GW - 50-2

GENERAL CORRESPONDENCE

YEAR(S):

2006 - 1986

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

February 28, 2006

Ms. Jennifer Knowlton
Agave Energy Company
105 South Fourth Street
Artesia, NM 88210

RE: Requests for Closure of Four Agave Energy Co. Facilities
Separate Requests dated February 20, 2006

Dear Ms. Knowlton:

The New Mexico Oil Conservation Division (NMOCD) has reviewed the above requests. Closure of the following facilities and related NMOCD discharge permits is approved:

1. Agave Salt Creek Compressor Station, located in unit letter C, Section 26, Township 8 South, Range 22 East, Discharge Permit Number GW-50-6
2. Agave Ned State Compressor Station, located in unit letter H, Section 5, Township 9 South, Range 23 East, Discharge Permit Number GW-50-4
3. Agave Haystack Compressor Station, located in Section 15, Township 7 South, Range 26 East, Discharge Permit Number GW-50-2
4. Agave Isler Compressor Station, located in unit letter I, Section 15, Township 7 South, Range 26 East, Discharge Permit Number GW-50-3

NMOCD approval of closure does not relieve Agave Energy Co. of liability should its operations at these sites prove to have been harmful to public health or the environment. Nor does it relieve Agave Energy Co. of its responsibility to comply with the rules and regulations of any other governmental agency.

If you have any questions, contact Ed Martin at (505) 476-3492 or ed.martin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Roger C. Anderson
Environmental Bureau Chief

Copy: NMOCD, Artesia

AGAVE ENERGY COMPANY

105 South Fourth Street | Artesia, New Mexico 88210 | (505) 748-4555 | Fax (505) 748-4275

February 20, 2006

Ed Martin
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Discharge Plan GW 50-2
Haystack Compressor Station
Agave Energy Company

15-75-26 E

Dear Ed:

The Haystack Compressor Station is no longer operational as of approximately 1995. Agave Energy purchased the facility from Transwestern. Agave did not operate the facility but rather consolidated operations and abandoned the site. The site is fenced and locked. Pictures of the facility are attached.

Agave Energy would like to close the above mentioned discharge permit. If you require any additional information, please do not hesitate to call me at 505-748-4471 or email me at jknowlton@ypcnm.com

Sincerely,

Jennifer Knowlton

Jennifer Knowlton
Environmental Engineer

(Discharge022006.doc)

Haystack Compressor Station

Martin, Ed, EMNRD

From: Jennifer Knowlton [jknowlton@YPCNM.COM]
Sent: Tuesday, January 31, 2006 11:40 AM
To: Martin, Ed, EMNRD
Subject: Agave Discharge Permits
Attachments: Jennifer Knowlton.vcf

Ed,

I went through the files that our aid copied for me and I have a couple of questions and clarifications.

OK Red Bluff #~~1~~ 2 (GW 50-7) expired on 4/7/05. I will be working on the renewal application in February
OK Red Bluff #~~2~~ 1 (GW 50-5) expired on 6/13/04. I will be working on the renewal application in February.
Red Bluff #3 (GW 50-8) - there wasn't a copy of the actual discharge permit in the file. Granted, I didn't copy the files, the the aid copied everything else except the maps. Could this have been misfiled? Can I get a copy of the discharge permit for my files? I am assuming that it has expired, but I don't know that for sure.
Bitter Lake (GW 50-1) expired 6/13/04. I will be working on the renewal application for February.

I will work on formal closure plans for the following facilities: Ned State (GW 50-4), Red Bluff #4, Red Bluff #5, and Red Bluff #6. I haven't found permit numbers for the last three facilities. If you can match these facilities to the permit number, it will make the paper work easier.

I also found a letter from Agave to OCD stating that the following facilities weren't operational: Haystack (GW 50-2), Isler (GW 50-3) and Salt Creek (GW 50-6). These have not been operational since before Agave purchased the facilities from Transwestern. We immediately made system wide changes that permanently shut these facilities down. Are the discharge permits still "open" and if so, do I need to formally close them as with the Ned State etc permit?

I appreciate your help with this. I will be working on the renewals for the four permits that have expired next month so that those are taken care of as quickly as possible. Then I will focus my attention on the modified permit for the Agave Dagger Draw Gas Plant.

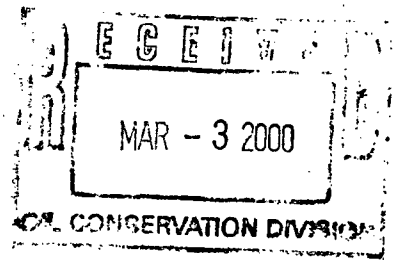
If you could get back to me on the closures by Wednesday I would appreciate it. Weather permitting (i.e. not blowing 100 mph), Ivan and I are going to visit those sites and take the pictures that you requested for the closure. If we need to visit additional faculties to formally close the discharge permit, it would be easier to do it that day since they are in the same relative location.

Thanks, Jen

Jennifer Knowlton
Agave Energy Company
Environmental Engineer
105 South Fourth Street
Artesia, New Mexico 88210
Office: 505-748-4471
Fax: 505-748-4275

AGAVE ENERGY COMPANY

105 South Fourth Street Artesia, New Mexico 88210 (505) 748-4555 Fax (505) 748-4576



March 1, 2000

Wayne Price
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, NM 87505

Re: Notice to Terminate Discharge Plan

Dear Mr. Price:

I have received your fax of February 24th that states that Agave Energy Company's shall submit a notice to terminate discharge plans for HayStack(GW50-2), Isler Station(GW50-3) and Salt Creek(GW50-6).

Please send me the appropriate guidelines to perform this closure. If you need further assistance please call me at 505 748-4526.

Sincerely,

Paula Haggith

Paula Haggith
Engineer

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505
(505) 827-7133
Fax: (505) 827-8177

(PLEASE DELIVER THIS FAX)

To: PAULA Haggith - AGAVE ENERGY

From: OCD-

Date: 2/24/00

Number of Pages (Includes Cover Sheet) 4

Message:

If you have any trouble receiving this, please call:
(505) 827-7133

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

Jennifer A. Salisbury
CABINET SECRETARY

Oil Conservation Div.
Environmental Bureau
2040 S. Pacheco
Santa Fe, NM 87505

Memorandum of Meeting or Conversation

Telephone __X__
Personal _____
E-Mail _____

Time: 8:30am
Date: 2/24/00

Originating Party: : Paula Haggith-Agave Energy

Other Parties: Wayne Price-OCD

Subject: Agave Discharge Plan sites GW-50 series

Discussion:

Paula Haggith notified OCD that NED station GW50-4 is still active. It runs about 5 days/mo. Haystack(GW50-2), Isler Station(GW50-3) and Salt Creek(GW50-6) are presently shut down and Agave does not have plans at this time to start them up.

Conclusions or Agreements:
OCD to send copy of Discharge Plan application for the Ned Station. Agave shall submit a Discharge plan application and $50 filing fee for the Ned station. Agave shall submit discharge plan applications for Haystack(GW50-2), Isler Station(GW50-3) and Salt Creek(GW50-6) or submit notice to terminate discharge plan.

Signed: _____

CC: Att: Paula Haggith and Mr. Paul Ragsdale fax 505-748-4576

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

Jennifer A. Salisbury
CABINET SECRETARY

Oil Conservation Div.
Environmental Bureau
2040 S. Pacheco
Santa Fe, NM 87505

Memorandum of Meeting or Conversation

Telephone __X___
Personal _____
E-Mail _____

Time: 3:30 pm
Date: February 23, 2000

Originating Party: Wayne Price-OCD

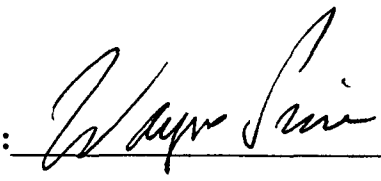
Other Parties: Paula Haggith

Subject: Agave Discharge Plan sites GW-50 series

Discussion:

OCD is going to publish public notices for GW-50-1 (Bitter Lake), GW-50-5 (Red Bluff #1), GW-50-7 (Red Bluff #7) and GW-50-8 (Red Bluff #8). Please let us know the status of GW-50-2 (Hay Stack), GW-50-3 (Isler Station), GW-50-4 (Ned Station), and GW-50-6 (Salt Creek).

Conclusions or Agreements:

Signed: 

CC: Att: Mr. Paul Ragsdale fax 505-748-4576

AGAVE ENERGY COMPANY

105 South Fourth Street Artesia, New Mexico 88210 (505) 748-4555 Fax (505) 748-4576

September 7, 1999

Wayne Price
N.M.O.C.D.
2040 S. Pacheco Street
Santa Fe, NM 87505

Re: Renewal of Compressor Discharge Plan for GW-050

Dear Mr. Price,

Agave Energy Company has submitted applications for renewal of the OCD Discharge Plans for the Red Bluff #1,2,3 and Bitter Lakes Compressor Stations. These are stations that were purchased by Agave Energy from Transwestern Pipeline in 1995.

Since the purchase, Agave has conducted a detailed engineering program to optimize the use of the compression. The net result is that Agave has shut several stations down and are in the process of moving the equipment to other locations. The stations that have been shut down are:

Red Bluff #4	Sec 27-T6S-R25E
Red Bluff #5	Sec 11-T6S-R25E
Red Bluff #6	Sec 24-T5S-R24E
Isler #1	Sec 15-T7S-R26E
Round Top	Sec 9-T7S-R26E

Therefore, we have not submitted a renewal application for these stations and will submit a closure plan once the equipment has been moved. Please let me know if there is additional information you need for these stations.

Sincerely yours,

Paul Ragsdale
Vice President

AGAVE ENERGY COMPANY

105 South Fourth Street Artesia, New Mexico 88210 (505) 748-4555 Fax (505) 748-4576

July 9,1999

Wayne Price
N.M.O.C.D.
2040 S. Pacheco Street
Santa Fe, NM 87505

Re: Compressor Discharge Plans for GW-050, 050-1,2,3,4,5,6.

Dear Mr. Price,

I have received your letter of June 12th that states that Agave's existing plans will be extended until new plans are approved and the new plans need to be submitted by July 13th. Agave has made extensive changes to these compressor stations and we have been unable to adequately compile all of the supporting documentation necessary to submit these plans.

