GIANT
REFINING CO.

Route 3, Box 7
Gallup, New Mexico
87301

505
722-3833

October 7, 1991

Ed Horst
Hazardous and Radioactive Waste Bureau
New Mexico Environment Department
P.O. Box 26110
1190 St. Francis Drive
Santa Fe, New Mexico 87502

RE: Bisti Lease Cleanup

Dear Mr. Horst:

Giant Exploration and Production Company (Giant E & P) has agreed with El Paso Natural Gas Company to remove and dispose of crushed containers located on the Bisti Property Lease. As indicated, these containers are located on lands leased by Giant E & P from El Paso Natural Gas Company in Section 16, Township 25 North, Range 12 West.

These drums last contained exploration and production chemicals. The attached Material Safety Data Sheets (MSDSs) are for the chemicals last contained in the drums that were crushed and landfilled at this location. As you can see, these chemicals are not listed in 40 CFR 261.33. Giant E & P also believes that although these crushed containers may contain residuals of the original chemical, they were empty when discarded.

El Paso Natural Gas Company has collected soil samples from the container disposal area. The samples labeled as Field ID #7 and #8, on the attached analytical and associated map, suggests that the soils in and around the container area are not regulated. Only trace levels of any of the specified regulated constituents are present in these samples. As a result, Giant E & P believes that it is possible that the crushed containers and associated soils are not regulated as hazardous waste.

Giant proposes to excavate the containers and associated soils and transport the material to a Class I or Class II landfill, whichever will be most appropriate for the material as it is uncovered. Giant E & P and El Paso Natural Gas will closely monitor the project to assure liquids are not found in quantities that create problems with the empty container rule of 40 CFR 261.7 (b). If this occurs, appropriate actions will be taken. Samples of the excavated soils will be composited and analyzed prior to disposal.

If you have any comments or require additional information, contact my office at (505) 722-0217.

Sincerely,

Claud Rosendale

Claud Rosendale
Environmental Manager
Ciniza Refinery

list of enclosures: Analytical Data Summary
MSDSs - (6)

cc w/enclosures: Kim Bullerdick
Giant Industries Arizona, Inc.

Al Kuchera
Giant Exploration & Production

Jamye Ward
El Paso Natural Gas Company

FINAL RESULTS
Analytical Data Summary
Hiboron Pit Sampling
Sampled August 21, 1991
Date of this report: 9-19-91

