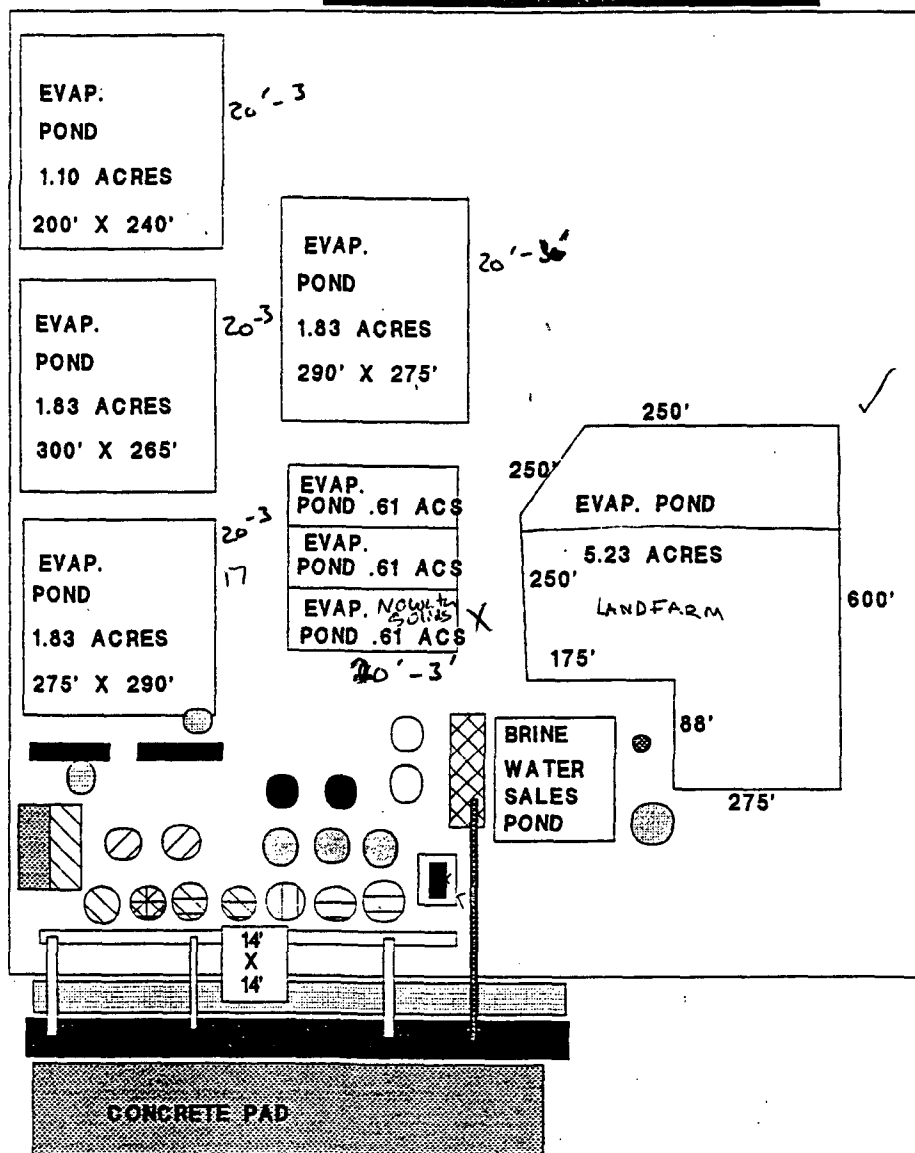


8.42 Acres Water

3 Ft Free Board

FACILITY PLAT

LEGEND



- 2 1,000 bbl. (new) OIL TREATMENT TANKS
- BOILER & BLDG. 15' x 20'
- 20' x 34' STORAGE BUILDING
- 1 300 BBL. OIL TANK
- 2 500BBL. SKIM TANK
- 1 750 BBL. SKIM TANK
- 1 300 BBL. SKIM TANK
- 3 500 BBL. OIL TANK
- 2 1000 BBL OIL TANK
- 2 500 BBL SALE TANK
- 2 250 BBL. OPEN TOP
- OIL SKIM PONDS
- OFFICE & SHOP
- DRAINAGE DITCH
- CATCH POND FOR UNLOADING DITCH (BURNED)
- STEAM BOILER
- BRINE WATER WELL
- BRINE WATER TANK
- UNLOADING BUILDING & INSTRUMENT ROOM
- UNLOADING PIPING AND NEW ELECTRICAL TO UNLOADING VALVES
- SLOPED CONCRETE BERM 1 1/2' TO 0 IN 8'
- CHAINLINK FENCING
- PHOTO LOCATIONS

CR-217

DRAWING NOT TO SCALE
 DRAWN
 SEPT 23, 1997

1 acre tract Pond Leakage 1.2 to .014 gal/min

7,781
8.42 Acres

9.372 gal/min
40-104 gal/min
606.24 gal/hour

10934 gal/min
11788 gal/min
7.0728 gal/hour

346.4 BB/day
321.3 BB/day
Red Bluff Res.

141,549.76 gal/day (24 hours)
131,455.68 gal/day
Evaporation

169.7472 gal/day (24 hours)
157.4496 gal/day
3-3500 bbl/month/acre

4.04 BB/day
3.7488 BB/day

Ex. and maintenance

Aug 26, 1985

Using Conversion 2000 bbl/month/acre.

R33 & 34

Acres Feet 1 acre ft = gal? or bbl?

~~1.1 x 5' = 5.5 Acres ft~~

~~1.83 x 5' = 9.15 Acres ft~~

~~1.83 x 5' = 9.15 Acres ft~~

~~1.83 x 5' = 9.15 Acres ft~~

~~.61 x 5' = 3 acres ft~~

~~.61 x 5' = 3 acres ft~~

~~.61 x 5' = 3 acres ft~~

41.95 acre ft

Acres ft 42 gal in a Barrel
325.85 gal

1.1 x 17 = 18.7 Aft

1.83 x 17 = 31.11 Aft,

1.83 x 17 = 31.11

1.83 x 17 = 31.11

.61 x 17 = 10.37

.61 x 17 = 10.37

132.77 acre ft

+ 325851 gal

43263237 gal

1030077 BB

1,030,077 BB Total Volume

emp 3 bbl/month/Acre

132.77 acre Feet

321.3 BB/day = 3206 days = 8.8 years

3.7486 BB/day = 274775 days = 752.8 years.

Infiltration of 1,030,077 BB

at 346.4 BB/day = 2973.66 days = 8.14 years
at 4.04 BB/day = 254969.55 days = 698.5 years

Myk

1. Ground water monitoring of the following monitoring wells must be performed quarterly and records of the date, inspector and status of the monitor well must be maintained. Annual reports must be furnished to the OCD Santa Fe office in database form and must include a graphical plot showing water level and conductivity in each well for all preceding quarters.

MH-1, MH-2, MH-3, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9, MH-10, MH-11, MH-12 and MH-13

NOTE: Monitor wells listed in plain type are completed to 60 feet below ground surface (bgs) within the Santa Rosa Formation and screened within 4 feet of the surface. Monitor wells listed in bold type are completed within the top of the Rustler Formation and screened from total depth to within 4 feet of the surface. The top of the Rustler Formation was encountered at depths ranging from 239 feet to 288 feet bgs. Each monitor well is cemented from 4 feet to the surface.

The evaporation ponds were expected to leak. Waste water was expected to migrate vertically to the Rustler Formation and then follow the local and regional dip of the Rustler to the southeast and south. Waste water was not expected to migrate horizontally with in the Santa Rosa Formation.

2. If fluid is present in the Santa Rosa Formation 60 foot monitor wells (MH-2, MH-4, MH-5, MH-6, MH-7, MH-8, MH-9 and MH-10) the fluids in the pond and monitor wells must be analyzed for conductivity. If the pond and monitor well fluid conductivity analyses are similar the OCD Santa Fe and appropriate District offices must be notified within 48 hours. Within 72 hours of discovery, the permittee will submit a plan to the OCD Santa Fe and appropriate District offices for review and approval that describes what procedures will be taken to investigate the lateral extent of extent of the waste water plume.
3. If fluid is present in the Rustler Formation monitor wells (MH-1, MH-3, MH-11, MH-12, and MH-13) the fluids in the pond and monitor wells must be analyzed for conductivity. The Pond and monitor well fluid analysis will be recorded for the annual report to be furnished to the OCD.

CHECKLIST FOR RULE 711 PERMIT APPLICATION COMPLETENESS

1. ✓ FACILITY TYPE *Commercial P. Water Evaporation
Cent Land Farm.*
2. ✓ OPERATOR NAME, ADDRESS, CONTACT PERSON AND PHONE# *James R. Maloney V. Pres.*
3. ✓ LEGAL LOCATION *SW1/4SW1/4, S16, T17S, R30E* *Randy Westall President*
4. ✓ MODIFICATION OR NEW FACILITY *Renewal* *Randall Harris / Geologist
Ph. (505) 677-2370
Ph. (505) 365-2237*
5. ✓ NAME AND ADDRESS OF THE FACILITY SITE LANDOWNER *State land lease*
6. ✓ NAME AND ADDRESS OF ALL LANDOWNERS OF RECORD WITHIN ONE MILE OF FACILITY SITE.
7. *NA* NOTIFICATION OF ALL LANDOWNERS OF RECORD WITHIN ONE MILE OF FACILITY SITE RETURN RECEIPT SUBMITTED
8. *NA* PUBLIC NOTICE IN TWO NEWSPAPERS ORIGINAL AFFIDAVIT OF PUBLICATION SUBMITTED.
9. ✓ FACILITY DESCRIPTION WITH DIAGRAMS INDICATING ALL PERTINENT FEATURES (FENCES, BERM, ROADS, PITS, DIKES, TANKS, MONITORING WELLS) *New map*
10. ✓ CONSTRUCTION INSTALLATION DESIGNS FOR PITS, PONDS, LEAK-DETECTION SYSTEMS, AERATION SYSTEMS, ENHANCED EVAPORATION SYSTEMS, WASTE TREATING SYSTEMS, SOLIDIFICATION SYSTEMS, SECURITY SYSTEMS, AND LANDFARM FACILITIES. *New map*
11. ✓ GEOLOGICAL/HYDROLOGICAL EVIDENCE THAT FACILITY WILL NOT IMPACT *on file* GROUNDWATER. DEPTH TO AND QUALITY OF GROUNDWATER INCLUDED.
12. ✓ CONTINGENCY PLAN FOR REPORTING AND CLEAN-UP OF SPILLS OR RELEASES.
13. H2S CONTINGENCY PLAN
14. ✓ ROUTINE INSPECTION AND MAINTENANCE PLAN TO ENSURE PERMIT COMPLIANCE
15. ✓ CLOSURE PLAN
16. ✓ CLOSURE COST ESTIMATE *LHWB Divt work Est. only* *\$5,947.00 + Tax 4,512.21*
17. BONDING AMOUNT *250,000* # TYPE DATE APPROVED
18. ANY OTHER INFORMATION AS NECESSARY TO DEMONSTRATE COMPLIANCE WITH ANY OTHER OCD RULES REGULATIONS AND ORDERS.
19. ✓ CERTIFICATION SIGNATURE AND DATE ON PERMIT

Martyn J. Kuh. 5-5-99

4-15-99

LHWD

Ray Westall

Dick Mahony

Randall Harris

1. Landfarm LHWD Solids only -
2. Policy Supreme Court Justices Basin Disposal
Lined water pit 12' sludge (Not Applicable with
LHWD Evap Ponds)
Sludge Removal is Skimp pits every 6 mo is Their operating
Standard.
3. Monitor well Annual Report.
4. Closer Cost. Estimate - From Me to LHWD
For their Response -
5. C-120 For Disposal Company with No well
To Ed.

117 118
6. Quarterly Monitor well Inspection / Annual Report.
Evaluate May adjust Frequency
7. State land office
Business lease with State

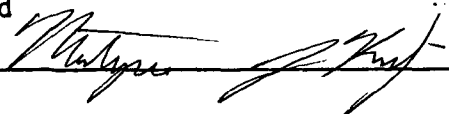
USFW
Doug McCanna
Amy Ann Tapp.

Randall L. Harris / Geologist

Post Office Box 4
Loco Hills, New Mexico 88255
Phone (505) 677-2370 or (505) 365-2237
FAX (505) 677-2361

Ray Westall
Independent Oil Producer

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 10:00	Date 4-5-99
<u>Originating Party</u> Dick Mahony LHWJ		<u>Other Parties</u> Martyne Kieling
<u>Subject</u> 10th Requested a 10 day extension 13th 14th April on Response to Inspection Report Now Due April 15 th		
<u>Discussion</u> Also with Facility owners want to meet on or around April 13 th or 14 th to Discuss changes in Facility operations		
<u>Conclusions or Agreements</u>		
<u>Distribution</u>		Signed 

LOCO HILLS WATER DISPOSAL CO.

P. O. Box 68
Loco Hills, NM 88255

RECEIVED

APR 15 1999

Environmental Bureau
Oil Conservation Division

March 31, 1999

Martyne J. Kieling
Environmental Geologist
NEW MEXICO ENERGY, MINERALS &
NATURAL RESOURCES DEPARTMENT
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

RE: Evaporation Pond and Treating Plant Inspection (NM-01-0004)

Martyne Kieling,

This is the response to the August 27, 1997 inspection of our facility and the deficiencies found at that time.

You will find attached our response to each item. Also enclosed is a copy of the new Form C-137 which is the new application.

Thank you for your consideration.

Sincerely,

LOCO HILLS WATER DISPOSAL, INC.



James R. Maloney
Vice President
Operations Manager

JRM:jb

Attachment(s)

ATTACHMENT 1
INSPECTION REPORT RESPONSE
Page 1

1. **Pond Freeboard**: In compliance as of November 07, 1997;
2. **Pond Levee**: The levee is level and the outside grade is maintained to avoid erosion. The levee has been repaired and is now in very good condition.
3. **Leak Detection System**: This is done monthly. The test results will be filed with the Artesia OCD office.
4. **Sludge Build-up**: This is in compliance.
5. **Security**: The facility is fenced and locked when closed; Personnel on site when open. Computerized disposal system is already in operation.
6. **Signs**: In compliance.
7. **Drum Storage**: This requirement has been completed and is in compliance.
8. **Process Area**: Spill collection system is cleaned and visually inspected monthly; Leak collection devise is inspected and cleaned on a routine basis. All leak collection devices have been enlarged and installed where needed.
9. **Above Ground Tank**: North end of the facility has been bermed and is now in compliance.
10. **Open Top Tanks and Pits**: These tanks and pits are netted and in compliance. The oil has been skimmed and the evaporation pond are clear. The oil sump pit will be emptied on a regular basis.
11. **Above Ground Saddle Tanks**: Impermeable pad and curb now in place.
12. **Tank Labeling**: Tanks have been labelled and the required placards are in place.
13. **Below Grade Tanks/Sumps**: Cleaning and visual inspection of the off-load area is done on a regular and routine basis. The integrity test will be done annually.
14. **Underground Process/Wastewater Lines**: No underground process or wastewater lines.
15. **Housekeeping**: Cleaned on a routine basis.
16. **Trash and Potentially Hazardous Materials**: Containers and Barrels available.

ATTACHMENT 1
INSPECTION REPORT RESPONSE
Page 2

17. **Spill Reporting:** In the event of a spill, OCD rule 116 and WQCC 1203 will be adhered to and all State Departments will be notified as required.
18. **Hydrocarbon Contaminated Solids Pit:** Please reference our letter dated November 05, 1997, item 6 which states we are waiting for the new application forms to apply for the Water Disposal, Treating Plant and Landfarm permit.
19. **Naturally Occurring Radioactive Material (NORM):** Loco Hills Water Disposal is not at this time receiving any NORM. In the event a request is made, LHWD will obtain the required declaration from the generator. Otherwise, disposal at this facility will be refused.
20. **Application Requirements for Permit Under the New Rule 711:** Please see the enclosed copy of the Loco Hills Water Disposal, Inc. Application Form C-137.

