NM1 - 6

GENERAL CORRESPONDENCE

YEAR(S):

1999

Inspection Report
Controlled Recovery Inc. (Waypoint #61)
Lea County, NM

Inspection Date: November 3, 1998

EPA ID Number: none

Facility Name: Controlled Recovery Inc. (CRI)

Physical Location: N 32° 32' 29.0", W 103° 45' 43.7"
Mile marker 66 on highway 62/180
Section 27, Township 20S, Range 32E

Mailing Address: P.O. Box 388
Hobbs, NM 88241

Type of Ownership: private

Inspection Participants:

Lead EPA Inspector: Melissa Smith (214) 665-7357 **Initials:** MLS

Other Participants:

Roger Anderson	New Mexico Oil Conservation Division	(505) 827-7152
Doug McKenna	U.S. Fish and Wildlife Service	(505) 589-2823
Greg Stover	U.S. Fish and Wildlife Service	(505) 883-7828
Vince Balderaz	U.S. Bureau of Land Management	(505) 393-3612
Ed Moriarty	Science Applications International Corporation (SAIC)	(703) 645-6973
Tim Reeves	SAIC	(303) 382-6730

Facility Owner: Controlled Recovery Inc.

Facility Representative: Ken Marsh, President (505) 393-1079

Facility Description: Commercial facility for oil field waste disposal.

Generator Status: non-generator

Inspection Type: Compliance evaluation inspection with sampling

Reason for Evaluation: General inspection with sampling

Summary of Inspection: see narrative

Checklists Completed: Problem Oil Pit Inspection Checklist

Peer Reviewed by: Deera Wooten **Date:** 2-22-99

Compliance Evaluation Inspection Narrative
Controlled Recovery Inc. (Waypoint #61)
Lea County, NM

On November 3, 1998, a compliance evaluation inspection was conducted at the Controlled Recovery Inc. ("CRI") facility located 37 miles west of Hobbs on Highway 62-180 (see Attachment A, map coordinates). The purpose of the inspection was to determine if any pits or structures at the facility pose a threat to human health or the environment (including wildlife), and to determine if the facility handles any waste which may be subject to the Resource Conservation Recovery Act ("RCRA") regulations regarding hazardous waste. The inspection team arrived at the facility at approximately 8:00 am. The team was met by Mr. Dave Parsons, Plant Manager, and Mr. Ken Marsh, President of CRI. The team explained the purpose of the visit and a brief safety meeting was held at which time Mr. Marsh explained potential hazards at the site (i.e. Hydrogen Sulfide gas).

The CRI facility occupies approximately 260 acres. According to a facility informational brochure (see Attachment B), the area is used to treat and reclaim sediment oil; to collect, dispose, evaporate, or store produced water, drilling fluids, drill cuttings, completion fluids and other nonhazardous oil field related waste; and to dispose of UST (underground storage tank) contaminated soils and liquids. The facility operates under permit #R9166 issued by the New Mexico Oil Conservation Division ("NMOCD"). A copy of the permit is included in the facility brochure in Attachment B. The facility also has an approved water discharge plan through the New Mexico Environment Department. In addition, the facility received permission from the NMOCD to operate a landfarm for oil field waste.

Operations at the site include an oil treating plant and surface waste disposal pits. According to facility representatives, the facility accepts only nonhazardous waste. Oil field waste that is exempt from the RCRA regulations is not required by the facility to be tested; however, waste that is not exempt is required to be tested by the generator who subsequently submits the results and a certification form to the NMOCD and CRI to verify that the waste is nonhazardous (see Attachment C, waste acceptance documentation).

The first area that the inspection team visited was the treating plant. The treating plant is located on the east side of the facility and consists of two receiving pits (rectangular tanks), a tank battery, and an excess storage pit. Crude oil bottoms are received in the two receiving pits (500 barrel capacity each) which are heated by steam coils (see Photo Log A, photo #2; and Photo Log B, photo #3). The oil then goes to the tanks in the tank battery where it is heated again. Depending upon the material, it may be run through a 3-stage centrifuge which separates the oil, solids, and water. The oil is sold as product, waste solids are dried and placed in a solids pit (see Photo Log A, photo #9), and water is piped to evaporation ponds located on the other side of the facility. At the time of the inspection, both of the receiving tanks appeared to be almost full (approximately 8 and 12 inches of freeboard; see Photo Log A, photo #'s 3-5). The contents of the tanks appeared to be solidified. Located north of the receiving tanks was a large pit for excess storage of tank bottoms (see Photo Log A, photo 1; and Photo Log B, photo #'s 1-2). The contents of the pit appeared to be "sludge-like" solid material with some liquid. The tank was lined and the top was covered with netting, although there was an opening around the pit between the net and the surface of the pit. There was approximately 18 inches of freeboard and some free liquids on the surface of the pit. The pit contents would eventually pass through the treatment process. The tank battery contained seven 750-barrel capacity tanks and three 500-barrel capacity tanks. There was an earthen berm around the tank battery; however, there was a low spot on the east side of the berm which appeared to be a driveway (see Photo Log A, photo #6; and Photo Log B, photo #4), as well as no berm beneath the piping leading from the receiving pits to the treatment tanks (see Photo Log A, photo #7; and Photo Log B, photo #5). The south side of the berm also had several low spots (see Photo Log A, photo #8; and Photo Log B, photo #6).

The second area of the facility that the team visited was the water disposal pits. This area consisted of several tanks for receiving produced waters, and numerous pits for evaporation and disposal of solids. Produced water is off loaded from trucks into the tanks (see Photo Log A, photo #10; and Photo Log B, photo #7). The oil and water is allowed to separate in the tanks. The oil is moved to a smaller tank and then transported to the treating plant to be sold as product. The water is transferred from the tanks to a series of pits. The first two pits are skim pits and were heavily covered with oil (see Photo Log A, photo #'s 11 and 13; and Photo Log B, photo #'s 8 and 11). According to the facility representative, both of the pits are lined; however, during the inspection it appeared that the lining of the first pit was torn in several places (see Photo Log B, photo #11). The oil is skimmed off of the pits and transferred to the treating plant. The water flows into a third unlined pit, which is the primary evaporation pit (see Photo Log A, photo #14; and Photo Log B, photo #9). At the time of the inspection, oil-stained soil was observed around the edge of the pit (see Photo Log B, photo #12). The pit was equipped with flagging to act as a deterrent to birds. The water flows from the third pit into a final evaporation pit (see Photo Log A, photo #12; and Photo Log B, photo #13). The evaporation pit was not lined, did not have netting or flagging, and did not appear to contain oil. The rest of the pits in the disposal facility were unlined and were used primarily for drilling muds (see Photo Log A, photo #'s 16-18; and Photo Log B, photo #'s 1-6). The muds are allowed to dry and then moved to the solids disposal pit. The drilling mud pits were heavily saturated with oil and were equipped with flagging as a bird deterrent. In 1997 the facility requested and received approval from NMOCD to operate the pits without being covered with netting (see Attachment D, netting exception letter). This request was granted based upon other bird deterrent devices utilized at the facility such as lighting, dogs, 24 hour traffic, some flagging, and no previous history of harm to migratory birds; however, at the time of the inspection, FWS agents collected evidence of bird mortality from one of the drilling mud pits. The bird was identified as a meadowlark (Sturnella Sp.), seizure tag #651585. The pit was heavily oiled and was equipped with flagging.

Representative samples were collected at both the water disposal pits and the treatment plant. The following samples were collected:

- Primary evaporation pit: Representative liquid samples were collected of the produced water flowing from the second skim pit into the evaporation pit. The sample was collected at the outflow of the pipe leading into the pit (sample # WP-61-EP-1). A liquid sample was also collected from the opposite side of the pit (WP-61-EP-2). The sample was collected by submersing the sample bottle into the liquid in the pit. Representative samples were collected of the sediment around the edge of the pit (WP-61-EP-3 and WP-61-EP-4). The samples were collected by scooping the sediment into the sample jars. Duplicate samples were collected of both the liquid and sediment for quality control purposes (WP-61-EP-5 and WP-61-EP-6, respectively).

- Drilling mud pit: Representative samples were collected of the sediment from opposite sides of one of the drilling mud pits (WP-61-DP-1 and WP-61-DP-2). The samples were collected by scooping the sediment into the sample jars. A duplicate sample was collected of the sediment for quality control purposes (WP-61-DP-3).

- Treatment tank: Representative samples were collected from Tank #5, a 750 barrel tank used to reclaim oil (WP-61-TANK-A). The liquid was collected from a valve at the bottom of the tank. A duplicate sample was collected of the liquid for quality control purposes (WP-61-TANK-B).

Appropriate quality assurance and quality control (QA/QC) samples were collected for each location. Adequate volume was collected at all sampling locations to provide split samples to the facility (duplicate QA/QC samples were not collected for the facility). A copy of the chain of custody form signed by Mr. Marsh is attached (Attachment E). The EPA samples were sent via Federal Express to Core Lab-Gulf States Analytical

in Houston, Texas, for analysis (see Attachment F, chain of custody for EPA samples). The samples were analyzed for volatile organic compounds, semi-volatile organic compounds, organochlorine pesticides, organophosphorus pesticides, chlorophenoxy herbicides, polychlorinated biphenols (PCBs), and HSL metals (Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc). A summary of the analytical results is included as Attachment G.

