GW - 17

GENERAL CORRESPONDENCE

YEAR(S):

1988-1982

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

Notice is hereby given that pursuant to the New Mexico Water Quality Control Commission Regulations, the following discharge plan renewals have been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-38) New Mexico State University, C. D. Black, Director of Physical Plant Department, Box 30001, Department 3545, Las Cruces, New Mexico 88003, has submitted an application for renewal of its previously approved discharge plan to discharge cooled geothermal water to an unlined pit at its greenhouse facility located in Section 23, Township 23 South, Range 2 East, NMPM, Dona Ana County, New Mexico. Approximately 54,720 gallons per day of cooled geothermal water with a total dissolved solids content of 1775 mg/l will be discharged. The disposed geothermal water will percolate into the ground and will re-enter the geothermal reservoir. Uppermost ground water is geothermal and is found with a TDS of 1636 at a depth of 365 feet.

(GW-17) Acid Engineering, Lloyd Bolding, owner, P. O. Box 753, Kilgore, Texas 75662, has submitted an application for renewal of its previously approved discharge plan for its Hobbs service facility located in Section 36, Township 18 South, Range 37 East, (NMPM) Lea County, New Mexico. Approximately 300 gallons per day of waste water containing 0.1% hydrochloric acid by weight will be discharged to a fiberglass tank. The waste water will be recycled as makeup water in the oil well treatment process. Ground water most likely to be affected by a discharge at the surface is at a depth of approximately 46 feet with a total dissolved content of approximately 1400 mg/l.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 17th day of August. To be published on or before September 2, 1988.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY, Director

S E A L

ACID ENGINEERING, INC.

P.O. BOX 753 KILGORE, TEXAS 75662

August 5, 1988

State of New Mexico
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
Post Office Box 2088
State Land Office Bldg.
Santa Fe, New Mexico 87504

Re: Discharge Plan GW-17

Dear Mr. Boyer:

Acid Engineering, Inc. requests renewal of our waste recycling system for our Hobbs, New Mexico facility. Our present approved plan expires January 6, 1989. There has been no modification or expansion of the subject system since it was installed in 1982. It continues to function with zero loss of any effluent to the environment.

The following information was requested in your July 11, 1988, letter.

1. Exhibit No. 3 is a listing of all the controlled chemicals that are stored and used or sold at our Hobbs Facility. An MSDS is provided for each chemical. Anti-freeze, transmission oils, and most lube oils are stored at our maintenance shop in Denver City, Texas.

2. A schematic diagram of our Hobbs Facility is enclosed and masked as Exhibit 1. Referring to this plat, the marked shop and office are serviced by a 1000 gallon septic tank and lateral lines. This system services two restrooms only. The shop part of the building does not have any floor drains and no waste is generated in this area. Truck and vehicle washing is performed on the wash slab that is detailed in Exhibit #2 and is the only area that waste is generated. This waste is totally collected in the 10,000 gallon fiberglass catch tank and is reused as mix water in our oil well acidizing operation.

3. The only underground piping that handles waste is a 4" PVC drain line from the sand catch tank. This line was installed new in 1982. This line is laying on an 8o grade and is a gravity line. The 3" PVC transfer line is laying on surface and was also installed in 1982. Exhibit 1 shows the location of each line.

4. Contingency plan for inadvertent leaks of spills include the following.

a. Wash slab is curbed and graded to catch any drum spills from the drum chemical storage area located beside wash slab.
b. HCL acid storage is a 10,000 gallon 1/4 inch steel, rubber lined tank. Grade and diking forces all run off into wash slab system.
c. A covered enclosed building, houses all dry chemicals at the Hobbs facility.
d. The fiberglass waste tank is setting in a large caliche pit and the tank is totally exposed. This exposure does not allow an advertent leak to go undetected. a further protective procedure that we practice is frequent recycling of waste to minimize the volume of stored wash up water at any given time.

I have posted a notice in our Hobbs office directing all employees to notify our Hobbs manager, Mr. Roger Jetton, of any and all chemical spills. This notice further directs Mr. Jetton to report each incident to our corporate office and the Oil Conversation Division of the State of New Mexico. I have enclosed a copy of this posting.

5. The final disposition of waste at our Hobbs Facility is as follows.

a. A dumpster service from the City of Hobbs is used to dispose of paper, sacks, small cans, bottles, etc.
b. All used drums are collected and recycled by Delta Distributors, Inc.
c. A. A. Oilfield Service, Inc., located at 3221 W. County Road, Hobbs, New Mexico 882240, is an approved Oilfield Fluids Disposal Service and can be used as a contingency disposal site. This company routinely takes liquid waste from Halliburton, Dowell, Western Co. and others that perform the same type of Oilfield service work as Acid Engineering, Inc.

Acid Engineering, Inc., Hobbs Facility, is supervised by Mr. Roger Jetton. He lives at 928 E. Gold, Hobbs, New Mexico 88240, and his office phone number is (505)392-3447 and his home phone is (505)393 5929. The office number is connected to an answering service that provides 24 hour a day contact with our office.

Thank you for reviewing our renewal application for recycling our Hobbs facility waste. I have tried to completely address all the information you requested in your July 11, 1988, letter. If additional information or clarification is needed, please call me at (214)983-2086.

I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate and complete to the best of my knowledge and belief.

Very truly yours,

ACID ENGINEERING, INC.

Lloyd Bolding

Lloyd Bolding

LB:jm

enclosures

ACID ENGINEERING, INC.

P.O. BOX 753

KILGORE, TEXAS 75662

MEMO

TO: Mr. Roger Jetton

FROM: Lloyd Bolding

DATE: July 15, 1988

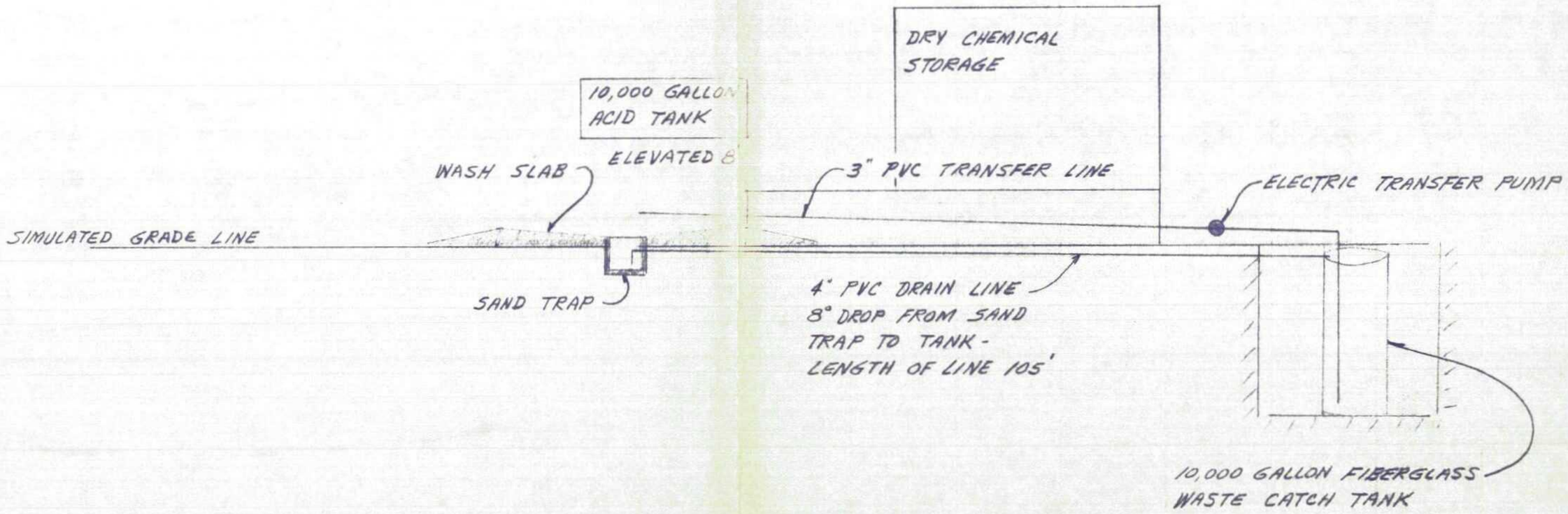
SUBJECT: Chemical Spills

Acid Engineering, Inc., is legally and morally obligated to report all chemical spills to the Oil Conservation Division of the Department of Energy, Minerals and Natural Resources, State of New Mexico. This reporting is to be made as quickly as possible (within a few hours) by calling (505)827-5885 or (505)827-5800.

In addition, any reportable spills will be reported to Bo Bolding at the corporate office in Kilgore.

EXHIBIT 2

NOT TO SCALE



SUBJECT: SALT WATER DISPOSAL WELL ORDER NO. SWD-223

THE APPLICATION OF A. A. OILFIELD SERVICE, INC. FOR A SALT WATER DISPOSAL WELL

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701 (C), A. A. Oilfield Service, Inc. made application to the New Mexico Oil Conservation Division on April 18, 1980, for permission to cmplete for salt water disposal its Southland Royalty State "AB" Well No. 1 located in Unit C of Section 3, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico.

The Division Director finds:

(1) That application has been duly filed under the provisions of Rule 701 (C) of the Division Rules and Regulations;

(2) That satisfactory information has been provided that all offset operators of surface owners have been duly notified;

(3) That the applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 (C) will be met.

(4) That no objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED:

That the applicant herein, A. A. Oilfield Service, Inc., is hereby authorized to complete its Southland Royalty State "AB" Well No. 1 located in Unit C of Section 3, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the San Andres formation at approximately 4897 feet to approximately 4919 feet through 2 3/8 inch plastic lined tubing set in a packer located at approximately 4900 feet.

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That injection pressure shall not exceed 980 pounds per square inch as measured at the surface.

That the operator shall shall notify the supervisor of the Division's Hobbs District Office before injection is commenced through said well;

That the operator shall immediately notify the Supervisor of the Division Hobbs District Office of the failure of the tubing, casing, or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely or

necessary to correct such failure or leakage.

PROVIDED FURTHER: That jurisdiction of this cause is hereby retained by the Division for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after notice and hearing, the Division may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operations in accordance with Rule 704 and 1120 of the Division Rules and Regulations.

APPROVED at Santa Fe, New Mexico, on this 5th day of May, 1980.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Division Director

S E A L

GAMMA RAY/NEUTRON
BHC Acoustilog

COMPANY AZTEC OIL & GAS COMPANY
WELL STATE "AB" NO. 1
FIELD WILDCAT
COUNTY LEA STATE NEW MEXICO
LOCATION 660' FNL & 1980' FWL
SEC 3 TWP 19-S RGE 37-E
Other Services: LL

Permanent Datum G.L. Elev. 3628'
Log Measured from K.B. 11.5 Ft Above Permanent Datum
Drilling Measured from K.B.

Date	6-21-71
Run No.	ONE
Type Log	BHC/AL/GR/N/C
Depth Driller	8123
Depth Logger	8123
Bottom Logged Interval	8120
Top Logged Interval	SURF
Type Fluid in Hole	BRINE-STARCH-OIL
Salinity PPM Cl.	225,000
Density Lb. Gal.	10.0
Level	FULL
Max. Rec. Temp. Deg. F	130
Oper. Rig Time	6 HRS.
Recorded By	HOWE
Witnessed By	MR. DOMALOSON-MR. SMITH

Bore Hole Record: Run No. 1; Bit; From; To 7 7/8 1682 8123
Casing Record: Size 8 5/8; From SURF; To 1682

OIL CONSERVATION COMMISSION
P. O. Box 2045
Hobbs, New Mexico

REMARKS 621 CALIPER RAN WITH ONE ARM REMOVED.
NEUTRON RAN WITH 5 1/4" SLEEVE.

Gamma Ray		Equipment Data	Neutron
Run No.	ONE	Run No	ONE
Tool Model No.	420	Log Type	N/EN
Diam.	3 3/8	Tool Model No	420
Detect. Model No.	RGDA	Diam	3 3/8
Type	S: NT	Detect. Model No	UNDH
Length	[illegible]	Type	P-COUNTER
Dist. to N. Source	[illegible]	Length	4"
		Source Model No.	S16ES
		Serial No	3505
Hoist Truck No.	[illegible]	Spacing	12"
Inst. Truck No.		Type	PU:BE
Tool Serial No.	1620-10	Strength	5 CURIES
	[illegible]-195 626-16	Logging Date	

Run No.	General Depths From	To	Speed Ft./Min.	Gamma Ray T.C. Sec.	Gamma Ray Sens. Settings	Gamma Ray Zero Div. L or R	Gamma Ray API GR Units Per Log Div.	Neutron T.C. Sec.	Neutron Sens. Settings	Neutron Zero Div. L or R	Neutron API N. Units Per Log Div.
1	8123	4980	REC	1	614	0	10	2	224/200	5-L	100
2	4984	SURF	REC	1	614	5	10	2	340/200	5-L	100

GAMMA RAY	DEPTH	ACOUSTILOG T_1 5 R_1 4 R_2 T_2 EPI - THERMAL NEUTRON
6" CALIPER 16"		ACOUSTIC TRAVEL TIME MICROSECONDS PER FOOT: 100 85 70 55 40
GAMMA RAY API GAMMA UNITS 10 API/CD: 0 API 100 API	2"-100 LR SURF	NEUTRON API NEUTRON UNITS 100 API/CD: 500 API 2500 API

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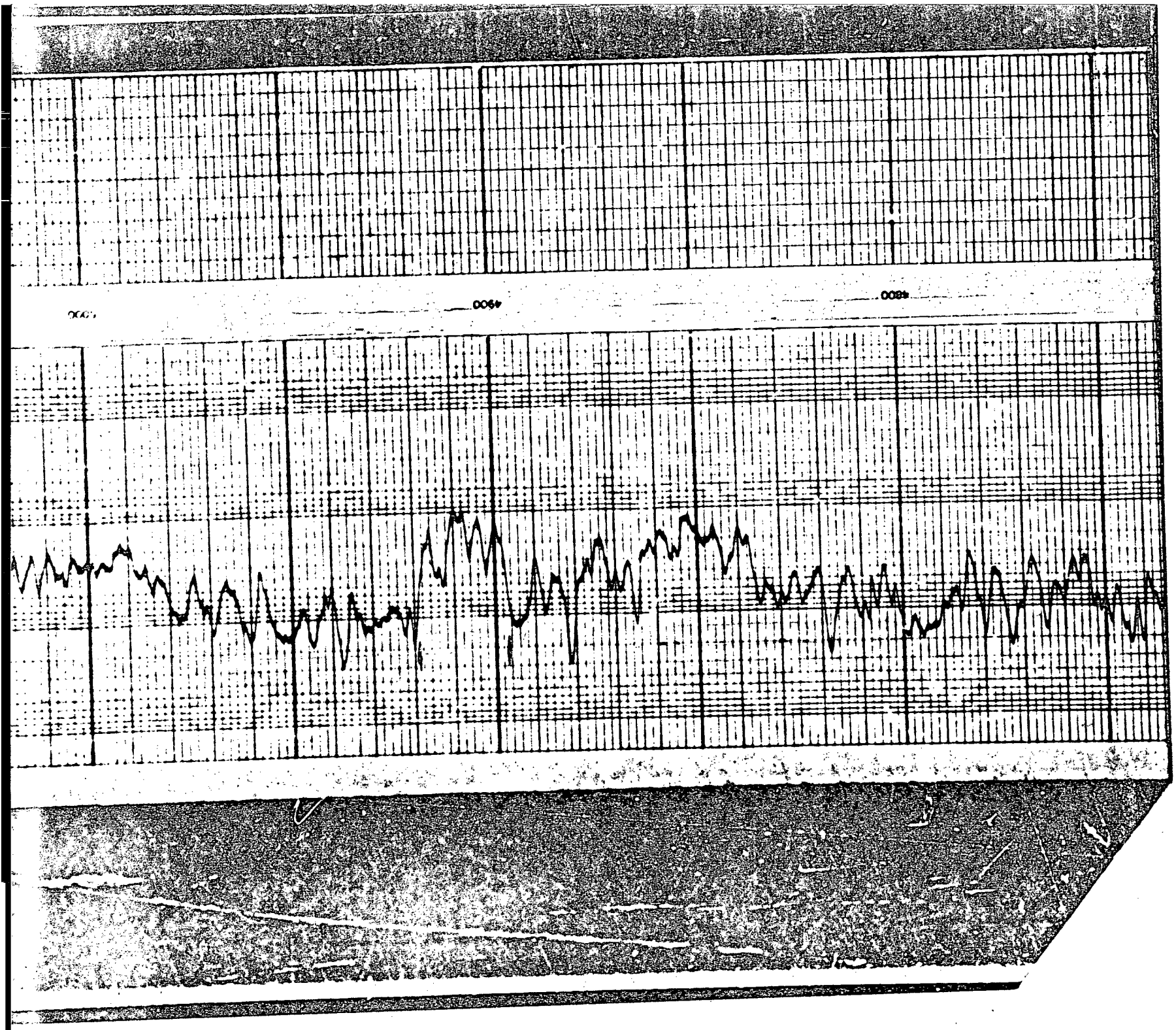


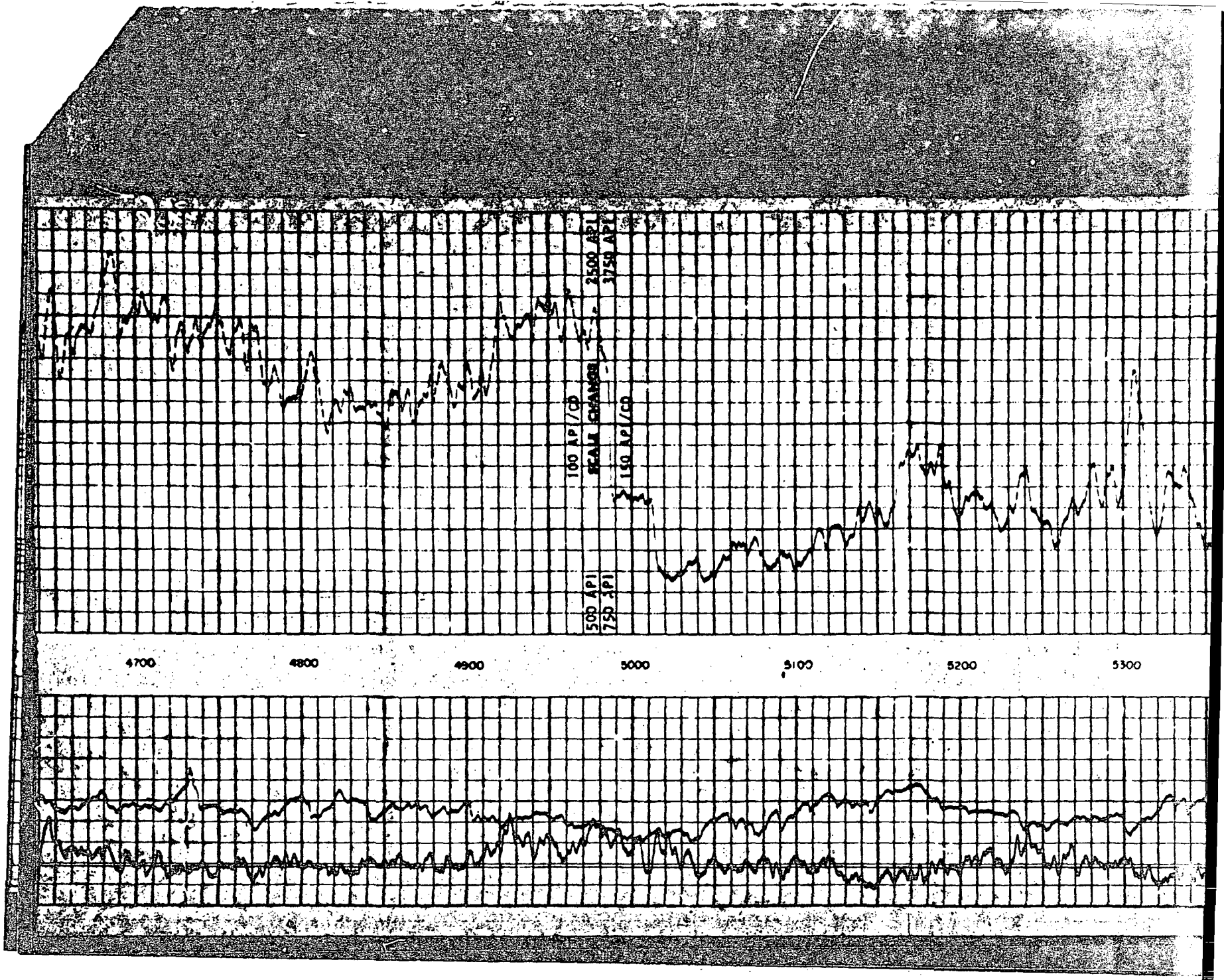
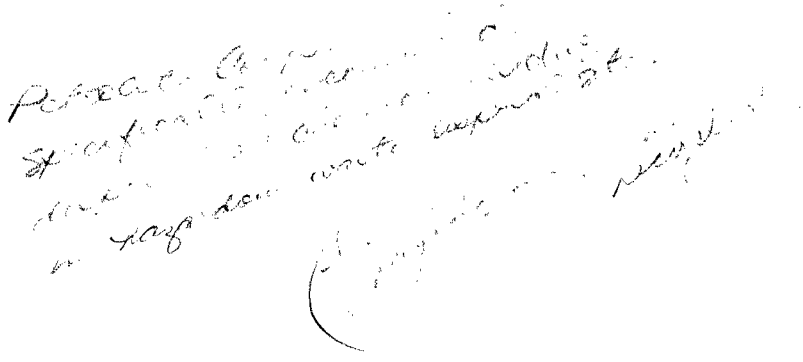

100 API/CD
SCALE CHANGE
150 API/CD
2500 API
3750 API
500 API
750 API
4700
4800
4900
5000
5100
5200
5300

EXHIBIT #3

Chemical List
Hobbs Facility

Product Name	Supplies	Containment
1. Diesel fuel	various supplies	4,000 gal. tank
2. HCL acid 2o Be	Vulcan Chemicals Reagent Chemicals	10,000 gal. tank
3. Scram 2T	Brainard Chemicals	55 gal. drum
4. ASP-322	Nalco Chemical	55 gal. drum
5. Citric acid anh.	Ashland Chemical	55 gal. lined drum
6. Cronox 210	Magna Corporation	55 gal. drum
7. AR-30	Petrolite Corporation	55 gal. drum
8. Enzyme breaker	Chemical Blending Inc.	#5 plastic bags
9. Erythorbic acid	Plizer Chemical	#50 lined bags
10. AY-31	Petrolite Corporation	44 gal. drum
11. Hi Sol 229	Ashland Chemicals	Bulk tank
12. AOG-200	Petrolite Corporation	55 gal. drum
13. Salt	Morton Thikol	#50 sacks
14. AY-21	Petrolite Corporation	55 gal. drum
15. Corexit 7648	Exxon Chemical	55 gal. drum
16. Naphthalene	Ashland Chemicals	#100 sacks
17. Motor oil	various suppliers	55 gal. drums

Note: Duplicate copies of MSDS sheets will be on file at our Hobbs Facility for all controlled chemicals.



Product #1

MATERIAL SAFETY DATA SHEET

Shell

97367 (4-85)

MSDS NUMBER ▶ 52,320-2 PAGE 1

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
SHELL: 713-473-9461 CHEMTREC: 800-424-9300	SHELL: 713-241-4819

ACUTE HEALTH *	FIRE	REACTIVITY	HAZARD RATING ▶
2	2	0	LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4

*For acute and chronic health effects refer to the discussion in Section III

BE SAFE
READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON
(PRODUCT LIABILITY LAW REQUIRES IT)

SECTION I	NAME
PRODUCT ▶	SHELL DIESELINE
CHEMICAL NAME ▶	DIESEL OIL
CHEMICAL FAMILY ▶	PETROLEUM HYDROCARBON
SHELL CODE ▶	31135

SECTION II-A PRODUCT/INGREDIENT

NO.	COMPOSITION	CAS NUMBER	PERCENT
P	SHELL DIESELINE	68334-30-5	100

SECTION II-B ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NOT AVAILABLE		

SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT
BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING LIQUID IS PRACTICALLY NONIRRITATING TO THE EYES.

SKIN CONTACT
BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING LIQUID IS PRESUMED TO BE MODERATELY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SEVERE IRRITATION AND DERMATITIS. MAY CAUSE MILD SKIN SENSITIZATION. RELEASE DURING HIGH PRESSURE USAGE MAY RESULT IN INJECTION OF OIL INTO THE SKIN CAUSING LOCAL NECROSIS.

INHALATION
INHALATION OF VAPORS OR MIST MAY CAUSE MILD IRRITATION TO THE UPPER RESPIRATORY TRACT. HIGH CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM DEPRESSION. INHALATION OF HIGH LEVELS OF MIST MAY RESULT IN CHEMICAL PNEUMONITIS.

INGESTION
INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

SIGNS AND SYMPTOMS
IRRITATION AS NOTED ABOVE. SKIN SENSITIZATION (ALLERGY) MAY BE EVIDENCED BY RASHES, ESPECIALLY HIVES. EARLY TO MODERATE CNS (CENTRAL NERVOUS SYSTEM) DEPRESSION MAY BE EVIDENCED BY GIDDINESS,

HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR. LOCAL NECROSIS IS EVIDENCED BY DELAYED ONSET OF PAIN AND TISSUE DAMAGE A FEW HOURS FOLLOWING INJECTION. ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR.

AGGRAVATED MEDICAL CONDITIONS
PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PREEXISTING SKIN OR LUNG ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS
KIDNEY DAMAGE MAY RESULT FOLLOWING ASPIRATION PNEUMONITIS. THE RESULTS OF ANIMAL BIOASSAYS ON MIDDLE DISTILLATE FUELS SHOW THAT PROLONGED DERMAL CONTACT PRODUCES A WEAK TO MODERATE CARCINOGENIC ACTIVITY.

SEE SECTION VI FOR ADDITIONAL HEALTH INFORMATION.

SECTION IV OCCUPATIONAL EXPOSURE LIMITS

NO.	OSHA PEL/TWA	OSHA PEL/CEILING	ACGIH TLV/TWA	ACGIH TLV/STEL	OTHER

NO OSHA PEL OR ACGIH TLV HAS BEEN ESTABLISHED.

SECTION V EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
FLUSH EYES WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

SKIN CONTACT
REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED. IF MATERIAL IS INJECTED UNDER THE SKIN, GET MEDICAL ATTENTION PROMPTLY TO PREVENT SERIOUS DAMAGE; DO NOT WAIT FOR SYMPTOMS TO DEVELOP.

INHALATION
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION
DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN
IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VI SUPPLEMENTAL INFORMATION

REPEATED DERMAL APPLICATION OF HIGH LEVELS OF MIDDLE DISTILLATE FUELS IN EXPERIMENTAL ANIMALS HAS PRODUCED EXTREMELY SEVERE IRRITATION TO CORROSIVE ACTION ON THE SKIN. VARYING DEGREES OF LIVER AND KIDNEY DAMAGE WERE NOTED IN THESE STUDIES, INCLUDING CONGESTION, ENLARGEMENT, MOTTLING, AND MULTIFOCAL NECROSIS.

MIDDLE DISTILLATE FUELS HAVE BEEN DEMONSTRATED TO CAUSE CHROMOSOME DAMAGE IN THE IN VIVO RAT BONE MARROW CYTOGENETICS ASSAY, AND MUTAGENIC IN THE L5178Y MOUSE LYMPHOMA ASSAY.

SECTION VII PHYSICAL DATA

BOILING POINT: 325 (DEG F)

SPECIFIC GRAVITY: 0.8762 (H2O=1)

VAPOR PRESSURE: NOT AVAILABLE (MM HG)

MELTING POINT: NOT AVAILABLE (DEG F)

SOLUBILITY: NEGLIGIBLE (IN WATER)

VAPOR DENSITY: >1 (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

APPEARANCE AND ODOR: YELLOW LIQUID; STRONG HYDROCARBON ODOR.

SECTION VIII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:
130 DEG F (PMCC) MIN.

FLAMMABLE LIMITS /% VOLUME IN AIR
LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS
CAUTION. COMBUSTIBLE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINTED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER. IN THE CASE OF LARGE FIRES, ALSO COOL SURROUNDING EQUIPMENT AND STRUCTURES WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS
CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION IX REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X EMPLOYEE PROTECTION

RESPIRATORY PROTECTION
USE A NIOSH-APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134, USE EITHER A FULL-FACE, ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

PROTECTIVE CLOTHING
NO SPECIAL EYE PROTECTION IS ROUTINELY NECESSARY. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

DDITIONAL PROTECTIVE MEASURES
E EXPLOSION-PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS.

CTION XI ENVIRONMENTAL PROTECTION

PILL OR LEAK PROCEDURES
UTION. COMBUSTIBLE. *** LARGE SPILLS *** ELIMINATE POTENTIAL SOURCES OF IGNITION. WEAR PROPRIATE RESPIRATOR AND OTHER PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO). DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP SIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING NTAINERS AND SEAL TIGHTLY FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; SPOSE OF FLUSH SOLUTION AS ABOVE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND ACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL.

STE DISPOSAL
DER EPA - RCRA (40 CFR 261.21), IF THIS PRODUCT BECOMES A WASTE MATERIAL, IT WOULD BE IGNITABLE ZARDOUS WASTE, HAZARDOUS WASTE NUMBER D001. REFER TO LATEST EPA OR STATE REGULATIONS REGARDING OPER DISPOSAL.

VIRONMENTAL HAZARDS
DER EPA-CWA, THIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311. SPILLS INTO OR LEADING TO RFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

CTION XII SPECIAL PRECAUTIONS

EP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY NITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHTS, CIGARETTES D TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY CUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE; FLASH-FIRE CAN RESULT. EP CONTAINERS CLOSED WHEN NOT IN USE. USE (ONLY) WITH ADEQUATE VENTILATION. CONTAINERS, EVEN OSE THAT HAVE BEEN EMPTIED, CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR RFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, INKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

CTION XIII TRANSPORTATION REQUIREMENTS

PARTMENT OF TRANSPORTATION CLASSIFICATION: COMBUSTIBLE LIQUID
D.T. PROPER SHIPPING NAME: FUEL OIL, NA 1993

CTION XIV OTHER REGULATORY CONTROLS

S PRODUCT IS LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: OCTOBER 16, 1985

JOHN P. SEPESI

BE SAFE

READ OUR PRODUCT
SAFETY INFORMATION ...AND PASS IT ON
(PRODUCT LIABILITY LAW
REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX 77210

Product # 2

Vulcan CHEMICALS

MATERIAL SAFETY DATA SHEET

24 Hour Emergency Phone (316) 524-5751

Division of Vulcan Materials Company / P.O. Box 7689 • Birmingham, AL 35253-0689

I – IDENTIFICATION

CHEMICAL NAME	CHEMICAL FORMULA	MOLECULAR WEIGHT
Hydrogen Chloride, Aqueous Solution	HCl	36.46

TRADE NAME
Muriatic Acid, 20° and 22° Baume, Technical, Industrial, and Commercial Grade

SYNONYMS	DOT IDENTIFICATION NO.
Hydrochloric Acid	UN 1789

II – PRODUCT AND COMPONENT DATA

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO.	% (Approx)	ACGIH TLV-TWA
Hydrogen Chloride	7647-01-0	35	5 ppm Ceiling

III – PHYSICAL DATA

APPEARANCE AND ODOR Clear, colorless liquid with pungent, irritating odor	SPECIFIC GRAVITY 20° Be: 1.1600 @ 15.6/15.6°C; 22° Be: 1.1789 @ 15.6/15.6°C
BOILING POINT 150°F - 230°F (65.6°C - 110.0°C)	VAPOR DENSITY IN AIR (Air = 1) 1.27
VAPOR PRESSURE 78 mm Hg @ 20°C	% VOLATILE, BY VOLUME 35
EVAPORATION RATE (Butyl Acetate = 1) <1	SOLUBILITY IN WATER Complete

IV – REACTIVITY DATA

STABILITY	CONDITIONS TO AVOID
Stable	Contact with strong bases can cause violent reaction generating large amounts of heat. Reactions with metals can release flammable hydrogen gas.