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-137
Originated 8/8/95
Revised 6/25/97

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

APPLICATION FOR WASTE MANAGEMENT FACILITY
(Refer to the OCD Guidelines for assistance in completing the application)

☒ Commercial

☒ Centralized LANDFARM

1. Type: ☒ Evaporation ☐ Injection ☐ Other _____
☐ Solids Handling ☐ Treating Plant

2. Operator: LOCO HILLS WATER DISPOSAL COMPANY, INC.

Address: P.O. BOX 68, 1 MILE NORTH, LOCO HILLS, NEW MEXICO 88255

Contact Person: JAMES MALONEY - RAY WESTALL Phone: 505-677-2118

3. Location: SW 4 SW /4 Section 16 Township 17S Range 30E
Submit large scale topographic map showing exact location

4. Is this a modification of an existing facility? ☒ Yes ☐ No

5. Attach the name and address of the landowner of the facility site and landowners of record within one mile of the site.

6. Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.

7. Attach designs prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aerations systems, enhanced evaporation (spray) systems, waste treating systems, security systems, and landfarm facilities.

8. Attach a contingency plan for reporting and clean-up for spills or releases.

9. Attach a routine inspection and maintenance plan to ensure permit compliance.

10. Attach a closure plan.

11. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact groundwater. Depth to and quality of ground water must be included.

12. Attach proof that the notice requirements of OCD Rule 711 have been met.

13. Attach a contingency plan in the event of a release of H₂S.

14. Attach such other information as necessary to demonstrate compliance with any other OCD rules, regulations and orders.

15. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: James R. Maloney

Title: Vice- President

Signature: *James R. Maloney*

Date: 4/13/99

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #01

ITEM # 5 STATE OF NEW MEXICO
 SEE STATE LEASE #BL1149



State of New Mexico
Commissioner of Public Lands

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

(505) 827-5700

FAX (505) 827-5853

RAY POWELL, M.S., D.V.M.
COMMISSIONER

BILLING STATEMENT

Mail Payment To:

STATE OF NEW MEXICO
COMMISSIONER OF PUBLIC LANDS
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

1

013467
LOCO HILLS WATER DISPOSAL
PO BOX 4
LOCO HILLS, NM 88255

If Payment already sent, please disregard this Billing Statement

PLEASE FILL IN AMOUNT PAID & RETURN ONE COPY OF THE BILL WITH PAYMENT

Invoice Number	Invoice Status	Invoice Date	Due Date	Total Due	Amount Paid	
51691	INITIAL	02/26/1999	04/01/1999	3,000.00		
ANNUAL BILLING, PAYMENT SHOULD BE MADE ON OR BEFORE THE ABOVE DUE DATE.						
Lease Number	Source	Amount Due	Interest	Penalty	Total Due	X Amts Paid
BL 1149	BUSINESS LEASES - RENT	3,000.00	0.00	0.00	3,000.00	
	TOTAL	3,000.00	0.00	0.00	3,000.00	
7885 5070 3/17/99						

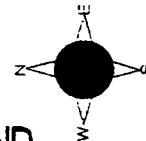
**LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137**

ATTACHMENT #2

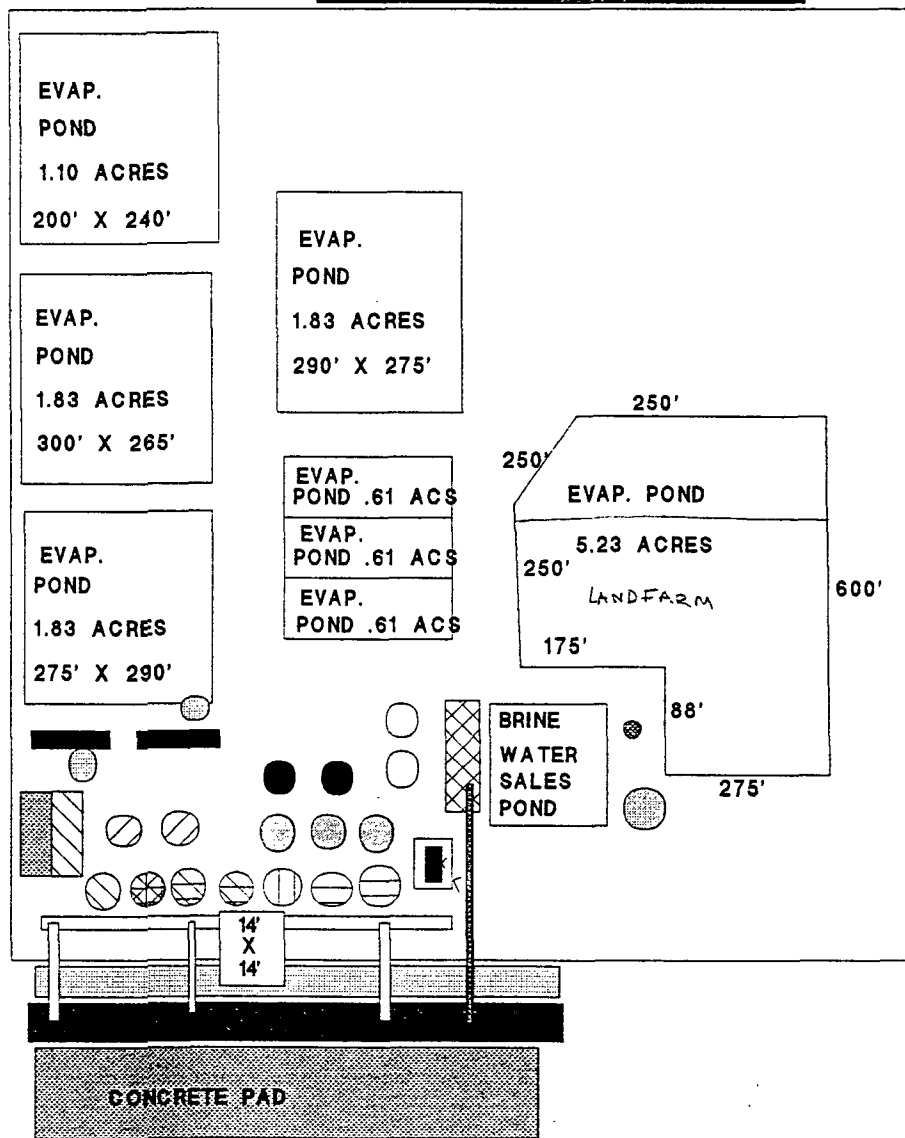
**ITEMS # 6 & 7 DESCRIPTION OF THE FACILITY WITH DIAGRAMS INDICATING
LOCATION OF FENCES, PITS, DIKES, AND TANKS. DESIGN OF
LEAK-DETECTION SYSTEM. WASTE TREATING SYSTEM,
SECURITY SYSTEM AND LANDFARM FACILITIES.**

LOCO HILLS WATER DISPOSAL CO., INC.
 BUSINESS LEASE BL-1149
 PT. OF SW4SW4, S16, T17S, R30E
 40 ACRES
 EDDY COUNTY, NEW MEXICO, NM PM

JC-1279



FACILITY PLAT



LEGEND

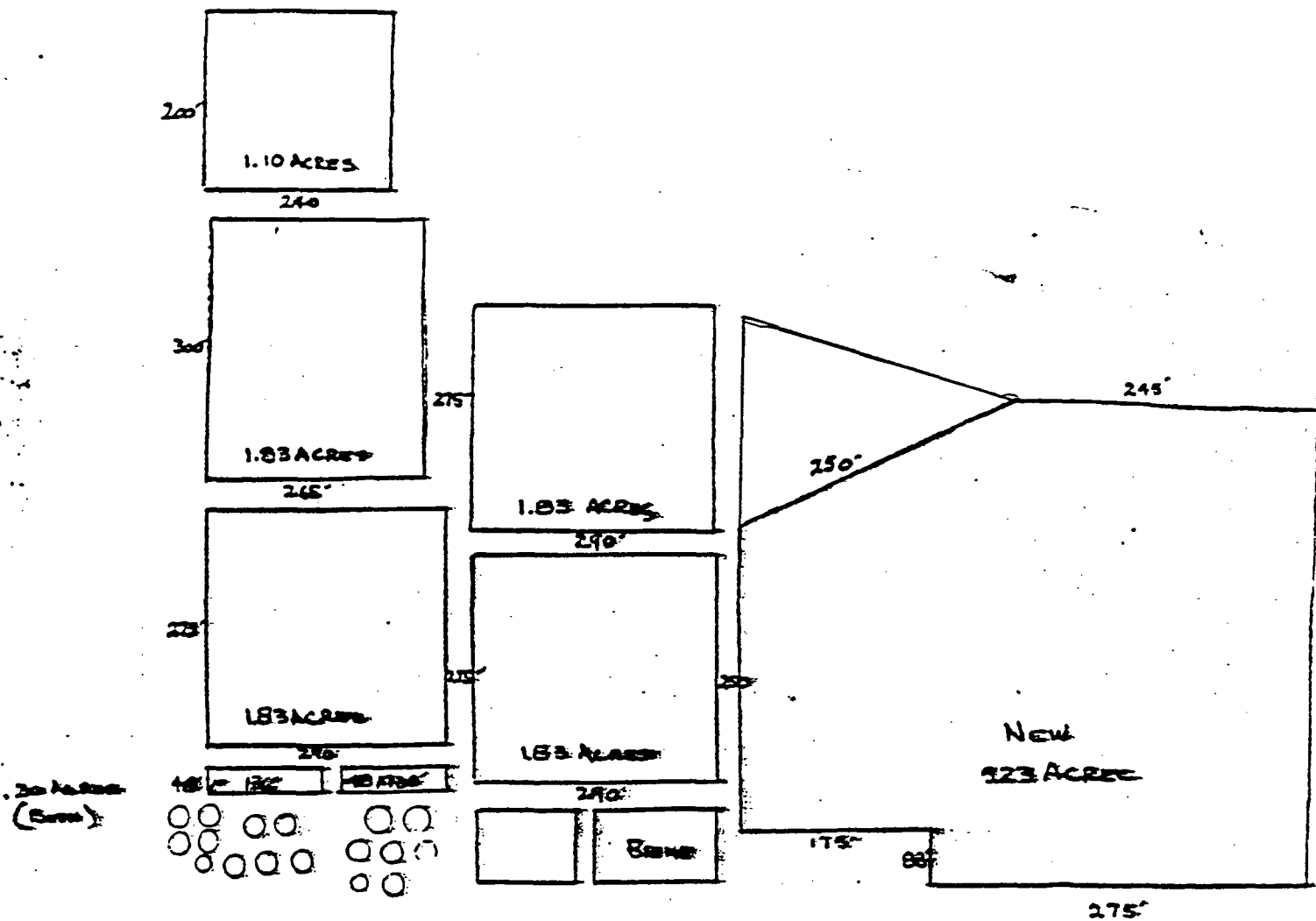
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- BOILER & BLDG. 15' x 20'
- 20' x 34' STORAGE BUILDING
- 300 BBL. OIL TANK
- 500BBL. SKIM TANK
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- 500 BBL. OIL TANK
- 1000 BBL OIL TANK
- 500 BBL SALE TANK
- 250 BBL. OPEN TOP
- OIL SKIM PONDS
- OFFICE & SHOP
- DRAINAGE DITCH
- CATCH POND FOR UNLOADING DITCH (BURNED)
- STEAM BOILER
- BRINE WATER WELL
- BRINE WATER TANK
- UNLOADING BUILDING & INSTRUMENT ROOM
- UNLOADING PIPING AND NEW ELECTRICAL TO UNLOADING VALVES
- SLOPED CONCRETE BERM 1 1/2' TO 0 IN 8'
- x— CHAINLINK FENCING
- PHOTO LOCATIONS

