

**REPORT  
PHASE I  
ENVIRONMENTAL SITE ASSESSMENT  
NEWPORT BANNING RANCH  
ORANGE COUNTY, CALIFORNIA**

Prepared for:

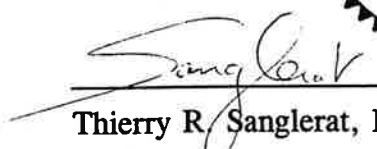
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## **1. INTRODUCTION**

### **1.1 Terms of Reference**

This report contains a Phase I Environmental Site Assessment (ESA) of the Newport Banning Ranch located in Orange County, California. Work for this project was authorized by the West Newport Oil Company (WNOC) under the Agreement for Consulting Services between WNOC and GeoSyntec Consultants (GeoSyntec) dated 1 June 1993. This report was prepared by Mr. Jeff Raines, P.E. and Dr. Bertrand Palmer R.E.P. and reviewed by Mr. Thierry Sanglerat, P.E., R.E.A., all of GeoSyntec. The review was conducted in accordance with GeoSyntec's internal review policy.

### **1.2 Overview**

The Newport Banning Ranch is located east of the mouth of the Santa Ana River near the border of Huntington Beach and Newport Beach in Orange County, California. A map showing the location of the Newport Banning Ranch is presented in Figure 1-1. The Newport Banning Ranch is currently operated as a crude oil and gas production facility by the West Newport Oil Company. WNOC is planning a phased abandonment of the oil and gas production operations at the Newport Banning Ranch. Following the phased cessation of oil and gas production operations, it is anticipated that the Newport Banning Ranch will be developed into a mixed-use planned community that will include residential and commercial uses, parks and recreation areas, wetlands restoration, roadways, and open space.

Before initiating activities associated with the development of the Newport Banning Ranch, WNOC decided to perform a Phase I ESA to evaluate environmental

conditions at the Newport Banning Ranch. This report presents the results of the Phase I ESA performed by GeoSyntec Consultants.

### **1.3            Procedures and Scope of Work**

This Phase I ESA was conducted in general accordance with American Society for Testing and Materials (ASTM) methods E 1527 and E 1528 [ASTM, 1993]. As suggested in ASTM method E 1527, the performance of the Phase I ESA included primarily the performance of the following activities:

- Records Review,
- Site Reconnaissance,
- Interviews, and
- Report Preparation.

### **1.4            Limitations and Exceptions**

A Phase I ESA is a "screening" assessment intended to evaluate if the facility under consideration is subject to, or may be subject to recognized environmental conditions.

In this Phase I ESA, GeoSyntec Consultants did not perform a chain-of-title search nor an environmental audit for permit compliance. In addition, evaluation of the potential presence of the following items was not included in the scope of this Phase I ESA as suggested in ASTM method E 1527:

- radon gas,
- asbestos-containing materials,
- lead-based paints,

- lead in drinking water, and
- wetlands.

The Newport Banning Ranch covers approximately 420 acres, some of which consists of dense brush and marsh. While an effort was made to visit each section of the site, some areas of the site were not walked. Because the perimeter of the Newport Banning Ranch is large (approximately 4 miles), a complete off-site reconnaissance could not be conducted within the constraints of the project. The off-site reconnaissance was limited to part of the adjacent industrial park (west of Placentia Avenue, south of 19th street). Similarly, an environmental data base search of the surrounding area for environmental concerns was limited to a radius of one mile (1.6 km) around the Newport Banning Ranch's main gate on 17th street.

WNOC may make and retain copies of this report for its use in the environmental restoration of the Newport Banning Ranch; however, this report and associated documentation may not be relied upon by any third-party or by WNOC for any purpose other than the specific purpose indicated in this report. GeoSyntec Consultants' reporting and documentation in this matter is solely with respect to the date of the assessment on 7 June 1993.

## **1.5            Organization of the Report**

The content and organization of this report generally follows the format suggested in ASTM method E 1527. The remainder of this report is organized in five sections, as follows:

- Section 2, Records Review, contains a listing of the records sources consulted in the preparation of this Phase I Environmental Site Assessment.

- Section 3, Information from Site Reconnaissance and Interviews, contains the results of the site reconnaissance, the off-site reconnaissance and the interview with Mr. Jay Stair of WNOC.
- Section 4, Description of the Facility, contains a description of the Newport Banning Ranch, the surrounding properties to the Newport Banning Ranch and the past and current uses of the Newport Banning Ranch.
- Section 5, Findings and Conclusions, contains a summary of the findings and conclusions of this Phase I Environmental Site Assessment.
- Section 6, Qualifications of Environmental Professionals, contains a brief synopsis of the qualifications and experience of the environmental professionals who conducted this Phase I ESA.

Appendices are included at the end of this document.



## **2. RECORDS REVIEW**

### **2.1 General**

This section contains a description of the types of records sources that were researched by GeoSyntec Consultants in the preparation of this Phase I ESA. The sources researched include:

- Federal sources,
- State of California sources,
- Orange County sources,
- Local municipality sources, and
- Engineering consultants' technical reports.

A detailed list of individual agencies and databases consulted is contained in the following sections. The results of a search of an environmental database containing data from some of these sources is presented in Appendix A.

### **2.2 Federal Sources**

The following federal sources were consulted in preparation of this Phase I ESA:

- The National Priority List (NPL) dated 3/28/93,
- The Comprehensive Environmental Response, Compensation, and Liability System dated CERCLIS) dated 3/28/93,
- Federal Facilities List dated 3/28/93,

- Superfund Liens List dated 12/13/92, and
- United States Geologic Service 7.5 Minute Topographic Map: Newport Beach Quadrangle, Photorevised 1981.

The CERCLIS database is a list used by the United States Environmental Protection Agency (USEPA) to track activities conducted under the CERCLA and SARA (superfund) acts. Within a one mile (1.6 km) radius of the 17th Street gate of the Newport Banning Ranch there are four sites that appear in the CERCLIS database: the Newport Banning Ranch, Barto Oil, Leadership Housing Systems and Hixson Metal Finishing. The USEPA does not plan any further action at Leadership Housing Systems or the Hixson Metal Finishing factory. Barto Oil reports [Barto Oil, 1993] that they have no oil storage facilities remaining on site and have only one oil production well in operation on site.

No sites within one mile (1.6 km) of the 17th Street gate of the Newport Banning Ranch were listed on the National Priority List, Superfund Liens List or Federal Facilities list as of the dates reported above.

### 2.3 State of California Sources

The following state sources were consulted in the preparation of this Phase I ESA:

- The California Regional Water Quality Control Board - Santa Ana Region,
- CALSITES dated 1/31/93,
- Office of Planning and Research, State of California (Cortese Bill AB2013) dated 1984 - 1987,
- Solid Waste Assessment Tests dated 11/6/91, and
- State Leaking Underground Storage Tanks list, dated 5/92.

The California Regional Water Quality Control Board - Santa Ana Region offices in Riverside were visited to review their records of sites with impacted ground water in the vicinity of the Newport Banning Ranch. Ground water investigations at the Shell Service stations at 801 W. 19th Street in Costa Mesa [Wayne Perry Construction, 1989] and 377 Superior Avenue in Newport Beach [Hardin Lawson, 1992] are currently on-going. While closure for these sites has not been granted by the California Regional Water Quality Control Board, the contamination present in the ground water is being monitored quarterly.

The remainder of the state lists were used to identify potential sources of off-site contamination of the Newport Banning Ranch. The environmental database search, the results of which are attached in Appendix A, revealed 110 sites on the CALSITES



list, 13 sites on the Cortese list, 3 sites on the list of sites required to produce Solid Waste Assessment Tests and 18 sites on the state list of leaking underground storage tanks within one mile (1.6 km) of the 17th Street gate of the Newport Banning Ranch.

## **2.4            Orange County Sources**

The following Orange County sources were consulted in the preparation of this Phase I ESA:

- The Orange County Health Care Agency:
  - List of Leaking Underground Storage Tanks, dated 4/14/93,
  - Ground Water Cleanup Program List, dated May, 1993, and
  - Landfill Sites Inventory, dated 5/11/93,
- The Orange County Sanitation District, and
- The Orange County Cities Hazardous Materials Emergency Response Authority.

The Orange County Health Care Agency (OCHCA) list of leaking underground storage tanks was used to identify sites in the vicinity of the Newport Banning Ranch which contained leaking underground storage tanks. The records from the following sites were obtained from OCHCA:

- Fords' Automotive at 405 Ohms Way in Costa Mesa,
- Vance & Associates Roofing at 837 W. 17th Street in Costa Mesa,
- Smith & Sons Properties at 735 Ohms Way, Costa Mesa, and
- Cla-Val Company at 1701 Placentia Avenue in Costa Mesa.

Based on the records of these sites that were reviewed, it appears that the lateral extent of the hydrocarbon-impacted soil at these sites is limited [AAKO, 1992; Georemediation Inc., 1992; Hekimian & Associates, 1990; CET Environmental Services, 1992]. The leaking underground storage tanks have been removed and the sites are being monitored by OCHCA.

The Orange County Sanitation District (OCSD) was contacted to inquire if the West Newport Oil Company was in compliance regarding discharges to the Orange County sewer system. According to OCSD [1993] personnel, the West Newport Oil Company has not been found in non-compliance with its discharge permit for the previous six quarters. The OCSD does not keep records of discharge permit compliance for more than the last six quarters.

The Orange County Cities Hazardous Materials Emergency Response Authority was contacted in an attempt to find the records of analyses of run-off water from the Hixson Metal Finishing factory fire. No records were available.

## **2.5            Municipal Sources**

The following municipal sources were consulted in the preparation of this Phase I ESA:

- The Huntington Beach Fire Department,
- The Newport Beach Fire Department, and
- The Costa Mesa Fire Department.

The three fire departments reported that they had no records regarding the Newport Banning Ranch.

## 2.6 Consultants' Technical Reports

The following technical reports were researched during the preparation of this Phase I ESA:

- Earth Technology Corporation, Geological Evaluation of Faulting Potential, West Newport Oil Field, Orange County, California, Report submitted to West Newport Oil Company, Newport Beach, California, 31 July 1986.
- Earth Technology Corporation, Crude Oil Tank Bottom Material, Baseline Investigation, Newport Beach Production Field, Report prepared by the Earth Technology Corporation, Irvine, California for West Newport Oil Company, Newport Beach, California, dated 21 August 1990.
- EEI, "Report of Environmental Site Assessment, 18th Street Site, Costa Mesa," a report prepared for the Kaufman and Broad Land Company, August 1987.
- GeoSyntec Consultants (formerly GSI Environmental), "Santa Ana River Marsh Environmental and Geotechnical Sampling and Study Report", prepared for U.S. Army Corps of Engineers, Los Angeles, California, Sept. 1989.
- GeoSyntec Consultants, "Transmittal of Presentation Material, Evaluation and Design of Treatment Methods for Tank Bottom Material, West Newport Oil Company, Newport Beach, Orange

County, California", Letter to Mr. Leonard W. Anderson (WNOG), April 1991 [1991a].

- GeoSyntec Consultants, "Final Report Sampling and Laboratory Chemical Analysis of Tank Bottom Material, West Newport Oil Company, Orange County, California", prepared for WNOG, July 1991 [1991b].
- Mitech, Sampling and Chemical Analysis Study on Material to be Excavated and Disposed of from the Santa Ana River Marsh, Lower Santa Ana River Channel Area, California, prepared by Mitech, Santa Ana, California, for the U.S. Army Corps of Engineers, Los Angeles, California, dated February 1988.

These reports contained characterizations regarding the nature of the hydrocarbon contaminants present at the Newport Banning Ranch and in the surrounding properties. The natures of the hydrocarbons present on the Newport Banning Ranch are discussed in Section 3.2.

## 2.7 Additional Record Sources

The following additional source was consulted during the preparation of this Phase I ESA for the Newport Banning Ranch:

- The Fairchild Aerial Photograph Collection at Whittier College in Whittier, California.

Copies of representative aerial photographs are attached in Appendix B. The historical aerial photographs were used to evaluate past uses of the Newport Banning Ranch. Signs of past industrial uses of the site were not detected in the aerial photographs.

### **3. INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS**

#### **3.1 General**

GeoSyntec Consultants performed a site reconnaissance and interviewed West Newport Oil Company employees to identify and evaluate potential environmental conditions existing at the Newport Banning Ranch. The site reconnaissance consisted of a site walk by two GeoSyntec Consultants employees. Photographic documentation of some of the site features observed during the site reconnaissance is attached to this report in Appendix C.

