NM2 - 2

GENERAL CORRESPONDENCE YEAR(S):

2006-1998

Martin, Ed, EMNRD

To: Brooks, Donald W

Subject: RE: Breach in Liner at Schneider Waste Management Facility

OK. Thanks for the notification. Please keep me posted.

Ed Martin
New Mexico Oil Conservation Division
Environmental Bureau
1220 S. St. Francis
Santa Fe, NM 87505
Phone: 505-476-3492
Fax: 505-476-3462
email: ed.martin@state.nm.us

NM-2-002

From: Brooks, Donald W [mailto:donald.brooks@bp.com]
Sent: Wednesday, March 08, 2006 11:52 AM
To: Martin, Ed, EMNRD; Foust, Denny, EMNRD; Perrin, Charlie, EMNRD
Subject: Breach in Liner at Schneider Waste Management Facility

Ed, I wanted you to know we have discovered another small breach (3 gallons per hour) in our new liner that was installed at the Schneider Facility. I called Charlie Perrin and let him know as well. This breach is only in one portion of the evaporation pond, and only breached the top layer of the liner. We still have the old original liner and leak detection in place, and there are no signs of fluids in that system at all. The leak appeared in only the one sump, so we are beginning work on location and repair of the leak now. The leak appears to be in a seam higher up on the liner, as we have not had water at this level yet. Thanks.

Don Brooks
Field Environmental Coordinator
BP - San Juan Southern Asset
Phone: (505) 326-9425

Martin, Ed

From: Brooks, Donald W [BROOKSD2@bp.com]
Sent: Monday, October 25, 2004 3:07 PM
To: Martin, Ed
Subject: Enhanced Evaporation Addition to our Schneider Centralized Surface Waste Management Facility

Ed, I just wanted to drop you a note informing you that we have installed a SMI 320 Evaporator on our Schneider Centralized Surface Waste Management Facility evaporation pond - permit # NM-02-0002 This evaporation unit also has a Young Meteorological Instruments Wind Monitor, which will deactivate the evaporator in the event of windy weather. This unit is being installed as part of our permits' liquid reduction technology and enhanced evaporation option. Our start up time is estimated to be the week of November 1, 2004. We have also informed Denny Foust who mentioned that we should send you an e-mail for your information and notification as well. If you have any questions, please feel free to contact me e-mail or at the phone number listed below. Thanks.

Don Brooks
Field Environmental Coordinator
BP - San Juan Southern Asset
Phone: (505) 326-9425

bp

BP America Production Company
200 Energy Court
Farmington, NM 87401

Phone: (505) 326-9200

October 8, 2003

Ms. Martyne Kieling
New Mexico Oil Conservation Division
1220 So. St. Francis Drive
Santa Fe, New Mexico 87505

Re: Evaporation Pond Treatment

Dear Ms. Kieling,

As discussed on the phone, BP America Production Company ("BP") is submitting the attached document that outlines the processes utilized to treat the Schneider Evaporation Pond. The MSDS is also attached.

If you have further questions please contact me at (505) 326-9235.

Sincerely,

Brittany D Benko

Brittany D Benko
Environmental Coordinator

cc: Denny Foust

BAKER HUGHES

Baker Petrolite

100 Montana
Bloomfield, NM 87413
(505) 632-1000
(505) 632-1010 (fax)

9-23-2003

Mr. George Joseph
BP
Farmington, NM

RE: Treating Schneider Pit with Sodium Hypochlorite (Bleach)

Dear Mr. Joseph,

After several visits with you to gather more information and consulting with our lead Microbiologist in Sugarland, TX regarding treatment to the Schneider evaporative pit located in the Cedar Hill area to reduce the pungent odor being omitted, it is everyone's opinion that for a quick solution we should utilize Sodium Hypochlorite (bleach) to reduce the bacteria that are generating the odor. Baker Petrolite would recommend pumping 440 gallons of Sodium Hypochlorite into the pit to reduce to odor, the exact amount of product needed can not be easily calculated and would require equipment to be used from Sugarland, this may be something we take a look at in the future. This equipment can determine how many other items are in the fluid that will also react with the Sodium Hypochlorite increasing its demand. This product will react very rapidly with the produced fluid and should reduce the odor very quickly.

APPLICATION

Batch treat the Schneider Pit with 440 gallons on 10% Sodium Hypochlorite utilizing a Baker Petrolite pump truck and pumping the product through the aerator header system for the application into the pit. The key to this application is getting the treatment throughout the entire pit to insure contact with the produced fluid. We have used this header in the past applications with good success; we recognize that we can not apply much pressure on this header due to the material it is made of (PVC).

Upon arrival, we would shut down the aerator pump, disconnected the PVC header from the air pump and plug that port. We would tie into the header using the 2" tee and valve assembly already installed. We would then test the connections by first pumping water through the system; at that point we would then switch over to the Sodium Hypochlorite and pump the 440 gallons. We would then follow this up by pumping a small amount of water to displace the product. We would then disconnect our equipment and reconnect the air pump to the header and resume normal operation.

COST

440 gallons of Sodium Hypochlorite-	**$2666.40**
Truck ($75/hr – approx. 3hr)	**$225.00**
TOTAL	**$2891.40**

Please review the proposal above and if I need to make any adjustments, correction, or you have any questions please contact me at your convenience, thank you for the opportunity to submit this recommendation.

Sincerely,
Sean Higgins
Baker Petrolite

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : TRETOLITE (R) PFR0549

SUPPLIER:
Baker Petrolite
12645 W. Airport
P.O. BOX 5050
Sugar Land, TX 77478-5050

CUSTOMER CARE: 1-800-231-3606
For information call 281-276-5400

MANUFACTURER:
Baker Petrolite
12645 W. Airport
P.O. BOX 5050
Sugar Land, TX 77478-5050

CUSTOMER CARE: 1-800-231-3606
For information call 281-276-5400

Chemtrec: 800-424-9300
PREPARER: Regulatory Info Grp, DATE OF LAST REVISION: 01/02/97
PREPARER TITLE:
Supercedes MSDS Dated: 12/28/96

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	HAZARDOUS INGREDIENTS	CAS NUMBER	WT/WT%
01	Sodium hydroxide	7310-73-2	1-5
02	Sodium hypochlorite	7681-52-9	10-30

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	N.E.	2mg/m3*	2mg/m3	N.E.	N.E.	NO
02	N.E.	N.E.	N.E.	N.E.	N.E.	NO

LEGEND: N.A.: Not Applicable (C): Ceiling Limit
N.E.: Not Established Y : Skin absorption is significant to overall
N.D.: Not Determined N : Skin absorption is not significant

(Continued on Page 2)

PRODUCT WARRANTY, DISCLAIMER AND LIMITATION OF LIABILITY ARE FOUND ON THE LAST PAGE

SECTION 3 - HAZARDS IDENTIFICATION

****
********** EMERGENCY OVERVIEW **********
****

Appearance: Yellow liquid Odor: Bleach odor
SIGNIFICANT HAZARDS:
Corrosive to skin and eyes. Irritating to the respiratory tract.

POTENTIAL HEALTH EFFECTS

EYE CONTACT: Corrosive to the eyes! Direct contact with eyes will cause severe irritation and may lead to burns and permanent eye damage. Mists and vapors may cause moderate to severe eye irritation.

SKIN CONTACT: Contact with skin can produce severe irritation or burns with possible in-depth injury.

INHALATION: Inhalation may cause intense irritation to the respiratory tract (nose, mouth, mucous membranes). Prolonged, repeated, or high exposures may cause chemical pneumonitis and, in extreme cases, pulmonary edema.

INGESTION: Harmful if swallowed. Corrosive! May cause severe irritation or burns to the mouth and the gastrointestinal tract. In extreme cases may cause liver and kidney damage.

CHRONIC EFFECTS: No Information.

CARCINOGENICITY: No Information.

SECTION 4 - FIRST AID MEASURES

FIRST AID PROCEDURES

EYES: If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

SKIN: In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. If rash, irritation or burns develop, consult a physician. Launder clothing before reuse.

INHALATION: If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

INGESTION: If ingested, DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsion may be

(Continued on Page 3)

SECTION 4 - FIRST AID MEASURES

necessary.

SECTION 5 - FIRE-FIGHTING MEASURES

Flashpoint and Method: 260 C (500 F) SFCC ASTM D-3828

Autoignition Temperature: N.D.

Flammable Limits: LEL: N.A. UEL: N.A.

HAZARDOUS COMBUSTION PRODUCTS: Hydrogen chloride (HCl). Carbon monoxide. Carbon dioxide.

UNUSUAL FIRE AND EXPLOSION HAZARDS: No Information.

EXTINGUISHING MEDIA: CO2, Foam, Water Fog

FIRE-FIGHTING INTRUCTIONS: Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Non-flammable. Cool fire-exposed containers using water spray.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LEAKS OR SPILLS: Use personal protective equipment as necessary. Absorb with suitable chemical absorbent. Dispose of material in accordance with all federal, state and local regulations. Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container.

OTHER: No Information.

Refer to Section 15 for regulatory reporting requirements in the event of an accidental release.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid breathing vapor and contact with eyes, skin and clothing. Keep container closed when not in use. Chemical residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning. Use in well ventilated area.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing. Safety shower and eyewash station should be located in immediate work area. Wear nitrile or neoprene gloves.

RESPIRATORY PROTECTION: When concentrations exceed the exposure limits specified, use of a NIOSH approved full facepiece acid gas cartridge respirator is recommended. Where the protection factor may be exceeded, use of a full facepiece supplied air respirator or a Self Contained Breathing Apparatus (SCBA) may be necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Solubility in Water:	Soluble
pH @ 5.0% in in water:	12.8 - 13.1
Density @ 60 F (16 C):	9.79 lb/USgal
Evaporation Rate:	Is slower than Ether
Boiling Point ASTM D-86:	N.D.
Vapor Density:	Is heavier than air
Vapor Pressure:	N.D.
Physical State:	Liquid

OTHER: No Information.

SECTION 10 - STABILITY AND REACTIVITY

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Keep away from materials which can react with sodium hydroxide, especially acids, chlorocarbons, nitroparaffins and phophorous. Reaction with metals such as zinc, aluminum, tin or lead may release flammable hydrogen gas. Overheating in storage accelerates corrosion. Keep away from strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: No Information.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

(Continued on Page 5)

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGICAL INFORMATION

LC50 Inhalation	LD50 Dermal	LD50 Oral	Eye Irritation Score	Skin Irritation Score

OTHER: No Information.

COMPONENT TOXICOLOGICAL INFORMATION:

COMPONENT	LD50 Dermal	LD50 Oral	LC50 Inhal
Sodium hydroxide	N.D.	N.D.	N.D.
Sodium hypochlorite	>3 g/kg-R	5 g/kg-R	N.D.

LEGEND: R = Rat
RB = Rabbit
M = Mouse
GP = Guinea Pig

SKIN AND EYE SCORE: 1 = No Effect / Slight Irritant
2 = Moderate Irritant
3 = Strong Irritant
4 = Skin: Extreme Irritant;
Eye: Extreme Irritant/Corrosive

SECTION 12 - ECOLOGICAL INFORMATION

An ECOTOX (R) Report is currently unavailable for this product. Please contact Baker Petrolite Corporation if ecological information is required.

OTHER: No Information.

SECTION 13 - DISPOSAL INFORMATION

DISPOSAL INFORMATION: Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with applicable regulations. Note that these regulations may also apply to empty containers, liners, and rinsate. Processing, use, dilution, or contamination or this product may cause its physical and chemical properties to change.

(Continued on Page 6)

SECTION 14 - TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (D.O.T.) INFORMATION:

Proper Shipping Name: Hypochlorite solution 8 UN1791 III

D.O.T. Emergency Response Guide: 154 Marine Pollutant: N.A.

INTERNATIONAL MARITIME ORGANIZATION (I.M.O.) INFORMATION:

Proper Shipping Name: Hypochlorite solution 8 UN1791 III

IMDG Code Page: 8186 EMS Number: 8-03

MFAG Table Number 1: 741 MFAG Table Number 2: N.A.

Marine Pollutant: N.A.

OTHER: No Information.

SECTION 15 - REGULATORY INFORMATION

CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES:
The Baker Petrolite product contains the following components that are subject to the release reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act. Also listed is the Reportable Quantity (RQ) in pounds for each such component, and the amount of product, in gallons, that must be released or spilled in order to exceed the RQ.

CHEMICAL NAME	CAS NUMBER	RQ lbs.	RQ, gal
Sodium hypochlorite	7681-52-9	100	64

SARA TITLE III:
This Baker Petrolite product contains the following components that are identified as extremely hazardous substances by the Superfund Amendments and Reauthorization Act. Also listed is the Reportable Quantity (RQ) in pounds for each such component, and the amount of product, in gallons, that must be released or spilled in order to exceed the RQ; and the Threshold Planning Quantity (TPQ) in pounds for each such component, and the amount of product in gallons that contains the TPQ.

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

--------- CHEMICAL NAME ---------- CAS NUMBER RQ lbs RQ,gal TPQ# TPQ
No SARA Extremely Hazardous materials present in this product.

SARA 311/312:
Baker Petrolite has determined that under Sections 311/312 of SARA Title III, the following hazard categories apply to this product:

HAZARD: IMMEDIATE HEALTH, CHRONIC HEALTH, REACTION

SARA SECTION 313:
This Baker Petrolite product contains the following components that are subject to the annual toxic release inventory reporting requirements of Section 313 of SARA Title III. Also listed is the concentration of the component, in weight percent, in the product, A component is not listed if its concentration is less than the de minimis level.

---------- Chemical Name ---------- CAS Number WT/WT%
No SARA Section 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
This product or its components, if a mixture, are listed on the TSCA inventory.

This Baker Petrolite product contains the following components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States:

---------- Chemical Name ---------- CAS Number
No TSCA 12(b) chemicals are present in the product.

SIGNIFICANT NEW USE RULES (SNUR): This product does not contain any components that are subject to a Significant New Use Rule (SNUR).

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

---------- CHEMICAL NAME ----------	CAS NUMBER
Sodium chloride	7647-14-5
Water	7732-18-5

SECTION 16 - OTHER INFORMATION

NFPA: Health: 3 Flammability: 0 Reactivity: 0 Special: COR

Revision History: 2/6/96 new msds
10/21/96 new format

(Continued on Page 8)

12/96 updated RQ's, sect. 15
file 938

The information and recommendations contained hereon are believed to be accurate and reliable as of the date issued. However, we do not warrant their accuracy or reliability.

We only warrant to you, but no other persons, that the product referenced herein shall conform to our quality assurance specifications for the product on the date of shipment to you. WE EXPRESSLY DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Any technical advice, information or recommendation given to you is given gratis without any warranty whatsoever as to the advice, information or recommendation given or results obtained.

You shall assume all risks and shall be solely responsible for the results obtained from the storage, handling or use of the product and any information or recommendation regarding the product, whether alone or in combination with other substances.

UNDER NO CIRCUMSTANCES SHALL WE BE LIABLE FOR ANY ECONOMIC, CONSEQUENTIAL (INCLUDING LOST PROFITS OR SAVINGS) OR INCIDENTAL DAMAGES, EVEN IF WE ARE INFORMED OF THEIR POSSIBLITY, EXEMPLARY OR PUNITIVE DAMAGES, REGARDLESS OF THE FORM OR ACTION, WHETHER IN CONTRACT OR TORT, INCLUDING OUR SOLE OR JOINT NEGLIGENCE AND STRICT LIABILITY.

<END OF MSDS>

***** E N D O F R E P O R T *****

Kieling, Martyne

From: Foust, Denny
Sent: Monday, June 02, 2003 12:46 PM
To: Anderson, Roger; Kieling, Martyne
Cc: Chavez, Frank; Perrin, Charlie
Subject: BP America Cahn and Schneider Ponds

At 08:30 received complaint from Chet Bell #18 CR 2343 behind Cedar Hill Fire Station of consistent oppressive odors at night over the past week. Notified Brittany Benko of BP America, She had Blagg Engineering investigate the complaints with me. The ponds are both black and have an stale sour water smell. The Cahn Pond had three ducks positively identified floating in the pond. The Schneider Pond also had a distinct H2S odor but did not register on either Blagg's or our meters. One duck was tentatively identified in the Schneider Pond. I notified Brittany Benko about the ducks and to start treating the pond with some kind of oxidizer immediately.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

September 15, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 7099-3220-0000-5051-1095

Mr. Stan Bennett
Koch Exploration Company
P.O. Box 1478
Houston, TX 77251-9970

RE: OCD Rule 711 Permit Approval NM-02-0001
Koch Exploration Company,
Centralized Evaporation Pond #2
SE/4 NW/4 Section 26, Township 32 North, Range 9 West, NMPM,
San Juan County, New Mexico.

Dear Mr. Bennett:

The permit application for the Koch Exploration Company (Koch) centralized surface waste management facility located in SE/4 NW/4 Section 26, Township 32 North, Range 9 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. A $50,000 blanket bond, Surety Bond No. 400JZ6303, has been submitted by Koch and approved by the Director. The application consists of the permit application Form C-137 dated July 27, 1998, inspection report response letter dated July 23, 1998, and materials already on file with the OCD.

The operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved evaporation methods must receive prior OCD approval. Koch 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 Koch of liability should your operation result in actual pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve Koch of responsibility for compliance with other federal, state or local laws and/or regulations.

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 facility is subject to periodic inspections by the OCD. The conditions of this permit will be reviewed by the OCD no later than five (5) years from the date of this approval and the facility will be inspected at least once a year.