Therefore, we are requesting a sixty day extension until September 13, 1999 to submit these plans. This extension will enable us to do a more complete description of all of the changes that have been made.

We appreciate your cooperation in this matter and apologize for the inconvenience. If you need further assistance please call me at 505 748-4520.

Sincerely,

Paul Ragsdale

Paul Ragsdale
Vice President

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

June 12, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z 357 870 136

Mr. Paul Ragsdale
Agava Energy Company
105 South Fourth Street
Artesia, New Mexico 88210

Re: Compressor Discharge Plans for GW-050, 050-1,2,3,4,5,6.

Dear Mr. Ragsdale:

The New Mexico Oil Conservation Division (NMOCD) is in receipt of Agava Energy Company's (AEC) letter dated February 9, 1999 requesting discharge plans be extended until new plans are approved. Pursuant to New Mexico Water Quality (WQCC) Regulation 3106.F AEC's request will be honored if AEC submits discharge plan applications with all supporting documentation and the $50.00 filing fees for each plan by July 13, 1999.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,

Wayne Price

Wayne Price-Pet. Engr. Spec.
Environmental Bureau

cc: OCD Artesia District office

AGAVE ENERGY COMPANY

105 South Fourth Street Artesia, New Mexico 88210 (505) 748-4555 Fax (505) 748-4576

February 9, 1999

Wayne Price
N.M.O.C.D.
2040 S. Pacheco
Santa Fe, NM 87505

Re: Compressor Discharge Plans

Dear Sir:

Agave Energy Company's Compressor Discharge Plans, GW-050, GW-050-1,GW-050-2,GW-050-3,GW-050-4,GW-050-5,GW-050-6 expire June 13,1999. Agave requests that these discharge plans be extended until new plans are approved.

We appreciate the O.C.D.'s cooperation in this matter. Please call me at 505-748-4520 for further information.

Sincerely yours,

Paul Ragsdale

Paul Ragsdale
Vice President

AGAVE ENERGY COMPANY
105 South Fourth Street Artesia, New Mexico 88210 (505) 748-1471 Fax (505) 748-4576

96 FE 13 P 1 9 52

February 13, 1996

RECEIVED
FEB 16 1996
Environmental Bureau
Oil Conservation Division

Roger Anderson
Oil Conservation Division
2040 South Pacheco St.
Santa Fe, NM 87504

Re: OCD Discharge Plans

Dear Roger:

Agave Energy has purchased certain gathering system assets in Chaves and Eddy Counties, The following facilities are covered under an approved OCD Discharge Plan:

Yates Plant in Eddy County
Red Bluff Gas Treating Systems in Chaves County

Operations will continue as before except that your agency should contact me for information at:

Paul Ragsdale
Agave Energy Company
105 South Fourth Street
Artesia, NM 88210
505-748-4520

Sincerely,

Paul Ragsdale

Paul Ragsdale
Vice President

Enclosure

FAX (505) 625-8060

Phone (505) 623-2761

Transwestern Pipeline Company
TECHNICAL OPERATIONS
January 25, 1996 6381 North Main • Roswell, New Mexico 88201

Mr. Paul Ragsdale
Agave Energy Company
105 S. 4th Street
Artesia, New Mexico 88210

Re: OCD Discharge Plan Change in Ownership Notification

Dear Paul:

With the purchase of gathering assets from Transwestern Pipeline Company by Agave, certain facilities within that purchase were permitted by the Oil Conservation Division (OCD) under an approved discharge plan. The facilities are as follows:

Yates Plant
Enron 6- (Arsenic Treating facilities in the Red Bluff system)

Under the current regulatory scheme, ownership transfer of any property under an approved discharge plan must notify the OCD agency in Santa Fe at the following address, and apprise them of the new ownership status:

Oil Conservation Division
2040 South Pacheco St.
Santa Fe, New Mexico 87504

Atten: Roger Anderson

Also, please be advised that disposal activities involving any non exempt waste, requires written approval by the OCD prior to removal of the waste from the facility.

If I can be of any further assistance, contact our Roswell office of Operations and Commercial Support at (505) 625-8022.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

xc: Lou Soldano
OCD Office, Santa Fe, New Mexico

FEB 23, 1989

HAYSTACK

MATERIAL SAFETY DATA SHEET

Date: 04/10/87

CITGO PETROLEUM CORPORATION
P. O. Box 3758
Tulsa, Oklahoma 74102

MATERIAL SAFETY DATA SHEET

Trade Name: CITGO Pacemaker Gas Engine Oil 1100

Commodity Code: 32-210

Synonyms: Lubricating Oil

CAS Reg. No.: Mixture
(Refer to Section I)

Citgo Index No. (CIN): 0209

Technical Contact: (918) 561-5165
Medical Emergency: (318) 491-6215

MATERIAL HAZARD EVALUATION
(Per OSHA's Hazard Communication Standard [29 CFR Part 1910.1200])
"OHCS"

Health: Non-Hazardous. (OHCS)

Precautionary Statement: Avoid prolonged skin contact with used motor oils.

I. GENERIC COMPOSITION/COMPONENTS

Components	CAS #	%	Hazard Data
Refined Petroleum Oil(s)	64742-65-0 64741-88-4	85-95	Oral: LD50(rat): >15g/kg Eye: Practically Non-Irritating Skin: Practically Non-Irritating Ihln: LC50/4H(rat): >5,000mg/m^3 Comparable material non-carcinoganic in mouse skin assay.
Dispersant, anti-wear, anti-oxidant	Mixture	6-10	Minor eye and skin irritant
VI improver	Mixture	5-7	Eye irritant
Pour Depressant	Mixture	<1	Eye and skin irritant

ND = No Data
NA = Not Applicable

II. PHYSICAL DATA

Physical Hazard Classification (Per 29 CFR Part 1910.1200)

No	Combustible	No	Oxidizer
No	Compressed Gas	No	Pyrophoric
No	Explosive	No	Reactivity
No	Flammable	Yes	Stable
No	Organic Peroxide	No	Unstable

Boiling Point, 760 mmHg, °C(°F): ND

Melting Point, °C(°F): NA

Vapor Pressure, mmHg (25°C): ND

Specific Gravity (H_2O=1): 0.88

Solubility in H_2O, % By Wt.: Negligible

Vapor Density (Air=1):>1

Evaporation Rate (Butyl Acetate=1): <1

% Volatiles By Vol.: Negligible

pH of Undiluted Product: ND

Appearance and Odor: Amber liquid, mild odor.

III. FIRE AND EXPLOSION DATA

Flash Point, COC, °C(°F): 245(473)

NFPA*

Flash Point, PM, °C(°F): 210(410)

Health: 1

Fire Point, COC, °C(°F): 288(535)

Flammability: 1

Reactivity: 0

Flammable Limits in Air, % Vol.: Lower: NA Upper: NA

Extinguishing Media: CO_2, dry chemical, foam or water fog.

Special Fire Fighting Procedure: None.

Unusual Fire or Explosion Hazard: Water may cause frothing.

*Citgo assignment based on our evaluation per NFPA guidelines.
Hazard Rating least-0; slight-1; moderate-2; high-3; extreme-4.

ND = No Data
NA = Not Applicable

CIN #: 0209

IV. REACTIVITY DATA

Stability: Yes Stable No Unstable

Conditions Contributing to Instability: None.

Incompatibility: Strong oxidants.

Hazardous Decomposition Products (thermal, unless otherwise specified):
CO, CO_2.

Conditions Contributing to Hazardous Polymerization: None.

V. SPILL OR LEAK PROCEDURES

Procedures if Material is spilled:
Remove sources of heat or ignition, provide adequate ventilation, contain leak. Absorb small spills with suitable material such as rags, straw or sand. Report spills as required to appropriate authorities.
Chemtrec Emergency Number: 800-424-9300.

Waste Disposal:
It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal.
Check before disposing to be sure you are in compliance with all applicable laws and regulations.

Protective measures during repair and maintenance of contaminated equipment:
Refer to Section VII - Special Protection Information.
Avoid prolonged contact with used oil, wash skin thoroughly with soap and water.

ND = No Data
NA = Not Applicable

VI. HEALTH HAZARD DATA

Health Hazard Classification (Per 29 CFR Part 1910.1200)

No	Carcinogen	No	Corrosive
No	Animal Carcinogen	No	Irritant
No	Suspect Carcinogen	No	Sensitizer
No	Mutagen	No	Teratogen
No	Highly Toxic	No	Target Organ
No	Toxic		

Product listed as carcinogen or potential carcinogen by:
NTP No, IARC No, OSHA No, OTHER No.

Toxicity Summary: Slightly toxic, 1 pt. to 1 qt. is approximate lethal oral dose for 150 lb. human adult.

Major Route of Entry: Inhalation of accidentally produced fumes.

Acute Exposure Symptoms:

- Inhalation: Low risk of inhalation. In enclosed spaces or when hot, vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea, or lung irritation. Mists above TLV may cause chemical pneumonitis.
- Dermal Contact: Mild irritant.
- Eye Contact: Transient, mildly irritating.
- Ingestion: Generally low toxicity. Very large amounts may cause generalized depression, headache, drowsiness, nausea, vomiting or diarrhea. Small doses may produce irritation and diarrhea.
- Injection: Irritating.

Chronic Exposure: Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis.

Other Special Effects: None expected.

First Aid and Emergency Procedures for Acute Effect

- Inhalation: Remove to fresh air. Respiratory support if necessary. Seek medical aid.
- Dermal: Wash with soap and water. Do not wear heavily contaminated clothing before laundering.
- Eyes: Flush with large volumes of water. See physician if any complications arise.
- Ingestion: Do not induce vomiting. Seek medical aid.
- Injection: Subcutaneous injection is a medical emergency . . seek medical aid immediately.

Notes to Physician: On ingestion, an oil viscosity of about 530 SUS (100°F) presents no aspiration hazard. However, for large quantities, lavage may still be advised.

ND = No Data
NA = Not Applicable

CIN #: 0209

VII. SPECIAL PROTECTION INFORMATION

Ventilation Requirements: Ventilation is required when work place exposures exceed TLV.