Mr. Tom McClosky and Mr. Ricky Swaringen of WNOC were interviewed regarding current and recent site operations. Mr. Jay Stair of WNOC completed the transaction screen questionnaire contained in ASTM method E 1528. The completed transaction screen questionnaire is attached to this report in Appendix D.

The results of the site reconnaissance and interviews enabled GeoSyntec Consultants to identify and evaluate some of the environmental issues existing at the Newport Banning Ranch. These issues include:

- Hazardous substances in use on site,
- Hazardous substances previously in use on site,
- Hazardous substance containers on site,
- Unidentified substance containers on site,
- Underground storage tanks on site,
- Above ground storage tanks on site,
- Presence of Polychlorinated Biphenyls (PCBs) on site,
- Solid waste on site, and

- The potential for on-site migration of hazardous substances.

These environmental issues are discussed in more detail in the following sections. Figure 3-1, in conjunction with Table 3-1, presents the locations and descriptions of some of the site features.

### 3.2 Hazardous Substances on Site

The hazardous substances (or materials containing hazardous substances) reported to be currently in use at the Newport Banning Ranch are listed in Table 3-2. Material Safety Data Sheets (MSDS) for hazardous substances (or materials containing hazardous substances) that are reported to be currently in use at the Newport Banning Ranch are contained in Appendix F. The definition of a hazardous substance is given in Appendix E. The site locations at which these materials are generally found are shown on Figure 3-1.

In addition to the hazardous substances which have been inventoried through the MSDSs, other hazardous substances listed in Title 22, Article 9, Section 66680 of the California Code of Regulations [1985], are potentially present at the Newport Banning Ranch. These substances include Hydrogen Sulfide (H<sub>2</sub>S) gas and barium.

In addition, to the known listed hazardous substances at the Newport Banning Ranch, hazardous wastes [California Code of Regulations, 1985] may also be present at the site. The California Code of Regulations specifically lists tank bottom materials and drilling muds as potentially hazardous wastes. The following materials known to be present at the Newport Banning Ranch have been impacted by tank bottom materials:

- asphalt-like materials,
- tar-like materials, and

- oil-impacted soil.

Based on the chemical concentrations expected to be present in these materials, they are not expected to exhibit the properties of either a hazardous substance or a hazardous waste. Chemical analyses on tank bottom materials conducted for GeoSyntec Consultants [1991b] indicated that the tank bottom materials did not exhibit the properties of a hazardous substance. Hence, even though tank bottom materials are a listed hazardous waste [California Code of Regulations, 1985], the tank bottom materials at the Newport Banning Ranch have been delisted and are not classified as hazardous wastes.

During past crude oil and gas production operations at the Newport Banning Ranch, arsenic and chromium [Burton, 1993] may have been used as corrosion inhibitors in oil production wells. Barium may also be present at the location of former oil well drilling mud pits as it is a common additive to oil well drilling mud [Burton, 1993]. These metals may still be present in site soils around the oil wells. However, analyses performed on a former crude oil and gas production site adjacent to the Newport Banning Ranch at the western end of 18th Street in Costa Mesa [EEI, 1987] revealed that the concentrations of those metals in the samples collected that were analyzed for heavy metals were below the Total Threshold Limit Concentration (TTLC) set by the California Code of Regulations [1985]. Analyses performed on samples of tank bottom materials, hydrocarbon-impacted soils and asphalt-like materials collected from the Santa Ana River Marsh which is adjacent to the Newport Banning Ranch [GeoSyntec Consultants, 1992] did not reveal significant quantities of either arsenic or barium.

Hazardous substances are generally placed and stored in containers to reduce the potential of leakage or spills of hazardous substances into the subsurface. However, it was noted that in some areas of the site some hazardous substances or petroleum



products had impacted the soil and potentially the subsurface. This may have been due to small spills or to the loss of container integrity. Table 3-1 indicates some of the locations at the Newport Banning Ranch at which soil may have been impacted by hazardous substances or petroleum products. The spatial extent of the impacted area could not be evaluated based on available information.

### **3.3      Hazardous Substances Containers and Unidentified Substance Containers**

A large number (more than 50) of discarded 55 gallon (210 liter) drums were found at various locations on site. Many of the drums were open and were empty or contained unidentified liquids (possibly rainwater) while others were in use as refuse receptacles. Some other drums were closed and empty, one was full of an unidentified liquid. One drum was partially full of an unidentified liquid. Most of the drums were rusted, thus their previous contents could not be identified. Several of the drums once contained corrosion inhibitors, but the chemical composition of the corrosion-inhibiting substance was not identified on the drums. There is a potential that the soil located below and/or around the drums has been impacted by the contents or former contents of the drums. The locations of some of the drums not in use as refuse receptacles are shown on Figure 3-1.

### **3.4              Storage Tanks**

#### **3.4.1              Underground Storage Tanks**

There is one (10,000 gallon) underground gasoline storage tank on site located east of the air compression plant shown on Figure 3-1. The tank was installed in 1987. The tank is double walled and is equipped with leak detection monitoring devices. The tank design drawings are attached to this report in Appendix G.

Three underground storage tanks were removed from the site in 1986, a 10,000 gallon gasoline storage tank, a 2,000 gallon diesel fuel storage tank and a 1,000 gallon diesel storage tank. Hydrocarbon tests conducted according to EPA test procedures 8015 (Purgeable Non-halogenated Volatiles) and 8020 (Purgeable Aromatics) were conducted on soil samples from the gasoline tank excavation. Hydrocarbon tests conducted according to EPA test procedure 8015 were conducted on soil samples collected from the diesel tank excavations. These tests indicated the presence of gasoline and diesel fuel in the soil. Soil impacted by hydrocarbons was removed from the area around the underground storage tanks. Soil was excavated until after test results indicated that the concentrations of hydrocarbons in the soils remaining in the bottom of the excavation were below 10 ppm, the method detection limit of the test. The test result for a soil sample collected from the bottom of one of the excavations is attached to this report in Appendix G.

The excavated soil was allowed to aerate for a few weeks and was then returned to the excavations after test results revealed that the hydrocarbon concentrations remaining in the soils were below the applicable action levels [Stair, 1993].

The permit from the Orange County Fire Department for the removal of the underground storage tanks is attached to this report in Appendix G.

Three underground sumps were observed at the Newport Banning Ranch during the site reconnaissance. The main site tank farm contains an underground sump. An underground sump used for the temporary storage of waste oils is adjacent to the site maintenance shop/warehouse. An underground sump used for the temporary storage of waste oils is located adjacent to the air compression plant. There is a potential for soil and ground water to be impacted by the materials stored in these sumps. Heavy soil staining was noted around the maintenance shop/warehouse sump.

### 3.4.2 Above Ground Storage Tanks

There are many above ground storage tanks on the Newport Banning Ranch. Table 3-3 provides a partial list of these above ground storage tanks. Above ground storage tanks often contain hazardous substances or chemicals making them potential sources of spills of hazardous substances to soil and ground water. Soil chemical analyses will be required to evaluate if the contents of the above ground storage tanks may have been spilled on the soil located below the above ground storage tanks.

The condensate drip tank south of the Newport Banning Ranch air compression plant was observed to be in poor condition with large rust holes eaten through its top surface. The tank is partially full with an oily-appearing substance.

### 3.5 Polychlorinated Biphenyls (PCB)

While there were many electrical transformers on site, both in use and out-of-service, signs of leakage from Newport Banning Ranch transformers were not detected nor were signs of oil staining seen on the ground around site transformers. Site personnel state that every transformer on site was tested for PCBs in the mid 1980s by Mobil Oil [McClosky, 1993]. Those transformers found to contain PCBs at concentrations of greater than 500 ppm in their oil were disposed of properly [Burton, 1993]. However, it may, because of a lack of documentation, be difficult to match the transformers existing on site with the results reported in the study. Hence, it may be impossible to prove that any of the transformers on the Newport Banning Ranch are free of PCBs without doing further testing. And as it was shown by the Mobil study that transformers containing PCBs were once in use at the Newport Banning Ranch, it is possible that some of these transformers may have leaked at one time. Hence, there is the potential for PCB-impacted soil to exist at the Newport Banning Ranch.

### 3.6 Solid Waste Disposal

The areas of the Newport Banning Ranch affected (or possibly affected) by solid waste disposal are indicated on Figure 3-1. Solid waste disposal poses an environmental threat because of potential sources of hazardous substances often found in solid waste. Examples of the kinds of hazardous substances often found in solid waste include solvents and volatile organic compounds in paints, PCBs in discarded electrical components, lead in soldered pipes or car radiators, and pesticides from empty household or garden pesticide containers.

Household waste and construction debris were discarded on one of the Newport Banning Ranch's slopes without the permission of WNOC [Stair, 1993]. A number of non-operable motor vehicles have been stored on the property in the vicinity of the maintenance shop/warehouse. Motor vehicles pose an environmental threat to the Newport Banning Ranch because of the potential for gasoline, crank case oil, transmission fluid and battery acid to leak from the vehicles into the site soils and surface and ground water.

WNOC has stockpiles of construction debris accumulated during the crude oil and gas production well abandonment process. WNOC has an inventory of out-of-service crude oil and gas production equipment directly north of the maintenance shop/warehouse.

During World War II, the United States Army maintained a coast watch station on the property south of the current headquarters building. There are reports that the soldiers stationed on the Newport Banning Ranch discarded their waste material in an erosion gully on site near the present location of the headquarters building.

### **3.7                    Potential for On-site Migration of Hazardous Substances**

Both the surface and first (upper most) aquifer of the Newport Banning Ranch appear to be down gradient of the mixed residential/light industrial areas to the east of the site in the cities of Costa Mesa and Newport Beach and, hence, there is the possibility of on-site migration of hazardous substances. Sites within a one mile (1.6 km) radius of the Newport Banning Ranch's 17th street gate that are known to contain environmental concerns are listed in Appendix B. However, site investigation and monitoring appears to be ongoing under the oversight of regulatory agencies for the listed sites located upgradient of the Newport Banning Ranch.

### **3.8                    Other Environmental Conditions**

The following is a list of environmental concerns not previously listed, for the Newport Banning Ranch:

- Methane generated from decomposing marsh plants (marsh gas) is known to exist throughout the Newport Beach vicinity [GeoScience Analytical, Inc. 1986].
- Hydrogen Sulfide (H<sub>2</sub>S) gas and methane may be present on site due to the presence of abandoned or existing crude oil production wells.
- As the site has been in operation for 50 years, it is possible that some wells may have been previously abandoned using procedures that do not meet current California Department of Conservation Division of Oil and Gas procedures for well abandonment. The West Newport Oil Company [Stair, 1993] knows of no improperly abandoned oil wells on the property. The California Department of Conservation Division of

Oil and Gas [Hebein, 1993] states that if the Division of Oil and Gas knew of any improperly abandoned wells, it would have required that the wells be re-abandoned according to Division of Oil and Gas standards for crude oil production wells.

- WNOC has abandoned and is in the process of abandoning crude oil production wells at the Newport Banning Ranch. While the crude oil production well abandonment is and has been conducted in accordance with California State Department of Conservation Division of Oil and Gas procedures [Stair, 1993], abandoned crude oil production wells are potential conduits for methane gas and hydrogen sulfide.
- A white substance remains in some pipes present in the out-of-service steam generating facility near the main site tank farm. Mr. Jay Stair [1993] of WNOC has indicated that the substance is calcium carbonate.
- Crude oil is present in soils at the Newport Banning Ranch at a number of locations. Typically, the crude oil is found in the vicinity of some crude oil production wells, pipelines and above ground crude oil tanks.
- Roads and surfaces at the Newport Banning Ranch have been sprayed with tank bottom materials to form a soft, asphalt-like substance.
- There are two septic tanks at the Newport Banning Ranch, one buried beside the WNOC office and the other buried beside the site changing room.
- The Bohn-Mack Slough flows across the southern end of the Newport Banning Ranch. The West Newport Oil Company at one time

maintained a bird screen across the slough to prevent water fowl from landing in the slough in the event of a crude oil spill into the slough. However, the West Newport Oil Company no longer feels this precaution is necessary and the bird screen has fallen into disrepair.

- The Orange County Sanitation Districts maintained a sewage treatment plant on land currently occupied by the Santa Ana River Marsh adjacent to the Newport Banning Ranch. Joe Rycraw [1993] of the Orange County Sanitation Districts states that it is possible that abandoned sewage pipelines cross the Newport Banning Ranch.
- The lowland zone of the Newport Banning Ranch contains habitat for endangered species, e.g. the California least tern and the California gnatcatcher.
- It was observed that no plant life grew beneath electrical distribution poles at a number of locations around the Newport Banning Ranch. This is an indication of the application of herbicides to site soils.