The land surrounding the facility appeared to be primarily range land (see Photo Log A, photo #15). A naturally occurring salt lake, Laguna Toston, is located approximately three-quarters of a mile from the facility (see Photo Log A, photo #19).

A Problem Oil Pit inspection checklist was completed during the inspection and is included in Attachment H. The inspection team left the facility at approximately 3:30pm.

Areas of Concern

- Inadequate berm around treatment tanks.
- Less than 2 feet of freeboard in receiving pits and excess storage pit located in the treating plant.
- Skim pits and drilling mud pits are heavily covered with oil and there is insufficient migratory bird deterrent as mortality was discovered during the inspection.
- Lining of one of the skim pits appears to be compromised.
- Drilling mud pits are heavily saturated with oil and are not lined.

Attachments

Photo Log "A"

Photo Log "B"

Photo Log "C"

A Map Coordinates

B Facility Informational Brochure

C Waste Acceptance Documentation

D Netting Exception Letter

E Chain of Custody for Split Samples

F Chain of Custody for EPA Samples

G Analytical Data Summary

H Problem Oil Pit Inspection Checklist

PHOTO LOG "A"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 1 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Netted and lined pit for excess storage
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 2 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Receiving tanks for treatment process
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 3 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Receiving tank for treatment process
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 4 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Receiving tank for treatment process
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 5 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Receiving tank for treatment process
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 6 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Low point in berm around treatment tanks
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 7 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Pump in berm opening from receiving tanks to treatment tanks
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 8 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Berm around treatment tanks, and pasture beyond fence
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 9 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Solids from centrifuge
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 10 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Receiving tanks for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 11 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: First skim pit for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 12 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Final evaporation pit for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 13 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Second skim pit for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 14 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Third skim pit for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 15 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Cattle in pasture beyond facility fence line
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 16 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Pit for drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 17 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Pit for drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 18 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Drying pit for oil based drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 19 Photographer: Melissa Smith
Location: Controlled Recovery Inc.
Subject: Playa lake (in background) across the road from facility
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

PHOTO LOG "B"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 1 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Backup secondary pit for tank bottoms, looking N
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 2 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Backup secondary pit for tank bottoms, looking NW
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 3 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Heated receiving tanks for tank bottoms
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 4 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Low spot in berm used as a road or driveway
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 5 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: No berm beneath piping
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 6 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Low berm at east side of tank battery
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 7 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Produced water off load and tank battery
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 8 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: First produced water pit for settling
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 9 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Primary 1st evaporation pond for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 10 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Torn liner on 1st produced water pit (see photo 8)
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 11 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Second settling pit for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 12 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Oil on bank edge of 1st evaporation pond for produced water
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 13 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Second evaporation pond for produced water, looking N
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

PHOTO LOG “C”

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 1 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Pit for drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 2 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: SW pit for drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 3 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: East of evaporation pits, pit for drilling materials
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

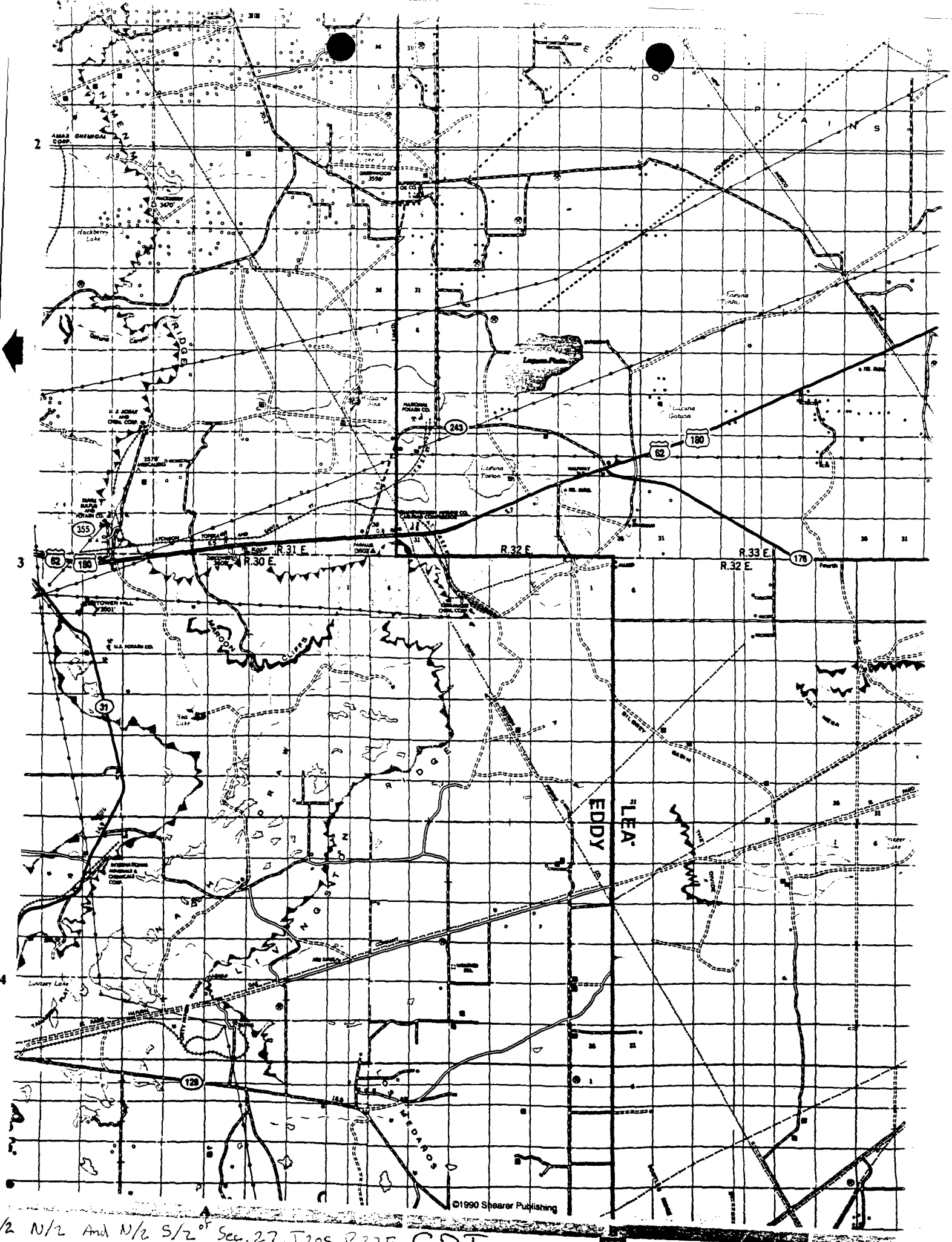
Photo Number: 4 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: East of evaporation pits, partially dried out pit of drilling mud
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 5 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Additional pit for drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

Photo Number: 6 Photographer: T. Reeves, SAIC
Location: Controlled Recovery Inc.
Subject: Additional pit for drilling muds
City/County: Lea County State: NM
Date: 11/03/98 Time: am Weather: cloudy, cool

ATTACHMENT A



S/2 N/2 And N/2 S/2 of Sec. 27, T.20S., R.32E. CRT

ATTACHMENT B

CRI
CONTROLLED RECOVERY INC.
P.O. BOX 369, HOBBS NM 88241

KEN MARSH

(505) 393-1079

CRI
CONTROLLED RECOVERY INC.

P.O. BOX 369 HOBBS, NEW MEXICO 88241
(505) 393-1079

A Subsidiary of

TransAmerican Waste Industries, Inc.

TABLE OF CONTENTS

INTRODUCTION

Controlled Recovery Inc.'s oil industry disposal facility is now open. We welcome your inspection and the opportunity to discuss your future needs of this facility.

This disposal site is operated in complete compliance with all laws, rules, and regulations of the governing agencies.

Controlled Recovery Incorporated is a New Mexico corporation that has been authorized by the State of New Mexico Oil Conservation Division (Order No. R9166) to construct and operate a surface waste disposal facility complete with unlined surface pits and an oil treating plant. In addition to the permit from the Oil Conservation Division, CRI has been permitted by the State of New Mexico Environment Department (DP-818) to accept Underground Storage Tank (UST) contaminated soils and liquids.

The facility is located 35 miles west of Hobbs on Highway 62-180. The 260 acre area serves three purposes: 1) to treat and reclaim sediment oil 2) to collect, dispose, evaporate, or store produced water, drilling fluids, drill cuttings, completion fluids and other nonhazardous oil field related waste, and 3) to dispose of UST contaminated soils and liquids.

CRI has qualified personnel who have over 30 years of experience in a variety of areas. Environmental consulting is one of the specialties and includes audits, project planning, permitting, and risk reduction of ground water contamination. Services such as sampling and testing of soils and sludges, clean up of contaminated aquifers and soils, and monitoring systems can also be performed. Furthermore, CRI has equipment to perform these operations and is also knowledgeable about the transportation of contaminated materials.

With prior approval from the New Mexico Oil Conservation Division, CRI can accept materials from other states.

We thank you for considering our disposal facility and for all efforts to protect the environment.

Please contact our office for contractual arrangements, acceptance procedures, or any additional information such as approved transporters.