Permitted Threshold Air Concentrations:	Agency:	OSHA	OSHA	ACGIH	ACGIH
	Year:	1972	1985	1985-86	1985-86
	Type:	TWA	PEL	TWA	STEL
Mineral Oil	ppm:	-	-	-	-
	mg/m^3:	5	5	5	10

Specific Personal Protective Equipment:

- Respiratory: Normally none required. If high vapor or mist concentrations expected - use respirator approved for organic vapors and mists.
- Eyes: Safety goggles, or chemical splash goggles if splashing is anticipated.
- Dermal: Oil impervious gloves if frequent or prolonged contact is expected.
- Other Clothing or Equipment: Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder soiled work clothes before reuse.

VIII. TRANSPORTATION AND SPECIAL PRECAUTIONS

Hazardous Material Placard/Label:

Caution: Avoid prolonged skin contact with used motor oils. Continuous contact with used oil has caused skin cancer in laboratory animals. After draining oil, wash skin thoroughly with soap and water.

Storage: Store below 120°F. Do not apply high heat or flame to container. Keep separate from strong oxidizing agents.

DOT Information:

DOT/UN Shipping Name:	Petroleum Lubricating Oil.
DOT Hazard Class:	Non-Hazardous.
DOT/UN Hazard Identification Number:	None assigned.
DOT Shipping Container Restrictions:	None.
DOT Placard:	None

Caution: Empty containers may contain product residue which could include flammable or explosive vapors.

Consult appropriate Federal, State and Local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

ND = No Data
NA = Not Applicable

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1367

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	EMERGENCY TELEPHONE NO.
Norchem	(815) 942-7301
ADDRESS (Number, Street, City, State, and ZIP Code) 8805 N. Tabler Road Morris, IL 60450-9988	
CHEMICAL NAME AND SYNONYMS Ethylene Glycol Antifreeze Coolant	TRADE NAME AND SYNONYMS NORKOOL® Concentrate Coolant
CHEMICAL FAMILY Dihydric Alcohol	FORMULA $HO-CH_2-CH_2-OH$

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS	0		BASE METAL	0	
CATALYST	0		ALLOYS	0	
VEHICLE	0		METALLIC COATINGS	0	
SOLVENTS	0		FILLER METAL PLUS COATING OR CORE FLUX	0	
ADDITIVES	0		OTHERS	0	
OTHERS	0			.	

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Ethylene Glycol	90	50 ppm (v
Other Glycols	5	N.A.
Proprietary inorganic and organic corrosion inhibitors	3	N.A.
Water	2	N.A.

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	325	SPECIFIC GRAVITY (H_2O=1)	1.134
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	N.A.
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (=1)	N.A.
SOLUBILITY IN WATER	100%		
APPEARANCE AND ODOR	Blue liquid, no odor.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	LEL	UEL
250°F, Cleveland Open Cup	N.A.		

EXTINGUISHING MEDIA: Water

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Unknow, LD50 (Rats) - 8 g/K. It is not a primary skin or eye irritant.

EFFECTS OF OVEREXPOSURE
Unknown

EMERGENCY AND FIRST AID PROCEDURES
Flush well with water

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE		

INCOMPATABILITY *(Materials to avoid)*
Strong caustic solutions.

HAZARDOUS DECOMPOSITION PRODUCTS
None known

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Soak up and/or flush with water to sanitary drain.

WASTE DISPOSAL METHOD

Biodegradation.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* None required.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)* Consistent with good manufacturing procedures.	OTHER

PROTECTIVE GLOVES
Not required

EYE PROTECTION
Safety Goggles.

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Keep from freezing. Freeze point is approximately 15°F.

OTHER PRECAUTIONS
None

PREPARED BY: R. L. Wolfe
DATE: NOVEMBER 20, 1984

MATERIAL SAFETY DATA SHEET

METHANOL	MSDS No. 998211201 Rev. Date 01/28/83

ARCO CHEMICAL COMPANY
DIVISION OF ATLANTIC RICHFIELD COMPANY
1500 MARKET STREET
P.O. BOX 7258
PHILADELPHIA, PENNSYLVANIA 19101

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers, and users of this product

I. General

Trade Name	METHANOL
Other Names	METHYL ALCOHOL, WOOD ALCOHOL

Telephone Numbers

800/424-9300 CHEMTREC
215/353-8300 ARCO CHEM
215/557-2000 INFO ONLY

Chemical Family	ALIPHATIC ALCOHOL
Generic Name	

DOT Hazardous Materials Proper Shipping Name: METHYL ALCOHOL

DOT Hazard Class: FLAMMABLE LIQUID

CAS No.	Company ID No.	UN No.
	E000142300	1230

II. Summary of Hazards

DANGER

EXTREMELY FLAMMABLE - MAY BURN WITH INVISIBLE FLAME
CAUTION - MODERATE INHALATION HAZARD - SERIOUS OVEREXPOSURE TO METHANOL VAPOR CAN CAUSE BLINDNESS AND PERHAPS DEATH
CAUTION - MODERATE INGESTION HAZARD - UNSAFE FOR HUMAN CONSUMPTION, MAY CAUSE BLINDNESS OR DEATH
CAUTION - MODERATE SKIN HAZARD - EXTENSIVE/PROLONGED LIQUID CONTACT CAN CAUSE SERIOUS ILLNESS
CAUTION - MODERATE EYE HAZARD

III. Fire and Explosion

SEE SUPPLEMENT BEGINNING ON PAGE 5

Flash Point (Method)	*Autoignition Temperature (Method)*	Flammable Limits at Normal Atmospheric Temperature Pressure (% Vol. in Air)
AP 50 F (CC)	AP 725 F	Lower 6.0 Upper 36.5

Unusual Fire and Explosion Hazards

RELEASES FLAMMABLE VAPOR BELOW NORMAL AMBIENT TEMPERATURES. WHEN MIXED WITH AIR AND EXPOSED TO IGNITION SOURCE, CAN BURN IN THE OPEN OR EXPLODE IF CONFINED. MIXTURES WITH WATER AND AS LITTLE AS 21% (BY VOL) METHANOL ARE STILL FLAMMABLE (FLASH PT. <100 F). UNDER SOME CIRCUMSTANCES, MAY CORRODE CERTAIN METALS, INCLUDING ALUMINUM AND ZINC, AND GENERATE HYDROGEN GAS.

Extinguishing Media

DRY CHEMICAL ALCOHOL TYPE FOAM
CO2
FOR ADDITIONAL EXTINGUISHING MEDIA INFORMATION -
SEE SUPPLEMENTAL DATA BEGINNING ON PAGE 5 OF MSDS

Special Firefighting Procedures

DO NOT ENTER FIRE AREA WITHOUT PROPER PROTECTION. SEE SECTION X - DECOMPOSITION PRODUCTS POSSIBLE. HEAT MAY BUILD PRESSURE AND RUPTURE CLOSED CONTAINERS, SPREADING FIRE, INCREASING RISK OF BURNS/INJURIES. FIGHT FIRE FROM SAFE DISTANCE/PROTECTED LOCATION. APPLY AQUEOUS EXTINGUISHING MEDIA CAREFULLY TO AVOID FROTHING AND LIMIT EXPOSURE OF NEARBY EQUIPMENT. NOTIFY AUTHORITIES IF LIQUID ENTERS SEWER/PUBLIC WATERS. A METHANOL FIRE MAY NOT BE VISIBLE TO THE NAKED EYE.

SEE THIS STATEMENT ON PAGE 4***

IV. Health Hazards

SEE SUPPLEMENT BEGINNING ON PAGE 5

Primary Hazard	BURNS AND INJURY DUE TO FIRE AND EXPLOSION. INHALATION OF EXCESSIVE VAPOR OR AEROSOL CONCENTRATION.

ROUTE OF EXPOSURE	SIGNS AND SYMPTOMS
Inhalation	DROWSINESS/DRUNKENNESS,HEADACHE,VISUAL DISTURBANCE LEADING TO BLINDNESS; COUGHING/SHORTNESS OF BREATH;COLLAPSE AND DEATH AT VERY HIGH CONCENTRATIONS
Eye Contact	UPON DIRECT LIQUID CONTACT, MAY CAUSE MODERATE BURNING, TEARING, REDNESS, AND SWELLING.HIGH VAPOR CONCENTRATIONS (>2000 PPM) MAY CAUSE SAME SYMPTOMS.
Skin Absorption	IN LIQUID OR SOLUTION FORM, THIS MATERIAL MAY BE ABSORBED THROUGH INTACT SKIN AND PRODUCE TOXIC EFFECTS.
Skin Irritation	FOLLOWING EXTENSIVE, REPEATED AND/OR PROLONGED SKIN CONTACT, MAY CAUSE BURNING, ITCHING, REDNESS, OR BLISTERS.
Ingestion	SWALLOWING BETWEEN 2 AND 8 OUNCES OF METHANOL CAN CAUSE DEATH.
Effects Of Overexposure	SEE SUPPLEMENTAL DATA BEGINNING ON PAGE 5 OF THIS MSDS.

Protective Equipment

SEE SUPPLEMENT BEGINNING ON PAGE 5

Respiratory	DO NOT USE AIR-PURIFYING RESPIRATORS. METHANOL CANNOT BE DETECTED BY ITS ODOR UNTIL DANGEROUS EXPOSURE OCCURS. SEE SUPPLEMENTAL SHEET BEGINNING ON PAGE 5 OF THIS MSDS FOR DETAILED RECOMMENDATIONS.
Ventilation	LOCAL EXHAUST VENTILATION MAY BE REQUIRED TO MEET EXPOSURE STANDARD(S) IN ADDITION TO GENERAL ROOM VENTILATION.
Eye	EYE PROTECTION, SUCH AS CHEMICAL SPLASH GOGGLES AND/OR FACE MASK, MUST BE WORN WHEN ANY POSSIBILITY EXISTS FOR EYE CONTACT DUE TO SPLASHING OR SPRAYING LIQUID. CONTACT LENSES SHOULD NOT BE WORN.
Skin	PROTECTIVE CLOTHING INCLUDING GLOVES, APRON, SLEEVES, BOOTS AND HEAD AND FACE PROTECTION MUST BE WORN. THIS EQUIPMENT MUST BE CLEANED THOROUGHLY AFTER EACH USE.
Other	EMERGENCY EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE IN THE IMMEDIATE VICINITY OF ANY POTENTIAL EXPOSURE.