CR-217

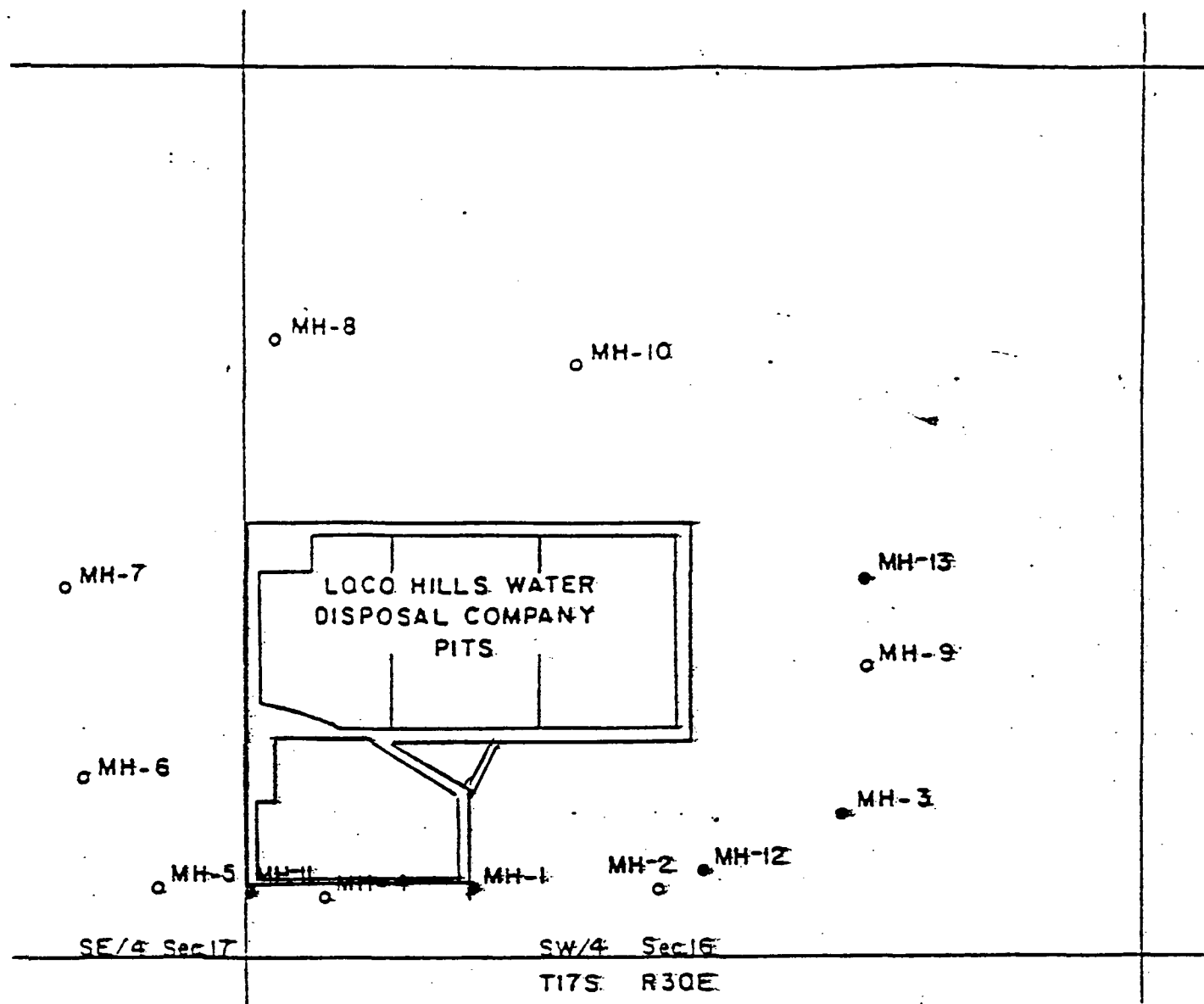
DRAWING NOT TO SCALE

DRAWN BY

SEPT. 23, 1997



TOTAL ACRES 13.95 IN ALL PLOTS



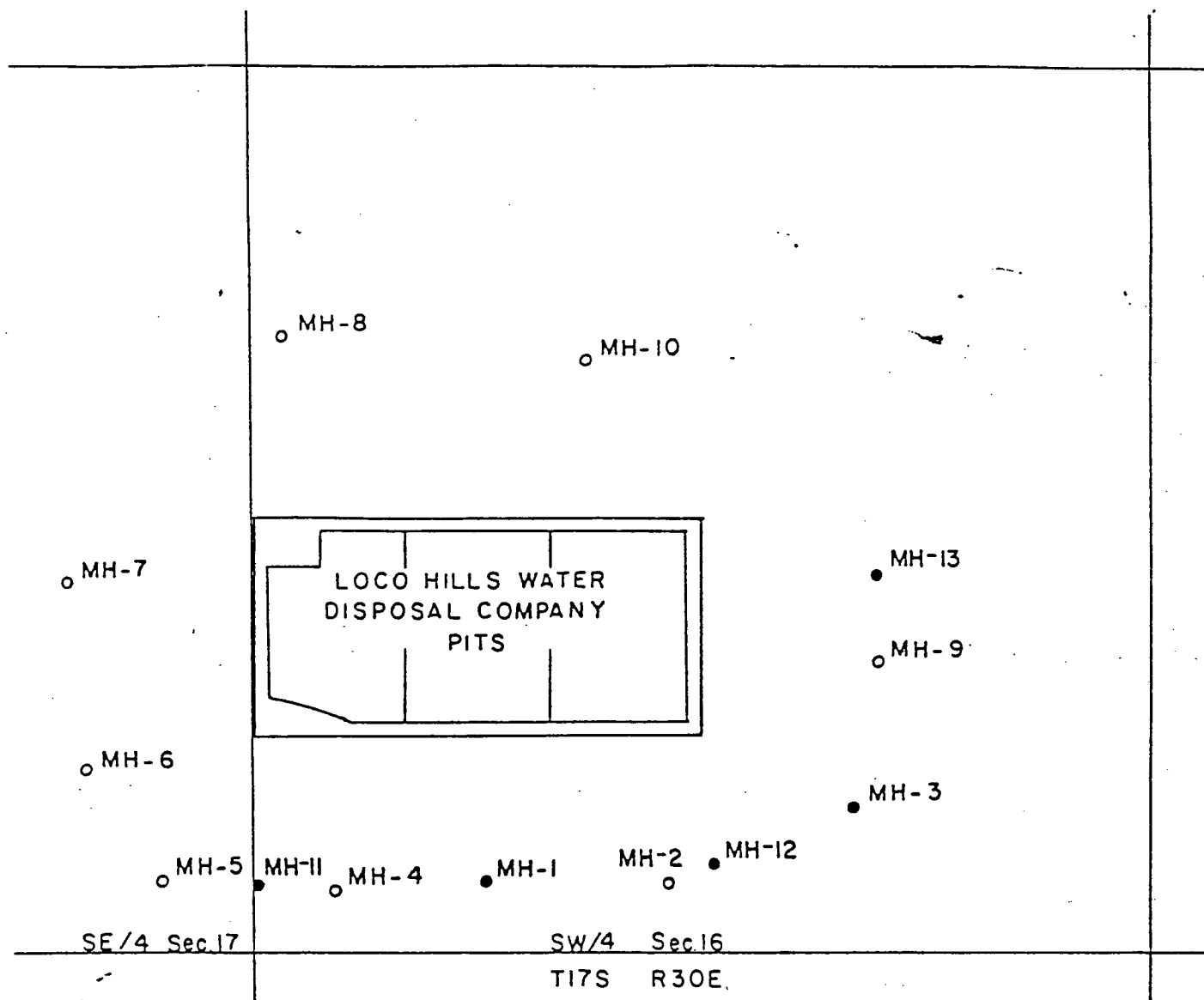
- 60' MONITOR HOLES
- RUSTLER DEPTH MONITOR HOLES

500 0 500 1000

EDDY COUNTY, NEW MEXICO
MONITOR HOLE LOCATIONS
LOCO HILLS WATER DISPOSAL CO.

2/2/83

ED L. REED & ASSOCIATES, INC.
CONSULTING ENGINEERS
MIDLAND & CORPUS CHRISTI, TEXAS



○ 60' MONITOR HOLES
● RUSTLER DEPTH MONITOR HOLES

N

500 0 500 1000

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, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #04

ITEM #08 IN THE EVENT OF A MAJOR SPILL, THE CLEAN UP HAS BEEN CONTRACTED WITH STEVE CARTER, INC. THIS COMPANY IS EQUIPPED WITH VACUUM TRUCK AS WELL AS TRANSPORT TRUCKS. CLEAN UP WILL BE IN ACCORDANCE WITH WQCC 1203 AND OCD RULE 116. ALL AGENCIES WILL BE NOTIFIED THAT A SPILL HAS OCCURED.

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #05

ITEM #09 PERSONNEL IS ON LOCATION AND VISUAL INSPECTIONS
ARE DONE ON A DAILY BASIS; ROUTINE MAINTENCE IS DONE
DAILY; REPAIRS ARE DONE AS NEEDED.

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #06

ITEM #10 THE CLOSURE OF THE DISPOSAL FACILITY WILL BE
IN ACCORDANCE WITH STATE GUIDE LINES.
ATTACHED IS A PRICE QUOTE FOR CLOSURE OF THIS FACILITY.



SWEATT CONSTRUCTION CO.

GENERAL DIRT WORK - OIL FIELD ROADS - PITS - LOCATIONS

P.O. BOX 827 — ARTESIA, NEW MEXICO 88210

Telephone (505) 748-1238 — FAX (505) 748-1230 — Hobbs (505) 397-4541

FEDERAL ID NO. 85-0157100
CONTRACTORS LICENSE NO. 005674

Owner
W.J. SWEATT

Manager
ARCHIE TIDWELL

Foremen
BRAD LARSON
CHET ARMSTRONG

Salesman
BILL PORTER

March 16, 1999

Loco Hills Water Flood
P.O. Box 4
Loco Hills, NM 88255

ATTN: Dick Mahoney

Dear Sir:

We would like to submit the following price on your Disposal at Loco Hills in Eddy County, New Mexico.

To furnish labor, materials and equipment to level pit walls to original countour after water is gone and pits are dry and tanks are removed by others.

Price will be \$85,947.00 plus \$4,512.21 sales tax.

Thank you for the opportunity to submit a price on this project. If you have any questions, please feel free to contact our office.

Sincerely,

Archie Tidwell / n.i.

Archie Tidwell

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #07

ITEM #11 ALREADY ON FILE WITH THE STATE; REFERENCE INSPECTION
REPORT DATED AUGUST 27, 1997 PAGE 6 OF 6 ITEM (b) AND (j).

LOCO HILLS WATER DIPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #08

ITEM #12 COMMISSION RULING 1982 - 1983. THE LOCO HILLS WATER
DISPOSAL FACILITY IS IN COMPLIANCE WITH THE STATE
REQUIREMENTS.

LOCO HILLS WATER DISPOSAL, INC.
APPLICATION FOR WASTE MANAGEMENT FACILITY
FORM C-137

ATTACHMENT #10

ITEM #14 REFERENCE THE INSPECITON REPORT DATED AUGUST 27, 1997
AND THE RESPONSES FROM LOCO HILLS WATER DISPOSAL, INC.
ALL OF THE ITEMS LISTED ARE NOW IN COMPLIANCE WITH THE
STATE REQUIREMENTS.



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87506
(505) 827-7131

March 15, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-518

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
Box 68
Loco Hills, NM 87255

RE: Requested Information

*Ignore This letter
myk
4-15-99*

*C-120 is Required by
Surface Disposal Facility*

Dear Mr. Maloney:

This letter is in response to our telephone conversation on March 11, 1999. I have enclosed the C-115 forms and instructions. If you have any questions concerning the C-115 please call Andrea Wheeler at (505) 827-1362 or Ed Martin at (505) 827-7151. The forms C-110 and C-120-A are no longer required. Please continue to file two copies of forms C-117 and C-118 with the Artesia district office.

Enclosed are the Orders pertaining to Loco Hills Water Disposal (LHWD). Our records are limited to the information in conjunction with the Orders R-6811, R-6811-A DE NOVO, and R-6811-B. It looks like LHWD will need to submit new contingency, inspection, maintenance and waste management plans. The only partial information that the OCD has on file is a map that shows how produced water is received, separated, skimmed and evaporated. Additional detail is required on this process and how facility solids are handled, and how used and unused chemicals, motor oil, and lube oil are handled and recycled or disposed.

If you have any questions please do not hesitate to contact me at (505) 827-7153.

Sincerely,

Martyne J. Kieling

Martyne J. Kieling
Environmental Geologist

Attachments

xc: Artesia OCD Office
Hobbs OCD Office



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87508
(505) 827-7131

March 3, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-513

505-677-2118

James Maloney
(Dick)

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
Box 68
Loco Hills, NM 87255

RE: Evaporation Pond and Treating Plant Inspection (NM-01-0004)
Loco Hills Water Disposal, Inc.
Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico

Dear Mr. James R. Maloney:

The New Mexico Oil Conservation Division (OCD), inspected Loco Hills Water Disposal, Inc. (LHWD) evaporation pond and treating plant waste management facility on August 27, 1997. The LHWD evaporation pond and treating plant is located in the Section 16, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

Overall the OCD found LHWD to have a well maintained facility. The OCD inspection and current file review of LHWD indicates some permit deficiencies. Attachment 1 lists the permit deficiencies found at LHWD during the inspection and the new Rule 711 requirements that are not on file. Attachment 2 contains photographs taken during the inspection. LHWD shall provide OCD with a detailed description of how the corrections will be made and a time table of when each of the corrections will be completed. A response is required by LHWD to these deficiencies by April 5, 1999.

Pursuant to Order R-10411-B the OCD General Rule 711 has been revised. The OCD is currently in the process of re-permitting all surface waste management facilities under the new Rule 711. LHWD's waste management facility is included under the new Rule 711. A copy of Order R-10411-B along with the new bond forms is included with this report. A permit application, Form C-137 (Attachment 3), shall be filed with the OCD according to the instructions in Attachment 1, Section 20.

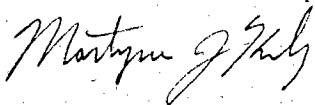
Please be advised that the bonding requirements have changed under the new Rule 711. The bonded amount will be based upon the estimated closure costs that the State of New Mexico would incur if a third party contractor were to remediate the facility (see Rule 711.B.1.i and

Mr. James R. Maloney
March 3, 1999
Page 2

711.B.3). LHWD must have a new bond in place for the approved estimated closure amount prior to receiving a new waste management facility permit.

If you have any questions please do not hesitate to contact me at (505) 827-7153.

Sincerely,



Martyne J. Kieling
Environmental Geologist

Attachments

xc: Artesia OCD Office
Hobbs OCD Office

**ATTACHMENT 1
INSPECTION REPORT
AUGUST 27, 1997
LOCO HILLS WATER DISPOSAL CO.
(Section 16, Township 17 South, Range 30 East, NMPM,)
EDDY COUNTY, NEW MEXICO**

1. **Pond Freeboard:** Liner markings or some other device shall be installed to accurately measure freeboard. Pond freeboard shall be a minimum three (3) feet below the top of the lowest point on the levee. The pond must be maintained below freeboard level at all times.

The evaporation pond is lacking freeboard markers that accurately measure the three (3) foot freeboard height (see pictures 9, 10, 11, 12, 13, 14, 17 and 18). The water level was well above freeboard at the time of inspection on three of the evaporation ponds and the two skim pits (see pictures 9, 10, 11, 13 and 18)

2. **Pond Levee:** The top of the levee shall be level, ponding of water should not occur, and the outside grade of the levee should be maintained to minimize erosion and maintain proper levee width.

The top of the levee is in good condition (see pictures 10, 11, 12, 14 and 18). However, where the pond level was above freeboard the levee sides were eroding (see picture 19) and the levee had either been overtopped by wave action or had been leaking as evidenced by salt kills (see pictures 18, 20 and 21)

3. **Leak Detection System:** The system of thirteen (13) leak detection monitor wells must be tested monthly to monitor the facility for any leaks to the subsurface.

The appearance of any fluids within the monitor well should be sampled and comparison analysis made to the contents within the pond. Monthly testing results are to be filed with the OCD Artesia district office.

4. **Sludge Build-up:** Any sludge build-up in the bottom of the pond in excess of twelve inches (12") will be removed and disposed of or remediated at an OCD approved waste management facility.

Sludge thickness at the bottom of the evaporation ponds should be routinely measured.

5. **Security:** The facility shall be secured when no attendant is present, to prevent any

unauthorized dumping. Securing the facility may include locks on tank valves, a perimeter fence and locked gate or other similar security measures.

Facility has a perimeter fence and locking gate. In addition, a computer system requires a company number and PIN number and a truck number and PIN number to be able to access the offloading valves (see pictures 1 and 2).

6. **Signs:** The facility shall have a sign in a conspicuous place at the facility. The sign shall be maintained in legible condition and shall be legible from at least fifty (50) feet and contain the following information: a) name of facility, b) location by quarter-quarter section, township and range, and c) emergency phone number.

Facility has a clearly labeled sign posted within view.

7. **Drum Storage:** All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums should be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets should also be stored on an impermeable pad and curb type containment.

Empty containers and/or containers with fluids were located at the facility (see picture 8 and 22). All drums/buckets containing fluids should be placed on an impermeable pad with curbing.

All drums and chemical containers should be clearly labeled to identify their contents and other emergency information necessary if they were to rupture, spill or ignite.

8. **Process Area:** All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

Spill collection system at truck off load area (see pictures 1 and 2) are lined and drain to oil sump pit (see picture 7). The tank and piping spill drains are lined (see pictures 4, 5, and 6). The spill collection system should be cleaned regularly and visually inspected.

A leak collection device must be installed beneath equipment that leaks (see picture 3). Other collection devices must be enlarged to adequately collect leaks (see picture 5 and 6).

9. **Above Ground Tanks:** All above-ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of

the largest tank or of all interconnected tanks. All new facilities or modifications to existing facilities must place the tank on an impermeable type pad within the berm so that leaks can be identified.

The treating plant portion of the facility is sloped toward the leak containment system which drains to the oil sump pit (see picture 7). This sump pit has the capacity to contain the volume of the all facility tanks. All berms and slopes should be maintained to direct any tank or system leak toward the oil sump pit collection system. The north end of the facility may need to be bermed to complete the containment.

10. Open Top Tanks and Pits: To protect migratory birds, all tanks exceeding 16 feet in diameter, and exposed pits and ponds shall be screened, netted, covered or otherwise rendered nonhazardous to migratory birds. In addition, OCD Rule 310 prohibits oil from being stored or retained in earthen reservoir, or in open receptacles.

Three of the evaporation ponds contained oil (see pictures 12, 13 and 14). The surface of the evaporation ponds must be kept oil free. Netting is not required on the evaporation ponds as long as they are kept oil free. The skimming pits were netted and contained significant amounts of oil (see picture 9). The oil sump pit contained oil and was not netted (see picture 7). The oil sump pit should be used for emergency overflow or accident containment only. The oil sump pit must be emptied on a regular basis and not used to store or retain oil.

11. Above Ground Saddle Tanks: Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

The saddle tank does not have the required impermeable pad and curb containment (see pictures 22 and 23).

12. Tank Labeling: All tanks, drums and containers should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill or ignite.

The above ground tanks and containers were not appropriately labeled as to their contents or the hazards of the contents (see picture 1, 3, and 4). All tanks and containers require hazard placards.

13. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary

containment and leak-detection into the design. All pre-existing sumps and below grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing and/or visual inspection of cleaned out tanks or sumps, or other OCD approved methods.

The below grade spill catchment and sump located at the truck off-load and treating plant area (see picture 1, 2, 4, 5 and 6) must have annual integrity testing. Testing might include cleaning and visually inspecting the bottom of the catchment and sump.

14. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter. Companies may propose various methods for testing such as pressure testing or other OCD approved methods.

Any underground process/wastewater lines must have a mechanical integrity testing proposal.

15. Housekeeping: All systems designed for spill collection/prevention should be inspected frequently to ensure proper operation and to prevent overtopping or system failure.

The facility tanks were free of overtopping stains (see pictures 1, 3, 4, and 11). Overall yard maintenance and spill prevention/cleanup was good. Oil catchments below equipment must be installed or enlarged to contain drips and leaks (see pictures 3, 5 and 6) drains.

16. Trash and Potentially Hazardous Materials: All trash and potentially hazardous materials should be properly disposed of.