INCOMPATIBILITY (Materials to avoid)
Bases, metals, mercuric sulfate, perchloric acid, carbides of calcium, cesium, rubidium, acetylides of cesium and rubidium, phosphides of calcium and uranium and lithium silicide.

HAZARDOUS DECOMPOSITION PRODUCTS

None (Refer to Conditions to Avoid)

HAZARDOUS POLYMERIZATION

Will not occur

V – FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS IN AIR
None	None

EXTINGUISHING AGENTS

N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS

Firefighters should wear self contained positive-pressure breathing apparatus and avoid skin contact. Refer to Reactivity Data - Section IV.

VI – TOXICITY AND FIRST AID

EXPOSURE LIMITS (When exposure to this product and other chemicals is concurrent, the TLV must be defined in the workplace.)

ACGIH: 5 ppm Ceiling
OSHA: 5 ppm Ceiling

Effects described in this section are believed not to occur if exposures are maintained at or below appropriate TLVs.
Because of the wide variation in individual susceptibility, TLVs may not be applicable to all persons and those with medical conditions listed below.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Asthma, bronchitis, emphysema and other lung conditions and chronic nose, sinus or throat conditions. Exposure may aggravate existing skin and/or eye conditions on contact.

ACUTE TOXICITY Primary route(s) of exposure: ☒ Inhalation ☒ Skin Absorption ☐ Ingestion

Inhalation: Hydrogen chloride gas, mist and vapor can cause irritation of respiratory tract, with burning, choking, coughing, headaches and rapid heartbeat. Levels of 10 to 35 ppm can cause irritation of throat and 50-100 ppm is nearly unbearable for 1 hour. Inflammation, destruction of nasal passages and breathing difficulties can occur with higher concentrations and may be delayed in onset. 1000-2000 ppm can be fatal.

Skin: Liquid hydrogen chloride or concentrated vapors can rapidly cause burning of skin. Repeated or prolonged contact with dilute solutions, and concentrated vapors, can cause irritation and dermatitis.

Eyes: Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage including blindness.

Ingestion: Can cause severe burns of mouth, esophagus and stomach. Nausea, pain and vomiting frequently occur. Depending upon amount swallowed, holes in the intestional tract, kidney inflammation, shock and death can occur.

FIRST AID

Inhalation: Move person to fresh air. If breathing stops, administer artificial respiration. Get medical attention immediately.

Skin: Remove contaminated clothing and wash skin thoroughly for a minimum of 15 minutes with large quantities of water (preferably a safety shower). Get medical attention immediately.

Eyes: Wash eyes immediately with large amounts of water (preferably eye wash fountain), lifting the upper and lower eyelids and rotating eyeball. Continue washing for a minimum of 15 minutes. Get medical attention immediately.

Ingestion: If conscious, give large quantities of water. Do not induce vomiting. Get medical attention immediately.

CHRONIC TOXICITY

Exposures of 100 ppm for 6 hours a day for 50 days caused only slight unrest and irritation to the eyes and nose of rabbits, guinea pigs and pigeons. The hemoglobin content of the blood was also slightly diminished. Monkeys receiving twenty exposures of 33 ppm for 6 hours did not display any adverse effects. Higher exposures (unspecified) have caused weight loss which paralleled the severity of exposure. In humans long term overexposures has been associated with erosion of the teeth.

Carcinogenicity No standard carcinogenicity studies for hydrogen chloride were identified. Two studies on rats were conducted to determine if hydrogen chloride increased the formation of nasal tumors or increased the carcinogenic potential of formaldehyde. In both studies the rats were exposed to 10 ppm hydrogen chloride, 6 hours per day, 5 days a week. One study lasted 84 weeks while the other lasted the animals' lifetime. Hydrogen chloride did not cause an increase in nasal tumors and did not increase the carcinogenicity of formaldehyde. Hydrogen chloride is not listed on the IARC, NTP or OSHA carcinogen lists.

Reproductive Toxicity No studies were identified relative to hydrogen chloride and reproductive toxicity.

VII – PERSONAL PROTECTION AND CONTROLS

RESPIRATORY PROTECTION

For vapor concentrations which exceeds or are likely to exceed 5 ppm, an approved full face respirator with acid gas canister is acceptable. Approved self-contained breathing apparatus with full face piece should be worn when air concentrations exceed 100 ppm or during leaks and/or emergencies. Follow any applicable respirator use standards or regulations.

VENTILATION

As necessary to maintain air concentration below 5 ppm, at all times.

SKIN PROTECTION

Wear neoprene or PVC rain suit, boots, and gloves.

EYE PROTECTION

Wear chemical goggles which are splashproof and face shield.

HYGIENE Avoid contact with skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking, or using restroom. Any protective clothing, or shoes which become contaminated with hydrochloric acid should be removed immediately, and thoroughly laundered before wearing again.

OTHER CONTROL MEASURES Safety showers and eyewash station must be available in immediate area. To determine the exposure level(s), monitoring should be performed regularly.
NOTE: Protective equipment and clothing should be selected, used, and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer or the Vulcan Chemicals Technical Service Department.

VIII – STORAGE AND HANDLING PRECAUTIONS

Follow protective controls set forth in Section VII when handling this product.

Store in closed, properly labeled, rubber-lined steel, acid-resistant plastic, or glass containers. Do not store near strong alkalies or other reactive materials.

Do not remove or deface label or tag.

IX – SPILL LEAK AND DISPOSAL PRACTICES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate immediate area where concentrated fumes are present. Cleanup personnel must wear proper protective equipment (see Section VII). Completely contain spilled acid with dikes, etc., and prevent run-off into ground and surface waters or into sewers. Neutralize with soda ash or dilute caustic soda. Neutralization products, both liquid and solid, must be recovered for proper disposal.

WASTE DISPOSAL METHOD

Recovered solids or liquids may be sent to a licensed reclaimer or disposed of in a permitted waste management facility. Consult federal, state, or local disposal authorities for approved procedures.

X – TRANSPORTATION

DOT HAZARD CLASSIFICATION

Corrosive

PLACARD REQUIRED

Corrosive

LABEL REQUIRED

Corrosive. Label as required by OSHA Hazard Communication Standard, and any applicable state and local regulations.

Medical Emergencies

Call collect 24 hours a day for emergency toxicological information 415/821-5338

Other Emergency information

Call 316/524-5751 (24 hours)

For any other information contact:

Vulcan Chemicals
Technical Service Department
P. O. Box 7689
Birmingham, AL 35253-0689
205/877-3459
8 AM to 5 PM Central Time
Monday through Friday

DATE OF PREPARATION: November 1, 1987

Product # 3

Material Safety Data Sheet

SCRAM or SCRAM ZT
GYPSUM SCALE SOLVENT

Identity (Trade Name As Used On Label)
- - -

Manufacturer
Acid Engineering, Inc.

MSDS Number*
- - -

Address
Drawer LL

CAS Number*

Denver City, Texas 79323

June 8, 1988

Date Prepared

Phone Number (For Information)
806-592-3547

L. W. Jones

Prepared By*

Emergency Phone Number Same Telex*

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS — Chemical Name & Common Names (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	%*	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED
Aqueous solution of caustic soda or		ND*	ND	ND
caustic potash with alkali metal salts				
of organic and inorganic acids				
Free hydroxide alkalinity about				
56 g/l as $CaCO_3$				
* ND = not determined				
Non-Hazardous Ingredients				
TOTAL	100			

SECTION 2 - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point	Similar to water	Specific Gravity (H_2O = 1)	1.14 typical
Vapor Pressure (mm Hg and Temperature)	Similar to water	Melting Point	liquid
Vapor Density (Air = 1)	Similar to water	Evaporation Rate (_____ = 1)	Similar to water
Solubility in Water	Soluble	Water Reactive	Non

Appearance and Odor: Clear light yellow with faint petroleum-like odor

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method Used	Auto-Ignition Temperature	Flammability Limits in Air % by Volume	LEL	UEL
NA*	NA	NA	ND	ND

Extinguisher Media: NA

Special Fire Fighting Procedures: Non-flammable

Unusual Fire and Explosion Hazards: NONE

* NA = not applicable

*Optional

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY
☒ Stable
☐ Unstable

Conditions To Avoid

Incompatability (Materials to Avoid): Reacts with acids

Hazardous Decomposition Products: None known.

HAZARDOUS POLYMERIZATION
☐ May Occur
☒ Will Not Occur

Conditions To Avoid

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY
☐ Inhalation ☒ Skin Absorption ☒ Ingestion ☐ Not Hazardous

CARCINOGEN LISTED IN ND
☐ NTP ☐ IARC Monograph ☐ OSHA ☐ Not Listed

HEALTH HAZARDS

Acute: Harmful if swallowed. Can damage eyes and skin.

Chronic: ND

Signs and Symptoms of Exposure: Burning sensation

Medical Conditions Generally Aggravated by Exposure: ND

EMERGENCY FIRST AID PROCEDURES - *Seek medical assistance for further treatment, observation and support if necessary.*

Eye Contact: Immediately flush with water for at least 15 minutes, occasionally lifting upper and lower lids. Get medical attention immediately.

Skin Contact: Immediately flush with water followed by soap and water followed by additional water flush. Remove and wash contaminated clothing.

Inhalation: Not likely to cause damage if used in a well ventilated area. If affected, move to fresh air.

Ingestion: Give large quantities of water or milk, follow with citrus juice and water.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Specify Type): Not required in ventilated areas

Protective Gloves: Required

Eye Protection: Required

VENTILATION TO BE USED
☒ Local Exhaust ☐ Mechanical (general) ☐ Special
☐ Other (specify)

Other Protective Clothing and Equipment: As required to prevent eye and skin contact.

Hygienic Work Practices: Usual with industrial chemicals.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE / LEAK PROCEDURES

Steps to be Taken If Material Is Spilled Or Released: Wear chemical eye goggles and skin protection while shutting off leaks. Confine and neutralize with dilute acid such as 5-10% hydrochloric

Waste Disposal Methods: Neutralize and dilute with water prior to disposal according to local regulations.

Precautions to be Taken in Handling and Storage: Usual for moderately alkaline industrial chemicals.

Other Precautions and/or Special Hazards: —

NFPA Rating* Health___ Flammability___ Reactivity___ Special___

HMIS Rating* Health___ Flammability___ Reactivity___ Personal Protection___

*Optional

SECTION 10 PERSONAL PROTECTION EQUIPMENT (CONTINUED)

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors, mists or aerosols may be released.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles (ANSI Z 87.1 requirements and selection of gloves, goggles, shoes, etc.) when attaching feeding equipment or doing maintenance.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (312-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, (i.e. D001 through D017) nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified before disposal to a sanitary landfill. Can be incinerated in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

AQUATIC DATA: Based upon a similar product.

96 hour static acute LC50 to Bluegill Sunfish = Greater than 100 ppm, less than 1,000 ppm

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60566-1024
AREA 312-961-9500

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

DENSITY:	7.6 lbs/gal.	
SOLUBILITY IN WATER:	Dispersible	
SPECIFIC GRAVITY:	0.91 @ 60 Degrees F	
pH (AT 20%):	11	ASTM E-70
POUR POINT:	Less than -60 Degrees F	ASTM D-97
VISCOSITY:	5.4 cps/45 SUS @ 60 Degrees F	ASTM D-445
FLASH POINT:	145 Degrees F (TCC)	ASTM D-56
VAPOR PRESSURE:	0 mm Hg @ 100 Degrees F	ASTM D-323
PERCENT VOLATILE BY WEIGHT:	1 @ 75 Degrees F	

NOTE: These physical properties are typical values for this product.

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: 145 Degrees F (TCC) ASTM D-56

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, alcohol foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drenching the burning material.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2 may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection is not normally needed since the volatility and toxicity are low. If significant vapors, mists or aerosols are generated, wear a NIOSH approved or equivalent respirator, (ANSI Z 88.2, 1980 for requirements and selection).

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60566-1024
AREA 312-961-9500

SECTION 14. REGULATORY INFORMATION (CONTINUED)

emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever is less, of an extremely hazardous substance.

After October 17, 1989, MSDS(s), or a list of product names for all hazardous substances between zero (0) and 10,000 pounds, not previously reported, must be submitted.

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard
-- Delayed (chronic) health hazard
XX Fire hazard
-- Sudden release of pressure hazard
-- Reactive hazard

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product contains naphthalene, which appear(s) on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
If this product becomes a waste, it does not meet the criteria of a hazardous waste.

FEDERAL WATER POLLUTION CONTROL ACT, Clean Water Act, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
This product contains the following ingredient(s) covered by the Clean Water Act:

SECTION 12 ENVIRONMENTAL INFORMATION (CONTINUED)

96 hour static acute LC50 to Rainbow Trout = 135 ppm

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - COMBUSTIBLE LIQUID, N.O.S. NA 1993
CONTAINS - AROMATIC HYDROCARBONS,
NAPHTHALENE

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.

Ethoxylated nonylphenol - Moderate eye irritant
Heavy aromatic naphtha - Skin irritant
Naphthalene - Irritant

Naphthalene = TWA 10 ppm, STEL 15 ppm ACGIH/TLV
50 mg/m3, 75 mg/m3 ACGIH/TLV

Naphthalene = PEL 10 ppm, 50 mg/m3 OSHA/TLV

Heavy aromatic naphtha = 100 ppm TLV
Manufacturer's recommendation

CERCLA/SUPERFUND, 40 CFR 117, 302:
This product contains naphthalene, a Reportable Quantity (RQ) substance and if 1,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60566-1024
AREA 312-961-9500

Product #4

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT NALCO ASP-322 NONEMULSIFIER

Emergency Telephone Number
Medical (312) 920-1510 (24 hours)

SECTION 17 BIBLIOGRAPHY (CONTINUED)

Nostrand Reinhold Company, N.Y., 6th edition, 1984.

IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO MAN, Geneva: World Health Organization, International Agency for Research on Cancer, 1972-1977.

PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 3rd edition, Vol. 2 A-C, 1981.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.

PREPARED BY: John J. Kasper, MSc., Manager Product Safety
DATE CHANGED: 01/13/88 DATE PRINTED: 01/19/88

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60566-1024
AREA 312-961-9500

SECTION 14 REGULATORY INFORMATION (CONTINUED)

Naphthalene - Section 307, 311

CLEAN AIR ACT, 40 CFR 60, Section 111, 40 CFR 61, Section 112:
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
Regulated in those states using the TLV for naphthalene as a criteria for listing.

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillian Publishing Company, Inc., N. Y., 2nd edition, 1980.

CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 1981.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van

Product #5

72-62-7820-01

MATERIAL SAFETY DATA SHEET

DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

Ashland®

001539 **CITRIC AC ANH USP/FCC FNGR 50#**

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

****

Product Name: CITRIC AC ANH USP/FCC FNGR 50#

Data Sheet No: 0033630-001
Prepared: 03/04/86
Supersedes: 02/28/85

ACID ENGINEERING
DRAWER LL
DENVER CITY TX 79323

05 50 039 0098850-004

PRODUCT: 3191045
INVOICE: 577321
INVOICE DATE: 06/21/88
TO: ACID ENGINEERING
WEST HWY 180
HOBBS NM 88240

ATTN: PLANT MGR./SAFETY DIR.

SECTION I - PRODUCT IDENTIFICATION

General or Generic ID: ORGANIC ACID

DOT Hazard Classification: NOT APPLICABLE

SECTION II - COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS ARE IDENTIFIED IN THIS SECTION
SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
CITRIC ACID CAS #: 77-92-9	100			(1)

Notes:

(1) PEL/TLV NOT ESTABLISHED FOR THIS MATERIAL

SECTION III - PHYSICAL DATA

Boiling Point	NOT APPLICABLE
Vapor Pressure	NOT APPLICABLE
Specific Vapor Density	NOT APPLICABLE
Specific Gravity	1.540 @ 68.00 Deg F (20.00 Deg C)
Percent Volatiles	NOT APPLICABLE
Evaporation Rate	NOT APPLICABLE

SECTION IV - FIRE AND EXPLOSION INFORMATION

FLASH POINT NOT APPLICABLE

EXPLOSIVE LIMIT UNAVAILABLE

EXTINGUISHING MEDIA: WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: NOT APPLICABLE

SECTION V - HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

EFFECTS OF ACUTE OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE IRRITATION.
SKIN - MAY CAUSE IRRITATION.
BREATHING - OF DUST CAN CAUSE IRRITATION OF NASAL AND RESPIRATORY PASSAGES.
SWALLOWING - MAY CAUSE GASTROINTESTINAL IRRITATION.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: IMMEDIATELY DRINK TWO GLASSES OF WATER AND INDUCE VOMITING BY EITHER GIVING IPECAC SYRUP OR BY PLACING FINGER AT BACK OF THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

IF BREATHED: REMOVE INDIVIDUAL TO FRESH AIR.

CONTINUED ON PAGE: 2

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH:, STRONG ALKALIES.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: SWEEP UP MATERIAL FOR DISPOSAL OR RECOVERY.

LARGE SPILL: SHOVEL MATERIAL INTO CONTAINERS. THOROUGHLY SWEEP AREA OF SPILL TO CLEAN UP ANY RESIDUAL MATERIAL.

WASTE DISPOSAL METHOD:

SMALL SPILL: PACKAGE MATERIAL IN PAPER AND BURN IN AN INCINERATOR IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: DESTROY BY INCINERATION IN ACCORDANCE WITH APPLICABLE REGULATIONS.

SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF NEEDED USE A NIOSH/MSHA JOINTLY APPROVED DUST RESPIRATOR.(ASK YOUR SAFETY EQUIPMENT SUPPLIER)

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW LEVEL OF OVEREXPOSURE (FROM KNOWN, SUSPECTED OR APPARENT ADVERSE EFFECTS).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NEOPRENE, NITRILE RUBBER, POLYVINYL CHLORIDE

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: NORMAL WORK CLOTHING COVERING ARMS AND LEGS.

SECTION IX - SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED.SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

Product #6

U.S. DEPARTMENT OF LABOR — OMB No. 44R1307

Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME: MAGNA CORPORATION	EMERGENCY TELEPHONE NO.: (713) 795-4270
ADDRESS (Number, Street, City, State, and ZIP Code): 2434 HOLMES ROAD, HOUSTON, TEXAS 77051	
CHEMICAL NAME AND SYNONYMS:	TRADE NAME AND SYNONYMS: CRONOX 210
CHEMICAL FAMILY: Multiple Blend	FORMULA: INHIBITOR - CORROSION

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Propargyl Alcohol (Skin)	8-10	1ppm
Isopropyl Alcohol	8-10	400ppm
Methyl Alcohol	8-10	200ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1)	0.95
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	Insoluble		
APPEARANCE AND ODOR	Amber Liquid - Alcohol Odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): 71°F (TCC)	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA: Water spray, Foam, Dry Chemical or Carbon Dioxide.			
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus and full protective clothing.			
UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable! Keep away from heat, sparks and open flame.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Not available.

EFFECTS OF OVEREXPOSURE: Acetylenic alcohol vapors are toxic. Liquid is rapidly absorbed through skin and irritating to eyes.

EMERGENCY AND FIRST AID PROCEDURES: For eye or skin contact, flush with water for 15 minutes and consult a physician. No known antidote. Treat symptomatically. Launder clothing before reuse.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	XX	Avoid heat, sparks and open flame.

INCOMPATABILITY *(Materials to avoid)*: Avoid contact with acids and strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride @ high temperatures.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all sources of ignition. Flush spill area with water spray or absorb on sawdust and incinerate.

WASTE DISPOSAL METHOD: Incinerate in an approved incinerator equipped with scrubber and afterburner.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*: Use with adequate ventilation.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)* Yes	OTHER

PROTECTIVE GLOVES: Rubber	EYE PROTECTION: Chemical goggles and face shield.

OTHER PROTECTIVE EQUIPMENT: Rubber boots and apron

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid breathing vapors. Keep off skin. Keep container closed and away from heat, sparks and open flame.

OTHER PRECAUTIONS: Do not transfer to improperly marked containers.

MATERIAL SAFETY DATA SHEET

Product # 7

PETROLITE CORPORATION
369 MARSHALL AVE.
ST.LOUIS MO 63119 U.S.A

REVISION DATE: 04/15/88
EMERGENCY PHONE: 1-314-961-3500
CHEMTREC EMER NO: 1-800-424-9300

****

SECTION 1 PRODUCT IDENTIFICATION

PRODUCT: AR 0030 NE TRADE NAME: N/A LABEL: 059 000 000

(IF HAZARDOUS PER D.O.T. CFR TITLE 49)

SHIPPING NAME: Flammable Liquid, N.O.S.

HAZARD CLASS: Flammable Liquid ID#: UN1993

CHEMICAL DESCRIPTION

OXYALKYLATED ALCOHOLS, POLYOXYALKYLENE GLYCOLS, OXYALKYLATED ALKYLPHENOLIC RESINS IN WATER, METHANOL, AND AROMATIC HYDROCARBONS.

****

SECTION 2 HAZARDOUS INGREDIENTS

CAS NUMBER	MATERIAL	%	EXPOSURE LIMITS
00067-56-1	Methanol		ACGIH TLV: 200 ppm OSHA PEL: 200 ppm ACGIH STEL: 250 ppm
64742-94-5	Heavy Aromatic Naphtha		RECOMMENDED: 25 ppm

Specific chemical identity of unlisted ingredients is being withheld for confidential business purposes.

****

SECTION 3 PHYSICAL DATA

SPECIFIC GRAVITY(H20 = 1.0@60 F): 0.982 VOLATILITY: >65

VAPOR PRESSURE: Not Established SOL. IN WATER: Dispersable

APPEARANCE AND ODOR: Amber liquid. Alcohol/aromatic odor.

****

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 84 F FLAMMABLE LIMITS: Not Established

FLASH METHOD:

SFCC ASTM D-3828

EXTINGUISHING MEDIA:

Use water spray or fog, alcohol-type foam, dry chemical or CO2.

CONTINUED ON PAGE: 2

***CONTINUATION OF AR 0030 ***

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

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Flammable liquid, vapors of which can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

****

SECTION 5 HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

INHALATION:
Prolonged or excessive exposures may result in respiratory irritation, headache and nausea. In extreme cases may cause CNS depression leading to dizziness, drowsiness and narcosis.
Prolonged exposure to methanol vapor may cause shortness of breath and a sense of drunkeness. In extreme cases, occular damage and visual disturbances may occur.

SKIN AND EYE CONTACT:
May cause mild to moderate skin irritation and dermatitis on prolonged contact. Contact with eyes may cause moderate irritation and mild but reversible eye injury.

INGESTION:
May cause severe gastrointestinal distress with nausea, vomiting and diarrhea. Aspiration into lungs may cause pulmonary edema and chemical pneumonitis. May be readily absorbed through the gastrointestinal tract.
Ingestion of methanol may result in a feeling of intoxication and can cause visual disturbances and, in extreme cases, occular damage.

EMERGENCY AND FIRST AID PROCEDURES:
Wash skin thoroughly with soap and water. If rash or irritation develops, consult a physician. Launder clothing before reuse. If in eyes, irrigate with flowing water immediately and continuously for fifteen minutes. Consult a physician promptly.
If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.
Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Consult a physician immediately.
NOTE TO PHYSICIAN: Administer activated carbon if indicated.

CONTINUED ON PAGE: 3

***CONTINUATION OF AR 0030 ***

****

SECTION 6 REACTIVITY DATA

STABILITY:

Stable under normal conditions of storage and use.

INCOMPATIBILITY:

Keep away from strong oxidizing agents, heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS:

None known.

HAZARDOUS POLYMERIZATION:

Will not occur.

****

SECTION 7 SPILL AND LEAK PROCEDURES

IF MATERIAL IS SPILLED OR RELEASED:

Small spill - Absorb on paper, cloth or other material. Large spill - Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container. Cover residue with dirt, or suitable chemical adsorbent. Use personal protective equipment as necessary.

DISPOSAL METHOD:

Place chemical residues and contaminated adsorbent materials into a suitable waste container and take to an approved hazardous waste disposal site. Dispose of all residues in accordance with applicable waste management regulations.

DECONTAMINATION PROCEDURES:

Not appropriate.

****

SECTION 8 SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

When concentrations exceed the exposure limits specified. use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor of the respirator may be exceeded, use of a self-contained breathing unit may be necessary.

VENTILATION:

General ventilation should be provided to maintain ambient concentrations below nuisance levels. Local ventilation of emmission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

CONTINUED ON PAGE: 4

***CONTINUATION OF AR 0030 ***

PROTECTIVE CLOTHING:

Synthetic gloves (such as rubber, neoprene, nitrile or viton) and chemical goggles should be used to prevent skin and eye contact.

****

SECTION 9 SPECIAL PRECAUTIONS

Flammable liquid. Avoid heat, sparks and open flames. Avoid breathing of vapors and contact with eyes, skin or clothing. Keep container closed when not in use. Hazardous product residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning.

****

Although the information and recommendations set forth herein are believed to be correct as of the date hereof, Petrolite makes no representations to the accuracy of such information and recommendations. It is the user's responsibility to determine the suitability and completeness of such information and recommendation for its own particular use.Petrolite shall not be responsible for any direct,indirect,incidental or consequential damages of whatsoever nature resulting from the publication,use of or reliance upon such information and recommendations.

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Product #8

CHEMICAL BLENDING SERVICES, INC. PHONE: 915-697-8171
5000 W. INDUSTRIAL
MIDLAND, TEXAS 79703
MATERIAL SAFETY DATA SHEET

SECTION I GENERAL INFORMATION

PRODUCT NAME: Enzyme Breaker
CHEMICAL NAME: Hemicellulase complex
CHEMICAL FORMULA:
MANUFACTURER: Chemical Blending Services
ADDRESS: 5000 W. Industrial, Midland, Tx 79703
FOR INFORMATION ON HEALTH HAZARDS CALL: (915) 697-8171.
INFORMATION EFFECTIVE AS OF: June 1988

SECTION II TOXICITY HAZARD DATA

PRINCIPAL HAZARDOUS COMPONENT(S): NONE

SECTION III PHYSICAL DATA

FREEZING POINT (F):	na
BOILING POINT (F):	Decomp. @ 320F/160C
VAPOR PRESSURE (mmHg):	na
VAPOR DENSITY (AIR=1):	na
SOLUBILITY IN WATER:	200 g/100ml at 20C
SPECIFIC GRAVITY (H20=1):	1.58
BULK DENSITY:	27.2 lbs/cu. ft.
PERCENT VOLATILE BY VOLUME:	0
EVAPORATION RATE:	na
APPEARANCE AND ODOR:	White, solid, powder, odorless

SECTION IV FIRE AND EXPLOSION HAZARD

FLASH POINT:	>200F
EXTINGUISHING MEDIA:	Water spray, foam, CO2, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES:	None
UNUSUAL FIRE/EXPLOSION HAZARDS:	Treat as a flammable dust in the finely divided and suspended atate - explosive concentration and ignition temperature have not been determined.

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Not available for blend. See Section II for hazards of principle components.
EFFECTS OF OVEREXPOSURE: None expected.

EMERGENCY AND FIRST AID PROCEDURES: Flush dust out eyes with water.

SECTION VI REACTIVITY DATA

STABILITY:	Stable
CONDITIONS TO AVOID:	Heat or flame.
INCOMPATIBILITY:	Oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:	CO, CO2
HAZARDOUS POLYMERIZATION:	Will not occur.

SECTION VII SPILL AND LEAK PROCEDURES

Avid breathing dust. Vacuum or sweep up dry spill. Apply adsorbant material to aqueous solutions. Dispose of according to local, state, and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	Dust mask.
VENTILATION:	Mechanical (general)
PROTECTIVE GLOVES:	None
EYE PROTECTION:	Safety glasses.
OTHER PROTECTIVE EQUIPMENT:	Eyewash

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a cool, dry place, away from heat or open flame.

OTHER PRECAUTIONS: DOT NAME: na
LABEL REQUIRED: na

SECTION X DISCLAIMER

The information contained herein is based on data considered accurate. However, no warrantly is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

na = not available/not applicable.

MATERIAL SAFETY DATA SHEET

HP-11A

Hi-Tek Polymers, Inc.
1 Riverfront Plaza
Louisville, Kentucky 40202

Date Issued: 10/21/86 Supersedes: 10/01/85

Emergency Phone Number (502) 585-8092 (if no answer, (502) 585-8119)

I. IDENTIFICATION & PHYSICAL DATA

Product Name: HP-11A

Product Class: Galacto-Mannans

Manufacturer's I.D. : 24706

D.O.T. Hazard Class: Not Regulated
Shipping Name: Compounds, Gas or Oil Well Drilling, Mud Treating

Evaporation Rate: No specific information

Appearance and Odor: Off white powder with bean like odor.

Percent Volatile by Volume: Not Applicable

Boiling Range: Not Applicable

Bulk Density: No Data

Specific Gravity: 1.3

Vapor Pressure at 20 C: Not Applicable

Solubility in Water: Forms Gel

II. HAZARDOUS INGREDIENTS

	CAS #	OSHA PEL ppm	TWA TLV ppm	STEL TLV ppm
Guar gum, 2-hydroxypropyl ether	39421-75-5	15 mg/m3*	10 mg/m3*	---
		5 mg/m3*	---	

*Limits based on nuisance particulate values for total and respirable dust.
---Not established

III. FIRE & EXPLOSION DATA

Flashpoint: >200 F Setaflash **LEL:** No data

Extinguishing Media:

Use carbon dioxide or dry chemical for small fires; aqueous foam or water for large fires.

Unusual Fire & Explosion Hazards:

Like all carbohydrate and most dry organic chemicals, a potential dust explosion hazard exists if the dust concentration in air is too high. Good housekeeping procedures are required to reduce this potential hazard. See Section VIII.

Special Fire Fighting Procedures:

Wear self-contained breathing apparatus and complete personal protective equipment when entering confined areas where potential for exposure to vapors or products of combustion exists.

IV. REACTIVITY DATA

Stability: Stable **Hazardous Polymerization:** Will not occur

Conditions to Avoid:

Fire, excessive heat.

Materials to Avoid:

No specific information available.

Hazardous Decomposition Products:

Fumes produced when heated to decomposition may include: carbon monoxide, carbon dioxide.

V. HEALTH HAZARD DATA

Effects of Overexposure:

Ingestion:

Practically nontoxic--LD50(rats) >5 g/kg.

Inhalation: No specific information available.

Dust may produce a respiratory allergenic response and/or irritation in some individuals.

Skin Absorption: No specific information available.

Expected to be practically nontoxic.

Skin Contact:

Essentially nonirritating, but contact may cause slight transient irritation.

Eye Contact:

May cause eye injury which may persist for several days.

Chronic Effects of Overexposure:

Based on a medical study of exposed workers, some individuals may develop a respiratory allergenic response to guar dust. Persons with a history of respiratory allergies may have those conditions aggravated by exposure to guar dust.

Emergency & First Aid Procedures:

Eye Contact: Flush with plenty of water for at least 15 minutes and seek medical attention if irritation persists.

Skin Contact: Remove contaminated clothing and wash contact area with soap and water for 15 minutes.

Ingestion: If appreciable quantities are swallowed, seek medical attention.

Inhalation: In case of exposure to a high concentration of dust, remove person to fresh air. If breathing has stopped, administer artificial respiration and seek medical attention.