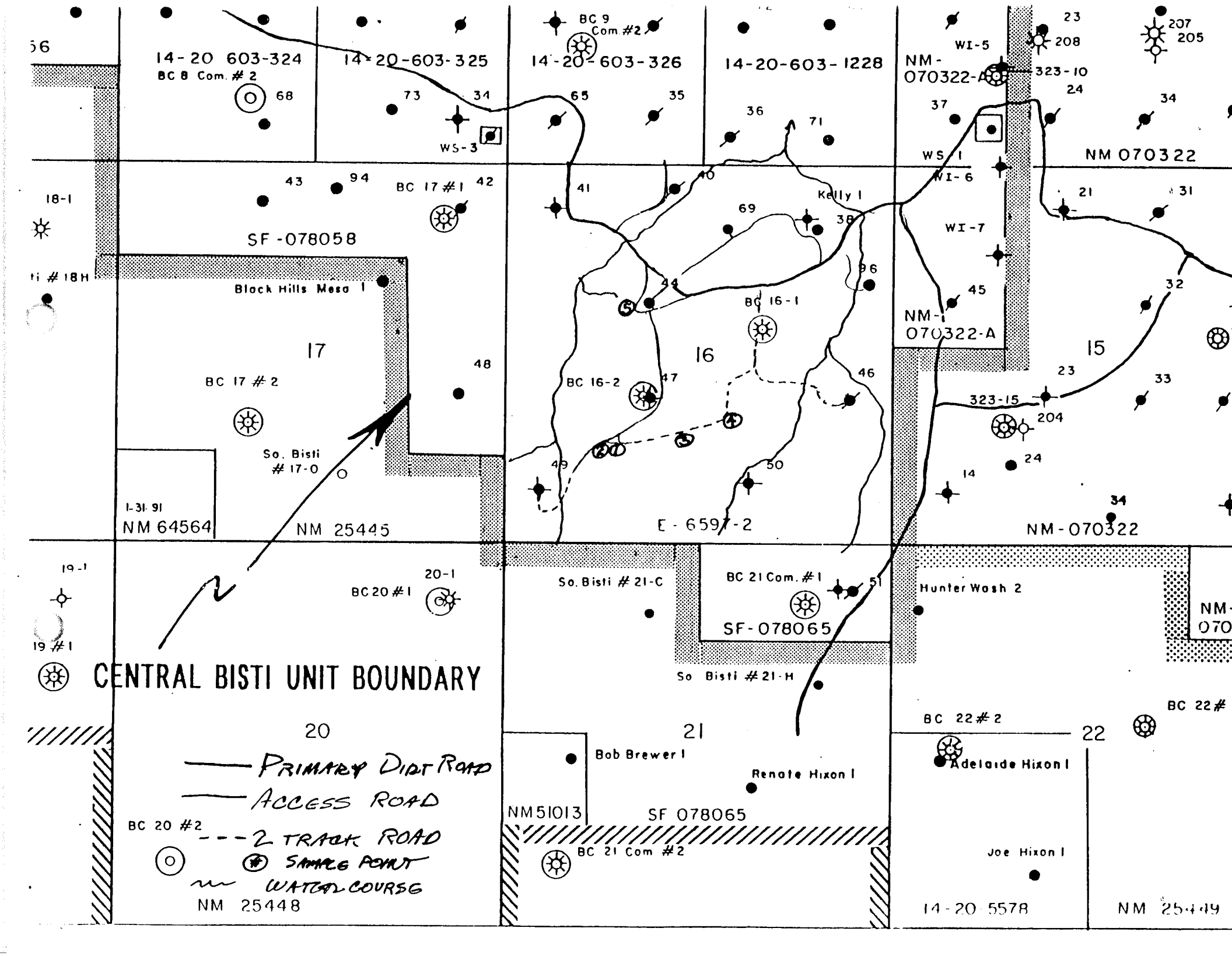
TABLE 1

Field ID	Sample Number	Sample Location	Time	Date	Matrix	IR TPH Mod. 418.1 (MG/KG)	Aromatic HC EPA 602/8020 BTEX (UG/L) Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TCLP Metals EPA Method 1311 Ext. Ag	As	Ba	Cd	Cr	Hg	Pb	Se
1	N11645	Open Trash Pit, 3pt. Comp. @ Ctr.	904	8-21-91	Soil	N/A	<0.025	<.025	<.025	<.025	<.12	<0.01	<.1	1.56	<.005	<0.01	<.0002	<.1	<.1
2	N11646	Open Trash Pit, 3pt. Comp. @ S end	912	8-21-91	Soil	N/A	<0.025	<.025	<.025	<.025	<.12	<0.01	<.1	1.24	<.005	<0.01	<.0002	<.1	<.1
3	N11647	Grab from under oil leaking drum	916	8-21-91	Soil	36000	<0.025	<.025	<.025	<.025	<.12	<0.01	<.1	1.04	<.005	0.022	<.0002	<.1	<.1
4	N11648	Grab from under oil rags at S end	920	8-21-91	Soil	120000	<0.025	<.025	<.025	<.025	<.12	<0.01	<.1	1.85	<.005	<0.01	<.0002	<.1	<.1
5	N11649	Grab from layer @ 6" - 3'	1010	8-21-91	Soil	32000	<0.025	<.025	<.025	<.025	<.12	<0.01	<.1	1.51	<.005	<0.01	<.0002	<.1	<.1
6	N11650	3 point comp. @1', 4', 6'	1000	8-21-91	Soil	19000	<0.025	<.025	<.025	<.025	<.12	<0.01	<.1	0.58	<.005	<0.01	<.0002	<.1	<.1
7	N11651	East Mesa: 4' grab, @ two drums loc.	1040	8-21-91	Soil	N/A	N/A	N/A	N/A	N/A	N/A	<0.01	<.1	1.16	<.005	<0.01	<.0002	<.1	<.1
8	N11652	East Mesa: 2 pt. comp. @ many drums loc.	1130	8-21-91	Soil	N/A	N/A	N/A	N/A	N/A	N/A	<0.01	<.1	1.26	<.005	<0.01	<.0002	<.1	<.1
9	N11653	Five pt. comp. @ corners & middle	1225	8-21-91	Soil	3900	<0.025	0.11	0.11	0.93	<.12	<0.01	<.1	1.08	<.005	<0.01	<.0002	<.1	<.1
10	N11654	4' below discharge pipe	1250	8-21-91	Soil	31000	1.9	9.7	21	130	<.12	<0.01	<.1	.44	<.005	<0.01	<.0002	<.1	<.1

TABLE 2

Field ID	Sample Number	Sample Location	TPH Modified 8015 MG/KG	TPH Modified 8015 Carbon Range	TCLP Organochlorine Pesticides EPA Method 8080/8140 (UG/L) Endrin	Chloradane	Hepta-Chlor	Heptachlor Epox.	Methoxychlor	Gamma BHC Lindane	Toxaphene	TCLP Semi-Volities EPA Method 8270 (74 Compounds)	TCLP Volitile Organics EPA Method 8240 (35 Compounds)
1	N11645	Open Trash Pit, 3pt. Comp. @ Ctr.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N11646	Open Trash Pit, 3pt. Comp. @ S end	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N11647	Grab from under oil leaking drum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N11648	Grab from under oil rags at S end	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N11649	Grab from layer @ 6" - 3'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N11650	3 point comp. @1', 4', 6'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N11651	East Mesa: 4' grab, @ two drums loc.	N/A	N/A	<0.1	<0.5	<0.05	<0.05	<0.5	<0.05	<1.0	Less than Det.	Trace of Toluene
8	N11652	East Mesa: 2 pt. comp. @ many drums loc.	N/A	N/A	<0.1	<0.5	<0.05	<0.05	<0.5	<0.05	<1.0	Less than Det.	Less than Det.
9	N11653	Five pt. comp. @ corners & middle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N11654	4' below discharge pipe	16000	C7-C36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

No Lead-210 was found in any of the samples tested (i.e. N11647,49,50,54)


14-20 603-324
BC 8 Com. #2
14-20-603-325
BC 9 Com. #2
14-20-603-326
14-20-603-1228
NM-070322-A
NM 070322
WS-3
WS-1
WI-5
WI-6
WI-7
Kelly 1
BC 17 #1
SF-078058
Black Hills Mesa 1
17
BC 17 #2
So. Bisti #17-0
16
BC 16-1
BC 16-2
NM-070322-A
15
323-15
323-10
204
207
205
208
1-31-91
NM 64564
NM 25445
E-6597-2
NM-070322
BC 20 #1
So. Bisti #21-C
BC 21 Com. #1
SF-078065
Hunter Wash 2
So Bisti #21-H
CENTRAL BISTI UNIT BOUNDARY
20
21
22
Bob Brewer 1
Renate Hixon 1
NM51013
SF 078065
BC 21 Com #2
BC 22 #2
Adelaide Hixon 1
Joe Hixon 1
14-20-5578
NM 25449
PRIMARY DIRT ROAD
ACCESS ROAD
2 TRACK ROAD
SAMPLE POINT
WATER COURSE
BC 20 #2
NM 25448