There was very little trash at the facility. A trash barrel was provided at the truck off load area (see picture 1).

17. Spill Reporting: All spills/releases shall be reported pursuant to OCD Rule 116 and WQCC 1203 to the appropriate OCD District Office.

There were no spills evident at this facility.

18. Hydrocarbon Contaminated Solids Pit: Hydrocarbon contaminated solids shall be landfarmed onsite or at an OCD approved waste management facility.

The stockpile of hydrocarbon contaminated solids will be landfarmed (see picture 8). A proposal of how this will be accomplished will be submitted by Loco Hills Water

Disposal Company (LHWD).

19. **Naturally Occurring Radioactive Material (NORM):** All generators submitting waste to a New Mexico Oil Conservation Division Permitted Commercial or Centralized 711 Waste Management Facility must include a Naturally Occurring Radioactive Material status declaration. The generator must declare that the waste was tested for Naturally Occurring Radioactive Material (NORM) and does not contain NORM at regulated levels pursuant to 20 NMAC 3.1 Subpart 1403.C and D.

Under the new 711 Waste Management Facility Permit all waste must be accompanied with a signed NORM declaration from the waste generator.

20. **Application Requirements for Permit Under the New Rule 711:** An application, Form C-137, for a permit renewal shall be filed in DUPLICATE with the Santa Fe Office of the Division and ONE COPY with the appropriate OCD district office. The application shall comply with Division guidelines and shall include:

- (a) The names and addresses of the applicant and all principal officers of the business if different from the applicant;

Please submit with C-137 application.

- (b) A plat and topographic map showing the location of the facility in relation to governmental surveys (1/4 1/4 section, township, and range), highways or roads giving access to the facility site, watercourses, water sources, and dwellings within one (1) mile of the site;

This is already on file with the OCD.

- (c) The names and addresses of the surface owners of the real property on which the management facility is sited and surface owners of the real property of record within one mile of the site;

Please submit with C-137 application.

- (d) A description of the facility with a diagram indicating location of fences and cattle guards, and detailed construction/installation diagrams of any pits, liner, dikes, piping, sprayers, sumps, landfarm and tanks on the facility;

Please submit an updated map of the facility if any changes have been made or if any permit modifications are to be proposed. Enclosed are the maps that the OCD has on file

- (e) A plan for management of approved wastes;

Part of this is already on file with the OCD, however, several changes have been made to the facility over the years and an updated description of how LHWD handles its waste streams is required.

- (f) A contingency plan for reporting a cleanup of spills or releases;

Please submit an updated contingency plan that includes the processing treating plant the evaporation pond system and the proposed landfarm.

- (g) A routine inspection and maintenance plan to ensure permit compliance;

Please submit an updated inspection and maintenance plan that incorporates the processing treating plant, evaporation pond system, and the proposed landfarm.

- (h) A Hydrogen Sulfide (H₂S) Prevention and Contingency Plan to protect public health;

Please submit with C-137 application.

- (i) A closure Plan including a cost estimate sufficient to close the facility to protect public health and the environment; said estimate to be based upon the use of equipment normally available to a third party contractor;

Please submit with C-137 application.

- (j) Geological/hydrological evidence, including depth to and quality of groundwater beneath the site, demonstrating that disposal of oil field wastes will not adversely impact fresh water;

This is already on file with the OCD.

- (k) Certification by an authorized representative of the applicant that information submitted in the application is true, accurate and complete to the best of the applicant's knowledge.

Please submit with C-137 application.

LOCO HILLS WATER DISPOSAL PLANT

PO. BOX 68

LOCO HILLS, N M 88255

1 MILE NORTH ON EDDY COUNTY ROAD

SEC. 16 TWP. 17S RGE 30E ACRES 40

BUSINESS LEASE BL-1149

BEFORE EXAMINER STOP
OIL CONSERVATION DIVISION

EXHIBIT NO. 1

CASE NO. 8855

PIT 45'x 145'

FOR SKIM OIL

PIT 45'x 145'