PERMIT FOR OIL TREATING PLANT AND SURFACE WASTE DISPOSAL

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9882
Order No. R-9166

APPLICATION OF CONTROLLED RECOVERY INC.
FOR AN OIL TREATING PLANT PERMIT, SURFACE
WASTE DISPOSAL AND AN EXCEPTION TO ORDER
NO. R-3221, LEA COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on April 4, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 27th day of April, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Decretory Paragraph No. (3) of Division Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any water course, or in any other place or in any manner which would constitute a hazard to any fresh water supplies.

(3) The aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(4) The State Engineer has designated all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(5) The applicant, Controlled Recovery Inc., seeks authority to construct and operate a surface waste disposal facility and an oil treating plant for the purpose of treating and reclaiming sediment oil and for the collection, disposal, evaporation, or storage of produced water, drilling fluids, drill cuttings, completion fluids and other non-hazardous oilfield related waste in unlined surface pits at a site in the S/2 N/2 and the N/2 S/2 of Section 27, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico.

(6) The applicant proposes to install and operate an effective system, consisting of separating tanks, a water disposal pit, a solids disposal pit, and associated skimming, heat, and/or chemical separating equipment for the removal and reclamation of oil and basic sediments from the produced water to be disposed of, and a settling area to separate other solid waste.

(7) The proposed plant and method of processing will efficiently process, treat, and reclaim the aforementioned waste oil, thereby salvaging oil which would otherwise be unrecoverable.

(8) No interested party appeared at the hearing in opposition to the application.

(9) A naturally occurring salt lake (Laguna Toston) is located in the S/2 of Section 21 and the N/2 of Section 28, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico, and is approximately three-quarters of a mile from the proposed disposal area.

(10) The hydrogeologic evidence presented in this case establishes that:

a) Triassic redbeds, comprised of the Chinle Shale, Santa Rosa sandstone, and the Dewey Lake formation, underlies both Laguna Toston and the proposed water disposal site;

b) Shales within the Triassic redbeds underlying the proposed waste disposal site and Laguna Toston are virtually impermeable and therefore prevent vertical seepage of the waters from the site and Laguna Toston into sand stringers with the redbeds which may contain fresh water;

c) The surface of the Triassic redbeds is depressed in the vicinity of the waste disposal site and Laguna Toston thus creating a "collapse feature";

d) The major flow of surface and subsurface water within the boundaries of the "collapse feature" is toward Laguna Toston;

e) Seepage from the Impoundments at the proposed waste disposal site will infiltrate into the subsurface and migrate toward Laguna Toston;

f) After the seepage reaches Laguna Toston, practically all of the seepage will evaporate;

g) There is no present or reasonably foreseeable beneficial use of the waters of Laguna Toston;

h) There are no known sources of potable groundwater in sediments underlying the Triassic redbeds at Laguna Toston;

i) The utilization of the proposed disposal site adjacent to Laguna Toston for the disposal of water produced in conjunction with the production of oil or gas, or both, and other non-hazardous oilfield waste products, including drill cuttings and drilling muds should not constitute a hazard to any fresh water supplies.

(11) The applicant should be authorized to utilize the unlined pits described in Finding Paragraph Nos. (5) and (6) above, for the disposal of water produced in conjunction with the production of oil or gas, or both, and other non-hazardous oilfield waste products, including drill cuttings and drilling muds.

(12) The maximum fill level in both of the above-described pits should be limited to a plane below the crest of the dikes surrounding the pits in order to preclude over-tapping of the dikes.

(13) The proposed oil treating plant and disposal facility should be constructed in accordance with the engineering plat and topographic map presented as evidence in this case and in accordance with such additional conditions and requirements as may be directed by the Division Director, and should be operated and maintained in such a manner as to preclude spills and fires, and protect persons and livestock.

(14) Prior to initiating operations, the facility should be inspected by a representative of the Hobbs district office of the Division in order to determine the adequacy of fences, gates and cattleguards necessary to preclude livestock and unauthorized persons from entering and/or utilizing said facility, and also to determine the adequacy of dikes and berms needed to assure safe plant operation.

(15) The Director of the Division should be authorized to administratively grant approval for the expansion or modification of the proposed treating plant.

(16) Authority for operation of the treating plant and disposal facility should be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.

(17) Prior to constructing said facility, the applicant should be required to submit to the Santa Fe office of the Division a surety or cash bond in the amount of $25,000 in a form approved by the Division.

(18) Authority for operation of the treating plant and disposal facility should be transferrable only upon written application and approval by the Division Director.

(19) The granting of this application should not endanger designated fresh water supplies, and will prevent waste by allowing the recovery of otherwise unrecoverable oil.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Controlled Recovery Inc., is hereby authorized to construct and operate a surface waste disposal facility complete with unlined surface pits and an oil treating plant at a site in the S/2 N/2 and the N/2 S/2 of Section 27, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico, for the purpose of treating and reclaiming sediment oil and for the collection, disposal, evaporation, or storage of produced water, drilling fluids, drill cuttings, completion fluids and other non-hazardous oilfield related waste.

PROVIDED HOWEVER THAT, the proposed oil treating plant and disposal facility shall be constructed in accordance with the engineering plat and topographic map presented as evidence in this case and in accordance with such additional conditions and requirements as may be directed by the Division Director, and shall be operated and maintained in such manner as to preclude spills and fires, and protect persons and livestock.

PROVIDED FURTHER THAT, prior to initiating operations, the facility shall be inspected by a representative of the Hobbs district office of the Division in order to determine the adequacy of fences, gates and cattleguards necessary to preclude livestock and unauthorized persons from entering and/or utilizing said facility, and also to determine the adequacy of dikes and berms needed to assure safe plant operation.

(2) The maximum fill level in both of the proposed unlined surface pits shall be limited to a plane below the crest of the dikes surrounding the pits in order to preclude over-tapping of the dikes.

(3) The Director of the Division shall be authorized to administratively grant approval for the expansion or modification of the proposed treating plant.

(4) Authority for operation of the treating plant and disposal facility shall be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.

(5) Prior to constructing said facility, the applicant shall submit, to the Santa Fe office of the Division, a surety or cash bond in the amount of $25,000 in a form approved by the Division.

(6) Authority for operation of the treating plant and disposal facility shall be transferrable only upon written application and approval by the Division Director.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Original on file
Santa Fe, New Mexico

WILLIAM J. LEMAY
Director

PERMIT FOR UNDERGROUND STORAGE TANK (UST) SOILS AND LIQUIDS

State of New Mexico

ENVIRONMENT DEPARTMENT

BRUCE KING
GOVERNOR

JUDITH M. ESPINOSA
SECRETARY

RON CURRY
DEPUTY SECRETARY

February 3, 1992

Mr. Ken Marsh,
President
CONTROLLED RECOVERY, INC.
P. O. Box 369
Hobbs, NM 88241

RE: Approved Discharge Plan, DP-818

This is to confirm that CONTROLLED RECOVERY, INC. has met the Water Quality Control Commission standards and has been granted an approved discharge plan from the Groundwater Protection and Remediation Bureau, Groundwater Section of the New Mexico Environment Department for the site located 37 miles west of Hobbs, NM on US 62 for the purpose of receipt and remediation of hydrocarbon contaminated soils. This approved plan is in effect until November 26, 1996.

For additional information, please contact me at the address below, or by telephone, 827-2703.

Sincerely,

Phillis Stevens
Water Resource Specialist
Ground Water Section

PS:mtf

LANDFARM APPROVAL

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

September 13, 1990

CERTIFIED MAIL
RETURN RECEIPT NO. P-918-402-355

Mr. Ken Marsh, President
Controlled Recovery, Inc.
P. O. Box 369
Hobbs, New Mexico 88241

RE: Landfarm Operation
Controlled Recovery Disposal Facility
Lea County, New Mexico

Dear Mr. Marsh:

The Oil Conservation Division (OCD) has reviewed your application for operation of an oilfield waste landfarm at your previously approved disposal facility located in Section 27, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico.

Pursuant to OCD Rule 711 the landfarm operation is hereby approved. The landfarm will be constructed and operated pursuant to the terms and conditions contained in your application dated August 2, 1990 and in your information dated September 12, 1990 submitted as a supplement to the application.

Please be advised approval of this landfarm does not relieve you of liability should your operation result in actual pollution of surface or ground water or the environment actionable under other laws and/or regulations.

If you have any questions, please contact Roger Anderson at (505) 827-5884.

Sincerely,

William J. LeMay, Director

WJL/RCA/sl

MATERIALS AND WASTE EXEMPT BY EPA FROM CONSIDERATION AS "HAZARDOUS WASTE":

(CRI may accept these materials without testing.)