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:
Aztec OCD Office
Donald Johnson, Koch Exploration Company

ATACHMENT TO OCD 711 PERMIT
PERMIT NM-02-0001
KOCH EXPLORATION COMPANY
CENTRALIZED WASTE MANAGEMENT FACILITY
SE/4 NW/4 Section 26, Township 32 North, Range 9 West, NMPM,
San Juan County, New Mexico.
(September 15, 2000)

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. The pond must have a minimum freeboard of two feet (2'). A liner marking or other device must be installed in the pond to accurately measure freeboard.

3. Pond inspection and maintenance must be conducted on a weekly basis or immediately following a consequential rainstorm or windstorm. If any defect is noted repairs must be made as soon as possible. If the defect will jeopardize the integrity of the pond additional wastes may not be placed into the pond until repairs have been completed. Records of such inspections must be made available to the OCD upon request.

4. The outside walls of all levees must be maintained in such a manner to prevent erosion. Inspection of the outside walls of the levees must be made weekly.

5. The spray evaporation system will be operated such that all spray remains within the confines of the lined portion of the pond. An anemometer with automatic shutdown must be installed and utilized such that the spray system will not operate when winds, sustained or in gusts, cause windborn drift to leave the confines of the pond.

6. The pond leak detection system sumps must be inspected weekly. Results must be recorded and maintained at the facility for OCD review. If fluids are found in the sump, the following steps must be undertaken:

    a. the operator must notify the Aztec office within 24 hours;

    b. the fluids must be sampled and analyzed and a comparison made to the fluids in the pond to determine the source; and

    c. the fluids must be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

7. If a leak is determined to exist in the primary liner, the operator will immediately undertake the following measures under the direction of the OCD:

   a. introduction of fluids into the pond must cease;

   b. enhanced evaporation must commence, provided atmospheric conditions are such that the spray system can be operated in accordance with the provisions of this permit;

   c. fluids must be removed from the pond using evaporation, injection or transportation to another authorized facility until the fluid level is below the location of the leak in the liner; and

   d. the liner must be repaired and tested and the leak detection system must be completely drained before introduction of fluids into the pond resumes.

8. Sludge thickness in the base of the pond must be measured annually. Any sludge build-up in the bottom of the pond in excess of twelve inches (12") must be removed and disposed of at an OCD-approved waste management facility.

9. All new or replacement above ground tanks located at the facility and containing materials other than fresh water must be placed on an impermeable pad and be bermed so that the containment area will hold one and one-third the volume of the largest tank or all interconnected tanks whichever is greater. All existing tanks must be labeled as to contents and hazards and must be bermed to contain one and one-third the volume of the largest tank or all interconnected tanks whichever is greater.

10. Below grade sumps must be cleaned and visually inspected annually. Results must be recorded and maintained for OCD review. If sump integrity has failed the OCD must be notified within 48 hours of discovery and the sump and contaminated soils must be removed and disposed of at an OCD-approved waste management facility. Soil remediation must follow OCD surface impoundment closure guidelines. Koch must submit a report to the OCD Santa Fe and Aztec offices that describes the investigation and remedial actions taken.

11. The produced water receiving and treatment area must be inspected weekly for tank, piping and berm integrity.

12. 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.

13. Liquid reduction technologies that may be used to eliminate pond waters include

evaporation, enhanced evaporation and injection.

14. Tests to determine dissolved oxygen levels in the pond must be conducted on a weekly basis. Test results must be recorded and retained. The sample for each test must be taken one foot from the bottom of the pond and the location of each test must vary around the pond. The OCD Aztec Office will be notified immediately if any test shows a dissolved residual oxygen level of less than 0.5 ppm.

15. Tests of ambient H_2S levels must be conducted on a weekly basis. Test results must be recorded and retained. The tests must be conducted at four (4) locations around the pond at the top of the berm. The wind speed and direction must be recorded in conjunction with each test.

    a. If an H_2S 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 H_2S levels must be made at the fence line down wind from the problem pond.

    b. If two (2) consecutive H_2S readings of 1.0 ppm or greater are obtained:

        i. the operator must notify the Aztec office of the OCD immediately;

        ii. the operator must commence hourly monitoring on a 24-hour basis; and

        iii. the operator must obtain a daily analysis of dissolved sulfides in the pond.

    c. If an H_2S reading of 10.0 ppm or greater at the facility fence line is obtained:

        i. the operator must immediately notify the Aztec office of the OCD and the following public safety agencies:

            New Mexico State Police
            San Juan County Sheriff
            San Juan County Fire Marshall; and

        ii. the operator must initiate notification of all persons residing within one-half (½) mile of the fence line and assist public safety officials with evacuation as requested.

WASTE ACCEPTANCE CRITERIA

1. The facility is authorized to accept only produced waters that are generated in the State of New Mexico by Koch Exploration Company.

2. The facility is authorized to accept only produced waters 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.

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 the permit holder.

REPORTING AND RECORD KEEPING

1. Results of weekly inspections of the pond and its leak detection system and the produced water receiving and treatment area must be recorded and maintained for OCD review

2. Results of testing of the evaporation pond for H_2S, dissolved sulfides and dissolved oxygen must be recorded and maintained for OCD review.

3. Results of annual maintenance on below grade sumps and annual measurements of sludge thickness in the pond must be recorded and maintained for OCD review.

4. The applicant must notify the **OCD Aztec office within 24 hours** of any fire, break, leak, spill, blow out, or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

5. The applicant must file forms C-117, C-118, and C-120 with the appropriate OCD office.

6. All records of testing and monitoring must be retained for a period of five (5) years.

7. The OCD must be notified prior to the installation of any pipelines or wells or other structures within the boundaries of the facility.

FINANCIAL ASSURANCE

1. Pursuant to OCD Rule 711.B.3.a., financial assurance in a form approved by the Director is required from Koch Exploration Company in the amount of **$25,000** for this facility or **$50,000** for statewide financial assurance.

2. Financial assurance must be submitted within thirty (30) days of this permit approval or on **October 15, 2000**.

3. The facility is subject to periodic inspections by the OCD. The conditions of this permit and the facility may be reviewed by the OCD no later than five (5) years from the date of this approval.

CLOSURE

1. The OCD Santa Fe and Aztec offices must be notified when operation of the facility is to be discontinued for a period in excess of six (6) months or when the facility is to be dismantled. Within six (6) months after discontinuing use or within 30 days of deciding to dismantle the facility, a closure plan must be submitted to the OCD Santa Fe office for approval. The operator must complete cleanup of constructed facilities and restoration of the facility site within six (6) months of receiving the closure plan approval, unless an extension of time is granted by the Director.

2. The closure plan to be submitted must include the following procedures:

   a. When the facility is to be closed no new material will be accepted.

   b The soils beneath the evaporation pond and liquids receiving and treatment area will be characterized as to total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) content to determine potential migration of contamination.

   c. Contaminated soils exceeding OCD closure standards for the site will be removed or remediated.

   d. The area will be contoured, seeded with native grasses and allowed to return to its

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

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

CERTIFICATION

Koch Exploration Company, by the officer whose signature appears below, accepts this permit and agrees to comply with all terms and conditions contained herein. Koch Exploration Company 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:

KOCH EXPLORATION COMPANY

Signature _____ Title G. Stanley Bennett Attorney-in-Fact Date 9/22/00

KOCH INDUSTRIES INC
Koch Exploration Company
P.O. Box 489
Aztec, New Mexico 87410
Phone: (505) 334-9111

July 23, 1998

Martyne J. Kieling
Environmental Geologist
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division
2050 South Pacheco Street
Santa Fe, New Mexico 87505

RE: 711 Centralized Waste Management Facility Inspection Response
Koch Exploration Company, Koch #2 Evaporation Pond
NE/4 NW/4 of Section 26, Township 32 North, Range 9 West, NMPM
San Juan County, New Mexico

Dear Ms. Kieling:

In response to your inspection of the Koch Exploration Company (Koch #2) waste management facility evaporation pond #2 on June 12, 1997. Attachment 1 is in response to the permit deficiencies found at Koch #2 during the inspection and the new Rule 711 requirements that are not on file. Attachment 2 contains photographs taken upon completion of required work

Pursuant to Order R-10411-B the OCD General Rule 711 revision, we have included the new financial assurance forms, and a permit application, Form C-137 are also attached.

All necessary forms and responses to deficiencies found at Koch #2 during the facility inspection are attached, to meet re-permitting requirements under the new Rule 711.

If you have questions or need additional information for re-permitting this facility, please feel free to contact me at (505) 334-9111.

Sincerely,

Don Johnson
Operations Manager
Koch Exploration Company

attachments
cc: Oil Conservation Division
1000 Rio Brazos RD
Aztec, NM 87410

ATTACHMENT 1
INSPECTION REPORT RESPONSE
KOCH EXPLORATION COMPANY, KOCH #2
(NE/4 NW/4 of Section 26, Township 32 North, Range 9 West, NMPM)
SAN JUAN 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 one and a half (1 ½) feet below the top of the lowest point on the levee. The pond must be maintained below freeboard level at all times.

   Freeboard markers accurately measure the two foot (2') freeboard height (see picture #5). Freeboard is now marked with 5" lettering.

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 levee top has been smoothed out, and t-posts installed to prevent trucks from driving on liner in the future (see picture #1).

3. Leak Detection System: The top of the leak detection monitor well must be above the top of the levee. The monitor well should be covered. In addition, the leak detection monitor well shall be inspected weekly.

   The evaporation pond leak detection system shall be inspected weekly, and maintained in good working order.

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 at an OCD approved disposal facility.

   Sludge thickness was measured in six (6) randomly selected areas. Using a thief off bottom of pond, we experienced no sign of sediment in any of the samples. We will continue to monitor sludge build-up periodically.

5. Security: The facility shall be secured when no attendant is present, to present 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, no action necessary at this time.

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.

   The facility has clearly labeled sign posted within view. This sign will be monitored and maintained as needed.

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.

   There are no drums or containers stored on site.

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.

   Overall yard maintenance practices at the facility were good, no action necessary at this time.

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 berms around the above ground tanks have been repaired to establish any over flow of tanks directly into pond (see pictures 1, 2, 3, and 4). The emergency containment is directed into the evaporation pond (see pictures 1 and 4).

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.

    The evaporation pond did not contain any oil at time of inspection, and has not in the past. Netting is not required on the evaporation pond as long as it is kept oil free. Koch will continue to regularly monitor the evaporation pond for any oil or hazardous materials.

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.

    There are no saddle tanks at this facility.

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.

    Hazard placards have been placed on all above ground tanks (see picture #3). Labeling, taken from MSDS sheet is as follows:

Produced Water	
Health	**0**
Reactivity	**0**
Flammability	**0**
Personal Protective Equipment	**B**

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.

There are no below grade tanks, pits or sumps at any tank valves. All valve catchment barrels are above ground.

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.

    There are no underground/process wastewater lines at this facility. The only underground line is for pump suction, which is above pond freeboard. Should the integrity of this line fail, the pond pump will shut it's self off.

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 clean with no overtopping stains. Overall yard maintenance and spill prevention/cleanup was good. No action necessary at this time.

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

    There is no trash at the facility. The facility will continue to be maintained in a trash and potentially hazardous materials free area.

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. Should a spill occur it will be reported under the guidelines of OCD Rule 116 and WQCC 1203 to the appropriate OCD District Office.

18. 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.

    NORM declaration is attached to OCD form C-137, Application For Waste Management Facility.

    Pursuant to 20 NMAC 3.1 Subpart 1403.E, "Produced water is exempt from the requirements of these regulations if it is ...stored or disposed in a double, synthetically lined surface impoundment permitted by the Division".

19. Produced Water Well Locations: Produced water from all well production locations that supply water to the evaporation pond shall be listed according to name and legal location.

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;

See enclosed C-137 application.

(b) A plat and topographic map showing the location of the facility in relation to governmental surveys (¼ ¼ 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;

This is already on file with the OCD.

(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, and tanks on the facility;

This is already on file with the OCD.

(e) A plan for management of approved wastes;

This is already on file with the OCD.

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

This is attached to form C-137, Application For Waste Management Facility.

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

This is attached to form C-137, Application For Waste Management Facility.

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

This is already on file with the OCD.

(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;

This is attached to form C-137, Application For Waste Management Facility.

(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.

See form C-137, Application For Waste Management Facility.

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

RECEIVED
JUL 28 1998
Environmental Bureau
Oil Conservation Division

Form C-137
Originated 8/8/95

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

1. Type: ☒ Evaporation ☐ Injection ☐ Other
   ☐ Solids/Landfarm ☐ Treating Plant
2. Operator: Koch Exploration Company
   Address: 610 S. Main ST / P.O. Box 489 Aztec, NM 87410
   Contact Person: Don Johnson Phone: (505) 334-9111
3. Location: NE /4 NW /4 Section 31 Township 32 North Range 8 West
   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.
   already on file
6. Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.
   already on file
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.
   already on file
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.
    already on file
12. Attach proof that the notice requirements of OCD Rule 711 have been met.
    already on file
13. Attach a contingency plan in the event of a release of H_2S.
    already on file
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: Don Johnson Title: Operations Manager

Signature: Don Johnson Date: 7/27/98

KOCH
INDUSTRIES INC
Koch Exploration Company
P.O. Box 489
Aztec, New Mexico 87410
Phone: (505) 334-9111

FACILITIES THAT DISPOSE OF WATER INTO POND #2

Blancett Com C-1	Unit A Sec. 27, T-32-N, R-9-W
Gardner C-1	Unit M Sec. 35, T-32-N, R-9-W
Gardner C-5	Unit L Sec. 26, T-32-N, R-9-W
Gardner C-7	Unit G Sec. 26, T-32-N, R-9-W

Water Spill Contingency Plan

for

KOCH INDUSTRIES INC

Koch Exploration Company
P.O. Box 489
Aztec, New Mexico 87410
Phone: (505) 334-9111

There are 2 Evaporation Ponds in San Juan County, New Mexico that are operated by Koch Exploration Company. The following Names and Numbers should be used in case of a Spill, which Names and Numbers will depend on the circumstances. Koch Exploration does not operate or own any equipment of our own that could be utilized in the event of a spill.

Governmental Agencies:

1. New Mexico Oil Conservation Commission: (505)-334-6178
2. Bureau of Land Management (BLM): (505)-599-8900

Clean up Equipment and Personnel:

1. Vacuum Trucks:
    a. Triple S Trucking: (505)-331-6193
    b. Sunco Trucking: (505)-327-0416
    c. Dawn Trucking: (505)-327-6314
2. Roustabout Services:
    a. Sunland Construction (505) 334-4350
    b. Foutz & Bursum: (505) 325-3712
    c. Flint Engineering: (505)-325-5081
    d. Cimmarron Oilfield Service: (505) -327-5049
3. Dirt Moving Equipment:
    a. Bill Moss Excavation: (505)-334-9093
    b. Sunland Construction (505) 334-4350
    c. Rosenbaum Construction: (505)-325-6367
    d. Adobe Construction: (505)-632-1486
    e. Aztec Excavation (505) 334-4020

Koch Exploration Company Employees: Aztec Office: (505)-334-9111

Employee Name	Home Phone	Mobile Phone	Pager
1. Don Johnson (Operations Manager)	(505)-334-3252	(505)-320-0819	(505)-324-2788
2. John Clark (Pumper)	(505)-334-6235	(505)-320-7799	
3. Ken Cagle (Pumper)	(505)-632-1505	(505)-320-1018	
4. Glen Hise (Contract Pumper)	(505)-334-9856	(505)-599-8074	

5. Stan Bennett (Main Office Wichita,KS) (316)-828-5242 or (Houston Office) (713) 544-4562

Routine Inspection and Maintenance Plan

for

KOCH INDUSTRIES INC

Koch Exploration Company

Evaporation Pond #2

P.O. Box 489

Aztec, New Mexico 87410

Phone: (505) 334-9111

Koch will:

1. Weekly monitor leak detection. Records for such inspections will be made and kept on file for two (2) years from the date of record. If fluids are found in the sump the following steps will be immediately undertaken.
    a. Koch will notify the OCD Aztec Office within twenty-four (24) hours of discovery.
    b. The fluids will be sampled and analyzed to determine the source.
    c. The fluids will be immediately and continuously removed from the sump. Such fluids may be returned to the pond.

    If a leak is determined to exist in the primary liner, Koch will immediately undertake the following:
    a. Introduction of fluids in the pond will cease.
    b. Enhanced evaporation will commence, provided atmosphere conditions are such that the spray systems can be operated in accordance with the provisions of this permit.
    c. Fluids will be removed from the pond utilizing evaporation and transportation to another authorized facility, until the fluid level is below the location of the leak in the liner.
    d. The liner will be repaired and tested and the leak detection system will be completely drained before resuming introduction of fluids into the pond.

2. Conduct weekly tests for ambient H_2S levels. Tests will be made at varying locations around the pond levee. The wind speed and direction will be recorded in conjunction with each test.

    If an H_2S reading of 0.1 ppm or greater is obtained:
    a. A second reading will be taken on the down wind berm within one hour.
    b. The dissolved oxygen and dissolved sulfide levels of the pond will be tested immediately and the need for immediate treatment determined
    c. Tests for H_2S levels will be made at the fence line, downwind from the pond.

    If 2 consecutive H_2S readings of 0.1 ppm or greater are obtained:
    a. Koch will notify the OCD Aztec Office immediately.
    b. Koch will commence hourly monitoring on a 24-hour basis.

c. Koch will obtain daily analysis of dissolved sulfides in the pond.
d. Koch will implement the approved treatment plan so as to reduce dissolved sulfides in the pond and eliminate H2S emissions.