**TABLE 3-1**  
**ENVIRONMENTAL SITE AUDIT LOCATIONS**  
**NEWPORT BANNING RANCH**  
**WEST NEWPORT OIL COMPANY**  
**ORANGE COUNTY, CALIFORNIA**

Numbers are cross referenced to Figure 3-1.

1. Typical oil and gas production well: (1) Petroleum-impacted oil and gas production appurtenant equipment, (2) Petroleum-impacted soil, (3) Petroleum-impacted concrete well cellars, (4) possible spills of corrosion inhibitors prior to the implementation of double containment, (5) drilling mud pits.
2. Undeveloped upland zone -- evidences only slight impact from on-going or past crude oil and gas production activities.
3. Gas leaks were observed, either audibly or as bubbles, in operating oil and gas production wells. Gas bubbles were also observed in a pool of water that had formed in an abandoned crude oil production well excavation. The origin of these bubbles mayb be gas generated by the decomposition of organic matter or gas generated from an oil reservoir.
4. Empty drums, truck batteries.
5. Surplus oil and gas production equipment.
6. Soil impacted by refined petroleum products in the vicinity of the maintenance shop/warehouse.
7. Excavated well cellar, stained soil.

**TABLE 3-1 CONTINUED**

8. Leaky pipes
9. Out-of-service transformers
10. Transformers on poles
12. Steam plant: empty drums, pipes filled with an unidentified white substance, transformers.
13. Oil Water Separator.
14. Tank farm: uncontained crude oil.
15. Asphalt-like material on side slopes.
16. Road to out-of-service tank farm heavily impacted with tank bottom materials.
17. Out-of-service tank farm. Large amounts of tar and petroleum-impacted soil. Surplus tanks and concrete cisterns.
18. Large concrete blocks forming a pad.
19. Stored motor vehicles, boats, and trailers.
20. Drainage culvert entering site from 19th Avenue

**TABLE 3-1 CONTINUED**

21. Air compression plant. Two sumps, one partially below ground, the above ground sump seriously corroded. A parts cleaning trough. Empty drums. Unidentifiable liquid spill. Construction debris.
22. Cement settling ponds.
23. Trench used as cement settling pond. Pipelines excavated. Stained soil.

**TABLE 3-2  
HAZARDOUS SUBSTANCES REPORTED IN USE AT THE  
NEWPORT BANNING RANCH  
WEST NEWPORT OIL COMPANY  
ORANGE COUNTY, CALIFORNIA**

Hazardous Substance	Air Compress. Plant	Tank Farm	Steam Plant	Mainten. Shop	Water Softening Plant	Across Site
Diesel fuel	✓					
Gasoline	✓					
Motor Oil	✓			✓		
Nalco 8330-M Inhibitor (contains sodium nitrate)	✓					
Stoddard Solvent (Petroleum Naphtha)	✓	✓		✓		
Automatic Transmission Fluid				✓		
Hydraulic Fluid				✓		
Natural Gas						✓
Aquanox (contains benzene and styrene)		✓				
Soda Ash			✓			
Sodium Metasilicate			✓			
Sodium Silicate		✓				

TABLE 3-2 CONTINUED

Hazardous Substance	Air Compress. Plant	Tank Farm	Steam Plant	Mainten. Shop	Water Softening Plant	Across Site
Methanol		✓				
Isopropyl Alcohol		✓				
Acetelyene				✓		
1,1,1 Trichloroethane				✓		
Degreaser (contains toluene, acetone, methanol, MEK, 2- Butoxyethanol)				✓		
Penetrating Oil				✓		
Insecticide (contains Baygon and Methylene chloride)				✓		
C-668, Corrosion-inhibitor (Imidoamine, also contains Isopropanol)						✓
West B-409 (contains Diethylaminoethanol)					✓	
West B-800 (contains formaldehyde)					✓	

**TABLE 3-3**  
**ABOVE GROUND STORAGE TANKS**  
**NEWPORT BANNING RANCH**  
**WEST NEWPORT OIL COMPANY**  
**ORANGE COUNTY, CALIFORNIA**

**List of Ground Storage Tanks in the Air Compression Plant**

- An Air Compressor Condensate Drip Tank,
- Ammonia Tanks (removed 11 August 1993 [Stair, 1993]),
- Anderol Tank (see MSDS in Appendix C),
- 100-40 Weight Motor Oil Tanks,
- Solvent Tanks,
- Corrosion Inhibitor Tanks,
- All-purpose Cleaner Tank,
- Diesel Fuel Additive Tank, and
- Diesel Fuel Tanks.

**List of Ground Storage Tanks in the Water Softening Plant**

- Brine Storage Tanks,
- Soft Water Storage Tanks,
- Primary Treatment Tanks, and
- Polishing Tanks.

**List of Ground Storage Tanks in the Maintenance Shop/Warehouse**

- 40 Weight Motor Oil Tank,
- 30 Weight Motor Oil Tank,
- Dextron Automatic Transmission Fluid Tank,
- Multi-purpose Hydraulic Fluid Tank,
- Solvent Tank,
- All-purpose Cleaner Tank,
- Acetelyene Tanks,
- Oxygen Tanks, and
- Cold Dip Tank.

### **TABLE 3-3 CONTINUED**

#### **List of Ground Storage Tanks in the Main Site Tank Farm**

- Crude Oil Tanks,
- Waste Water Storage Tanks,
- Clarifier Tank,
- Wash Tanks,
- Heater Treaters,
- Condensate Tanks,
- Oil Recovery Tanks,
- Diesel Fuel Tanks,
- Solvent Tank,
- Degreaser Tank,
- BP-884 Tank (see MSDS in Appendix C),
- SP-0355 Tanks (see MSDS in Appendix C),
- WF-173 Tank (see MSDS in Appendix C),
- Corrosion Inhibitor Tanks, and
- Sodium Silicate Tank.

#### **List of Miscellaneous Above Ground Storage Tanks**

- Crude Oil Tanks, Heater Treaters, Wash Tanks, etc. in the out of service tank farm south of the main site tank farm,
- Double Contained Drums of Corrosion Inhibitors at some of the crude oil production wells, and
- Miscellaneous Crude Oil Transfer Tanks.

## **4. DESCRIPTION OF THE FACILITY**

### **4.1 Site and Vicinity Characteristics**

The geology of the Newport Banning Ranch consists of sedimentary bedrock units of Miocene and possibly Pliocene age covered by Quaternary San Pedro Sands and terrace deposits in the mesa. In the lowland area, the Pleistocene sediments are covered by Holocene alluvial floodplain units derived from the Santa Ana River. As observed during the reconnaissance of the site, all of the units exposed in the mesa appear to be highly erodible; the deposits within the lowland are also likely to be very erodible. Steep slopes on the property underlain by the Pliocene sedimentary formations, the Quaternary San Pedro Formation, and the terrace deposits all have been extensively gullied [Woodward-Clyde, 1985].

The ground water beneath the Newport Banning Ranch lies in the Santa Ana Gap portion of the Anaheim Ground Water Basin [DWR, 1966]. The Anaheim Ground Water Basin is a coastal synclinal basin with a forebay and pressure area. The forebay is north of the Santa Ana Freeway and is where most of the recharge to the Anaheim Ground Water Basin occurs. The Santa Ana Gap region is in the Anaheim Ground Water Basin pressure area. The pressure area consists of confined aquifers underlying a semi-perched water table.

The Talbert aquifer lies directly below the Newport Banning Ranch, extending from a depth of approximately 50 to 150 feet below sea level. The Talbert aquifer is connected to the Pacific Ocean in the vicinity of the Newport Banning Ranch; hence concentrations of chloride in the ground water beneath the Newport Banning Ranch are elevated above the recommended U.S. Drinking Water Standard (250 mg/l). The elevated concentrations are due to seawater intrusion caused by overpumping of the



Anaheim Ground Water Basin [DWR, 1966]. However, the elevated chloride levels in the ground water do not preclude the beneficial use of the ground water beneath the Newport Banning Ranch. Though, because the ground water is not potable and cannot be used for agriculture, the beneficial uses of the ground water are extremely limited.

Pacific Soils [1993] has installed seven barrel auger borings into the Newport Banning Ranch uplands zone. Boring B6 (located on the bluffs approximately 500 ft (150 m) due north of the out-of-service tank farm in the Newport Banning Ranch lowlands) hit groundwater at 45 ft (13.6 m) below the ground surface (BGS) which corresponds to 9 ft (2.7 m) above mean sea level (MSL). Borings B2 (on the bluff due west of 17th Street in Costa Mesa) and B5 (on the bluff directly north of the Pacific Coast Highway) both terminated at 15 ft (4.5 m) above MSL without striking ground water.

Pacific Soils [1993] has installed two hollow stem auger borings into the Newport Banning Ranch lowlands zone. Boring H-1 (located approximately 400 ft (120 m) south of the out-of-service tank farm along the canal) struck ground water at 6 ft (1.8 m) above MSL. Boring H-2 (located at the foot of the bluff approximately 1000 ft (300 m) south of the northern boundary of the site) struck ground water at 1 ft (0.3 m) above mean sea level.

Ground water investigations at the Shell Service stations at 801 W. 19th Street in Costa Mesa [Wayne Perry Construction, 1989] and 377 Superior Avenue in Newport Beach [Hardin Lawson, 1992] found ground water elevations between 50 and 60 ft (15 and 18 m) above MSL.

These ground water elevations found in borings in the vicinity and on the Newport Banning Ranch are consistent with a study of ground water in Orange County conducted by the Orange County Water District [1980]. Their conclusion was that the

perched ground water below the Newport Mesa generally followed the surface contours 30 to 40 ft (9 to 12 m) BGS on the mesa and generally fell to within a few feet of the surface in the Talbert Gap between the Newport and Huntington Beach mesas.

#### 4.2 Site Improvements

The Newport Banning Ranch contains a number of improvements related to the production of crude oil and gas. These improvements include:

- An air compression plant and compressed air distribution pipe network,
- A steam plant and steam distribution pipe network,
- A maintenance shop/warehouse,
- An office building,
- A changing facility for site personnel,
- An operations shack,
- The main site tank farm,
- Crude oil piping network (both buried and above ground),
- An out-of-service tank farm,
- A road network,
- A paved parking lot,
- A storage yard for surplus oil and gas production equipment,
- An electrical distribution network,
- A water softening plant,
- A pilot-scale bioremediation cell, and
- Between three and four hundred crude oil and gas production, steam injection, water injection, and air injection wells.

There are typical environmental concerns associated with each of these types of improvements. In addition to hydrocarbons, associated with the improvements used

in the extraction, transportation, treatment, and storage of crude oil, creosote-impregnated wooden poles and PCBs are often associated with electrical distribution networks, compressor condensate drippings (containing lubricants) are often associated with air compressors, used crank case oil is often associated with automobile shops, heavy metals often concentrate in drainage works, and hazardous substances such as asbestos and lead are often found in inhabitable structures.

#### **4.3            Environmental Lien**

Mr. Jay Stair of WNOG (See Appendix D) reports that there are no environmental liens held against the Newport Banning Ranch.

#### **4.4            Current Uses of the Property**

The property is currently used as a crude oil and gas production facility.

#### **4.5            Past Uses of the Property**

Oil and gas production began at the Newport Banning Ranch in 1944. Prior to this time the site was vacant land used for sheep farming [Stair, 1993]. Review of aerial photographs from 1928 did not reveal signs of permanent structures located on the property.

During World War II, the United States Army maintained a coast watch station on the property south of the current headquarters building. There are reports that the soldiers stationed on the Newport Banning Ranch discarded their waste material in an erosion gully on site near the present location of the West Newport Oil company headquarters building.

#### **4.6                    Current and Past Uses of Adjoining Properties**

The adjoining property to the west of the Newport Banning Ranch is the Santa Ana River Marsh, a wetlands. The Santa Ana River Marsh was formerly a crude oil and gas production facility containing the same kinds of hydrocarbon-impacted materials as the Newport Banning Ranch. GeoSyntec Consultants [1989] prepared a work plan for the remediation of the Santa Ana River Marsh to remediate the hydrocarbon-impacted materials present on the site. No records were found regarding the implementation of this work plan.

The Talbert Regional Park is located directly north of the site. The park was also the former site of a crude oil and gas production facility. No records were found regarding the presence of recognized environmental conditions in the park.

A residential district is located directly south of the Newport Banning Ranch, separated from the Newport Banning Ranch by a canal.