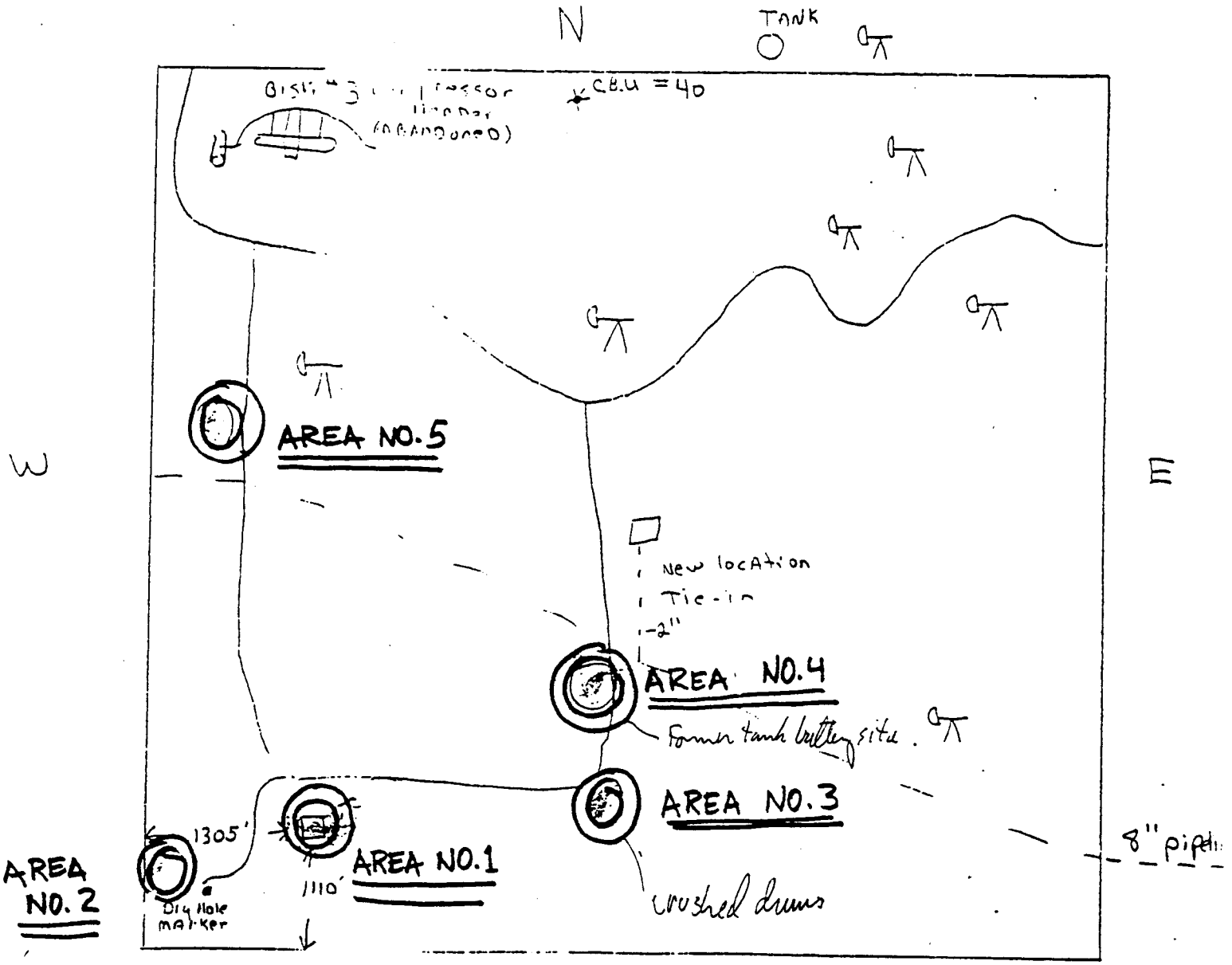
---- New 8" pipeline owned by Giant Exploration.

Area for

Giant exploration leases

Note: There are no E.R.N.G. metering facilities in this section.

S16-T25N-R12W



5

DRAWN BY

Scott Brown

7-1-91

EXXON CHEMICALS

MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS P.O. BOX 3272, HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

05/13/88

NO. *

SECTION I PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME
SURFLO B54 (Biocide)

CHEMICAL NAME
Not applicable: Blend

CHEMICAL FAMILY
Aldehyde

PRODUCT APPEARANCE
Clear Colorless Liquid
Aldehyde Odor

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

SECTION II HAZARDOUS INGREDIENT INFORMATION

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse. This product is hazardous as defined in 29 CFR1910.1200, based on the following compositional information:

COMPONENT	OSHA HAZARD
Glutaraldehyde	Eye & Skin Corrosive
Glutaraldehyde	Skin Sensitizer
Glutaraldehyde	PEL/TLV

For additional information see Section III.

SECTION III HEALTH INFORMATION AND PROTECTION

NATURE OF HAZARD

EYE CONTACT:
Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT:
Corrosive; causes permanent skin damage.
Moderate systemic toxicity through the skin.
Causes skin sensitization, an allergic reaction which becomes evident on reexposure to this material.

INHALATION:
Irritating to eyes and respiratory tract in high concentrations.

INGESTION:
Corrosive to mouth, esophagus and stomach.

FIRST AID

EYE CONTACT:
Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT:
Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention.

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.

INGESTION:
DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

WORKPLACE EXPOSURE LIMITS

OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:
A ceiling value of 0.2 ppm (0.8 mg/m3) for Glutaraldehyde.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:
a ceiling value of 0.2 ppm (0.7 mg/m3) for Glutaraldehyde.

PRECAUTIONS

PERSONAL PROTECTION
For open systems where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.
Where contact may occur, wear long sleeves, chemical resistant gloves, chemical goggles, and a face shield.
All contact should be avoided by persons with known hypersensitivity to GLUTARALDEHYDE
Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION
The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be stored and handled in a lab hood. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations.

SECTION IV FIRE & EXPLOSION HAZARD

FLASHPOINT: 210 DEG F **METHOD:** Setc CC
FLAMMABLE LIMITS: Not applicable
AUTOIGNITION TEMPERATURE: 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" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

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.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS
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 subject to CERCLA reporting (see Section VII) notify the National Response Center.
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.

SECTION VII REGULATORY INFORMATION

TSCA:
Components of this product are listed on the TSCA Inventory.

CERCLA:
Under the Comprehensive Response, Compensation, and Liability Act, (CERCLA), certain releases to air, land, or water may be reportable to the National Response Center at 800-424-8802. Circumstances surrounding the release and cleanup determine reportability.
This product is not subject to CERCLA reporting requirements.