FOR SKIM OIL

Water Line
Gas Line

ALL WATER TANKS
FIBER GLASS
ALL OIL TANKS
STEEL

500 BBL
OIL
HOLDING
TANK

500 BBL
OIL
HOLDING
TANK

500 BBL
OIL
SKIM TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

500 BBL
WATER
TANK

1000 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
OIL
HOLDING
TANK

1000 BBL
TREATING
WITH COILS-
INSULATION

500 BBL
TREATING
WITH
INSULATION

500 BBL
OIL SALE
TANK

500 BBL
TREATING
WITH
INSULATION

500 BBL
OIL SALE
TANK

OFFICE

CONTROL
BUILDING

BROILER
500 GAL

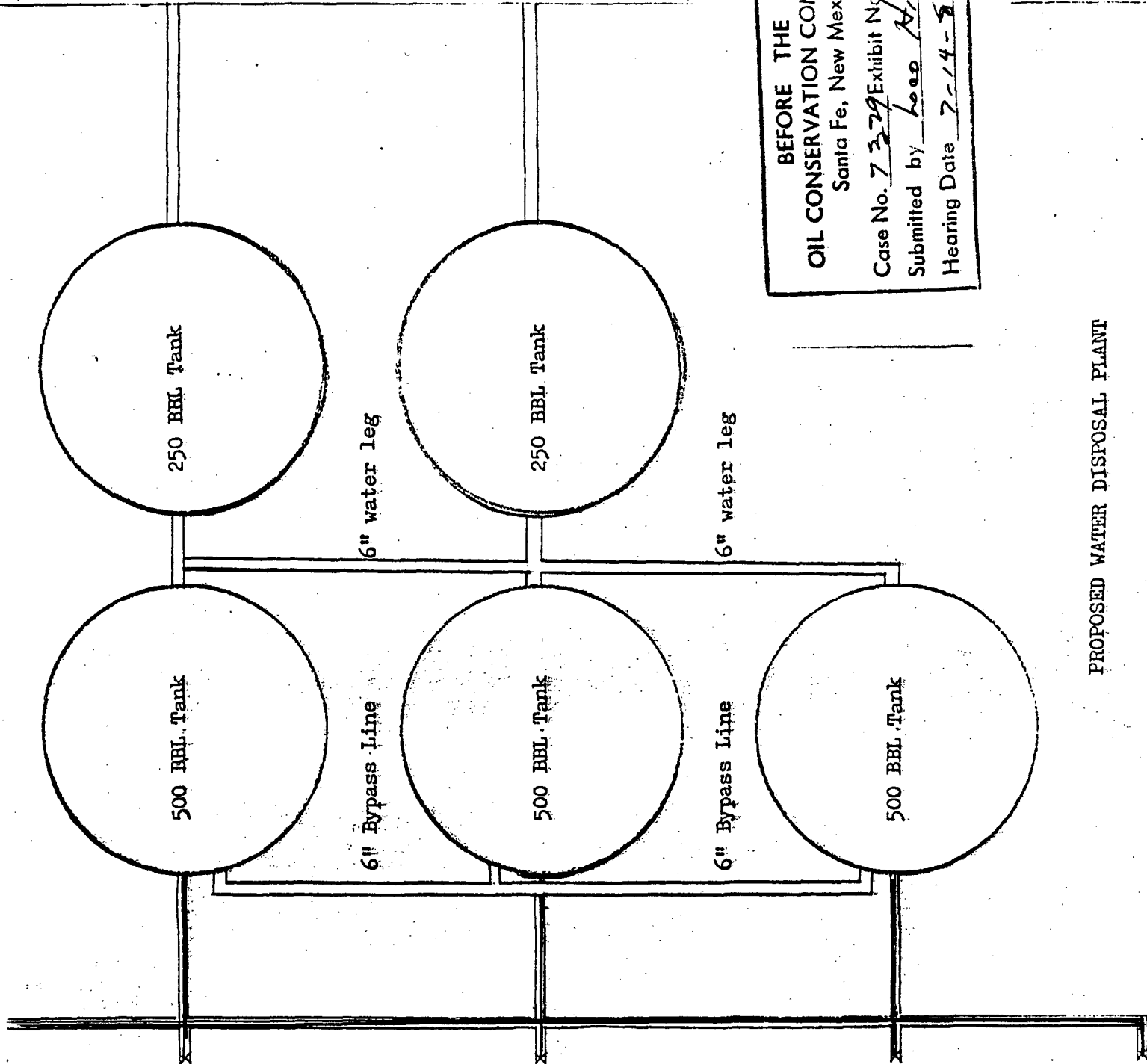
4" Load Lines

4" Load Line

4" Load Line

4" Load Line

4" Load Line



SKIM PIT

BEFORE THE
OIL CONSERVATION COMMISSION

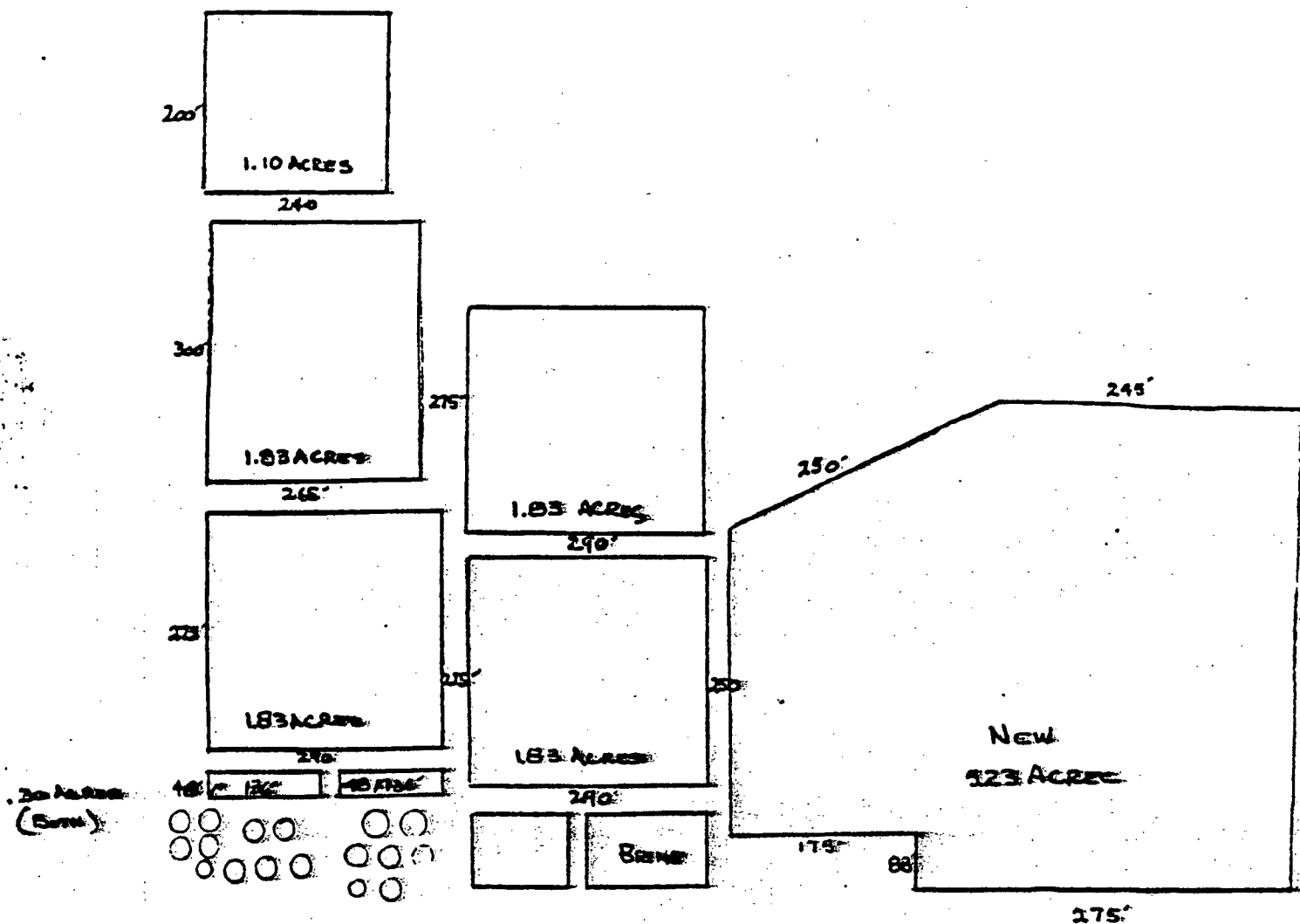
Santa Fe, New Mexico

Case No. 7329 Exhibit No. 6

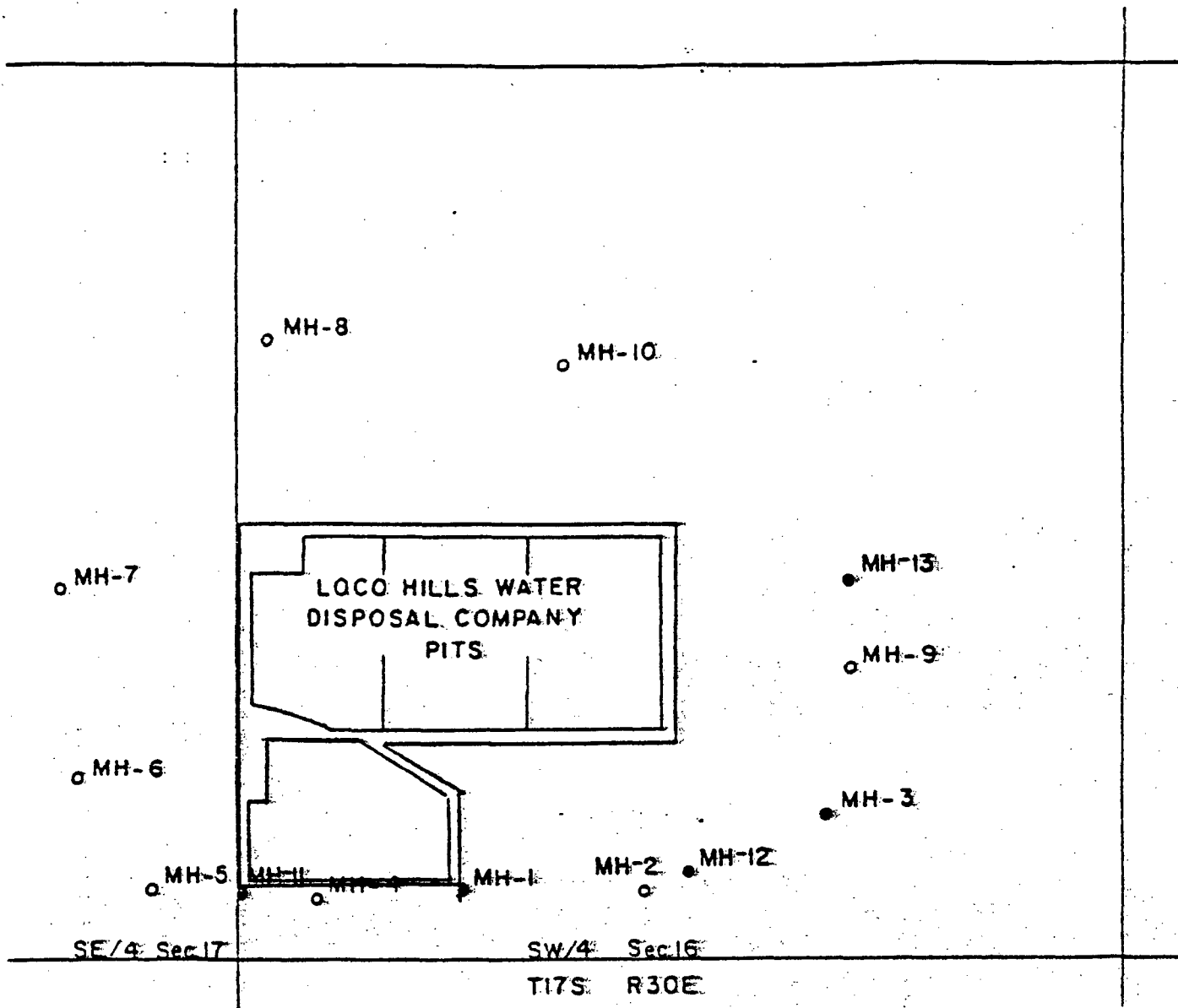
Submitted by Loce H. Hs

Hearing Date 7-14-82

PROPOSED WATER DISPOSAL PLANT



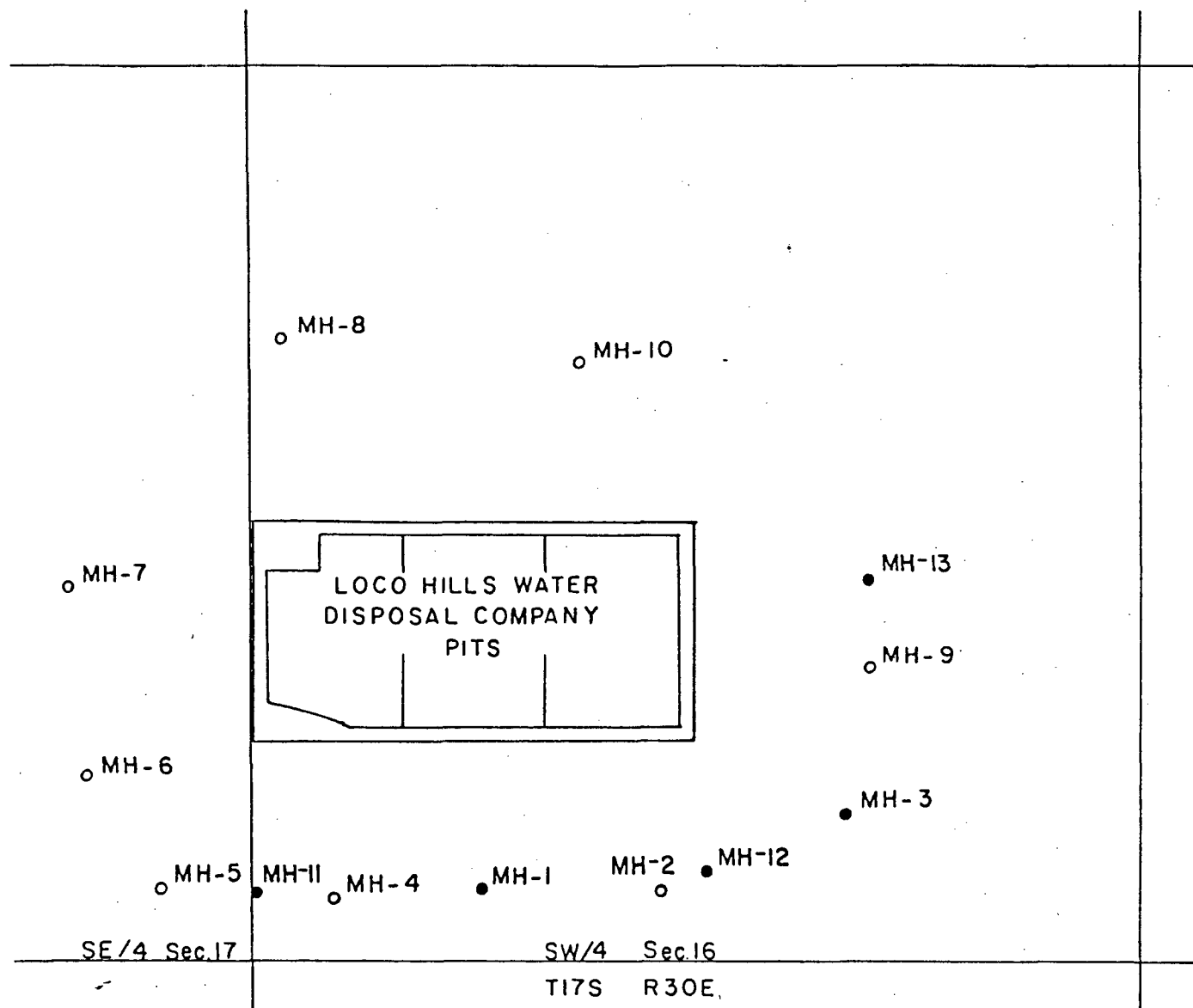
TOTAL ACRES 13.95 IN ALL PLOTS



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



- 60' MONITOR HOLES
- RUSTLER DEPTH MONITOR HOLES

N

500 0 500 1000

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 711 FACILITY INSPECTION (PHOTOS BY OCD)

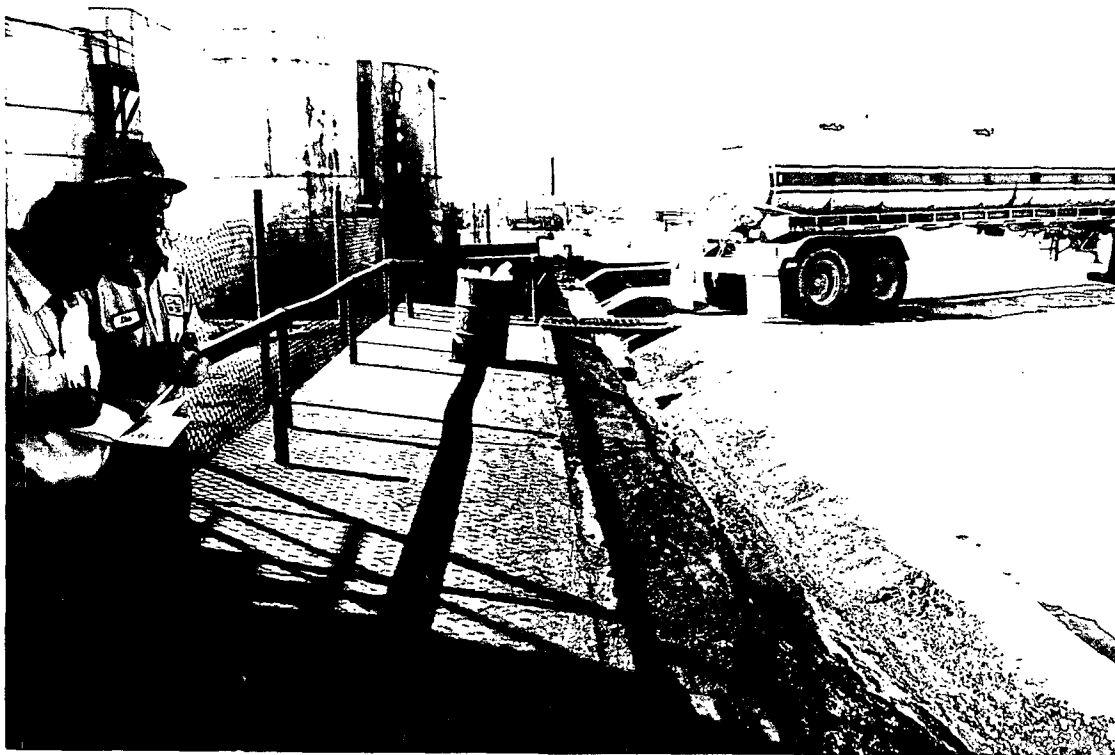


PHOTO NO. 1 DATE: 08/27/97



PHOTO NO. 2 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)