VI. SPILL OR LEAK PROCEDURES

Steps to Be Taken In Case Material Is Released or Spilled:

For wet material, dike spill and absorb with inert material and collect for disposal. Caution: wet material is slippery.

For dry powder, sweep or scoop-up and collect for disposal. Avoid creating dust clouds and breathing dust.

Waste Disposal Method:

Incinerate or dispose of in a landfill in accordance with federal, state, and local regulations. This material is not defined as a hazardous waste under current RCRA regulations.

VII. SPECIAL PROTECTION INFORMATION

Respiratory Protection:

Wear a properly fitted NIOSH/MSHA approved dust or air-line respirator whenever exposure to dust is likely and where ventilation is inadequate.

Ventilation:

Local Exhaust - Recommended when appropriate to control employee exposure.

Mechanical - Not recommended as the sole means of controlling employee exposure.

Protective Gloves: For operations where contact can occur, wear impervious gloves.

Eye Protection: Safety goggles.

Other Protective Equipment: For operations where contact can occur, a safety shower and eye wash facility should be available.

VIII. SPECIAL PRECAUTIONS

Store in a dry place. Keep container closed to avoid moisture pickup. Avoid creating dust clouds and breathing dust when handling.

Explosion test data on guar and guar derivatives:	Guar Gum	Guar Derivatives
Minimum Oxygen Concentration (%)	19	18
Minimum Ignition Energy (mJ)	840	40,000 (1)
Minimum Ignition Temperature: Cloud (F)	950	950
Minimum Ignition Temperature: Layer (F)	420	390
Minimum Explosive Concentration (oz per cu.ft) (2)	0.8	0.29

(1) This material would not ignite at energies up to 40 joules, the highest tried. The material would ignite when subjected to a 24 watt continuous arc.

(2) In larger vessels explosions may occur at lower dust concentrations.

Product # 9

ISSUE DATE: 7/86

MATERIAL SAFETY DATA SHEET

MANUFACTURER/ADDRESS

Pfizer Chemical Division
235 East 42nd St.
New York, N.Y. 10017

PRODUCT IDENTIFICATION

PFIZER PRODUCT NAME: ERYTHORBIC ACID

PFIZER MSDS NO.: E002

EMERGENCY PHONE NUMBER(S): (718)-780-8456

CHEMICAL NAME AND MOLECULAR FORMULA: Erythorbic Acid $C_6H_8O_6$

CAS NO.(S): 89-65-6

SYNONYMS: Isoascorbic Acid

CHEMICAL FAMILY: Organic Acid

HAZARDOUS COMPONENTS

MATERIALS OR COMPONENTS	%	HAZARD DATA (TLV, LD50, LC50, etc.)
See section under Health Hazard - Not a Mixture		

PHYSICAL PROPERTIES

BOILING POINT (°F)	Not Applicable - Solid	SPECIFIC GRAVITY (H_2O = 1)	Not Known
VAPOR PRESSURE (mm Hg.)	Not Applicable - Solid	PERCENT VOLATILE BY VOLUME (%)	Not Applicable
VAPOR DENSITY (AIR = 1)	Not Applicable - Solid	EVAPORATION RATE (= 1)	Not Applicable
SOLUBILITY IN WATER	40 g/100 ml	pH 10 % SOLN	1.9 - 2.5
APPEARANCE & ODOR	White, crystalline powder or granules, practically odorless.		

FIRE & EXPLOSION DATA

FLASH POINT (Method used) IGNITION TEMPERATURE 640°C	FLAMMABLE LIMITS g/cu. ft.	Min XXX Lel: 8	Opt XXX Uel: 14.

EXTINGUISHING MEDIA: Water, CO_2

SPECIAL FIRE FIGHTING PROCEDURES: None normally required.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None. "Weak" B of M Relative Explosion Hazard rating.

REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID
UNSTABLE		None Known
STABLE	X	

INCOMPATIBILITY (Materials to avoid): Usual incompatability of organic acids.

HAZARDOUS DECOMPOSITION PRODUCTS: None Known

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
May Occur	Will Not Occur	
	X	Not Applicable

TOXICITY

ORAL/PARENTERAL: No TLV's established. Generally recognized as safe for use in foods.
Ort-mus LD_{50}: 8.3g/kg.

DERMAL (acute): Not Available

EYE: Not Available

INHALATION: Not Available

CHRONIC: Not Available

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

HEALTH HAZARD INFORMATION

Effects of Exposure

ORAL INGESTION
Not applicable. Generally recognized as safe for use in foods.

EYE CONTACT
As with many mild organic acids, may be an irritant.

SKIN CONTACT
As with many mild organic acids, may be an irritant.

INHALATION
Could be a respiratory irritant due to dust inhalation.

Emergency First Aid

ORAL INGESTION
Not Applicable

EYE CONTACT
Flush eye contact with plenty of water; get medical attention.

SKIN CONTACT
Flush skin with water. Launder clothes before reuse.

INHALATION
Remove to source of fresh air.

SPILL OR LEAK

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Recover by vacuum or broom and shovel. Wash area down with water to remove final traces.

WASTE DISPOSAL METHOD (Comply with applicable federal, state, and local regulations.)

Any normal solid disposal system in conformance with applicable federal, state and local regulations.

SPECIAL PROTECTION INFO.

RESPIRATORY PROTECTION (Specify type)
Approved dust mask.

VENTILATION		
	LOCAL EXHAUST: Sufficient to control dusting	SPECIAL
	MECHANICAL (general)	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Standard Work Gloves	Safety Glasses

OTHER PROTECTIVE EQUIPMENT
None

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in tightly closed containers, away from strong oxidizing agents or strong acids (e.g. nitric/sulfuric).

OTHER PRECAUTIONS
Aqueous solutions of erythorbic acid can, if in contact with reactive metals (iron, zinc or aluminum), form hydrogen which may form explosive mixtures.

This MSDS is based on a limited review of Pfizer's files and standard toxicology handbooks.

The information herein is furnished without warranty of any kind. This information should be used only as a supplement to information already in your possession concerning this product. The determination of whether and under what conditions the product should be used by your employees is yours to make.

MATERIAL SAFETY DATA SHEET

Product # 10

PETROLITE CORPORATION
369 MARSHALL AVE.
ST.LOUIS MO 63119 U.S.A

REVISION DATE: 03/14/88
EMERGENCY PHONE: 1-314-961-3500
CHEMTREC EMER NO: 1-800-424-9300

****

SECTION 1 PRODUCT IDENTIFICATION

PRODUCT: AY 0031 TRADE NAME: N/A LABEL: 014
000
000

(IF HAZARDOUS PER D.O.T. CFR TITLE 49)
SHIPPING NAME: Combustible Liquid, N.O.S. (In Bulk D.O.T.)

HAZARD CLASS: Combustible Liquid ID#: NA1993

CHEMICAL DESCRIPTION
OXYALKYLATED ALKANOLAMINES, AN AMMONIUM SALT OF AN ALKYL POLYETHER SULFATE, AND OXYALKYLATED ALKYLPHENOLS IN WATER, METHANOL, 2-BUTOXYETHANOL AND AROMATIC HYDROCARBONS.

****

SECTION 2 HAZARDOUS INGREDIENTS

CAS NUMBER	MATERIAL	%	EXPOSURE LIMITS
**	Oxyalkylated alkylphenols	10-20	Not Established
**	Alkyl polyether sulfates	10-20	Not Established
00111-76-2	2-Butoxyethanol (Skin)	5-10	ACGIH TLV: 25 ppm OSHA PEL: 50 ppm ACGIH STEL: 75 ppm
00067-56-1	Methanol	<5	ACGIH TLV: 200 ppm OSHA PEL: 200 ppm ACGIH STEL: 250 ppm
64742-94-5	Heavy Aromatic Naphtha	<5	RECOMMENDED: 25 ppm

**Specific chemical identity is being withheld for confidential business purposes.

****

SECTION 3 PHYSICAL DATA

SPECIFIC GRAVITY(H20 = 1.0@60 F): 1.032 VOLATILITY: Moderate
VAPOR PRESSURE: Not Established SOL. IN WATER: Dispersible

APPEARANCE AND ODOR: Amber liquid. Alcohol odor.

CONTINUED ON PAGE: 2

***CONTINUATION OF AY 0031 ***

****

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 142 F

FLAMMABLE LIMITS: Not Established

FLASH METHOD:

SFCC ASTM D-3828

EXTINGUISHING MEDIA:

Use water spray or fog, alcohol-type foam, dry chemical or CO2.

FIRE FIGHTING PROCEDURES:

Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Combustible. Keep fire exposed containers cool using water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

At elevated temperatures, vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

****

SECTION 5 HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

INHALATION:

Exposure to elevated vapor concentrations may result in eye, nose and respiratory irritation. Prolonged contact may cause drowsiness, dizziness and, in extreme cases, narcosis.

SKIN AND EYE CONTACT:

Brief, intermittant skin contact may cause moderate to severe irritation resulting in skin rashes. Prolonged contact may cause severe irritation or burns where clothing is confined. Contact with eyes may produce severe irritation or burns with transient eye injury.

INGESTION:

May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Absorption through the gastrointestinal tract may lead to kidney, liver and blood cell abnormalities.

EMERGENCY AND FIRST AID PROCEDURES:

Wash skin thoroughly with soap and water. If rash or irritation develops, consult a physician. Launder clothing before reuse. If in eyes, irrigate with flowing water immediately and continuously for fifteen minutes. Consult a physician promptly.

CONTINUED ON PAGE: 3

***CONTINUATION OF AY 0031 ***

If inhaled, remove to fresh air. Administer oxygen if necessary.
If ingested, induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

****

SECTION 6 REACTIVITY DATA

STABILITY:
Stable under normal conditions of storage and use.

INCOMPATIBILITY:
Keep away from strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:
Oxides of nitrogen and sulfur.

HAZARDOUS POLYMERIZATION:
Will not occur.

****

SECTION 7 SPILL AND LEAK PROCEDURES

IF MATERIAL IS SPILLED OR RELEASED:
Small spill - Absorb on paper, cloth or other material.
Large spill - Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container. Cover residue with dirt, or suitable chemical adsorbent. Use personal protective equipment as necessary.

DISPOSAL METHOD:
Place chemical residues and contaminated adsorbent materials into a suitable waste container and take to an approved hazardous waste disposal site. Dispose of all residues in accordance with applicable waste management regulations.

DECONTAMINATION PROCEDURES:
Not appropriate.

****

SECTION 8 SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:
When concentrations exceed the exposure limits specified, use of a NIOSH-approved organic vapor cartridge respirator is recommended. Where the protection factor of the respirator may be exceeded, use of a self-contained breathing unit may be necessary.

CONTINUED ON PAGE: 4

***CONTINUATION OF AY 0031 ***

VENTILATION:

General ventilation should be provided to maintain ambient concentrations below nuisance levels. Local ventilation of emmission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

PROTECTIVE CLOTHING:

Synthetic gloves (such as rubber, neoprene, nitrile or viton) and chemical goggles should be used to prevent skin and eye contact.

****

SECTION 9 SPECIAL PRECAUTIONS

Avoid heat, sparks and open flames. Avoid breathing of vapors and contact with eyes, skin or clothing. Keep container closed when not in use. Hazardous product residue may remain in emptied container. Do not reuse empty container without commercial cleaning or reconditioning.

****

Although the information and recommendations set forth herein are believed to be correct as of the date hereof, Petrolite makes no representations to the accuracy of such information and recommendations. It is the user's responsibility to determine the suitability and completeness of such information and recommendation for its own particular use.Petrolite shall not be responsible for any direct,indirect,incidental or consequential damages of whatsoever nature resulting from the publication,use of or reliance upon such information and recommendations.

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Product # 11

72-62-7820-01

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

MATERIAL SAFETY DATA SHEET

24-HOUR EMERGENCY TELEPHONE (606) 324-1133

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

PRODUCT NAME: HI SOL 229
CAS NUMBER: 67891 80 9

ACID ENGINEERING
DRAWER LL
DENVER CITY TX 79323

ATTN: PLANT MGR./SAFETY DIR.

05 50 039 0098850-001
DATA SHEET NO: 0212683-001
LATEST REVISION DATE: 04/88-88106
PRODUCT: 2063000
INVOICE: 381393
INVOICE DATE: 03/30/88
TO: ACID ENGINEERING
2 MILES WEST OF LEVELLAND ON
HWY 114-SOUTH SIDE OF ROAD
LEVELLAND TX 79336

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: AROMATIC HYDROCARBON XYLENE

DOT HAZARD CLASSIFICATION: FLAMMABLE LIQUID (173.115)

SECTION II-COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS ARE IDENTIFIED IN THIS SECTION
SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (BY WT)	NOTE
AROMATIC PETROLEUM DISTILLATES CAS #: 67891-80-9	100	(1)

(1): PEL/TLV NOT ESTABLISHED FOR THIS MATERIAL

THIS MATERIAL CONTAINS: 50-60% XYLENE (CAS#1330-20-7) WHICH HAS A TLV OF 100 PPM, STEL OF 150 PPM, PEL OF 100 PPM; 6-10% TOLUENE (CAS# 108-88-3) WHICH HAS A TLV OF 100 PPM, STEL OF 150 PPM, PEL OF 200 PPM WITH AN ACCEPTABLE CEILING CONCENTRATION OF 300 PPM AND AN ACCEPTABLE MAXIMUM PEAK ABOVE THE CEILING CONCENTRATION FOR AN 8-HOUR SHIFT OF 500 PPM FOR A MAXIMUM DURATION OF 10 MINUTES; 4-8% ETHYL BENZENE (CAS# 100-41-4) WHICH HAS A TLV OF 100 PPM, STEL OF 125 PPM, PEL OF 100 PPM; 1-3% OCTANE (CAS# 111-65-9) WHICH HAS A TLV OF 300 PPM, STEL OF 375 PPM, PEL OF 500 PPM; 2-4% NONANE (CAS# 111-84-2) WHICH HAS A TLV OF 200 PPM; AND 3-5% METHYLCYCLOHEXANE (CAS# 108-87-2) WHICH HAS A TLV OF 400 PPM, PEL OF 500 PPM.

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
BOILING POINT	FOR PRODUCT	240.00 - 290.00 DEG F (115.55 - 143.33 DEG C) @ 760.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	20.00 MMHG @ 68.00 DEG F (20.00 DEG C)
SPECIFIC VAPOR DENSITY	AIR = 1	4.0
SPECIFIC GRAVITY		.830 @ 60.00 DEG F (15.55 DEG C)
PERCENT VOLATILES		100.00%
EVAPORATION RATE		SLOWER THAN ETHER

SECTION IV-FIRE AND EXPLOSION INFORMATION

FLASH POINT(TCC) 58.0 DEG F
(14.4 DEG C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - .9%

EXTINGUISHING MEDIA: REGULAR FOAM OR WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

CONTINUED ON PAGE 2

SECTION V-HEALTH HAZARD DATA (CONTINUED)

EFFECTS OF ACUTE OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE AND POSSIBLE UNCONSCIOUSNESS, AND EVEN DEATH.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION

SKIN CONTACT

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS.

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS. PREVENT RUN-OFF TO SEWERS, STREAMS OR OTHER BODIES OF WATER. IF RUN-OFF OCCURS, NOTIFY PROPER AUTHORITIES AS REQUIRED, THAT A SPILL HAS OCCURED.

WASTE DISPOSAL METHOD:

SMALL SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

LARGE SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NITRILE RUBBER

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATASHEET MUST BE OBSERVED.

CONTINUED ON PAGE: 3

PETROLITE

MATERIAL SAFETY DATA SHEET

Product # 12

PETROLITE CORPORATION
369 MARSHALL AVE.
ST.LOUIS MO 63119 U.S.A

REVISION DATE: 10/04/8
EMERGENCY PHONE: 1-314-961-3500
CHEMTREC EMER NO: 1-800-424-9300

SECTION 1 PRODUCT IDENTIFICATION

PRODUCT: AOG0200 TRADE NAME: N/A LABEL: 22

(IF HAZARDOUS PER D.O.T. CFR TITLE 49)
SHIPPING NAME: Flammable Liquid, N.O.S.

HAZARD CLASS: Flammable Liquid ID#: UN1993

CHEMICAL DESCRIPTION
Carboxylic acid salts of oxyalkylated fatty amines in methanol.

SECTION 2 HAZARDOUS INGREDIENTS

CAS NUMBER	MATERIAL	%	EXPOSURE LIMITS
00067-56-1	Methanol		ACGIH TLV: 200 ppm OSHA PEL: 200 ppm ACGIH STEL: 250 ppm

Specific chemical identity of unlisted ingredients is being withheld for confidential business purposes.

SECTION 3 PHYSICAL DATA

SPECIFIC GRAVITY(H20 = 1.0@60 F): 0.914 VOLATILITY: 37
VAPOR PRESSURE: Not Established SOL. IN WATER: Soluble

APPEARANCE AND ODOR: Amber liquid. Alcohol odor.

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 56 F FLAMMABLE LIMITS: Not Establishe

FLASH METHOD:
SFCC ASTM D-3828

EXTINGUISHING MEDIA:
Use water spray or fog, alcohol-type foam, dry chemical or CO2.

FIRE FIGHTING PROCEDURES:
Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

CONTINUED ON PAGE: 2

***CONTINUATION OF AOG0200 ***

Flammable. Cool fire-exposed containers using water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Flammable liquid, vapors of which can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

****

SECTION 5 HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

INHALATION:

Prolonged exposure may cause mild irritation of mucous membranes, headache and tiredness. At elevated concentrations, symptoms may include nausea, shortness of breath and a sense of drunkeness. In extreme cases, visual disturbances and occular damage may occur.

SKIN AND EYE CONTACT:

Intermittant, brief skin contact may result in mild irritation. Prolonged contact with skin may cause moderate to severe irritation resulting in rashes and dermatitis. Contact with eyes will cause moderate to severe irritation, and may produce moderate but reversible eye injury.

INGESTION:

May be harmful if swallowed. May cause gastrointestinal disturbances.
Ingestion of methanol may result in a feeling of intoxication and can cause visual disturbances and, in extreme cases, occular damage.

EMERGENCY AND FIRST AID PROCEDURES:

Wash skin thoroughly with soap and water. If rash or irritation develops, consult a physician. Launder clothing before reuse. If in eyes, irrigate with flowing water immediately and continuously for fifteen minutes. Consult a physician promptly.
If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.
If ingested, induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

****

SECTION 6 REACTIVITY DATA

STABILITY:

Stable under normal conditions of storage and use.

CONTINUED ON PAGE: 3

***CONTINUATION OF AOG0200 ***

INCOMPATIBILITY:
Keep away from strong oxidizing agents, heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS:
Oxides of nitrogen.

HAZARDOUS POLYMERIZATION:
Will not occur.

SECTION 7 SPILL AND LEAK PROCEDURES

IF MATERIAL IS SPILLED OR RELEASED:
Small spill - Absorb on paper, cloth or other material. Large spill - Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container. Cover residue with dirt, or suitable chemical adsorbent. Use personal protective equipment as necessary.

DISPOSAL METHOD:
Place chemical residues and contaminated adsorbent materials into a suitable waste container and take to an approved hazardous waste disposal site. Dispose of all residues in accordance with applicable waste management regulations.

DECONTAMINATION PROCEDURES:
Not appropriate.

SECTION 8 SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:
When concentrations exceed the exposure limits specified. use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor of the respirator may be exceeded, use of a self-contained breathing unit may be necessary.

VENTILATION:
General ventilation should be provided to maintain ambient concentrations below nuisance levels. Local ventilation of emmission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

PROTECTIVE CLOTHING:
Synthetic gloves (such as rubber, neoprene, nitrile or viton) and chemical goggles should be used to prevent skin and eye contact.

CONTINUED ON PAGE: 4

***CONTINUATION OF AOG0200 ***

SECTION 9 SPECIAL PRECAUTIONS

Flammable liquid. Avoid heat, sparks and open flames. Avoid breathing of vapors and contact with eyes, skin or clothing. Keep container closed when not in use. Hazardous product residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning.

.though the information and recommendations set forth herein are believed to be
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: consequential damages of whatsoever nature resulting from the publication,use of
: reliance upon such information and recommendations.

ETROLITE EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OF EVERY KIND AND NATURE
NCLUDING THOSE OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE WITH
ESPECT TO THE PRODUCT, THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN,
R ANY USE OR RELIANCE THEREON.

Material Safety Data Sheet

Product # 13

MORTON THIOKOL, INC.
Morton Salt Division
110 North Wacker Drive, Chicago, Illinois 60606-1555

Emergency Phone No. (312) 807-2000

PRODUCT IDENTIFICATION

Chemical Name: Sodium Chloride

Common Name: Salt

Product Name: FARM & RANCH STOCK

CAS Number: 7647-14-5

Chemical Formula: NaCl

Product Use:

HAZARDOUS INGREDIENTS

Chemical Name	Common Name	CAS NO.	%	OSHA PEL	ACGIH TLV-TWA
None					

PHYSICAL DATA

Boiling Point, (760mm Hg.) 1413°C

Specific Gravity (Water = 1) 2.165

Vapor Pressure (mm Hg) 1mm @ 865°C

% Non-Volatile 100

Vapor Density (AIR = 1) N/A

Evaporation Rate (Ether = 1) N/A

Solubility in Water 1g in 2.8ml H_2O at 25°C

pH 6.7 - 7.3

Appearance White Crystalline Powder

Odor Odorless

FIRE AND EXPLOSION HAZARD DATA

Flash Point N/A °F

Flammable Limits Lel N/A Uel N/A

Method Used:
Non-Combustible

Extinguishing Media:
Not applicable

Special Fire Fighting Procedures:
Not applicable

Unusual Fire and Explosion Hazards:
Not applicable

Hazardous Decomposition Products:
When heated to decomposition it emits toxic fumes of Cl_2 and Na_2O

HEALTH HAZARD DATA

Oral Toxicity:

Does not meet toxicity criteria under OSHA 1910.1200 Hazard Communication, Appendix A parts 3. & 6.

Dermal Toxicity:

Not toxic to the skin

Eye:

Not toxic to the eye

Inhalation:

Not toxic through inhalation

Chronic Toxicity: No applicable information found

Mutagenesis: No applicable information found

Effects of Overexposure:

Ingestion:
1. Disagreeable taste
2. Nausea and vomiting

Skin Contact:
1. Irritation
2. Inflammation
3. Small ulcerations

Eye Contact:
1. Mechanical irritation
2. Watering of eyes
3. Inflammation of conjunctivas

Inhalation:
1. Slight irritation of nose
2. Sneezing

Acute Systemic Effects:

Ingestion of large amounts can cause irritation of the stomach.

Chronic Systemic Effects:

No applicable information found.

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:
1. Wash the affected eye or eyes under slowly running water for 15 minutes or longer making sure that the victim's eyelids are held wide apart and he moves his eyes slowly in every direction.
2. Make sure that no solid particles remain the the creases of the eye; if they do, continue to wash the eye.
3. If the pain persists, the medical service will refer the victim to an ophthalmologist.

Skin Contact:
1. Remove the victim from the source of contamination.
2. Remove clothing from the affected area.
3. Wash affected area under the shower.
4. Rinse carefully.

Skin Contact: (continued)
5. Dry gently with a clean soft towel.
6. If the skin is inflamed or painful, contact the medical service who will treat it in the same way as a heat or thermal burn.

Inhalation:
1. Make the victim blow his nose to remove the dust but discourage him from sniffing.
2. If there is any doubt about the victim's condition send or escort him to the infirmary, first-aid room or hospital.

Ingestion:
1. Make the victim vomit by having him stick his finger down his throat or tickling his uvula with the handle of a spoon.
2. Afterwards give him as much milk or water as he wants.

REACTIVITY DATA

Stability ☒ **Stable** ☐ **Unstable** **Conditions to Avoid:**

Incompatibility: (Materials to Avoid)
Bromine Trifluoride, Lithium (BrF_3, Li)

Can Hazardous Polymerization Occur: No

Hazardous Decomposition Products and Conditions:
When heated to decomposition it emits toxic fumes of Cl_2 and Na_2O

SPILL OR LEAK PROCEDURES

Response to Small Spills:
No special requirements

Response to Large Spills:
No special requirements

Hazards to be Avoided:
None known

Reportable Quantity: Check your State for requirements

Waste Classification: Some States have set maximum limits on Chlorides in waste effluent.

Disposal Methods:
Dilution with water is the only practical method to meet requirements.

SPECIAL PROTECTION INFORMATION

Respiratory Protection:
No special equipment

For Hands, Body:
No special equipment

For Eyes:
No special equipment

Ventilation:
None required

SPECIAL PRECAUTIONS

Other Precautions:

Transport in dry equipment. Storage should be in a dry location.

LABELING INFORMATION

DOT Shipping Name: Salt (common) sodium chloride

DOT Label: Not applicable

UN No.: Not applicable

Other Contents of Product Label:

Not applicable

WARNING:

None

USERS RESPONSIBILITY

The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment.

Disclaimer of Liability

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Nothing contained herein is to be construed as a recommendation for use in violation of any patents or of applicable laws or regulations.

MORTON THIOKOL, INC.
Morton Salt Division

110 North Wacker Drive, Chicago, Illinois 60606-1555 (312) 807-2000

MATERIAL SAFETY DATA SHEET

Product #14

PETROLITE CORPORATION
369 MARSHALL AVE.
ST.LOUIS MO 63119 U.S.A

REVISION DATE: 04/19/88
EMERGENCY PHONE: 1-314-961-3500
CHEMTREC EMER NO: 1-800-424-9300

SECTION 1 PRODUCT IDENTIFICATION

PRODUCT: AY 0021 TRADE NAME: COMPOUND LABEL: 016 000 000

(IF HAZARDOUS PER D.O.T. CFR TITLE 49)

SHIPPING NAME: Flammable Liquid, N.O.S.

HAZARD CLASS: Flammable Liquid ID#: UN1993

CHEMICAL DESCRIPTION

AN ALKYL POLYETHER SULFATE IN WATER AND METHANOL

SECTION 2 HAZARDOUS INGREDIENTS

CAS NUMBER	MATERIAL	%	EXPOSURE LIMITS
00067-56-1	Methanol		ACGIH TLV: 200 ppm OSHA PEL: 200 ppm ACGIH STEL: 250 ppm

Specific chemical identity of unlisted ingredients is being withheld for confidential business purposes.

SECTION 3 PHYSICAL DATA

SPECIFIC GRAVITY(H20 = 1.0@60 F): 1.040 VOLATILITY: 50

VAPOR PRESSURE: Not Established SOL. IN WATER: Soluble

APPEARANCE AND ODOR: Amber liquid. Mild alcohol odor.

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 97 F FLAMMABLE LIMITS: Not Established

FLASH METHOD:

SFCC ASTM D-3828

EXTINGUISHING MEDIA:

Use water spray or fog, alcohol-type foam, dry chemical or CO2.

FIRE FIGHTING PROCEDURES:

Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

CONTINUED ON PAGE: 2

MATERIAL SAFETY DATA SHEET

PETROLITE CORPORATION
369 MARSHALL AVE.
ST.LOUIS MO 63119 U.S.A

REVISION DATE: 04/19/88
EMERGENCY PHONE: 1-314-961-3500
CHEMTREC EMER NO: 1-800-424-9300

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SECTION 3 PHYSICAL DATA

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VAPOR PRESSURE: Not Established SOL. IN WATER: Soluble

APPEARANCE AND ODOR: Amber liquid. Mild alcohol odor.

****

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 97 F FLAMMABLE LIMITS: Not Established

FLASH METHOD:

SFCC ASTM D-3828

EXTINGUISHING MEDIA:

Use water spray or fog, alcohol-type foam, dry chemical or CO2.

FIRE FIGHTING PROCEDURES:

Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

CONTINUED ON PAGE: 2

***CONTINUATION OF AY 0021 ***

Flammable. Cool fire-exposed containers using water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Flammable liquid, vapors of which can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back.

****

SECTION 5 HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

INHALATION:
Prolonged exposure may cause mild irritation of mucous membranes, headache and tiredness. At elevated concentrations, symptoms may include nausea, shortness of breath and a sense of drunkeness. In extreme cases, visual disturbances and occular damage may occur.

SKIN AND EYE CONTACT:
Repeated and prolonged contact may cause dermatitis, drying or cracking of skin due to defatting solvent properties. Contact with eyes will cause moderate irritation.

INGESTION:
May be harmful if swallowed. May cause gastrointestinal disturbances.
Ingestion of methanol may result in a feeling of intoxication and can cause visual disturbances and, in extreme cases, occular damage.

EMERGENCY AND FIRST AID PROCEDURES:
Wash skin thoroughly with soap and water. Launder clothing before reuse. If in eyes, irrigate with flowing water immediately and continuously for fifteen minutes. Consult a physician. If inhaled, remove to fresh air and administer oxygen if necessary. If ingested, consult a physician.
If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.
If ingested, induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

****

SECTION 6 REACTIVITY DATA

STABILITY:
Stable under normal conditions of storage and use.

CONTINUED ON PAGE: 3

***CONTINUATION OF AY 0021 ***

INCOMPATIBILITY:
Keep away from strong oxidizing agents, heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS:
Oxides of nitrogen. Oxides of sulfur.

HAZARDOUS POLYMERIZATION:
Will not occur.

****

SECTION 7 SPILL AND LEAK PROCEDURES

IF MATERIAL IS SPILLED OR RELEASED:
Small spill - Absorb on paper, cloth or other material.
Large spill - Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container. Cover residue with dirt, or suitable chemical adsorbent. Use personal protective equipment as necessary.

DISPOSAL METHOD:
Place chemical residues and contaminated adsorbent materials into a suitable waste container and take to an approved hazardous waste disposal site. Dispose of all residues in accordance with applicable waste management regulations.

DECONTAMINATION PROCEDURES:
Not appropriate.

****

SECTION 8 SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:
When concentrations exceed the exposure limits specified. use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor of the respirator may be exceeded, use of a self-contained breathing unit may be necessary.

VENTILATION:
General ventilation should be provided to maintain ambient concentrations below nuisance levels. Local ventilation of emmission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

PROTECTIVE CLOTHING:
Synthetic gloves (such as rubber, neoprene, nitrile or viton) and chemical goggles should be used to prevent skin and eye contact.

CONTINUED ON PAGE: 4

***CONTINUATION OF AY 0021 ***

****

SECTION 9 SPECIAL PRECAUTIONS

Flammable liquid. Avoid heat, sparks and open flames. Avoid breathing of vapors and contact with eyes, skin or clothing. Keep container closed when not in use. Hazardous product residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning.

****

Although the information and recommendations set forth herein are believed to be correct as of the date hereof, Petrolite makes no representations to the accuracy of such information and recommendations. It is the user's responsibility to determine the suitability and completeness of such information and recommendation for its own particular use.Petrolite shall not be responsible for any direct,indirect,incidental or consequential damages of whatsoever nature resulting from the publication,use of or reliance upon such information and recommendations.

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EXXON CHEMICAL AMERICAS • P.O. BOX 3272, HOUSTON, TE
A division of EXXON CHEMICAL COMPANY, a division of EXXON CORPORATION

CHEM 10/04/85

NO. M11

Product # 15

SECTION I PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME

COREXIT 7648 7-7648

CHEMICAL NAME

Not applicable: Blend

CHEMICAL FAMILY

Metal Acid Salt

PRODUCT APPEARANCE

Light Yellow Liquid
Bland Odor

EMERGENCY TELEPHONE NUMBERS: EXXON CHEMICAL AMERICAS 713-870-6000
CHEMTREC 800-424-9300

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

THE PRECISE COMPOSITION OF THIS MIXTURE IS PROPRIETARY INFORMATION. A MORE COMPLETE DISCLOSURE WILL BE PROVIDED TO A PHYSICIAN OR NURSE IN THE EVENT OF A MEDICAL EMERGENCY. THE FOLLOWING COMPONENTS ARE DEFINED HAZARDOUS IN ACCORDANCE WITH 29CFR1910.1200:

OSHA HAZARD	COMPONENT
Irritant	Alkyl Oxyacid Salt

SECTION III HEALTH INFORMATION AND PROTECTION

FIRST AID & NATURE OF HAZARD

EYE CONTACT:
Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.
Irritating, but does not injure eye tissue.