- Produced water;
- Drilling fluids;
- Drill cuttings;
- Rig wash;
- Drilling fluids and cuttings from offshore operations disposed of onshore;
- Geothermal production fluids;
- Hydrogen sulfide abatement wastes from geothermal energy production;
- Well completion, treatment and stimulation fluids;
- Basic sediment and water and other tank bottoms from storage facilities that hold product and exempt waste;
- Accumulated materials such as hydrocarbons, solids, sand, and emulsion from production separators, fluid treating vessels, and production impoundments;
- Pit sludges and contaminated bottoms from storage or disposal of exempt wastes;
- Work over wastes;
- Gas plant dehydration wastes, including glycol-based compounds, glycol filters, filter media, backwash and molecular sieves;
- Gas plant sweetening wastes for sulfur removal, including amines, amine filters, amine filter media, backwash, precipitated amine sludge, iron sponge, and hydrogen sulfide scrubber liquid and sludge;
- Cooling tower blowdown;
- Spent filters, filter media, and backwash (assuming the filter itself is not hazardous and the residue in it is from an exempt waste stream);
- Packing fluids;
- Produced sand;
- Pipe scale, hydrocarbon solids, hydrates, and other deposits removed from piping and equipment prior to transportation;
- Hydrocarbon-bearing soil;
- Pigging wastes from gathering lines;
- Wastes from subsurface gas storage and retrieval, except for the nonexempt wastes listed on the next page;
- Constituents removed from produced water before it is injected or otherwise disposed of;
- Liquid hydrocarbons removed from the production stream but not from oil refining;
- Gases from the production stream, such as hydrogen sulfide and carbon dioxide, and volatilized hydrocarbons;
- Materials ejected from a producing well during the process known as blowdown;
- Waste crude oil from primary field operations and production;
- Light organics volatilized from exempt wastes in reserve pits or impoundments or production equipment;
- Liquid and solid wastes generated by crude oil and crude tank bottom reclaimers.

Source: Federal Register, Wednesday, July 6, 1988, p.25,446-25,459.

MATERIALS AND WASTE NOT EXEMPT BY THE EPA.

(CRI may accept these and other materials after they are determined to be nonhazardous.)

- Unused fracturing fluids or acids;
- Gas plant cooling tower cleaning wastes;
- Painting wastes;
- Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting waste, spent solvents, spilled chemicals, and waste acids;
- Vacuum truck and drum rinsate from trucks, and drums transporting or containing non-exempt waste;
- Refinery wastes;
- Liquid and solid wastes generated by crude oil and tank bottom reclaimers;
- Used equipment lubrication oils;
- Used hydraulic fluids;
- Waste solvents;
- Waste in transportation pipeline-related pits;
- Caustic or acid cleaners;
- Boiler cleaning wastes;
- Boiler refractory bricks;
- Boiler scrubber fluids, sludges, and ash;
- Incinerator ash;
- Laboratory wastes;
- Pesticide wastes;
- Radioactive tracer wastes;
- Sanitary wastes;
- Drums, insulation, and miscellaneous solids;
- Waste compressor oil, filters, and blowdown.

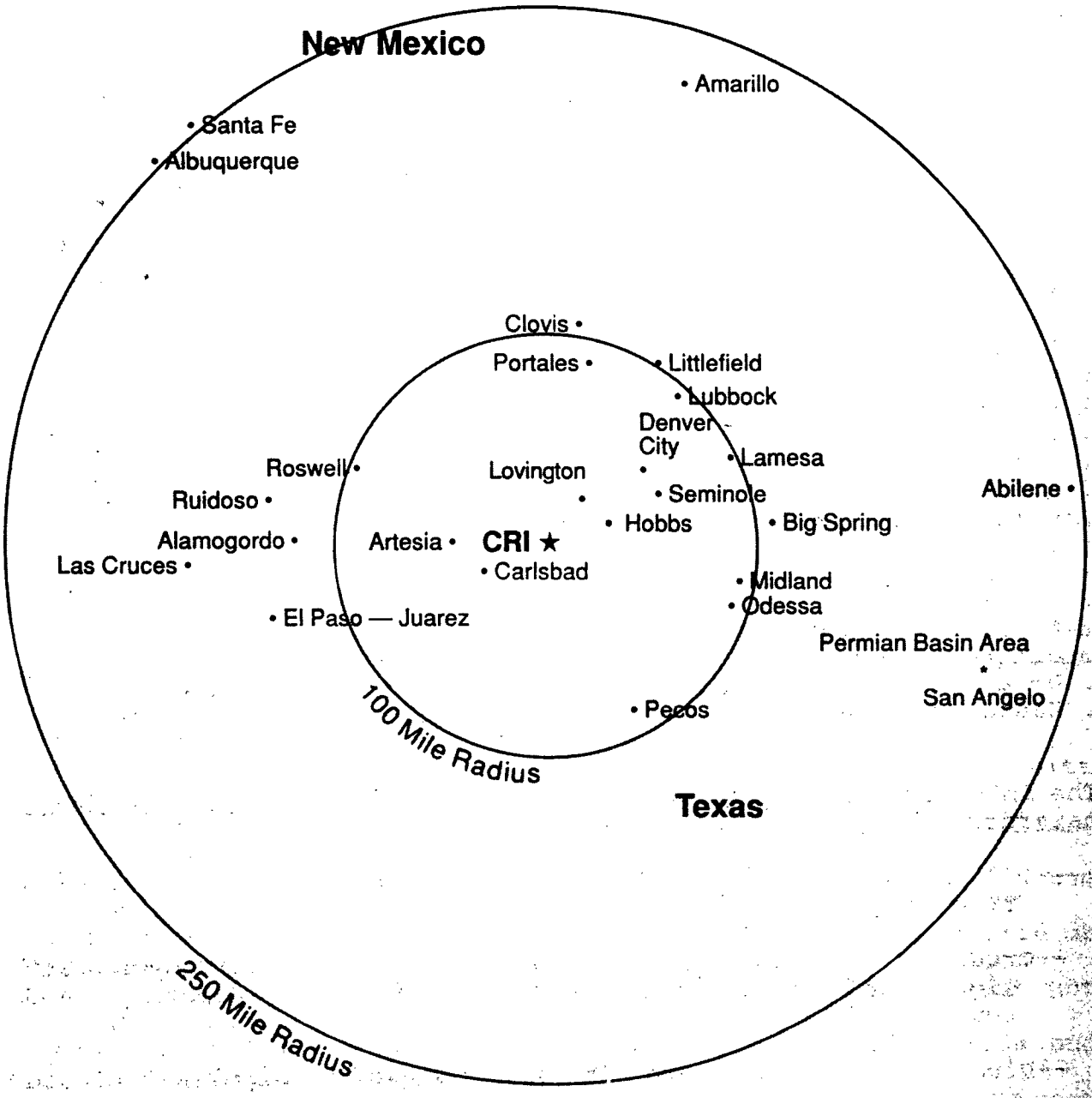
The following OCD regulated facilities especially may be subject to hazardous waste rules on and after September 25, 1990:

--Oil and gas service companies having wastes such as vacuum truck rinsate.

--Crude oil treating plants and tank bottom reclaimers with liquid and solid wastes remaining after oil treatment and removal.

--Pipelines having waste in transportation pipeline-related pits.

Source: Federal Register, Thursday, March 29, 1990, p. 11,798-11,877.



★ = CRI
Controlled Recovery Halfway Disposal

DEFINITIONS:

Production Water or Produced Water - Water produced from a completed, producing well in conjunction with the production of oil or gas. Does not include any fluids from work over or drilling operations nor fluids recovered while testing. Water must come from storage tanks on producing leases.

Drilling Fluids or Drilling Mud - Any fluid used in drilling or completing of a well. This category includes all fluids, mud, and cuttings which come from steel pits, reserve pits, storage tanks, reverse pits, mud tanks, frac tanks, and any flow back or fluids recovered while testing well.

Completion Fluids - Any and all fluids and mud used in the completion of or stimulation or work over of a well. This category includes all fluids, mud, and cuttings which come from steel pits, reserve pits, storage tanks, reverse pits, mud tanks, frac tanks, and any flow back or fluids recovered while testing well.

Tank Bottoms a/k/a BS&W - Oil emulsified with water or other substances and concentrated at the bottom of stock tanks used for gathering and temporary storage of crude oil preparatory to its sale.

Drill Cuttings or Solids - Any material from the well bore that cannot be handled by a vacuum truck or transport truck.

Please note:

New Mexico Oil & Gas Division Rule 804-B states that all off-lease transportation of liquids which may contain crude oil, lease condensate, sediment oil, or miscellaneous hydrocarbons shall be accompanied by a run ticket, work order, or equivalent document, i.e., Form C-117-A. The documentation shall identify the name and address of the transporter, the name of the operator and of the lease or facility from which the liquid was removed, the nature of the liquid removed including the observed percentage of liquid hydrocarbons, the volume or estimated volume of liquids, and the destination.

MEASUREMENT CONVERSIONS:

1 barrel = 42 gallons
1 drum = 55 gallons
1 yard = 1 loose ton

PRICES:

Available upon request.

ATTACHMENT C

CONTROLLED RECOVERY, INC.
P.O. Box 369 Hobbs, New Mexico 88241

NON-EXEMPT NON-HAZARDOUS OIL FIELD WASTE

1. Documentation required by New Mexico Oil Conservation Division:
   - A. Non-exempt waste certificate
   - B. Field notes & Sample methods
   - C. Chain of custody
   - D. TCLP (Toxicity Characteristic Leaching Process)
     1. TCLP Metals
     2. TCLP Volatiles
     3. TCLP Semi-volatiles
   - E. RCI (Reactivity, Corrositivity, Ignitability)
   - F. Knowledge of process may replace D & E.
   - G. Texas waste will require manifest with Texas Natural Resource Conservation Commission waste code or Texas Railroad Commission documentation.
2. Procedure:
   - A. Submit documentation to CRI for approval.
   - B. CRI will submit the required C138 and information to the New Mexico Oil Conservation Division for their approval.
     *This process takes approximately seven days.
   - D. Upon receipt of the OCD's decision, CRI will notify the customer.