PHOTO NO. 3 DATE: 08/27/97

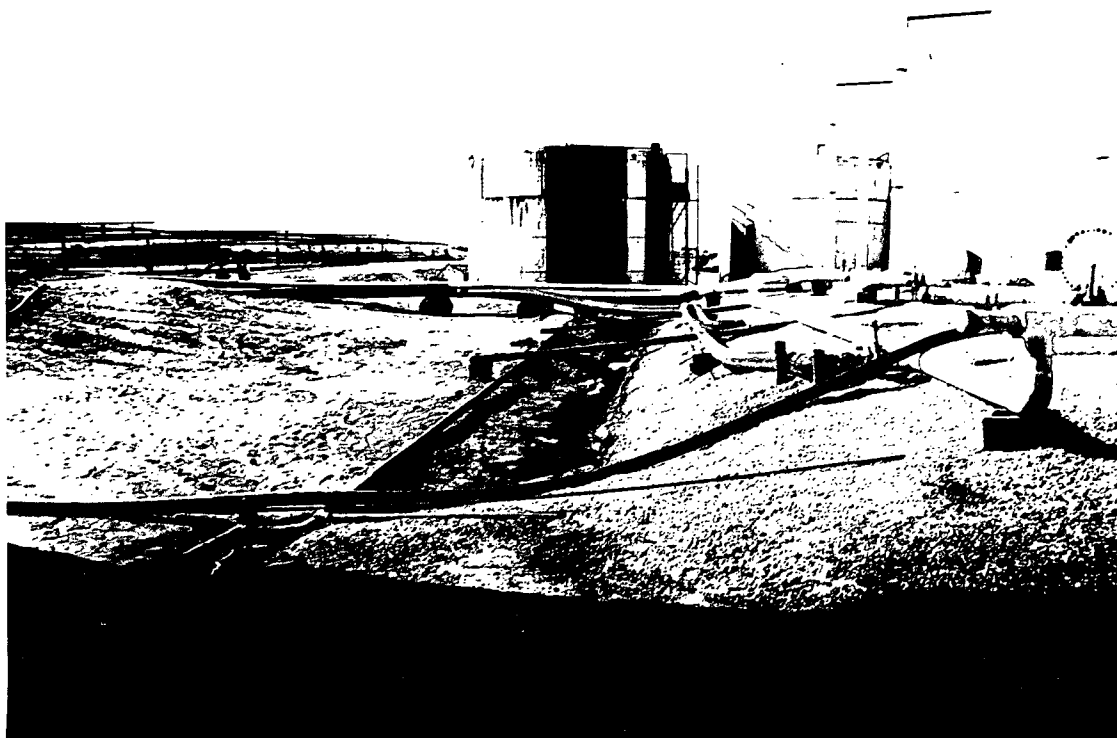


PHOTO NO. 4 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

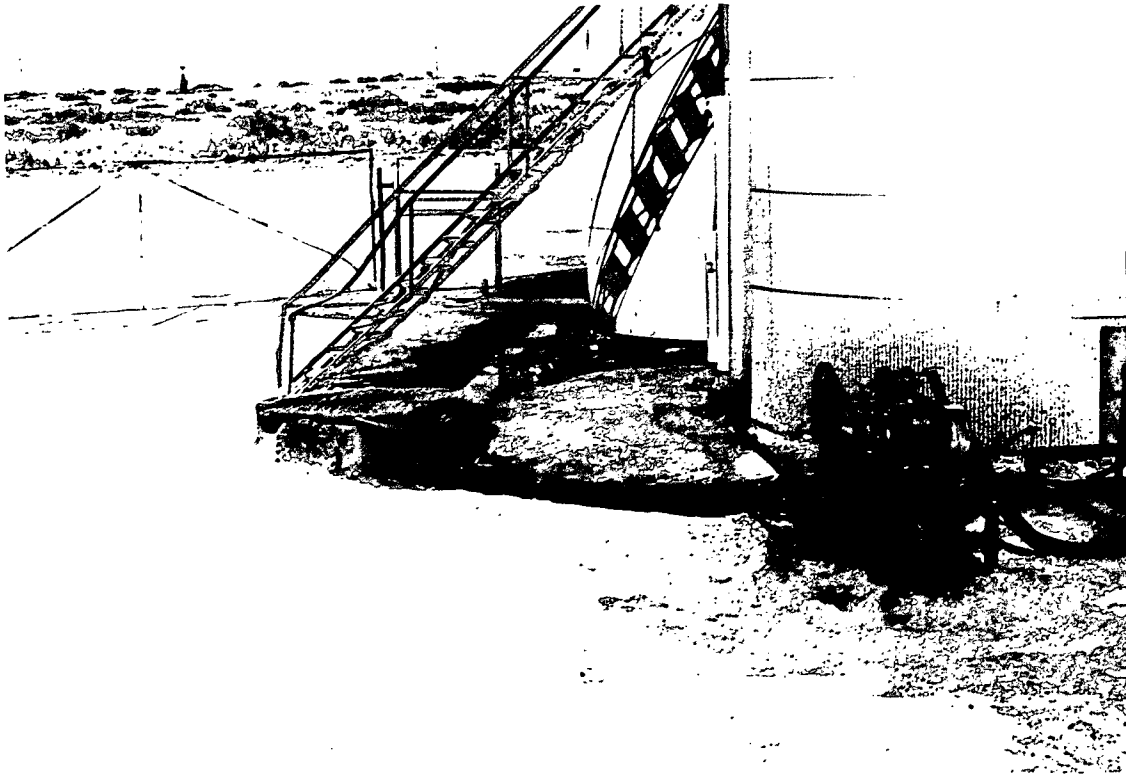


PHOTO NO. 5 DATE: 08/27/97

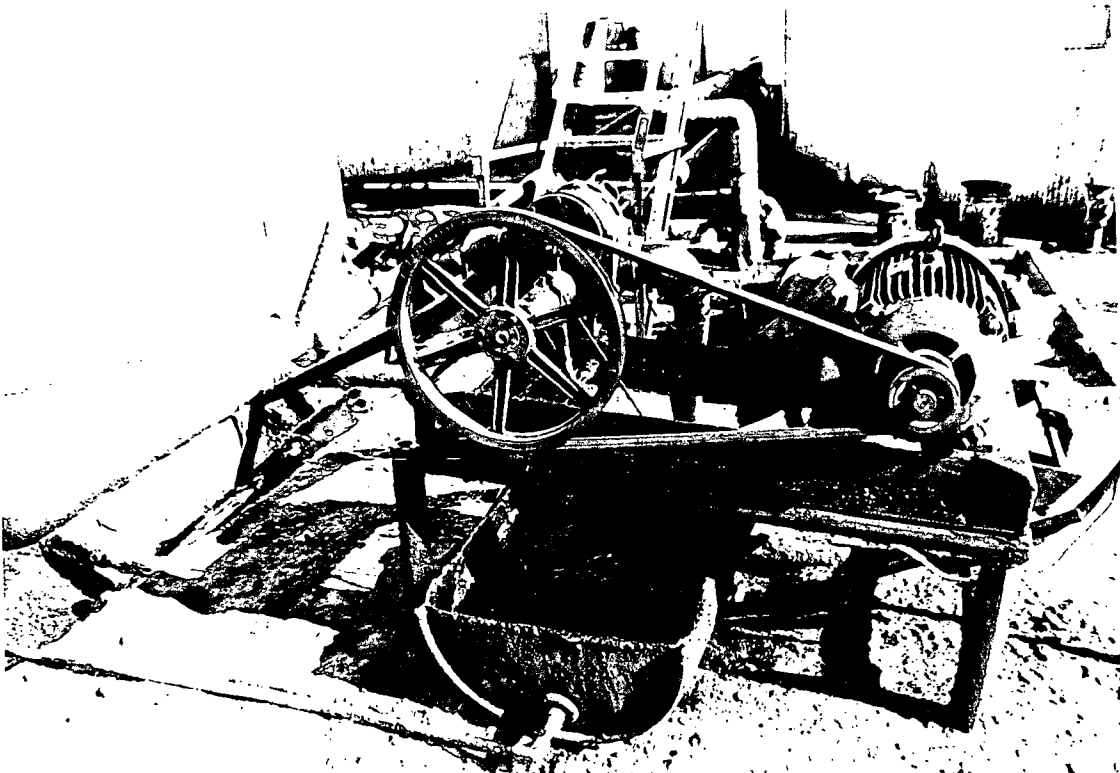


PHOTO NO. 6 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

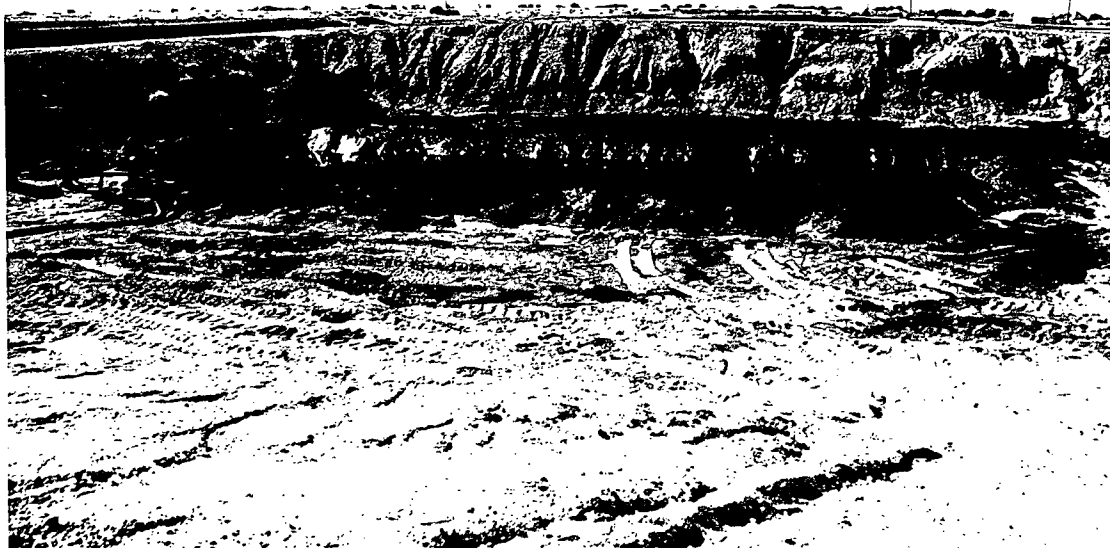


PHOTO NO. 7 DATE: 08/27/97



PHOTO NO. 8 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

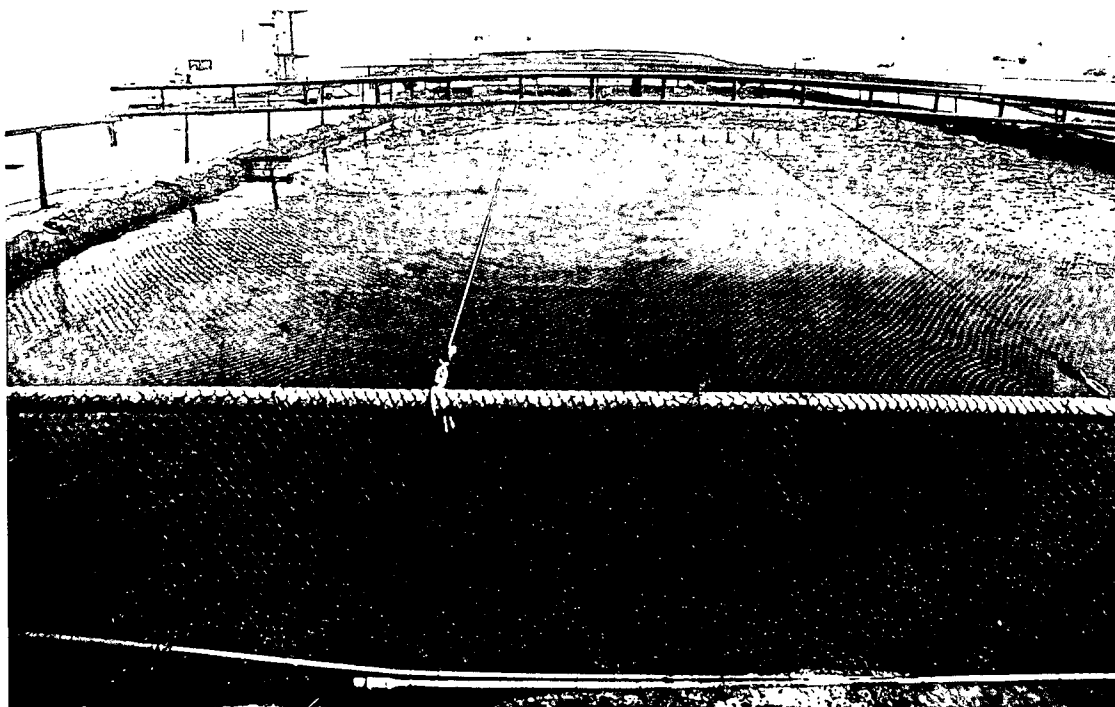


PHOTO NO. 9 DATE: 08/27/97

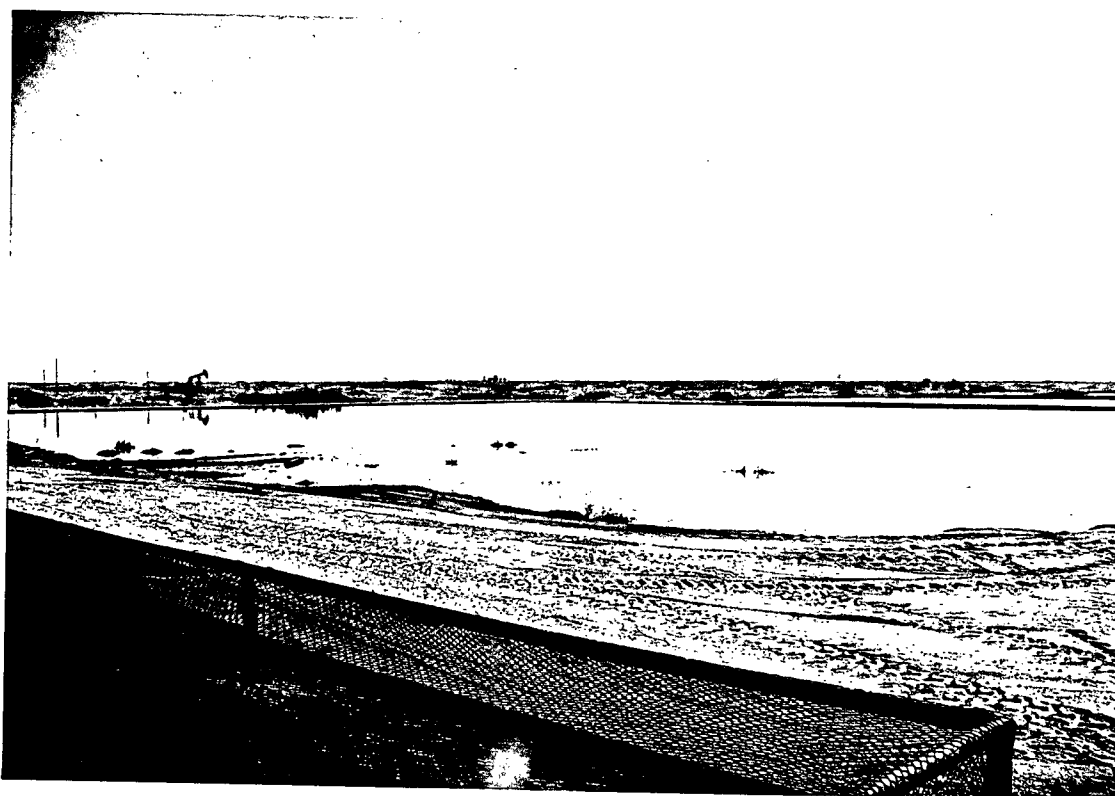


PHOTO NO. 10 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

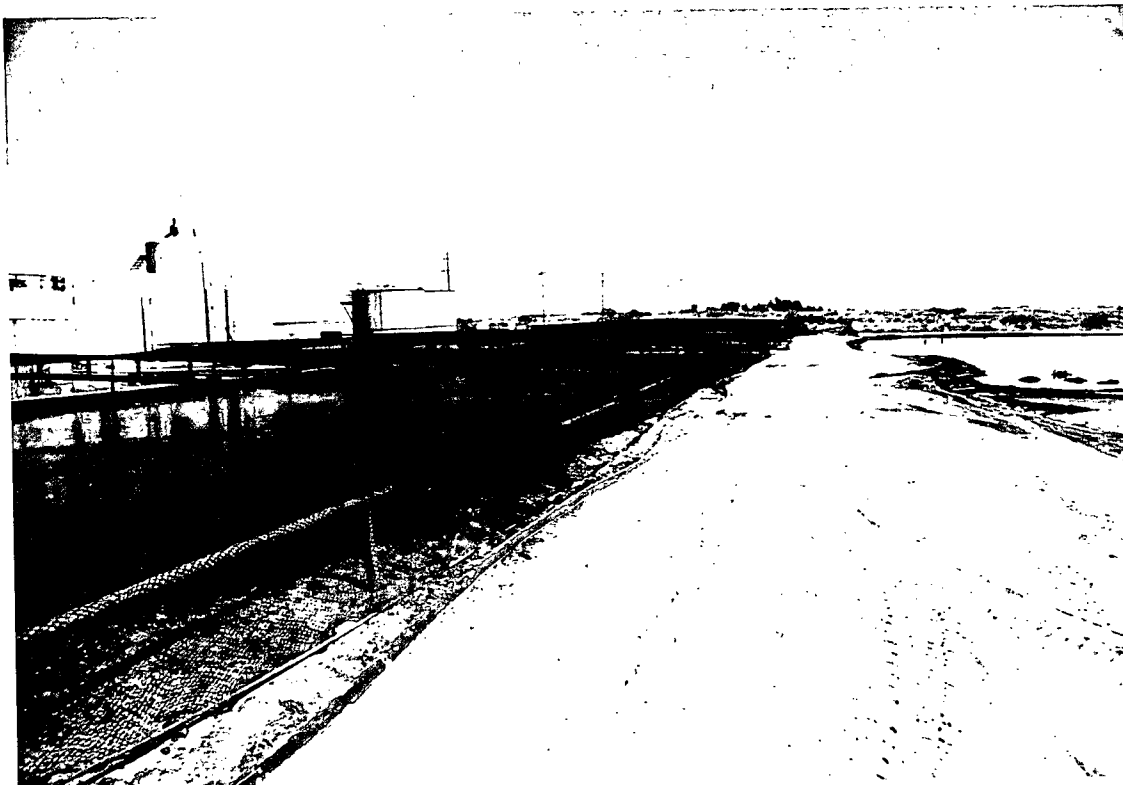


PHOTO NO. 11 DATE: 08/27/97



PHOTO NO. 12 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)



PHOTO NO. 13 DATE: 08/27/97



PHOTO NO. 14 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

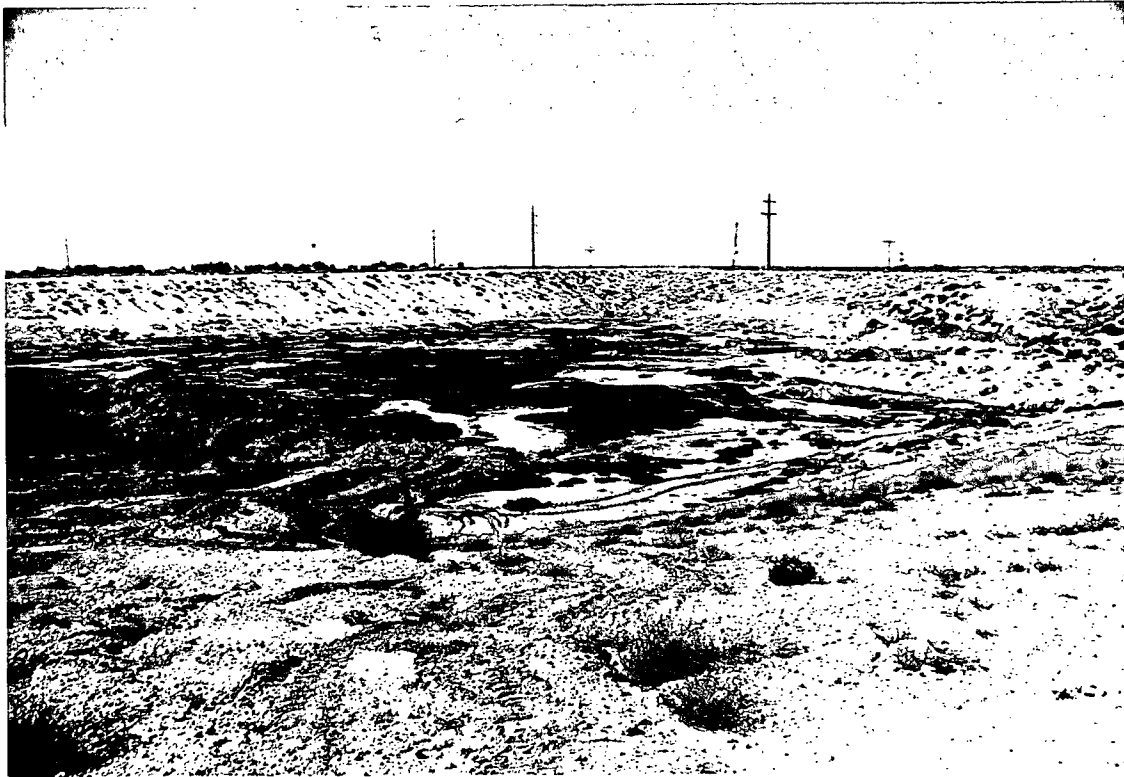


PHOTO NO. 15 DATE: 08/27/97



PHOTO NO. 16 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)



PHOTO NO. 17 DATE: 08/27/97

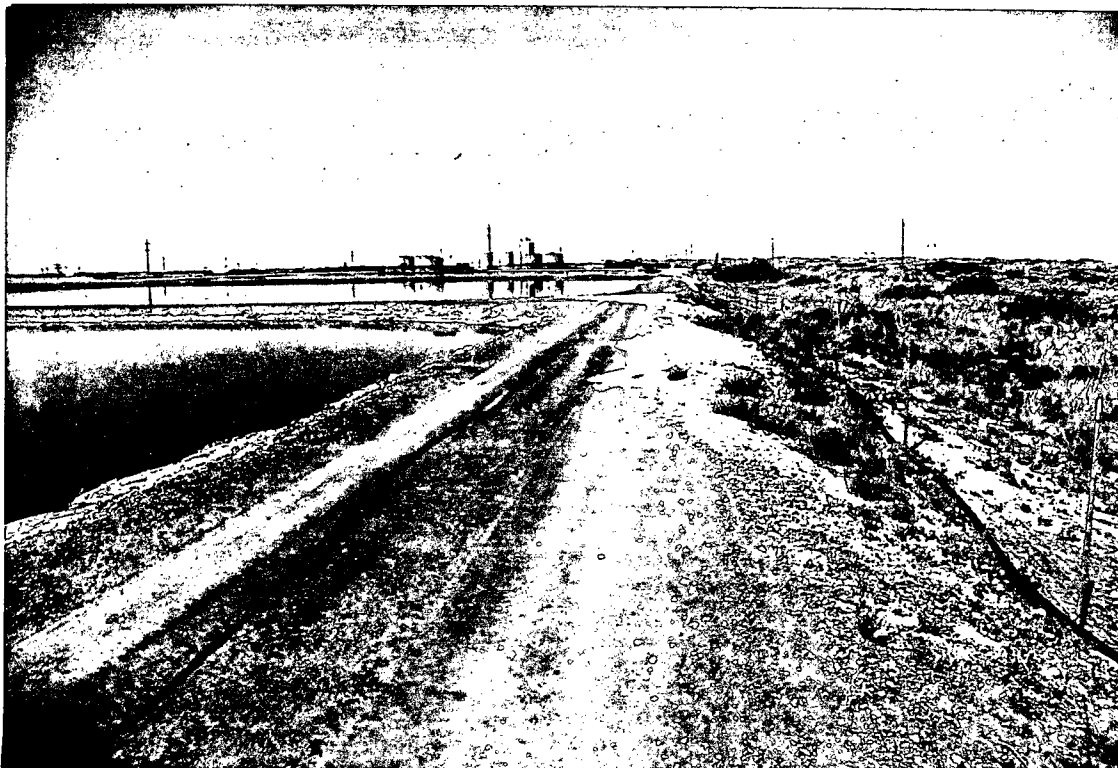


PHOTO NO. 18 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)