SKIN CONTACT:
Flush with large amounts of water; use soap if available.
Low order of toxicity.

INHALATION:
Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.
Negligible hazard at ambient (-18 to 38 Deg C) or recommended blending temperature.

INGESTION:
First aid is normally not required.
Low order of toxicity.

ACUTE TOXICITY DATA IS AVAILABLE UPON REQUEST

PERSONAL PROTECTION
For open systems where contact is likely, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.
Where overexposure by inhalation may occur and engineering, work practice or other means of exposure reduction are not adequate, approved respirators may be necessary.

VENTILATION
The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated.

SECTION IV FIRE & EXPLOSION HAZARD

FLASHPOINT DEG. F : 210 METHOD: Seta CC
FLAMMABLE LIMITS-LEL: UEL: NOTE: Not applicable
AUTOIGNITION TEMPERATURE DEG. F : NOTE: Not available

GENERAL HAZARD
Low Hazard, liquid can burn upon heating to temperatures at or above the flashpoint.
Toxic gases will form upon combustion.
Empty product containers may contain product residue. Do not pressurize, cut, heat, weld or expose containers to flame or other sources of ignition.

FIRE FIGHTING
Use water spray to cool fire exposed surfaces and to protect personnel.
Isolate "fuel" supply from fire.
Use alcohol type foam, dry chemical or water spray to extinguish fire.
Respiratory and eye protection required for fire fighting personnel.
Avoid spraying water directly into storage containers due to danger of boilover.

HAZARDOUS COMBUSTION PRODUCTS
Smoke, Fumes, Carbon Monoxide, Carbon Dioxide

SECTION V SPILL CONTROL PROCEDURE

LAND SPILL
Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is an EPA hazardous substance (See Section X, Page 4) notify the U.S. EPA if appropriate.
Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth.
Recover by pumping or with a suitable absorbent.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL
Prevent additional discharge of material, if possible to do so without hazard. Advise authorities.
Consult Health Information and Protection (Section III) regarding possible hazards.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION VI NOTES

No notes applicable.

No Information on this page, continued on page 4.

SECTION VII TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SP. GRAVITY 1.24 REF. TEMP. F Not available DENSITY, LBS/GAL: 10.3 @ 60	VAPOR PRESSURE, mmHg at F 55 @ 100 Calculated
SOLUBILITY IN WATER, WT. % at F Soluble	VISCOSITY OF LIQUID, cST at F 1.4 @ 100 Cannon-Fenske 0.9 @ 150 Cannon-Fenske
SP. GRAVITY OF VAPOR, at 1 ATM AIR=1 >1.0	FREEZING MELTING POINT/RANGE, F -15 Pour Point
EVAPORATION RATE, n-BU ACETATE=1 1.5, Calculated	BOILING POINT/RANGE, F 212 Calculated

SECTION VIII REACTIVITY DATA

STABILITY? Stable	HAZARDOUS POLYMERIZATION OCCUR? Will not occur
CONDITIONS TO AVOID INSTABILITY None	CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION Not applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY
Strong Oxidizing Agents

HAZARDOUS DECOMPOSITION PRODUCTS
None

SECTION IX TRANSPORT & STORAGE

ELECTROSTATIC ACCUMULATION HAZARD
Unknown, use proper grounding procedure

STORAGE TEMPERATURE, F Not available	LOADING/UNLOADING TEMPERATURE, F Not available
STORAGE/TRANSPORT PRESSURE, mmHg Not available	VISCOSITY AT LOADING/UNLOADING TEMPERATURE, cST Not available

SECTION X HAZARD CLASSIFICATION

U.S. DOT CLASSIFICATION Not regulated	EPA HAZARDOUS SUBSTANCE AMOUNT LBS. Not applicable

ADDITIONAL INFORMATION
Not Available

REFERENCE NUMBER	DATE PREPARED	SUPERCEDES ISSUE DATE
HDHA-A-10563	OCTOBER 04, 1985	MAY 23, 1985

FOR ADDITIONAL PRODUCT INFORMATION CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION CALL 713-870-6885

EX1063

Product # 16

MATERIAL SAFETY DATA SHEET

DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 8[redacted]33
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

Rec'd 4/15/88

Ashland®

003004 099 NAPHTHALENE PAGE: 1

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

PRODUCT NAME: NAPHTHALENE
CAS NUMBER: 91 20 3

KENOVA CHEMICAL COMPANY
DIV WILLERT HOME PRODUCTS INC
4044 PARK AVENUE
SAINT LOUIS MO 63110

ATTN: PLANT MGR./SAFETY DIR.

03 59 008 4877800-
DATA SHEET NO: 002524O-004
LATEST REVISION DATE: 04/08-88097
PRODUCT: 418505
INVOICE: 384268
INVOICE DATE: 03/26/88
TO: KENOVA CHEMICAL COMPANY
21ST AND BEECH STREETS
KENOVA WV 25530

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: HYDROCARBON

DOT HAZARD CLASSIFICATION: ORM-A

SECTION II-COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS ARE IDENTIFIED IN THIS SECTION
SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (BY WT)	NOTE
NAPHTHALENE CAS #: 91-20-3 PEL: 10 PPM	>95 TLV: 10 PPM	(1)

(1): ACGIH - SHORT TERM EXPOSURE LIMIT (STEL) FOR NAPHTHALENE IS 15 PPM.

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
BOILING POINT	FOR PRODUCT,	424.00 DEG F (217.77 DEG C) @ 760.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	0.08 MMHG @ 77.00 DEG F (25.00 DEG C)
SPECIFIC VAPOR DENSITY	AIR = 1	4.4
SPECIFIC GRAVITY		1.150 @ 60.00 DEG F (15.55 DEG C)
PERCENT VOLATILES	NOT APPLICABLE	
EVAPORATION RATE		SLOWER THAN ETHER

SECTION IV-FIRE AND EXPLOSION INFORMATION

FLASH POINT 174.0 DEG F
(78.9 DEG C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - .9%

EXTINGUISHING MEDIA: REGULAR FOAM OR WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

WATER OR FOAM MAY CAUSE FROTHING WHICH CAN BE VIOLENT AND POSSIBLY ENDANGER THE LIFE OF THE FIREFIGHTER, ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.

SPECIAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY HEAT, PILOT LIGHTS, OTHER FLAMES AND IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

NFPA CODES: HEALTH- 2 FLAMMABILITY- 2 REACTIVITY- 0

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 10 PPM

THRESHOLD LIMIT VALUE 10 PPM

EFFECTS OF ACUTE OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE IRRITATION.
SKIN - CAN CAUSE REDDENING, IRRITATION, DERMATITIS, POSSIBLE SENSITIZATION.
BREATHING - INHALATION OF NAPHTHALENE MAY CAUSE HEADACHE, CONFUSION, NAUSEA AND VOMITING DEPENDING ON INDIVIDUAL SUSCEPTIBILITY.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA.

CONTINUED ON PAGE: 2

Product # 17

Material Safety Data Sheet

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200).
(Formerly Called MATERIAL INFORMATION BULLETIN)

Chevron

CHEVRON Special Motor Oil SAE 30 CPS 220003

TYPICAL COMPOSITION

Highly refined base oils (CAS 64742-36-5, 64742-65-0, 64742-57-0, 64742-01-4, 64742-54-7)	>90%
Additives including inhibitors, dispersants, calcium phenate, zinc dialkyldithiophosphate (CAS 68649-42-3)	<10%

EXPOSURE STANDARD

No Federal OSHA exposure standard or ACGIH TLV has been established for this material. Based on information reviewed to date, we recommend an exposure standard of 5 mg/m^3. This is the Federal OSHA exposure standard and the ACGIH (1985-86) TLV for mineral oil mists.

PHYSIOLOGICAL & HEALTH EFFECTS	EMERGENCY & FIRST AID PROCEDURES
Eyes	
Expected to cause no more than minor eye irritation.	Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If irritation persists, see a doctor.
Skin	
Expected to cause no more than minor skin irritation following prolonged or frequently repeated contact. See Additional Health Data.	Wash skin thoroughly with soap and water. Launder contaminated clothing.
Inhalation	
Not expected to be acutely toxic by inhalation. Breathing mineral oil mist at concentrations in air that exceed the recommended exposure standard can cause respiratory irritation or discomfort. See Additional Health Data.	If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.
Ingestion	
Not expected to be acutely toxic by ingestion.	If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

ADDITIONAL HEALTH DATA

See Page 3.

SPECIAL PROTECTIVE INFORMATION

Eye Protection: No special eye protection is necessary.
Skin Protection: No special skin protection is necessary.
Respiratory Protection: No special respiratory protection is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standard, the use of an approved respirator is recommended.
Ventilation: Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

FIRE PROTECTION

Flash Point: (COC)428°F(220°C) Min.
Autoignition Temp.: NDA
Flammability Limits: n/a
Extinguishing Media: CO_2, Dry Chemical, Foam, Water Fog.
Special Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. See Hazardous Decomposition Products. Read the entire MSDS.

SPECIAL PRECAUTIONS

DO NOT weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently.

CAUTION! Do not use pressure to empty drum or explosion may result.

ENVIRONMENTAL PROTECTION

Environmental Impact: This material is not expected to present any environmental problems other than those associated with oil spills.
Precautions if Material is Released or Spilled: Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.
Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

REACTIVITY DATA

Stability (Thermal, Light, etc.): Stable.
Incompatibility (Materials to Avoid): May react with strong oxidizing materials.
Hazardous Decomposition Products: Normal combustion forms carbon dioxide and water vapor and may produce oxides of sulfur, nitrogen and phosphorus; incomplete combustion can produce carbon monoxide.
Hazardous Polymerization: Will not occur.

PHYSICAL PROPERTIES

Solubility: Insoluble in water. Miscible with hydrocarbon solvents.
Appearance (Color, Odor, etc.): Dark amber liquid.
Boiling Point: n/a
Melting Point: n/a
Specific Gravity: 0.88 @ 15.6/15.6°C
Vapor Pressure: n/a
Vapor Density (Air=1): n/a
Percent Volatile (Volume %): n/a
Evaporation: (-0.4°F)
Pour Point: -18°C (Max.)
Viscosity: 12.0 cSt @ 100°C

n/a = Not Applicable
NDA = No Data Available

Material Safety Data Sheet

CHEVRON Special Motor Oil SAE 30 **CPS 220003**

ADDITIONAL HEALTH DATA

Signs and symptoms of respiratory tract irritation may include, but may not be limited to, one or more of the following, depending on concentration and length of exposure: nasal discharge, nosebleed, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing.

This product contains zinc dialkyldithiophosphate (ZDDP). ZDDPs have been tested by repeated application to the skin of young rabbits for three weeks. These rabbits developed severe skin damage, weight loss, and adverse testicular effects. Follow-up studies indicated similar testicular effects can be produced by placing rabbits on a restricted diet and causing them to lose weight or by treating rabbits with simple caustic chemicals and causing them to develop both severe skin irritation and weight loss. Rats similarly treated with ZDDP did not develop testicular effects even when skin damage and weight loss occurred. These results indicate that the testicular effects seen in rabbits were not caused by the toxicity of ZDDPs but were due to the species reaction to stress from severe skin irritation and weight loss. There is no evidence that human exposure to ZDDPs in the workplace will cause testicular effects since occupational exposure does not cause stress from severe skin irritation and weight loss similar to that observed in rabbits. In summary, we now believe there is no risk of male reproductive impairment from working with ZDDP.

Several ZDDPs have also been found to have weak mutagenic activity in cultured mammalian cells. The low level of activity occurred only at ZDDP concentrations which were highly toxic to the test cells. Since mutagenic activity was observed with zinc chloride but not with calcium dialkyldithiophosphate, the weak mutagenic activity of ZDDP may be due to the zinc in the chemical. Zinc is abundant in the environment, is an essential element in our diets, and it is generally accepted that zinc is not a health hazard. Therefore, we do not believe the test results discussed above indicate a genetic hazard to employees working with ZDDPs. Appropriate personal hygiene procedures as outlined in the MSDS, should, of course, be followed since ZDDPs in concentrated form are irritating to the skin.

This product also contains calcium phenate. When a similar calcium phenate was applied to the skin of rabbits five days/week for four weeks, the animals developed adverse testicular effects. Studies with other chemicals have since shown that rabbits may develop similar testicular effects due to stress rather than to chemical toxicity. We further investigated the effects of calcium phenates in rats, a species now recognized as more appropriate than rabbits for investigating toxicity by repeated skin exposures. Calcium phenate applied five days/week for four weeks to the skin of rats did not produce adverse testicular effects. Based on these data, we believe that there is no risk of male reproductive impairment from exposure to calcium phenate in the workplace.

This product contains base oils which the International Agency for Research on Cancer (IARC) classifies as having no evidence of carcinogenic potential.

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly

removed by washing with soap and water. See Chevron Material Safety Data Sheet No. 1795 for additional information on used motor oil.

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

July 11, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lloyd Bolding
ACID ENGINEERING, INC.
P. O. Box 753
Kilgore, Texas 75662

RE: Discharge Plan GW-17,
Hobbs Service Facility,
Lea County, New Mexico

Dear Mr. Bolding:

On April 18, 1988, the ground water discharge plan, GW-17, for your Hobbs Service Facility located in the SE/4 of the SW/4, Section 36, Township 18 South, Range 37 East, NMPM, Lea County, New Mexico was renewed by the Director of the Oil Conservation Division (OCD). This discharge plan and renewal was required and submitted pursuant to Water Quality Control Commission Regulations and it was renewed for a period of one year. The original discharge plan, as approved January 6, 1983, was prepared in 1982 and did not contain all the information that is now required for approval. This plan was renewed for one year to allow Acid Engineering ample time to submit a renewal application containing the updated information contained in the "Guidelines for the Preparation of Ground Water Discharge Plans at Oilfield Service Facilities". The renewal will expire January 6, 1989.

If your facility continues to have effluent or leachate discharges and you wish to continue discharging, please submit your application for renewal of plan approval as quickly as possible.

The OCD is reviewing discharge plan submittals and renewals carefully and the review time can often extend for several months. Please indicate whether you have made, or intend to make, any changes in your discharge system, and if so, include an application for plan amendment with your application for renewal. To assist you in preparation of your renewal application, the following items were not contained in the original discharge plan, but are now required:

1. A listing of chemicals used at your facility. Please supply this list and the MSD sheet for each chemical (supplied by manufacturer). Examples of the types of chemicals that must be reported are: acid additives (inhibitors, non-emulsifiers, surfactants, etc.), oils, lubricants, soaps and solvents.

2. A water and waste water flow diagram to include drains from shops, sumps, vehicle washing facilities and yard drains.

3. If the facility contains any underground waste piping or sumps, supply the age, composition and location of each line.

4. A contingency plan describing procedures for containment, clean up and reporting to the OCD of any spills or leaks at the facility.

5. The final disposition of all wastes generated at the facility (solid waste, used motor oils, used drums, etc.). Include the names and addresses of any entity that receives any of these wastes.

If you no longer have such discharges and discharge plan renewal is not needed, please notify this office.

If you have any questions, please do not hesitate to contact Roger Anderson at (505) 827-5885.

Sincerely,

David G. Boyer, Chief
Environmental Bureau

DGB:RA:sl

Enclosure

cc: OCD - Hobbs

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

April 18, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lloyd Bolding
Acid Engineering, Inc.
P. O. Box 753
Kilgore, Texas 75662

RE: Discharge Plan GW-17, Hobbs Service Facility, Lea County, New Mexico

Dear Mr. Bolding:

The ground water discharge plan renewal (GW-17) for the Acid Engineering Hobbs Service Facility located in the SE/4 of the SW/4 of Section 36, Township 18 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby approved. The original discharge plan was approved on January 6, 1983. The renewal application consists of the original discharge plan as approved January 6, 1983 and the renewal application dated February 8, 1988.

The discharge plan was submitted pursuant to Section 3-106 of the New Mexico Water Quality Control Commission (WQCC) Regulations. It is renewed pursuant to Section 3-109.F., which provides for the possible future amendments of the plan. Please be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground water which may be actionable under other laws and or regulations.

There will be no routine monitoring or reporting requirements other than those listed in the plan.

Please note that Section 3-104 of the regulations requires that "when a plan has been approved, discharges must be consistent with the terms and conditions of the plan." Pursuant to Section 3-107.C., you are required to notify the Director of the OCD of any facility expansion, or modification that would result in any change in the discharge of water quality or volume.

Pursuant to Section 3-109.G.4 of the WQCC Regulations, this plan renewal is for a period of one (1) year and will expire on January 6, 1989. Since the original discharge plan was prepared in 1982, it does not contain all the information that is now required for approval. The one (1) year renewal will allow Acid Engineering ample time to submit a renewal application containing

the updated information contained in the "Guidelines for the Preparation of Ground Water Discharge Plans at Oilfield Service Facilities" (enclosed) that is required for renewal prior to the January 6, 1989 expiration. These guidelines have been supplied to you previously. You are encouraged to begin the renewal process as soon as possible.

The Oil Conservation Division Environmental Bureau is available to assist you in the preparation of an approvable plan and will be in contact with you in the near future to explain the requirements.

If you have any questions, please contact Dave Boyer at (505) 827-5812 or Roger Anderson at (505) 827-5885.

Sincerely,

William J. LeMay
Director

WJL:RA:sl

cc: OCD - Hobbs

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Ecological Services
Suite D, 3530 Pan American Highway NE
Albuquerque, New Mexico 87107

March 17, 1988

RECEIVED
MAR 21 1988
OIL CONSERVATION DIVISION

Mr. William J. Lemay, Director
Oil Conservation Division
New Mexico Energy, Minerals and
Natural Resources Department
Villagra Building
Santa Fe, New Mexico 87503

Dear Mr. Lemay:

This letter responds to the undated public notice for proposed discharge plans submitted to your division. We have reviewed the following plans and have not identified any resource issues of concern to our agency. Renewal of these plans should not have a significant impact upon plants, fish, shellfish or wildlife resources of New Mexico.

(GW-28), Navajo Refining Company, Eddy County, New Mexico.
(GW-17), Acid Engineering, Lea County, New Mexico.

These comments represent the views of the Fish and Wildlife Service. Thank you for the opportunity to review and comment on the proposed plans. If you have any questions concerning our comments please contact Tom O'Brien at (505) 883-7877 or FTS 474-7877.

Sincerely yours,

Michael J. Donahoo

Michael J. Donahoo
Acting Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Health and Environment Department, Environmental Improvement Division, Santa Fe, New Mexico
Regional Administrator, Environmental Protection Agency, Dallas, Texas
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement, Albuquerque, New Mexico

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, _____

William H. Shearman, Jr.

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of _____

One _____ weeks.

Beginning with the issue dated

March 10, 19 88

and ending with the issue dated

March 10, 19 88

Bill Shearman
Publisher.

Sworn and subscribed to before

me this 15 day of

March, 19 88

Vera Murphy
Notary Public.

My Commission expires _____

November 14, 19 88
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
March 10, 1988
NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to the New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal and discharge plan modification has been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

(GW-28) Navajo Refining Company, David Griffin, Environmental Affairs Superintendent, P.O. Drawer 159, Artesia, New Mexico 88210, has submitted for approval a modification to the previously submitted ground water discharge plan application for its refining facility located in the SE/4 Section 1, E/2 Section 8, W/2 Section 9 and N/2 Section 12, Township 17 South, Range 26 East, NMPM, Eddy County, New Mexico. Approximately 405,200 gallons per day of refinery waste water will be processed through an oil/ water separator and a newly constructed waste water treatment plant prior to disposal in approximately 145 acres of evaporation ponds located three miles east of the refinery adjacent to the Pecos River. The modification requested is an increase of 60 acres from the 85 acres previously requested. The refinery effluent has a total dissolved solids content of 2000 to 4000 mg/l. Ground water most likely to be affected by any discharge at the surface in the refinery area is at a depth of about 15 feet and has a total dissolved solids concentration of approximately 2500 mg/l, and in the pond area ground water is at a depth of 5 to 10 feet and has a total dissolved solids content ranging between 6,000 and 27,000 mg/l. The discharge plan addresses how spills, leaks and other discharges to ground water at the plant site and the pond area will be managed.

(GW-17) Acid Engineering, Lloyd Bolding, owner, P.O. Box 753, Kilgore, Texas 75662, has submitted an application for renewal of its previously approved discharge plan for its Hobbs service facility located in Section 36, Township 18 South, Range 37 East, (NMPM) Lea County, New Mexico. Approximately 300 gallons per day of waste water containing 0.1% hydrochloric acid by weight will be discharged to a fiberglass tank. The waste water will be recycled as makeup water in the oil well treatment process. Ground water most likely to be affected by a discharge at the surface is at a depth of approximately 46 feet with a total dissolved content of approximately 1400 mg/l.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 3rd day of March. To be published on or before March 11, 1988.

STATE OF
NEW MEXICO
OIL CONSERVATION
DIVISION
W. J. LeMay,
Director
(Seal)

Affidavit of Publication

No. 12260

STATE OF NEW MEXICO,
County of Eddy:

Gary D. Scott being duly

sworn, says: That he is the Publisher of The

Artesia Daily Press, a daily newspaper of general circulation,

published in English at Artesia, said county and state, and that

the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia

Daily Press, a daily newspaper duly qualified for that purpose

within the meaning of Chapter 167 of the 1937 Session Laws of

the State of New Mexico for 1 consecutive days weeks on

the same day as follows:

First Publication March 10, 1988

Second Publication

Third Publication

Fourth Publication

and that payment therefore in the amount of $

has been made.

Subscribed and sworn to before me this 14th day

of March, 19 88

Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1991

Copy of Pub

LEGAL NOTICE

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

Notice is hereby given that pursuant to the New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal and discharge plan modification have been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800.:

(GW-28) Navajo Refining Company, David Griffin, Environmental Affairs Superintendent, P. O. Drawer 159, Artesia, New Mexico 88210, has submitted for approval a modification to the previously submitted ground waterdischarge plan application for its refining facility located in the SE/4 Section 1, E/2 Section 8, W/2 Section 9 and N/2 Section 12, Township 17 South, Range 26 East, NMPM, Eddy County, New Mexico. Approximately 405,200 gallons per day of refinery waste water will be processed through an oil/water separator and a newly constructed waste water treatment plant prior to disposal in approximately 145 acres of evaporation ponds located three miles east of the refinery adjacent to the Pecos River. The modification requested is an increase of 60 acres from the 85 acres previously requested. The refinery effluent has a total dissolved solids content of 2000 to 4000 mg/1. Ground water most likely to be affected by any discharge at the surface in the refinery area is at a depth of about 15 feet and has a total dissolved solids concentration of approximately 2500 mg/1, and in the pond area ground water is at a depth of 5 to 10 feet and has a total dissolved solids content ranging between 6,000 and 27,000 mg/1. The discharge plan addresses how spills, leaks and other discharges to ground water at the plant site and the pond area will be managed.

(GW-17) Acid Engineering, Loyd Bolding, owner, P.O. Box 753, Kilgore, Texas 75662, has submitted an application for renewal of its previously approved discharge plan for its Hobbs service facility located in Section 36, Township 18 South, Range 37 East, (NMPM) Lea County, New Mexico. Approximately 300 gallons per day of waste containing 0.1% hydrochloric acid by weight will be discharged to a fiberglass The waste water will be cled as makeup water i oil well treatment proc Ground water most like be affected by a dischar the surface is at a depth o proximately 46 feet with tal dissolved content of ap imately 1400 mg/1.

Any interested person ma tain further information the Oil Conservation Div and may submit written ments to the Director o Oil Conservation Divisio the address given above. to ruling on any proposed charge plan or its mod tion, the Director of the Conservation Division sha low at least thirty (30) da ter the date of publicatio this notice during which ments may be submitte him and a public hearing be requested by any inter person. Requests for p hearing shall set forth the sons why a hearing shou held. A hearing will be h the Director determines is significant public inter If no public hearing is the Director will appro disapprove the proposed based on information a able. If a public heari held, the Director will ap or disapprove the pro plan based on informat the plan and informatio mitted at the hearing.

GIVEN under the Seal o Mexico Oil Conservatio mission at Santa Fe, Ne ico, on this 3rd day of To be published on or March 11, 1988.

STATE OF NEW MI
OIL CONSERVATI
DIVISION

s- W. J.
WILLIAM J. L
I

SEAL

Published in the Artesi Artesia, N.M. 10, 1988.

Lega

P.O. GW-28 GW-17
NO Limit

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

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Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 3rd day of March, 1988.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
s/WILLIAM J. LEMAY, Director

Journal, March 11, 1988

STATE OF NEW MEXICO } ss
County of Bernalillo

THOMAS J. SMITHSON

being duly sworn declares and says that he is **NAT'L ADV. MGR.** of the **Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made or assessed as court costs; that the notice, a copy of which is hereto attached, was published in said paper in the regular daily edition,

for 1 times, the first publication being on the 11 day of March, 1988, and the subsequent consecutive publications on ,198

OFFICIAL SEAL
BRENDA ESTVANDER
NOTARY PUBLIC - NEW MEXICO
Filed with Secretary of State
My Commission Expires 1/8/92

Thomas J. Smithson

Sworn and subscribed to before me, a Notary Public in and for the County of Bernalillo and State of New Mexico, this 14 day of March, 1988.

PRICE $31.26

Statement to come at end of month.

ACCOUNT NUMBER C80932

EDJ-15 (R-2/86)

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

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Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on information in the plan and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 3rd day of March. To be published on or before March 11, 1988.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

W. J. LeMay

WILLIAM J. LEMAY, Director

S E A L

ACID ENGINEERING, INC.

P.O. BOX 753

KILGORE, TEXAS 75662

February 8, 1988

Mr David G. Boyer
Environmental Bureau Chief
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
Box 2088
Santa Fe, New Mexico 87504

Re: Discharge Plan GW-17

Dear Mr. Boyer:

Acid Engineering continues to use our Hobbs, New Mexico facility as well as the wash up water collection system that was approved for us in January 1983. The system has not been altered in any way and continues to function properly with zero loss of effluent.

I met with Mr. Jerry Sexton from your Hobbs, New Mexico office on February 4, 1988. We toured our Hobbs facility and inspected our collection system. I further introduced Mr. Sexton to our station Manager, Rusty Moose, phone (505)393-1377, to help in any future on site inspections.

I request that you consider extending our subject discharge plan. Please call me at (214)983-2086 if any additional information or clarification is desired.

Sincerely yours,

Lloyd Bolding

Lloyd Bolding
Acid Engineering, Inc.

LB:jm

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

GARREY CARRUTHERS
GOVERNOR

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

MEMORANDUM TO: Roger Anderson
FROM: Jerry Sexton, Supervisor - District I
DATE: February 4, 1988

RE: Acid Engineering Inspection for Discharge Plan

Acid Engineering's Discharge System is as was described to you and appears to be okay.

The following should be noted:

1) The fiberglass tank sits in an old pit (but the pit has not appeared to be used).

2) The fiberglass tank is exposed and there are no leaks.

3) They do wash the trucks. but do it on an asphalt pad with a drain that goes to the fiberglass tanks (this is the same pad for loading trucks.

4) Office and Maintenance shop is connected to septic tank. Shop is in good condition and may not need anything else.

5) Inspection was made in rain and condition of yard looked okay, but it was hard to tell for sure.

6) There were an estimated 50 drums on location waiting to be picked up, but reclaim company won't pick up this amount of drums. The drums will be re-used when enough drums are accumulated so they can be picked up.

7) All waste water is used to flush acid.

Mr. Bolding was cooperative and invited the facility to be inspected at any time.

JS:jm

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

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

January 28, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lloyd Bolding
Acid Engineering, Inc.
P. O. Box 753
Kilgore, Texas 75662

RE: Discharge Plan GW-17

Dear Mr. Bolding:

On October 1, 1987 you were notified of the January 6, 1988 expiration of your discharge plan. To date, we have not received your renewal application. I am enclosing the October 1, 1987 letter.

Since discharging effluent or leachate without an approved discharge plan is a violation of New Mexico Water Quality Commission Regulations and the Water Quality Act, we request your voluntary compliance in taking care of this matter immediately. Persons who discharge without an approved discharge plan can be subject to criminal and civil penalties which may include imprisonment and fines up to $10,000 per day. Please advise me by February 5, 1988 as to when I may expect to receive your renewal application.

Sincerely,

Roger C. Anderson

for David G. Boyer
Environmental Bureau Chief

Enc.

DGB:RA:sl

cc: William J. LeMay - Director
Jerry Sexton - Hobbs

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

GARREY CARRUTHERS
GOVERNOR

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

October 1, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, TX 75662

RE: Discharge Plan GW-17

Dear Mr. Bolding:

On January 30, 1986 you were notified of the transfer of your discharge plan (DP-249) from the Environmental Improvement Division to the Oil Conservation Division (OCD) for administrative purposes. The OCD has changed the identification of your plan to GW-17.

On January 6, 1983, the ground water discharge plan for the Hobbs Facility, Lea County, New Mexico, was approved by the Director of the Environmental Improvement Division. This discharge plan was required and submitted pursuant to Water Quality Control Commission Regulations and it was approved for a period of five years or less. The approval will expire on January 6, 1988.

If your facility continues to have effluent or leachate discharges and you wish to continue discharging, please submit your application for renewal of plan approval as quickly as possible. The OCD is reviewing discharge plan submittals and renewals carefully and the review time can often extend for several months. Please indicate whether you have made, or intend to make, any changes in your discharge system, and if so, include an application for plan amendment with your application for renewal. To assist you in preparation of your renewal application, I have enclosed a copy of the OCD's guidelines for preparation of groundwater discharge plans at oilfield service facilities. These guidelines will be used in review of your renewal application.

If you no longer have such discharges and discharge plan renewal is not needed, please notify this office.

If you have any questions, please do not hesitate to contact Roger Anderson or me at (505) 827-5812.

Sincerely,

DAVID G. BOYER
Hydrogeologist/Environmental Bureau Chief

DGB/RCA/ag

Enc.

cc: W. J. LeMay
OCD - Hobbs

DISCHARGE PLAN SUMMARY

Acid Engineering DP-249: Lloyd Bolding is permitted to discharge a maximum of 300 gallons per day of tank truck washdown water containing 0.1% hydrochloric acid by weight. Acid Engineering is located on U.S. Highway 82 across from the Hobbs Airport, T18S, R37E, Section 36, Lea County, New Mexico. The holding tank is a 210 barrel fiberglass tank installed below grade. Acid wastes, stored in the tank, are either recycled or transported offsite. The tank is located in an old acid disposal pit and has had past leaking problems around pipe inlets and outlets. Acid Engineering is to notify EID within 24 hours in the event of an accidental spill. Ground water occurs at a depth of 46 feet and has a TDS of 1,400 mg/l. There are no monitoring requirements.

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968

TONEY ANAYA
GOVERNOR

DENISE D. FORT
DIRECTOR

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 30, 1986

Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, TX 75662

RE: Change of regulatory authority over ground water discharge plan DP-249

Dear Mr. Bolding:

This letter is to inform you that the Oil Conservation Division (OCD) will now administer your ground water discharge plan (DP-249) for Acid Engineering, Inc., located on U.S. Highway 82 across from the Hobbs Airport in Lea County, New Mexico. Both OCD and the Environmental Improvement Division (EID) administer the New Mexico Water Quality Control Commission Regulations under which DP-249 was required and approved. Recently the Water Quality Control Commission clarified the division of responsibilities between EID and OCD. A copy of this delegation of responsibilities is enclosed for your information. You will note that it assigns the responsibility for regulating oil field service industries to the OCD. Acid Engineering, Inc. is an oil field service company, henceforth you will be dealing with OCD as the agency having jurisdication over DP-249. If you have any questions concerning these changes, please call me at 827-2392.