Northeast and east of the Newport Banning Ranch there is a mixed residential/light industrial district. The light industrial facilities include machine shops, metal finishing plants, automobile repair/modification shops, boat building yards, an aviation fuel facility, a biotechnology facility and other miscellaneous facilities. Photographic documentation of the types of industrial facilities present in this district are included in Appendix C. Appendix A contains a list of facilities located within a one half mile (0.8 km) radius of the main gate of the Newport Banning Ranch on 17th street that have received permits to generate, store or dispose of hazardous materials.

The Orange County sewage district had a treatment facility on the adjoining Santa Ana River Marsh site in the 1940s and 1950s.

## **5. FINDINGS AND CONCLUSIONS**

This phase I environmental site assessment has revealed evidence of recognized environmental conditions or potential recognized environmental conditions at the Newport Banning Ranch. The following is a list of these environmental conditions:

- Solid waste and construction debris have been discarded at the Newport Banning Ranch and have been found at four locations across the site.
- The underground storage sump at the maintenance shop appears to have over-flowed, spilling petroleum products onto surrounding soils.
- The condensate tank south of the air compression plant, which is partially full of an oily substance, is rusted through in a number of places.
- Solvents appear to have been splashed onto soil surfaces around the parts-cleaning troughs by the maintenance shop and the air compression plant.
- A white substance fills some of the pipes at the out-of-service steam generating facility near the main site tank farm. Jay Stair [1993] reports that the substance is calcium carbonate.
- Oil-production wells drilled at the Newport Banning Ranch typically have an associated drilling mud sump associated with them. These sumps may contain soil mixed with various concentrations of crude oil, corrosion inhibitors, heavy metals, and solid waste.

- More than fifty (50) empty or full 55 gallon drums are present at the Newport Banning Ranch. Unknown substances are present in some of the 55 gallon drums present at the Newport Banning Ranch.
- Non-operative motor vehicles are present at the Newport Banning Ranch.
- Construction debris (notably concrete well cellars and platforms) are present at the Newport Banning Ranch.
- Uncontained crude oil is present in some areas of the Newport Banning Ranch. Typically, the crude oil is found in the vicinity of some crude oil production wells, pipelines and crude oil holding tanks.
- Tar-like materials are present in a number of locations around the Newport Banning Ranch.
- Soil impacted by crude-oil is present at various locations at the Newport Banning Ranch. Specifically, near or below active or inactive oil production equipment and appurtenances, including: tanks, pumps, pipelines, and active or abandoned oil wells. Ground water may also be impacted in some of these locations.
- Asphalt-like materials are present on almost every road way across the site. This asphalt like material appears to be dried tank-bottom material that was applied as part of the construction or maintenance of site roads and parking areas.

- Large quantities (covering approximately 2 acres ) of surplus oil and gas production equipment are present at the Newport Banning Ranch.
- Soil is likely to have been impacted by petroleum products or solvents because of potential leaks or spillage near or below sumps, underground storage tanks, above-ground storage tanks, solid waste, drums, and motor vehicles. Ground water may also be impacted in these areas.
- A sewer main collecting waste water from the city of Newport Beach crosses the Newport Banning Ranch in the lowlands. It is possible that abandoned sewer mains cross the site.
- There are two septic tanks on site at the Newport Banning Ranch, one serving the WNOC office building and one serving the changing facility.

Additional investigations are recommended to further clarify the existence of recognized environmental conditions at the Newport Banning Ranch. These investigations would include sampling and testing of soils and ground water at the Newport Banning Ranch at various locations such as around above ground and below ground storage tanks, drums, transformers, non-operable vehicles, and solid waste piles. Sampling and testing of the unidentified substances contained in unmarked containers is also suggested. Archival searches, such as for evidence that proper oil well abandonment procedures have been followed at the NBR, is also suggested.

## **6. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS**

**Thierry Sanglerat**      Registered Environmental Assessor (REA, California # 319), Registered Environmental Professional (REP, #2620), Certified Ground Water Professional (CGWP, #349), Registered Professional Engineer (PE, # C 050452). More than 10 years of managing environmental assessment, design and remediation projects.

**Bert Palmer, Ph.D**      Registered Environmental Professional (REP, #2421). More than five years of managing environmental assessment, design and remediation projects.

**Jeff Raines**      Registered Professional Engineer (PE, # C 051120). More than two years of conducting environmental assessment, design and remediation projects.



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**BBL**

**ENVIRONMENTAL RECORD SEARCH**

for the site

1080 W. 17TH ST, COSTA MESA

performed for

GEOSYNTEC

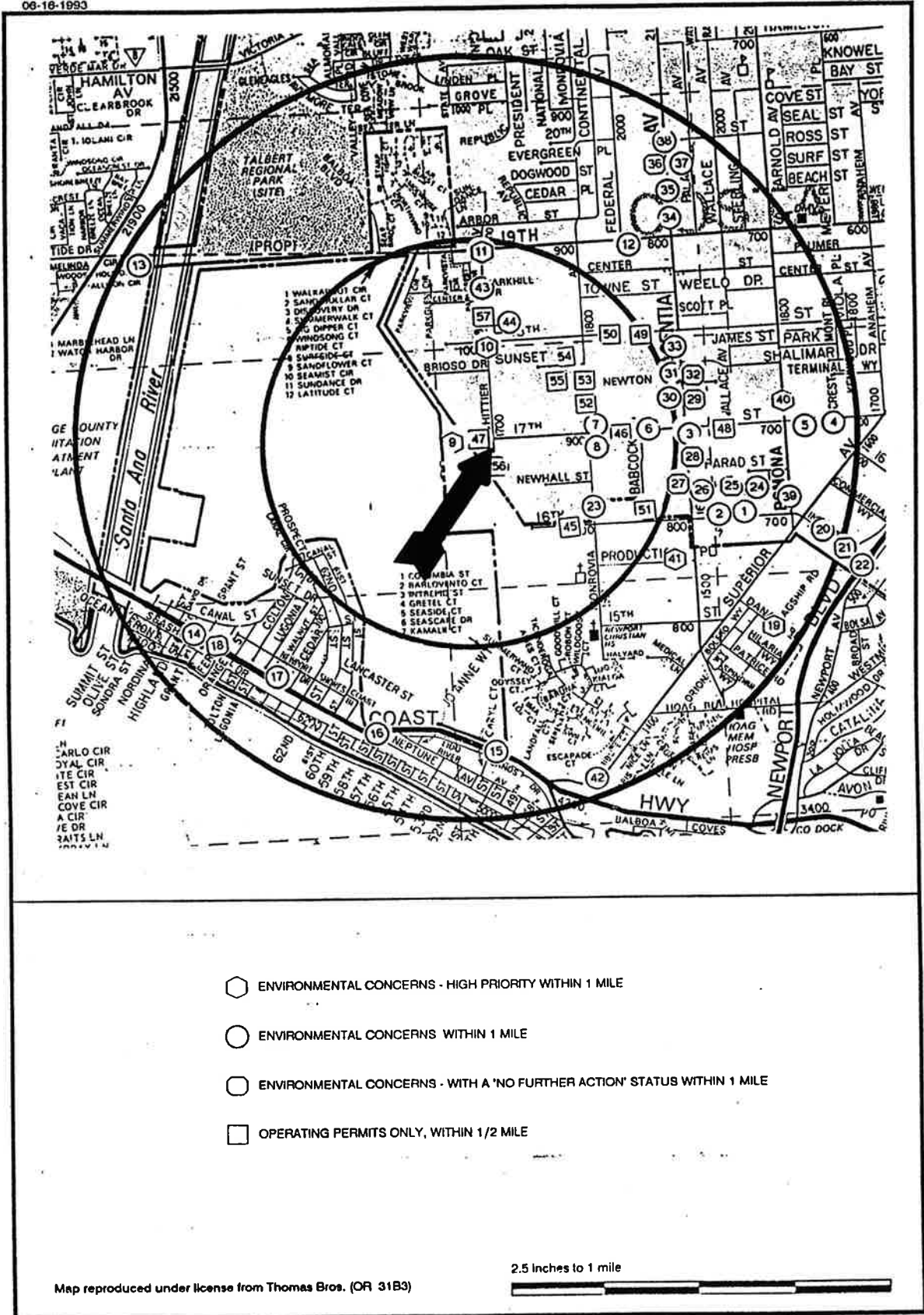
06-14-1993

GEOS7001

This document, prepared on the request of Geosyntec, reports the findings of BBL's investigation of environmental concerns in the vicinity of 1080 W. 17th St, Costa Mesa. It is divided in the following segments:

- |                                      |           |
|--------------------------------------|-----------|
| - Federal Sources                    |           |
| National Priority List               | No sites  |
| CERCLIS                              | 4 sites   |
| Federal Facilities                   | No sites  |
| Superfund Liens                      | No sites  |
| - State Sources                      |           |
| Annual Work Plan                     | No sites  |
| CalSites                             | 110 sites |
| Cortese                              | 13 sites  |
| State Solid Waste Assessment Test    | 3 sites   |
| Solid Waste Information System       | No sites  |
| State Leaking Underground Tanks      | 18 sites  |
| - Regional Sources                   |           |
| Regional Leaking Underground Tanks   | 18 sites  |
| Non-Tank or Unauthorized Releases    | No sites  |
| Toxic Pits                           | No sites  |
| Regional Solid Waste Assessment Test | 3 sites   |
| Well Investigation Program           | No sites  |

- |                                    |          |
|------------------------------------|----------|
| Hazardous Waste Information System | 11 sites |
| Underground Storage Tanks          | 4 sites  |
| SARA Title III                     | 1 site   |



APPROXIMATE LOCATION OF IDENTIFIED SITES IN THE VICINITY OF  
1080 W. 17TH ST, COSTA MESA

- . RITE-O-LITE
- . LIDO CASTINGS
- . WEST COAST COATING
- . WAYFARER YACHT CORP
- . MASTER MECHANIC
- . FOSS CO. #1
- . DUCTALL CORP.
- . TEXAS METALS & MINERALS CORP.
- . CANNON ELECTRIC CO.
- . AERO DESIGN PRODUCTS CORP.
- . COOLEY SARAH COSMETICS
- . ENTIN METALS #2
- . HIXSON METAL FINISHING
- . SARGENTS GRINDING
- . RED - JET SYSTEMS
- . FIBERTECH
- . AM & M METALS
- . ROYCE WOODFORD
- . ELECTRO-MECHANIC SHOP
- . SUPREME ENGINEERING
- . ORTHODYNE ELECTRONICS
- . METAL SERVICE CO
- . HOUSE OF BATTERIES
- . WILLIAMS DRILLING COMPANY
- . NEWPORT HARBOR NEWS PRESS
- . ARMSTRONG PETROLEUM #1
- . COLLINS OIL
- . AAA PROPELLOR
- . PICK UP PRECISION GEARS
- . LINKLATER CO.
- . DECK TECHNOLOGY
- . SEYMOUR ENTERPRISES
- 1. FLEXIBLE METAL HOSE
- 2. SOUTH COAST MARINE
- 3. SOUNDCAST
- 4. CLAM PROTECTIVE COATINGS
- 5. J C CARTER COMPANY
- 6. VANCE & ASSOC. ROOFING, INC.
- 7. CAL VAL
- 8. PLASTIC FARM CO
- 9. MOBIL OIL CORP BANNING LEASE
- 10. BARTO OIL
- 11. LEADERSHIP HOUSING SYSTEMS
- 12. L & M VENTURES (EMERALD AUTO)
- 13. L & M VENTURES (SHELL)
- 14. MOBIL SERVICE STATION #18-HG7
- 15. TRIANGLE ASSOCIATES (LUBY)
- 16. MACOIL CORP
- 17. CALTRANS
- 18. CALTRANS
- 19. NEWPORT BEACH CITY LANDFILL

- 20. CALIF. REDWOOD MATERIALS
- 21. NEWPORT AUTOWORKS
- 22. O.C. MORITZ
- 23. MASTER SPECIALTIES
- 24. FORD'S AUTOMOTIVE
- 25. SMITH AND SONS PROPERTIES
- 26. HARTMAN ENTERPRISES
- 27. BOAT YARD, THE
- 28. ALANOR CORPORATION
- 29. CLA-VAL CORPORATION
- 30. SOUNDCAST CO.
- 31. BAYSIDE INDUSTRIES
- 32. SKIPJACK BOATS
- 33. FOSS CO. #2
- 34. BROWNING MFG.
- 35. JOLLY ROGER BOATS
- 36. CRISSMAN'S RENTAL
- 37. MESA CONSOLIDATED WATER DIST.
- 38. HARTLEY COMPANY, THE
- 39. MIKE COOK BOATYARD
- 40. ENTIN METALS NO 2
- 41. HIXSON METAL FINISHING FIRE
- 42. G.E. KADANE & SONS
- 43. CADILLAC GAGE CO. (CADILLAC CO
- 44. ANGEL M GARCIA
- 45. OMOHUNDRO CO
- 46. PRECISION OPTICAL
- 47. WINFIELD LOCKS INC
- 48. AMERINCA QUALITY REFINISHERS
- 49. NEWPORT SANITATION CO
- 50. ORANGE COAST PLASTIC MOLDING,
- 51. EUROPEAN AUTO RESTORATION INC
- 52. COAST CIRCUIT ENGINEERING INC
- 53. BRAXTON MFG CO OF CALIF INC
- 54. KAAMA MARINA ENGINEERING INC
- 55. P W ASSCIOTES
- 56. GULTON INDUSTRIES (S C DIV)
- 57. BRUCE JONES SURFBOARDS INC