VI. Occupational Exposure Limits

	Substance	Source	Date
1.	METHANOL	OSHA	1972

Exposure Limit Value/Time	Short Term Limit/Time	Peak Limit
200.00 PPM / 8 HOURS		

	Substance	Source	Date
2.	METHANOL -SKIN	ACGIH	1982

Exposure Limit Value/Time	Short Term Limit/Time	Peak Limit
200.00 PPM / 8 HOURS	250.00 PPM / 15 MINUTES	

VII. Emergency and First Aid

SEE SUPPLEMENT BEGINNING ON PAGE 5

Inhalation	IF OVERCOME BY EXPOSURE, IMMEDIATELY MOVE VICTIM TO FRESH AIR. KEEP VICTIM QUIET. ADMINISTER OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN EMERGENCY MEDICAL ATTENTION IMMEDIATELY. PROMPT ACTION IS ESSENTIAL.
Eye Contact	IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH EYES WITH CLEAN, LOW PRESSURE, LUKEWARM WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING EYELIDS. OBTAIN MEDICAL ATTENTION.
Skin Contact	SEE SUPPLEMENTAL DATA BEGINNING ON PAGE 5 OF THIS MSDS.
Ingestion	IF SWALLOWED, ADMINISTER LUKEWARM WATER (PINT) ONLY IF VICTIM IS COMPLETELY CONSCIOUS/ALERT. INDUCE VOMITING. OBTAIN IMMEDIATE EMERGENCY MEDICAL TREATMENT. PROMPT ACTION IS ESSENTIAL.
Note to Physician	IN CASE OF INGESTION OR MASSIVE INHALATION, OBSERVE AS INPATIENT BECAUSE SLOW METABOLISM CAUSES A LATENT PERIOD OF 24 HOURS BETWEEN EXPOSURE AND ACIDOSIS/BLINDNESS. SEE SUPPLEMENTAL DATA BEGINNING ON PAGE 5 OF THIS MSDS FOR ADDITIONAL INFORMATION.

VIII. Spill and Disposal

SEE SUPPLEMENT BEGINNING ON PAGE 5

Precautions if Material is Spilled or Released	SEE SUPPLEMENTAL DATA BEGINNING ON PAGE 5 OF THIS MSDS.
Waste Disposal Methods	DESIGNATE RCRA F005 IF SPENT SOLVENT INTENDED FOR DISPOSAL. DESIGNATE SPILL CLEANUP RESIDUE RCRA U154. LANDFILL PROPERLY CONTAINED, COMTAMINATED SOLIDS ONLY AT PERMITTED DISPOSAL SITES USING REGISTERED CONTRACTORS. BURN CONCENTRATED LIQUID WASTE IN PROPERLY DESIGNED COMBUSTION SYSTEMS. TAKE SAFETY *PRECAUTIONS DUE TO LOW FLASH POINT. ASSURE EMISSIONS ARE COMPLIANT WITH ALL* APPLICABLE AIR POLLUTION CONTROL REGULATIONS. DILUTE AQUEOUS WASTE (<1% WT) MAY BE BIODEGRADABLE WHEN FED IN LOW PROPORTION TO SUITABLE BIOPLANT. AVOID OVERLOADING/POISONING THE BIOMASS. ASSURE EFFLUENT IS COMPLIANT WITH ALL APPLICABLE WATER POLLUTION CONTROL REGULATIONS.

IX. Components

{This may not be a complete list of components}

Component Name	CAS No.		Composition amount (See Note on Page 4)
METHANOL	67-56-1	AP	100 PERCENT

Compositions given are typical values, not specifications.

V. Physical and Chemical Data

Boiling Point AP 148 F	**Evaporation Rate (Ratio of Time)** N/AP		**Dry Point** N/AP
Freezing Point AP -144 F	**Vapor Pressure** (MM HG AT 68 F) AP 96		**Volatile Characteristics** MODERATE
Specific Gravity (H_2O = 1 at 39.2°F) AP 0.79	**Vapor Density (Air = 1 at 60 – 90°F)** AP 1.1	**Solubility in Water** COMPLETE	**Stability** STABLE
Hazardous Polymerization NOT EXPECTED TO OCCUR	**Viscosity Units, Temp., Method** N/AP		**pH** N/AP

Other Physical and Chemical Properties

Appearance and Odor	CLEAR LIQUID WITH FAINT ALCOHOL ODOR. ODOR IS NOT GOOD INDICATION OF EXPOSURE LEVEL.
Conditions to Avoid	HEAT, SPARKS, OPEN FLAME, OXIDIZING CONDITIONS; OPEN CONTAINERS AND POOR VENTILATION.
Materials to Avoid	STRONG OXIDIZING AGENTS; ALUMINUM; ZINC; ANY REACTIVE METAL WHICH WILL DISPLACE HYDROGEN; CERTAIN FORMS OF PLASTICS, RUBBER, AND COATINGS.
Hazardous Decomposition Products	INCOMPLETE COMBUSTION WILL GENERATE HIGHLY POISONOUS CARBON MONOXIDE AND PERHAPS OTHER TOXIC VAPORS SUCH AS FORMALDEHYDE.

VI. Additional Precautions

Handling and Storage

STORE ONLY IN TIGHTLY CLOSED/PROPERLY VENTED CONTAINERS AWAY FROM HEAT,OPEN FLAME,SPARKS,STRONG OXIDIZING AGENTS.MAY BE STORAGE FIRE HAZARD ON CONTACT WITH AIR ABOVE 50 DEG.F. BLANKET STORAGE WITH DRY INERT GAS. STORE DRUMS W/ BUNG IN UP POSITION.CAREFULLY VENT INTERNAL PRESSURE BEFORE REMOVING CLOSURE.GROUND CONTAINERS BEFORE TRANSFER. WILL ABSORB ATMOSPHERIC MOISTURE. ELECTRICAL EQUIPMENT SHOULD CONFORM TO NATIONAL ELECTRIC CODE. CARBON STEEL IS SATISFACTORY MATERIAL OF CONSTRUCTION. DO NOT STORE IN ALUMINUM OR ZINC (GALVANIZED).HANDLE "EMPTY" DRUMS WITH CARE/VAPOR RESIDUE MAY BE FLAMMABLE. DECONTAMINATE CONTAINERS BEFORE REUSE/DISPOSAL.

General Comments

IT IS RECOMMENDED THAT SPILL CLEANUP RESIDUES CONTAMINATED WITH THIS PRODUCT BE SHIPPED AS:

HAZARDOUS WASTE (METHYL ALCOHOL)
FLAMMABLE LIQUID
UN 1230

– – – Note – – – Qualifications: EQ = Equal; LT = Less Than; AP = Approximately; GT = Greater Than; UK = Unknown; TR = Trace; N/AV = Not Available; N/AP = Not Applicable

XII. Supplement

FIRE EXTINGUISHING MEDIA

DO NOT USE SOLID WATER STREAM BUT WATER SPRAY/FOG ARE USEFUL TO COOL EXPOSED FACILITIES OR DILUTE THIS WATER SOLUBLE LIQUID BELOW FLASH POINT. WATER DILUTION REQUIRED TO EXTINGUISH FIRE IS HIGH (>5:1).

EFFECTS OF OVEREXPOSURE

EXPOSURE TO 4,000-13,000 PPM OF METHANOL FOR 12 HOURS WAS FATAL TO ONE WORKER. APPARENT EXPOSURE TO 1,200-8,000 PPM FOR 4 YEARS CAUSED CHRONIC POISONING WITH DIMMING OF VISION AMONG A GROUP OF WORKERS; OTHERS IN THE AREA WERE NOT AFFECTED. HEADACHES REPORTED AMONG DUPLICATING MACHINE OPERATORS EXPOSED TO 300 PPM. MOST SERIOUS CASES OF METHANOL POISONING REPORTED IN LAST 40 YEARS RESULTED FROM INGESTION IN BELIEF IT WAS ETHYL ALCOHOL.

RESPIRATORY PROTECTION

CONDITION	MINIMUM RESPIRATORY PROTECTION* REQUIRED ABOVE 200 PPM
VAPOR CONCENTRATION	
2000 PPM OR LESS	ANY SUPPLIED-AIR RESPIRATOR
	ANY SELF-CONTAINED BREATHING APPARATUS
10,000 PPM OR LESS	ANY SUPPLIED-AIR RESPIRATOR WITH FULL FACEPIECE, HELMET OR HOOD
	ANY SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE
25,000 PPM OR LESS	A TYPE C SUPPLIED-AIR RESPIRATOR WITH FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE OR WITH FULL FACEPIECE, HELMET OR HOOD OPERATED IN CONTINUOUS-FLOW MODE.
GREATER THAN 25,000 PPM OR ENTRY AND ESCAPE FROM UNKNOWN CONCENTRATIONS	SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.
	A COMBINATION RESPIRATOR WHICH INCLUDES TYPE C SUPPLIED-AIR RESPIRATOR WITH FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE OR CONTINUOUS-FLOW MODE AND AN AUXILIARY SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.
FIREFIGHTING	SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.
ESCAPE	ANY ESCAPE SELF-CONTAINED BREATHING APPARATUS.

*ONLY NIOSH-APPROVED OR MSHA-APPROVED EQUIPMENT SHOULD BE USED.

NOTE TO PHYSICIAN

METHANOL IS WATER SOLUBLE AND DISTRIBUTES IN THE WATER SPACE (0.65 X WT. (KG)). IT IS SLOWLY METABOLIZED TO FORMIC ACID. ETHANOL, BY COMPETITIVE INHIBITION, RETARDS METHANOL METABOLISM. TREATMENT SHOULD BEGIN WITH PO ETHANOL VIA NG TUBE OR IV ETHANOL UNTIL BLOOD ETHANOL LEVEL REACHES 100 MG/DL. CONTINUE ETHANOL UNTIL BLOOD METHANOL LEVEL IS LESS THAN 20 MG/DL. RELAPSES CAN OCCUR IF ETHANOL STOPPED PREMATURELY. HEMODIALYSIS IS HELPFUL TO REMOVE METHANOL AND FORMATE BUT ALSO REMOVES ETHANOL AND DOSAGE ADJUSTMENT IS REQUIRED.