Sincerely,

Paul Clement
Water Resource Specialist
Ground Water Section

PC:egr

cc: Dave Boyer, Oil Conservation Division, Santa F
EID Field Office, Hobbs

P 612 425 113

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

See Reverse

Sent to Lloyd Bolding

Street and No. P.O. Box 753

P.O. State and ZIP Code Kilgore, TX

Postage

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87503

GOVERNOR

SECRETARY

January 17, 1983

Scott Nicholson
U.S. EPA-Region VI
1201 Elm Street
Dallas, Texas 75270

Dear Scott:

This letter will serve as a means of identifying a possible non-notifier. The facility in question is Acid Engineering Inc. near Hobbs. Several months ago this facility was identified. At that time we turned the facility over to N.M. EID Groundwater Section as well as alerting Gerald Fontenot, EPA, to the situation.

EID's Groundwater Section (Joel Hubble) found out that this facility produces 2900 to 5800 gallons per week of spent hydrochloric acid with a pH of less than 1.0. This facility does not currently have an EID ID number. A company, Sonny's Oil Field Services, EPA ID #NMD042521062, has transported at least two loads of wastes from Acid Engineering for disposal at their brine injection well. (This information was obtained from L.D. Clarke of Sonny's Oil Field Service). I would assume that the appropriate manifests were not filled out, Acid Engineering does not have an ID number.

Acid Engineering is located at the following address:

Acid Engineering
Carlsbad Highway
Hobbs, NM

The home office's address is:

Acid Engineering Inc.
Lloyd Boding, President
P.O. Box 753
Kilgore, Texas 75662

If we can be of further assistance on this matter, let us know.

Sincerely,

Jack Ellvinger

Jack Ellvinger
Environmental Scientist
Hazardous Waste Unit

JE/ps

cc: Joel Hubble - Groundwater Section, EID
Non-notifier File
Acid Envineering File

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F. Rhoades, M.P.H., Director

TONEY ANAYA
GOVERNOR

ROBERT P. MCNEILL
SECRETARY

No. 255790

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	Lloyd Bolding
STREET AND NO.	P.O. Box 753
P.O., STATE AND ZIP CODE	Kilgore, TX 75662
POSTAGE	$
CERTIFIED FEE	
SPECIAL DELIVERY	
RESTRICTED DELIVERY	

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 6, 1983

Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, Texas 75662

Dear Mr. Bolding:

The discharge plan (DP-249) for Acid Engineering, Inc., located on the north side of U.S. Highway 82 across from the Hobbs Airport, in Lea County, New Mexico (T18S, R37E, Section 36) is hereby approved. The approved plan consists of the plan dated September 14, 1982 and the materials dated April 29, 1982, October 28, 1982, December 7, 1982, and December 28, 1982 submitted as supplements to the discharge plan.

The discharge plan was submitted pursuant to Section 3-106 of the N.M. Water Quality Control Commission Regulations. It is approved pursuant to Section 3-109. Please note subsections 3-109.E. and 3-109.F., which provide for possible future amendment of the plan. Please be advised that the approval of this plan does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

There will be no monitoring or reporting requirements.

Pursuant to subsection 3-109.G.4., this plan approval is for a period of five years. This approval will expire January 6, 1988, and you should submit an application for new approval in ample time before that date.

Sincerely,

CONCUR: Goad MSR
Nylander CRN 1-10-83
Clayton _____
McKeag _____

RUSSELL F. RHOADES
Director

RFR:JH:jba

cc: John Guinn, District IV Manager, Roswell
Hobbs EID Field Office
Jack Ellvinger, EID Hazardous Waste Section

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 11:45	Date 1-14-83

Originating Party	Other Parties
TO: Pete C. D. Clark	Sonny's Oil field Service Inc.
FROM:	W county Road 393-4521 Hobbs NM

Subject: Acid Engineering Inc

Discussion

- They have picked up wastes from Acid Engineering.
- He said other companies also dispose of A.E. wastes
- the wastes are then injected via brine disposal well owned by their company

Conclusions or Agreements

I Call AE: for them to get off the [illegible]

Distribution

Signed Joel Hubbell

ACID ENGINEERING, INC.

P. O. BOX 753

KILGORE, TEXAS 75662

December 28, 1982

Joel Hubbell
Water Resource Specialist
Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Joel,

It is good news to learn that our Hobbs facility is now in compliance with the requirements of the State of New Mexico, Environmental Improvement Division. We will maintain the facility in good working order and always be open for your inspection.

Let this letter serve as our pledge that no effluent from our operation will ever be intentionally allowed to escape into our on site catch pit. In the event of an accidental spill, we further pledge to notify your office within 24 hours of spill.

Sincerely,

Lloyd Bolding
Acid Engineering, Inc.

LB:cf

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F. Rhoades, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

CERTIFIED MAIL--RETURN RECEIPT REQUESTED

December 21, 1982

Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, Texas 75662

Dear Mr. Bolding:

Jim Kinney, of the Carlsbad EID office, inspected the seal on your effluent holding tank at the Hobbs facility on December 15, 1982 and found it adequate to prevent leakage of effluent. In order to complete our evaluation of your discharge plan, the EID needs a written commitment from you stating that all effluent from your facility will be either recycled or transported to an approved disposal site so no effluent is disposed of into the catchment pit.

If you have any questions, please contact me at the address or telephone number above.

Sincerely,

Joel M. Hubbell

Joel Hubbell
Water Resource Specialist
Ground Water Section

JH:jba

cc: John Guinn, District IV Manager, Roswell
Hobbs EID Field Office
Jack Ellvinger, Hazardous Waste Section-EID

No. 285761
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	LLOYD BOLDING ACID ENGINEERING
STREET AND NO.	P.O. Box 753
P.O., STATE AND ZIP CODE	KILGORE, TX. 75662
POSTAGE	$
CERTIFIED FEE	
SPECIAL DELIVERY	
RESTRICTED DELIVERY	

MSZ

STATE OF NEW MEXICO
HEALTH & ENVIRONMENT department

MEMORANDUM

DATE: December 15, 1982

RECEIVED
DEC 16 1982
EID: WATER POLLUTION CONTROL

TO: Joel Hubbell, Water Pollution Control, Santa Fe

FROM: Jim Kenney, Env. III., Carlsbad JK

SUBJECT: Acid Engineering Site Visit

Joel, I found the problems associated with Acid Engineering waste tank to be corrected. I have attached photos taken during my visit. One of the formen told me they were seriously considering back-filling the area around the tank.

If I can be of any further help, please call me.

JK/are

xc: File

ADM 031A Issued 6/78

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 9 29	Date 11-18-82
Originating Party		Other Parties
TO: James Spurgeon 505-393-1377		
FROM: Joel Hubbell		

Subject Acid Engineering - DP-249

Discussion - The tank is emptied once a week or once every two weeks. A load is approximately 140 Bbl @ 42 gal-bbl or 5880 gal to 2900 gal per week - This is more than what they originally expected.

Conclusions or Agreements

Distribution

Signed Joel Hubbell

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 9 25	Date 11-18-82
Originating Party		Other Parties
TO: Lloyd Belding		
FROM: Joel Hubbell		

Subject

Discussion

- They will seal the inlet pipe to the tank so it won't overflow.
- When this seal is on, when full the ~~tank~~ water in the tank will ~~not~~ fill the sump.
- They still plan to use a recycle pump
- ~~They~~ the ~~may~~ will be fencing their entire yard - may fence the pit - I told him we would recommend that he fence the pit but ~~that~~ we will not require fencing for the discharge plan.
-

Conclusions or Agreements

1. Lloyd will write to say the tank is sealed and that they will either recycle or transport all wastes - No wastes will be disposed of into the open pit.

Distribution

Signed Joel Hubbell

MEMORANDUM OF MEETING OR CONVERSATION

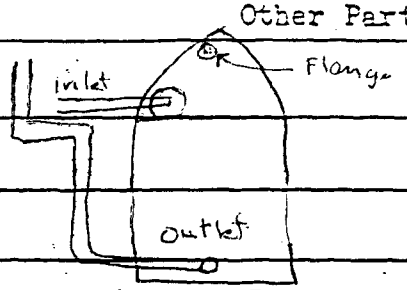
☒ Telephone ☐ Personal	Time 4:00	Date 11-9-82

Originating Party

TO: Joel Hubbell

FROM: Jim Kinney EID-Hobbs

Other Parties



Subject

Acid Engineering - Inspection of Acid Tank

Discussion

- The tank is shaped like a bullet with an inlet near the top where the cone tapers. The hole in the tank is larger than the inlet pipe so it allows waste water to overflow from the tank. Jim said the tank was overflowing at the time he visited the site.
- Currently Sonny's Transport (pumps) picks up the waste from the tank and transports it to dispose of else where. (injection?)
- The outlet pipe (PVC) is not sealed.
- Jim was told by an employee of A.E. that they plan to recycle the acid in the future (~~it~~ costs ~~of~~ 2000 to have it hauled/week). It is emptied 2-3 times a week
- They do not have ~~the~~ a trench pump yet.

Conclusions or Agreements

- The tank should have a vent on top - Seal the fill pipe and put a cap on the outlet (suction) pipe - it also needs some sort of device to show when tank is full.
- Filling the pit with Caliche may increase risk of damaging the tank.

Distribution

Signed Joel Hubbell

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 11 20	Date 11-9-82
Originating Party		Other Parties
TO: Jim Kinney		
FROM: Joel Hubbell		

Subject Acid Engineering.

Discussion Jim will go out today and Inspect Acid Engineer's facility. He will Look at their Acid Reclaim ~~tank~~ Tank and give us a call this afternoon to tell us how it Looks

Conclusions or Agreements

Distribution

Signed

ACID ENGINEERING, INC.

P. O. BOX 753

KILGORE, TEXAS 75662

Ocotber 28, 1982

Joel Hubbell
Ground Water Section
Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 875-0968

Dear Joel,

Please be advised that the recycle system that I proposed in my letter of September 14, 1982, is now operational in our Hobbs facility. First service of the facility was made on September 29, 1982, and is performing satisfactory as of this date. The delay in notifying you was because of my inability to make a personal inspection until last week.

Our manager for the Hobbs yard is James Spurgeon, Phone 505-393-1377. He will be available to give any of your representives an on site inspection and futher cooperate with your agency.

Thank you again for your patience and understanding in this matter.

Very truly yours,

Lloyd Bolding

Lloyd Bolding
Acid Engineering, Inc.

LB:cf

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F. Rhoades, M.P.H., Director

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 15, 1982

Lloyd Bolding
Acid Engineering
P.O. Box 753
Kilgore, Texas 75662

Dear Mr. Bolding:

Enclosed is a copy of the Public Notice pertaining to your proposed discharge which was issued by this agency pursuant to New Mexico Water Quality Control Commission Regulations 3-108.A.

If you have any questions, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,

Marlene S. Conrad

Marlene S. Conrad, Program Manager
Ground Water Section
Water Pollution Control Bureau

MSC:jba

Enclosure

P 300 121 253

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
See Reverse

SENT TO
Lloyd Bolding
STREET AND NO.
P.O. Box 753
P.O., STATE AND ZIP CODE
Kilgore, Texas 75662
POSTAGE
CERTIFIED FEE
SPECIAL DELIVERY
RESTRICTED DELIVERY

Department

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F. Rhoades, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 15, 1982

Lea County Commissioners
Lea County Courthouse
Lovington, New Mexico 88260

Board of County Commissioners:

Enclosed is a public notice which includes notice of proposed discharge plan(s) for one or more operations located in your county.

If you have any questions, please do not hesitate to contact me at the address and telephone number given above.

Sincerely,

Maxine S. Goad

MAXINE S. GOAD
Program Manager
Ground Water Section

MSG:jlm

Enclosure

P 243 077 558
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)
SENT TO
Lea Cnty Commissioners
STREET AND NO.
Lea Cnty Courthouse
P.O. STATE AND ZIP CODE
Lovington, NM 88260
POSTAGE
CERTIFIED FEE
SPECIAL DELIVERY FEE
RESTRICTED DELIVERY FEE
RETURN RECEIPT SHOWING TO WHOM AND DATE DELIVERED
RETURN RECEIPT SHOWING TO WHOM, DATE, AND ADDRESS OF DELIVERY
TOTAL POSTAGE AND FEES

October 15, 1982
TO BE PUBLISHED ON OR BEFORE OCTOBER 20, 1982

PUBLIC NOTICE
NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION
HEALTH AND ENVIRONMENT DEPARTMENT

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following proposed discharge plan has been submitted for approval to the Director of the New Mexico Environmental Improvement Division, Post Office Box 968, Crown Building, 725 St. Michael's Drive, Santa Fe, New Mexico 87504-0968; telephone (505) 984-0020.

ACID ENGINEERING, INC., Lloyd Bolding, President, P.O. Box 753, Kilgore Texas 75662 proposes to discharge up to 300 gallons per day of wash-up water, containing 0.1% hydrochloric acid by weight, to a buried fiberglass tank located west of Hobbs in Section 36, T18S, R37E in Lea County, New Mexico. The wash-up water will be pumped out of the fiberglass tank to be recycled in the oil well acidizing process. The ground water most likely to be affected is at a depth of approximately 46 feet with a total dissolved solids content of approximately 1400 mg/l.

Any interested person may obtain further information from the Ground Water Section, Water Pollution Control Bureau, EID, and may submit written comments to the Director of the EID at the address given above. Prior to ruling on any proposed discharge plan or its modification, the Director of EID will allow thirty (30) days after the date of publication of this Notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why the hearing should be held. A hearing will be held if the Director determines that there is significant public interest.

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 2:00	Date 10/15/86

Originating Party	Other Parties
From: Joel Hubbell	
To: Lloyd Boldin	

Subject

Discussion

- Lloyd will write to the EID and commit to dispose of all their wastes into their fiberglass tank.
- The Tank is in and in operation. They plan to work on filling in the caliche pit
- Tank size is 10 diameter x 15 long
- They will periodically (once a year or so) hire a vacuum truck to clean out any deposits in the bottom of the tank

Conclusions or Agreements

Distribution

Signed Joel Hubbell

ACID ENGINEERING, INC.

P. O. BOX 753

ACID ENGINEERING INC.

KILGORE, TEXAS 75662

September 14, 1982

Joel Hubbell
Ground Water Section
Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Joel,

After receiving your letter of August 27, 1982, we have examined our options in attempting to meet state requirements for disposing of our effluent. The more practical approach for us at this time is to take the following action:

1. Install a recycle system consisting of:
   A. A 210 bbl. fiberglass tank will be installed, according to the attached plat, to catch all wash-up fluid from our loading sump.
   B. Install a sump pump in the tank to allow reclaiming the water for use as acid mix water.
   C. Eliminate exterior truck washing on loading dock to reduce total fluid discharge.

The proposed system should be installed and ready for service by or before October 1, 1982. I will notify you by letter as soon as the system is operational.

Thank you so much for your patience and understanding in this matter.

Very truly yours,

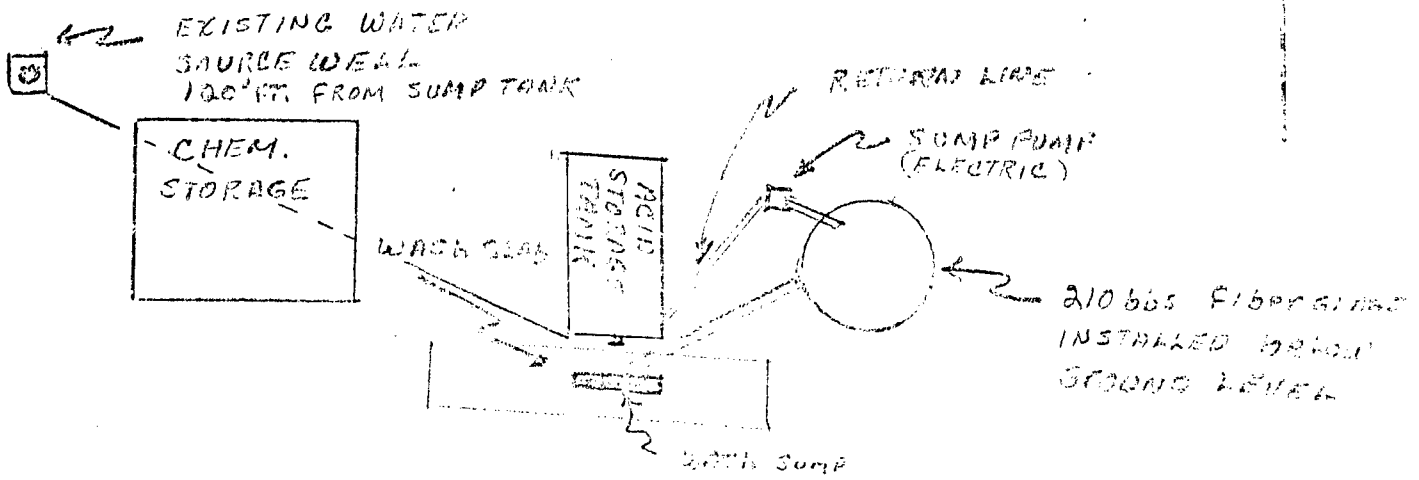
Lloyd Bolding

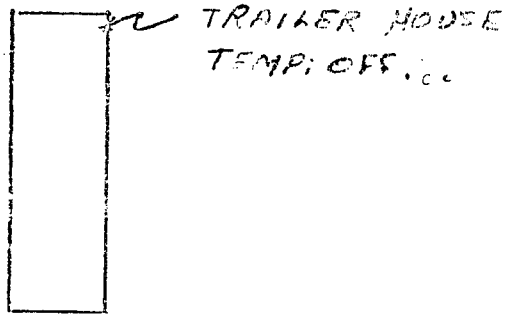
Lloyd Bolding
Acid Engineering, Inc.

LB:dm
Enclosure

HOBBS FACILITY
HOBBS, N.M.

N





HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F. Rhoades, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

September 13, 1982

Max Curry
Hobbs Airport
Hobbs, New Mexico 88240

Dear Mr. Curry:

Thank you for allowing us to collect a water quality sample from the airport well. Enclosed is a copy of the analysis. If you have any questions concerning this analysis, please contact me at the telephone number or address given above.

Sincerely,
Joel Hubbell

Joel Hubbell
Water Pollution Control Bureau

Enclosure

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 2:00	Date 9/8/82
Originating Party		Other Parties
From: Lloyd Golding		
To: Joel Hubbell		

Subject: Acid Engineering

Discussion

- Lloyd Contacted the city of Hobbs about a sewage line hook-up. They said they did not plan to bring out sewage lines to this area.
- His tentative plan is to put in a fiberglass tank with a recirculation pump so they can reuse the fluid. This tank would be buried and have sand around it. Thus, there would be No discharge to ground water. All waste would be recycled.
- Lloyd wants us to re-sample and split samples for all of the wells we have sampled around their site and their own well. I will contact Brown Edwards to arrange this.
- Lloyd will send us his discharge plan. I asked them to include drawings showing how his set up will be constructed.

Conclusions or Agreements

- Lloyd thought he could have this system in within a few months.
- They will not be able to fill in the caliche with out having to buy rock from surrounding sites to fill it in. The pit, in fact, was there when they moved in. The rock was used to build up the A.E. site + other uses.

Distribution

Signed: Joel M. Hubbell

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

#1

Date received	Lab No.	SLD user code No.
4/29/82	HM-1338	51.32

CONSULT SLD Lab Annex L for proper presentation of sample(s). TYPE or PRINT with Ball Point Pen

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP: ☒ 1 ☐ 2 ☐ 3 ☐ Complete Secondary

TYPE of CHEMICAL ANALYSIS: ☐ Organic ☐ Radiological

er Supply System Name	Water Supply System Code No.	City or Location	County	Check one:
cid Engineering	NM	West of Hobbs	Lea	☒ TREATED WATER ☐ RAW WATER

lection Date	Collection Time	Collection Point	Collector's remarks	Report to
-28-82	2:10PM.	Disposed pit	Caution pH = 0	David Boyer (Groundwater Section)
lected By	**Owner**		No Preservatives Added	Address P.O. Box 968
Chenney & B. Edwards	Acid Eng. Inc.		Refer Questions to →	Santa Fe N.M.

TYPE of SYSTEM (Check one)
☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☐ Well-Depth ☐ Drain ☐ Stream ☒ Pool ☐ Other (specify)

LAT. ° ' " LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
00930 Sodium (as Na)		00940 Chloride (as Cl)		70300 Total Filterable Residue	mg/l	☒ 01000 Arsenic	0.034			39390 Endrin	
00935 Potassium (as K)		00950 Fluoride (as F)		38260 Foaming Agents (as Las)		☒ 01005 Barium	0.9			39732 Lindane	
00900 Tot. Hardness (as $CaCO_3$)		00620 Nitrate (as N)		00095 Conductance Micromhos 25°C		☒ 01025 Cadmium	0.006			38270 Methoxychlor	
00915 Calcium (as Ca)		00430 Alkalinity (as $CaCO_3$)		00400 pH		☒ 01030 Chromium	0.014	RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
00925 Magnesium (as Mg)		00440 Bicarbonate (as HCO_3)		01330 Odor		☒ 01049 Lead	<0.005	03501 Gross Beta	pCi/l	39730 2, 4-D	
01045 Iron-Total (as Fe)	7.3	00445 Carbonate (as CO_3)		00080 Color	mg/l	☒ 07180 Mercury	<0.0005	09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
01056 Manganese (as Mn)	0.38	00945 Sulfate (as SO_4)		00070 Turbidity		☒ 01145 Selenium	0.015	11501 Radium-228	pCi/l		
						☒ 01075 Silver	<0.001				

RECEIVED
AUG 16 1982
EID: WATER

LABORATORY REMARKS:

Reviewed by: DMF

Date reported: 8/11/82

D 702 Form Revised 4/78

DISTRIBUTION: White - Water Supply Regulation, SF • Canary - WS System • Pink - EIA Regional Office • Goldenrod - SLD Lab

3700

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES #2

Date received	Lab No.	SLD user code No.
4/29/82	WC-3894	51.32

CONSULT SLD Lab Annex L for proper presentation of sample(s). TYPE or PRINT with Ball Point Pen

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP: ☐ 1 ☒ 2 ☐ 3

TYPE of CHEMICAL ANALYSIS: ☐ Complete Secondary ☐ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one
Acid Engineering	N/A	West of Hobbs	Lea	☒ TREATED WATER ☐ RAW WATER

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
4-28-82	2:10 PM	Disposal Pit	Caution pH < 1 — No preservative added — Refer Questions to →	David Boyer

Collected By	Owner	Address
Jim Kenney & B. Edwards	Acid Engineering	P.O. Box 968 Santa Fe, N.M.

TYPE of SYSTEM (Check one): ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☐ Well-Depth ☐ Drain ☐ Stream ☒ Pool ☐ Other (specify)

LAT. ° ' "
LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
00930 Sodium (as Na)		00940 Chloride (as Cl)		70300 Total Filterable Residue	mg/l	01000 Arsenic				39390 Endrin	
00935 Potassium (as K)		00950 Fluoride (as F)		38260 Foaming Agents (as Las)		01005 Barium				39732 Lindane	
00900 Tot. Hardness (as $CaCO_3$)		00620 Nitrate (as N)	135	00095 Conductance Micromhos 25°C		01025 Cadmium				38270 Methoxychlor	
00915 Calcium (as Ca)		00430 Alkalinity (as $CaCO_3$)		00400 pH		01030 Chromium		RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
00925 Magnesium (as Mg)		00440 Bicarbonate (as HCO_3)		01330 Odor		01049 Lead		03501 Gross Beta	pCi/l	39730 2, 4-D	
01045 Iron-Total (as Fe)		00445 Carbonate (as CO_3)		00080 Color	mg/l	07180 Mercury		09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
01056 Manganese (as Mn)		00945 Sulfate (as SO_4)		00070 Turbidity		01145 Selenium		11501 Radium-228	pCi/l		
						01075 Silver					

LABORATORY REMARKS:

Reviewed by: C.V. Mitchell
Date reported: 5/3/82

SLD 702 Form Revised 4/78

DISTRIBUTION: White - Water Supply Regulation, SF • Canary - WS System • Pink - EIA Regional Office • Goldenrod - SLD Lab

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

Spl. marked #3

Date received	Lab No.	SLD user code No.
4-29-82	WC-3893	51.32

CONSULT SLD Lab Annex L for proper presentation of sample(s). TYPE or PRINT with Ball Point Pen

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP: ☐ 1 ☐ 2 ☐ 3

TYPE of CHEMICAL ANALYSIS: ☒ Complete Secondary ☐ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one
Acid Engineering	N/A	West of Hobbs (2 mi.)	Lea	☒ TREATED WATER ☐ RAW WATER

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
4-28-82	2:10 P.M.	Disposal pit	Caution pH < 1 No preservatives Added Refer Questions to →	David Boyer (Groundwater)

Collected By	Owner	Address
Jim Kenney & Brown Edwards	Acid Engineering	P.O. Box 968 Santa Fe, N.M.

TYPE of SYSTEM (Check one): ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☐ Well-Depth ☐ Drain ☐ Stream ☒ Pool ☐ Other (specify)

LAT. ° ' "

LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
☒ 00930 Sodium (as Na)	2093	☒ 00940 Chloride (as Cl)	14,665	☒ 70300 Total Filterable Residue	mg/l 42211	☐ 01000 Arsenic				39390 Endrin	
☒ 00935 Potassium (as K)	1989	☒ 00950 Fluoride (as F)		☒ 38260 Foaming Agents (as Las)	710	☐ 01005 Barium				39732 Lindane	
☒ 00900 Tot. Hardness (as $CaCO_3$)	2480	☒ 00620 Nitrate (as N)		☒ 00095 Conductance Micromhos 25°C	110000	☐ 01025 Cadmium				38270 Methoxychlor	
☒ 00915 Calcium (as Ca)	854	☒ 00430 Alkalinity (as $CaCO_3$)	0	☒ 00400 pH	1 0612	☐ 01030 Chromium		RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
☐ 00925 Magnesium (as Mg)	598	☒ 00440 Bicarbonate (as HCO_3)	0	☒ 01330 Odor	Stale	☐ 01049 Lead		03501 Gross Beta	pCi/l	39730 2, 4-D	
01045 Iron-Total (as Fe)		☒ 00445 Carbonate (as CO_3)	0	☒ 00080 Color	mg/l 30	☐ 07180 Mercury		09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
☒ 01056 Manganese (as Mn)		☒ 00945 Sulfate (as SO_4)	934	00070 Turbidity	100	☐ 01145 Selenium		11501 Radium-228	pCi/l		
						☐ 01075 Silver					

LABORATORY REMARKS: Appears to be a lot of HCl

Reviewed by

Date Reported 6/4/82

RECEIVED
JUN 17 1982
WATER SUPPLY
REGULATION SECTION

SLD 702 Form Revised 4/78

DISTRIBUTION: White - Water Supply Regulation, SF • Canary - WS System • Pink - EIA Regional Office • Goldenrod - SLD Lab

Health & Env. [illegible]ent Department
P. O. Box 96[illegible] Brown Building
Santa Fe, NM [illegible]
ATTENTION: Joel Hubbell

DATE RE[illegible] 4-6-82
DATE RE[illegible] 4/6/82 Cmm
Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Acid Engineering-Well

Lat/Long 103° 12' 25" ; 32° 41' " T ___ R ___ S ___

Station/Well Code ___ NPDES No ___ Outfall No ___

Collected 820401 1030 By Boyer/Hubbell
Date Time Name Unit

Pumping Conditions ___

Water Level ___ pH (00400) ___

Staff Gage Height ___ Conductivity (Uncorrected) ___ µmho

Control Structure ___ Water Temp (00010) ___ °C

Discharge ___ Conductivity at 25°C (00094) ___ µmho

Sample Type Grab

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

From NF, NA sample:

			Date Analyzed
☒	Conductivity (25°C)(00095)	1888 µmho	4/9/82
☐	Total nonfilterable residue (suspended)(00530)	___ mg/l	___
☒	pH	7.73	4/6

From NF, A-H_2SO_4 sample:

☐	Nitrate + nitrite, total (00630)	___ mg/l	___
☐	Ammonia, total (00610)	___ mg/l	___
☐	Chemical oxygen demand (00340)	___ mg/l	___

From ~~NF~~ NA sample:

			Date Analyzed
☒	Magnesium (00925)	47.9 mg/l	4/9
☒	Bicarbonate (00440)	190.1 mg/l	4/6
☒	Calcium (00915)	232 mg/l	4/9
☒	Chloride (00940)	511.9 mg/l	4/13
☒	Potassium (00935)	4.7 mg/l	4/12
☒	Sodium (00930)	92.0 mg/l	"
☒	Sulfate (00945)	86.0 mg/l	4/12/82
☒	Total filterable residue (dissolved)(70300)	1371 mg/l	4/23
☒	BORON	0.12	4/

From F, A-H_2SO_4 sample:

☐	Nitrate + nitrite, dissolved (00631)	___ mg/l	___
☐	Ammonia, dissolved (00608)	___ mg/l	___

This form accompanies 1 sample(s) marked as follows to indicate field treatment:

(NF) Whole sample (no filtration) (NA) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4 : Acidified with 2 ml conc H_2SO_4/l

P. O. Box 968 - Crown Building
Santa Fe, NM [redacted]7503
ATTENTION: Jack Hubbell

DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Airport - From Fire hydrant East of Water Storage tanks.