SARA TITLE III:
Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:
Immediate health, Delayed Health.

EXXON CHEMICALS

MATERIAL SAFETY DATA SHEET

05/13/89 SURFLO 854

NO.

SECTION VIII TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SPECIFIC GRAVITY:
1.13 Not available
Density: 9.4 LBS/GAL at 61

SOLUBILITY IN WATER, WT. % AT °F:
Soluble

SP. GRAV. OF VAPOR, at 1 ATM AIR=1:
Greater Than 1.00

EVAPORATION RATE, n-BU ACETATE=1:
1.8 Calculated

VAPOR PRESSURE, mmHg at °F:
55 at 100 Calculated

VISCOSITY OF LIQUID, CST AT °F:
Not available

FREEZING/MELTING POINT, °F:
Not available

BOILING POINT, °F:
212 Calculated IBP

SECTION IX REACTIVITY DATA

STABILITY:
Stable

CONDITIONS TO AVOID INSTABILITY:
None

HAZARDOUS POLYMERIZATION:
Will not occur

COND. TO AVOID HAZARDOUS POLYMERIZATION:
Not applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:
Strong Oxidizing Agents

HAZARDOUS DECOMPOSITION PRODUCTS:
None

SECTION X TRANSPORT AND STORAGE

U.S. DOT CLASSIFICATION:
Corrosive Liquid

ELECTROSTATIC ACCUMULATION HAZARD:
Unknown, use proper grounding procedure

STORAGE TEMPERATURE, °F:
Not available

STORAGE/TRANSPORT PRESSURE, mmHg:
Not available

UN NUMBER:
Not Available

LOADING/UNLOADING TEMPERATURE, °F:
Not available

VISC. AT LOADING/UNLOADING TEMP., CST:
Not available

REFERENCE NUMBER: HDHA-A-10580

DATE PREPARED: MAY 13, 1989

SUPERCEDES ISSUE DATE: JUNE 21, 1988

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 713-870-6685

MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS, P.O. BOX 3272 HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

CHECKER-SOL (Mutual Solvent)

MSDS NUMBER: 72858000 ISSUE DATE: 9/22/91

EMERGENCY TELEPHONE NUMBERS
EXXON CHEMICAL AMERICAS (713) 870-6000
CHEMTREC (000) 424-9300

SECTION 1. PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

CHEMICAL NAME: Not Applicable Blend
CHEMICAL FAMILY: Well Stimulant
DESCRIPTION:
Clear Liquid
Faint Odor

SECTION 2. HAZARDOUS INGREDIENT INFORMATION

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse.
This product is hazardous as defined in 29CFR1910.1200, based on the following compositional information:

COMPONENT	OSHA HAZARD
Methyl Alcohol	Flammable Liquid
Phosphoric Acid	Eye and Skin Corrosive
Methyl Alcohol, Phosphoric Acid	Vapors Irritant to Eyes and Respiratory Tract
Methyl Alcohol	Systemic Toxicity via Ingestion, Inhalation, Skin
2-Ethyl Hexyl Alcohol	Animal Teratogen
Methanol, Phosphoric Acid	PEL/TLV

For additional information see Section 3.

SECTION 3. HEALTH INFORMATION AND PROTECTION

NATURE OF HAZARD

EYE CONTACT:

Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT:

Corrosive; causes permanent skin damage.
Methyl alcohol may be absorbed through the skin which can contribute to damage of the optic nerve resulting in permanent visual changes, loss of vision or total blindness

INHALATION:

Irritating to eyes and respiratory tract in high concentrations.
This product contains methyl alcohol. Vapor inhalation and/or skin absorption can cause central nervous system effects and blindness.

INGESTION:

The main hazard of methyl alcohol arises from its misuse as a drinking substitute for ethyl alcohol As little as 15 ml (1/2 oz.) of 40 % methyl alcohol has caused death. Sublethal doses of methyl alcohol may damage the optic nerve which can result in permanent visual changes, including blindness.
Corrosive to mouth, esophagus and stomach.

FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT:

Flush with large amounts of water; use soap if available.
Remove grossly contaminated clothing, including shoes, and launder before reuse.
If irritation persists, seek medical attention.

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.

INGESTION:

DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

WORKPLACE EXPOSURE LIMITS

OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:

A TWA of 200 ppm (260 mg/m3) and a STEL of 250 ppm (310 mg/m3) for Methyl Alcohol (skin)
A TWA of 1 mg/m3 and a STEL of 3 mg/m3 for Phosphoric Acid.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:

a TWA of 200 ppm (262 mg/m3), and a STEL of 250 ppm (328 mg/m3) for Methyl Alcohol (skin).

CHECKER-SOL

a TWA of 1 mg/m3, and a STEL of 3 mg/m3 for Phosphoric Acid.

PRECAUTIONS

PERSONAL PROTECTION

For open systems where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.
Where contact may occur, wear long sleeves, chemical resistant gloves, chemical goggles, and a face shield.
Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION

The use of local exhaust ventilation is recommended to control process emissions near the source Laboratory samples should be stored and handled in a lab hood. Provide mechanical ventilation of confined spaces.
See respiratory protection recommendations.
Use explosion-proof ventilation equipment.

CHRONIC EFFECTS

There is evidence, based on animal studies, that 2-Ethylhexanol (2-EH) at high oral doses may damage the embryo/fetus. This finding is of uncertain significance to man.

CHRONIC TOXICITY DATA IS AVAILABLE UPON REQUEST

SECTION 4. FIRE & EXPLOSION HAZARD

FLASHPOINT: 68 Deg F. METHOD Tag CC
FLAMMABLE LIMITS: LEL: 6.7 UEL: 36.8
AUTOIGNITION TEMPERATURE: Not available

GENERAL HAZARD

Flammable Liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint.
Toxic gases will form upon combustion.
"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

FIRE FIGHTING

Use water spray to cool fire exposed surfaces and to protect personnel.
Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors
Either allow fire to burn under controlled conditions or extinguish with alcohol type foam and dry chemical. Try to cover liquid spills with foam.
Respiratory and eye protection required for fire fighting personnel.