## UNKNOWN LOCATIONS

- VOGUE COSMETICS PRODUCTS
- DELMAR WESTERN CHEMICAL INC

# **ENVIRONMENTAL RECORDS SEARCH**

## **SUMMARY**

### **LISTED BY STREET**



**ENVIRONMENTAL RECORDS SEARCH FOR  
1080 W. 17TH ST, COSTA MESA**

Page: 1  
Job: GEOS7001  
Date: 06-16-1993

LOCATION	ADDRESS	CITY	MAP LOC	SOU- RCE	STATUS
RITE-O-LITE	871 W 15TH ST	COSTA MESA		AS	NFA
SEMICONDUCTOR DEVICES	875 W 15TH ST	COSTA MESA		AS	NFA
FLEXIBLE METAL HOSE	777 W 16TH ST	COSTA MESA	1	AS	PEARL
SOUTH COAST MARINE	788 W 16TH ST	COSTA MESA	2	AS	SSR
METAL SERVICE CO	789 W 16TH ST	COSTA MESA		AS	NFA
WALKER PAINT WORKERS	818 W 16TH ST	COSTA MESA		AS	NFA
ELECTRONIC TECHNOLOGY LABS	823 W 16TH ST	COSTA MESA		AS	NFA
LOCKFAST	864 W 16TH ST	COSTA MESA		AS	NFA
SOUNDCAST	17TH & PLACENTIA	COSTA MESA	3	AS	SSR
CLAM PROTECTIVE COATINGS	638 W 17TH ST	COSTA MESA	4	AS	PEARL
MASTER MECHANIC	644 W 17TH ST	COSTA MESA		AS	NFA
BUSHCRAFT ENGINEERING & MFG.	660 W 17TH ST	COSTA MESA		AS	NFA
J C CARTER COMPANY	671 W 17TH ST	COSTA MESA	5	AS	SSR
J.C. CARTER CO., INC.	671 W 17TH ST	COSTA MESA	5	LR	3B
J.C. CARTER CO., INC.	671 W 17TH ST	COSTA MESA	5	LT	3B
J.C. CARTER CO.	671 W 17TH ST	COSTA MESA	5	Cs	WCRBT
SARGENTS GRINDING	738 W 17TH ST	COSTA MESA		AS	NFA
HARBOR MACHINE	748 W 17TH ST	COSTA MESA		AS	NFA
SPARCRAFT	770 W 17TH ST	COSTA MESA		AS	NFA
DUTRON	777 W 17TH ST	COSTA MESA		AS	NFA
EPOXY-PAC	817 W 17TH ST	COSTA MESA		AS	NFA
VANCE & ASSOC. ROOFING, INC.	837 W 17TH ST	COSTA MESA	6	LR	3B
VANCE & ASSOC. ROOFING, INC.	837 W 17TH ST	COSTA MESA	6	LT	3B
CAL VAL	870 W 17TH ST	COSTA MESA	7	AS	PEARL
AM & M METALS	873 W 17TH ST	COSTA MESA		AS	NFA
PLASTIC FARM CO	875 W 17TH ST	COSTA MESA	8	AS	SSR
ROYCE WOODFORD	891 W 17TH ST	COSTA MESA		AS	NFA
WALTAN CORKWOOD	934 W 17TH ST	COSTA MESA		AS	NFA
ARTHUR MARINE	959 W 17TH ST	COSTA MESA		AS	NFA
MOBIL OIL CORP BANNING LEASE	1080 W 17TH ST	COSTA MESA	9	CC	
MOBIL OIL #2	1080 W 17TH ST	COSTA MESA	9	AS	SSR
BARTO OIL	18TH & WHITTIER AVE	COSTA MESA	10	CC	
CALIFORNIA EXPLORATION COMPANY	18TH & WHITTIER AVE	COSTA MESA	10	AS	SSR
CALIFORNIA EXPLORATION COMPANY	18TH & WHITTIER AVE	COSTA MESA	10	Cs	DHS1
ELECTRO-MECHANIC SHOP	687 W 18TH ST	COSTA MESA		AS	NFA
SUPREME ENGINEERING	849 W 18TH ST	COSTA MESA		AS	NFA
ORTHODYNE ELECTRONICS	851 W 18TH ST	COSTA MESA		AS	NFA
MAJORWAY TRAILOR MFG	869 W 18TH ST	COSTA MESA		AS	NFA
LEADERSHIP HOUSING SYSTEMS	19TH & WHITTIER AVE	COSTA MESA	11	CC	
LEADERSHIP HOUSING SYSTEMS-NEW	19TH & WHITTIER AVE	COSTA MESA	11	SR	13
LEADERSHIP HOUSING SYSTEMS-#1	19TH & WHITTIER AVE	COSTA MESA	11	ST	13
LEADERSHIP HOUSING SYSTEMS	19TH & WHITTIER AVE	COSTA MESA	11	AS	PEARL
HOUSE OF BATTERIES	778 W 19TH ST	COSTA MESA		AS	NFA
L & M VENTURES (EMERALD AUTO)	801 W 19TH ST	COSTA MESA	12	LR	7
L & M VENTURES (EMERALD AUTO)	801 W 19TH ST	COSTA MESA	12	LT	7

**ENVIRONMENTAL RECORDS SEARCH FOR  
1080 W. 17TH ST, COSTA MESA**

Page: 2  
Job : GEOS7001  
Date: 06-16-1993

LOCATION	ADDRESS	CITY	MAP LOC	SOU- RCE	STATUS
L & M VENTURES (EMERALD AUTO)	801 W 19TH ST	COSTA MESA	12	Cs	WCRBT
WILLIAMS DRILLING COMPANY	857 W 19TH ST, 857-867	COSTA MESA		AS	NFA
HUNT MFG.	857 W 19TH ST	COSTA MESA		AS	NFA
L & M VENTURES (SHELL)	1901 W 19TH ST	COSTA MESA	13	LR	5C
L & M VENTURES (SHELL)	1901 W 19TH ST	COSTA MESA	13	LT	5C
L & M VENTURES (SERVICE STM)	1901 W 19TH ST	COSTA MESA	13	Cs	WCRBT
MOBIL SERVICE STATION #18-HG7	1500 W BALBOA BLVD	NEWPORT BEACH	14	LR	5R
MOBIL SERVICE STATION #18-HG7	1500 W BALBOA BLVD	NEWPORT BEACH	14	LT	5R
MOBIL SERVICE STATION #18-HG7	1500 W BALBOA BLVD	NEWPORT BEACH	14	Cs	WCRBT
NEWPORT HARBOR NEWS PRESS	2211 W BALBOA BLVD	NEWPORT BEACH		AS	NFA
TRIANGLE ASSOCIATES (LUBY)	4625 W COAST HWY	NEWPORT BEACH	15	LR	7
TRIANGLE ASSOCIATES (LUBY)	4625 W COAST HWY	NEWPORT BEACH	15	LT	7
LUBY ENTERPRISES(FORMER TOSCO)	4625 W COAST HWY	NEWPORT BEACH	15	Cs	WCRBT
MACOIL CORP	5800 W COAST HWY	NEWPORT BEACH	16	AS	SSR
MACOIL CORP	5800 W COAST HWY	NEWPORT BEACH	16	AS	SSR
ARMSTRONG PETROLEUM #1	5800 W COAST HWY	NEWPORT BEACH		AS	NFA
CALTRANS	6500 W COAST HWY	NEWPORT BEACH	17	LR	3B
CALTRANS	6500 W COAST HWY	NEWPORT BEACH	17	LT	3B
CALTRANS	6800 W COAST HWY	NEWPORT BEACH	18	LR	9
CALTRANS	6800 W COAST HWY	NEWPORT BEACH	18	LT	9
COLLINS OIL	131 COMMERCIAL WAY	COSTA MESA		AS	NFA
RESIN FLOOR PRODUCTS INC	134 COMMERCIAL WAY	COSTA MESA		AS	NFA
EL MOORE COMPANY	135 COMMERCIAL WAY	COSTA MESA		AS	NFA
NEWPORT BEACH CITY LANDFILL	DANA RD & FLAGSHIP RD	NEWPORT BEACH	19	SR	14
NEWPORT BEACH CITY LANDFILL	DANA RD & FLAGSHIP RD	NEWPORT BEACH	19	ST	14
CALIF. REDWOOD MATERIALS	106 INDUSTRIAL WAY	COSTA MESA	20	AS	SSR
NEWPORT AUTOWORKS	121 INDUSTRIAL WAY	COSTA MESA	21	LR	9
NEWPORT AUTOWORKS	121 INDUSTRIAL WAY	COSTA MESA	21	LT	9
NEWPORT AUTOWORKS	121 INDUSTRIAL WAY	COSTA MESA	21	Cs	WCRBT
AAA PROPELLOR	127 INDUSTRIAL WAY	COSTA MESA		AS	NFA
O.C. MORITZ	133 INDUSTRIAL WAY	COSTA MESA	22	AS	PEARM
PICK UP PRECISION GEARS	136 INDUSTRIAL WAY	COSTA MESA		AS	NFA
NMS CO.	1533 MONROVIA AVE	COSTA MESA		AS	NFA
PERMALITE PLASTICS CORPORATION	1537 MONROVIA AVE	NEWPORT BEACH		AS	NFA
NEWPORT PHARMACEUTICALS INTERN	1590 MONROVIA AVE	NEWPORT BEACH		AS	NFA
MONITOR SCIENCE CORPORATION	1598 MONROVIA AVE	NEWPORT BEACH		AS	NFA
MONITOR SCIENCE CORPORATION	1598 MONROVIA AVE	NEWPORT BEACH		AS	NFA
MASTER SPECIALTIES	1640 MONROVIA AVE	COSTA MESA	23	AS	PEARM
LINKLATER CO.	1725 MONROVIA AVE, 'B-5	COSTA MESA		AS	NFA
DECK TECHNOLOGY	1733 MONROVIA AVE, 'G	COSTA MESA		AS	NFA
SEYMOUR ENTERPRISES	1780 MONROVIA AVE	COSTA MESA		AS	NFA
A-1 BEARINGS AND ABRASIVES	1794 MONROVIA AVE	COSTA MESA		AS	NFA
MAJOR DATA CONCEPTS INC	1796 MONROVIA AVE	COSTA MESA		AS	NFA
LINCO PRODUCTS	1820 MONROVIA AVE	COSTA MESA		AS	NFA
BROOKSCHEM CORP	925 NEWHALL ST	COSTA MESA		AS	NFA