XII. Supplement Continued

PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED

RELEASE MAY CAUSE FIRE/EXPLOSION. EVACUATE/EXCLUDE NONESSENTIAL PERSONNEL. EXTINGUISH ALL IGNITION SOURCES/STOP RELEASE IF FEASIBLE WITHOUT UNDUE RISK. IMMEDIATELY NOTIFY FIRE/WATER SUPPLY/POLLUTION CONTROL AUTHORITIES. DO NOT FLUSH TO SEWER. LIQUID REMAINS FLAMMABLE EVEN WHEN MIXED WITH WATER UNLESS MAJOR DILUTION IS ACHIEVED. BLANKET SPILL WITH ALCOHOL RESISTANT FOAM TO LIMIT VAPOR EMISSION. EQUIP CLEANUP CREW WITH PROPER PROTECTION.

DIKE/IMPOUND DOWNGRADE FROM LARGE LAND SPILL. SOAK UP SMALL SPILL ONTO INERT SOLIDS/SHOVEL INTO SUITABLE DISPOSAL CONTAINERS. RESTRICT WATER USE IN CLEANUP. ON WATER, LIQUID IS HIGHLY SOLUBLE/WILL REMAIN ON SURFACE UNTIL RECOVERED OR DISPERSED. LIQUID IS HIGHLY BIODEGRADABLE/MAY DEPLETE OXYGEN FROM WATER/CAUSE FISH KILL. DISPERSE UNRECOVERABLE MATERIAL TO MINIMIZE THIS EFFECT. IF RELEASED TO THE ENVIRONMENT, COMPLY WITH ALL REGULATORY NOTIFICATION REQUIREMENTS.

TRIANGLE REFINERIES, INC.

SPECIALTY PRODUCTS DIVISION

[illegible] STREET • SUITE [illegible] • SHREVEPORT, LOUISIANA [illegible]

[illegible]

A SUBSIDIARY OF KERR MCGEE REFINING CORPORATION

MSDS NUMBER

MATERIAL SAFETY DATA SHEET

W-1410

	COMPANY	CHEMTREC
EMERGENCY TELEPHONE	405/270-2526	800/424-9300

I. PRODUCT IDENTIFICATION

PRODUCT	CHEMICAL NAME	
KERMAC 100-W	Stoddard Solvent, White Spirits	
CHEMICAL FAMILY	**FORMULA**	**CAS NUMBER**
Petroleum Hydrocarbon Naphtha	C_8-C_{12}	64741-48-9

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATING CODES	HEALTH CODE	FIRE CODE	REACTIVITY CODE
Slight - 1 Moderate - 2 High - 3 Extreme - 4	0	2	0

II. HAZARDOUS COMPONENTS

INGREDIENT	%	OSHA LIMIT	TLV
Stoddard Solvent	100	TWA-500 ppm	TWA-100 ppm STEL-200 ppm
Xylene	Up to 1%	TWA-100 ppm	TWA-100 ppm STEL-150 ppm

III. PHYSICAL AND CHEMICAL PROPERTIES

[illegible]	[illegible]	
PERCENT VOLATILE BY VOLUME (%) 100	MOLECULAR WEIGHT Approximately 140	Clear Liquid
ODOR AND THRESHOLD Petroleum Naphtha/Approx 1 ppm	MELTING POINT Not Available	VAPOR DENSITY (AIR = 1) > 4.8
[illegible]	[illegible]	[illegible]

from: Brewer Oil
Bob Smith
1-29-87

H. W. DUDLEY
VICE-PRESIDENT
OIL SPECIALTIES MARKETING

TRIANGLE REFINERIES, INC.

HOUSTON
PHONE (713) 663-4900

POST OFFICE BOX 3367
HOUSTON, TEXAS
77253

KERMAC Mineral Spirits (100W)

WYNNEWOOD REFINERY

TYPICAL SPECIFICATIONS

API GRAVITY @ 60 F.		49.0
SPECIFIC GRAVITY		.7839
FLASH POINT TCC		100 F. Min.
COLOR		+30
DISTILLATION		
	IBP	314
	10%	323
	50%	338
	90%	368
	DP	396
Aniline Point		138.7
Kauri Butanol		35.9
CHEMICAL COMPOSITION VOL %		
	Paraffins	45.2
	Olefins	Nil.
	Aromatics	11.3
	Naphthenes	43.5
CORROSION		1-A
SULFUR		NIL
DOCTOR		NEG.

IV. FIRE PROTECTION INFORMATION

FLASH POINT AND METHOD	AUTOIGNITION TEMPERATURE	FLAMMABLE LIMITS % VOLUME IN AIR	LOWER	UPPER
ig Closed Cup 100°F minimum	Approx. 440°F		1	6

EXTINGUISHING MEDIA

.. oon dioxide, dry chemical, or foam. Water stream may spread fire, use water spray only to ool containers exposed to fire. If leak or spill has not ignited, use water spray to isperse vapors.

HAZARDOUS DECOMPOSITION PRODUCTS

ncomplete combustion can yield carbon monoxide and various hydrocarbons.

FIRE AND EXPLOSION HAZARDS

an form flammable mixtures with air and flash when heated to approximately 100°F. Explosion azard in fire situation. Vapor heavier than air and may travel considerable distance to a ource of ignition and flash back.

HAZARDOUS POLYMERIZATION		STABILITY	
☒ Will Not Occur	☐ May Occur	☒ Stable	☐ Unstable

V. HEALTH INFORMATION

INHALATION

Possible effects include headache, nasal and respiratory irritation, nausea, drowsiness, igue, peumonitis, pulmonary edema, central nervous system depression.

EYE CONTACT

Irritation

SKIN CONTACT

Irritation, may cause dermatitis due to defatting of keratin layer.

INGESTION

Possible effects include headache, drowsiness, nausea, fatigue, peumonitis, pulmonary edema, central nervous system depression. Aspiration hazard.

REPORTED AS POTENTIAL CARCINOGEN OR CARCINOGEN		
	☒ Not Applicable	☐ National Toxicology Program
	☐ International Agency for Research on Cancer	☐ OSHA

VI. FIRST AID PROCEDURES

HALATION

e exposed person to fresh air. If breathing has stopped, perform artificial respiration. medical attention as soon as possible.

E CONTACT

Immediately flush eyes with water for a minimum of 15 minutes, occasionally lifting the lower and upper lids. Get medical attention as soon as possible.

IN CONTACT

If clothing soaked, immediately remove clothing and wash skin with soap and water. Launder clothing before wearing. Get medical attention promptly.

ESTION

Do not induce vomiting. Get medical attention as soon as possible.

VII. EMPLOYEE PROTECTION

IRATORY PROTECTION (UTILIZE NIOSH APPROVED RESPIRATORS. REFER TO MANUFACTURER'S PROTECTION FACTORS AND OSHA STANDARD 1910.134, AS A GUIDELINE:)

Up to 500 ppm, half-mask organic vapor respirator.
Up to 1000 ppm, full-face organic vapor respirator or full-face supplied air respirator.
Greater than 1000 ppm, fire fighting, or unknown concentration, self-contained breathing apparatus with positive pressure.

PROTECTIVE CLOTHING

EYE: Chemical goggles, face shield.

SKIN: Gloves: Nitrile, neoprene or other material resistant to naphtha solvent.

VENTILATION

Maintain local or dilution ventilation to keep air concentration below 100 ppm. Loading, unloading, tank gauging, etc. remain upwind. Request assistance of safety and industrial hygiene personnel to determine air concentrations.

VIII. TRANSPORTATION AND STORAGE INFORMATION

)OT Hazardous Material ☒ Yes ☐ No

)T SHIPPING NAME AND NUMBER

etroleum naphtha UN1255

DOT HAZARD CLASS

Combustible liquid

'ORAGE

o not store with strong oxidizers. Store as OSHA Class II combustible liquid.

IX. ENVIRONMENTAL PROTECTION

SPILLS

Notify emergency response personnel. Evacuate area and remove ignition sources. Build dike to contain flow. Remove free liquid, do not flush to sewer or open water. Pick up with inert absorbent and place in closed container for disposal. If flash point of residue is under 140°F, utilize hazardous waste manifest and permitted hazardous waste disposal site. If flash is above 140°F, utilize permitted industrial waste disposal site.

WASTE DISPOSAL

EPA Hazardous Waste ☒ Yes ☐ No

EPA WASTE CODE NUMBER: D 001

WASTE CHARACTERISTIC OR HAZARD CODE: Ignitable

Utilize licensed waste disposal company. Consider recycling or incineration. Based on flash point, utilize permitted hazardous waste disposal site and manifest or permitted industrial waste disposal site as appropriate.

MANAGER'S SIGNATURE (PRODUCT SAFETY AND COMPLIANCE)

Prepared by Kerr-McGee Refining Corporation for Triangle Refineries, Inc

C L. Russell

DATE PREPARED: 5-15-85

DISCLAIMER

NOTICE JUDGEMENT BASED ON INDIRECT TEST DATA

MATERIAL SAFETY DATA SHEET

DATE: (ESSENTIALLY SIMILAR TO FORM OSHA-20)

I-PRODUCT INFORMATION

MANUFACTURED FOR **ALPHA DYN CHEMICAL**	EMERGENCY PHONE NUMBER **(505) 392-7034**
ADDRESS **P.O. BOX F #3 BRAND DRIVE HOBBS, N.M. 88240**	OTHER
FORMULA PROPRIETARY	TRADE NAME BLUE TIGER

II-HAZARDOUS INGREDIENTS

	CAS #	%(wt)	TLV(ppm)

III-PHYSICAL DATA

BOILING POINT (°F)	212	SPECIFIC GRAVITY ($H_2O = 1$)	1.035
VAPOR PRESSURE (psig)	18	% VOLATILE BY VOLUME	90.00
VAPOR DENSITY	N/A	EVAPORATION RATE (WATER =1)	1.00
SOLUBILITY IN WATER	100%	APPEARANCE AND ODOR	CLEAR, BLUE, MOD. VISCOUS LIQUID

IV-FIRE & EXPLOSION HAZARD DATA

FLAMMABILITY AS PER CPSC FLAME EXTENSION TEST NONE	FLAMMABLE LIMITS Lower Upper
EXTINGUISHING MEDIA NONE	
SPECIAL FIRE FIGHTING PROCEDURES NONE	
UNUSUAL FIRE & EXPLOSION HAZARDS NONE	

V-REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATABILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

VI-HEALTH HAZARD DATA

OSHA PERMISSIBLE EXPOSURE LIMIT

EFFECTS OF OVER EXPOSURE

INHALATION NO ADVERSE EFFECTS FROM INHILATION.