EXXON

MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS, P.O. BOX 3272 HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

CHECKER-SOL

HAZARDOUS COMBUSTION PRODUCTS

Smoke, fumes, carbon monoxide, carbon dioxide.

SECTION 5. 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 subject to CERCLA reporting (see Section 7) notify the National Response Center.

Vapors/dust can be harmful/fatal. Warn occupants of downwind areas. Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.

Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Eliminate sources of ignition Vapors/dust can be harmful/fatal. Warn occupants and shipping in downwind areas.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 6. NOTES

NOTES:

This product may contain trace amounts of ethylene oxide (CAS No. 75-21-8), a condition which creates the potential for accumulation of ethylene oxide in the headspace of shipping and storage containers and in enclosed areas where the product is being handled or used. Ethylene oxide is considered by OSHA, IARC, and NTP as a potential carcinogen for humans. Ethylene oxide may also present reproductive, mutagenic, genotoxic, neurologic and sensitization hazards in humans. If this product is handled with adequate ventilation, the presence of these trace amounts is not expected to result in any short or long term hazards.

EXXON

MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS, P.O. BOX 3272 HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

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HAZARD RATING SYSTEMS:
This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704)
Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704
HEALTH	3	3
FLAMMABILITY	3	3
REACTIVITY	0	0

KEY
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

SECTION 7. REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT).
DOT Proper Shipping Name:
FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(contains METHANOL, PHOSPHORIC ACID) UN2924
DOT Hazard Class: Flammable Liquid
Corrosive Material
DOT Identification Number UN 2924
Name: Flammable liquids corrosive, n.o.s.

TSCA:
Components of this product are listed on the TSCA Inventory.

CERCLA:
If the reportable quantity of this product is accidentally spilled, the incident is subject to the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and must be reported to the National Response Center by calling 800-424-8802.
The reportable spill quantity of this product is 11,364 pounds.
It contains:
Methyl Alcohol.

SARA TITLE III:
Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:
Immediate health, Delayed Health, Fire.
This product contains the following Section 313 Reportable Ingredients:

COMPONENT	CAS #	MAX. %
Methyl Alcohol	67-56-1	45.0
Orthophosphoric Acid	7664-38-2	5.0

SECTION 8. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Specific Gravity (@ F): 0.94 at 68
Vapor Pressure (mmHg @ F) 133 Denser Than Air

MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS, P.O. BOX 3272 HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

PAGE 6

CHECKER-SOL

Density: 7.8 lbs/gal at 60
Solubility in Water: Soluble
Viscosity (cSt @ F): 4 at 100 Cannon Fenske
2 at 150 Cannon Fenske
Specific Gravity of Vapor (@ 1 atm. Air = 1): 3.32 Calculated
Freezing/Melting Point/Range (F): -80 Pour Point
Evaporation Rate (n-Bu Acetate=1): 1.8 Slower Than Ether
Boiling Point/Range (F): 180 Calculated IBP

SECTION 9. REACTIVITY DATA

This product is stable and hazardous polymerization will not occur.
Conditions to avoid Instability:
None
Conditions to avoid Hazardous Polymerization:
Not Applicable
Materials & Conditions to avoid Incompatibility:
Strong Oxidizing Agents
Hazardous Decomposition Products:
None

SECTION 10. STORAGE AND HANDLING

Electrostatic Accumulation Hazard? Unknown, use proper grounding procedure
Storage Temperature (F): Ambient
Storage Pressure (mmHg): Atmospheric
Loading Temperature (F): Ambient
Loading Viscosity (cSt @ F) Not Available

SECTION 11. OTHER INFORMATION

Not Applicable.
REVISION SUMMARY:
Since November 7,1990 this MSDS has been revised in Section(s):
2, 3, 4, 5, 6, 7, 8

HDHA-A-73053 REVISION: September 22,1991 SUPERSEDES: November 7,1990

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 713-870-6865

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

EXXON CHEMICAL

MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS • P.O. BOX 3272, HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

05/02/90 NO. 70543000

SECTION 1 PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME
Coat C1815 7-0543

CHEMICAL NAME
Not applicable: Blend

CHEMICAL FAMILY
Corrosion Inhibitor

PRODUCT APPEARANCE/DESCRIPTION
Clear Dark Amber Liquid
Hydrocarbon Odor

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

SECTION 2 HAZARDOUS INGREDIENT INFORMATION

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse. This product is hazardous as defined in 29 CFR1910.1200, based on the following compositional information:

COMPONENT	OSHA HAZARD
Methyl Alcohol	Flammable Liquid
Cyclic Amine Organic Acid Salt	Eye & Skin Corrosive
Methyl Alcohol: to Eyes and Respiratory Tract	Vapors Irritant
Methyl Alcohol: via Ingestion and Inhalation	Toxic, Systemic
Methyl Alcohol	PEL/TLV
Heavy Naphthalene	Carcinogen

For additional information see Section 3.

SECTION 3 HEALTH INFORMATION & PROTECTION

NATURE OF HAZARD

EYE CONTACT:
Corrosive. Will cause eye burns and permanent tissue damage.

SKIN CONTACT:
Corrosive; causes permanent skin damage.
Frequent or prolonged contact may irritate and cause dermatitis.
May cause skin sensitization, an allergic reaction which becomes evident on reexposure to this material.

INHALATION:
High vapor concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.
This product contains methyl alcohol. Vapor inhalation and/or skin absorption can cause central nervous system effects and blindness.
May cause an allergic respiratory reaction becoming evident upon exposure to this material. This may cause breathing difficulties.

INGESTION:
Corrosive to mouth, esophagus and stomach.
The principle hazard of methyl alcohol arises from its ingestion as a substitute for ethyl alcohol. As little as 15 ml (1/2 oz.) of 40% methyl alcohol has caused death.
The most significant systemic effect caused by sublethal doses of methyl alcohol is the damage to the optic nerve which can result in permanent visual changes, loss of vision or total blindness.

FIRST AID

EYE CONTACT:
Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT:
Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention.

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.