**ENVIRONMENTAL RECORDS SEARCH FOR**  
**1080 W. 17TH ST, COSTA MESA**

Page: 3  
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LOCATION	ADDRESS	CITY	MAP LOC	SOU- RCE	STATUS
FORD'S AUTOMOTIVE	705 OHMS WAY	COSTA MESA	24	LR	3A
FORD'S AUTOMOTIVE	705 OHMS WAY	COSTA MESA	24	LT	3A
SMITH AND SONS PROPERTIES	735 OHMS WAY	COSTA MESA	25	LR	9
SMITH AND SONS PROPERTIES	735 OHMS WAY	COSTA MESA	25	LT	9
LIDO CASTINGS	735 OHMS WAY	COSTA MESA		AS	NFA
HARTMAN ENTERPRISES	741 OHMS WAY	COSTA MESA	26	AS	PEARL
HARTMAN ENTERPRISES	741 OHMS WAY	COSTA MESA	26	Cs	DHS1
WEST COAST COATING	1606 PLACENTIA AVE	COSTA MESA		AS	NFA
CRYSTALINER YACHTS	1626 PLACENTIA AVE	NEWPORT BEACH		AS	NFA
INTERNATIONAL TUNGSTON CARBIDE	1651 PLACENTIA AVE	COSTA MESA		AS	NFA
CHAPMAN SHERMAN PAINT	1663 PLACENTIA AVE	COSTA MESA		AS	NFA
AMERICAN GLASS & SCREEN	1671 PLACENTIA AVE	COSTA MESA		AS	NFA
BOAT YARD, THE	1672 PLACENTIA AVE	COSTA MESA	27	LR	9
BOAT YARD, THE	1672 PLACENTIA AVE	COSTA MESA	27	LT	9
WAYFARER YACHT CORP	1682 PLACENTIA AVE	COSTA MESA		AS	NFA
ALANOR CORPORATION	1697 PLACENTIA AVE	COSTA MESA	28	LR	9
ALANOR CORPORATION	1697 PLACENTIA AVE	COSTA MESA	28	LT	9
ALANOR CORPORATION	1697 PLACENTIA AVE	COSTA MESA	28	Cs	WCRBT
CLA-VAL CORPORATION	1701 PLACENTIA AVE	COSTA MESA	29	LR	9
CLA-VAL CORPORATION	1701 PLACENTIA AVE	COSTA MESA	29	LT	9
CLA-VAL CORPORATION	1701 PLACENTIA AVE	COSTA MESA	29	Cs	WCRBT
SOUNDCAST CO.	1741 PLACENTIA AVE	COSTA MESA	30	AS	SSR
FOSS CO. #1	1751 PLACENTIA AVE	COSTA MESA		AS	NFA
CAST INDUSTRIES	1755 PLACENTIA AVE	COSTA MESA		AS	NFA
BAYSIDE INDUSTRIES	1761 PLACENTIA AVE	COSTA MESA	31	AS	PEARL
SKIPJACK BOATS	1763 PLACENTIA AVE	COSTA MESA	32	LR	9
SKIPJACK BOATS	1763 PLACENTIA AVE	COSTA MESA	32	LT	9
SKIPJACK BOATS	1763 PLACENTIA AVE	COSTA MESA	32	Cs	WCRBT
FOSS CO. #2	1767 PLACENTIA AVE	COSTA MESA	33	AS	SSR
DUCTALL CORP.	1771 PLACENTIA AVE	COSTA MESA		AS	NFA
JENSEN MARINE	1791 PLACENTIA AVE	COSTA MESA		AS	NFA
BROWNING MFG.	1919 PLACENTIA AVE	COSTA MESA	34	AS	PEARL
TEXAS METALS & MINERALS CORP.	1922 PLACENTIA AVE	COSTA MESA		AS	NFA
SPACE-TEK INDUSTRIES	1926 PLACENTIA AVE	COSTA MESA		AS	NFA
JOLLY ROGER BOATS	1937 PLACENTIA AVE	COSTA MESA	35	AS	SSR
CANNON ELECTRIC CO.	1943 PLACENTIA AVE	COSTA MESA		AS	NFA
MACOA MARINE	1947 PLACENTIA AVE	COSTA MESA		AS	NFA
POLLARD BOAT REPAIR	1950 PLACENTIA AVE	COSTA MESA		AS	NFA
POLLARD BOAT REPAIR	1950 PLACENTIA AVE	COSTA MESA		AS	NFA
CRISSMAN'S RENTAL	1954 PLACENTIA AVE	COSTA MESA	36	LR	9
CRISSMAN'S RENTAL	1954 PLACENTIA AVE	COSTA MESA	36	LT	9
MESA CONSOLIDATED WATER DIST.	1965 PLACENTIA AVE	COSTA MESA	37	LR	3B
MESA CONSOLIDATED WATER DIST.	1965 PLACENTIA AVE	COSTA MESA	37	LT	3B
MESA CONSOLIDATED WATER DIST.	1965 PLACENTIA AVE	COSTA MESA	37	Cs	WCRBT
AERO DESIGN PRODUCTS CORP.	1970 PLACENTIA AVE	COSTA MESA		AS	NFA

**ENVIRONMENTAL RECORDS SEARCH FOR  
1080 W. 17TH ST, COSTA MESA**

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LOCATION	ADDRESS	CITY	MAP LOC	SOU- RCE	STATUS
PREMIERE ADHESIVES	1875 PLACENTIA AVE	COSTA MESA		AS	NFA
PREMIERE ADHESIVES	1875 PLACENTIA AVE	COSTA MESA		AS	NFA
SOCIAL MARINE	1880 PLACENTIA AVE	COSTA MESA		AS	NFA
HARTLEY COMPANY, THE	1887 PLACENTIA AVE	COSTA MESA	38	LR	5C
HARTLEY COMPANY, THE	1887 PLACENTIA AVE	COSTA MESA	38	LT	5C
HARTLEY COMPANY, THE	1887 PLACENTIA AVE	COSTA MESA	38	CS	WCRBT
COOLEY SARAH COSMETICS	1998 PLACENTIA AVE, 1988-1998	COSTA MESA		AS	NFA
VOGUE COSMETICS PRODUCTS	PO BOX 215	COSTA MESA		AS	NFA
DELMAR WESTERN CHEMICAL INC	PO BOX 831	COSTA MESA		AS	NFA
MIKE COOK BOATYARD	1640 POMONA AVE	COSTA MESA	39	AS	PEARM
MIKE COOK BOATYARD	1640 POMONA AVE	COSTA MESA	39	AS	PEARM
ENTIN METALS NO 2	1701 POMONA AVE	COSTA MESA	40	SR	13
ENTIN METALS #2	1701 POMONA AVE	COSTA MESA	40	ST	13
ENTIN METALS #2	1701 POMONA AVE	COSTA MESA		AS	NFA
SAN GABRIEL DIE & MOLD	1719 POMONA AVE	COSTA MESA		AS	NFA
RUBBER TREAD INC.	1730 POMONA AVE, BLDG CA	COSTA MESA		AS	NFA
COLLINS WESLEY MINING CO.	1758 POMONA AVE	COSTA MESA		AS	NFA
HIXSON METAL FINISHING FIRE	829 PRODUCTION PL	NEWPORT BEACH	41	CC	
HIXSON METAL FINISHING	829 PRODUCTION PL	NEWPORT BEACH		AS	NFA
DELTA SEMICONDUCTORS #2	835 PRODUCTION PL	COSTA MESA		AS	NFA
OMEGA INDUSTRIES	841 PRODUCTION PL	COSTA MESA		AS	NFA
FLOW SYSTEMS, INC.	842 PRODUCTION PL	COSTA MESA		AS	NFA
MAGNETIC METALS	847 PRODUCTION PL	COSTA MESA		AS	NFA
MAGNETIC METALS #3	853 PRODUCTION PL	COSTA MESA		AS	NFA
CROWN MFG CO.	858 PRODUCTION PL	NEWPORT BEACH		AS	NFA
KAY LAB	870 PRODUCTION PL	COSTA MESA		AS	NFA
ROBBIN THOMAS PL	888 PRODUCTION PL	NEWPORT BEACH		AS	NFA
LIDO CASTINGS #2	894 PRODUCTION PL	COSTA MESA		AS	NFA
G.E. KADANE & SONS	1313 SUPERIOR AVE	COSTA MESA	42	AS	SSR
RED - JET SYSTEMS	1779 WHITTIER AVE	COSTA MESA		AS	NFA
CADILLAC GAGE CO. (CADILLAC CO	1866 WHITTIER AVE	COSTA MESA	43	AS	SSR
FIBERTECH	1880 WHITTIER AVE	COSTA MESA		AS	NFA
ENKAY AIRCRAFT PROD	1882 WHITTIER AVE	COSTA MESA		AS	NFA
ANGEL M GARCIA	1897 WHITTIER AVE	COSTA MESA	44	AS	SSR

**OPERATING PERMITS SEARCH FOR  
1080 W. 17TH ST, COSTA MESA**

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LOCATION	ADDRESS	CITY	MAP LOC	SOU- RCE	STATUS
OMOHUNDRO CO	960 W 18TH ST	COSTA MESA	45	HW	
VANCE & ASSOC., ROOFING INC.	837 W 17TH ST	COSTA MESA	6	UT	
PRECISION OPTICAL	869 W 17TH ST	COSTA MESA	46	HW	
WINFIELD LOCKS INC	1020 W 17TH ST	COSTA MESA	47	HW	
AMERINCA QUALITY REFINISHERS	785 W 17TH ST UNIT A	COSTA MESA	48	HW	
NEWPORT SANITATION CO	834 W 18TH ST	COSTA MESA	49	UT	
ORANGE COAST PLASTIC MOLDING,	850 W 18TH ST	COSTA MESA	50	UT	
EUROPEAN AUTO RESTORATION INC	1665 BABCOCK ST	COSTA MESA	51	HW	
EATON CORPORATION/MSC PRODUCTS	1640 MONROVIA AVE	COSTA MESA	23	HW	
EATON CORP., AEROSPACE & COMM	1640 MONROVIA AVE	COSTA MESA	23	SA	
COAST CIRCUIT ENGINEERING INC	1725 MONROVIA AVE, STE A6	COSTA MESA	52	HW	
BRAXTON MFG CO OF CALIF INC	1733 MONROVIA AVE, STE V	COSTA MESA	53	HW	
KAAMA MARINA ENGINEERING INC	936 SUNSET DR	COSTA MESA	54	UT	
P W ASSCIOTES	942 SUNSET DR	COSTA MESA	55	HW	
GULTON INDUSTRIES (S C DIV)	1644 WHITTIER AVE	COSTA MESA	56	HW	
BRUCE JONES SURFBOARDS INC	1835 WHITTIER AVE, UNIT E3	COSTA MESA	57	HW	

# REFERENCED SOURCES

## FEDERAL SOURCES

NL National Priority List (03/28/93)

CC Comprehensive Environmental Response, Compensation, and Liability System CERCLIS (03/28/93)

NFA No Further Action

FF Federal Facilities (03/28/93)

LI Superfund Liens - LIENS (12/13/92)

## CALIFORNIA STATE SOURCES

BP Annual Work Plan (formerly BEP) (01/31/93)

AWP Active Annual Work Plan site  
BKLK Backlog, potential AWP site  
COM Certified, but in Operation & Maintenance mode  
CERT Certified, site has been remediated  
DLIST Delisted  
REFRC Former AWP site, referred to RCRA  
REFRW Former AWP site, referred to RWQCB

AS CALSITES (formerly ASPIS) (01/31/93)

PEAR Preliminary Endangerment Assessment  
SSR Site Screening Required  
HRR Hazard Ranking Required  
PRPR Potential Responsible Party search Required  
NFA No Further Action  
EPA Federal EPA lead  
RCRA RECRA permitting program lead  
RWQC Regional Water Quality Board lead  
CNTY County lead  
OAL Other Agency lead

(Suffixes L,M or H indicates Low, Medium or High Priority)

CS Office of Planning and Research, State of California - CORTESE

WCRBT Tank leaks.  
DHS1 Abandoned hazardous waste site.  
DHS2 Contaminated public drinking wells serving less than 200 connections.  
DHS3 Contaminated public drinking wells serving more than 200 connections.  
DHS5 Sites pursuant to section 25356 of the Health and Safety Code (see BEP)  
WMB Solid waste disposal sites with known migration of hazardous waste.

ST Solid Waste Assessment Test, California State - SWAT(S) (11/6/91)

Facilities or sites are ranked within each region on a scale 1-15 according to priority.

SS Solid Waste Information System - SWIS (9/92)

LT Leaking Underground Storage Tanks, California State - LUST(S) (May 92)

0 No action  
1 Leak being confirmed  
3A Prel site assessment workplan submitted  
3B Prel site assessment underway  
5C Pollution characterization  
5R Remediation plan  
7 Remedial action underway  
8 Post remedial action monitoring  
9 Case closed

## REGIONAL SOURCES (updated quarterly)

LR Leaking Underground Storage Tanks, Regional - LUST(R)

0 No action  
1 Leak being confirmed  
3A Prel site assessment workplan submitted  
3B Prel site assessment underway  
5C Pollution characterization  
5R Remediation plan  
7 Remedial action underway  
8 Post remedial action monitoring  
9 Case closed

NT Non-Tank or Unauthorized Releases

1 Leak being confirmed  
2 Spill Response  
3 Preliminary Assessment  
3A Prel Site Assessment plan submitted  
3B Prel Site Assessment underway  
5 Remedial Investigation  
6A Remediation Plan Submitted  
6B Remediation Underway  
7 Post Remedial Monitoring  
9 Case Closed

TP Toxic Pits, Regional

SR Solid Waste Assessment Test, Regional - SWAT(R)

Priority Ranking 1-15

WP Well Investigation Program

1A Organics exceeding action levels  
1B Organics with set action levels  
2 Inorganics exceeding action level

## OPERATING PERMITS

HW Hazardous Waste Information System - HWIS (11/1990)

EPA Permit number

UT Underground Storage Tank Permits (1987)

Reference to tank permit

SA SARA Title III

# **ENVIRONMENTAL RECORDS SEARCH**

**LISTED BY SOURCE**

Responsible Parties (RP) who can be required to finance cleanup activities, either directly or through reimbursement of federal Superfund expenditures.