SKIN CONTACT / ABSORPTION MAY BE IRRITATING TO SKIN. FLUSH OFF WITH CLEAR WATER.

INGESTION GASTROINTESTINAL IRRITATION IF INGESTED. DO NOT INDUCE VOMITING. DRINK LARGE VOLUMES OF CLEAR WATER AND SEEK PROMPT MEDICAL ATTENTION.

EYES FLUSH WITH CLEAR WATER, THEN APPLY AN ISOTONIC EYEWASH SOLUTION.

EMERGENCY AND FIRST AID PROCEDURES

EYES AND SKIN
FLUSH OFF WITH CLEAR WATER

INHALATION
N/A

INGESTION
DRINK LARGE VOLUMES OF CLEAR WATER AND SEEK PROMPT MEDICAL ATTENTION

VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED FLUSH ALL EFFECTED SURFACES WITH CLEAR WATER, SQUEEGEE TO FLOOR DRAIN, THEN FLUSH TO STANDARD SEWER WITH LARGE VOLUMES OF CLEAR WATER. WIPE DRY OR ALLOW TO AIR DRY.

WASTE DISPOSAL METHOD DILUTE CONCENTRATION OF WASTE OR SPENT MATERIAL WITH CLEAR WATER, THEN FLUSH TO STANDARD SEWER. EMPTY CONTAINER NAY BE SENT TO A LANDFILL SITE OR OFFERED FOR RECONDITIONING.

VIII-SPECIAL PROTECTION INFORMATION

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

EYE GOGGLES

SKIN RUBBER GOLVES

OTHER

VENTILATION REQUIREMENTS ADEQUATE

IX-SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING KEEP OUT OF THE REACH OF CHILDREN. KEEP CONTAINER SEALED WHEN NOT IN USE. PROTECT PRODUCT FROM STORAGE IN AREA EXPOSED TO TEMPERATURE EXTREMES. STORE PRODUCT IN ORIGINAL SHIPPING CONTAINER WITH PRODUCT LABEL INTACT. READ PRODUCT LABEL CAREFULLY BEFORE USING PRODUCT.

OTHER PRECAUTIONS

MATERIAL SAFETY DATA SHEET

Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

PRODUCT NAME: TRIETHYLENE GLYCOL - TECHNICAL

Effective Date: 03/20/88 Date Printed: 03/29/88 MSDS:000271

1. INGREDIENTS:

Triethylene glycol	CAS# 000112-27-6	99%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 545.9F; 286C
VAP PRESS: < 1.0 mmHg @ 20C
VAP DENSITY: 5.18
SOL. IN WATER: Completely miscible
SP. GRAVITY: 1.1 @ 25/25C
APPEARANCE: Colorless liquid.
ODOR: Mild odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 350F; 177C
METHOD USED: PMCC

FLAMMABLE LIMITS
LFL: 0.9%
UFL: 9.2%

EXTINGUISHING MEDIA: Water fog, alcohol resistant foam, CO2, dry chemical.

FIRE & EXPLOSION HAZARDS: Not available.

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained

(Continued on Page 2)

* An Operating Unit of The Dow Chemical Company

6. HEALTH HAZARD DATA: (CONTINUED)

amounts. The dermal LD50 has not been determined.

INGESTION: Single dose oral toxicity is low. Amounts ingested incidental to industrial handling are not likely to cause injury; however ingestion of larger amounts may cause injury. The oral LD50 for rats is 16,800-22,060 mg/kg.

INHALATION: No adverse effects are anticipated from inhalation.

SYSTEMIC & OTHER EFFECTS: Based on available data, repeated exposures are not anticipated to cause any significant adverse effects. Did not cause cancer in long-term animal studies. Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus. In animal studies, has been shown not to interfere with reproduction.

7. FIRST AID:

EYES: Irrigate immediately with water for at least five minutes.

SKIN: Wash off in flowing water or shower.

INGESTION: Induce vomiting if large amounts are ingested. Consult medical personnel.

INHALATION: Remove to fresh air if effects occur. Call a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to the patient.

(Continued on Page 4)

9. ADDITIONAL INFORMATION: (CONTINUED)

MSDS STATUS: Revised Section 9.

United Catalysts Inc.
Girdler and CCI Catalysts

Post Office Box 32370
Louisville, Kentucky 40232

Telephone 502-634-7200
Telex 204190, 204239
Facsimile 502-637-3732

MATERIAL SAFETY DATA SHEET
G-132B

SECTION I PRODUCT IDENTIFICATION

Trade Name and Synonyms G-132B

Chemical Family **Formula**

Heterogeneous Catalyst $CuO+ZnO+Al_2O_3+C$

SECTION II HAZARDOUS INGREDIENTS

Hazardous Components in the Solid Mixture

COMPONENT	CAS No.	%	OSHA/PEL	ACGIH/TLV
Zinc oxide	1314-13-2	40-50	2.0 mg/m^3	10.0 mg/m^3
Copper oxide	1317-38-0	35-45	1.0 mg/m^3	1.0 mg/m^3
Aluminum oxide	1344-28-1	8-15	15.0 mg/m^3	10.0 mg/m^3
Carbon (Syn. graphite)	7782-42-5	1-5	*NIA	10.0 mg/m^3

SECTION III PHYSICAL DATA

Appearance and Odor: Dark brown cylindrical tablets. No odor.

Melting Point: Greater than 1600°C, greater than 3000°F.

Solubility in Water: Insoluble.

Bulk Density: 80 lbs./cu. ft.

Percent Volatile by Weight at 1000°F: Less than 7%.

MATERIAL SAFETY DATA SHEET
G-132B

SECTION IV FIRE EXPLOSION DATA

Fire and Explosion Hazard
Negligible fire and explosion hazard when exposed to heat or flame by reaction with incompatible substances.

Flash Point
Non-flammable

Firefighting Media
Dry chemical, water spray, or foam.
For larger fires, use water spray fog or foam.

Firefighting
Non-flammable solids, liquids or gases: Cool containers that are exposed to flames with water from the side until well after fire is out. For massive fire in enclosed area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of the tank due to fire.

SECTION V HEALTH HAZARD DATA

Health hazards may arise from inhalation, ingestion, or contact with the skin and eyes.

Excessive repeated inhalation of carbon may cause irritation to the upper respiratory tract and lung damage. Activated carbon may cause irritation of the eyes and mucous membranes, conjunctivitis, epithelial hyperplasia of the cornea, and eczematous inflammation of the eyes. Ingestion of large quantities may cause stomach and alimentary tract irritation. In the form of dust, activated carbon may contain small amounts of irritating and possibly toxic impurities.

Alumina particles deposited in the eye may cause necrosis of the cornea. Ingestion may cause stomach and intestinal distress. Salts of alumina may cause dermatoses, eczema, conjunctivitis, and irritation of the mucous membranes of the upper respiratory tract. Prolonged inhalation of alumina dust may result in pneumoconiosis. Lung damage (Shaver's Disease) may result from inhalation of finely divided aluminum oxide particles; it is complicated by silica and oxides of iron in the inhaled air.

MATERIAL SAFETY DATA SHEET
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SECTION VI REACTIVITY DATA

Reactivity
Is stable under normal temperatures and pressures in sealed containers. Hazardous polymerization will not occur. Finely divided particles can result in fire or explosion. Toxic fumes are produced at elevated temperatures. When heated, can react explosively with magnesium or chlorinated rubber.

SECTION VII SPILL OR LEAK PROCEDURES

Notify safety personnel of spills or leaks. Clean-up personnel need protection against inhalation of dusts or fumes. Eye protection is required. Vacuuming and/or wet methods of cleanup are preferred. Place in appropriate containers for disposal, keeping airborne particulates at a minimum.

Disposal
Consult applicable local, state, and federal regulations to select the method of disposal. Recover metal components by reprocessing when possible.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection
Provide a NIOSH/MSHA jointly approved respirator in the absence of proper environmental control. Contact your safety equipment supplier for proper mask type.

Ventilation
Provide general and/or local exhaust ventilation to keep exposures below the TLV. Ventilation used must be designed to prevent spots of dust accumulation or recycling of dusts.

Protective Clothing
Wear protective clothing, including long sleeves and gloves, to prevent repeated or prolonged skin contact.

Eye Protection
Chemical splash goggles designed in compliance with OSHA regulations are recommended. Consult your safety equipment supplier.

MATERIAL SAFETY DATA SHEET
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Excessive inhalation of copper dusts may produce irritation to the upper respiratory tract and may cause temporary or permanent damage to the lungs. Sublimed copper oxide may be responsible for a form of metal fume fever. Ingestion of large quantities may result in damage to the liver, pancreas, kidney, or nervous system. Prolonged or repeated contact with the skin may result in irritation and possible dermatitis in sensitive individuals. Contact with eye tissue may result in irritation and/or conjunctivitis.

Inhalation of zinc dust, mists, or fumes may irritate the respiratory tract, mucous membranes and skin. At higher levels of exposure "zinc chills" or "zinc fume fever" may occur with symptoms of metallic or sweet taste, marked thirst, coughing, weakness, fatigue, muscular pain, nausea and vomiting, followed by fever, perspiration and chills, dyspnea, rales throughout the chest, and tachycardia. Onset of symptoms usually occur about 4-12 hours after exposure. Workers in zinc refining have been reported to suffer from a variety of nonspecific intestinal, respiratory, and nervous symptoms. Excessive contact may cause perforation of the nasal septum. Prolonged or repeated contact under poor hygienic conditions may produce a papular, pustular eczema or dermatitis called "oxide pox." Contact with the eye tissue may produce irritation and/or conjunctivitis.

First Aid (Inhalation)
Remove to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

First Aid (Ingestion)
If large amounts have been ingested, give emetics to cause vomiting. Stomach siphon may be applied as well. Milk and fatty acids should be avoided. Get medical attention immediately.