INGESTION:
DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

WORKPLACE EXPOSURE LIMITS

OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:
A TWA of 200 ppm (260 mg/m3) and a STEL of 250 ppm (310 mg/m3) for Methyl Alcohol (skin).
A TWA of 10 ppm (50 mg/m3) and a STEL of 15 ppm (75 mg/m3) for Naphthalene.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:
a TWA of 200 ppm (260 mg/m3), and a STEL of 250 ppm (310 mg/m3) for Methyl Alcohol (skin).
A TWA of 10 ppm (50 mg/m3), and a STEL of 15 ppm (75 mg/m3) for Naphthalene.

EXXON RECOMMENDS THE FOLLOWING OCCUPATIONAL EXPOSURE LIMITS:
100 ppm total organic vapor based on Heavy Aromatic Naphtha (HAN).
50 ppm total hydrocarbon based on composition.

PRECAUTIONS

PERSONAL PROTECTION
For open systems where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.
Where contact may occur, wear long sleeves, chemical resistant gloves, chemical goggles, and a face shield.
Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.
All contact should be avoided by persons with known hypersensitivity to DETA

VENTILATION
The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be stored and handled in a lab hood. Provide mechanical ventilation of confined spaces.
See respiratory protection recommendations.
Use explosion-proof ventilation equipment.

CHRONIC EFFECTS
This product contains significant amounts of Polynuclear Aromatic Hydrocarbons (PNAs). Certain of these PNAs have been shown to cause skin cancer inlaboratory animals and may also cause cancer of the lung and other sites. In view of these findings, there may be potential risk of skin cancer in humans from

prolonged and repeated skin contact with this product in the absence of good personal hygiene.

Benzo(a)pyrene (BaP), some other PNAs and materials containing PNAs are listed as carcinogens or potential carcinogens in the Annual Report on Carcinogens published by the U.S. National Toxicology Program (NTP).

The International Agency fo Research on Cancer (IARC) has concluded that BaP and some other PNAs are probably carcinogenic to humans.

Limited studies on oils that are very active carcinogens have shown that washing the animal's skin with soap and water between applications greatly reduces tumor formation. These studies demonstrate the effectiveness of cleansing the skin after contact.

Potential risks to humans can be minimized by observing good work practices and personal hygiene procedures generally recommended for petroleum products.

CHRONIC TOXICITY DATA IS AVAILABLE UPON REQUEST

SECTION 4 FIRE & EXPLOSION HAZARD

FLASHPOINT: 92 Deg F. METHOD: Seta CC
FLAMMABLE LIMITS: LEL: 0.8 UEL: 36.0
AUTOIGNITION TEMPERATURE: Not available

GENERAL HAZARD

Flammable Liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint.
Toxic gases will form upon combustion.
"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

FIRE FIGHTING

Use water spray to cool fire exposed surfaces and to protect personnel.
Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.
Use alcohol type foam or dry chemical to extinguish fire.
Respiratory and eye protection required for fire fighting personnel.
Avoid spraying water directly into storage containers due to danger of boilover.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Smoke, Fumes, Carbon Monoxide, Carbon Dioxide

SECTION 5 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 subject to CERCLA reporting (see Section 7.) notify the National Response Center.
Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
Recover by pumping (use an explosion proof or hand pump) or with a

suitable absorbent.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 6 NOTES

This product may contain trace amounts of ethylene oxide (CAS No. 75-21-8), a condition which creates the potential for accumulation of ethylene oxide in the head space of shipping and storage containers and in enclosed areas where the product is being handled or used. Ethylene oxide is considered by OSHA, IARC, and NTP as a potential carcinogen for humans. Ethylene oxide may also present reproductive, mutagenic, genotoxic, neurologic and sensitization hazards in humans. If this product is handled with adequate ventilation, the presence of these trace amounts is not expected to result in any short or long term hazards.

SECTION 7 REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):
DOT PROPER SHIPPING NAME:
FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(contains METHYL ALCOHOL,ALKYL AMINE SALTS) UN2924
DOT HAZARD CLASS: Flammable Liquid
Corrosive Liquid
DOT IDENTIFICATION NUMBER: UN 2924
NAME: Flammable liquids, corrosive, n.o.s.

TSCA:
Components of this product are listed on the TSCA Inventory.

CERCLA:
If the reportable quantity of this product is accidentally spilled, the incident is subject to the provisions of the Comprehensive Response, Compensation and Liability Act (CERCLA) and must be reported to the National Response Center by calling 800-424-8802.
The reportable spill quantity of this product is 1,414 pounds.
This product contains:
Naphthalene, Methyl Alcohol.

SARA TITLE III:
Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:
Immediate health, Delayed Health, Fire.
This product contains the following Section 313 Reportable Ingredients:

COMPONENT	CAS NO.	MAXIMUM %
Naphthalene	90-20-3	7.0
Methyl Alcohol	67-864	4.0

SECTION 8 TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SPECIFIC GRAVITY:
0.98 at 60
Density: 8.2 lbs/gal at 60

SOLUBILITY IN WATER, WT. % AT °F:
Dispersible

SP. GRAV. OF VAPOR, at 1 atm (Air=1):
5.06

EVAPORATION RATE, n-Bu Acetate=1:
0.4 Calculated

VAPOR PRESSURE, mmHg at °F:
39 at 100 Calculated

VISCOSITY OF LIQUID, CST AT °F:
8 at 100 Cannon-Fenske
4 at 150 Cannon-Fenske

FREEZING/MELTING POINT, °F:
-80 Pour Point (less than)

BOILING POINT, °F:
303 Calculated IBP

SECTION 9 REACTIVITY DATA

STABILITY:
Stable

CONDITIONS TO AVOID INSTABILITY:
None

HAZARDOUS POLYMERIZATION:
Will not occur

COND. TO AVOID HAZARDOUS POLYMERIZATION:
Not applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:
Strong Oxidizing Agents

HAZARDOUS DECOMPOSITION PRODUCTS:
None

SECTION 10 STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD:
Unknown, use proper grounding procedure