If an H2S reading of 10.0 ppm or greater at the facility fence line is obtained:

a. Koch will immediately notify the OCD Aztec and Santa Fe Offices and the following public safety agencies:

New Mexico State Police	(505) 325-7547
San Juan County Sheriff Dept.	(505) 334-6622
Fire Marshall	(505) 334-4500

b. Koch will initiate notification of all persons residing within one-half (1/2) mile of the fence line and assist public safety officials with evacuation as requested,

3. Conduct monthly tests to determine the dissolved oxygen levels. The sample for each test will be taken one foot from the bottom of the pond and the location of each test will vary around the pond. The OCD Aztec Office will be notified immediately if any test shows a dissolved residual oxygen level of less than 0.5 ppm. Test records will be available in the Koch Exploration Aztec Office for review.

4. Monitor pond levee after precipitation events, to maintain level, prevent ponding of water, to minimize erosion, and maintain proper width.

5. Periodically measure any sludge build-up in the bottom of the pond. Any build-up in excess of twelve (12) inches will be removed and disposed of at an OCD approved disposal facility.

6. Routinely inspect, and maintain berms around the above ground tanks.

7. Regularly inspect the tank separation system to ensure it is working properly, and no contaminants are entering the pond.

KOCH INDUSTRIES INC
Koch Exploration Company
P.O. Box 489
Aztec, New Mexico 87410
Phone: (505) 334-9111

Naturally Occurring Radioactive Material (NORM) Status Declaration For Evaporation Pond #2

Koch Exploration had the following sites tested for NORM in October, 1997. Each of these sites discharge produced water into the Koch Evaporation Pond #2, and do not contain NORM at regulated levels pursuant to 20 NMAC 3.1 Subpart 1403.C and D. The Evaporation Pond was not tested, as produced water stored or disposed in a double, synthetically lined surface impoundment permitted by the OCD, is exempt from NORM regulations.

Well Name	Background NORM	Highest NORM	Above Background
Blancett Com C-1	14 μR/Hr	20 μR/Hr	6 μR/Hr
Gardner C-1	13 μR/Hr	13 μR/Hr	0 μR/Hr
Gardner C-5	14 μR/Hr	16 μR/Hr	2 μR/Hr
Gardner C-7	15 μR/Hr	18 μR/Hr	3 μR/Hr

X _____

Don Johnson, Operations Manager
Koch Exploration Company
Aztec, New Mexico

Closure Plan

for

KOCH INDUSTRIES INC

Koch Exploration Company

Evaporation Pond #2

P.O. Box 489

Aztec, New Mexico 87410

Phone: (505) 334-9111

Upon Koch's decision to close it's Evaporation Pond # 2, notice will be given to OCD. Closure and waste disposal will then be completed in accordance with the statues rules and regulations in effect at the time of closure.

Koch will:

1. Cease discharge of waters into the site, and begin removal of all fluids and/or wastes.

   Assuming the Pond is at maximum level (freeboard), based on the Koch Evaporation Pond #2's last 12 months experience and anticipated rainfall, it will take approximately 3 years to evaporate the pond's capacity. This **does not** include trucking any water from the Pond.

2. Remove, the plastic liner, all operating equipment, and structures from the site.

3. Clean up any contaminated soils and/or waters pursuant to OCD approval, fill the pond, and level the site.

4. Re-seeded the area with natural grasses and allow it to return to it's natural state.

The approximate cost for dirt remediation of this facility is $18,000.00.

ATTACHMENT 2

RECEIVED

JUL 23 1998

Environmental Bureau
Oil Conservation Division

KOCH #2 711 APPLICATION

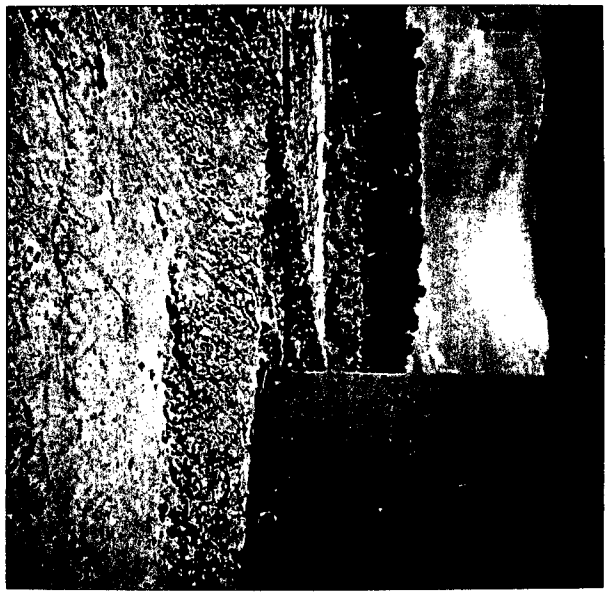
(PHOTOS BY KOCH)

Pond #2

(1)

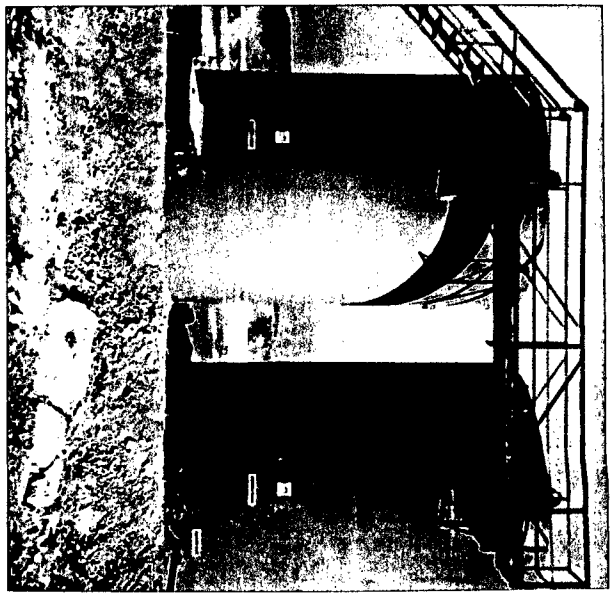
Pond #2

(2)



Pond #2

(3)



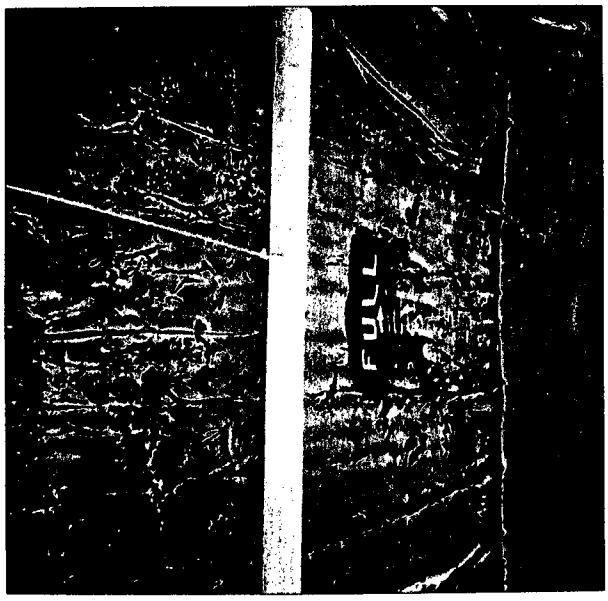
Pond #2

(4)

Pond #2

5" letters

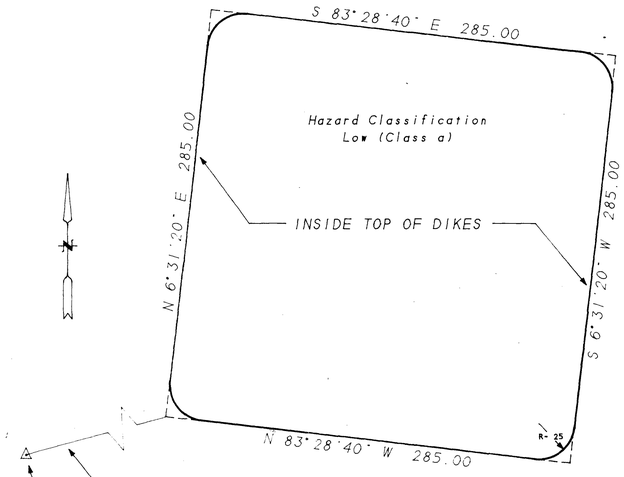
(5)



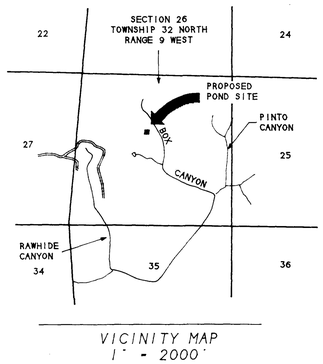
KOCH EXPLORATION EVAPORATION POND NO. 2

LOCATED IN SE/4. NW/4 SECTION 26 T32N R9W N.M.P.M. SAN JUAN COUNTY. NEW MEXICO
SHEET ONE OF TWO

RECEIVED
JAN 25 1995
OIL CONSERVATION DIV.
SANTA FE



PLAN VIEW 1" = 50'



VICINITY MAP
1" = 2000'

CONSTRUCTION SPECIFICATIONS
Site Preparation and Earthwork

1. Strip all loose surface soils, vegetation, roots and debris from the pond and embankment area to a horizontal distance of 5 feet beyond the perimeter of new construction. Removal should extend 1 foot below the bottom of the embankment or 1 foot below the existing grade, whichever is deeper.
2. Clean and widen depressions, swales, etc., to form level working areas to accommodate compaction equipment and fill placement.
3. No material should be placed which is frozen or where the in place material is frozen.
4. Proof-roll the exposed subgrade in the embankment and pond areas to densify materials which may have loosened during the stripping and excavation process. The proof-rolling may be accomplished by a minimum of (2) passes of loaded scraper or equilivent. All soft areas will be removed and replaced with compacted fill.
5. Place and compact all embankment fill in horizontal lifts to the finished grade levels. Lift thickness should be compatible with the equipment used to achieve the required uniform densities. The maximum size of rock to be used for fill will be 6 inches.
6. All subgrade preparation, fill placement and compaction will be accomplished under observation and testing to assess compliance with the project specifications. All fill material will be at least 95% of the maximum dry density as determined by ASTM: D-698 methods and at a moisture content of optimum to 4% above optimum.
7. Positive drainage will be provided around pond during construction and maintained throughout the life of the pond.
8. All phases of pond construction will be accomplished under observation and testing directed by a soils engineer, to assess compliance with the construction specifications.
9. The State Engineer has full authority regarding inspection during construction and full power to act if specifications are not met.
10. No burrowing animals will be allowed to dig in the embankments or under the liners. No deep rooted trees will be allowed to grow in the embankments.
11. Item 6 (above) not withstanding, the maximum lift thikness shall be eight inches (8").
12. All grading shall conform to the Uniform Building Code, Chapter 70
13. All grading shall be done in conformance with the recomendation of the soils report, prepared by SHB Agra, dated December 13, 1994 Reference No. 94-9765

MAP
of the
KOCH EXPLORATION EVAPORTAION POND NO. 2

The undersigned, Michael Scates, claimant, whose post office address is 4111 E. 37th St. North Wichita, County of Sedgwick, State of Kansas, has caused to be located by a qualified Registered Land Surveyor, the KOCH EXPLORATION EVAPORATION POND NO. 2 as herein described and indicated, hereby makes these several statements relative thereto and offers these maps and statements for acceptance and filing in compliance with the laws of the State of New Mexico.

The Koch Exploration Evaporation Pond No. 2, has the following properties: Maximum height above foundation, 15 feet; maximum length, 400 feet; maximum width at base, 380 feet; crest width, 12 feet; slope of upstream face, 3 horizontal to 1 vertical; slope of downstream face, 3 horizontal to 1 vertical; top of dam elevation, 6564 feet; bottom of pond elevation, 6550 feet (varies); high water line elevation, 6562.5 feet; freeboad distance, 1.5 feet. The pond will have two (2) plastic liners, the upper liner being XR-5 or equivalent, 30 mills minimum thickness, the lower line being PVC, 30 mills minimum thickness. The dam will be constructed of well compacted native materials. The surface area of the pond at high water line is 1.74 Acres; the capacity at high water line is 17.84 Acre feet.

State of Kansas)
)ss.
County of Sedgwick)

I, Michael Scates, being first duly sworn upon my oath state that I have read and examined the accompanying maps and statements and know the contents the contents thereof and representations thereon, and state that the same are true and correct to the best of my knowledge and belief.

Administrative Manager

Subscribed and sworn before me this 11th day of January, 1995.

Notary Public

My commission expires: JUANITA L. MAY NOTARY PUBLIC STATE OF KANSAS My Appt. Exp. 5-15-1998

State of New Mexico)
)ss.
County of San Juan)

I, Cecil B. Tullis, being first duly sworn upon my oath, state that I am the Registered Professional Land Surveyor who made the maps of the KOCH EXPLORATION EVAPORATION POND NO. 2, and that such maps were prepared by me or under my direction and that the same are true and correct to the best of my knowledge and belief.

Cecil B. Tullis

License No. 9672

CECIL B. TULLIS NEW MEXICO 9672 REGISTERED PROFESSIONAL LAND SURVEYOR

Subscribed and sworn before me this 1st day of December, 1994.

Willis A. Stolworthy
Notary Public

My commission expires: 3-10-96

State of New Mexico)
)ss.
County of San Juan)

I Michael Daly, being first duly sworn, upon my oath, state that I am a Registered Professional Engineer, qualified in civil engineering, and that the accompanying plans were prepared under my supervision and are true and correct to the best of my knowledge and belief.

Michael Daly

License No. 5992

Subscribed and sworn before me this 1st day of December, 1994.

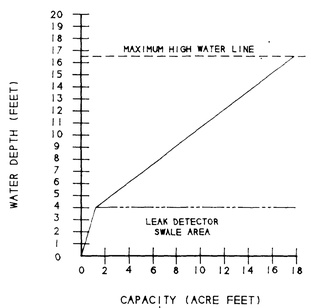
Willis A. Stolworthy
Notary Public

My commission expires: 3-10-96

State of New Mexico)
)ss.
County of Santa Fe)

I hereby certify that the accompanying maps and statements have been examined by me and approved as to form and content, and were duly accepted for filing on the _____ day of _____, 19___.

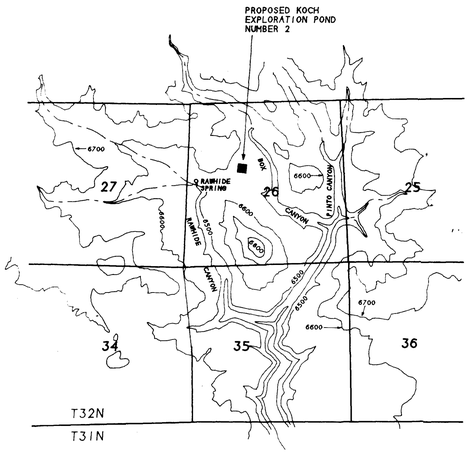
State Engineer



POND CAPICITY

WATER LEVEL MANAGEMENT

Permanent markers will be installed at maximum high water line. Water will be gravity fed from a tank into the pond. In the event that the pond reaches high water line, Koch Exploration will stop the delivery of water to the pond, until evaporation (natural and/or sprayer enhanced) lowers the water level.



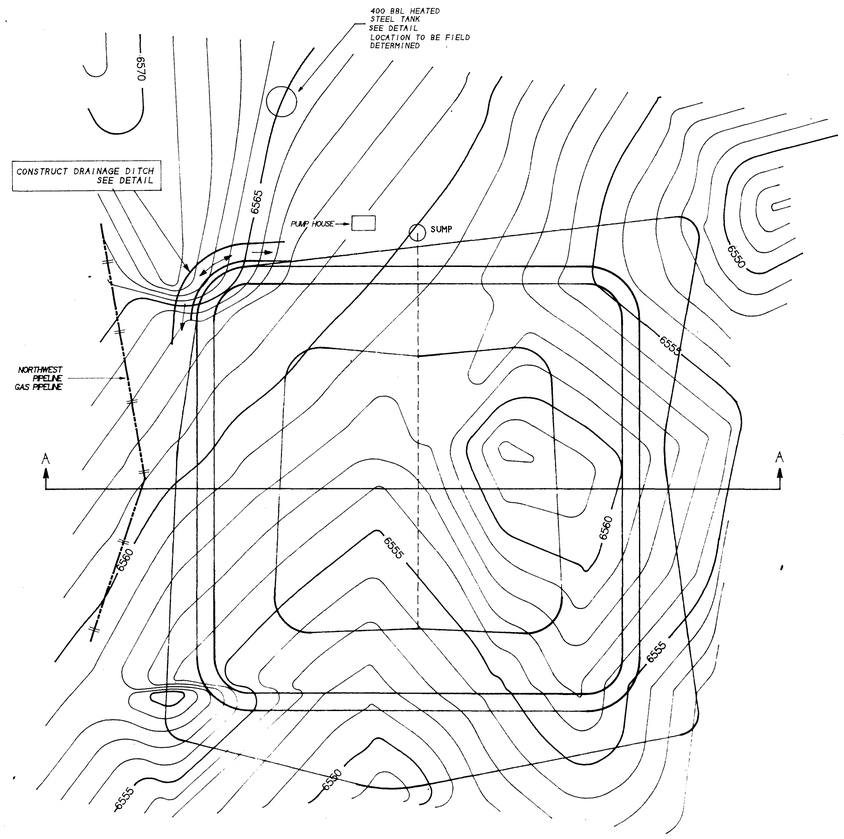
MAP OF DRAINAGE AREA 1" = 2000'

HIGH COUNTRY SURVEYS
101 W. 32ND STREET
FARMINGTON, NEW MEXICO

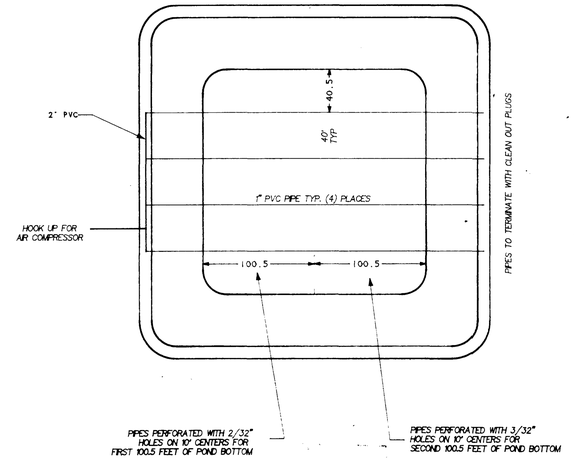
0 25 50 75 125
SCALE: 1" = 50'

KOCH EXPLORATION EVAPORATION POND NO. 2

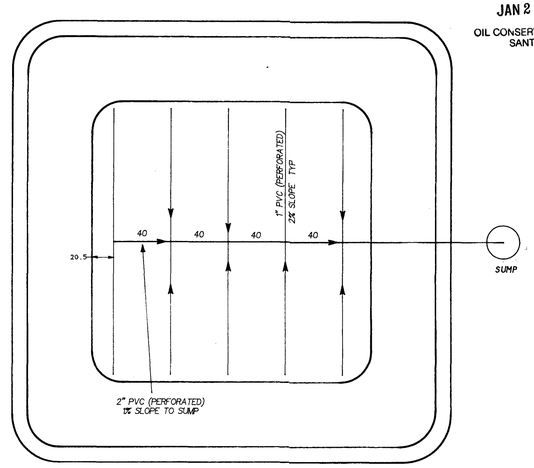
LOCATED IN SE/4,NW/4 SECTION 26 T32N R9W N.M.P.M. SAN JUAN COUNTY, NEW MEXICO
SHEET TWO OF TWO (DETAILS)



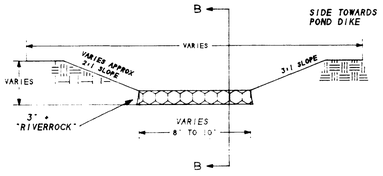
SITE TOPOGRAPHY 1" 50'
CONTOUR INTERVAL 1'

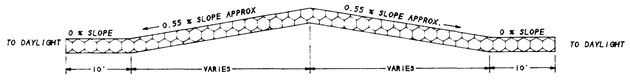


AERATION SYSTEM N.T.S.