First Aid (Eyes)
Wash eyes immediately and carefully for 15 to 20 minutes with running water, lifting upper and lower eyelids occasionally. Get prompt medical attention.

First Aid (Skin)
To avoid repeated or prolonged contact with this chemical, use good hygienic practices. Wash with soap and a large amount of water. Get medical attention if irritation or inflammation develops.

United Catalysts Inc.
Girdler and CCI Catalysts

MATERIAL SAFETY DATA SHEET
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SECTION IX

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Please refer to 40 CFR Part 372, Subpart D (372.62 - Specific Toxic Chemical Listings) and Section II - Hazardous Ingredients of this document for the names and percentages of the toxic chemical(s) in this product.

The information presented herein is believed to be accurate but is not warranted. Recipients are advised to confirm in advance that the information is current and applicable to meet their circumstances.

* No Information Available

Doc. 151

HAZARD COMMUNICATION GUIDE

Material Safety Data Sheet

N/D = No Data
N/A = Not Applicable

Supercedes: 10/20/86

I. General Information

Date Revised: 12/12/88

Chemical Name & Synonyms
N/A

Trade Name & Synonyms
OIL-OFF

Chemical Family
Solvent=Surfactant Mixture

Formula
N/A

Proper DOT Shipping Name
Compound, degreasing, liquid

DOT Hazard Classification
Combustible material

Manufacturer
Crain Chemical Co., Inc.

Manufacturer's Phone Number
214/358-3301

Manufacturer's Address
P.O. Box 540995 , Dallas,TX 75354

Chemtrec Phone Number
1-800-424-9300

II. Ingredients

Principal Hazardous Components	Percent	Threshold Limit Value (units) OSHA	ACGIH
Petroleum Hydrocarbon Distillate CAS# 8008-20-6		500ppm	N/D

III. Physical Data

Boiling Point (°F)
354-525

Specific Gravity (H_2O = 1)
0.848

Vapor Pressure (mm Hg.)
0.4 @ 68°F

Percent Volatile By Volume (%)
75

Vapor Density (Air = 1)
6.6

Evaporation Rate (_____ = 1) Toluene
< 0.1

Solubility In Water
Negligible

pH
N/A

Appearance & Odor
Clear, dark blueish green liquid/characteristic odor

IV. Fire & Explosion Hazard Data

Flash Point (Test Method)
149°F

Auto Ignition Temperature
410°F

Flammable Limits

LEL	UEL
1.0	8.0

Extinguishing Media
Foam, dry chemical, CO_2

Special Fire Fighting Procedures
Water stream may spray fire. Use water spray only to keep fire exposed containers cool.

Unusual Fire & Explosion Hazards
Can form combustible mixtures with air when heated to approximately 171°F will not flash spontaneously.

HAZARD COMMUNICATION GUIDE

V. Health Hazard Data

Threshold Limit Value	OSHA Threshold Limit Value	ACGIH Threshold Limit Value
500ppm	500ppm	N/D

Carcinogen - NTP Program	Carcinogen - IARC Program
N/A	N/A

Symptoms of Exposure

Irritation, possible effects include headache, drowsiness, nausea, fatigue, peumonitis, pulmonary edema, CNS depression, aspiration hazard.

Medical Conditions Aggravated By Exposure

Many aggravate existing eye, skin or respiratory conditions.

Primary Route(s) of Entry

Inhalation, skin

Emergency First Aid

Inhalation: Move to fresh air. Resuscitate if necessary. Eyes: Immediately flush with water for 15 minutes, occasionally lifting upper & lower eyelids. Skin: Wash with soap and water. Ingestion: Do NOT induce vomiting. Get medical attention as soon as possible.

VI. Reactivity Data

Stability		X	Unstable / Stable
Hazardous Polymerization		X	May Occur / Will Not Occur

Conditions to Avoid

Heat, sparks, open flames, welding arcs.

Incompatability

Materials to Avoid

Strong oxidizing agents

Conditions to Avoid

Not known to polymerize

Hazardous Decomposition Products

Incomplete combustion can yield CO and various hydrocarbons.

VII. Environmental Protection Procedures

Spill Response

Notify emergency response personnel. Remove ignition sources and evacuate area. Remove free liquid. Do Not Flush to sewer or open water. Pick up with inert absorbent and place in closed container for disposal.

Waste Disposal Method

Utilize licensed waste disposal company. Consider recycling or incineration. Utilize permitted industrial waste disposal site.

VIII. Special Protection Information

Eye Protection

Chemical goggles

Skin Protection

Solvent-resistent gloves

Respiratory Protection (Specific Type)

Half/mask or full face organic respirator or supplied air, or self contained breathing apparatus. NIOSH/MSHA approved

Ventilation Recommended

Maintain adequate ventilation to keep vapor concentrations below TLV.

Other Protection

Rubber aprons and boots.

IX. Special Precautions

Hygienic Practices In Handling & Storage

Maintain good industrial hygienic practices. Store as a Class III A combustible liquid.

Precautions For Repair & Maintenance Of Contaminated Equipment

Remove all ignition sources.

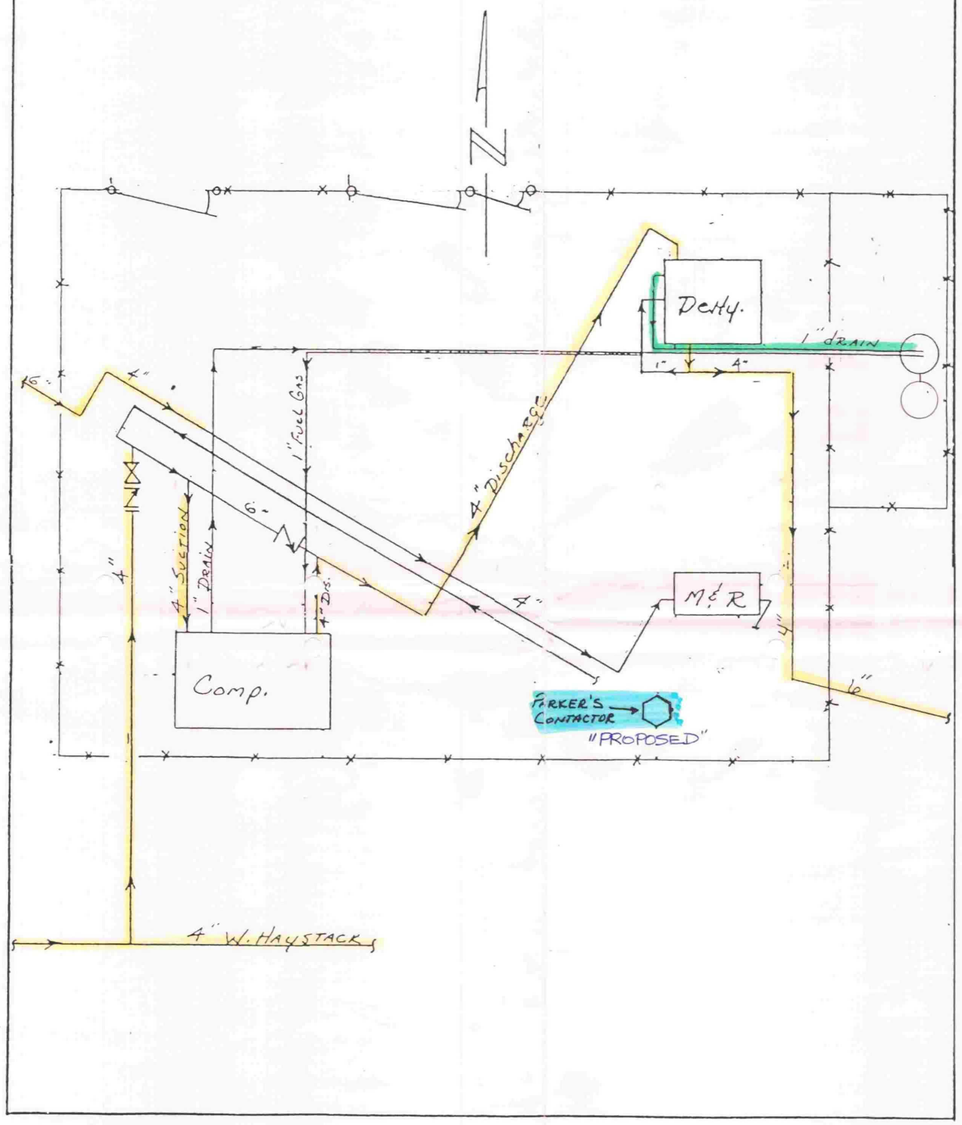
Other Precautions

Avoid breathing vapors over extended periods.
Avoid contact with eyes, skin. Keep out of reach of children.

West Haystack Comp. Unit
After Reconnection
Chaves Co, NM

A. F. E. # 23579 JOB # FEATURE # Plot Plan

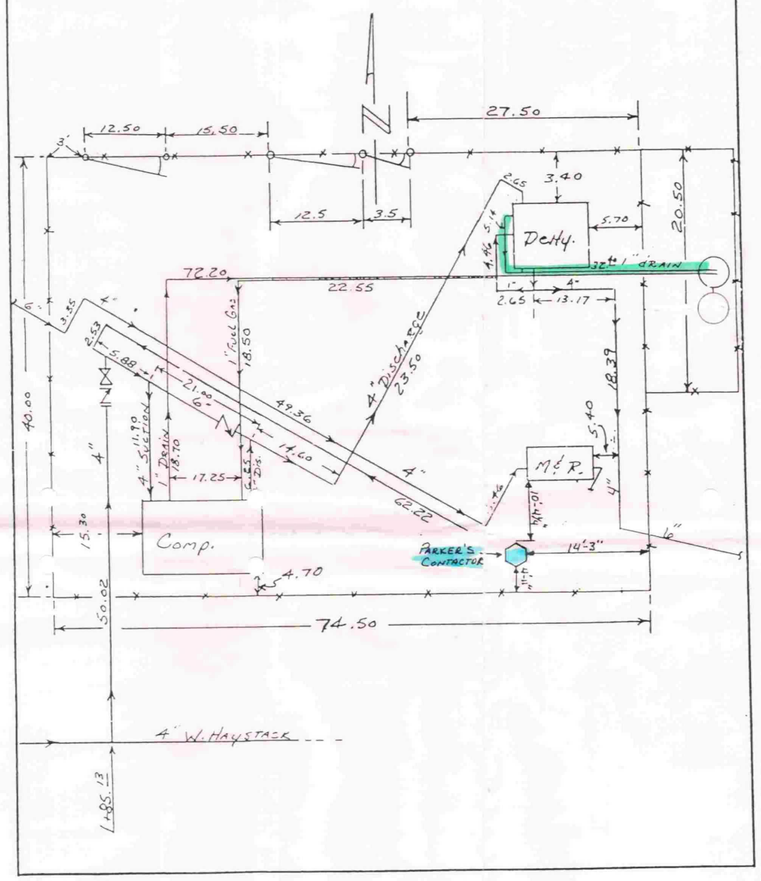
BY R. Fancher
DATE 4-2-84



West Haystack Comp. Unit
After Reconnection
Chaves Co, NM

A. F. E. # 23579 JOB # FEATURE # "DIMENSIONS"

BY R. Fancher
DATE 4-2-84



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OIL CONSERVATION DIV.
SANTA FE

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y.						
BID						
CONSTR.	[illegible]	11-11-88			LH	11-11-88
CADDS	PLOT DATE:					
	DWG.					