Lat/Long: 0 : " ; 0 : " T ___ R ___ S ___

Station/Well Code: 195,37E,2,22 NPDES No ___ Outfall No ___

Collected: 820805 1030 (Date / Time) By: Hubbell (Name) WPCB/G.W. (Unit)

Pumping Conditions: ___

Water Level: ___ pH (00400): ___

Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho

Control Structure: ___ Water Temp (00010): 85 °F

Discharge: ___ Conductivity at 25°C (00094): ___ µmho

Sample Type: Grab

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Ha 4.39
Ca 33.3

From NF, NA sample:

			Date Analyzed
☒ Conductivity (25°C)(00095)	600	µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___	mg/l	___

From NF, A-H_2SO_4 sample:

			Date Analyzed
☐ Nitrate + nitrite, total (00630)	___	mg/l	___
☐ Ammonia, total (00610)	___	mg/l	___
☐ Chemical oxygen demand (00340)	___	mg/l	___
☐ Kjeldahl Nitrogen Total	___	mg/l	___

From NF, NA sample:

			Date Analyzed
☒ Magnesium (00925)	12.9	mg/l	8/18
☒ Bicarbonate (00440)	220	mg/l	8/4
☒ Calcium (00915)	66.6	mg/l	8/12
☒ Chloride (00940)	94.6	mg/l	8/17
☒ Potassium (00935)	2.34	mg/l	8/11
☒ Sodium (00930)	41.4	mg/l	8/11
☒ Sulfate (00945)	67.5	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	418	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___	mg/l	___
☐ Ammonia, dissolved (00608)	___	mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate field treatment:
(NF:) Whole sample (no filtration) (NA:) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4 : Acidified with 2 ml conc H_2SO_4/l

Health & Env. Department
P. O. Box 968 Crown Building
Santa Fe, NM 87
ATTENTION: Joel Hubbell

DATE RECEIVED 8-10-82
DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location M+M Tool Rental - Hobbs

Lat/Long ° ' " ; ° ' " T R S

Station/Well Code 185,376,36,3 NPDES No . Outfall No

Collected 8208051130 By Hubbell WPCB - Groundwater
Date Time Name Unit

Pumping Conditions

Water Level

Staff Gage Height

Control Structure

Discharge

Sample Type Grab

pH (00400) 7.3

Conductivity (Uncorrected) µmho

Water Temp (00010) 68°F

Conductivity at 25°C (00094) 600 µmho

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hd 4.40
Ca 3.38

From NF, NA sample:

		Date Analyzed
☒ Conductivity (25°C)(00095)	643 µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	mg/l	

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	mg/l	
☐ Ammonia, total (00610)	mg/l	
☐ Chemical oxygen demand (00340)	mg/l	
☐ Kjeldahl Nitrogen Total	mg/l	

From NF, NA sample:

			Date Analyzed
☒ Magnesium	(00925)	12 < mg/l	8/18
☒ Bicarbonate	(00440)	212 mg/l	8/11
☒ Calcium	(00915)	67.6 mg/l	8/12
☒ Chloride	(00940)	40.6 mg/l	8/17
☒ Potassium	(00935)	2.3 < mg/l	8/11
☒ Sodium	(00930)	32.2 mg/l	"
☒ Sulfate	(00945)	76.6 mg/l	8/11
☒ Total filterable residue (dissolved)(70300)		419 mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	mg/l	
☐ Ammonia, dissolved (00608)	mg/l	

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate treatment:
NF: Whole sample (no filtration) NA: No acid added
F: Filtered in field with 0.45µ membrane filter

Health & Env. Department
P. O. Box 968 Crown Building
Santa Fe, NM
ATTENTION: Joel Hubbell

DATE RECEIVED 8-10-82
DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Country Club - Domestic well house

Lat/Long: ° ' " ; ° ' " T ___ R ___ S ___

Station/Well Code: 19S.37E.1.231 NPDES No ___ Outfall No ___

Collected: 820805 1652 (Date Time) By: Hubbell (Name) WPCB-Ground Water (Unit)

Pumping Conditions: ___

Water Level: ___ pH (00400): ___

Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho

Control Structure: ___ Water Temp (00010): ___ °C

Discharge: ___ Conductivity at 25°C (00094): ___ µmho

Sample Type: Grab

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Ho 11.00
Ca 8.38

From NF, NA sample:

			Date Analyzed
☒ Conductivity (25°C)(00095)	1411	µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___	mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___	mg/l	___
☐ Ammonia, total (00610)	___	mg/l	___
☐ Chemical oxygen demand (00340)	___	mg/l	___
☐ Kjeldahl Nitrogen Total	___	mg/l	___

From NF, NA sample:

			Date Analyzed
☒ Magnesium (00925)	32.0	mg/l	8/12
☒ Bicarbonate (00440)	435	mg/l	8/11
☒ Calcium (00915)	168	mg/l	8/12
☒ Chloride (00940)	119.4	mg/l	8/17
☒ Potassium (00935)	3.00	mg/l	8/11
☒ Sodium (00930)	96.6	mg/l	"
☒ Sulfate (00945)	219.0	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	938	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___	mg/l	___
☐ Ammonia, dissolved (00608)	___	mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate treatment:

(NF) Whole sample (no filtration) (NA) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4: Acidified with 2 ml conc H_2SO_4/l

P. O. Box 968 - Crown Building
Santa Fe, NM 503
ATTENTION: Joe Hubbell

DATE RECEIVED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Country Club - Pool Well

Lat/Long: 0 : " ; 0 : " T ___ R ___ S ___

Station/Well Code: 195,37E,1,213 NPDES No ___ Outfall No ___

Collected: 820805 1648 (Date Time) By: Hubbell (Name) WPCB-Groundwater (Unit)

Pumping Conditions: ___

Water Level: ___ pH (00400): ___

Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho

Control Structure: ___ Water Temp (00010): ___ °C

Discharge: ___ Conductivity at 25°C (00094): ___ µmho

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hd 5.36
Ca 4.30

From NF, NA sample:

			Date Analyzed
☒ Conductivity (25°C)(00095)	761	µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___	mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___	mg/l	___
☐ Ammonia, total (00610)	___	mg/l	___
☐ Chemical oxygen demand (00340)	___	mg/l	___
☐ Kjeldahl Nitrogen Total	___	mg/l	___

From ~~F~~ NF, NA sample:

			Date Analyze
☒ Magnesium (00925)	12 9	mg/l	8/18
☒ Bicarbonate (00440)	279	mg/l	8/11
☒ Calcium (00915)	85 9	mg/l	8/12
☒ Chloride (00940)	53.8	mg/l	8/17
☒ Potassium (00935)	3.17	mg/l	8/11
☒ Sodium (00930)	50.6	mg/l	"
☒ Sulfate (00945)	82.0	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	483	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___	mg/l	___
☐ Ammonia, dissolved (00608)	___	mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate field treatment

(NF) Whole sample (no filtration) (NA) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4: Acidified with 2 ml conc H_2SO_4/l

	4/28/82 Effluent	4/1/82 F.F. well	5/82 Country Club Pool water	5/82 Country Club Domestic	8/5/82 M+M Tool	6/5/82 [illegible]	Average
Mg	60	43	13	32	12	13	18
HCO_3	0	190	279	435	212	220	287
Ca	E=4	232	86	168	68	67	97
Cl^-	14,665	512	54	119	41	92	69
K	20	4.7	3	4	2	2	4
Na^+	209	92	51	97	32	41	55
$SO_4^=$	93	86	82	219	77	68	111
TFR	4221	1371	483	938	419	410	563
PH	0.62	7.73			7.3		
Temp					65°F		
SC	110,000	1895			600		

Health & Environment Department
P. O. Box 96[illegible] Crown Building
Santa Fe, NM [illegible]3
ATTENTION: Jeff Hubbell

DATE [illegible]ED 7/26/82 MJ
Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Acid Engineering-Well

Lat/Long: ° ' "; ° ' " T ___ R ___ S ___

Station/Well Code ___ NPDES No. ___ Outfall No. ___

Collected 6-24-82 1030 By Roger Hubbell
Date Time Name Unit

Pumping Conditions ___

Water Level ___ pH (00400) ___

Staff Gage Height ___ Conductivity (Uncorrected) ___ µmho

Control Structure ___ Water Temp (00010) ___ °C

Discharge ___

Sample Type Grab Conductivity at 25°C (00094) ___ µmho

METAL ANALYSES

From NF, A-HNO_3 sample:		Date Analyzed	From F, A-HNO_3 sample:		Date Analyzed
☒ Aluminum	550. µg/l	6/23			
☒ Arsenic, total	19. µg/l	7/14/82	☐ Arsenic, dissolved	___ µg/l	___
☒ Barium, total	300. µg/l	5/17/82	☐ Barium, dissolved	___ µg/l	___
☒ Cadmium, total	<1.0 µg/l	5/28/82	☐ Cadmium, dissolved	___ µg/l	___
☒ Lead, total	47. µg/l	5/25/82	☐ Lead, dissolved	___ µg/l	___
☒ Molybdenum, tot	<10. µg/l	5/17/82	☐ Molybdenum, diss	___ µg/l	___
☒ Selenium, total	12. µg/l	6/28/82	☐ Selenium, diss	___ µg/l	___
☒ Uranium, total	5. µg/l	6/16/82	☐ Uranium, diss	___ µg/l	___
☒ Silver Vanadium, total	<1.0 µg/l	4/30/82	☐ Vanadium, diss	___ µg/l	___
☒ Zinc, total	570 µg/l	4/15/82	☐ Zinc, dissolved	___ µg/l	___
☒ Chromium	8.0	4/15/80			
☒ Copper	120.	4/30/82			
☒ Iron	370.	4/30/82			
☒ Manganese	<50.	5/20/82			

Remarks

This form accompanies 1 sample(s) marked as follows to indicate field treatment (circle):

(NF, A-HNO_3): Whole sample; acidified with 5 ml conc HNO_3/l

F, A-HNO_3: Filtered sample (0.45µ membrane filter); acidified with 5 ml conc HNO_3/l

ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F Rhoades, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

August 27, 1982

Bill Pipal
M & M Tool Rental
Box 1693
Lovington, New Mexico 88240

Dear Mr. Pipal:

Thank you for allowing us to collect water quality samples from your well. Enclosed is a copy of the analysis. If you have any questions concerning this analysis, please contact me at the telephone number or address given above.

Sincerely,

Joel M. Hubbell

Joel Hubbell
Water Pollution Control Bureau

JH:dl

enclosure

M532

Environmental Improvement Division
Health & Environment Department
P. O. Box 968 Cr[illegible] Building
Santa Fe, NM 87503
ATTENTION: Joel Hubbell

DATE RECEIVED 8-11-82
DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: M+M Tool Rental - Hobbs

Lat/Long: 0 ' " ; 0 ' " T ___ R ___ S ___

Station/Well Code: 185,37E,36,3 NPDES No ___ Outfall No ___

Collected: 820805 1130 (Date Time) By: Hubbell (Name) WPCB-Groundwater (Unit)

Pumping Conditions: ___

Water Level: ___

Staff Gage Height: ___

Control Structure: ___

Discharge: ___

Sample Type: Grab

pH (00400): 7.3

Conductivity (Uncorrected): ___ µmho

Water Temp (00010): 68 °F

Conductivity at 25°C (00094): 600 µmho

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hd 4.49
Ca 3.38

From NF, NA sample:

			Date Analyzed
☒ Conductivity (25°C)(00095)	643	µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___	mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___	mg/l	___
☐ Ammonia, total (00610)	___	mg/l	___
☐ Chemical oxygen demand (00340)	___	mg/l	___
☐ Kjeldahl Nitrogen Total	___	mg/l	___

From NF, NA sample:

			Date Analyzed
☒ Magnesium (00925)	12.1	mg/l	8/18
☒ Bicarbonate (00440)	212	mg/l	8/11
☒ Calcium (00915)	67.6	mg/l	8/12
☒ Chloride (00940)	40.6	mg/l	8/17
☒ Potassium (00935)	2.3J	mg/l	8/11
☒ Sodium (00930)	32.2	mg/l	"
☒ Sulfate (00945)	76.6	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	419	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___	mg/l	___
☐ Ammonia, dissolved (00608)	___	mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate treatment:

NF: Whole sample (no filtration) NA: No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4: Acidified with 2 ml conc H_2SO_4/l

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020
Russell F. Rhoades, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

August 27, 1982

Bill Linsday
Hobbs Country Club
Hobbs, New Mexico 88240

Dear Mr. Linsday:

Thank you for allowing us to collect water quality samples from your wells. Enclosed are copies of the analyses. Please note the pool well has better quality water than the domestic well and both of the wells conform to New Mexico's ground water quality standards for those parameters tested.

If you have any questions concerning these analyses, please contact me at the telephone number or address given above.

Sincerely,

Joel Hubbell

Joel Hubbell
Water Pollution Control Bureau

JH:dl

Health & Env[illegible]nment Department
P. O. Box 968 - Crown Building
Santa Fe, NM [redacted]
ATTENTION: Joel Hubbell

DATE RECEIVED 8-10-82
DATE REPORT 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Country Club - Domestic well house

Lat/Long: ° ' "; ° ' " T ___ R ___ S ___

Station/Well Code: 19S.37E.1.231 NPDES No ___ Outfall No ___

Collected: 820805 1652 (Date Time) By: Hubbell (Name) WPCB-Ground Water (Unit)

Pumping Conditions: ___

Water Level: ___ pH (00400): ___

Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho

Control Structure: ___ Water Temp (00010): ___ °C

Discharge: ___ Conductivity at 25°C (00094): ___ µmho

Sample Type: Grab

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Na 11.00
Ca 8.38

From NF, NA sample:		Date Analyzed
☒ Conductivity (25°C)(00095)	1441 µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___ mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___ mg/l	___
☐ Ammonia, total (00610)	___ mg/l	___
☐ Chemical oxygen demand (00340)	___ mg/l	___
☐ Kjeldahl Nitrogen Total	___ mg/l	___

From NF, NA sample:			Date Analyzed
☒ Magnesium (00925)	32.0	mg/l	8/18
☒ Bicarbonate (00440)	435	mg/l	8/11
☒ Calcium (00915)	168	mg/l	8/12
☒ Chloride (00940)	119.4	mg/l	8/17
☒ Potassium (00935)	3.00	mg/l	8/11
☒ Sodium (00930)	96.6	mg/l	"
☒ Sulfate (00945)	219.0	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	938	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___ mg/l	___
☐ Ammonia, dissolved (00608)	___ mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate treatment:

(NF) Whole sample (no filtration) (NA) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4 : Acidified with 2 ml conc H_2SO_4/l

Health & Env[illegible]onment Departme[illegible]
P. O. Box 96[illegible] Crown Buildin[illegible]
Santa Fe, NM 875[illegible]
ATTENTION: Joel Hubbell

DATE RE[illegible]IVED 8/12/82
DATE REPOR[illegible]D 8/18/82
Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Country Club - Pool Well

Lat/Long: 0 ' " ; = ' " T ___ R ___ S ___

Station/Well Code: 19S.37E.1.213 NPDES No: ___ Outfall No ___

Collected: 820805 1648 (Date Time) By: Hubbell (Name) WPCB-Groundwater (Unit)

Pumping Conditions: ___

Water Level: ___ pH (00400): ___

Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho

Control Structure: ___ Water Temp (00010): ___ °C

Discharge: ___ Conductivity at 25°C (00094): ___ µmho

Sample Type: ___

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hd 5.36
Ca 4.30

From NF, NA sample:

			Date Analyzed
☒ Conductivity (25°C)(00095)	761	µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___	mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___	mg/l	___
☐ Ammonia, total (00610)	___	mg/l	___
☐ Chemical oxygen demand (00340)	___	mg/l	___
☐ Kjeldahl Nitrogen Total	___	mg/l	___

From NF, NA sample:

			Date Analyze
☒ Magnesium (00925)	12.9	mg/l	8/18
☒ Bicarbonate (00440)	279	mg/l	8/11
☒ Calcium (00915)	85.9	mg/l	8/12
☒ Chloride (00940)	53.8	mg/l	8/15
☒ Potassium (00935)	3.12	mg/l	8/11
☒ Sodium (00930)	30.6	mg/l	"
☒ Sulfate (00945)	82.0	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	483	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___	mg/l	___
☐ Ammonia, dissolved (00608)	___	mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate field treatment:

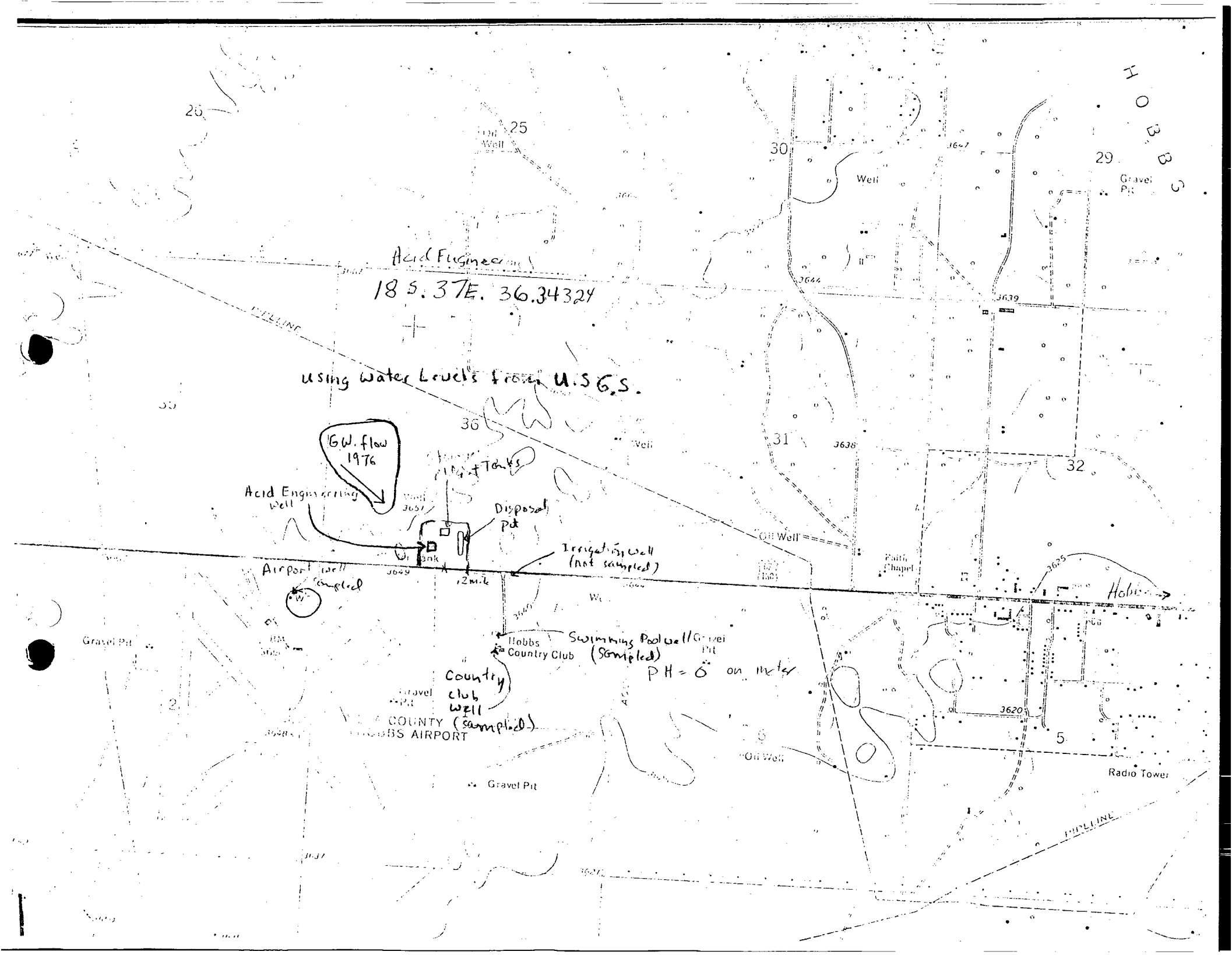
(NF) Whole sample (no filtration) (NA) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4: Acidified with 2 ml conc H_2SO_4/l

	Effluent	4/1/82 A.F well	Pool water				
Mg	60	43	13	32			
HCO	0	190	279				
Ca	54	232	86			67	
Cl	14,665	72	54				
K	20	4.7	3	4			
Na	209	92	51				
SO	93	80	32			63	
TFR			483				
PH	6.62	7.73					
Temp							
SC	10,200						

9/[illegible]

A [illegible]

These analyses imply that [illegible] has been contaminated by [illegible] To that end, we must assume that [illegible] contaminated your [illegible] to be [illegible]


Acid Engineering
18 S. 37 E. 36.34324
using Water Levels from U.S.G.S.
GW. flow 1976
Acid Engineering well
Disposal Pit
Irrigation well (not sampled)
Airport well sampled
Hobbs Country Club
Swimming Pool well/Gravel Pit (Sampled)
PH = 6 on meter
Country club well (sampled)
COUNTY
BBS AIRPORT
Gravel Pit
Oil Well
Well
Faith Chapel
Radio Tower
PIPELINE
HOBBS
25
26
30
29
31
32
36
35
2
5
6

Water Levels from U.S.G.S.

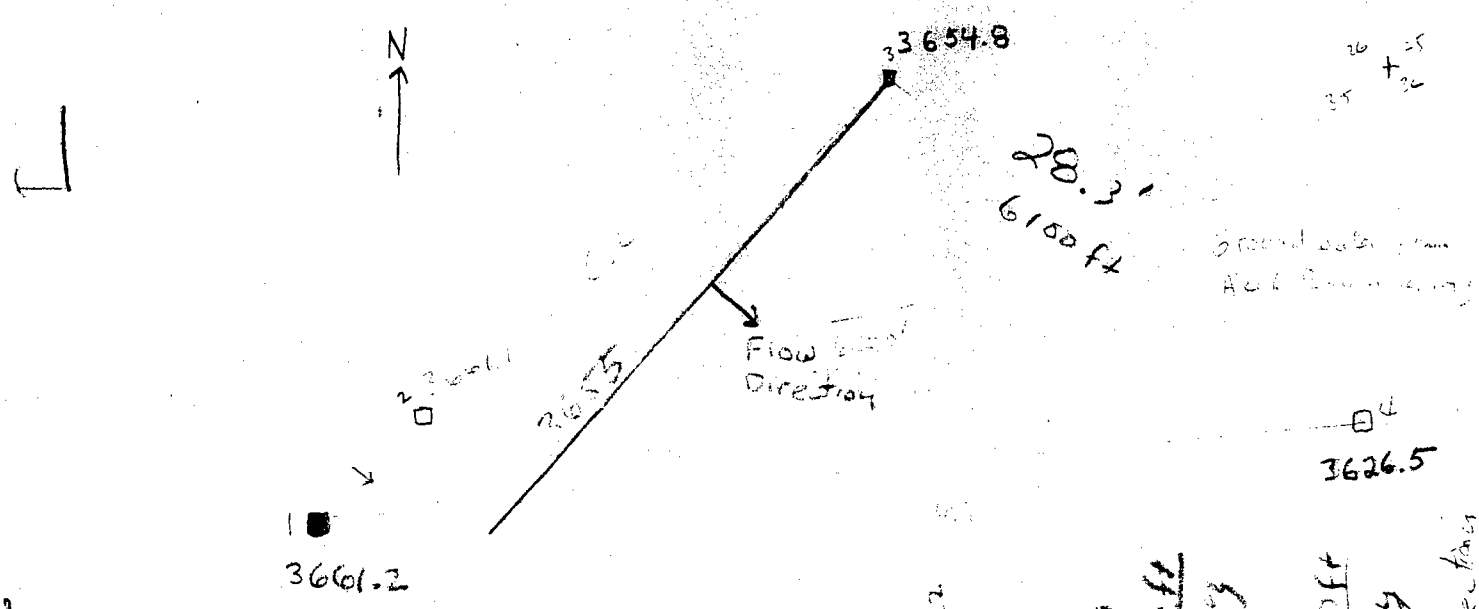
Acid Engineering

Plotted on Graph Paper

Page	Location	Altitude	Depth to Water	Date	Water Level
✓ 1	19,37,13,44322	3671	29.33	1-28-76	3661.2
✓ 2	24,31323	3687	25.37	"	3661.1
✓ 3	35, IIIII	3677	22.21	"	3654.8
✓ 4	25,42432	3663	36.74	"	3626.5

18S 38E

5	31.42442	3633	30.40	1-28-76	3602.6
	19.37.01.22242	3643	49.99	1-28-76	3593



Ground water from Acid Engineering

Scale 1" = 24,000'

@ scale = .00546 ft/ft

$K = \frac{850 - 4500 \text{ ft}^2}{\text{day}}$

$i = \text{Hydraulic Gradient} = 3.72 \text{ ft} \div 2048 \text{ ft} = .2573$

$14,883.20 \frac{\text{ft}^3}{\text{day}}$

Flow Direction Calculation

REPORT TO: Water Pollution Control Bureau 37.52 LAB NUMBER WPC-4766
Environmental Improvement Division
Health & Environment Department DATE RECEIVED 8/16/82
P. O. Box 968 - Crown Building
Santa Fe, NM 87503 DATE REPORTED 8/18/82 Initials
ATTENTION: Joel Hubbell

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Country Club - Pool Well
Bill Lindsey, Manager
Lat/Long: 0 : " ; 0 : " T ___ R ___ S ___
Station/Well Code: 19S.37E.1.213 NPDES No ___ Outfall No ___
Collected: 820805 1648 (Date Time) By: Hubbell (Name) WPCB-Groundwater (Unit)
Pumping Conditions: ___
Water Level: ___ pH (00400): ___
Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho
Control Structure: ___ Water Temp (00010): ___ °C
Discharge: ___ Conductivity at 25°C (00094): ___ µmho
Sample Type: ___

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hd 5.36
Cond 4.30

From NF, NA sample:

		Date Analyzed
☒ Conductivity (25°C)(00095)	761 µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___ mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___ mg/l	___
☐ Ammonia, total (00610)	___ mg/l	___
☐ Chemical oxygen demand (00340)	___ mg/l	___
☐ Kjeldahl Nitrogen Total	___ mg/l	___

From NF, From F, NA sample:

			Date Analyzed
☒ Magnesium (00925)	12 9	mg/l	8/18
☒ Bicarbonate (00440)	279	mg/l	8/11
☒ Calcium (00915)	85 9	mg/l	8/12
☒ Chloride (00940)	53.8	mg/l	8/17
☒ Potassium (00935)	3.12	mg/l	8/11
☒ Sodium (00930)	58 6	mg/l	"
☒ Sulfate (00945)	82.0	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	483	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___ mg/l	___
☐ Ammonia, dissolved (00608)	___ mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate field treatment:
NF: Whole sample (no filtration) NA: No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4: Acidified with 2 ml conc H_2SO_4/l

Environmental Improvement Division
Health & Environment Department
P. O. Box 968 - Crown Building
Santa Fe, NM 87503
ATTENTION: Joel Hubbell

DATE RECEIVED 8-10-82
DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Country Club - Domestic well house
B. H. Lindsay
Lat/Long: ° ' " ; ° ' " T ___ R ___ S ___
Station/Well Code: 19S.37E.1.231 NPDES No ___ Outfall No ___
Collected: 820805 1652 (Date Time) By: Hubbell (Name) WPCB-Ground Water (Unit)
Pumping Conditions: ___
Water Level: ___ pH (00400): ___
Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho
Control Structure: ___ Water Temp (00010): ___ °C
Discharge: ___ Conductivity at 25°C (00094): ___ µmho
Sample Type: Grab

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hs 11.00
Ca 8.38

From NF, NA sample:		Date Analyzed
☒ Conductivity (25°C)(00095)	1411 µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___ mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___ mg/l	___
☐ Ammonia, total (00610)	___ mg/l	___
☐ Chemical oxygen demand (00340)	___ mg/l	___
☐ Kjeldahl Nitrogen Total	___ mg/l	___

From NF, F, NA sample:			Date Analyzed
☒ Magnesium (00925)	32.0	mg/l	8/18
☒ Bicarbonate (00440)	435	mg/l	8/11
☒ Calcium (00915)	168	mg/l	8/12
☒ Chloride (00940)	119.4	mg/l	8/17
☒ Potassium (00935)	3.90	mg/l	8/11
☒ Sodium (00930)	94.6	mg/l	"
☒ Sulfate (00945)	219.0	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)	938	mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___ mg/l	___
☐ Ammonia, dissolved (00608)	___ mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate treatment:
(NF:) Whole sample (no filtration) (NA:) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4 : Acidified with 2 ml conc H_2SO_4/l

Environmental Improvement Division
Health & Environment Department
P. O. Box 968 - Brown Building
Santa Fe, NM 87503
ATTENTION: Joel Hubbell

DATE RECEIVED 8-11-82
DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location M+M Tool Rental - Hobbs
Bill Pipal

Lat/Long ° ' "; ° ' " T ___ R ___ S ___

Station/Well Code 185,376,36,3 NPDES No ___ Outfall No ___

Collected 8208051130 By Hubbell WPCR-Groundwater
Date Time Name Unit

Pumping Conditions ___

Water Level ___
Staff Gage Height ___
Control Structure ___
Discharge ___
Sample Type Grab

pH (00400) 7.3
Conductivity (Uncorrected) ___ µmho
Water Temp (00010) 68 °F
Conductivity at 25°C (00094) 600 µmho

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Hd 4.40
Ca 3.38

From NF, NA sample:

			Date Analyzed
☒ Conductivity (25°C)(00095)	643	µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___	mg/l	___

From NF, A-H_2SO_4 sample:

			Date Analyzed
☐ Nitrate + nitrite, total (00630)	___	mg/l	___
☐ Ammonia, total (00610)	___	mg/l	___
☐ Chemical oxygen demand (00340)	___	mg/l	___
☐ Kjeldahl Nitrogen Total	___	mg/l	___

From NF, NA sample:

				Date Analyzed
☒ Magnesium	(00925)	12 <	mg/l	8/18
☒ Bicarbonate	(00440)	212	mg/l	8/11
☒ Calcium	(00915)	67.6	mg/l	8/12
☒ Chloride	(00940)	40.6	mg/l	8/17
☒ Potassium	(00935)	2.3 <	mg/l	8/11
☒ Sodium	(00930)	32.2	mg/l	"
☒ Sulfate	(00945)	76.6	mg/l	8/11
☒ Total filterable residue (dissolved)(70300)		419	mg/l	8/11

From F, A-H_2SO_4 sample:

			Date Analyzed
☐ Nitrate + nitrite, dissolved (00631)	___	mg/l	___
☐ Ammonia, dissolved (00608)	___	mg/l	___

RECEIVED
AUG 31 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate treatment:
NF: Whole sample (no filtration) NA: No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4: Acidified with 2 ml conc H_2SO_4/l

REPORT TO: Water Pollution Control Bureau LAB NUMBER WRC-2489
Environmental Improvement Division
Health & Environment Department
P. O. Box 968 - Crown Building
Santa Fe, NM 87503
ATTENTION: Joel Hubbell

DATE RECEIVED 8-12-82
DATE REPORTED 8/18/82 Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Hobbs Airport - From Fire Hydrant East of Water Storage Tanks. - Max Curry

Lat/Long: ° ' " ; ° ' " T ___ R ___ S ___

Station/Well Code: 195,37E,2,22 NPDES No ___ Outfall No ___

Collected: 8208051030 (Date / Time) By Hubbell (Name) WPCB/G.W. (Unit)

Pumping Conditions: ___

Water Level: ___ pH (00400): ___

Staff Gage Height: ___ Conductivity (Uncorrected): ___ µmho

Control Structure: ___ Water Temp (00010): 85 °F

Discharge: ___ Conductivity at 25°C (00094): ___ µmho

Sample Type: Grab

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

Ha 4.39
Ca 33.3

From NF, NA sample:

		Date Analyzed
☒ Conductivity (25°C)(00095)	600 µmho	8/12
☐ Total nonfilterable residue (suspended)(00530)	___ mg/l	___

From NF, A-H_2SO_4 sample:

☐ Nitrate + nitrite, total (00630)	___ mg/l	___
☐ Ammonia, total (00610)	___ mg/l	___
☐ Chemical oxygen demand (00340)	___ mg/l	___
☐ Kjeldahl Nitrogen Total	___ mg/l	___

From NF, NA sample:

			Date Analyzed
☒ Magnesium	(00925)	12.9 mg/l	8/18
☒ Bicarbonate	(00440)	220 mg/l	8/11
☒ Calcium	(00915)	66.6 mg/l	8/12
☒ Chloride	(00940)	~~345~~ 91.6 mg/l	8/17
☒ Potassium	(00935)	2.3 mg/l	8/11
☒ Sodium	(00930)	41.4 mg/l	"
☒ Sulfate	(00945)	67.5 mg/l	8/11
☒ Total filterable residue (dissolved)(70300)		418 mg/l	8/11

From F, A-H_2SO_4 sample:

☐ Nitrate + nitrite, dissolved (00631)	___ mg/l	___
☐ Ammonia, dissolved (00608)	___ mg/l	___

RECEIVED
AUG 25 1982
EID: WATER POLLUTION CONTROL

This form accompanies 1 sample(s) marked as follows to indicate field treatment:
(NF:) Whole sample (no filtration) (NA:) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4 : Acidified with 2 ml conc H_2SO_4/l

MEMORANDUM OF MEETING OR CONVERSATION

[X] Telephone [ ] Personal	Time 9 am	Date 8/24/82

Originating Party	Other Parties
From: Joel Hubbell ( ) -	
To: Lloyd Bolding ( ) -	

Subject Acid Engineering.

Discussion

- I discussed what was in the letter I am preparing to send him
- I asked him when his Discharge plan ~~would~~ would be submitted. Lloyd said he would try to get it to us in a couple of weeks.
- I asked that he would include a schedule of compliance for when he would be done with the ~~the~~ Proposed Parts of the D. P. Lloyd said he would ~~send~~ send it to us.