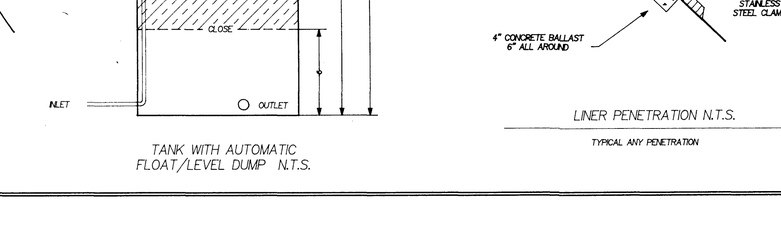


LEAK DETECTOR SYSTEM 1" = 50'

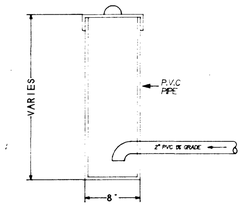




SECTION B N.T.S.

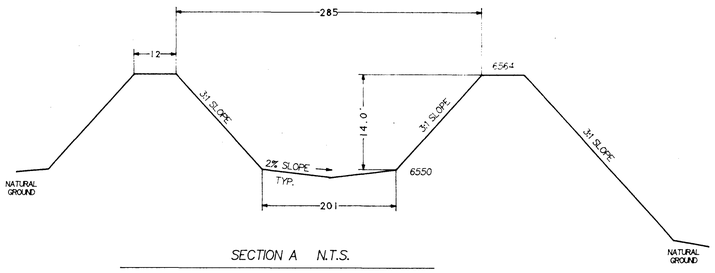


SPRAYER SYSTEM 1" = 50'

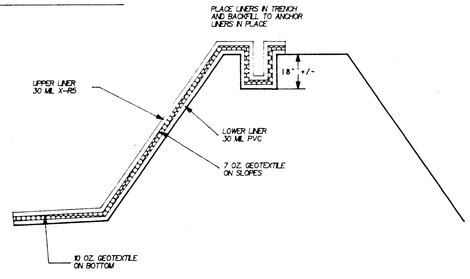


SUMP DETAIL N.T.S.

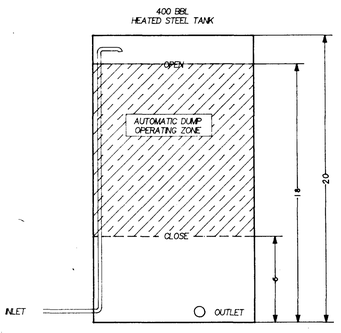
DRAINAGE DITCH DETAIL N.T.S.



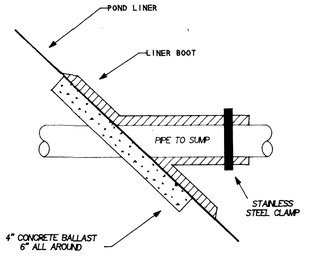
SECTION A N.T.S.



LINER DETAILS N.T.S



TANK WITH AUTOMATIC FLOAT/LEVEL DUMP N.T.S.



LINER PENETRATION N.T.S.

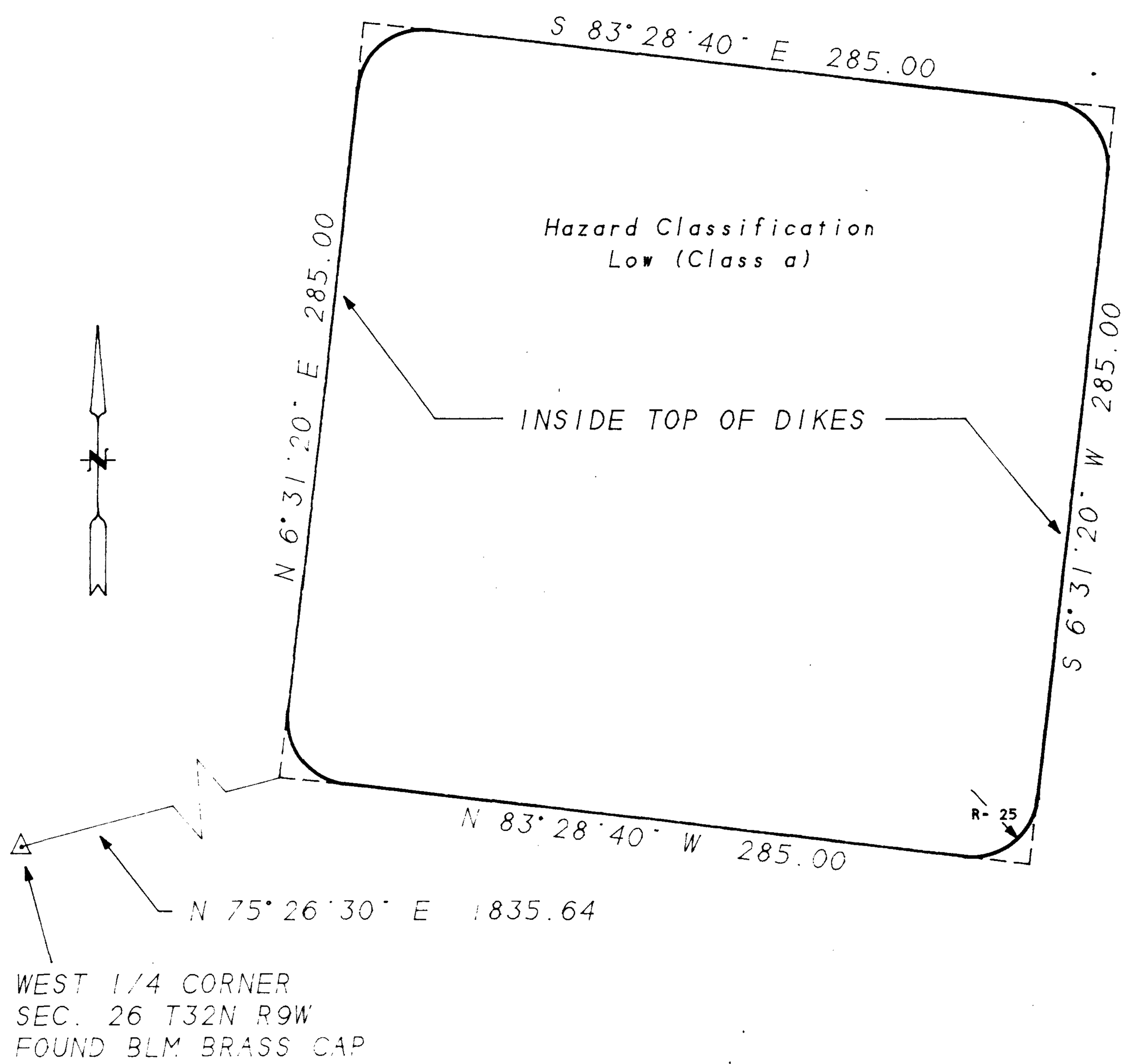
TYPICAL ANY PENETRATION

0 25 50 75 125
SCALE: 1" = 50'

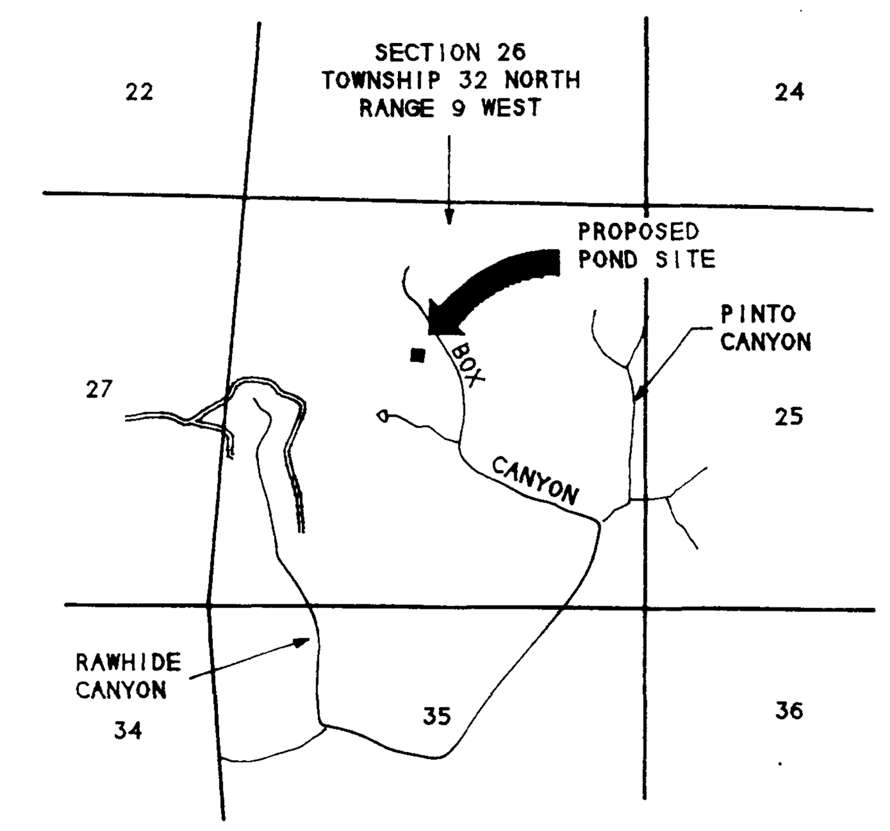
RECEIVED
JAN 25 1995
OIL CONSERVATION DIV.
SANTA FE

KOCH EXPLORATION EVAPORATION POND NO. 2

LOCATED IN SE/4. NW/4 SECTION 26 T32N R9W N.M.P.M. SAN JUAN COUNTY. NEW MEXICO
SHEET ONE OF TWO



PLAN VIEW 1" - 50'



VICINITY MAP
1" - 2000'

CONSTRUCTION SPECIFICATIONS
Site Preparation and Earthwork

1. Strip all loose surface soils. vegetation. roots and debris from the pond and embankment area to a horizontal distance of 5 feet beyond the perimeter of new construction. Removal should extend 1 foot below the bottom of the embankment or 1 foot below the existing grade. whichever is deeper.
2. Clean and widen depressions. swales. etc.. to form level working areas to accommodate compaction equipment and fill placement.
3. No material should be placed which is frozen or where the in place material is frozen.
4. Proof-roll the exposed subgrade in the embankment and pond areas to densify materials which may have loosened during the stripping and excavation process. The proof-rolling may be accomplished by a minimum of (2) passes of loaded scraper or equilivent. All soft areas will be removed and replaced with compacted fill.
5. Place and compact all embankment fill in horizontal lifts to the finished grade levels. Lift thickness should be compatible with the equipment used to achieve the required uniform densities. The maximum size of rock to be used for fill will be 6 inches.
6. All subgrade preparation. fill placement and compaction will be accomplished under observation and testing to assess compliance with the project specifications. All fill material will be at least 95% of the maximum dry density as determined by ASTM: D-698 methods and at a moisture content of optimum to 4% above optimum.
7. Positive drainage will be provided around pond during construction and maintained throughout the life of the pond.
8. All phases of pond construction will be accomplished under observation and testing directed by a soils engineer. to assess compliance with the construction specifications.
9. The State Engineer has full authority regarding inspection during construction and full power to act if specifications are not met.
10. No burrowing animals will be allowed to dig in the embankments or under the liners. No deep rooted trees will be allowed to grow in the embankments.
11. Item 6 (above) not withstanding. the maximum lift thikness shall be eight inches (8")
12. All grading shall conform to the Uniform Building Code. Chapter 70
13. All grading shall be done in conformance with the recomendation of the soils report. prepared by SHB Agra. dated December 13, 1994 Reference No. 94-9765

MAP
of the
KOCH EXPLORATION EVAPORTAION POND NO. 2

The undersigned. Michael Scates. claimant. whose post office address is 4111 E. 37th St. North Wichita. County of Sedgwick . State of Kansas. has caused to be located by a qualified Registered Land Surveyor. the KOCH EXPLORATION EVAPORATION POND NO. 2 as herein described and indicated. hereby makes these several statements relative thereto and offers these maps and statements for acceptance and filing in compliance with the laws of the State of New Mexico.

The Koch Exploration Evaporation Pond No. 2 . has the following properties: Maximum height above foundation. 15 feet: maximum length. 400 feet: maximum width at base. 380 feet: crest width. 12 feet: slope of upstream face. 3 horizontal to 1 vertical: slope of downstream face. 3 horizontal to 1 vertical: top of dam elevation. 6564 feet: bottom of pond elevation. 6550 feet (varies): high water line elevation. 6562.5 feet: freeboad distance. 1.5 feet. The pond will have two (2) plastic liners. the upper liner being XR-5 or equivalent. 30 mills minimum thickness. the lower line being PVC. 30 mills minimum thickness. The dam will be constructed of well compacted native materials. The surface area of the pond at high water line is 1.74 Acres: the capacity at high water line is 17.84 Acre feet.

State of Kansas)
)ss.
County of Sedgwick)

I. Michael Scates. being first duly sworn upon my oath state that I have read and examined the accompanying maps and statements and know the contents the contents thereof and representations thereon. and state that the same are true and correct to the best of my knowledge and belief.

____
Administrative Manager

Subscribed and sworn before me this 11th day of January. 1995.

____
Notary Public

My commission expires: JOAN Mc[illegible] NOTARY PUBLIC STATE OF KANSAS My Appt. Exp. Dec. 15 1998

State of New Mexico)
)ss.
County of San Juan)

I. Cecil B. Tullis. being first duly sworn upon my oath. state that I am the Registered Professional Land Surveyor who made the maps of the KOCH EXPLORATION EVAPORATION POND NO. 2. and that such maps were prepared by me or under my direction and that the same are true and correct to the best of my knowledge and belief.

Cecil B. Tullis
Cecil B. Tullis

License No. 9672

CECIL B. TULLIS NEW MEXICO 9672 REGISTERED PROFESSIONAL LAND SURVEYOR

Subscribed and sworn before me this 1st day of December. 1994.

Willie A. Stolworthy
Notary Public

My commission expires: 3-10-96

State of New Mexico)
)ss.
County of San Juan)

I Michael Daly. being first duly sworn. upon my oath. state that I am a Registered Professional Engineer. qualified in civil engineering. and that the accompanying plans were prepared under my supervision and are true and correct to the best of my knowledge and belief.

Michael Daly
Michael Daly

License No. 5992

Subscribed and sworn before me this 1st day of December. 1994.