PHOTO NO. 19 DATE: 08/27/97

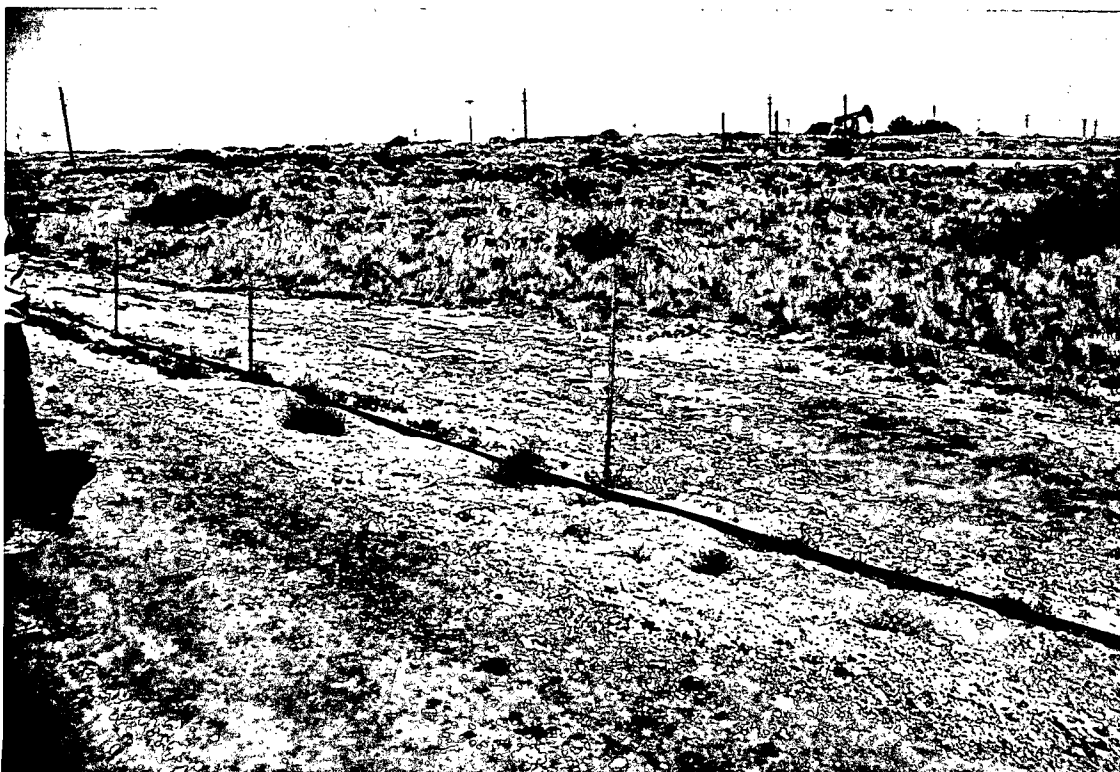


PHOTO NO. 20 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

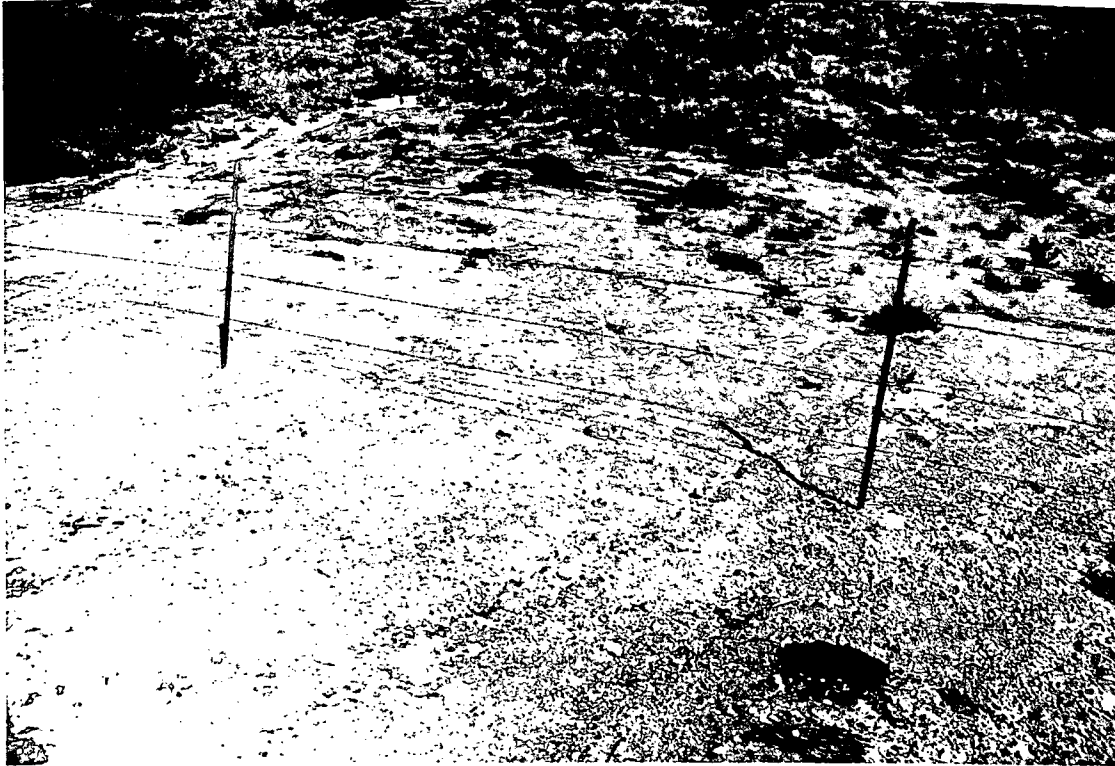


PHOTO NO. 21 DATE: 08/27/97

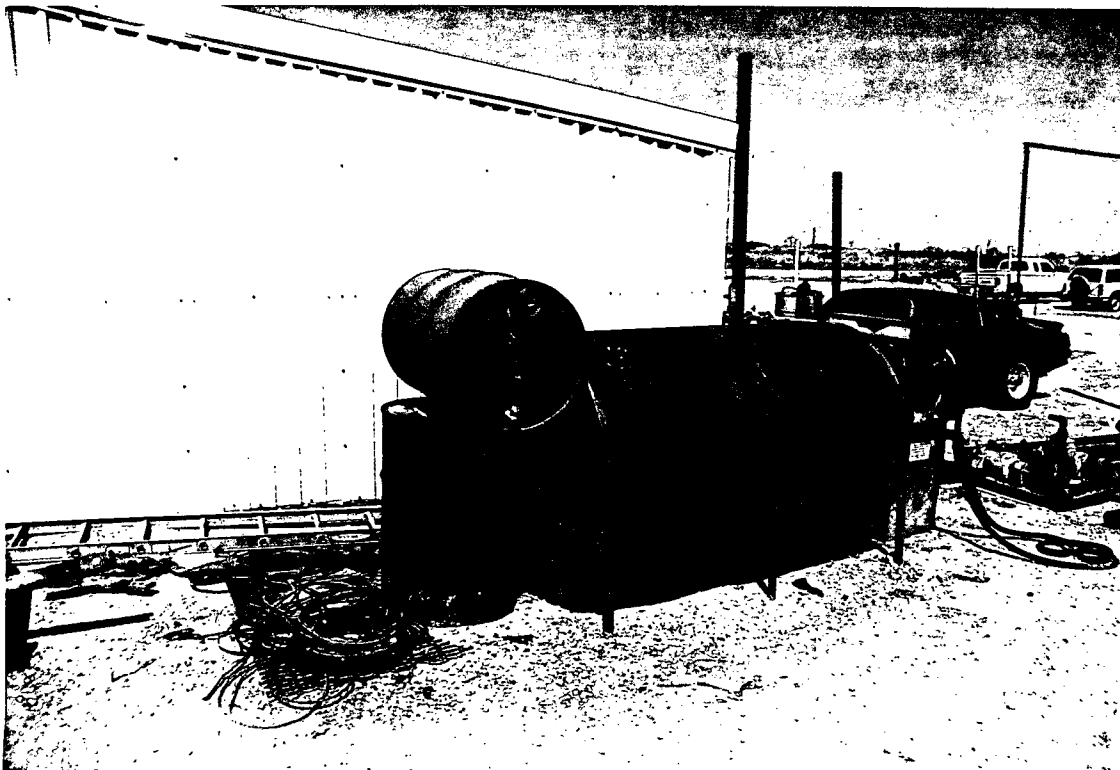


PHOTO NO. 22 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL 711 FACILITY INSPECTION (PHOTOS BY OCD)

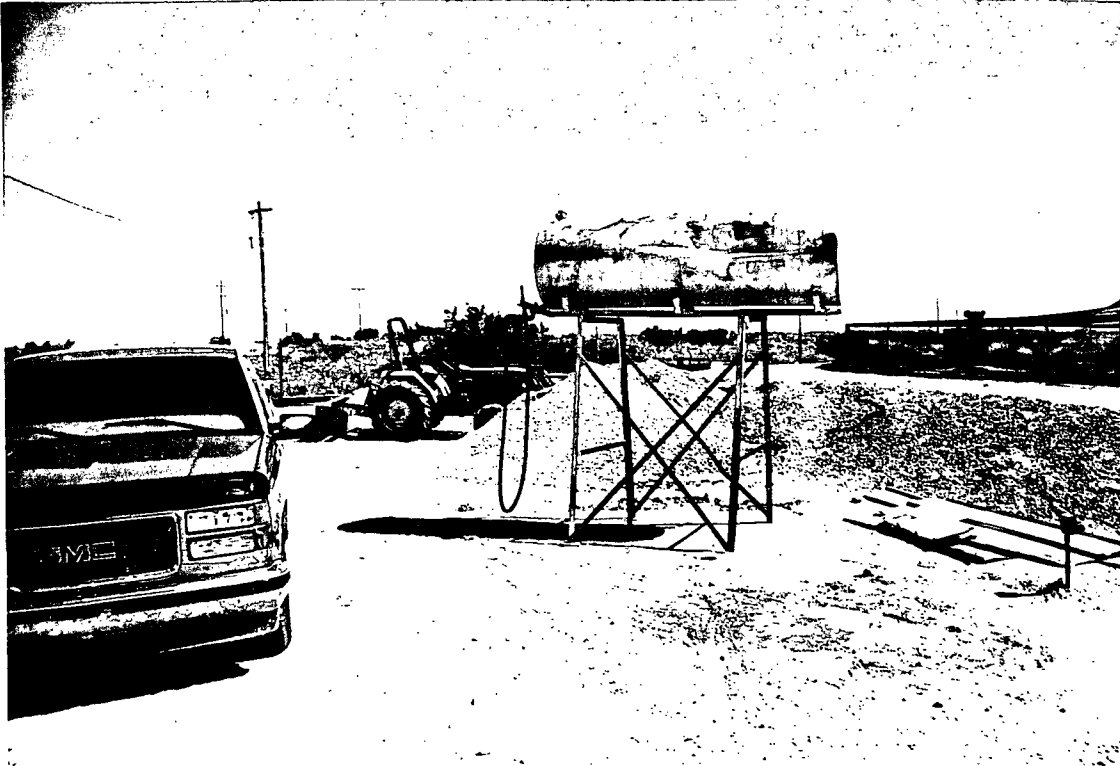


PHOTO NO. 23 DATE: 08/27/97

LOCO HILLS WATER DISPOSAL CO.
P. O. Box 68
Loco Hills, NM 88255

November 7, 1997

Martyne J. Kieling
NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT
Oil Conservation Division
2040 S. Pacheco Street
Santa Fe, NM 87505

RECEIVED
NOV 11 1997

RE: Notice Of Violation

In response to the violations identified during the inspection conducted on September 22, 1997, the following corrective actions are already in place and should be completed by January, 1998.

1. As of September 23, 1997, all fluids have ceased going into the solid pit;
2. We are in the process of lowering some of the pits and on the other pits, raising the level on the dikes in order to be in compliance with the three foot freeboard;
3. All of the oil has been removed from the evaporation pit. This will be closely monitored in the future;
4. The large southern pit is being corrected. As soon as possible, we will have equipment into the pit and complete the work in the " first of the year" time frame;
5. When we spoke on the telephone November 5th, the work of repairing the berm was already in progress. The hole through the dike is for transporting solids. We wish to maintain this opening for future use;

Martyne J. Keiling
November 5, 1997
Page 2

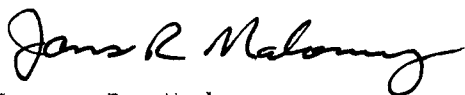
6. Loco Hills Water Disposal, Inc is definitely going to file for landfarm Permit. At the present time, we are waiting for the new Application Forms for the Water Disposal, Treating Plant and Landfarm.

As stated, we hope to have all work completed on or before the first of next year.

The Permit Application will be completed as soon as we receive it and we will return it immediately.

Sincerely,

LOCO HILL WATER DISPOSAL, INC.



James R. Maloney
Vice President
JRM:jb

MEMORANDUM OF CONVERSATION

X TELEPHONE PERSONAL TIME 9:29 DATE 11/5/97

ORIGINATING PARTY Dick Maloney Loco Hills W.D.

OTHER PARTIES Monty Kieley

DISCUSSION Wishes to Not Repair the Berm
To the Solids Pit Because this will be the ~~Right~~
Route taken to Move the Solids Down into the
Large South Pit.

The Volume of water in the South pit Has gone
Down But it will be Another Month Before it is
All gone.

(This means they are letting it evaporate/ Soak in)

CONCLUSIONS I told Dick M. to write Down His
Reasons For leaving the Breach in the Solid
Pit Berm and that No liquids Should
be Allowed to Pass through the Pit

~~CHRIS EUSTICE~~ Monty Kieley



**NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 24, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-326-936-352

Mr. James R. Maloney
Loco Hills Water Disposal, Inc.
Box 68
Loco Hills, NM 87255

RE: NOTICE OF VIOLATION
Loco Hills Water Disposal, Inc.
Section 16, Township 17 South, Range 30 East, NMPM
Eddy County, New Mexico
Waste Management Facility Permit No. NM-01-0004

Dear Mr. James R. Maloney:

On September 22, 1997 the New Mexico Oil Conservation Division (OCD) inspected Loco Hills Water Disposal, Inc. (LHWD), waste management facility located in the Section 16, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico. During the LHWD facility inspection the following permit violations were identified.

1. The two oil separating/skimming pits held liquids above the required three foot freeboard.

The LHWD permit by Order R-6811-B, Finding 4.17, states that a free board of a minimum of three feet should be maintained at all times.

2. The three northern evaporation pits held liquids above the required three foot freeboard.

The LHWD permit by Order R-6811-B, Finding 4.17, states that a free board of a minimum of three feet should be maintained at all times.

3. Two of the northern evaporation pits and one of the central evaporation pits contained oil.

Pursuant to the OCD Order R-8952, all tanks exceeding 16 feet in diameter and all exposed pits and ponds shall be screened, netted or covered unless rendered non-hazardous to migratory birds.

4. Liquids were being siphoned from the skimming pits into the solids pit. The liquid then traveled through the solids pit, picking up hydrocarbons, and out a breach in the southern end of the solids pit and into the large southern pit (pit proposed for a

Mr. James R. Maloney
October 24, 1997
Page 2

landfarm). The bottom of the large southern pit was completely covered with liquids including oil.

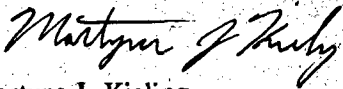
Pursuant to the OCD Order R-8952, all tanks exceeding 16 feet in diameter and all exposed pits and ponds shall be screened, netted or covered unless rendered non-hazardous to migratory birds.

The OCD informed LHWD, during the August 27, 1997 inspection, of the permit requirements that a three foot freeboard must be maintained and that all oil must be kept off of the evaporation pits. Pursuant to OCD rules and regulations, Loco Hills Water Disposal, Inc., is in violation of their Permit No. NM-01-0004. Loco Hills Water Disposal, Inc. has until **November 7, 1997** to submit a corrective action plan to the Santa Fe OCD office and a copy to both the Artesia and Hobbs District offices. The corrective action plan shall address the following and shall include a time table as to when each of the deficiencies will be corrected:

1. immediately cease the draining of liquids through the solid pit;
2. lower the level in all pits/ponds to the required three foot freeboard;
3. remove all oil from the evaporation pits;
4. remove of all liquids from the large southern pit;
5. repair the berm in the south end of the solids pit;
6. dispose of the remaining hydrocarbon contaminated soils in an OCD approved waste management facility or apply for a modification to the existing Permit to landfarm the contaminated soil in place.