STORAGE TEMPERATURE, °F:
Ambient

STORAGE/TRANSPORT PRESSURE, mmHg:
Atmospheric

LOADING/UNLOADING TEMPERATURE, °F:
Ambient

VISC. AT LOADING/UNLOADING TEMP., cST:
Not available

REVISION SUMMARY:
Since JANUARY 30, 1990 this MSDS has been revised in Section(s):
2, 6, 7

REFERENCE NUMBER:	DATE PREPARED:	SUPERCEDES ISSUE DATE:
HDHA-A-73006	May 2, 1990	January 30, 1990

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

BEST CHEMICAL COMPANY
MSDS for BEST 215

CAUTION CODE 2-3-0

1 - SECTION I - IDENTITY

BEST CHEMICAL COMPNAY
Route 6, Box 407
Shawnee, Oklahoma 74801

PLANT PHONE: 405-275-1797

EMERGENCY NUMBERS:
405-275-1797
405-275-8647

BEST 215

CHEMICAL NAME: Chemical Identity Is A Trade Secret

CHEMICAL USE: CORROSION INHIBITOR

2 - SECTION II - REGULATORY CLASSIFICATION

ENVIRONMENTAL	OCCUPATIONAL	TRANSPORTATION
RQ= 163 Gallons	OSHA Non-Hazardous: NA	Not Regulated: NA
TPQ= None	OSHA Hazardous: Yes	Regulated: Yes
	X Acute	
TSCA S313: Yes	X Chronic	Flammable Liquid,
Toluene - <90%	X Fire	N.O.S.
	NA Pressure	ID#: UN 1993
	NA Reactive	DOT Response #: 27

The components of this product are listed on the TSCA inventory.

3 - SECTION III - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT	CAS #	PEL (OSHA)* TWA	PEL (OSHA)* STEL	PEL (OSHA)* A/L	TLV (ACGIH)* TWA	TLV (ACGIH)* STEL	MFG* REC
Toluene (<90%)	108-88-3	100	150		100	150	
Aromatic Naphtha (Proprietary)	64742-94-5	None Published					

*ppm unless otherwise indicated; (C) denotes ceiling limit

4 - SECTION IV - PHYSICAL & CHEMICAL PROPERTIES

Specific Gravity @60F: (H2O=1)
~0.866

Vapor Pressure Estimated: (mm.Hg @68F) <1

pH:
5% of Product: Not Applicable

Vapor Density (Air=1)
>1

Solubility in Water: Insoluble

Appearance and Odor: Clear light amber liquid with aromatic odor

Flash Point (Method): ~75F (TCC)

Stability: Stable

Haz. Decomp. Prod: Carbon monoxide

Conditions to Avoid: Oxidizers; heat sparks, or open flame

Hazardous Polymerization: Will not occur

FIRE CONTROL PROCEDURES: Use foam, dry chemical, CO2, water fog or spray. Do not enter a fire area without proper protective equipment, including NIOSH/MSHA approved, self-contained breathing apparatus. Cool exposed containers with water spray. Avoid vapors.

FIRE HAZARDS:
Material is flammable.
Vapors are heavier than air and may travel along ground to ignition source and flash back.
Never use welding or cutting torch on or near drums, even when empty. Explosion may result.

5 - SECTION V - HEALTH HAZARDS

EFFECTS OF OVEREXPOSURE:
INHALATION: Inhalation of high levels of vapors or mists may cause lightheadedness, dizziness, headaches or unconsciousness.
EYE CONTACT: Eye contact may cause irritation and redness.
SKIN CONTACT: Prolonged or repeated contact with skin may cause irritation or contact dermatitis.
INGESTION: May be harmful if ingested.

OTHER INFORMATION:
Toluene may cause irritation of the eyes, respiratory tract, and skin. Repeated or prolonged contact with liquid may cause removal of natural fats

5 - SECTION V - HEALTH HAZARDS (continued)

from the skin resulting in dry, cracking skin. The liquid splashed in the eyes may cause irritation and irreversible damage. Acute exposure to toluene can result in central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, incoordination with staggering gait, skin parethesias, collapse and coma.

Toluene Toxicity:
Inh - Hmn - TCLo = 200 ppm
Inh - Man - TCLo = 100 ppm
Inh - Mus - LD50 = 5320 ppm/8H
Skn - Rbt - LD50 = 12124 mg/kg
Irritation Data:
Eye - Hmn = 300 ppm
Skn - Rbt = 500 mg - Moderate
Eye - Rbt = 2 mg/24H - Severe

Petroleum distillates normally enter the body via inhalation of vapors. Petroleum distillates may be irritating to the skin, conjunctiva, and the mucous membranes of the upper respiratory tract. Skin chapping and photosensitivity may develop after repeated contact with liquid.

TARGET ORGANS (29 CFR 1910.1200-APPENDIX A):

Neurotoxin (Nervous System)
Eye Hazard
Cutaneous Hazard (Skin)

6 - SECTION VI - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Flush eyes immediately with large amounts of water for at least 15 minutes. Call a physician if irritation persists.
INHALATION: Remove to fresh air. If labored breathing continues, contact a physician.
SKIN CONTACT: Remove contaminated clothes. Wash skin thoroughly with mild soap and water. Launder clothes before reuse.
INGESTION: DO NOT induce vomiting. If conscious, drink large amounts of water and contact a physician.

7 - SECTION VII - PROTECTIVE EQUIPMENT RECOMMENDATIONS

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

7 - SECTION VII - PROTECTIVE EQUIPMENT RECOMMENDATIONS (continued)

or is agitated. Where engineering controls are not feasible, assure use is in an area where there is natural air movement.

Under normal operating conditions, no excursions above the regulated (recommended) exposure levels should occur. However, if used at elevated temperatures, lower atmospheric pressure (high altitudes) or any other physical conditions that may increase the inhalation exposure, respiratory protective equipment as described below, should be worn. Also, due to individual susceptibility and sensitivity, before respirators are used, a full medical evaluation should be performed per 29 CFR 1910.134(b)(10).