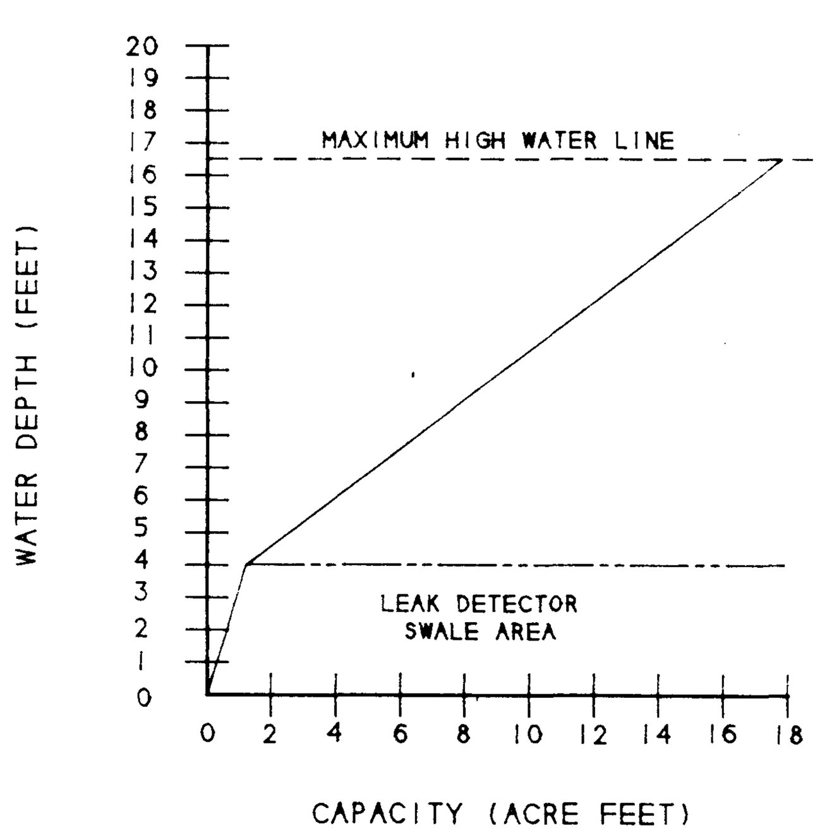
Willie A. Stolworthy
Notary Public

My commission expires: 3-10-96

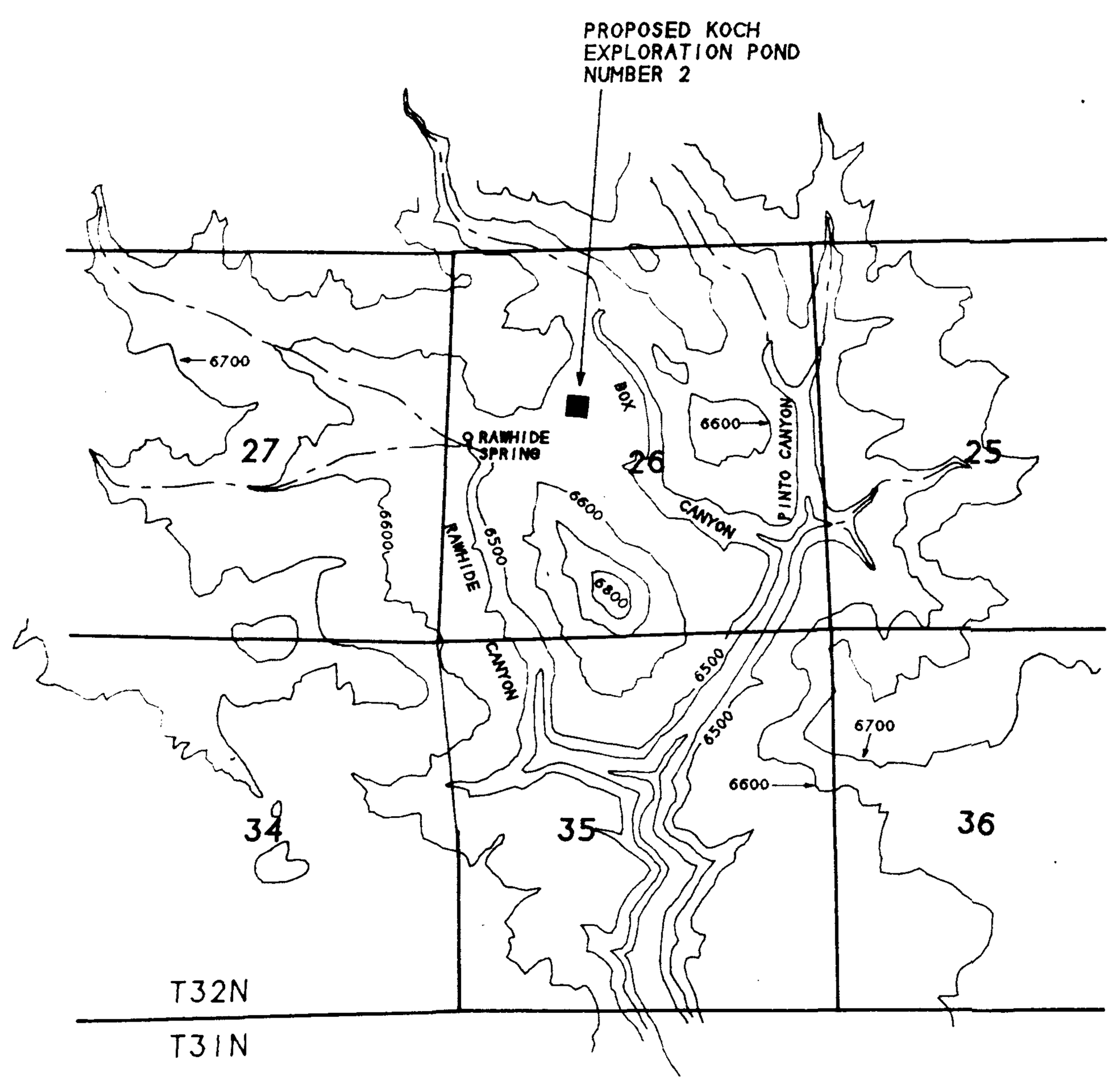
State of New Mexico)
)ss.
County of Santa Fe)

I hereby certify that the accompanying maps and statements have been examined by me and approved as to form and content. and were duly accepted for filing on the ______day of__________. 19___.

____
State Engineer



POND CAPICITY



MAP OF DRAINAGE AREA 1" - 2000'

WATER LEVEL MANAGEMENT

Permanent markers will be installed at maximum high water line.
Water will be gravity fed from a tank into the pond.
In the event that the pond reaches high water line. Koch Exploration will stop the delivery of water to the pond. until evaporation (natural and/or sprayer enhanced) lowers the water level.

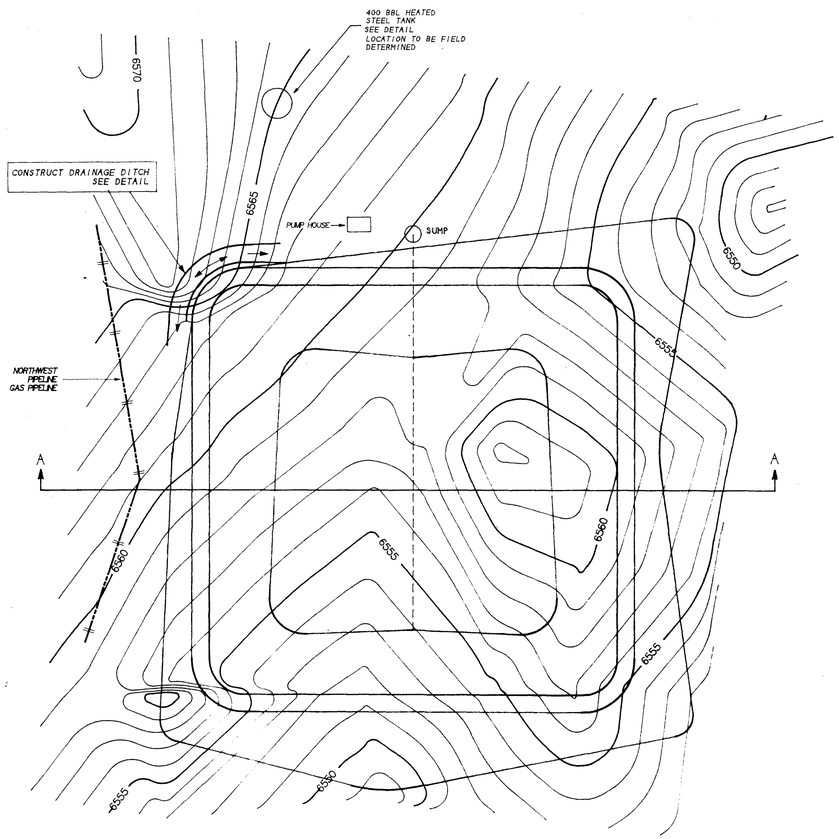
HIGH COUNTRY SURVEYS
101 W. 32ND STREET
FARMINGTON. NEW MEXICO

0 25 50 75 125
SCALE: 1" - 50'

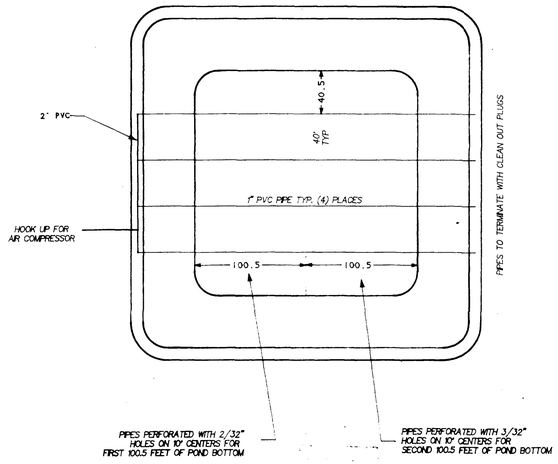
RECEIVED
JAN 25 1995
OIL CONSERVATION DIV
SANTA FE

KOCH EXPLORATION EVAPORATION POND NO. 2

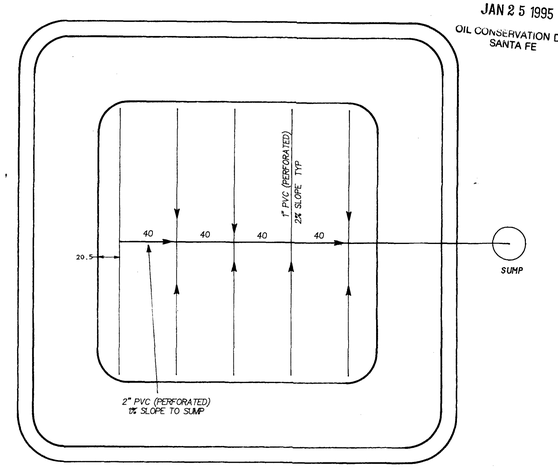
LOCATED IN SE/4,NW/4 SECTION 26 T32N R9W N.M.P.M. SAN JUAN COUNTY, NEW MEXICO
SHEET TWO OF TWO (DETAILS)



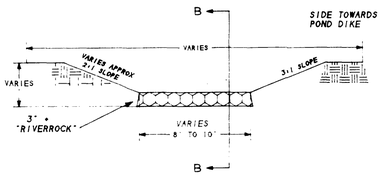
SITE TOPOGRAPHY 1" 50'
CONTOUR INTERVAL 1'

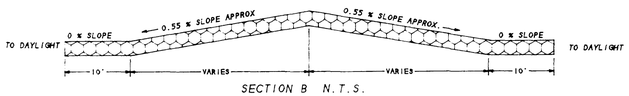


AERATION SYSTEM N.T.S.

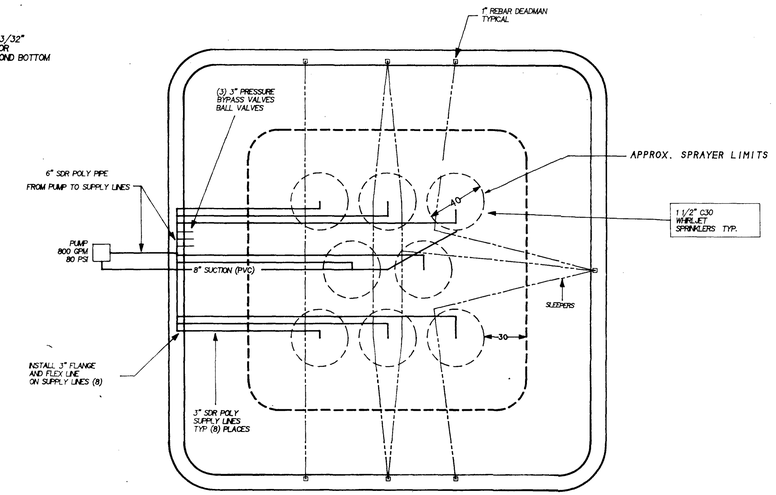


LEAK DETECTOR SYSTEM 1" = 50'

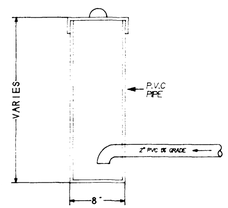




SECTION B N.T.S.

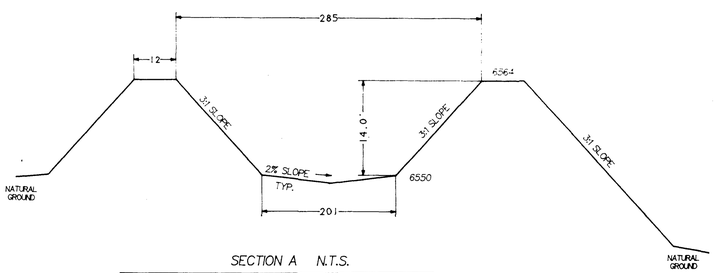


SPRAYER SYSTEM 1" = 50'

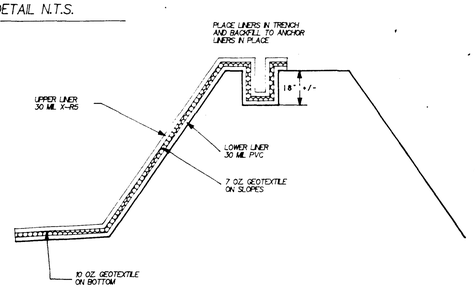


SUMP DETAIL N.T.S.

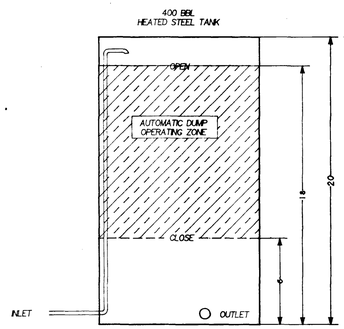
DRAINAGE DITCH DETAIL N.T.S.



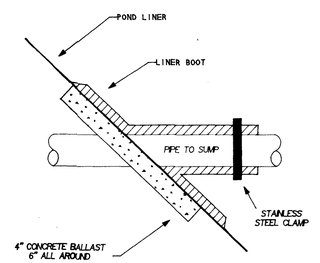
SECTION A N.T.S.



LINER DETAILS N.T.S



TANK WITH AUTOMATIC FLOAT/LEVEL DUMP N.T.S.



LINER PENETRATION N.T.S.

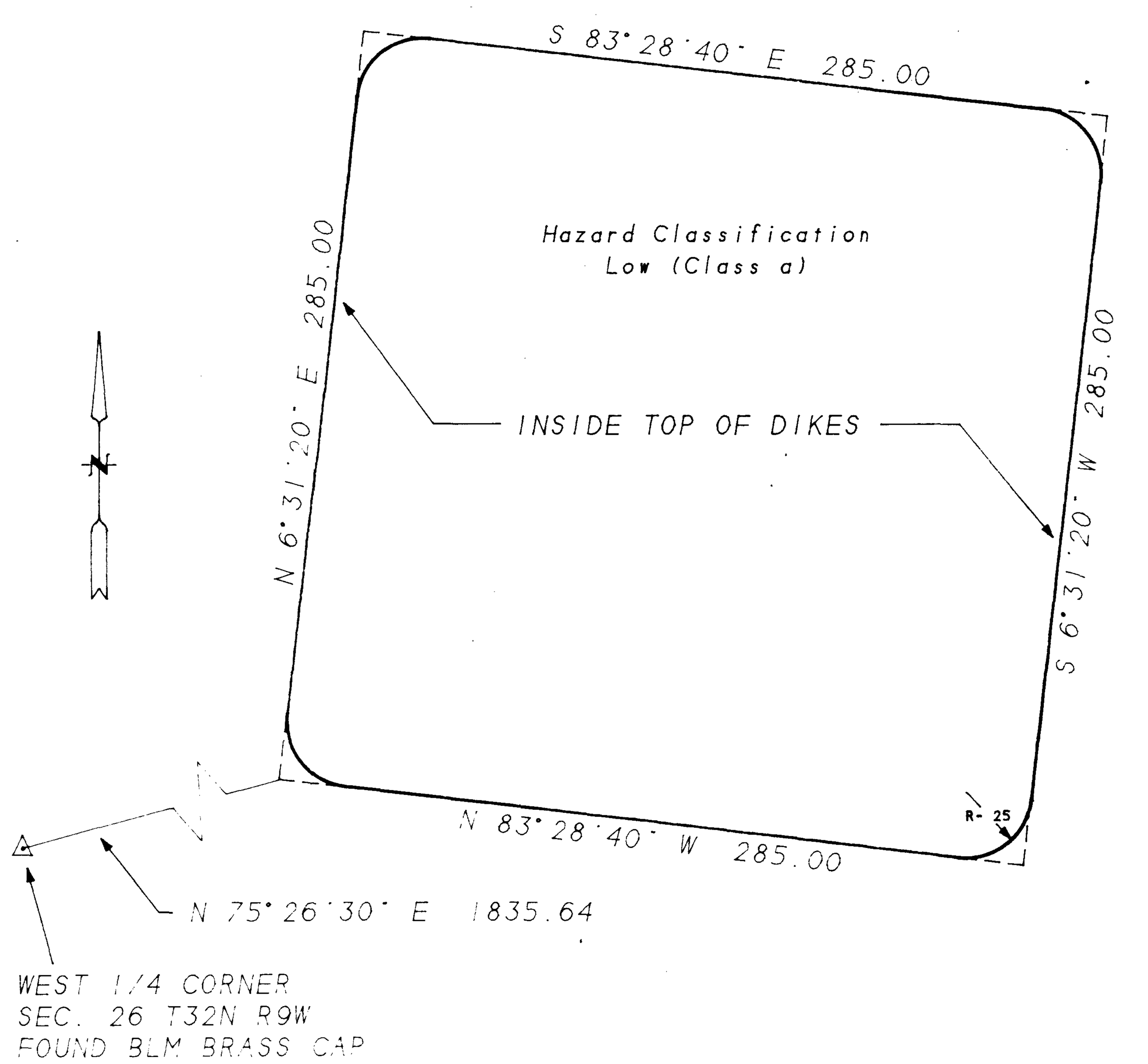
TYPICAL ANY PENETRATION

0 25 50 75 125
SCALE: 1" = 50'