3. Acceptance of material:
   - A. Delivery dates must be arranged with the office in advance.
   - B. Transporter must complete and sign a delivery manifest at the facility.

HAZARDOUS CHARACTERISTICS

IGNITABILITY - A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

* It is a liquid, other than a aqueous solution containing less that 24 percent alcohol by volume and has a flash point less than 60 degrees C (140 degrees F).
* It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and when ignited, burns so vigorously and persistantly that it creates a hazzard.
* It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by EPA under sections 260.20 and 260.21.

CORROSIVITY - A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has any of the following properties:

* It is aqueous and has a ph less than or equal to 2 or greater than or equal to 12.5.
* It is a liquid and corrodes steel at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees C (130 degrees F)

REACTIVITY - A solid waste exhibits the characteristic of reactivity if a represenative sample of the waste has any of the following properties:

* It is normally unstable and readily undergoes violent change without detonating.
* It reacts violently with water.
* It forms potentially explosive mixtures with water.
* When mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.
* It is a cyanide or sulfide bearing waste which, when exposed to ph conditions between 2 and 12.5, can generate toxic gased, vapors, or fumes in a quantity sufficient ot present a danger to human health or the environment.
* It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
* It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
* It is forbidden explosive as defined by EPA.

TOXICITY - A solid waste exhibits the characteristic of toxicity if the extract from a representative sample of the waste contains any contaminants listed by EPA at a concentration to or greater than a respective thresholds value.

T C L P

COMPLIANCE CRITERIA

MAXIMUM CONCENTRATIONS

METALS:	mg/l
Arsenic	5.0
Barium	100.0
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0

VOLATILES:	mg/l
Benzene	0.5
Carbon Tetrachloride	0.5
Chlorobenzene	100.0
Chloroform	6.0
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
Methyl Ethyl Ketone	200.0
Tetrachloroethylene	0.7
Trichloroethlene	0.5
Vinyl Chloride	0.2

SEMIVOLATILES:	mg/l
o-Cresol	200.0
m-Cresol	200.0
p-Cresol	200.0
2,4-Dinitrotoluene	0.13
Hexachlorobenzene	0.13
Hexachlorobutadiene	0.5
Hexachloroethane	3.0
Nitrobenzene	2.0
Pentachlorophenol	100.0
Pyridine	5.0
2,4,5-Trichlorophenol	400.0
2,4,6-Trichlorophenol	2.0
1,4-Dichlorobenzene	7.5

FIELD NOTES
SHALL INCLUDE, AS A MINIMUM

1.) Sample identification number
2.) Purpose of sample
3.) Analysis method to be used
4.) Who collected the sample
5.) How the sample was collected
6.) Sample quantity
7.) Sample preservation, if any
8.) Date and time sample
9.) Where the sample was collected

NECESSARY INFORMATION ON DATA
LABORATORY REPORT FORMS

1.) Name of laboratory
2.) Name of person responsible for analysis
3.) Data (units), sample description (solid, liquid, etc), field code sample date, receiving date
4.) Cross reference to laboratory analysis record
5.) Parameter being analyzed
6.) Result of analysis with units specified
7.) Analytical method used (must have SW-846) numbers
8.) Minimum detection value of analytical method used (statement "ND")
9.) Quality control results (as appropriate)
    - Precision (deviation between sample and duplicate)
    - Extraction Accuracy (recovery of spike)
    - Instrument Accuracy (documentation of calibration)
10.) Signature of person responsible for analysis

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
"AS REQUIRED BY NEW MEXICO OIL CONSERVATION DIVISION"

COMPANY/GENERATOR_____

ADDRESS_____

GENERATING SITE_____

COUNTY_____STATE_____

TYPE OF WASTE_____

ESTIMATED VOLUME_____

GENERATING PROCESS_____

_____

REMARKS_____

NMOCD FACILITY CONTROLLED RECOVERY INC.

TRUCKING COMPANY_____

As a condition of acceptance for disposal, I hearby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 2613.

AGENT_____
SIGNATURE

NAME _____
PRINTED

ADDRESS_____

_____

DATE_____

CERTIFICATE OF WASTE STATUS
EXEMPT WASTE MATERIAL

ORIGINATING LOCATION:_____

SOURCE:_____

DISPOSAL LOCATION:_____

_____

I hereby certify,represent and warrant that the wastes are generated from oil and gas exploration and production operations exempt from Resource Conservation and Recovery Act (RCRA) Subtitle C Regulations; and not mixed with non-exempt wastes.

I, the undersigned as the agent for_____ concur with the status of the waste from the subject site.

Name_____

Title_____

Address_____

_____

Signature_____

Date_____

ATTACHMENT D

CRI
CONTROLLED RECOVERY INC.
P.O. BOX 369, HOBBS, NM 88241 (505) 393-1079

April 7, 1997

Mr. Jerry Sexton
District Supervisor
State of New Mexico
Oil Conservation Division
P.O. Box 1980
Hobbs, New Mexico 88241

Dear Mr. Sexton,

N.M.O.C.D. Rule 711 Section C.8 provides for an exception to the requirements that tanks, pits and ponds exceeding sixteen feet in diameter be covered, screened or netted.

Controlled Recovery, Inc. is requesting that you issue this exception to CRI's facility located in Section 27 Township 20 South Range 23 east NMPM, Lea County permitted under order R-9166 April 27, 1997.

CRI's facility has night security lights, twenty-four hour truck traffic, is adjacent to US Highway 62-180 and County Road C-29. Machinery on site generates noise and movement. There are two dogs on site at all times. There are four full time employees assigned to facility operations.

In six years of operations there have been no incidents harmful to migratory birds at the facility. CRI's facility has been visited and inspected by U.S. Fish and Wildlife Services. Mr. Nicholas E. Chavez has been at the facility in the past 120 days and reported no problems or concerns. CRI also utilizes flags in some locations.

These alternate methods are more than adequate to protect migratory birds and clearly this facility is not hazardous to migratory birds.

Rule 711 provides that the NMOCD District Supervisor may grant the exception, which CRI now requests.

Sincerely,

Ken Marsh

Ken Marsh

The above request is granted this 14 day of April 1997.

Jerry Sexton

Jerry Sexton
District Supervisor
New Mexico Oil Conservation Division

ATTACHMENT E

Analytical Services inc. 1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 11/4/98 PAGE 1 OF 1

PROJECT NAME NM Oil Pits #

PROJECT MANAGER

COMPANY/ADDRESS SAIC
2222 Gallows Rd Suite 300
Dunn Loring, Va 22027 PHONE 703 645 6933

SAMPLERS SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neutral/Acid Organics GC/MS 625/8270	Volatile Organics ~~GC/MS 624/8240~~	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons EPA 418.1 ☐ OR418.1 ☐ WA418.1 ☐	TPH/Gas/BTEX 5030/8015/8020 Gas ☐ BTEX ☐	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan ☐	TPH/HCID WA/HCID ☐ OR/HCID ☐	TCLP Metals ☐ VOA ☐ Semi ☐ Pest/Herb ☐	Metals (total or dissolved) List Below	Cyanide	pH, Cond, Cl, SO4, PO4, F, Br, NO2, NO3 (circle)	NH3-N, COD, Total P, TKN, TOC (circle)	Total Organic Halides (TOX) 9020 ☐ (AOX) 1650A ☐				REMARKS
WP-61-FB	11/3/98	1055		Water	8		X		X						X		X	X					
WP-61-EP-1	↓	1135		↓	↓		↓		↓						↓		↓	↓					
WP-61-EP-2	↓	1210		↓	↓		↓		↓						↓		↓	↓					
WP-61-EP-3	↓	1110		Sed	2		↓		↓						↓		↓	↓					
WP-61-EP-4	↓	1135		↓	↓		↓		↓						↓		↓	↓					
WP-61-DP-1	↓	1205		Sed	↓		↓		↓						↓		↓	↓					
WP-61-DP-2	↓	1145		↓	↓		↓		↓						↓		↓	↓					
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		~~water~~																			
WP-61-TANK-A	11/3/98	1440		Aqueous	8		X		X						X		X	X					

RELINQUISHED BY:	RECEIVED BY:
Signature [signature]	Signature [signature]
Printed Name Edward J Moriarty	Printed Name Ken Marsh
Firm SAIC	Firm CRI
Date/Time 11/3/98 / 1530	Date/Time

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr. ___ 5 day

___ Standard (10-15 working days)

___ Provide Verbal Preliminary Results

___ Provide FAX preliminary Results

Requested Report Date ___

REPORT REQUIREMENTS

___ I. Routine Report

___ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# ___

Bill To ___

SAMPLE RECEIPT:

Shipping VIA: ___

Shipping #: ___

Condition: ___

Lab No: ___

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

~~SRT~~ Splits provided to operator at WP-61

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400-05

ATTACHMENT F

GULF STATES ANALYTICAL

CORE LAB

6310 Rothway, Houston, Texas 77040
(713) 690-4444, Fax (713) 690-5646

❶ Company: SAIC	Address: 2222 Gallows Rd Suite 300, Dunn Loring, Va 22027	Tele #: (703) 645-6773	Fax #:
Reports Sent To:	P O #:	Project #:	
Project Name: NII Oil Pits		Project Location:	
Sampler(s) Name: (Signature) [signature]			
Courier: Fed Ex			

❷ Field Sample ID	❸ Sampling Date	Time	❹ Matrix Water	Soil	Sludge	Oil	Other	# of Containers	Haz. Sample (Y/N)	❺ Request for Analysis: VOC	SVOC	Pest/PCB	DRO	Herbicides	Metals	
1. WP-61-FB	11/3/95	1055	X					8		X	X	X	X	X	X	
2. WP-61-EP-1		1135														
3. WP-61-EP-2		1210														Do Lab QC
4. WP-61-EP-3		1110														
5. WP-61-EP-4		1135														Do Lab QC
6. WP-61-EP-5		1150														
7. WP-61-EP-6		1120														
8. WP-61-DP-1		1205														Do Lab QC
9. WP-61-DP-2		1145														
10. WP-61-DP-3		1220														
11. WP-61-TANK-A		1440														Do Lab QC
12. WP-61-TANK-B	↓	1455	↓					↓		↓	↓	↓	↓	↓	↓	
13.																