*Status Codes: NFA - No Further Action*

Site: MOBIL OIL CORP BANNING LEASE  
Address: 1080 W 17TH ST  
City: COSTA MESA  
Map Loc: 9  
Status: EPA ID#: CAD000629246

Site: BARTO OIL  
Address: 18TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 10  
Status: EPA ID#: CAD000629246

Site: LEADERSHIP HOUSING SYSTEMS  
Address: 19TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 11  
Status: EPA ID#: CAD982359994

No Further Action is planned.

Site: HIXSON METAL FINISHING FIRE  
Address: 829 PRODUCTION PL  
City: NEWPORT BEACH  
Map Loc: 41  
Status: EPA ID#: CAD982029241

No Further Action is planned.

FEDFAC Federal Facilities

As part of the CERCLIS program, federal facilities with known or suspected environmental problems, Federal Facilities Hazardous Waste Compliance Docket, are tracked separately to comply with a Federal Court order.

*No listings within the specified range.*



**LIENS      Superfund Liens**

A current list of Federal Superfund Liens as compiled by the Office of Enforcement and Compliance Monitoring (OECM), EPA, Washington, D.C. based upon information submitted by EPA's ten Regional Offices. The EPA and the OECM make no representations regarding the accuracy or completeness of the list.

*No listings within the specified range.*

**CALIFORNIA STATE SOURCES**

**AW      Annual Work Plan (previously known as Bond Expenditure Plan)**

The California Health and Safety code, as amended by AB 129, requires the California Environmental Protection Agency to develop a site-specific expenditure plan as the basis for an appropriation of California Hazardous Substance Cleanup Bond Act of 1984 funds.

The Agency is also required to update the report annually and report any significant adjustments to the Legislature on an ongoing basis. The plan identifies California hazardous waste sites targeted for cleanup by responsible parties, the California and the Federal Environmental Protection Agencies over the next five years.

<i>Status Codes:</i>	<i>BKLG</i>	<i>Backlog, Potential Annual Work Plan Site</i>
	<i>AWP</i>	<i>Active Annual Work Plan site</i>
	<i>COM</i>	<i>Certified, but still in Operation &amp; Maintenance mode</i>
	<i>CERT</i>	<i>Certified after remediation</i>
	<i>DLIST</i>	<i>Delisted from the AWP</i>
	<i>REFRC</i>	<i>Former AWP site referred to RCRA</i>
	<i>REFRW</i>	<i>Former AWP site referred to the Regional Water Quality Board</i>

*No listings within the specified range.*

**CALS      CALSITES (previously known as The Abandoned Sites Program Information System ASPIS)**

The Historical Abandoned Site Survey Program identified certain potential hazardous waste sites. These sites determinations were generally not made via sampling and site characterization. They were made as a result of file searches and windshield surveys.

Some of the sites may have had a site inspection with sampling.

The information has been compiled into this database by California Environmental Protection Agency, Department of Toxic Substance Control (DTSC) in accordance with Section 253596 of the California Health and Safety Code.

**Status Codes:**

<b>PEARL</b>	<i>Preliminary Endangerment Assessment Required, Low Priority</i>
<b>PEARM</b>	<i>Preliminary Endangerment Assessment Required, Medium Priority</i>
<b>PEARH</b>	<i>Preliminary Endangerment Assessment Required, High Priority</i>
<b>SSR</b>	<i>Site Screening Required</i>
<b>HRR</b>	<i>Hazard Ranking Required</i>
<b>PRPR</b>	<i>Potential Responsible Party Search Required</i>
<b>NFA</b>	<i>No Further Action for DTSC</i>
<b>EPA</b>	<i>EPA is the lead agency</i>
<b>RCRA</b>	<i>Mitigated under the RCRA permitting program</i>
<b>RWQCB</b>	<i>Mitigated under the lead of the Regional Water Quality Board.</i>
<b>CNTY</b>	<i>County Lead</i>
<b>OAL</b>	<i>Other Agency Lead</i>

Site: RITE-O-LITE  
Address: 871 W 15TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SEMICONDUCTOR DEVICES  
Address: 875 W 15TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: FLEXIBLE METAL HOSE  
Address: 777 W 16TH ST  
City: COSTA MESA  
Map Loc: 1  
Status: *PEARL - Preliminary Endangerment Assessment Required, Low Priority*

Site: SOUTH COAST MARINE  
Address: 788 W 16TH ST  
City: COSTA MESA  
Map Loc: 2  
Status: *SSR - Site Screening Required*

Site: METAL SERVICE CO  
Address: 789 W 16TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: WALKER PAINT WORKERS  
Address: 816 W 16TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: ELECTRONIC TECHNOLOGY LABS  
Address: 823 W 16TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: LOCKFAST  
Address: 864 W 16TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SOUNDCAST  
Address: 17TH & PLACENTIA  
City: COSTA MESA  
Map Loc: 3  
Status: *SSR - Site Screening Required*

Site: CLAM PROTECTIVE COATINGS  
Address: 636 W 17TH ST  
City: COSTA MESA  
Map Loc: 4  
Status: *PEARL - Preliminary Endangerment Assessment Required, Low Priority*

Site: MASTER MECHANIC  
Address: 644 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: BUSHCRAFT ENGINEERING & MFG.  
Address: 660 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: J C CARTER COMPANY  
Address: 671 W 17TH ST  
City: COSTA MESA  
Map Loc: 5  
Status: *SSR - Site Screening Required*

Site: SARGENTS GRINDING  
Address: 738 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

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Site: HARBOR MACHINE  
Address: 746 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SPARCRAFT  
Address: 770 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: DUTRON  
Address: 777 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: EPOXY-PAC  
Address: 817 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: CAL VAL  
Address: 870 W 17TH ST  
City: COSTA MESA  
Map Loc: 7  
Status: *PEARL - Preliminary Endangerment Assessment Required, Low Priority*

Site: AM & M METALS  
Address: 873 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: PLASTIC FARM CO  
Address: 875 W 17TH ST  
City: COSTA MESA  
Map Loc: 8  
Status: *SSR - Site Screening Required*

Site: ROYCE WOODFORD  
Address: 891 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: WALTAN CORKWOOD  
Address: 934 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: ARTHUR MARINE  
Address: 959 W 17TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MOBIL OIL #2  
Address: 1080 W 17TH ST  
City: COSTA MESA  
Map Loc: 9  
Status: *SSR - Site Screening Required*

Site: CALIFORNIA EXPLORATION COMPANY  
Address: 18TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 10  
Status: *SSR - Site Screening Required*

Site: ELECTRO-MECHANIC SHOP  
Address: 687 W 18TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SUPREME ENGINEERING  
Address: 849 W 18TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: ORTHODYNE ELECTRONICS  
Address: 851 W 18TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MAJORWAY TRAILOR MFG  
Address: 869 W 18TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: LEADERSHIP HOUSING SYSTEMS  
Address: 19TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 11  
Status: *PEARL - Preliminary Endangerment Assessment Required, Low Priority*

Site: HOUSE OF BATTERIES  
Address: 778 W 19TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

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Site: WILLIAMS DRILLING COMPANY  
Address: 857 W 19TH ST, 857-867  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: HUNT MFG.  
Address: 857 W 19TH ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: NEWPORT HARBOR NEWS PRESS  
Address: 2211 W BALBOA BLVD  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: MACOIL CORP  
Address: 5800 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 16  
Status: *SSR - Site Screening Required*

Site: MACOIL CORP  
Address: 5800 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 16  
Status: *SSR - Site Screening Required*

Site: ARMSTRONG PETROLEUM #1  
Address: 5800 W COAST HWY  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: COLLINS OIL  
Address: 131 COMMERCIAL WAY  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: RESIN FLOOR PRODUCTS INC  
Address: 134 COMMERCIAL WAY  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: EL MOORE COMPANY  
Address: 135 COMMERCIAL WAY  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: CALIF. REDWOOD MATERIALS  
Address: 106 INDUSTRIAL WAY  
City: COSTA MESA  
Map Loc: 20  
Status: *SSR - Site Screening Required*

Site: AAA PROPELLOR  
Address: 127 INDUSTRIAL WAY  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: O.C. MORITZ  
Address: 133 INDUSTRIAL WAY  
City: COSTA MESA  
Map Loc: 22  
Status: *PEARM - Preliminary Endangerment Assessment Required, Medium Priority*

Site: PICK UP PRECISION GEARS  
Address: 136 INDUSTRIAL WAY  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: NMS CO.  
Address: 1533 MONROVIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: PERMALITE PLASTICS CORPORATION  
Address: 1537 MONROVIA AVE  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: NEWPORT PHARMACEUTICALS INTERN  
Address: 1590 MONROVIA AVE  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: MONITOR SCIENCE CORPORATION  
Address: 1598 MONROVIA AVE  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: MONITOR SCIENCE CORPORATION  
Address: 1598 MONROVIA AVE  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: MASTER SPECIALTIES  
Address: 1640 MONROVIA AVE  
City: COSTA MESA  
Map Loc: 23  
Status: *PEARM - Preliminary Endangerment Assessment Required, Medium Priority*

Site: LINKLATER CO.  
Address: 1725 MONROVIA AVE, 'B-5  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: DECK TECHNOLOGY  
Address: 1733 MONROVIA AVE, 'G  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SEYMOUR ENTERPRISES  
Address: 1780 MONROVIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: A-1 BEARINGS AND ABRASIVES  
Address: 1794 MONROVIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MAJOR DATA CONCEPTS INC  
Address: 1796 MONROVIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: LINCO PRODUCTS  
Address: 1820 MONROVIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: BROOKSCHEM CORP  
Address: 925 NEWHALL ST  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: LIDO CASTINGS  
Address: 735 OHMS WAY  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*



Site: HARTMAN ENTERPRISES  
Address: 741 OHMS WAY  
City: COSTA MESA  
Map Loc: 26  
Status: *PEARM - Preliminary Endangerment Assessment Required, Medium Priority*

Site: WEST COAST COATING  
Address: 1606 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: CRYSTALINER YACHTS  
Address: 1626 PLACENTIA AVE  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: INTERNATIONAL TUNGSTON CARBIDE  
Address: 1651 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: CHAPMAN SHERMAN PAINT  
Address: 1663 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: AMERICAN GLASS & SCREEN  
Address: 1671 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: WAYFARER YACHT CORP  
Address: 1682 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SOUNDCAST CO.  
Address: 1741 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 30  
Status: *SSR - Site Screening Required*

Site: FOSS CO. #1  
Address: 1751 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: CAST INDUSTRIES  
Address: 1755 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: BAYSIDE INDUSTRIES  
Address: 1761 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 31  
Status: *PEARL - Preliminary Endangerment Assessment Required, Low Priority*

Site: FOSS CO. #2  
Address: 1767 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 33  
Status: *SSR - Site Screening Required*

Site: DUCTALL CORP.  
Address: 1771 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: JENSEN MARINE  
Address: 1791 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: BROWNING MFG.  
Address: 1919 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 34  
Status: *PEARL - Preliminary Endangerment Assessment Required, Low Priority*

Site: TEXAS METALS & MINERALS CORP.  
Address: 1922 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SPACE-TEK INDUSTRIES  
Address: 1926 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: JOLLY ROGER BOATS  
Address: 1937 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 35  
Status: *SSR - Site Screening Required*

Site: CANNON ELECTRIC CO.  
Address: 1943 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MACOA MARINE  
Address: 1947 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: POLLARD BOAT REPAIR  
Address: 1950 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: POLLARD BOAT REPAIR  
Address: 1950 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: AERO DESIGN PRODUCTS CORP.  
Address: 1970 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: PREMIERE ADHESIVES  
Address: 1975 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: PREMIERE ADHESIVES  
Address: 1975 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SOCIAL MARINE  
Address: 1980 PLACENTIA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: COOLEY SARAH COSMETICS  
Address: 1996 PLACENTIA AVE, 1996-1998  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: VOGUE COSMETICS PRODUCTS  
Address: PO BOX 215  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: DELMAR WESTERN CHEMICAL INC  
Address: PO BOX 831  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MIKE COOK BOATYARD  
Address: 1640 POMONA AVE  
City: COSTA MESA  
Map Loc: 39  
Status: *PEARM - Preliminary Endangerment Assessment Required, Medium Priority*