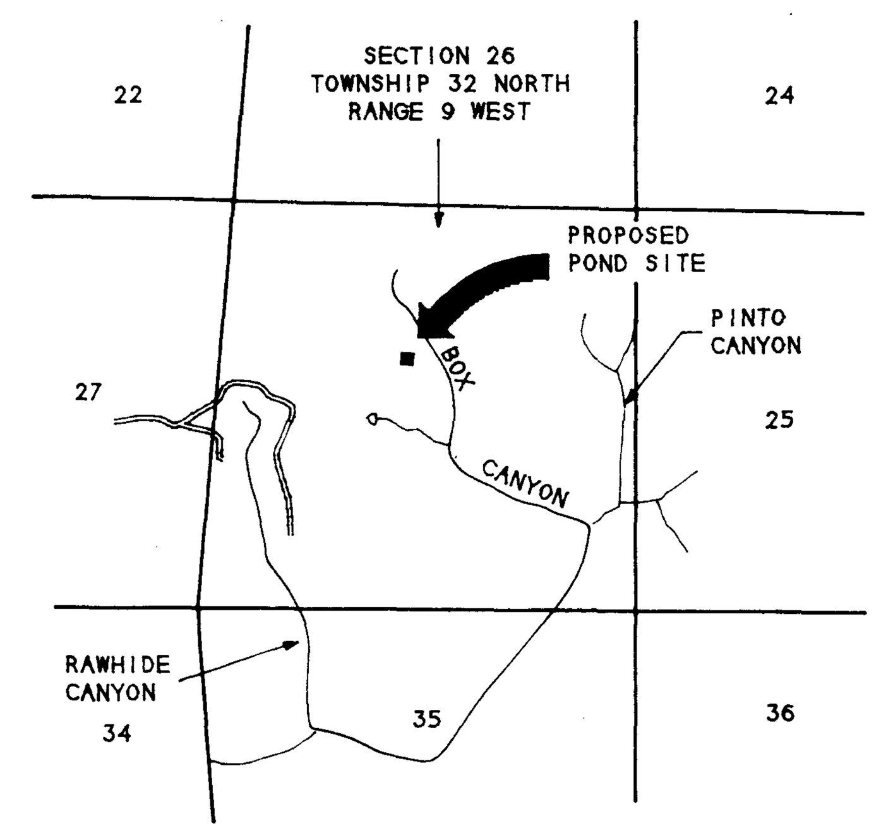
KOCH EXPLORATION EVAPORATION POND NO. 2

LOCATED IN SE/4. NW/4 SECTION 26 T32N R9W N.M.P.M. SAN JUAN COUNTY. NEW MEXICO
SHEET ONE OF TWO

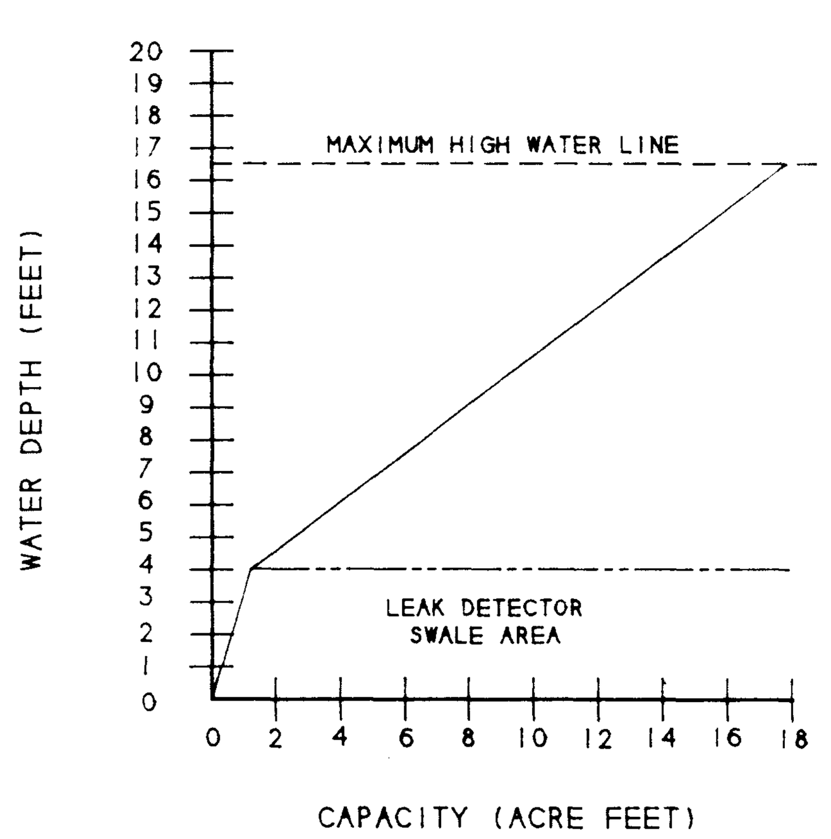
RECEIVED
JAN 2 5 1995
OIL CONSERVATION DIV
SANTA FE



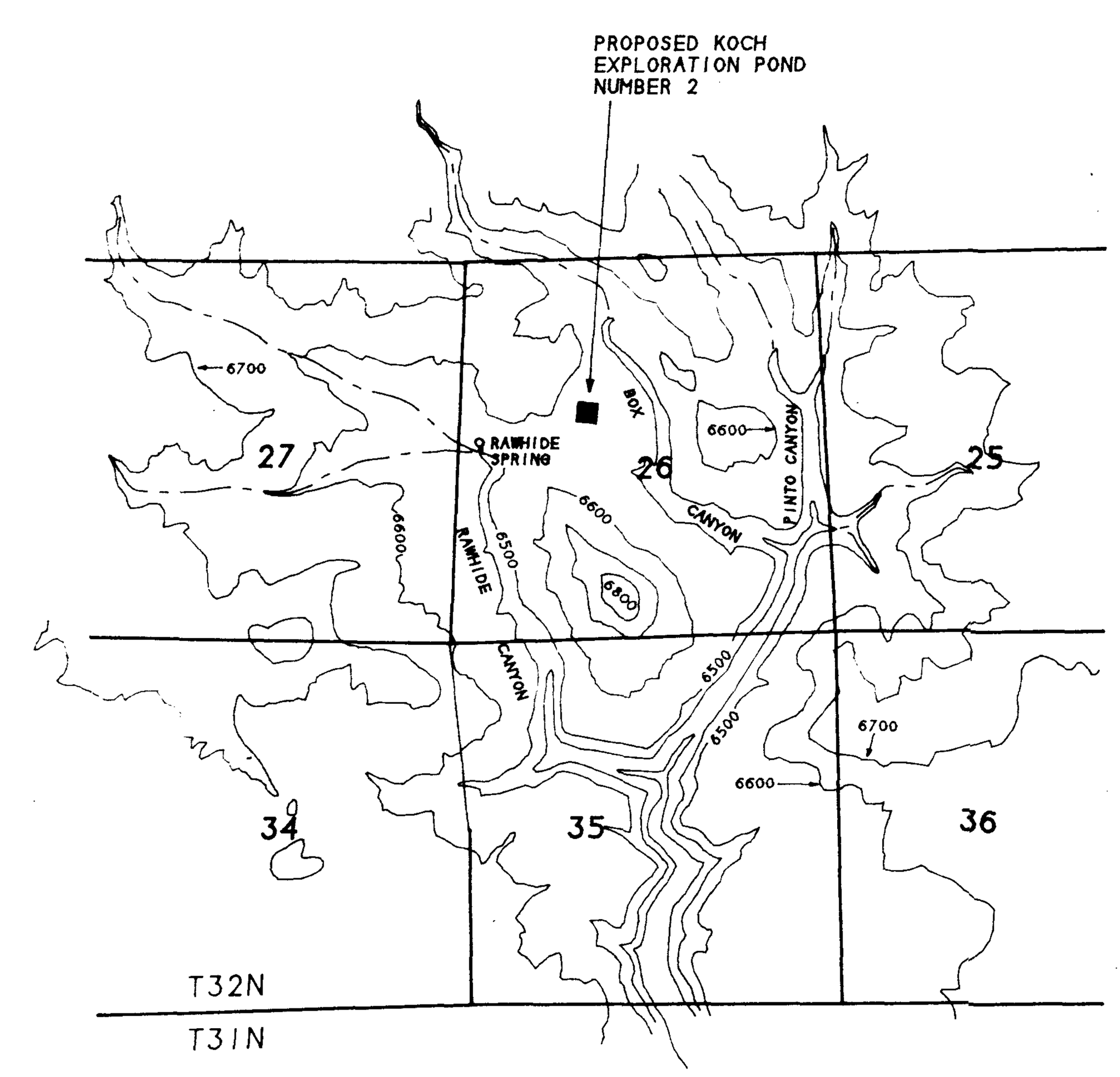
PLAN VIEW 1" = 50'



VICINITY MAP
1" = 2000'



POND CAPICITY



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MAP
of the
KOCH EXPLORATION EVAPORTAION POND NO. 2

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State of Kansas)
)ss.
County of Sedgwick)

I. Michael Scates. being first duly sworn upon my oath state that I have read and examined the accompanying maps and statements and know the contents the contents thereof and representations thereon. and state that the same are true and correct to the best of my knowledge and belief.

Administrative Manager

Subscribed and sworn before me this 11th day of January. 1995.

Notary Public

My commission expires: JOAN MC[illegible]Y NOTARY PUBLIC STATE OF KANSAS My Appt. Exp. Dec. 15, 1998

State of New Mexico)
)ss.
County of San Juan)

I. Cecil B. Tullis. being first duly sworn upon my oath. state that I am the Registered Professional Land Surveyor who made the maps of the KOCH EXPLORATION EVAPORATION POND NO. 2. and that such maps were prepared by me or under my direction and that the same are true and correct to the best of my knowledge and belief.

Cecil B Tullis
Cecil B. Tullis

License No. 9672

CECIL B. TULLIS NEW MEXICO 9672 REGISTERED PROFESSIONAL LAND SURVEYOR

Subscribed and sworn before me this 1st day of December. 1994.

Willie A. Stolworthy
Notary Public

My commission expires: 3-10-96

State of New Mexico)
)ss.
County of San Juan)

I Michael Daly. being first duly sworn. upon my oath. state that I am a Registered Professional Engineer. qualified in civil engineering. and that the accompanying plans were prepared under my supervision and are true and correct to the best of my knowledge and belief.

Michael Daly
Michael Daly

License No. 5992

Subscribed and sworn before me this 1st day of December. 1994.

Willie A. Stolworthy
Notary Public

My commission expires: 3-10-96

State of New Mexico)
)ss.
County of Santa Fe)

I hereby certify that the accompanying maps and statements have been examined by me and approved as to form and content. and were duly accepted for filing on the ______day of__________. 19___.

State Engineer

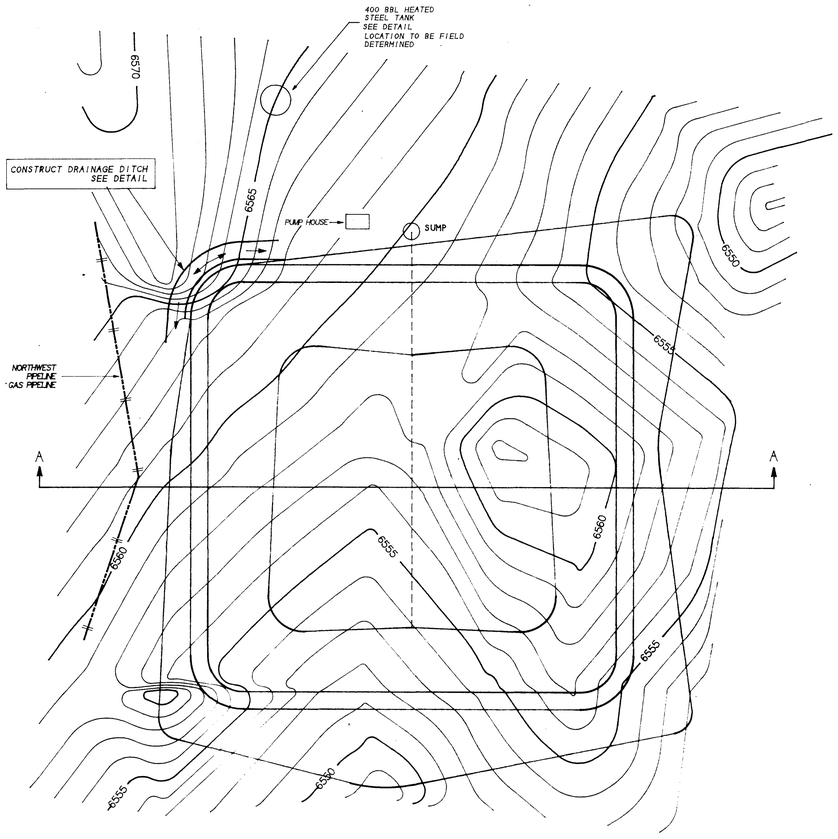
HIGH COUNTRY SURVEYS
101 W. 32ND STREET
FARMINGTON. NEW MEXICO

0 25 50 75 125
SCALE: 1" = 50'

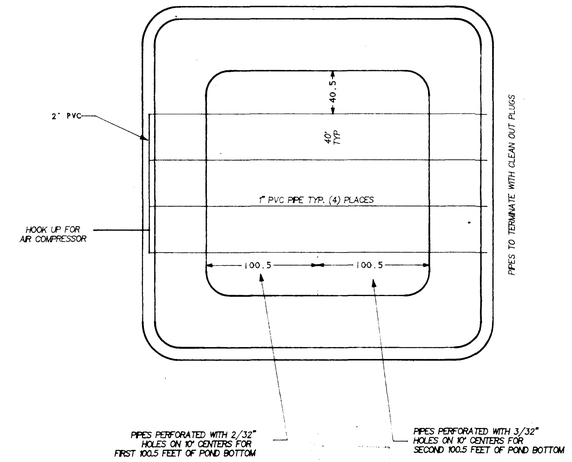
RECEIVED
JAN 25 1995
OIL CONSERVATION DIV.
SANTA FE

KOCH EXPLORATION EVAPORATION POND NO. 2

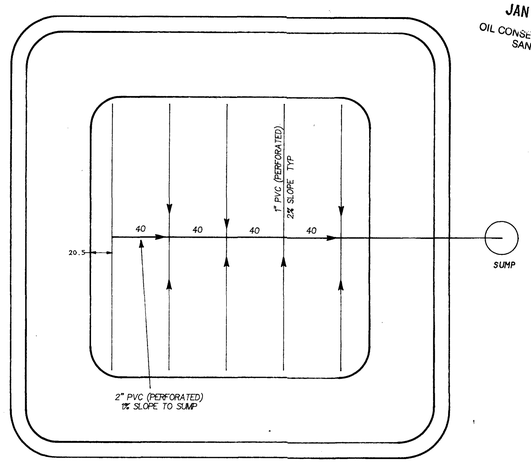
LOCATED IN SE/4,NW/4 SECTION 26 T32N R9W N.M.P.M. SAN JUAN COUNTY, NEW MEXICO
SHEET TWO OF TWO (DETAILS)



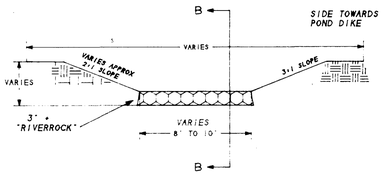
SITE TOPOGRAPHY 1" 50'
CONTOUR INTERVAL 1"

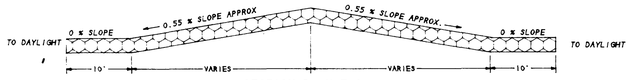


AERATION SYSTEM N.T.S.



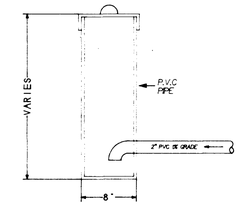
LEAK DETECTOR SYSTEM 1" = 50'





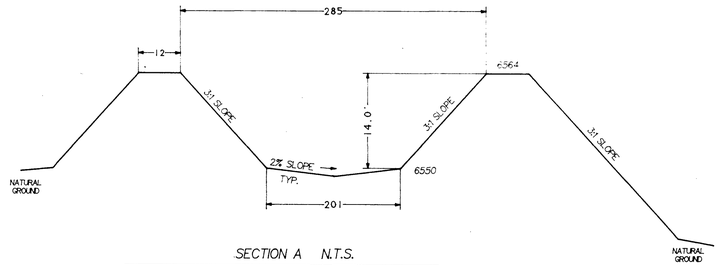
SECTION B N.T.S.

SPRAYER SYSTEM 1" = 50'

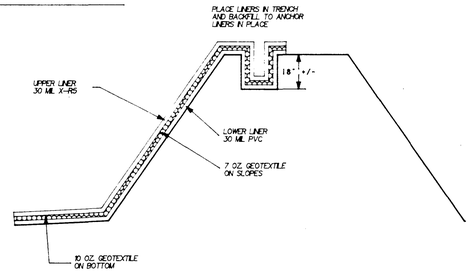


SUMP DETAIL N.T.S.