- Still in Violation of NM. Regulations
- How long till Discharge Plan will be submitted
- Send a schedule of compliance

Conclusi

- EVAP Pond - [illegible]
- Hazardous waste
- City Sanitary
- recycle to tank

Distribution

Signed Joel M Hubbell

Pond [illegible]

[illegible]

40 x 150 [illegible] ft² = 137 yds.

6000 ft² x .5 ft = 3000 ft³ of leakage from pond

or 22,440 gal

year

effluent disposed - 250 [illegible]

250 x 365 = 91,250

300 x 365 = 109,500

FIELD TRIP REPORT
GROUND WATER SECTION

FACILITY VISITED

Name of Facility: Hobbs Country Club

Location: Across (south west) of Acid Engineering

Discharge Plan Number: DP-

Type of Operation:

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Hubbell, Boyer

Date of Inspection or Visit: 3-5-82

Discharger's Representative Present During EID Visit:

Name: Bill Linsday

Title or Position: Manager

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan _____

b. Compliance Inspection of Discharge with Approved Plan _____

c. Other (specify) Sample Wells down gradient from Acid Engineering

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)
Sampled well Next to pool and Sampled West of Club House - We were Not able to Sample of well Next to ~~R~~ Highway

(c.) Sampling of (Ground Water) (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations, and Information Obtained during the Visit:

The well used for domestic water was setting in a pool of water caused by a leaking seal. We warned him that this was not safe and that he ~~should~~ should correct it Fast! we ~~told~~ called Brown Edwards of the local EID office to check-up on him.

Action Required: Have some one sample well that Irrigates around the golf Course. This turns on at 6 PM in the evening - Need Sample run for major Cations + Anions. (NA-NA)

FIELD TRIP REPORT
GROUND WATER SECTION

FACILITY VISITED

Name of Facility: M + M Rental Tool

Location: west of Acid Engineering (AE) on Main Highway

Discharge Plan Number: DP-

Type of Operation:

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Hubbell,

Date of Inspection or Visit: 8/5/82

Discharger's Representative Present During EID Visit:

Name: Bill Pipal

Title or Position: Manager

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan _____

b. Compliance Inspection of Discharge with Approved Plan _____

c. Other (specify) Sample Groundwater

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

(c.) Sampling of Ground Water (give names or locations of wells)
Took one ground water sample at his Boiler, west of A.E.

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

e. Other (specify)

Observations, and Information Obtained during the Visit:

This a new well (Copy of log of state Engr's) It is up gradient from A.E. - It should provide a representative sample of Background water.

Action Required:

Send Analysis of Sample to:

Bill Pipal
M+M Tool Rental
Box 1693
Lovington, New Mexico 88240

FIELD TRIP REPORT
GROUND WATER SECTION

FACILITY VISITED

Name of Facility: Dowell

Location: Hobbs, New Mexico -

Discharge Plan Number: DP-

Type of Operation: Oil well Acidizing firm

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Hubbell

Date of Inspection or Visit: August 5, 1982

Discharger's Representative Present During EID Visit:

Name: Don Brown Joe Igo

Title or Position: Environmental Manager District Manager

Purpose of Visit:

(a.) Evaluation of Proposed Discharge Plan For Acid Engineering

b. Compliance Inspection of Discharge with Approved Plan ____

c. Other (specify) To see how they treat their left over acid - to compare to Acid Engineering facilities.

Inspection Activities During Field Visit:

a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

(e.) Other (specify) Inspected Acid neutralization facility.

Observations, and Information Obtained during the Visit:

Flow chart of their process is on the back. This looks like a very good process. He said it will probably ~~cost~~ cost a total of $80,000 when completed. He estimates that the reuse of the water will pay for the system in 24 months. They designed the system to hold a large volume of water so they can have a long retention time. The water can be recycled or sent to the sewage system if required. They will also catch run off water from around the maintenance shop.

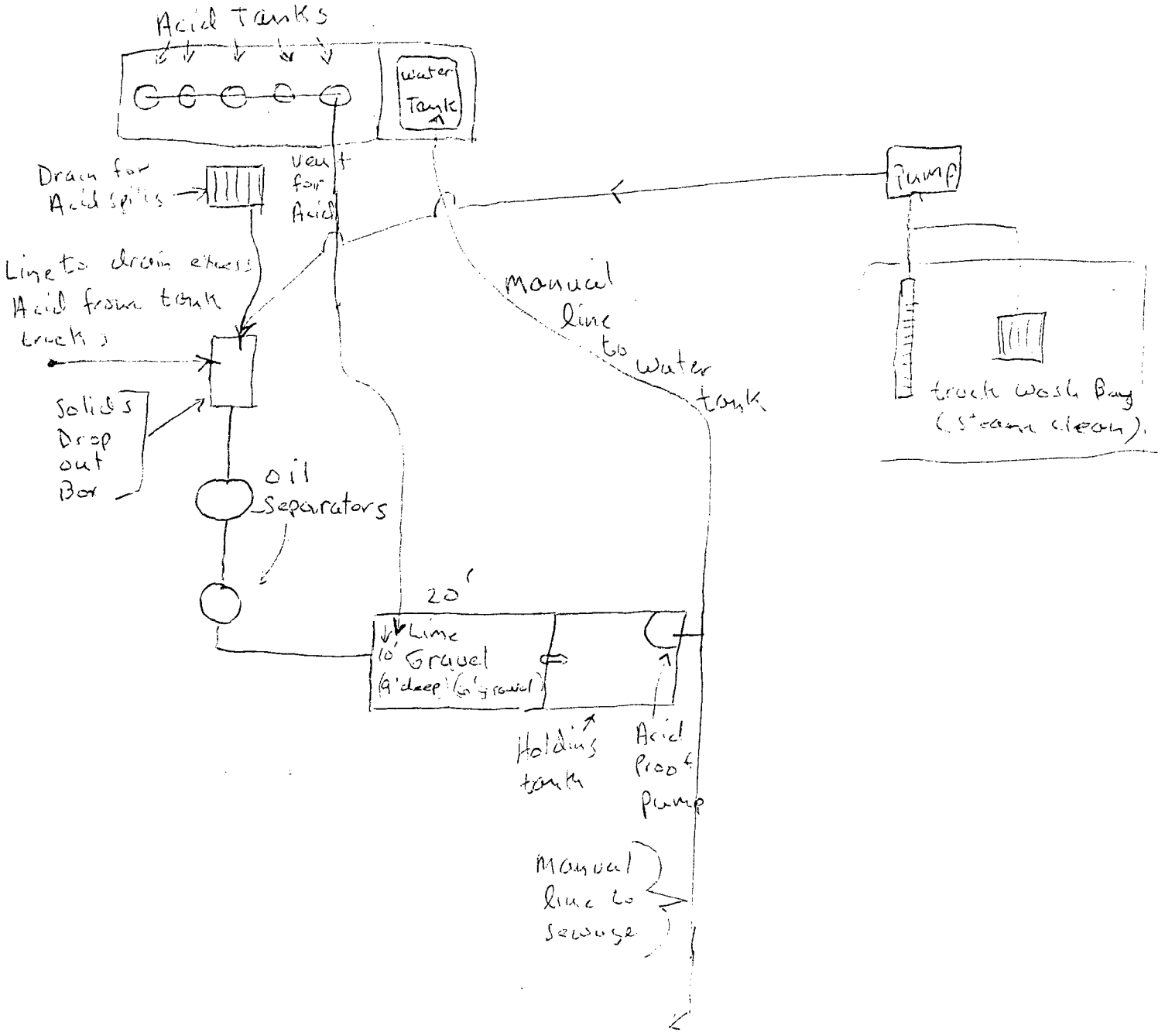
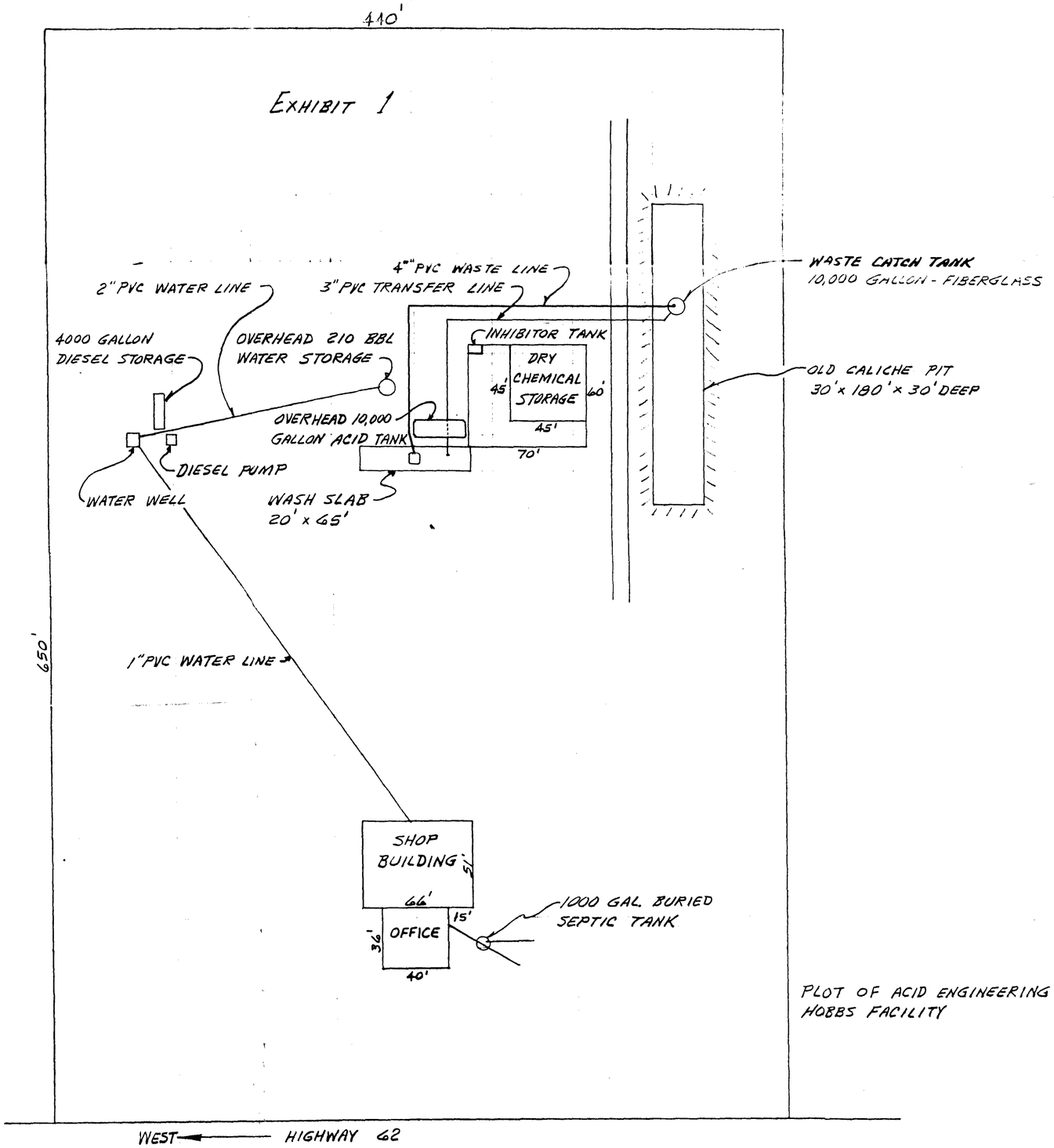

Acid Tanks
water Tank
Drain for Acid spills
Vent for Acid
Pump
Line to drain excess Acid from tank trucks
manual line to water tank
truck wash Bay (steam clean)
Solids Drop out Box
oil Separators
20'
Lime
10' Gravel
(9' deep) (6' gravel)
Holding tank
Acid Proof Pump
Manual line to Sewage

EXHIBIT 1



PLOT OF ACID ENGINEERING YARD
HOBBS FACILITY

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 827-5271
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
May 20, 1982

Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, Texas 75662

Dear Mr. Bolding:

Pursuant to New Mexico Water Quality Control Commission Regulations, enclosed, you are hereby notified that a discharge plan as defined in Section 1-101.I is required for your oil well acidizing facilities located on the north side of U.S. Highway 62/180 directly across from the country club and airport, west of Hobbs in Lea County, New Mexico.

This notification of discharge plan requirement is pursuant to Sections 3-104 and 3-106 of the regulations. The minimum information you will need to address in the discharge plan application is given in Section 3-106.C of the enclosed regulations.

If you have any question, please contact Joel Hubbell of my staff at the above address and telephone.

Sincerely,

Russell F. Rhoades
for Thomas E. Baca
Director

TEB:JH:jba

cc: John Guinn, EID District IV
Jim Kinney, EID Carlsbad
Hobbs Field Office

enclosure

NSL

P 300 121 116
RECEIPT FOR CERTIFIED MAIL
INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
See Reverse
SENT TO Lloyd Bolding
Acid Engineering Inc
STREET AND NO. P.O. Box 753
P.O., STATE AND ZIP CODE Kilgore Tx 75662
POSTAGE
CERTIFIED FEE

ACID ENGINEERING, INC.

P. O. BOX 753

ACID ENGINEERING INC.

KILGORE, TEXAS 75662

September 14, 1982

Joel Hubbell
Ground Water Section
Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Joel,

After receiving your letter of August 27, 1982, we have examined our options in attempting to meet state requirements for disposing of our effluent. The more practical approach for us at this time is to take the following action:

1. Install a recycle system consisting of:
   A. A 210 bbl. fiberglass tank will be installed, according to the attached plat, to catch all wash-up fluid from our loading sump.
   B. Install a sump pump in the tank to allow reclaiming the water for use as acid mix water.
   C. Eliminate exterior truck washing on loading dock to reduce total fluid discharge.

The proposed system should be installed and ready for service by or before October 1, 1982. I will notify you by letter as soon as the system is operational.

Thank you so much for your patience and understanding in this matter.

Very truly yours,

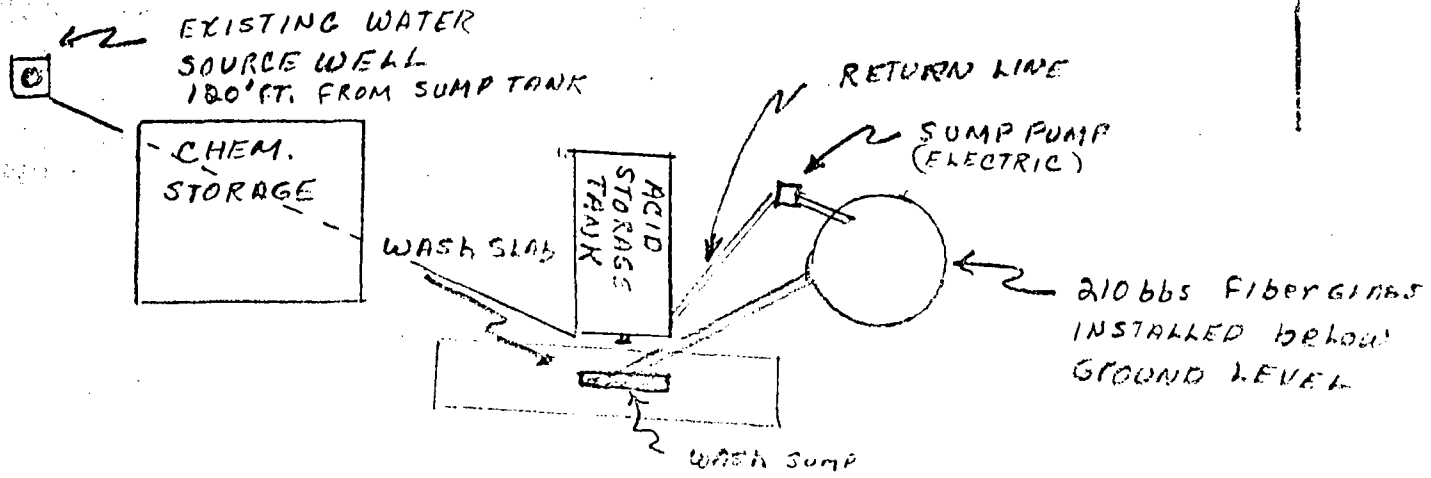
Lloyd Bolding

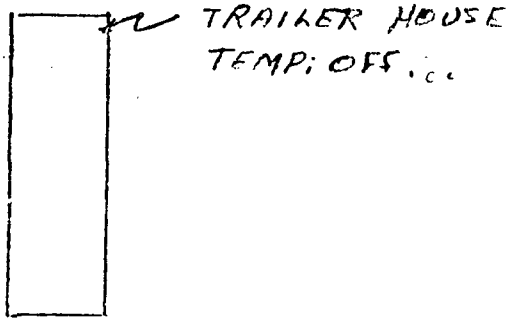
Lloyd Bolding
Acid Engineering, Inc.

LB:dm
Enclosure

ACID ENGR. INC.
HOBBS FACILITY
HOBBS, N.M.

N.





P 327 406 214

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	Acid Engineering, Inc.
STREET AND NO.	P.O. Box 753
P.O., STATE AND ZIP CODE	Kilgore, Texas 75662

POSTAGE			$
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		¢
	OPTIONAL SERVICES	SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES			$
POSTMARK OR DATE			

PS Form 3800, Apr. 1976

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISIO
P.O. Box 968, Santa Fe, New Mexico 87504-0
(505) 827-5271
Russell F. Rhoades, M.P.H., Direc

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 27, 1982

Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, Texas 75662

Dear Mr. Bolding:

The purpose of this letter is to remind you that Acid west of Hobbs, is in violation of Sections 3-104 and 3-106 Water Quality Control Commission Regulations, since you have been discharging without an approved plan. This letter is an attempt to get you voluntary compliance in regard to this matter. We would like to know when your discharge plan for your facility will be submitted to the Environmental Improvement Division. Include a detailed time schedule stating when the different portions of the discharge Plan will be in operation.

There are several different methods to get a discharge plan approved for your oil well acidizing facility. In Section 3-109.C., pages 24 and 25 of the Water Quality Control Commission Regulations, it states that if the other requirements of the regulations are met and if the discharge plan demonstrates that neither a hazard to public health or undue risk to property will result, then a discharge plan will be approved if it meets one of the following two conditions.

1. That the amount of effluent reaching the subsurface from a surface empoundment will not exceed 0.5 acre-feet per acre per year. The amount of leakage permitted implies that some sort of liner, either natural or artificial, must be employed to reduce the volume of seepage.

2. The person proposing the discharge demonstrates that the approval of the discharge plan will not result in concentrations in excess of standards of Section 3-103 at any place of withdrawal of water for present or reasonably foreseeable future use. As stated in the first paragraph of Section 3-103, these ground water standards are either the numerical standards of 3-103 or the background concentrations of the contaminants in the existing ground water, whichever is greater. The New Mexico WQCC Regulations allow degradation of the ground water up to the limit of the standards.

The chemical analysis of your effluent (copy enclosed) indicates that the pH is very low and the chloride concentrations are very high. These two parameters will be used to determine if and how ground water quality will be affected by your discharge. The EID has analyzed samples from your well and wells surrounding your site (copies enclosed). A comparison of the analyses of your well versus the other wells shows your well has much higher concentrations of several of the ions, most notably chloride, indicating your well has been contaminated, probably by the disposal of your effluent. If you have reason to believe your well has higher concentrations of chlorides and several other constituents for some other reason than stated above, please send us evidence supporting that contention. The contamination of your well, so that ground water standards have been exceeded, shows that you must dispose of your effluent in a different manner than currently used. If you can prove that your well has not been contaminated by your effluent, you must still dispose of your effluent in a different manner than at present. The existing concentration for chloride for you site would be 511.9 mg/l, which exceeds the numerical ground water standard of 250 mg/l and thus, you could not be allowed to increase this concentration. Several alternative methods you may want to consider to dispose of your diluted acid are:

1. Disposing of your wastes in a lined evaporation pond.
2. Disposing of your effluent into the city sewage system (this would not require a discharge plan, but rather arrangements with the City of Hobbs).
3. Have a hazardous waste disposal firm properly dispose of your wastes.
4. Construct a recycle system to reuse your waste.

For any method of disposing your wastes, except number 2 or 3 above, you must provide adaquate provision for both sampling and measuring the quantity of flow of your effluent, and submit monitoring data to the EID as required by the Director.

I hope this summary of the regulations is useful in drawing up your discharge plan. If you have any questions, please do not hesitate to contact me at the above address and telephone. We expect your reply to this letter by September 13, 1982.

Sincerely,
Joel Hubbell

Joel Hubbell
Ground Water Section

JH:dl

cc: John Guinn, EID District IV
Hobbs EID Office
Jack Ellvinger, Hazardous Wastes Section

mcs

FIELD TRIP REPORT
GROUND WATER SECTION

FACILITY VISITED

Name of Facility: Dowell
Location: Hobbs, New Mexico -

Discharge Plan Number: DP-
Type of Operation: Oil well Acidizing firm

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

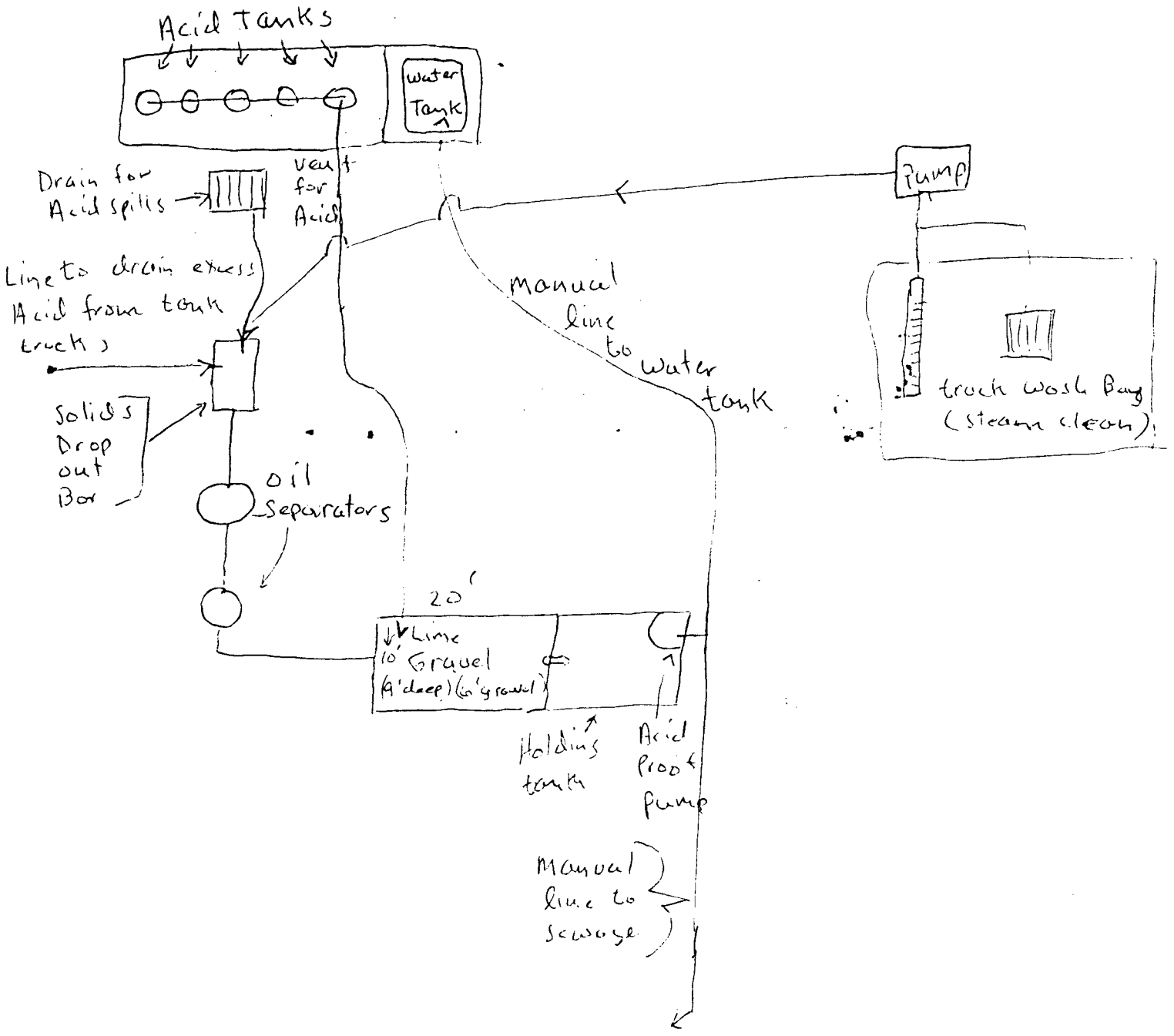
EID Inspector(s): Hubbell
Date of Inspection or Visit: August 5, 1982
Discharger's Representative Present During EID Visit:
Name: Don Brown Joe Igo
Title or Position: Environmental Manager District Manager
Purpose of Visit:
(a.) Evaluation of Proposed Discharge Plan For Acid Engineering
b. Compliance Inspection of Discharge with Approved Plan ____
c. Other (specify) To see how they treat their left over acid - to compare to Acid Engineering facilities.
Inspection Activities During Field Visit:
a. Inspection of Facilities or Construction (specify)

b. Sampling of Effluents (give sampling locations)

c. Sampling of Ground Water (give names or locations of wells)

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)

(e.) Other (specify) Inspected Acid neutralization facility
Observations, and Information Obtained during the Visit:
Flow chart of their process is on the back. This looks like a very good process. He said it will probably ~~cost~~ cost a total of $80,000 when completed. He estimates that the reuse of the water will pay for the system in 24 months. The system is designed to hold a large volume of water so they can have a long retention time. The water can be recycled or sent to the sewage system if required. They will also catch run off water from around the neutralization plant.


Acid Tanks
water Tank
Drain for Acid spills
vent for Acid
Pump
Line to drain excess Acid from tank trucks
manual line to water tank
truck wash Bay (steam clean)
Solids Drop out Box
oil Separators
20'
Lime
10' Gravel
(4' deep) (6" gravel)
Holding tank
Acid Proof Pump
Manual line to sewage

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 827-5271
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
May 20, 1982

Lloyd Bolding
Acid Engineering, Inc.
P.O. Box 753
Kilgore, Texas 75662

Dear Mr. Bolding:

Pursuant to New Mexico Water Quality Control Commission Regulations, enclosed, you are hereby notified that a discharge plan as defined in Section 1-101.I is required for your oil well acidizing facilities located on the north side of U.S. Highway 62/180 directly across from the country club and airport, west of Hobbs in Lea County, New Mexico.

This notification of discharge plan requirement is pursuant to Sections 3-104 and 3-106 of the regulations. The minimum information you will need to address in the discharge plan application is given in Section 3-106.C of the enclosed regulations.

If you have any question, please contact Joel Hubbell of my staff at the above address and telephone.

Sincerely,

Russell F. Rhoades
for Thomas E. Baca
Director

TEB:JH:jba

cc: John Guinn, EID District IV
Jim Kinney, EID Carlsbad
Hobbs Field Office

enclosure

MS92

P 300 121 116
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO Lloyd Bolding
Acid Engineering Inc.
STREET AND NO. P.O. Box 753
P.O. STATE AND ZIP CODE Kilgore, Tx 75662
POSTAGE $
CERTIFIED FEE
SPECIAL DELIVERY
RESTRICTED DELIVERY

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87503
(505) 827-5271
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

April 19, 1982

Lloyd Bolding
Acid Engineering, Inc.
P. O. Box 753
Kilgore, TX 75662

Dear Mr. Bolding:

Enclosed is a copy of the Notice of Intent to Discharge that you requested.

Sincerely,

Joe M. Hubbell

Joe Hubbell
Water Pollution Control Bureau
Ground Water Section

JH:md

cc: Rodger Jetton, Acid Engineering, Inc., Carlsbad
John Guinn, EID Roswell

ACID ENGINEERING, INC.

P. O. BOX 753

KILGORE, TEXAS 75662

April 29, 1982

Mr. Joel Hubbell
Water Pollution Control Bureau
Ground Water Section
P. O. Box 968
Santa Fe., N. M. 87503

Dear Mr. Hubbell,

Please find the enclosed executed copy of our notice of intent to dischage. We are anxious to comply with all regulations that will allow our operation to be acceptable to the State of New Mexico.

The only discharge we have at our Hobbs yard is residual HCL acid that we wash and dilute with fresh water. This run-off is collected in a pit that measures 40' X 150' and 15' deep.

If additional information or facility modification is required, you can contact myself or Mr. Roger Jetton. Our mailing address in Hobbs is Acid Engineering, Inc. Star Route A, Box 370, Hobbs, N. M. 88240.

Sincerely yours,

Lloyd Bolding

Lloyd Bolding
Acid Engineering, Inc.

LB:dm

NOTICE OF INTENT TO DISCHARGE

1. Name and address of the person making the discharge.

ACID ENGINEERING INC.

P. O. BOX 753

KILGORE, TEXAS 75662

Telephone: 214-983-2086

2. Location of the discharge (in Township, Range and Section, ¼,¼,¼ if available).

NE 1/4: SW 1/4; SE 1/4, SW 1/4. Section 36 T-18 South Range 37 East

3. The means of discharge (To a Lagoon, Flowing Stream, Water Course, Arroyo, Septic Tank-Leach field, Other-Specify.

4" PVC Pipe allows gravity flow from wash slab to catch pit

4. The estimated concentration of contaminants in the discharge.

Approximately 1/10 of 1% HCL Acid by weight of acid.

5. The type of operation from which the discharge is derived.

Wash up facility for an oilwell acidizing company

6. The estimated flow to be discharged per day.

250 to 300 gal per 24 hour day.

7. The estimated depth to ground water (if available).

48 ft.

Signed: Lloyd Belding Date: April 29, 1982

59100

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

Spl. marked #3

Date received	Lab No.	SLD use code No.
4-29-82	WC-3893	51.32

CONSULT SLD Lab Annex L for proper presentation of sample(s). TYPE or PRINT with Ball Point Pen

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP ☐ 1 ☐ 2 ☐ 3

TYPE of CHEMICAL ANALYSIS ☒ Complete Secondary ☐ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one:
Acid Engineering	N/A	West of Hobbs (2 mi.)	Lea	☒ TREATED WATER ☐ RAW WATER

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
4-28-82	2:10 P.M.	Disposal pit	Caution pH < 1 No preservatives added Refer Questions to →	David Boyer (Consultant)

Collected By	Owner	Address
Jim Kenney & Brown Edwards	Acid Engineering	P.O. Box 968 Santa Fe NM

TYPE of SYSTEM *(Check one)* ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☐ Well-Depth ☐ Drain ☐ Stream ☒ Pool ☐ Other *(specify)*

LAT. ° ' "

LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
☒ 00930 Sodium (as Na)	2093	☒ 00940 Chloride (as Cl)	14,665	☒ 70300 Total Filterable Residue	mg/l 4221	01000 Arsenic				39390 Endrin	
☒ 00935 Potassium (as K)	1989	☒ 00950 Fluoride (as F)		☒ 38260 Foaming Agents (as Las)	70	01005 Barium				39732 Lindane	
☒ 00900 Tot. Hardness (as $CaCO_3$)	2480	☒ 00620 Nitrate (as N)		☒ 00095 Conductance Micromhos 25°C	110000	01025 Cadmium				38270 Methoxychlor	
☒ 00915 Calcium (as Ca)	854	☒ 00430 Alkalinity (as $CaCO_3$)	0	☒ 00400 pH	1 062	01030 Chromium		RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
☒ 00925 Magnesium (as Mg)	598	☒ 00440 Bicarbonate (as HCO_3)	0	☒ 01330 Odor	Stale	01049 Lead		03501 Gross Beta	pCi/l	39730 2, 4-D	
01045 Iron-Total (as Fe)		☒ 00445 Carbonate (as CO_3)	0	☒ 00080 Color	mg/l 30	07180 Mercury		09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
☒ 01056 Manganese (as Mn)		☒ 00945 Sulfate (as SO_4)	934	00070 Turbidity	100	01145 Selenium		11501 Radium-228	pCi/l		
						01075 Silver					

LABORATORY REMARKS: Apparently a lot of HCl

Reviewed by

Date reported 6/4/82

RECEIVED
JUN 17 1982
WATER SUPPLY
REGULATION SECTION

SLD 702 Form Revised 4/78

DISTRIBUTION: **White** - Water Supply Regulation, SF • **Canary** - WS System • **Pink** - EIA Regional Office • **Goldenrod** - SLD Lab

~~State~~ 59100

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

#2

Date received	Lab No.	SLD user code No.
4/29/82	WC-3894	51.32

CONSULT SLD Lab Annex L for proper presentation of sample(s). TYPE or PRINT with Ball Point Pen

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP: ☐ 1 ☒ 2 ☐ 3

TYPE of CHEMICAL ANALYSIS: ☐ Complete Secondary ☐ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one:
Reid Engineering	N/A	Abs'd of Hobbs	Lea	☒ TREATED WATER ☐ RAW WATER

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
4-28-82	2:10 PM	Disposal Pit	Caution pH < 1 — No preservative added — Refer Questions to →	David Boyer
Collected By	**Owner**			**Address**
Jim Kenney/B. Edwards	Reid Engineering			PO Box 968 Santa Fe, N.M.