WORK ORDER NUMBER	
P.L. OR STA. ACCOUNT NUMBER	
1988 CONSTRUCTION	BY / DATE
DESIGN	L.H 11-88
DRAWN	M.L. 11-88
AS BUILT	
MICROFILM	
MICROFILM FILE NO.	M-303
SCALE	3/8" = 1'-0"

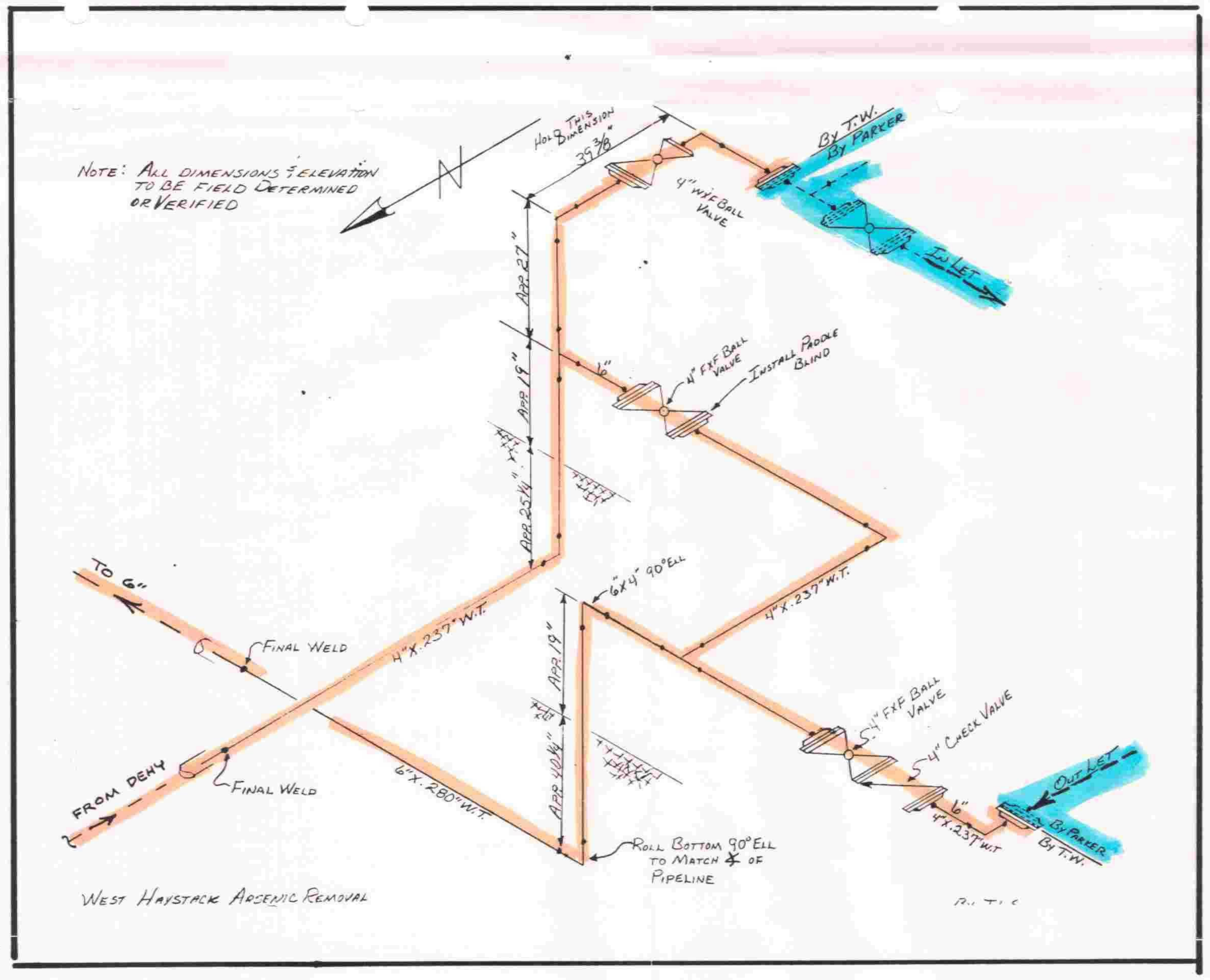
ENRON
Gas Pipeline Operating Company
Houston, Texas

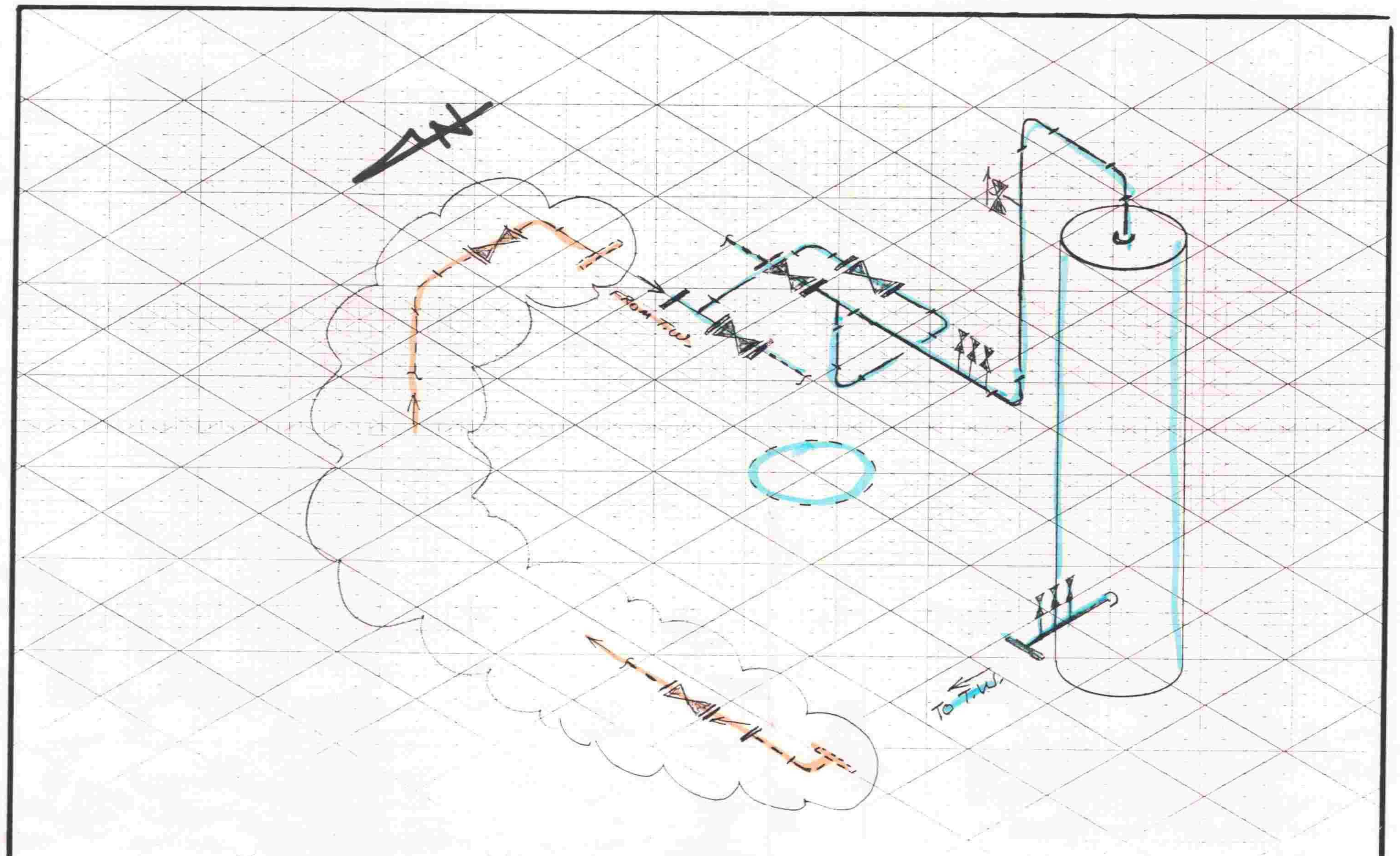
TRANSWESTERN PIPELINE COMPANY
WEST HAYSTACK COMPRESSOR
ARSENIC REMOVAL UNIT INSTALLATION
PLOT PLAN
CHAVES COUNTY, NEW MEXICO

ENRON
GAS PIPELINE
GROUP

APPROVED BY CHIEF ENGINEER	
APPROVED BY VICE PRESIDENT	
APPROVED BY OPERATING COMPANY	
DRAWING NUMBER	

- T.W. PIPING MODIFICATIONS -





- PARKER FACILITIES -

ENRON
Gas Pipeline Operating Company
Houston, Texas

TRANSWESTERN PIPELINE COMPANY
WEST HAYSTACK COMPRESSOR
ARSENIC REMOVAL UNIT INSTALLATION
"PROPOSED"
CHAVES COUNTY, NEW MEXICO

ENRON GAS PIPELINE GROUP

APPROVED BY CHIEF ENGINEER	
APPROVED BY VICE PRESIDENT	
APPROVED BY OPERATING COMPANY	
DRAWING NUMBER	