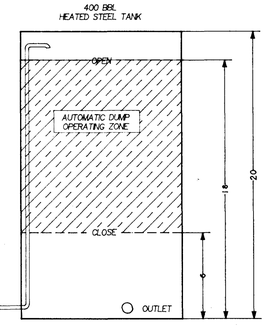
DRAINAGE DITCH DETAIL N.T.S.



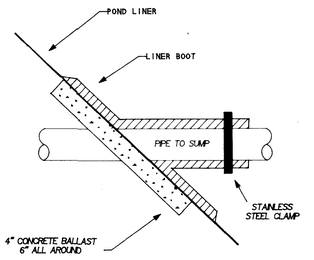
SECTION A N.T.S.



LINER DETAILS N.T.S



TANK WITH AUTOMATIC FLOAT/LEVEL DUMP N.T.S.

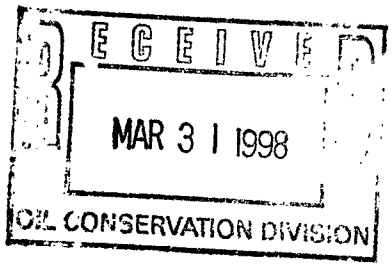


LINER PENETRATION N.T.S.

TYPICAL ANY PENETRATION

0 25 50 75 125
SCALE: 1" = 50'

BLAGG ENGINEERING, INC.
P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505)632-1199 Fax: (505)632-3903



March 25, 1998

Ms. Martyne J. Kieling
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Amoco Production Company
Schneider Waste Management Facility, SW/4 SW/4 Sec. 28 - T32N - R10W
NMOCD Rule 711 Application

Dear Ms. Kieling:

On behalf of Amoco Production Company, Blagg Engineering, Inc. (BEI) is responding to your correspondence dated February 10, 1998 with respect to the Schneider Waste Management Facility. This is a pre-existing produced water evaporation unit installed and operated prior to adoption of NMOCD Rule 711. Attached, please find a completed Form C-137 with associated documentation. Bonding requirements per Rule 711.B.l.i and 711.B.3 will be addressed separately by Amoco Production Company. Amoco is evaluating its bonding options for this and other waste management facilities located in New Mexico.

Addressed below is a response to your comments and concerns presented in Attachment 1 of your February 10, 1998 correspondence:

1. Pond Freeboard: A pond freeboard marking device will be installed prior to June 1, 1998. Presently, freeboard is well below the 1.5 foot minimum requirement. This level is not expected to be approached prior to June 1, 1998.

4. Sludge Build-up: Sludge thickness in the base of the pond will be measured annually.

6. Signs: A clearly labelled sign is in view within 50 feet of the facility.

8. Process Area: Overtopping stains on tanks are not believed to be from current process operations, but appear to be from prior upsets. Recent inspection of the tanks indicated an absence of new stains.

9. Above Ground Tanks: The berms around the above ground tanks are 3 feet above grade and enclose an area of 85' x 60'. The volume of fluid that can be contained by this berm is 2,725 barrels. The holding storage capacity of the above ground tanks is 400 barrels + 300 barrels + 300 barrels = 1,000 barrels. Therefore, the berm capacity is 2.7 times that required to contain a failure of all

above grade tanks within the berm area.

10. Open Top Tanks & Pits: Netting will not be required on the evaporation pond as long as it is kept oil free. Oil entering the pond will be minimized.

12. Tank Labeling: Hazard placards will be placed on above ground tanks not containing fresh water prior to June 1, 1998.

13. Below Grade Tanks/Sumps: Below grade sumps will be cleaned and visually inspected annually.

14. Underground Process/Wastewater Lines: Any underground process/wastewater lines will have an annual mechanical integrity test. Discharge lines to the evaporation pond are open ended (pressure free) and mechanical integrity testing is not warranted or possible.

18. Naturally Occurring Radioactive Material (NORM): Pursuant to discussions with the NMOCD, NORM testing will not be required for this facility.

19. Application Requirements for Permit Under New Rule 711: A Form C-137 application is attached.

Questions or comments concerning the this transmittal may be directed to Jeff Blagg of Blagg Engineering at (505)632-1199 or to Buddy Shaw with Amoco at (505)326-9200.

Respectfully submitted:
Blagg Engineering, Inc.

Jeffrey C. Blagg, P.E.
President

Attachment: Form C-137 Application

cc: Denny Foust, NMOCD Aztec District Office
B.D. Shaw, Amoco San Juan Operations Center

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-13
Originated 8/8/
Revised 6/25/

Submit Origin
Plus 1 Co
to Santa
1 Copy to appropria
District Offi

APPLICATION FOR WASTE MANAGEMENT FACILITY

(Refer to the OCD Guidelines for assistance in completing the application)

☐ Commercial ☒ Centralized

1. Type: ☒ Evaporation ☐ Injection ☐ Other _____
   ☐ Solids/Landfarm ☐ Treating Plant
2. Operator: Amoco Production Company
   Address: 200 Amoco Ct., Farmington, NM 87401
   Contact Person: Buddy Shaw Phone: (505)326-9200
3. Location: SW /4 SW /4 Section 28 Township 32N Range 10W
   Submit large scale topographic map showing exact location
4. Is this a modification of an existing facility? ☐ Yes ☒ No APPLICATION PER NEW 711
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 H_2S.
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: Buddy D. Shaw Title: Environmental Coordinator

Signature: BD Shaw Date: 3/24/98

AMOCO PRODUCTION COMPANY
WASTE MANAGEMENT FACILITY PERMIT
SCHNEIDER FACILITY, SW/4 SEC 28 - T32N - R10W NMPM

Pursuant to NMOCD Order R-10411-B, Exhibit "A" (Rule 711), Amoco Production Company is submitting a Form C-137 for the pre-existing Schneider Waste Management Facility. Section E. (1) of Order R-10411-B outlines the information required for a facility permitted prior to adoption of this Order to include only sections B.1.a, h, i and l. However, Amoco is responding to all sections B.1.a through B.1.l pursuant to the request of NMOCD as outlined in their letter dated February 10, 1998. The Schneider Waste Management Facility is a pre-existing facility permitted by NMOCD prior to adoption of Order R-10411-B.

B.1.a Name and Address of Facility Applicant:

Amoco Production Company
200 Amoco Ct.
Farmington, NM 87401

B.1.b Topographic Map Indicating Facility Location

A copy of the relevant section of U.S.G.S. Topographic Map Cedar Hill, N Mex - Colo (provisional edition 1985) is attached as Figure A.

B.1.c Names & Addresses of Surface Owners Adjacent to Facility

Based on a records review at the San Juan County, New Mexico Assessors Office numerous surface land owners are of record within a 1 mile radius of the facility. The residential community of Cedar Hill, New Mexico is located approximately 3/4 mile from the facility and many small private residences are found in this village. Large property owners of record with the County Assessors Office adjacent to or near the site are listed as follows:

U.S. Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 87401

N.M. State Land Office
4601 College Blvd.
Farmington, New Mexico 87401

Virginia Uhden, et al
4012 Via Opata
Palos Verdes Est, CA 90274

Shirley Mae Holmberg, et al
2459 Hwy 550
Aztec, NM 87410

Ruby Leeper, trustee
1083 Rd 2900
Aztec, NM 87410

Orbesen Family Trust
324 Amherst Dr. SE
Albuquerque, NM 87106

Randy Orbesen
6813 Edith Blvd. NE
Albuquerque, NM 87113

Harry J. Valentine Jr., trustee
3736 William Way
Sacramento, CA 95821

Kennon A. Decker
141 CR 2300
Aztec, NM 87410

B.1.d Facility Description

The existing facility is a 3.0± acre non-commercial centralized waste management site. Non RCRA oilfield generated wastes resulting from oil and gas production operations are transported to the site for treatment. Wastes include produced water and oil. Produced oil collected by the treatment operation is held for final disposition off site; produced water (free of floating hydrocarbons) is placed into a lined pond for evaporation. The existing evaporation pond is a double lined lagoon of approximate dimensions 440' x 285' x 5' deep. A spray evaporation system is installed on the west extent (upwind side of predominant winds) of the pond. This spray system is manually started and stopped and is only operated when accelerated evaporation rates are required. The spray nozzles and location are placed to minimize the possibility of overspray leaving the pond. Site schematics of the facility are attached as Figures 1, 2 and 3.

Buffer Zone: The existing waste management facility is currently permitted by OCD and the site was constructed prior to OCD buffer zone requirements. Therefore, no buffer zone stipulations apply to this site.

Facility Berming: The existing treatment pond is constructed with a lined berm. The National Weather Service was consulted with respect to precipitation during a 100 year storm in this area and the maximum rainfall expected is approximately 2.8-inches during a 24 hour period. The treatment pond will be maintained with sufficient freeboard to accept a precipitation event of this magnitude.

Wave Calculations: Wind setup (increase in water level at downwind side of pond) from maximum predicted sustained winds is calculated for the 440' x 285' x 5.0' deep pond to be (from Water Resources Engineering, McGraw-Hill, 1972):

$$Z_s = V_w^2 F/1400d$$

where Z_s = rise in feet above still water level
V_w^2 = maximum sustained windspeed in miles per hour = 38 mph per Farmington FAA
F = fetch in miles = 524/5280 = 0.0993 miles
d = maximum pond depth in feet = 5.0 feet

Therefore $Z_s = (38^2)(0.0993)/(1400)(5.0) = 0.020$ feet

Wave-height is calculated to be (from Water Resources Engineering, McGraw-Hill, 1972):

$$z_w = 0.034 V_w^{1.06} F^{0.47}$$

where z_w = average maximum height of waves (significant wave height) in feet
V_w = maximum wind velocity in mph
F = fetch in miles

Therefore $z_w = (0.034)(38^{1.06})(0.0993^{0.47}) = 0.54$ feet.

Given these conditions and calculations, the maximum downwind increase in water level is approximately 0.56 feet. Average annual rainfall for the region is 0.72 feet (per U.S. Weather Service, Albuquerque District Office). Therefore, a total required freeboard for the pond is calculated to be approximately 1.28 feet. For safety considerations, a minimum freeboard of 1.5 feet is proposed.

Freeboard Measurement: A marking device shall be installed in the pond to accurately measure freeboard.

B.1.e Waste Management Plan

Products deposited at the Schneider Waste Management Facility include produced oil, produced water and associated minimal sludge material. The volume and origination of this liquid waste material is recorded by Amoco authorized transport drivers using manifests that follow each deposit. Deliveries are pumped from transport vehicles into one (1) of three (3) holding/gravity separation tanks. Water is preferentially separated and placed into the onsite lined evaporation pond. Sludge is accumulated into the bottom of the holding tanks and oil is gravity held in a holding tank.

Accumulated sludge is periodically cleaned out from the holding tanks and evaporation pond for on-site landfarming. Oil is skimmed from the surface of the tanks and sold to a crude oil purchaser for subsequent processing.

B.1.f Contingence Plan for Spills & Releases

Spills and releases will be treated on site if possible. If a spill or release cannot be treated on site, the impacted media will be transported to a NMOCD approved facility for treatment. If an off site release occurs the impacted soils will be excavated and transported to a NMOCD approved facility for treatment.

Pursuant to Rule 116, major spills of 25 barrels or more of liquid will be reported to the NMOCD district office and to the Environmental Bureau Chief by telephone or personal communication within 24 hours of the release. A subsequent written notification of the spill on Form C-141 will be submitted in duplicate to the district office and to the Environmental Bureau Chief within 15 days of the spill or incident.

Minor spills of between 5 and 25 barrels of liquid will be reported to the district office and the Environmental Bureau Chief with a subsequent written notification on Form C-141 within 15 days of the spill or incident.

B.1.g Routine Inspection & Maintenance

Inspection and maintenance will be conducted on a weekly basis or immediately following consequential rainstorms or windstorms. This inspection will include determination of facility integrity and security. Repairs to facility defects will be made as soon as possible. If a defect will jeopardize the integrity of a treatment unit, additional wastes will not be placed into the treatment unit until repairs have been completed.

B.1.h Contingence Plan in the Event of H_2S Release

A. H_2S Contingency Plan: A single produced water evaporative pond is operated at the facility. Tests of ambient H_2S gas at the pond will be conducted on a weekly basis and test results will be recorded and retained. The tests will be conducted at four (4) locations around the pond. Wind speed and direction will be recorded with each test.

If an H_2S reading of 0.1 ppm or greater is detected, a second reading will be taken on the downwind berm within one hour of the first test. Dissolved oxygen and dissolved sulfide levels of the pond will also be measured and appropriate treatments, if any, will be initiated. Additionally, the H_2S level at the down wind fence line of the facility will then be measured.

If two (2) consecutive H_2S readings of 0.1 ppm or greater are obtained, the NMOCD Aztec district office will be immediately notified. Hourly monitoring of H_2S levels will then be initiated and maintained on a 24-hour basis. Dissolved sulfides in the pond will then be measured daily.

If an H_2S measurement of 10.0 ppm or greater at the facility fence line is obtained, the NMOCD Aztec district office will be notified immediately. Additionally, the New Mexico State Police, San Juan County Sheriff and San Juan County Fire Marshall will also be immediately notified. All persons residing within ½ mile of the fence line will be notified and public safety officials will be

assisted with any evacuations that may be required.

Harmful levels of H_2S will be prevented from developing by initiation of the following procedures:

a) Water hauler truck drivers are familiar with H_2S identification by odor. Drivers are instructed to not transport water with possible H_2S content to the facility, and such water is to be transported to an alternate licensed facility with the capacity to accept and treat such water.

b) A continuously operating aeration system is to be installed in the evaporation pond to minimize the possibility of H_2S development.

c) Weekly tests of pond pH will be conducted and recorded. If pH falls below 7.0, remedial steps will be taken to raise the pH to above 7.0.

d) Monthly tests of pond dissolved sulfide will be conducted and recorded.

e) Monthly tests of pond dissolved oxygen are conducted and recorded. This sampling will be conducted at a depth of 1 foot from the bottom of the pond. The test location will vary between tests. If testing indicates dissolved oxygen levels of less than 0.5 ppm, steps will be taken to raise the dissolved oxygen level to greater than 0.5 ppm.

B.1.i Closure plan:

At closure, all storage tanks and piping will be removed from the facility and the evaporation pond will be filled and recontoured to fit existing grades. Site fences will be removed and berms will be recontoured to fit existing grades. Alternatively, if the landowner desires to keep the fences and berms in place for use as a facility not requiring NMOCD permitting, no alterations to these structures will be made.

Five (5) point composite samples will be collected from below the tank area and from below the pond area. These samples will be submitted to a qualified laboratory for determination of TPH and BTEX content. If TPH or BTEX are found to exceed existing NMOCD closure standards for the site, a site specific remediation plan will be developed and submitted to NMOCD for acceptance. Otherwise, the site will be permanently closed.

The estimated cost to complete site closure and abandonment, including surface soil sampling and testing, is $15,000.

B.1.j Groundwater Depth, Quality and Resistance to Impacts

Groundwater at the site is believed to be in excess of 180 feet below ground surface. The site is located on Bushelberger Mesa at an elevation of 6,060 feet. Approximately 1 mile south of the facility several domestic water wells are located on the Leeper property. Groundwater in these wells is found at an elevation of approximately 5,880 feet. The Animas River is located approximately 1/2 mile due east of the site, also at an elevation of approximately 5,880 feet.

The surface geology at the site is comprised of the San Jose Formation. This is a massive sandstone ranging in thickness from 1,100 to 2,500 feet. The San Jose sandstone is anticipated to form a sufficient barrier to prevent seepage of surface waters from the lined evaporation pond. Inspection of road cuts and exposed outcrops surrounding the site indicates the presence of competent sandstone and shalestone beginning approximately 20 feet below the ground surface.

Below the San Jose is the Nacimiento Formation, a shale/mudstone/sandstone that is a main water bearing strata for the region. The groundwater from the Nacimiento is not of high quality. A water sample collected from one of the Leeper wells, which is believed to be completed in the Nacimiento, was tested for general water chemistry in May, 1997. High total dissolved solids (675 mg/L) and sulfate (309 mg/L) was reported by the testing laboratory. A copy of the laboratory report is attached.