TYPE of SYSTEM *(Check one)*: ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☐ Well-Depth ☐ Drain ☐ Stream ☒ Pool ☐ Other *(specify)*

LAT. ° ' "

LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
00930 Sodium (as Na)		00940 Chloride (as Cl)		70300 Total Filterable Residue	mg/l	01000 Arsenic				39390 Endrin	
00935 Potassium (as K)		00950 Fluoride (as F)		38260 Foaming Agents (as Las)		01005 Barium				39732 Lindane	
00900 Tot. Hardness (as $CaCO_3$)		☒ 00620 Nitrate (as N)	1.35	00095 Conductance Micromhos 25°C		01025 Cadmium				38270 Methoxychlor	
00915 Calcium (as Ca)		00430 Alkalinity (as $CaCO_3$)		00400 pH		01030 Chromium		RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
00925 Magnesium (as Mg)		00440 Bicarbonate (as HCO_3)		01330 Odor		01049 Lead		03501 Gross Beta	pCi/l	39730 2, 4-D	
01045 Iron-Total (as Fe)		00445 Carbonate (as CO_3)		00080 Color	mg/l	07180 Mercury		09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
01056 Manganese (as Mn)		00945 Sulfate (as SO_4)		00070 Turbidity		01145 Selenium		11501 Radium-228	pCi/l		
						01075 Silver					

LABORATORY REMARKS:

Reviewed by: C.W. Meibohm

Date reported: 5/3/82

SLD 702 Form Revised 4/78

DISTRIBUTION: **White** - Water Supply Regulation, SF • **Canary** - WS System • **Pink** - EIA Regional Office • **Goldenrod** - SLD Lab

REPORT TO: Water Pollution Control Bureau 37.32 LAB NUMBER WC-2550
Environmental Improvement Division
Health & Env[redacted]t Department DATE RE[redacted] 4-6-82
P. O. Box 968 - Crown Building
Santa Fe, NM 87503 DATE REPORTED 4/16/82 Cmm
ATTENTION: Joel Hubbell Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location: Acid Engineering-Well

Lat/Long: 103° 12' 23" ; 32° 41' " T ___ R ___ S ___

Station/Well Code ___ NPDES No ___ Outfall No ___

Collected 3/30/82 1030 By Boyer/Hubbell
Date Time Name Unit

Pumping Conditions ___

Water Level ___ pH (00400) ___

Staff Gage Height ___ Conductivity (Uncorrected) ___ µmho

Control Structure ___ Water Temp (00010) ___ °C

Discharge ___

Sample Type Grab Conductivity at 25°C (00094) ___ µmho

GENERAL WATER CHEMISTRY AND NITROGEN ANALYSES

From NF, NA sample:

			Date Analyzed
☒	Conductivity (25°C)(00095)	1888 µmho	4/9/82
☐	Total nonfilterable residue (suspended)(00530)	___ mg/l	___
☒	pH	7.23	4/6

From NF, A-H_2SO_4 sample:

☐	Nitrate + nitrite, total (00630)	___ mg/l	___
☐	Ammonia, total (00610)	___ mg/l	___
☐	Chemical oxygen demand (00340)	___ mg/l	___

From ~~F~~ NF, NA sample:

				Date Analyzed
☒	Magnesium	(00925)	47.9 mg/l	4/9
☒	Bicarbonate	(00440)	190.1 mg/l	4/6
☒	Calcium	(00915)	232 mg/l	4/9
☒	Chloride	(00940)	511.9 mg/l	4/23
☒	Potassium	(00935)	4.7 mg/l	4/12
☒	Sodium	(00930)	92.0 mg/l	"
☒	Sulfate	(00945)	86.0 mg/l	4/12/82
☒	Total filterable residue (dissolved)(70300)		1371 mg/l	4/23
☒	BORON		0.12	4/22

From F, A-H_2SO_4 sample:

☐	Nitrate + nitrite, dissolved (00631)	___ mg/l	___
☐	Ammonia, dissolved (00608)	___ mg/l	___

This form accompanies 1 sample(s) marked as follows to indicate field treatment:

(NF) Whole sample (no filtration) (NA) No acid added
F: Filtered in field with 0.45µ membrane filter
A-H_2SO_4 : Acidified with 2 ml conc H_2SO_4/l

REPORT TO: Water Pollution Control Bureau
Environmental improvement Division
Health & Environment Department
P. O. Box 968 - Crown Building
Santa Fe, NM 87503
ATTENTION: Fred Hall

LAB NUMBER HM-1244

DATE RECEIVED 4-6-82

DATE REPORTED 7/26/82 MJ
Initials

WATER OR WASTEWATER ANALYSES-ENERGY DEVELOPMENT MONITORING PROGRAM

Sample Location Acid Engineering-Well

Lat/Long ° ' "; ° ' " T ___ R ___ S ___

Station/Well Code ___ NPDES No. ___ Outfall No ___

Collected 6-04/1030 By Roger Hubbell
Date Time Name Unit

Pumping Conditions ___

Water Level ___ pH (00400) ___

Staff Gage Height ___ Conductivity (Uncorrected) ___ µmho

Control Structure ___ Water Temp (00010) ___ °C

Discharge ___ Conductivity at 25°C (00094) ___ µmho

Sample Type Grab

METAL ANALYSES

From NF, A-HNO_3 sample:		Date Analyzed	From F, A-HNO_3 sample:		Date Analyzed
☒ Aluminum	550. µg/l	6/23			
☒ Arsenic, total	19. µg/l	7/14/82	☐ Arsenic, dissolved	µg/l	
☒ Barium, total	300. µg/l	5/7/82	☐ Barium, dissolved	µg/l	
☒ Cadmium, total	<1.0 µg/l	5/28/82	☐ Cadmium, dissolved	µg/l	
☒ Lead, total	47. µg/l	5/25/82	☐ Lead, dissolved	µg/l	
☒ Molybdenum, tot	<10. µg/l	5/17/82	☐ Molybdenum, diss	µg/l	
☒ Selenium, total	12. µg/l	6/29/82	☐ Selenium, diss	µg/l	
☒ Uranium, total	5. µg/l	6/16/82	☐ Uranium, diss	µg/l	
☒ ~~Vanadium~~ Silver, total	<1.0 µg/l	4/30/82	☐ Vanadium, diss	µg/l	
☒ Zinc, total	370 µg/l	4/15/82	☐ Zinc, dissolved	µg/l	

Remarks

☒ CHROMIUM	8.0	4/15/82
☒ Copper	120.	4/30/82
☒ Iron	370.	4/30/82
☒ Manganese	<50.	5/20/82

This form accompanies 1 sample(s) marked as follows to indicate field treatment (circle):

(NF, A-HNO_3): Whole sample; acidified with 5 ml conc HNO_3/l

F, A-HNO_3: Filtered sample (0.45µmembrane filter); acidified with 5 ml conc HNO_3/l

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 8 3.0 Am	Date 4/19/82
Originating Party		Other Parties
Lloyd Bolding - President, Acid Engineering Inc.		214-983-2086 operator #6
To Joel Hubbell		

Subject Acid Engineering

Discussion

- he wants to know what they need to do be comply with regulations
- No Chlorinated hydrocarbons are put into pit - None used
- Alchol doesn't go into pit either.
- he suggested that they may put in fiberglass sump - fill with Caliche then run fluid into this sump before putting into pit. (digester)
- he said trucks were ~~can~~ rinsed w/ 1BBL or so.
- Some soap may be ~~pu~~ put into pit - But not much
- other companies that do the same job but dispose of effluent into city sewage - Do-well, Halliburton B J - Hughes, Dresser, Knox services, Western Company

Conclusions or Agreements

Sent Additional Notice of Intent to Lloyd Bolding

Distribution

Signed Joel Hubbell

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87503
(505) 827-5271
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.

P 327 [illegible] 210

April 13, 1982

CERTIFIED MAIL--RETURN RECEIPT REQUESTED

Ed Autery, Acid Engineering Inc.
P. O. Box LL
Denver City, TX 79323

Ed Autery
Acid Engineering, Inc.
P. O. Box LL
Denver City, TX 79323

Dear Mr. Autery:

Acid Engineering, located on the north side of U. S. Highway 82 across from the Hobbs Airport, in Lea County, New Mexico, is in violation of Section 1-201 and 3-106.B of the Water Quality Control Commission Regulations since a discharge from the facility has been initiated without prior notification of the Water Pollution Control Bureau of the Environmental Improvement Division. This letter is an attempt to get your voluntary compliance in regards to this matter. We request that you send us the following data promptly.

1. Please fill out and return the Notice of Intent to Discharge.

2. Send us a list of all chemicals used in your business which may in any way, such as washing out truck tanks, being discharged into your disposal pit. Include an estimate of the volumes of each chemical disposed into your pit.

3. Will any additional fluids be put into your disposal pit when you start servicing your own trucks?

David Boyer and myself met with Mack Holt at your site on April 1, 1982. We examined your disposal site, took a sample of your well water and discussed your operation at this site. Based upon what we examined and data obtained from the State Engineer's office regarding the geology of the site and the depth to ground water (46') it is likely that contaminants in the Acid Engineering discharge may move directly or indirectly to ground water. If so, and if Acid Engineering does not qualify for any of the exemptions of Section 3-105, then a discharge plan should have been submitted and approval obtained before initiation of the discharge, pursuant to Sections 3-104 and 3-106.B.

If you have any questions feel free to contact either David Boyer (Ext. 303) or Joel Hubbell (Ext. 284).

Sincerely,

Joel M Hubbell

Joel Hubbell
David Boyer
Water Pollution Control Bureau
Ground Water Section

JH:DB:md

Enclosures: Notice of Intent to Discharge
Water Quality Control Commission Regulations

cc: Lloyd Bolding, Acid Engineering, Inc.
Rodger Jetton, Acid Engineering, Inc.
John Guinn, EID District IV, Manager

FIELD TRIP REPORT
GROUND WATER SECTION

FACILITY VISITED

Name of Facility: Acid Engineering

Location: North side of U.S. Highway 62/180 directly across from the Hobbs airport and country club on west side of Hobbs

Discharge Plan Number: DP-

Type of Operation:

ENVIRONMENTAL IMPROVEMENT DIVISION FIELD VISIT

EID Inspector(s): Joel Hubbell, David Boyer

Date of Inspection or Visit: 4/1/82

Discharger's Representative Present During EID Visit:

Name: Mack Holt

Title or Position: Assistant Manager

Purpose of Visit:

a. Evaluation of Proposed Discharge Plan _____

b. Compliance Inspection of Discharge with Approved Plan _____

(c.) Other (specify) Follow up visit on note by Jack Ellvinger -

Inspection Activities During Field Visit:

(a. Inspection of Facilities) or Construction (specify)

b. Sampling of Effluents (give sampling locations)

(c.) Sampling of Ground Water (give names or locations of wells)
Collected sample of on site well - Well is located on west side of property

d. Evaluation of geology, soils, water levels or other physical characteristics of the location (specify)
Pit is unlined, in caprock of ogallala formation. The Acid has been dissolving the caliche. The % Calcilide decreases with depth at this site.

e. Other (specify)

Observations, and Information Obtained during the Visit:

- The pond was dry at the time of the visit
- Wells are acidized by HCl, the acid left over at the end of the day 1-2 bbl is washed down with water at a rate of 100 to 1 or so. This is drained either directly into the pond or through a sump → PVC pipe to trench
- The acid (before dilution) is 15% (1.075 SG) or 20% (1.1 SG)
- No fence around pit - Some people have used it for trash - Mack said that they were considering putting a fence around it

in truck (they use 2 trucks) (42 gal per BBl.)

(OVER)

Action Required:- Notify them that a discharge plan will be required

- Include a copy of the regulations - marking section 3-106

- Copy of correspondence should be sent to Lloyd Balding, Acid Engineering Inc P.O. Box 753, Kilgore, Texas 75662 (214) 984-0601

- Sample effluent (head office)

- Mack estimated that each truck discharged approx. 6000 gallon per truck per working day. 2 trucks so Total of 12,000 gal/day
- Barrels on their loading dock were labeled – Acetic Acid blend, Acetic anhydrite, Isopropyl Alchol, Isooctyl Alchol
- The plant opened its office in Hobbs in June 1980 and moved to this location in October 1981
- The steel sump where the Acid is drained into was eaten through by the acid. The concrete pad also showed a lot of wear. Mack said that the pad only had an estimated 3 year life.

-

ACIDIZING — CHEMICAL TREATMENTS — PUMPING

ACID ENGINEERING INC. DENVER CITY, TEXAS

MACK HOLT
HOBBS, NEW MEXICO

OFF. 505/393-1377
HOME 505/393-8422
[redacted]
D. C. OFF. 806/592-3547

P. O. DRAWER LL
DENVER CITY, TEXAS

ACIDIZING - CHEMICAL TREATMENTS - PUMPING

ACID ENGINEERING INC. DENVER CITY, TEXAS

RODGER JETTON
HOBBS, NEW MEXICO

OFF. 505-393-1377
RES. 505-392-3477
ANS. SER. 505-393-4165
D.C. OFF. 806-592-3547

P. O. DRAWER LL
DENVER CITY, TEXAS

HEALTH & ENVIRONMENT department

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 827-5271
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

MEMORANDUM

TO: MAXINE GOAD, ENVIRONMENTAL PROGRAM MANAGER, WATER POLLUTION BUREAU

THRU: RAYMOND C. KREHOFF, PROGRAM MANAGER, PEM SECTION, CSSB

FROM: JACK ELLVINGER, ENVIRONMENTAL SCIENTIST, HAZARDOUS WASTE UNIT

RE: OPEN PIT DISPOSAL OF SPENT ACIDS

DATE: JANUARY 13, 1982

On January 12, 1982 while in Hobbs a discussion with Jim Kinney brought out a complaint he had recently received. The complaint concerned a firm (Acid Engineering) located on the north side of Highways 62/180 directly across from the Hobbs airport and country club on the west side of Hobbs.

On our return trip to Santa Fe Ray Sisneros and I investigated this site. There was a metal building/loading dock and several elevated (8' - 10') storage tanks. Under the tanks were large puddles of liquid. This was on the west side of the building. On the east side of the building was a large pit (100' X 30' X 20'). The pit had a puddle of liquid on the bottom. A 4" pipe coming from the building extended into the pit. The south end of the pit was erroded as if trucks had drained their contents into the pit.

It is my understanding that this company is involved in oil field activities, i.e. acidizing wells. This information is being forwarded to you because it was unknown if this company had filed a discharge plan. This firm's activities constitute on-site disposal and is, therefore, exempt from the current New Mexico Hazardous Waste Regulations.

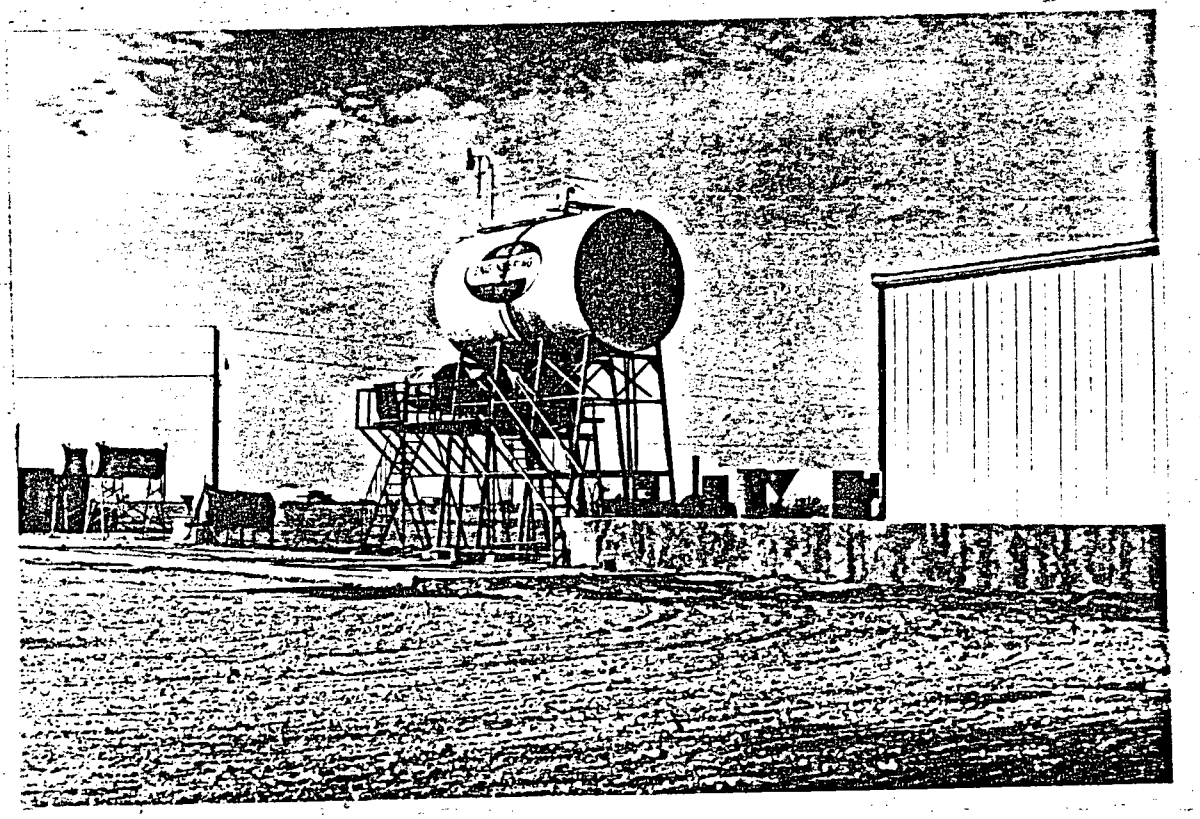
JE/ps

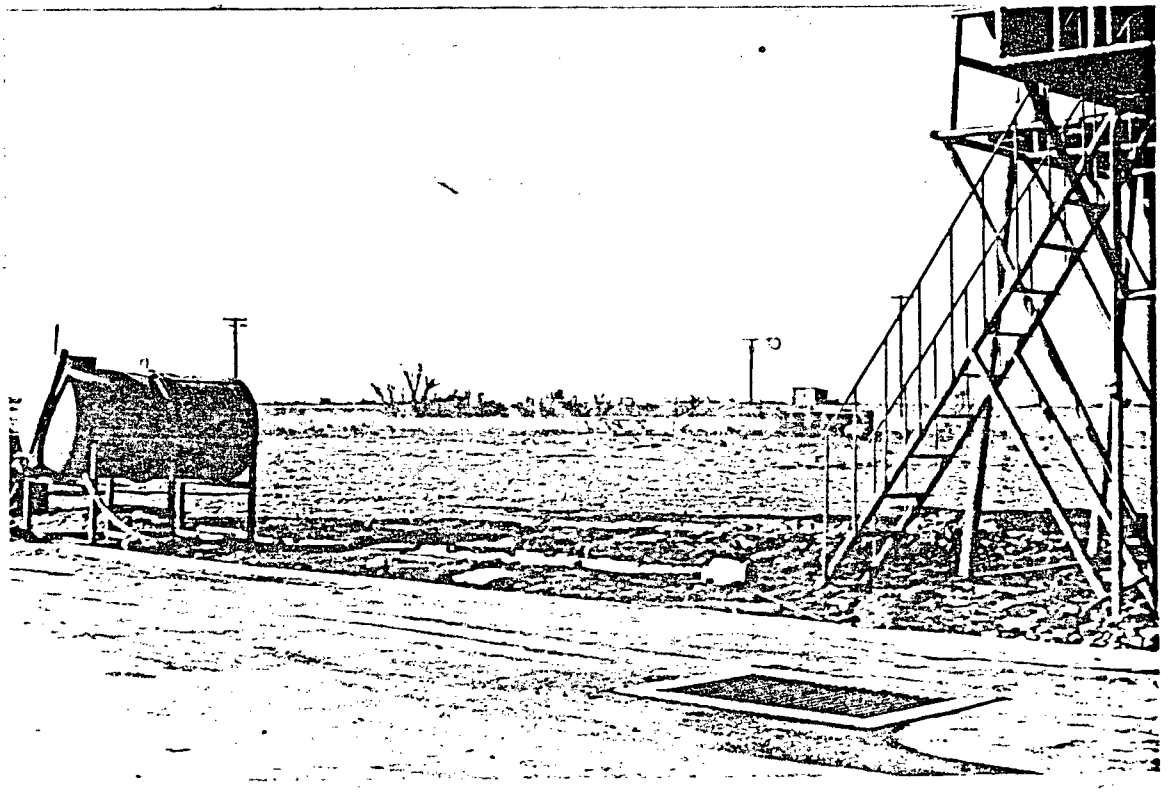
cc: Jim Kenney, EID, Carlsbad Field Office

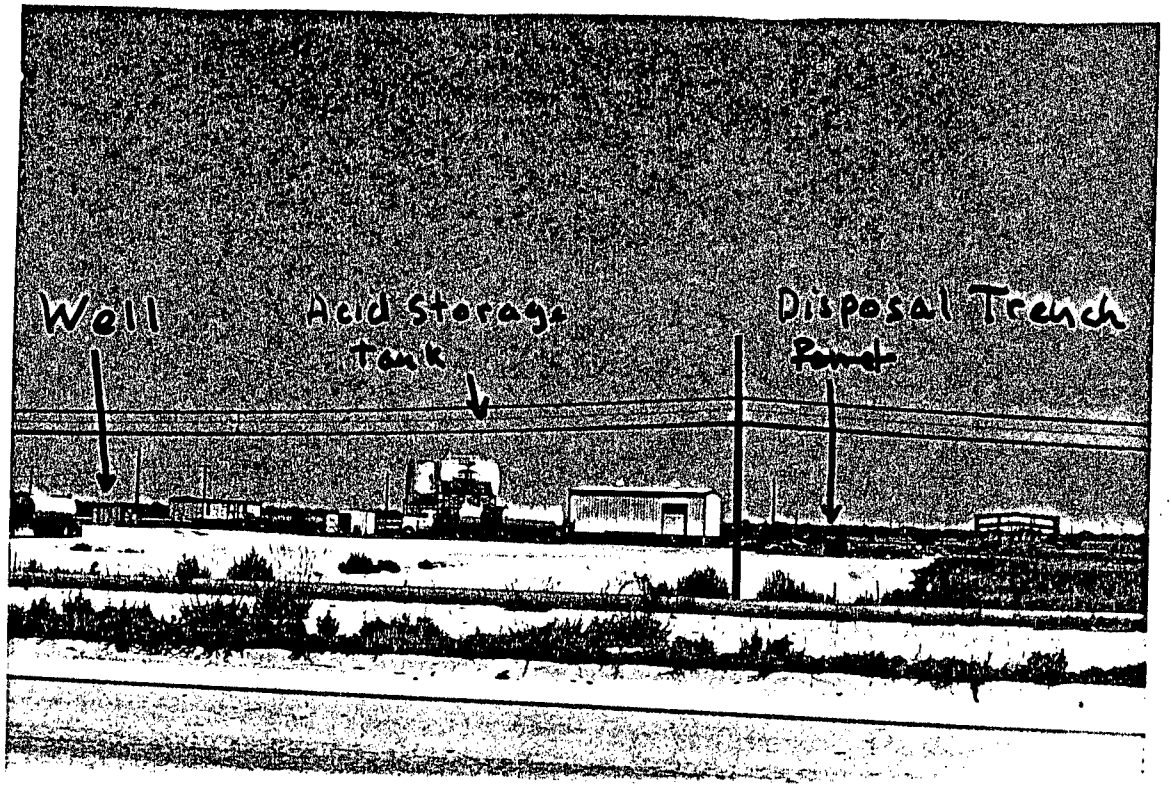
Photos of Acid Engineering site

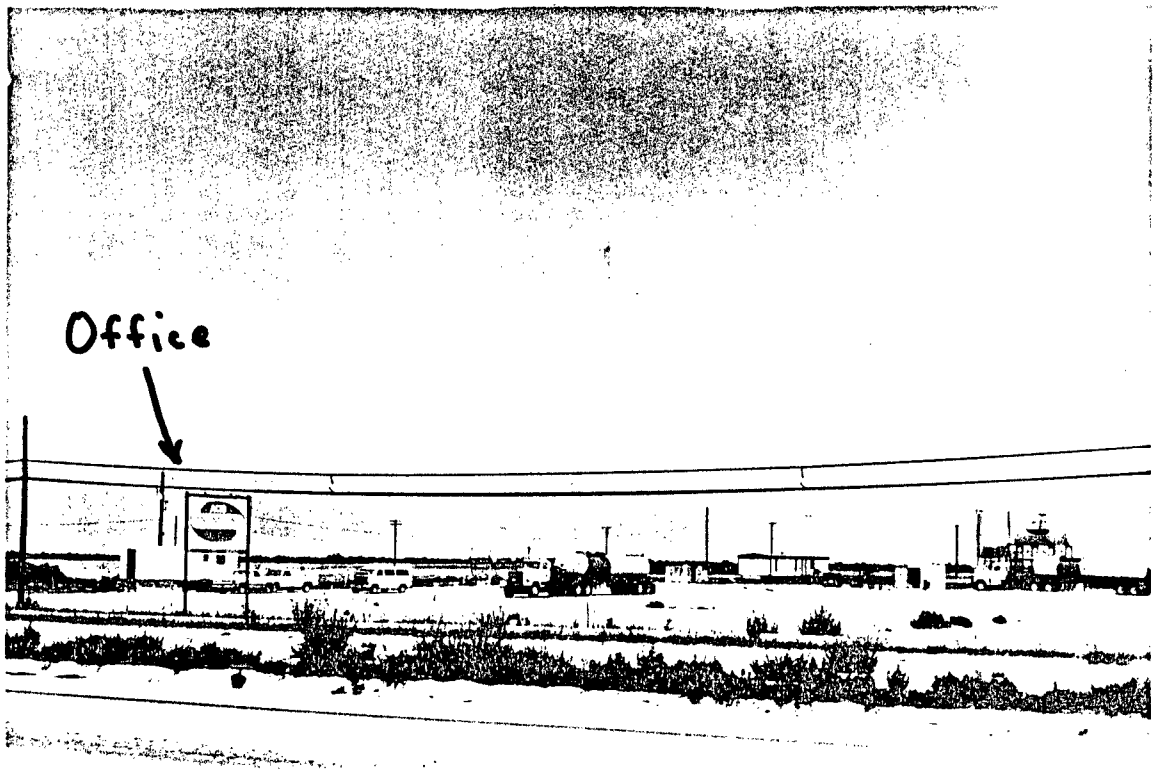
Jan 13, 1982 By Jack Ellinger - Hazardous Waste

Original photos in their file






Well
Acid Storage Tank
Disposal Trench Pond

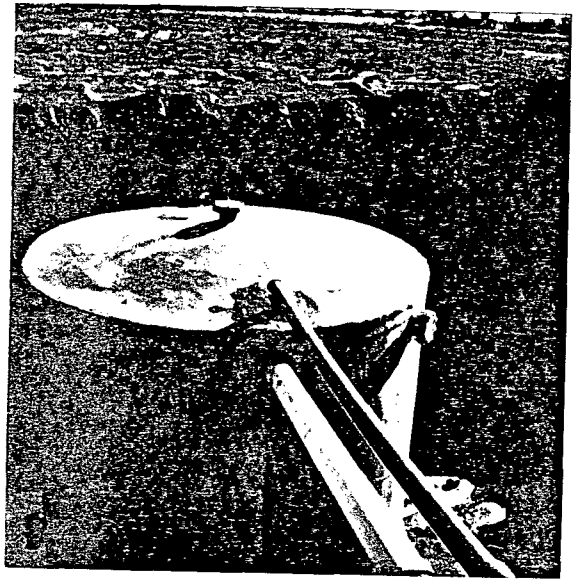

Office

8-5-82

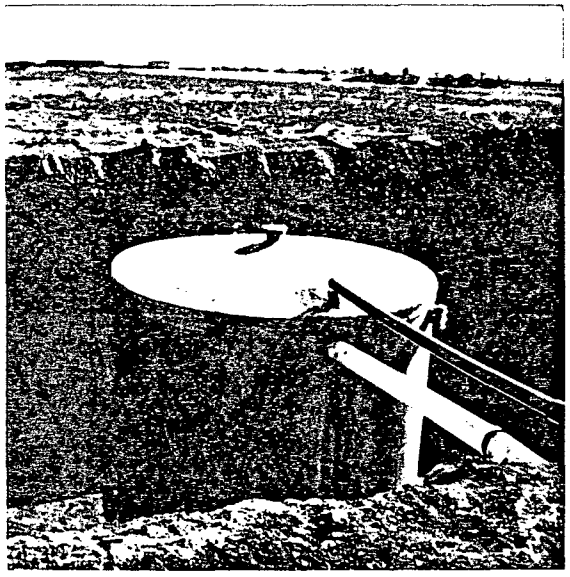
Acid Engineering

Hazardous Waste (Jack Ellsinger) Has additional prints
and Dave Boyer (Ground ~~water~~ water) has slides from 4-1-82
visit

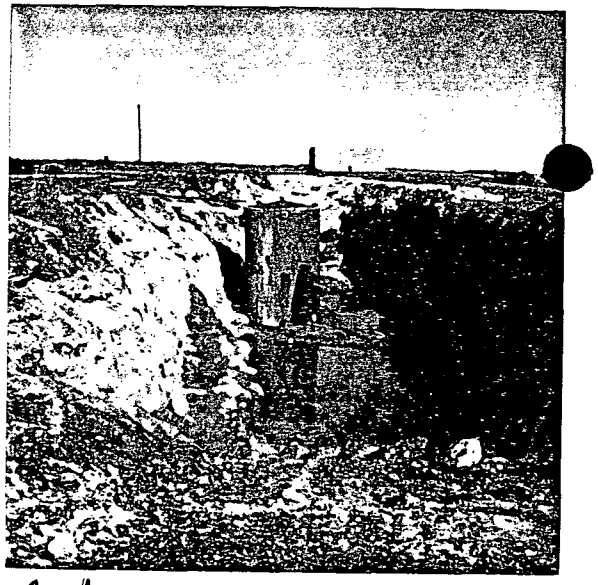
Acid Engineering 8-5-82



Acid Engineering Waste Tank
Camera facing East 12-14-82
Jim Kenney / Garrison McCaslin



Acid Engineering Waste Tank
Camera facing East 12-14-82
Jim Kenney / Garrison McCaslin



Acid Engineering Waste Tank
Camera facing North 12-14-82
Jim Kenney / Garrison McCaslin