❼ Relinquished by Sampler: (Signature) [signature]	Date 11/4/95	Time: 0700	Received by: (Signature)	Date	Time:
Relinquished by: (Signature)	Date	Time:	Received by: (Signature)	Date	Time:
Relinquished by: (Signature)	Date	Time:	Received by Laboratory: (Signature)	Date	Time:

❻ Remarks:

Requested Turnaround

GSAI Group:

Special Detection Limits

QC Package: (check one)
☐ CLP ☐ Site Specific
☐ Tier 1 ☐ Tier 2 ☐ QC Summary

SOUTHERN LITHOGRAPH, INC. - (713) 780-0400

White Copy to Accompany Samples to Lab — Yellow Copy Retained by Client — Pink Copy Retained by Sampler

ATTACHMENT G

TABLE 2-1

SUMMARY OF DETECTED CONSTITUENTS FOR SOIL SAMPLES LOCATION 2, CARLSBAD, NEW MEXICO

Detected Constituent	WP-61-EP-3	WP-61-EP-4	WP-61-EP-6	WP-61-DP-1	WP-61-DP-2	WP-61-DP-3
HSL Metals (SW-846 Methods 3051/6010B/7470A)						
Aluminum	2,710	3,430	4,190	2,770	1,510	2,860
Antimony	< 0.63	< 0.66	1.3 T	< 0.55	1.7 T	1.0 T
Arsenic	2.4	1.9	2.9	3.2	9.7	7.6
Barium	199	148	536	918	1,850	2,050
Cadmium	0.21 T	0.1 T	0.41 T	0.43 T	< 0.03	< 0.03
Calcium	78,700	66,100	101,000	116,000	34,900	39,700
Chromium	5.0	5.3	21.3	11.1	20.9	17.7
Cobalt	1.6 T	0.95 T	1.9	2.1 T	3.1 T	3.3 T
Copper	4.8	0.96 T	19.4	17.4	115	85.7
Iron	5,230	4,250	10,400	7,390	23,200	17,500
Lead	13.6	6.9	81.1	40.8	97.6	116
Magnesium	2,730	3,040	4,360	7,870	4,160	4,490
Manganese	50.2	38.5	115	108	128	105
Mercury	0.16	0.1 T	0.285 T	0.4	1.3	0.21
Nickel	5.1	4.0 T	9.4	12.3	33.9	25.6
Potassium	1,940	2,030	2,140	1,500	863	1,220
Sodium	15,000	20,900	15,700	2,220	5,160	3,270
Vanadium	6.1 T	7.6	10.3	11.8	3.1 T	6.5
Zinc	41.0	25.8	87.7	115	269	206
Total VOCs (SW-846 Method 8260B)						
Benzene	0.83	1.3	0.84	< 0.053	< 0.055	< 0.053
Carbon Disulfide	0.095	0.057 V	0.059 V	< 0.053	< 0.055	< 0.053
Ethylbenzene	11.0 D	0.91	8.0 D	< 0.053	< 0.055	< 0.053
Methylene Chloride	< 0.062	0.028 V	0.042 V	< 0.053	< 0.055	< 0.053
Toluene	14.0 D	10.0 D	12.0 D	0.018 V	< 0.055	< 0.053
Xylene (total)	50.0 D	22.0 D	45.0 D	0.04 V	< 0.160	< 0.160

TABLE 2-1 (Continued)

SUMMARY OF DETECTED CONSTITUENTS FOR SOIL SAMPLES LOCATION 1, CARLSBAD, NEW MEXICO

Detected Constituent	WP-61-EP-3	WP-61-EP-4	WP-61-EP-6	WP-61-DP-1	WP-61-DP-2	WP-61-DP-3
Total SVOCs (SW-846 Method 8270C)						
Benzo(a)anthracene	< 1.6	< 2.6	< 21.0	0.96 V	< 20.0	< 23.0
Bis(2-ethylhexyl)phthalate	0.540 D	1.8 V	< 21.0	2.3 V	4.6 VD	< 23.0
Chrysene	0.73 VD	0.93 V	5.1 VD	3.7 V	10.0 VD	6.2 VD
Dibenzofuran	0.58 VD	0.89 V	4.5 VD	< 9.5	< 20.0	< 23.0
Fluorene	2.8 D	1.9 V	13.0 VD	< 9.5	3.9 V	< 23.0
2-Methylnapthalene	11.0 D	7.0	65.0 D	< 9.5	< 20.0	< 23.0
Naphthalene	2.4 D	1.5 V	14.0 VD	< 9.5	< 20.0	< 23.0
Phenanthrene	6.2 D	5.5	38.0 D	6.1 V	23.0 D	6.2 VD
Pyrene	0.72 VD	0.87 V	3.7 VD	3.4 V	5.7 VD	4.1 VD
Pesticides (SW-846 Methods 8081A/8141)						
None Detected						
Polychlorinated Biphenyls (SW-846 Method 8082)						
None Detected						
Herbicides (SW-846 Method 8151)						
None Detected						

Notes:

All concentrations are reported in units of milligrams per kilogram (mg/kg).

Constituents reported in this table include those detected in at least one sample at a concentration greater than the reporting limit.

D This flag identifies all compounds indentified in an analysis at a secondary dilution factor
HSL Hazardous Substance List
SW-846 U.S. EPA (1996), Test Methods for Evaluating Solid Waste: Update III, third edition. Washington, D.C.
SVOC Semivolatile organic compound
T The reported value is less than the contract required detection limit but greater than the instrument detection limit
V Result is less than the contract required quantitation limit but greater than zero
VOC Volatile organic compound

TABLE 2-2

SUMMARY OF DETECTED CONSTITUENTS FOR WATER SAMPLES LOCATION 2, CARLSBAD, NEW MEXICO

Detected Constituent	WP-61-FB	WP-61-EP-1	WP-61-EP-2	WP-61-EP-5	WP-61-TANK-A	WP-61-TANK-B
HSL Metals (SW-846 Methods 3051/6010B/7470A)						
Aluminum	< 0.0382	1.13	0.265	0.559	2.31	1.68
Arsenic	< 0.0037	0.012	0.0051 T	< 0.0037	0.376	0.366
Barium	< 0.00044	1.66	1.43	1.63	4.89	3.72
Beryllium	< 0.00022	0.0043 T	0.0043 T	0.0021 T	0.0019 T	0.0036 T
Cadmium	< 0.00033	< 0.00033	< 0.00033	< 0.00033	0.00099 T	< 0.0006
Calcium	< 0.0088	16,700	12,800	16,200	2,820	2,730
Chromium	< 0.0021	0.044	0.032	0.0459	0.042	0.0368
Cobalt	< 0.0011	0.0059 T	0.0035 T	0.005 T	< 0.0011	< 0.0011
Iron	< 0.0199	21.5	6.55	20.4	14.7	9.94
Lead	< 0.0047	0.126	0.0828	0.128	0.0518	0.033
Magnesium	< 0.0376	2,760	2,050	2,660	36,000	635
Manganese	< 0.00044	2.96	2.47	3.08	3.06	2.95
Nickel	< 0.0017	0.0033 T	< 0.0017	0.0024 T	0.0114 T	0.0059 T
Selenium	< 0.0091	0.168	0.206	0.163	0.0587	0.05
Silver	< 0.0014	< 0.0014	0.0061 T	0.0026 T	< 0.0014	0.0015 T
Zinc	< 0.0017	0.386	0.123	0.304	0.232	0.199
Potassium	< 0.08	1,350	1,150	1,380	354	360
Sodium	0.233 T	62,400	38,700	62,800	25,000	22,800
Total VOCs (SW-846 Method 8260B)						
Acetone	< 0.01	0.5 VD	< 1.0	0.8 D	14.0 D	14.0 D
Benzene	< 0.005	0.73 VD	0.7 D	0.68 D	7.0 D	7.2 D
2-Butanone	< 0.01	0.12	0.034	0.074	0.42	0.42
Carbon disulfide	< 0.005	0.002 V	0.008	0.001 V	< 0.05	< 0.05
Chloroform	< 0.005	0.004 V	< 0.005	< 0.005	< 0.05	< 0.05
Ethylbenzene	< 0.005	0.076	0.028	0.047	0.7	0.78
4-Methyl-2-pentanone	< 0.01	0.019 B	0.005 VB	0.012 B	< 0.1	0.036 VB
Methylene chloride	0.002 VB	< 0.005	< 0.005	< 0.005	0.021 V	0.013 VB
2-Hexanone	< 0.01	0.02	0.007 V	0.013	< 0.1	0.018 V
Toluene	< 0.005	0.74 D	0.5 D	0.72 D	4.6 D	4.7 D
1,1,2-Trichloroethane	< 0.005	0.043	< 0.005	< 0.005	< 0.05	< 0.05
Xylene (total)	< 0.015	0.32	0.12	0.2	1.0	1.1