B.1.k Notice Requirements

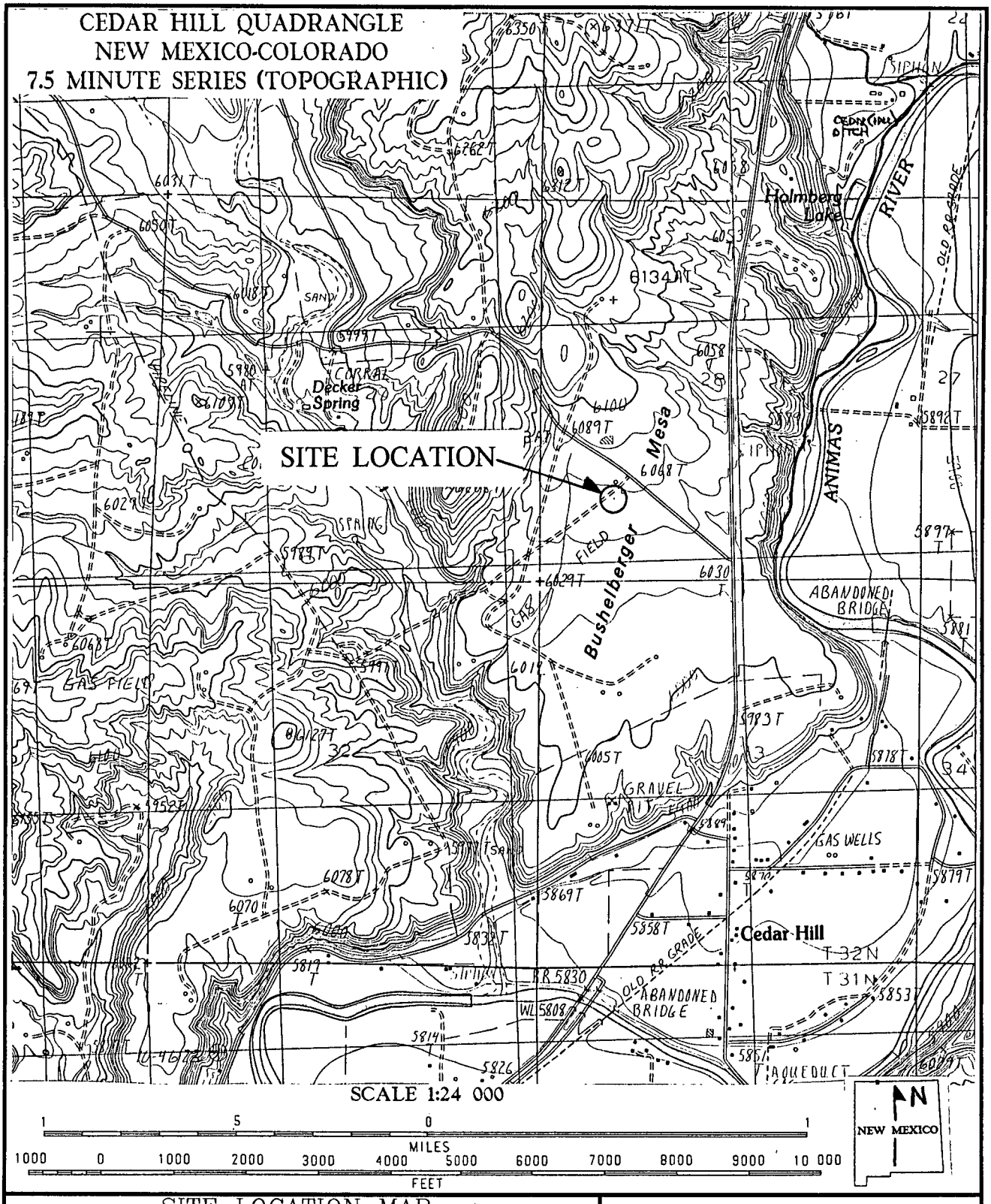
The Schneider Waste Management Facility is an existing facility previously permitted by the NMOCD. As such, it is grandfathered in as an approved facility and notice requirements are not applicable.

B.1.l Certification by Authorized Representative

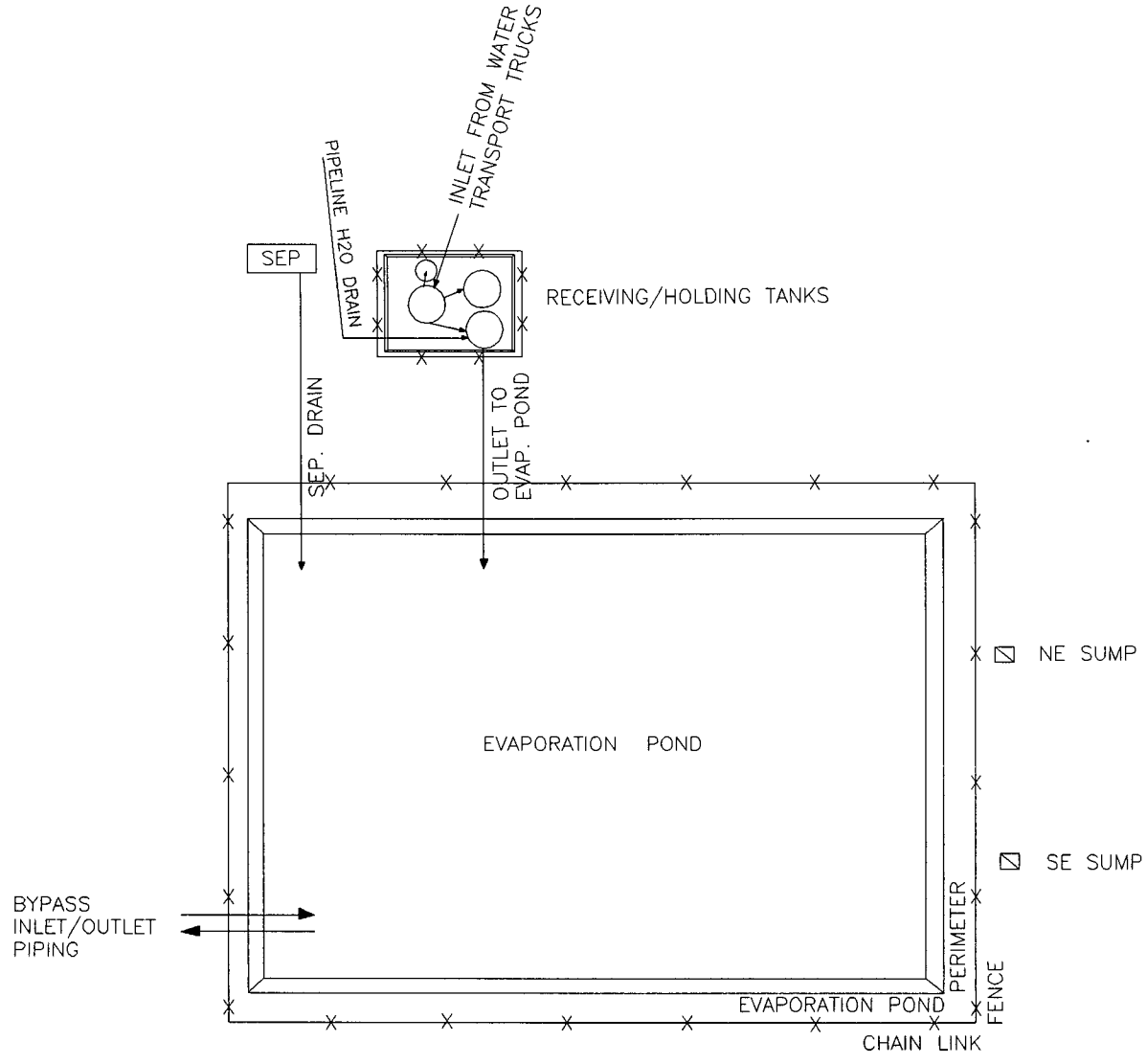
An authorized representative has signed an original Form C-137 included with this application.

AMOCO PRODUCTION COMPANY
SCHNEIDER WASTE MANAGEMENT FACILITY
NMOCD 711 APPLICATION

FIGURES



SITE LOCATION MAP AMOCO SCHNEIDER WASTE MANAGEMENT FACILITY SW/4 SEC 28 – T32N – R10W NMPM			BLAGG ENGINEERING, INC.
DATE: 3/98	FIGURE A	BY: JCB	P.O. BOX 87, BLOOMFIELD, NM PHONE: (505)632-1199



LEGEND

N

0 200 400 FEET

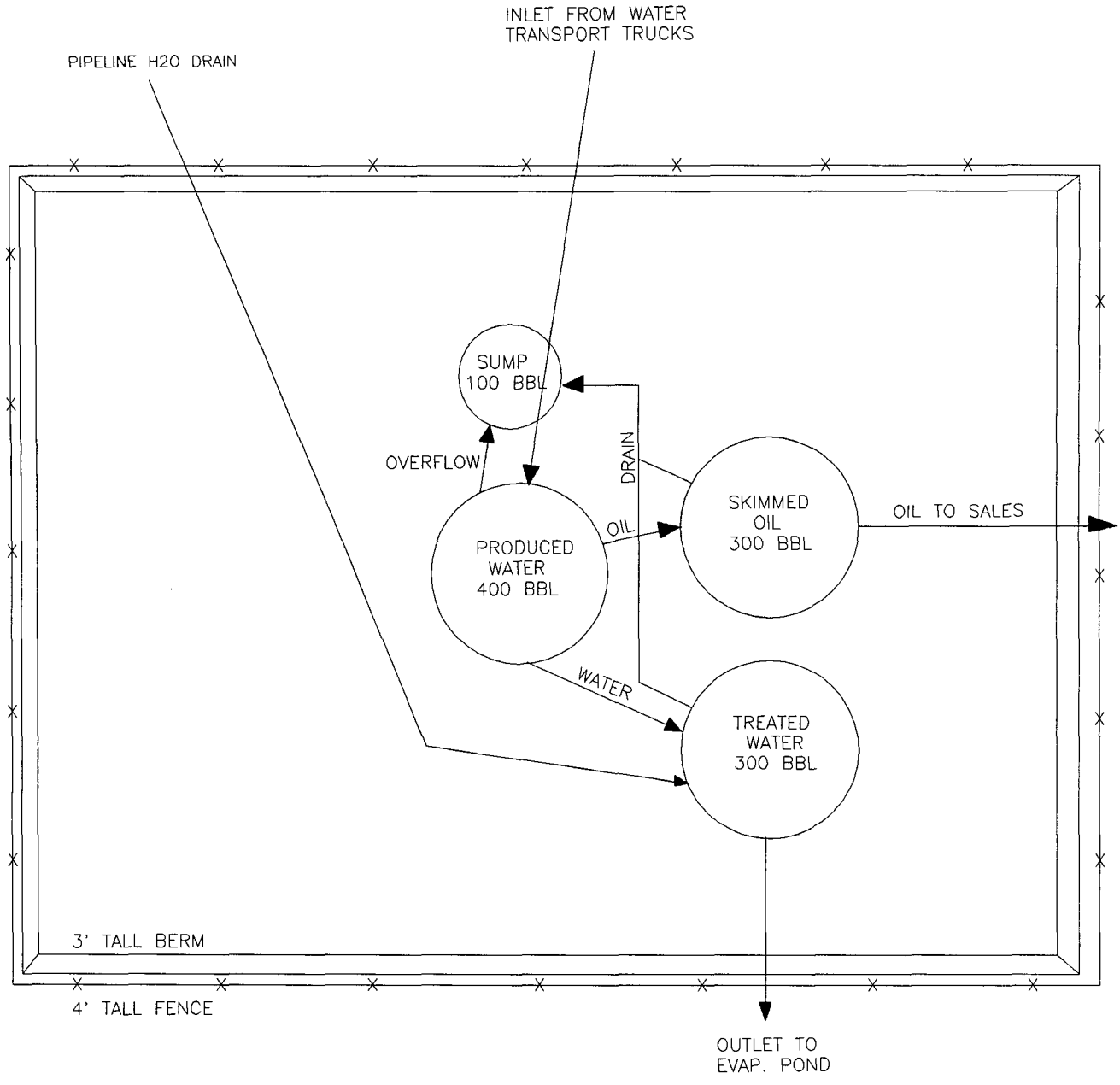
AMOCO PRODUCTION CO.
SCHNEIDER WASTE MGMT. FAC.
SAN JUAN CO., NEW MEXICO

MARCH 1998

BLAGG ENGINEERING, INC.
CONSULTING ENGINEERING SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

SITE SCHEMATIC

FIGURE 1	DRWN BY: JCB
SNEID2	PROJ MGR: JCB



LEGEND

N

0 20 40 FEET

AMOCO PRODUCTION CO.
SCHNEIDER WASTE MGMT. FAC.
SAN JUAN CO., NEW MEXICO

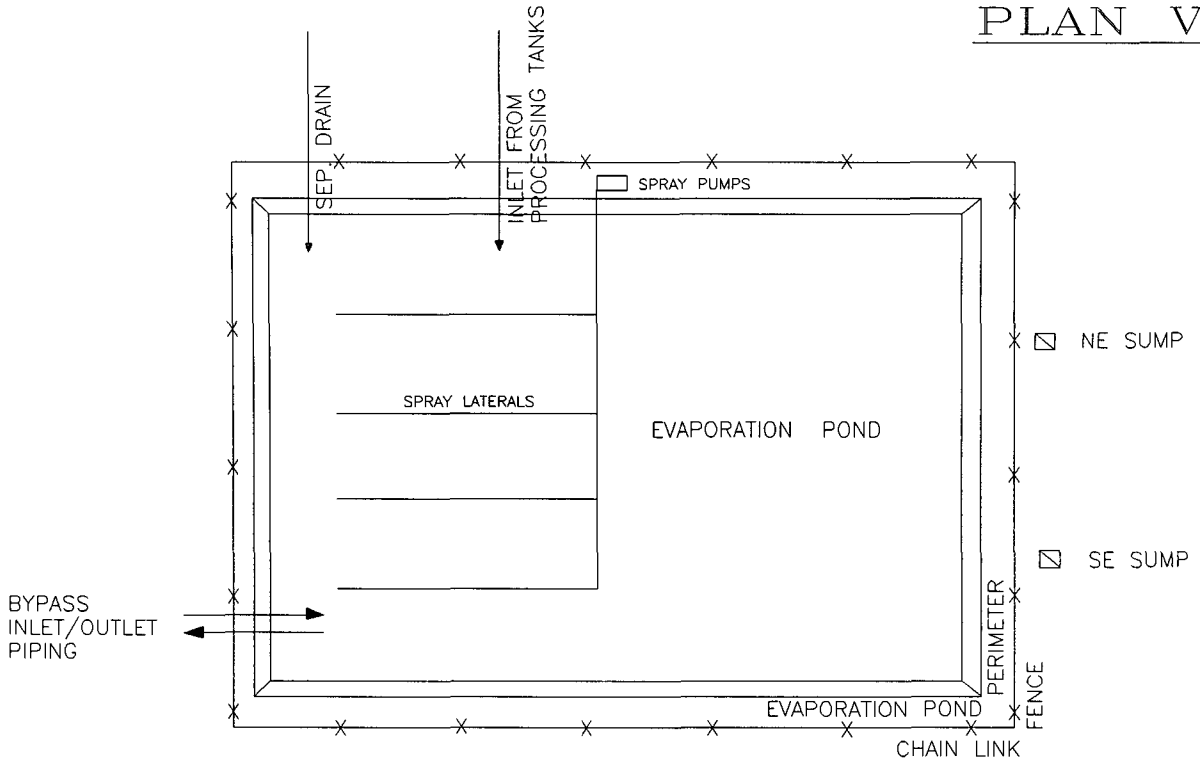
MARCH 1998

BLAGG ENGINEERING, INC.
CONSULTING ENGINEERING SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

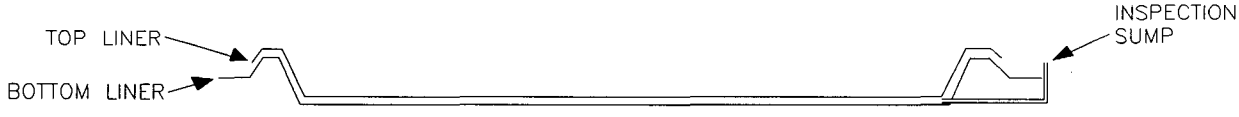
PROCESSING TANK SCHEMATIC

FIGURE 2	DRWN BY: JCB
SNEID3	PROJ MGR: JCB

PLAN VIEW



SIDE VIEW



LEGEND

N

0 200 400 FEET

AMOCO PRODUCTION CO.
SCHNEIDER WASTE MGMT. FAC.
SAN JUAN CO., NEW MEXICO

MARCH 1998

BLAGG ENGINEERING, INC.
CONSULTING ENGINEERING SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

EVAP. POND SCHEMATIC

FIGURE 3	DRWN BY: JCB
SNEID4	PROJ MGR: JCB

AMOCO PRODUCTION COMPANY
SCHNEIDER WASTE MANAGEMENT FACILITY
NMOCD RULE 711 APPLICATION

LABORATORY REPORTS
(Section B.1.j - Groundwater Quality)

ANAITAS ENVIRONMENTAL LABS

API Suite

Blagg Engineering, Inc.

Project ID:	Leeper	Date Reported:	06/10/97
Sample ID:	Well #1	Date Sampled:	05/29/97
Laboratory ID:	6968	Time Sampled:	08:20
Sample Matrix:	Water	Date Received:	05/29/97

Parameter		Analytical Result	Units
General	Lab pH	8.3	s.u.
	Lab Conductivity @ 25° C	1,050	µmhos/cm
	Total Dissolved Solids @ 180°C	675	mg/L
	Total Dissolved Solids (Calc)	667	mg/L
	Specific Gravity	1.002	***
Anions	Total Alkalinity as $CaCO_3$	87.5	mg/L
	Bicarbonate Alkalinity as $CaCO_3$	87.5	mg/L
	Carbonate Alkalinity as $CaCO_3$	NA	mg/L
	Hydroxide Alkalinity as $CaCO_3$	NA	mg/L
	Chloride	87.5	mg/L
	Sulfate	309	mg/L
	Nitrate + Nitrite - N	NA	
	Nitrate - N	NA	
	Nitrite - N	NA	
Cations	Total Hardness as $CaCO_3$	130	mg/L
	Calcium	29.1	mg/L
	Magnesium	14.0	mg/L
	Potassium	6	mg/L
	Sodium	169	mg/L
	Iron	2.19	mg/L
Data Validation			Acceptance Level
	Cation/Anion Difference	2.62	+/- 5 %
	TDS (180):TDS (calculated)	1.0	1.0 - 1.2

Reference U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Review

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Leeper	Report Date:	06/12/97
Sample ID:	Well #1	Date Sampled:	05/29/97
Lab ID:	6968	Date Received:	05/29/97
Sample Matrix:	Water	Date Analyzed:	06/11/97
Preservative:	Cool, HgCl2		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	1.00
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50
Total BTEX	ND	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	97	88 - 110%
Bromofluorobenzene	93	86 - 115%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review