If you require any further information concerning permitting/closure procedures please contact me at (505) 827-7153.

Sincerely,



Martyne J. Kieling
Environmental Geologist

xc: Artesia OCD Office
Hobbs OCD Office

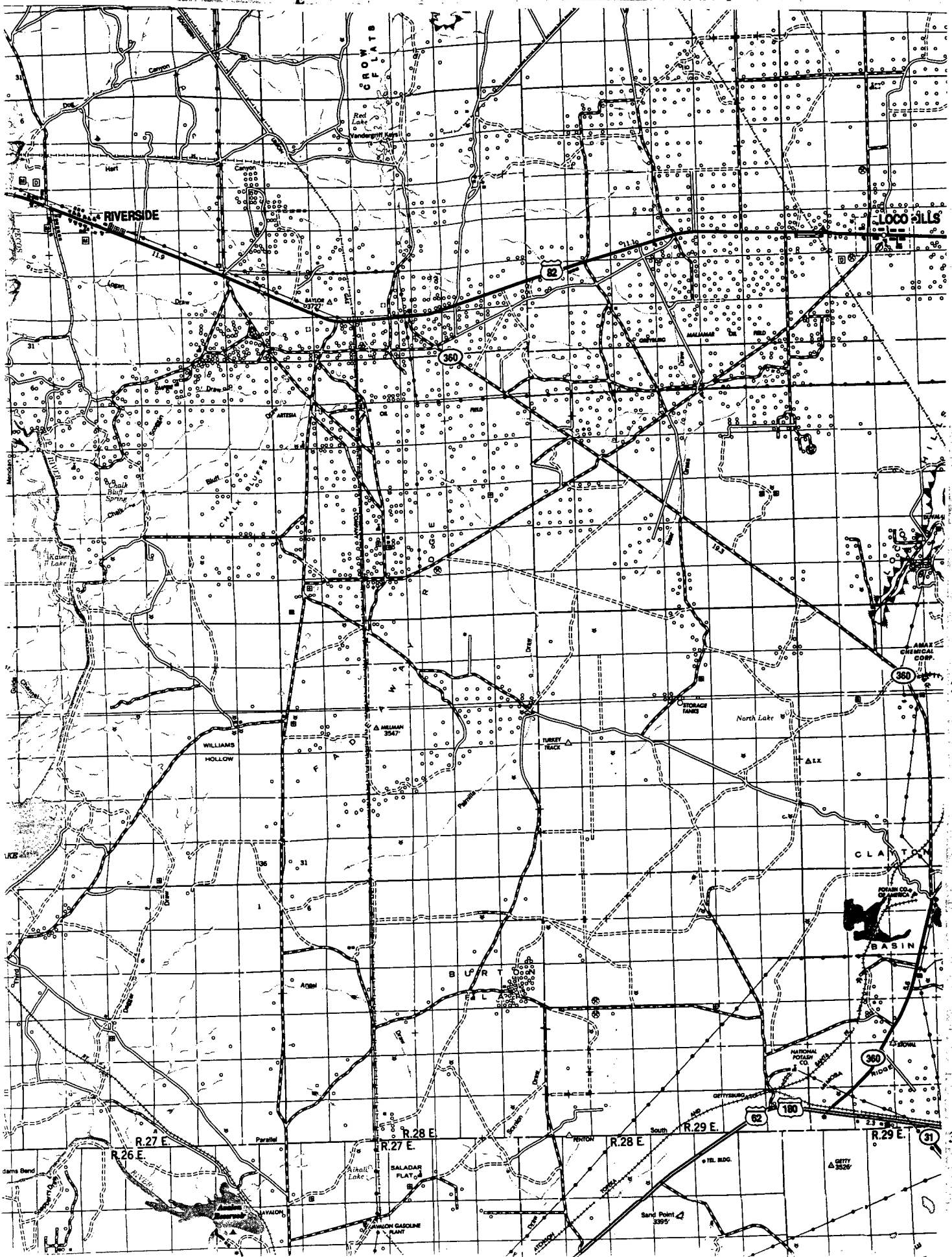
97
E

SCALE - ONE INCH EQUALS 2.9 MILES

0 1 2 3 4 5 6

109

F



Loco Hills



PROBLEM OIL PIT INSPECTION CHECKLIST

Site Number (State-Year-Waypoint):

Loco HI'115

Checklists Completed (circle those that apply):

A B C

Prepared by the US Environmental Protection Agency Region VIII and US Fish and Wildlife Service Region VI

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PROBLEM OIL PIT INSPECTION CHECKLIST

SECTION ONE: Site Information

Site Name and Waypoint: Loco Hills Water Disposal Facility

Lease # and Operator: _____

Site Location Section/Township/Range: _____

GPS Coordinates Obtained During Aerial Survey: _____

GPS Coordinates Obtained During Site Inspection: _____

Site Address: P.O. Box 68

City/County/State/Zip: Loco Hills, NM 88255

USFWS Case ID #: NK

EPA Facility ID # and/or NMOCD ID #'s: NMOCD R6811A-B-C NMO1-01-0004

Contact Name/Affiliation/Phone: Dick Maloney 505-677-2118

Contact Address (if different from site address): _____

Site Type (production, commercial disposal, other): Commercial disposal

SECTION TWO: Inspection Information

Inspection date and time: 9/22/97 2:30 P.M.

Describe weather conditions (including estimated temperature): Mostly sunny, warm

If known, list federal, state, or tribal programs that this site is subject to regulation under via a permit and list all permit number(s): _____

Inspection Team: Martine Kieling

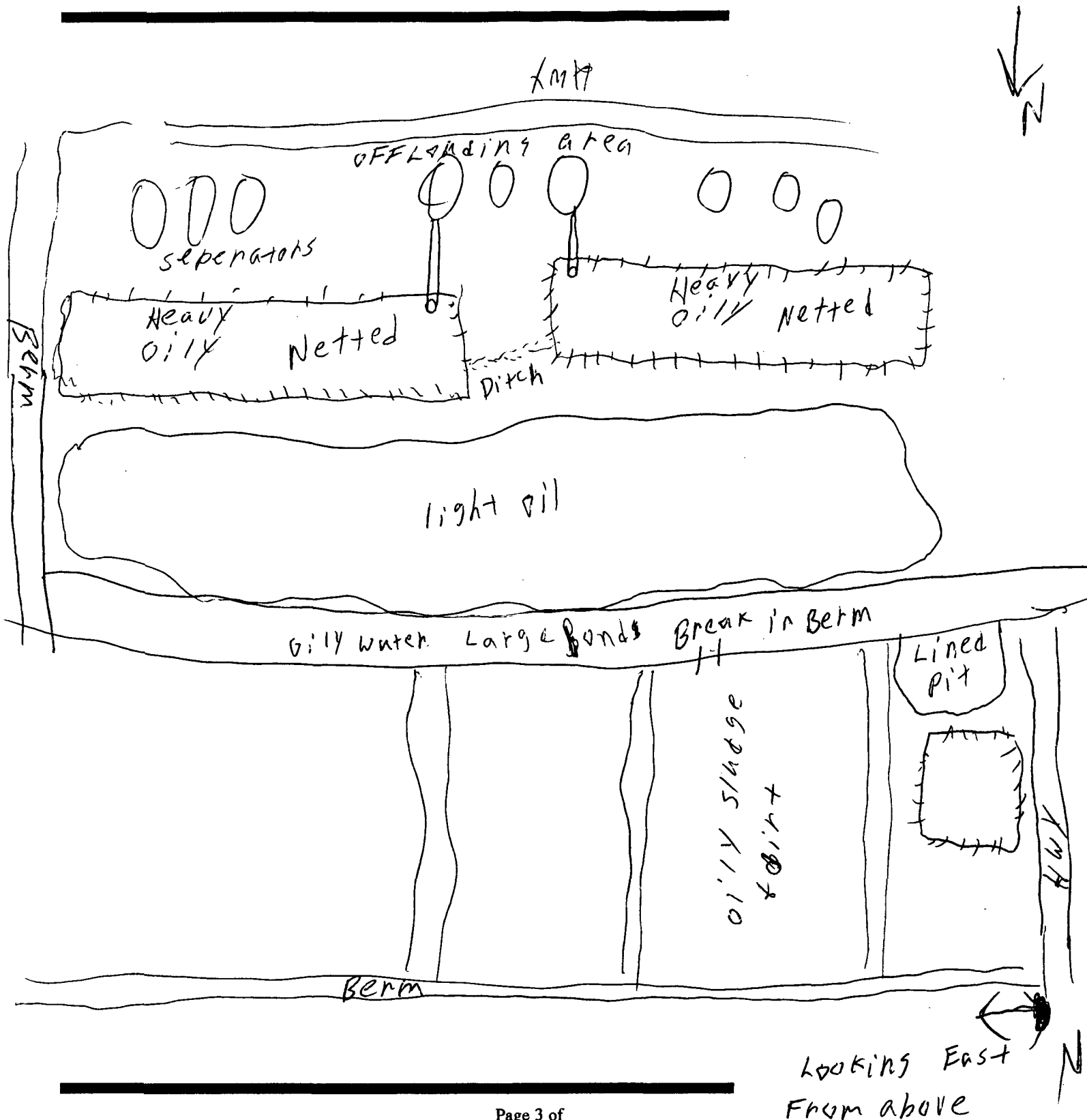
Inspector 1	<u>Wayne Price</u>	Agency/Program: <u>OCD</u>	Phone: _____
Inspector 2	<u>Nick Chavez</u>	Agency/Program: <u>FWS</u>	Phone: _____
Inspector 3	<u>Greg Pashin</u>	Agency/Program: <u>EPA</u>	Phone: _____
Inspector 4	_____	Agency/Program: _____	Phone: _____
Inspector 5	_____	Agency/Program: _____	Phone: _____
Inspector 6	_____	Agency/Program: _____	Phone: _____

SECTION THREE: Sketch of Site/Layout

Site Number and Name :

Loco HI 115

Include the estimated size (including depth) of any pits and describe site operations on site sketch. Include description of pertinent features such as waters of the US (location of, distance to, description of conduits to, etc.) or electrical equipment areas, for example. Include a north arrow on site sketch.



SECTION FOUR: General Observations

A. PITS (complete checklist A if any of the following conditions exist)

1. Does accumulated oil exist on the surface of any pits, ponds, sumps, or other open-topped storage devices ? Yes X No
2. Are pits, ponds, tanks, sumps, or other devices which may accumulate oil covered with netting or are there any other wildlife exclusionary or deterrent devices in use (covers, flagging, etc.) ? Yes X No X
3. Are there any dead or oiled birds or other wildlife on or near the site or any indication of oiled birds/wildlife previously at or near the site (oily tracks, etc.) ? Yes No

B. DISCHARGES (complete checklist B if any of the following conditions exist)

1. Is there a discharge (either ongoing or one-time) from a pit, pond, tank, or other device at the site ? Yes No X
2. Is there indication of any past or potential future discharge from a pit, pond, tank, or other device at the site (soil staining, fresh dirt or gravel used as cover, 2 ft or less freeboard maintained, eroded berms, etc.) ? Yes No X

C. TANKS AND CONTAINERS (complete checklist C if any of the following conditions exist)

1. Are there any tanks or containers on site ? Yes X No

see diagram

CHECKLIST "A" - PITS

1. If accumulated oil exists on the surface of any pits, ponds, sumps, or other open-topped storage devices, describe observed conditions including size of each pit, pond, sump, or device, percentage of area covered, and thickness of oil. Describe any other observations (visual, odor) of the material in each pit, pond, sump, or other device:

1. main Pond 1 with solids and some oil 1 acre
2. solids pits sludge & heavy oil with breached berm. 1/2 acre
3. Land Farm area Heavy covered with oil 3 acre

2. Describe any netting or other wildlife exclusionary or deterrent devices in use at the site. Include description of condition, coverage, netting mesh size, etc.:

Netting on 3 ponds But no netting for 3 ponds in 1 above.

3. Describe any oiled or dead birds or other wildlife found at or near the site. Indicate the number of mortalities and the seizure tag numbers for any birds collected:

4. Describe the construction and operation of any pits or ponds located at the site. Include a description of the pond liner system, if possible. Estimate the freeboard observed at the time of the inspection:

ponds used to separate produced waters into oil & water fraction.

5. Indicate how long any pits or ponds at the site have been in operation:

Pit 3 above in 1 was created in last month it is the biggest problem.

6. If a pit, pond, sump, or other device is used as a loading/unloading area at a non-production site, describe any secondary containment used:

CHECKLIST "B" - DISCHARGES AND SPILLS

1. Indicate whether or not the site has a NPDES permit and, if so, indicate the permit number and whether or not the number is posted on site:

NO NPDES

2. Describe any ongoing discharges or one-time spills from pits, ponds, or other devices at the site. For each discharge, include a description of the source, duration, and rate (gal/min or cfs) of material discharged. For each spill, describe the amount and area of the spilled material. Also describe any observations (oil sheen, odor) regarding the type of material discharged or spilled:

Discharge within facility from bermed area.
settling ponds through solids pit to land farm area.

3. Describe any indications (e.g. soil / vegetation staining on ground or in drainages) of past discharges or spills from pits, ponds, tanks, or other devices at the site. Include any indication of the type of material discharged or spilled (e.g. oil stain, salt brine, etc.) and when and for how long the discharge or spill occurred:

3 acre land farm covered in oily water.

4. Identify and describe the drainage pathway (dry arroyo, ditch, stream, etc.) of any current or suspected past discharges or spills from the site. Trace the drainage pathway to a flowing waterway, if possible, and describe the extent of any oil staining. Include a description of whether the drainage is dry at the time of the inspection, contains standing water that doesn't appear to be flowing or, if flowing, the estimated flowrate (gal/min or cfs) of water and/or discharged material:

NA contained on site.

5. Identify and describe any pits, ponds, or other devices in which less than 2 ft of freeboard exists at the time of the inspection. Also describe any indications that less than 2 ft of freeboard has been maintained in the past, such as staining of pond banks or overtopping of berms, etc.:

settling ponds have oily material to top.

6. If possible, estimate the receipt rate or production rate (gal/day) of oil and/or produced water at the site:

7. If possible, determine whether or not any discharges or spills from the site have been reported and, if so, describe how (letter, phone, etc.), when, and to whom (EPA, BLM, DEQ, OGCC, BIA, etc.) it was reported:

NA

8. Describe the general housekeeping and maintenance of the facility and any conditions which could result in a discharge or spill (valves which could be opened, poorly supported pipelines, etc.):

good house keeping.

CHECKLIST "C" - TANKS AND CONTAINERS

1. Identify whether or not the site has a Spill Prevention, Control, and Countermeasure (SPCC) Plan. If so, verify by personally viewing the plan, if possible. Has it been certified by a registered Professional Engineer?:
2. Describe the type, use, condition, maximum capacity (gal or bbl), contents, markings, and actual quantity at the time of the inspection for each tank and container on the site. Also describe any secondary containment for each tank and container, including its condition, estimated capacity, and method of precipitation removal:

Tank / Container Type and Use	Maximum Capacity	Actual Quantity	Secondary Containment	Markings	Comments (including condition)
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NO tank problems

CONTINUATION SHEET (identify Section and/or Checklist continued)

PHOTO LOG

Site Number: Loco Hills

Film Type/ASA/Size: 200 ASA / 135 / Kodak

Photographer: Wallace O'Rear

Photo Number Subject Loco Hills

- RIE14 Covered pit South Side, looking southeast
- RIE15 Northside covered pit, looking Northeast
- RIE16 Pit east of first 2 pits, looking Northeast
- RIE17 Solids pit, looking southeast
- RIE18 partially used pit south of the first two netted pits
- RIE19 Large pit on the south side of site. Appeared to
receive runoff from solids pit.
- RIE20 Looking Northeast, Sludge running down ~~from the~~ the berm
from the solids pit
- RIE21 Sludge running into large pit
- RIE22 Iron Sulfide Pit #1, next to solids pit
- RIE23 Iron Sulfide Pit #2, next to pit #1 to the east
- RIE24 Iron Sulfide Pit #3, east of pit #2
- RIE01 Sulfide Pit #4, Eastern portion of pit