TABLE 2-2 (Continued)

SUMMARY OF DETECTED CONSTITUENTS FOR WATER SAMPLES LOCATION 2, CARLSBAD, NEW MEXICO

Detected Constituent	WP-61-FB	WP-61-EP-1	WP-61-EP-2	WP-61-EP-5	WP-61-TANK-A	WP-61-TANK-B
Total SVOCs (SW-846 Method 8270C)						
Bis(2-ethylhexyl)phthalate	< 0.01	0.0036 V	< 0.01	< 0.01	< 0.2	< 0.04
Carbazole	< 0.01	0.004 V	< 0.01	0.0026 V	< 0.2	< 0.04
Chrysene	< 0.01	0.0047 V	< 0.01	0.0035 V	< 0.2	0.0095 VD
Dibenzofuran	< 0.01	0.0093 V	< 0.01	0.0063 V	0.088 V	0.053
2,4-Dimethylphenol	< 0.01	< 0.01	0.042	< 0.01	< 0.2	< 0.04
Dimethylphthalate	< 0.01	< 0.01	0.0028 V	< 0.01	< 0.2	< 0.04
Fluorene	< 0.01	0.026	< 0.01	0.02	0.073 VD	0.035 VD
2-Methylnapthalene	< 0.01	0.2	< 0.01	0.14	0.54 D	0.34 D
2-Methylphenol	< 0.01	0.088	0.12	0.062	0.12 VD	0.24 D
4-Methylphenol	< 0.01	0.11	0.084	0.1	0.083 VD	0.21 D
Naphthalene	< 0.01	0.054	0.0046 V	0.046	0.33 D	0.22 D
Phenanthrene	< 0.01	0.04	0.005 V	0.026	0.087 VD	0.055 D
Phenol	< 0.01	0.2	0.31 D	0.34 D	0.094 VD	0.22 D
Pyrene	< 0.01	< 0.01	< 0.01	0.0033 V	< 0.2	0.009 VD
Pesticides (SW-846 Methods 8081A/8141)						
None Detected						
Polychlorinated Biphenyls (SW-846 Method 8082)						
None Detected						
Herbicides (SW-846 Method 8151)						
Dalapon	< 0.0005	< 0.005	0.00089	< 0.005	< 0.05	< 0.025
Dicamba	0.001	< 0.005	< 0.0005	< 0.005	< 0.05	< 0.025

Notes:

All concentrations are reported in units of milligrams per liter (mg/L).

Constituents reported in this table include those detected in at least one sample at a concentration greater than the reporting limit.

B This flag is used when the analyte is found in the associated blank as well as in the sample
D This flag identifies all compounds indentified in an analysis at a secondary dilution factor
HSL Hazardous Substance List
SW-846 U.S. EPA (1996), Test Methods for Evaluating Solid Waste: Update III, third edition, Washington, D.C.
SVOC Semivolatile organic compound
T The reported value is less than the contract required detection limit but greater than the instrument detection limit
V Result is less than the contract required quantitation limit but greater than zero
VOC Volatile organic compound

ATTACHMENT H

PROBLEM OIL PIT INSPECTION CHECKLIST

Site Number (State-Year-Waypoint):

NM21

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

revised 7/8/98

PROBLEM OIL PIT INSPECTION CHECKLIST

SECTION ONE: Site Information

Site Name: Controlled Recovery Inc Waypoint: 61

Lease Name: n/a Lease Number: _____

Site Location:

Section 27 Township 20S Range 32E

GPS Coordinates: Lat _____ Long _____

City/County/State/Reservation: Lea County

EPA Facility ID # or Other ID #'s: _____

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

Corporate Owner/Operator Name and Mailing Address: NRI

Contact Name/Affiliation/Phone: Ken Marsh, President

List any known federal, state, or tribal regulatory permits applicable to this site. Include all permit number(s) and take photos of any signage which includes permit numbers: Border from NMOCD rule 711

SECTION TWO: Inspection Information

Inspection date: 11/3/98 Start time: 8:05 Finish time: _____

Describe weather conditions (including estimated temperature): Cloudy, cool, foggy

Were any samples taken during the inspection? Yes ✓ No ____. If yes, use a Continuation Sheet to thoroughly document the sampling activity. Include the following information: agency taking the sample(s), individual taking the sample(s), whether or not the samples were split (and with whom), sample type, sample purpose, sample location, and parameters to be analyzed for.

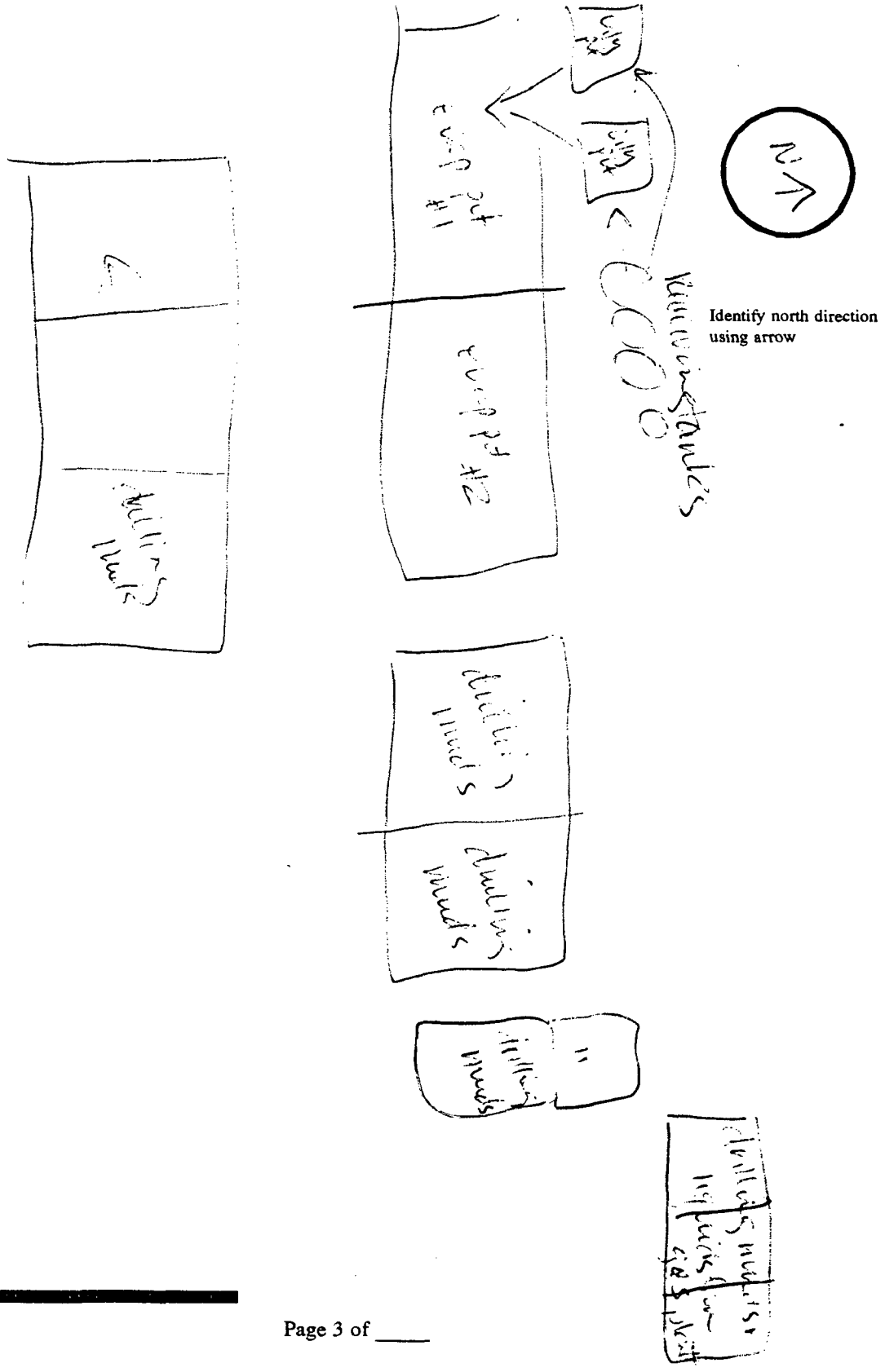
Inspection Team:

Inspector 1	Melissa Smith	Agency: EPA	Phone: 214-665-7357
Inspector 2	Roger Anderson	Agency: NMOCD	Phone: 505-827-7152
Inspector 3	Doug McKenna	Agency: USFWS	Phone: 505-589-2823
Inspector 4	Vince Balderaz	Agency: US BLM	Phone: 505-393-3612
Inspector 5	Ed Moriarty	Agency: SAIC	Phone: 703-645-6973
Inspector 6	Tim Reeves	Agency: SAIC	Phone: 303-382-6730
Inspector 7	Greg Stover	USFWS	505-883-7828

SECTION THREE: Sketch of Site/Layout

Site Name : OR1 Waypoint: 01

Include the estimated size (including depth. if possible) 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.), for example. Include a north arrow on site sketch.