RESPIRATORY	CHEMICAL RESISTANT APPAREL	EYE/FACE
X As Needed	X Gloves	X Goggles
Air Supplied (SCBA)	Clothing	Full Face Shield
X Air Purifying	Boots	
Full Face Piece		
X Half Face Piece		
Cartridge or Cannister		
Acid Gas		
X Organic Vapor		
Ammonia		

A thorough review of the job task (job safety analysis) by a competent safety professional should be conducted to determine the appropriate level of protection. See 29 CFR 1910, Subpart I and 29 CFR 1910.133 for further information.

8 - SECTION VIII - SPILL & LEAK PROCEDURES

Don appropriate protective clothing and respiratory protection prior to entering a spill/leak area. Eliminate ignition sources. Approach area upwind if possible. Shut off leak if it can be done safely. Dike and pump large spills into salvage containers. Soak up residue and small spills with absorbent clay, sand, or dirt and place in salvage containers. If RQ (reportable quantity) is exceeded, report to National Spill Response Office 1-800-424-8802. Also, in some jurisdictions, spills or leaks of any hazardous materials are reportable--consult local lead agencies for further information. Continue to observe precautions.

WASTE DISPOSAL METHOD(S): Re-evaluation of the product may be required by

8 - SECTION VIII - SPILL & LEAK PROCEDURES (continued)

the user at the time of disposal, since the product uses, transformations, mixtures and processes may change the classification to non-hazardous, or hazardous for reasons other than, or in addition to product characteristics. Dispose of all waste and/or containers in accordance with federal, state and local regulations.

REQUIREMENTS FOR TRANSPORTATION, HANDLING AND STORAGE: Transport, handle and store in accordance with OSHA Regulation 1910.106 and applicable DOT regulations.
Avoid inhalation of vapors or mists. Do not get in eyes,on skin or on clothing Keep container closed when not in use. Wear suitable protection for eyes and skin when handling. Use with adequate ventilation. Avoid contact with oxidizers. Store in well-ventilated area. Store in cool, dry area. Control ignition source; keep away from heat, sparks and open flame.

NOTE: The information on this MSDS is based on data which is considered to be accurate. Best Chemical Company, however, makes no guarantees or warramty, either expressed or implied of the accuracy or completeness of this information. Best does expressly disclaim any loss incurred with the handling storage, transportation, use or disposal of the product.

DATE: 5/29/90 Supercedes: New

UNICHEM INTERNATIONAL

MATERIAL SAFETY DATA SHEET

"Essentially Similar" to Form OSHA-20

Date Prepared June 17, 1986

Supersedes Previous Sheet Dated 11-4-83

I PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL 707 N. Leech / P. O. Box 1499 / Hobbs, New Mexico 88240	EMERGENCY TELEPHONE NO (505) 393-7751

PRODUCT NAME TECHNI-HIB 756 TRADE NAME: SCALE INHIBITOR

CHEMICAL DESCRIPTION: Proprietary blend of organic phosphonates

II HAZARDOUS INGREDIENTS

MATERIAL		TLV (UNITS)

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	N/D	FREEZING POINT:	2°F
SPECIFIC GRAVITY (H_2O=1)	1.18	VAPOR PRESSURE @	N/D
VAPOR DENSITY (AIR=1)	N/D	SOLUBILITY-IN WATER	Soluble
PERCENT VOLATILES BY WEIGHT	N/D	EVAPORATION RATE	N/D

APPEARANCE AND ODOR Amber liquid, alcohol odor

IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD) 190°F (TCC)

FLAMMABLE LIMITS IN AIR, % BY VOLUME	LOWER	N/D	UPPER	N/D

EXTINGUISHING MEDIA CO_2, dry chemical, alcohol foam, and water mist or fog. Use a blanketing effect to smother fire.

SPECIAL FIRE FIGHTING PROCEDURES Fire fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS Low explosion hazard, dangerous fire hazard when exposed to heat, sparks, or flames. Can react with oxidizing agents.

*N/D - Not Determined

V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	200 ppm (Skin) or 260 mg/m3 (for methanol)
EFFECTS OF OVEREXPOSURE	Symptoms of overexposure include dizziness, visual impairmen nausea, respiratory failure, muscular incoordination, and narcosis. Skin contact may cause severe burns. Ingestion cou cause blindness or death.
EMERGENCY AND FIRST AID PROCEDURES	SKIN:Remove contaminated clothing immediately. Wash with soa water. EYES:Wash with copious amounts of water for 15 min. S a physician. INHALATION:Remove to fresh air and restore brea if necessary. INGESTION:Drink water, milk or sodium bicarbona solution. DO NOT induce vomiting. See a physician.

VI REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	
UNSTABLE	STABLE		NONE
	XXXXX		
INCOMPATIBILITY (MATERIALS TO AVOID)	Avoid strong oxidizing agents and strong alkaline solutions.		
HAZARDOUS DECOMPOSITION PRODUCTS	Oxides of carbon and nitrogen		
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
MAY OCCUR	WILL NOT OCCUR		NONE
	XXXXX		

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Remove all sources of ignition. Provide adequate ventilation. Absorb and burn in an approved incinerator. Do not flush to sewer.
WASTE DISPOSAL METHOD	Dispose of via a licensed waste disposal company according to Federal or approved state procedures under Subtitle C of the Resource Conservation and Recovery Act.

VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)	Air supplied or self contained breathing apparatus above TLV and below 2000 ppm. A full face piece is required.			
VENTILATION	LOCAL EXHAUST	100 cfm where vapor exposure is likely	SPECIAL	
	MECHANICAL (GENERAL)	As needed to keep exposure below TLV	OTHER	
PROTECTIVE GLOVES	Impervious Rubber		EYE PROTECTION	Safety glasses, goggles and or face shield.
OTHER PROTECTIVE EQUIPMENT	Eye wash stations and safety showers should be available in areas of use.			

IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	No smoking in use areas. Store in well ventilated, low fire risk area away from sources of heat, open flame and ignition.
OTHER PRECAUTIONS	Avoid prolonged or repeated breathing of vapors. May cause severe burns to eyes or skin. Do not ingest.