SECTION FOUR: Ecological Setting

Use the Site Sketch in Section Three to identify significant ecological features (waterbodies, wetlands, vegetation, etc.)

A. GENERAL SETTING

1. Land use surrounding site (e.g. urban, agricultural, rural, residential, industrial) Agricultural

2. Describe sensitive environmental areas adjacent to or in proximity to the site (e.g. parks, monuments, wetlands, prairie potholes). playa lake

3. Potential routes of off-site migration of contaminants observed at site (e.g. swales, depressions, drainage ditches, runoff, windblown particulates, vehicular traffic) no off-site routes

4. Threatened and/or endangered species (plant or animal) known to inhabit area ? none

5. Drinking water sources on or near the site? Yes ____ No ✓ If yes, explain: Aquifer

6. Ground water supply wells or monitoring wells on or near the site? Yes ____ No ✓ If yes, what is the distance from the site? _____ Describe: _____

B. TERRESTRIAL HABITAT

1. Percentage of the site is coverered by: wooded areas ____ %, shrub/scrub vegetation 90 %, open fields 10 %.

2. Presence and/or absence of insects, fish, birds, mammals, etc.? cottontail, birds

C. AQUATIC HABITAT

1. Describe any flowing or non-flowing water systems at or near the site (e.g. river, creek, arroyo, ditch, natural pond or lake, artificial lagoon, reservoir, impoundment, etc.). Include type, size, distance from site, and name, if known. playa lake 3/4 mile - discharge for Potash Mines

2. Is there any aquatic vegetation present? If yes, describe. don't know

3. What observations, if any, were made at the waterbody regarding the presence and/or absence of insects, fish, birds, mammals, etc.? don't know

D. WETLAND HABITAT

1. Based on observations and/or available information, are designated or known wetlands definitely present at the site? no

2. Based on the location of the site (e.g. along a waterbody, in a floodplain) and site conditions (e.g. standing water, dark/ wet soils, mud cracks, debris line, water marks), are wetland habitats suspected? ~~Yes~~ no

3. What observations, if any, were made at the wetland regarding the presence and/or absence of insects, fish, birds, mammals, etc.? none

SECTION FIVE: 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 ✓ 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 ✓ No ___

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.) ? See FWS report 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 ✓

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 ✓

C. TANKS AND CONTAINERS [complete this section only if there are tanks or containers with oil on site with a capacity of 660 gallons (16 barrels) in a single tank/container or total capacity of 1,320 gallons (31 barrels) in all tanks/containers on site]. Complete checklist C if any of the following conditions exist:

1. Is the secondary containment (dikes, berms, weirs) around tanks, containers, and heater-treaters absent? Yes ___ No ✓

2. Is the secondary containment (dikes, berms, weirs) around tanks, containers, and heater-treaters inadequate (in size, material, eroded or worn down)? Ice build up in berm around tank Yes ✓ No ___

3. Has there been a discharge or spill outside the secondary containment ? Yes ___ No ✓

D. OTHER. Complete Supplemental Checklist if any of the following conditions exist:

1. Do you see or smell any air emissions (smoke, vapors, steam, dust) from any vent, stack, or other site activity or do you have any reason to believe that such an emission might exist? Yes ___ No ✓

2. Do you see pesticide containers in storage and/or trash areas? Yes ___ No ✓

3. Is there evidence that dredged or fill material is being or was removed from or discharged in or on the banks of waters of the US (e.g. ponds, streams, rivers, wetlands, dry arroyos, etc.) or that other inappropriate activities are occuring or having occured on waters of the US ? Yes ___ No ✓

4. Do you see or suspect dumping of any solid or liquid materials at the site, including in pit or ponds (other than oil in pits or ponds as described above) ? Only oil drilling muds Yes ___ No ✓

5. Do you see or suspect any kind of below ground or partially buried storage tanks (for fuels, chemicals or waste products such as waste or used oil)? Yes ___ No ✓

6. Do you see any liquid filled transformers or capacitors? Yes ___ No ✓

7. Is there any indication that hazardous waste is generated or otherwise managed at the site ? Yes ___ No ✓

PHOTO LOG

Site Number: WF61 (Six Fathom Water)

Film Type/ASA/Size: Kodak 35 mm color print

Photographer: Melissa Smith

Photo Number	Subject	Direction Photo Taken
1	netted + lined pit for excess storage	
2	receiving tanks for treatment process	
3	receiving tank for treatment process	
4	receiving tank for treatment process	
5	receiving tank for treatment process	
6	berm point in berm around treatment tanks	
7	pump in berm opening from rec. tanks to treatment tanks	
8	berm around treatment tanks + pasture beyond fence	
9	solids from centrifuge	
10	receiving tanks for produced water	
11	first skim pit for produced water	
12	final evaporation pit for produced water	
13	second skim pit for produced water	
14	third skim pit for produced water	
15	cattle in pasture beyond facility fence line	
16	pit for drilling muds	
17	pit for drilling muds	
18	drying pit for oil based drilling muds	
19	Playa lake (in background) across road from facility	

Photos taken by Tim Reeves, SAIC (1st roll)

1.	Backup secondary pit for tank bottoms	N
2	Backup secondary pit for tank bottoms	NW

PHOTO LOG (CONTINUED)

Photo Number	Subject	Direction Photo Taken
3	Heated receiving tanks for tank bottoms	
4	low spot in berm used as road or driveway	
5	No berm beneath piping	
6	low berm at east side of tank battery	
7	produced water offload + tank battery	
8	1st produced water pit for settling	
9	primary 1st evaporation pond for produced water	
10	torn liner on 1st produced water pit	
11	Second settling pit for produced water	
12	oil on bank edge of 1st evap. pit for produced water	
13	2nd evaporation pit for produced water.	N

Photos taken by Tim Reeves (2nd Roll)

1	pit for drilling muds	
2	SW pit for drilling muds	
3	E of evap pits, pit for drilling materials	
4	E of evap pits, partially dried out pit of drilling mud	
5	additional pit for drilling muds	
6	additional pit for drilling muds	

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:

All pits with the exception of the 2 clay pits were heavily covered w/ oil

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 was on skimming pit in treatment area - all other pits had flagging

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:

One Meadowlark (Sturnella Sp.) was recovered from one of the pits Seizure tag #651585

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 that were lined had plastic liners. determined by 6 of hydrocarbons whether or not they are lined.

5. Indicate how long any pits or ponds at the site have been in operation: 1991

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: tanks used as loading/unloading devices.

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

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:

   None

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:

   None

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:

   Facility has ~~drains~~ sloping to keep any drainage 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.:

   less than 2ft freeboard in receiving pits + excess storage pit in treating plant.

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

   ~~Hc~~ not available

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:

   not known

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.): generally good, however, many pits were full

CHECKLIST "C" - TANKS AND CONTAINERS

1. Is there a Spill Prevention, Control, and Countermeasure (SPCC) Plan on site? in operating permit Yes ✓ No ____

   Has it been certified by a registered Professional Engineer? Yes ____ No ✓ How confirmed: ____

   If no SPCC Plan on site, is there one elsewhere? Yes ____ No ✓ Where? in trailer
   - Maybe, not sure

2. Is the facility manned 8 hrs/day or more? Yes ✓ No ____

3. Are there any flowing, non-flowing, or wetland water systems at or near the site? Yes ✓ No ____. If yes, what is the distance from the site? 1/2 mile. Describe: Pilgalaki

4. Describe any threat/potential for spill (e.g. oil soaked containment; containment filled with water, debris, vegetation; leaking valves; overfilling of tanks; corroded tanks; holes in tanks; oil discharge at loading/unloading area; etc.):

   none observed; ~~treatment~~ (see #6)

5. Is there a method to remove water from secondary containment, such as piping? Yes ✓ No ____ Is it closed? ____

6. If secondary containment is not adequate (in size, material, eroded or worn down), describe:

   berm around treatment area was not complete.

7. Describe all items below. Be sure to include each tank/container and its secondary containment on the site sketch (Section Three). IMPORTANT: Estimate capacity or height and diameter of each tank/container, if not marked or known.

Tank / Container Type and Use	Maximum Capacity	or	Height/ Diameter	Markings	Secondary Containment	Condition / Comments (Corrosion, overtopping)

CONTINUATION SHEET (identify Section and/or Checklist continued)

3 of 8

STATE OF
NEW MEXICO

OIL
CONSERVATION
DIVISION

MARTYNE J. KIELING
ENVIRONMENTAL GEOLOGIST

1220 SOUTH ST. FRANCIS DRIVE
SANTA FE, NM 87505
OFFICE: (505) 476-3488
FAX: (505) 476-3462
E-MAIL: mkieling@state.nm.us
WEB: http://www.emnrd.state.nm.us/ocd/