Site: MIKE COOK BOATYARD  
Address: 1640 POMONA AVE  
City: COSTA MESA  
Map Loc: 39  
Status: *PEARM - Preliminary Endangerment Assessment Required, Medium Priority*

Site: ENTIN METALS #2  
Address: 1701 POMONA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: SAN GABRIEL DIE & MOLD  
Address: 1719 POMONA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: RUBBER TREAD INC.  
Address: 1730 POMONA AVE, BLDG CA  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: COLLINS WESLEY MINING CO.  
Address: 1756 POMONA AVE  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: HIXSON METAL FINISHING  
Address: 829 PRODUCTION PL  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: DELTA SEMICONDUCTORS #2  
Address: 835 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: OMEGA INDUSTRIES  
Address: 841 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: FLOW SYSTEMS, INC.  
Address: 842 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MAGNETIC METALS  
Address: 847 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: MAGNETIC METALS #3  
Address: 853 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: CROWN MFG CO.  
Address: 858 PRODUCTION PL  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: KAY LAB  
Address: 870 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: ROBBIN THOMAS PL  
Address: 888 PRODUCTION PL  
City: NEWPORT BEACH  
Status: *NFA - No Further Action for DTSC*

Site: LIDO CASTINGS #2  
Address: 894 PRODUCTION PL  
City: COSTA MESA  
Status: *NFA - No Further Action for DTSC*

Site: G.E. KADANE & SONS  
Address: 1313 SUPERIOR AVE  
City: COSTA MESA  
Map Loc: 42  
Status: *SSR - Site Screening Required*

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Site:	RED - JET SYSTEMS
Address:	1779 WHITTIER AVE
City:	COSTA MESA
Status:	NFA - No Further Action for DTSC
Site:	CADILLAC GAGE CO. (CADILLAC CO
Address:	1866 WHITTIER AVE
City:	COSTA MESA
Map Loc:	43
Status:	SSR - Site Screening Required
Site:	FIBERTECH
Address:	1880 WHITTIER AVE
City:	COSTA MESA
Status:	NFA - No Further Action for DTSC
Site:	ENKAY AIRCRAFT PROD
Address:	1882 WHITTIER AVE
City:	COSTA MESA
Status:	NFA - No Further Action for DTSC
Site:	ANGEL M GARCIA
Address:	1897 WHITTIER AVE
City:	COSTA MESA
Map Loc:	44
Status:	SSR - Site Screening Required

**CORTESE** State of California Office of Planning and Research

This database is a consolidation of information from various sources. It is maintained by the State Office of Planning and Research and lists potential and confirmed hazardous waste or substances sites. This source was last updated by the government in November 1990.

<b>Status Codes:</b>	<b>WRCBT</b>	<b>Tank leaks. Compiled by Water Resource Control Board.</b>
	<b>DHS1</b>	<b>Abandoned hazardous waste site. Compiled by Toxic Substance Control Div. of DHS.</b>
	<b>DHS2</b>	<b>Contaminated public water drinking wells serving less than 200 connections. Compiled by Env. Health Div. of DHS.</b>
	<b>DHS3</b>	<b>Contaminated public water drinking wells serving more than 200 connections.</b>
	<b>DHS5</b>	<b>Sites pursuant to section 25356 of the Health and Safety Code (see BEP)</b>
	<b>CWMB</b>	<b>Solid waste disposal sites with known migration of hazardous waste.</b>

Site: J.C. CARTER CO.  
Address: 671 W 17TH ST  
City: COSTA MESA  
Map Loc: 5  
Status: *WCRBT - Leaking Tank*

Site: CALIFORNIA EXPLORATION COMPANY  
Address: 18TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 10  
Status: *DHS1 - Abandoned Hazardous Waste Site*

Site: L & M VENTURES (EMERALD AUTO)  
Address: 801 W 19TH ST  
City: COSTA MESA  
Map Loc: 12  
Status: *WCRBT - Leaking Tank*

Site: L & M VENTURES (SERVICE STN)  
Address: 1901 W 19TH ST  
City: COSTA MESA  
Map Loc: 13  
Status: *WCRBT - Leaking Tank*

Site: MOBIL SERVICE STATION #18-HG7  
Address: 1500 W BALBOA BLVD  
City: NEWPORT BEACH  
Map Loc: 14  
Status: *WCRBT - Leaking Tank*

Site: LUBY ENTERPRISES(FORMER TOSCO)  
Address: 4625 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 15  
Status: *WCRBT - Leaking Tank*

Site: NEWPORT AUTOWORKS  
Address: 121 INDUSTRIAL WAY  
City: COSTA MESA  
Map Loc: 21  
Status: *WCRBT - Leaking Tank*

Site: HARTMAN ENTERPRISES  
Address: 741 OHMS WAY  
City: COSTA MESA  
Map Loc: 26  
Status: *DHS1 - Abandoned Hazardous Waste Site*

Site: ALANOR CORPORATION  
Address: 1697 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 28  
Status: *WCRBT - Leaking Tank*

Site: CLA-VAL CORPORATION  
Address: 1701 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 29  
Status: *WCRBT - Leaking Tank*

Site: SKIPJACK BOATS  
Address: 1763 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 32  
Status: *WCRBT - Leaking Tank*

Site: MESA CONSOLIDATED WATER DIST.  
Address: 1965 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 37  
Status: *WCRBT - Leaking Tank*

Site: HARTLEY COMPANY, THE  
Address: 1987 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 38  
Status: *WCRBT - Leaking Tank*

LUST(S) Leaking Underground Storage Tanks - California State

The Leaking Underground Storage Tanks Information System is maintained by the State Water Resource Board pursuant to Section 25295 of the Health and Safety Code.

Status Codes:	0	No action
	1	Leak being confirmed
	3A	Prel site assessment workplan submitted
	3B	Prel site assessment underway
	5C	Pollution characterization
	5R	Remediation plan
	7	Remedial action underway
	8	Post remedial action monitoring
	9	Case closed



Site: J.C. CARTER CO., INC.  
Address: 671 W 17TH ST  
City: COSTA MESA  
Map Loc: 5  
Status: 3B - Prelim Site Assessment underway.

Site: VANCE & ASSOC. ROOFING, INC.  
Address: 837 W 17TH ST  
City: COSTA MESA  
Map Loc: 6  
Status: 3B - Prelim Site Assessment underway.

Site: L & M VENTURES (EMERALD AUTO)  
Address: 801 W 19TH ST  
City: COSTA MESA  
Map Loc: 12  
Status: 7 - Remedial Action underway.

Site: L & M VENTURES (SHELL)  
Address: 1901 W 19TH ST  
City: COSTA MESA  
Map Loc: 13  
Status: 5C - Pollution characterization.

Site: MOBIL SERVICE STATION #18-HG7  
Address: 1500 W BALBOA BLVD  
City: NEWPORT BEACH  
Map Loc: 14  
Status: 5R - Remediation Plan submitted.

Site: TRIANGLE ASSOCIATES (LUBY)  
Address: 4625 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 15  
Status: 7 - Remedial Action underway.

Site: CALTRANS  
Address: 6500 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 17  
Status: 3B - Prelim Site Assessment underway.

Site: CALTRANS  
Address: 6800 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 18  
Status: 9 - Case Closed.

Site: NEWPORT AUTOWORKS  
Address: 121 INDUSTRIAL WAY  
City: COSTA MESA  
Map Loc: 21  
Status: 9 - Case Closed.

Site: FORD'S AUTOMOTIVE  
Address: 705 OHMS WAY  
City: COSTA MESA  
Map Loc: 24  
Status: 3A - Prelim Site Assessment workplan submitted.

Site: SMITH AND SONS PROPERTIES  
Address: 735 OHMS WAY  
City: COSTA MESA  
Map Loc: 25  
Status: 9 - Case Closed.

Site: BOAT YARD, THE  
Address: 1672 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 27  
Status: 9 - Case Closed.

Site: ALANOR CORPORATION  
Address: 1697 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 28  
Status: 9 - Case Closed.

Site: CLA-VAL CORPORATION  
Address: 1701 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 29  
Status: 9 - Case Closed.

Site: SKIPJACK BOATS  
Address: 1763 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 32  
Status: 9 - Case Closed.

Site: CRISSMAN'S RENTAL  
Address: 1954 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 36  
Status: 9 - Case Closed.

Site: MESA CONSOLIDATED WATER DIST.  
Address: 1965 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 37  
Status: 3B - Prelim Site Assessment underway.

Site: HARTLEY COMPANY, THE  
Address: 1987 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 38  
Status: 5C - Pollution characterization.

SWAT(S) Solid Waste Assessment Test - California State

This program, provided for under the Calderon legislation (Section 13273 of the Water Code), requires that disposal sites with more than 50,000 cubic yards of waste provide sufficient information to the regional water quality control board to determine whether or not the site has discharged hazardous substances which will impact the environment.

Site operators are required to file Solid Waste Assessment Test reports on a staggered basis. Operators of the 150 highest ranking (Rank 1) sites were required to submit Solid Waste Assessment Tests by July 1, 1987, Rank 2 in 1988 and so on.

Operators submit water quality tests to the Regional Water Quality Control Board, describing surface and groundwater quality and supply; and the geology within 1 mile of the site. Air quality tests are submitted to the local Air Quality Management District or Air Pollution Control District.

*Status Codes: Facilities or sites are ranked within each region on a scale 1-15 according to priority.*

Site: LEADERSHIP HOUSING SYSTEMS-#1  
Address: 19TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 11  
Status: Priority Rank 13

Site: NEWPORT BEACH CITY LANDFILL  
Address: DANA RD & FLAGSHIP RD  
City: NEWPORT BEACH  
Map Loc: 19  
Status: Priority Rank 14

Site: ENTIN METALS #2  
Address: 1701 POMONA AVE  
City: COSTA MESA  
Map Loc: 40  
Status: *Priority Rank 13*

SWIS Solid Waste Information System

As legislated under the Solid Waste Management and Resource Recovery Act of 1972, the California Waste Management Board maintains lists of certain facilities, i.e. Active solid waste disposal sites, Inactive or Closed solid waste disposal sites and Transfer facilities.

*No listings within the specified range.*

REGIONAL SOURCES

LUST(R) Leaking Underground Storage Tanks - Regional

Each of the California Regional Water Quality Control Boards RWQCB maintains lists of leaking underground storage tanks.

<i>Status Codes:</i>	<i>0</i>	<i>No action</i>
	<i>1</i>	<i>Leak being confirmed</i>
	<i>3A</i>	<i>Prel site assessment workplan submitted</i>
	<i>3B</i>	<i>Prel site assessment underway</i>
	<i>5C</i>	<i>Pollution characterization</i>
	<i>5R</i>	<i>Remediation plan</i>
	<i>7</i>	<i>Remedial action underway</i>
	<i>8</i>	<i>Post remedial action monitoring</i>
	<i>9</i>	<i>Case closed</i>

Site: J.C. CARTER CO., INC.  
Address: 671 W 17TH ST  
City: COSTA MESA  
Map Loc: 5  
Status: *3B - Prelim Site Assessment underway.*

Site: VANCE & ASSOC. ROOFING, INC.  
Address: 837 W 17TH ST  
City: COSTA MESA  
Map Loc: 6  
Status: *3B - Prelim Site Assessment underway.*

Site: L & M VENTURES (EMERALD AUTO)  
Address: 801 W 19TH ST  
City: COSTA MESA  
Map Loc: 12  
Status: 7 - Remedial Action underway.

Site: L & M VENTURES (SHELL)  
Address: 1901 W 19TH ST  
City: COSTA MESA  
Map Loc: 13  
Status: 5C - Pollution characterization.

Site: MOBIL SERVICE STATION #18-HG7  
Address: 1500 W BALBOA BLVD  
City: NEWPORT BEACH  
Map Loc: 14  
Status: 5R - Remediation Plan submitted.

Site: TRIANGLE ASSOCIATES (LUBY)  
Address: 4625 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 15  
Status: 7 - Remedial Action underway.

Site: CALTRANS  
Address: 6500 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 17  
Status: 3B - Prelim Site Assessment underway.

Site: CALTRANS  
Address: 6800 W COAST HWY  
City: NEWPORT BEACH  
Map Loc: 18  
Status: 9 - Case Closed.

Site: NEWPORT AUTOWORKS  
Address: 121 INDUSTRIAL WAY  
City: COSTA MESA  
Map Loc: 21  
Status: 9 - Case Closed.

Site: FORD'S AUTOMOTIVE  
Address: 705 OHMS WAY  
City: COSTA MESA  
Map Loc: 24  
Status: 3A - Prelim Site Assessment workplan submitted.

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Site: SMITH AND SONS PROPERTIES  
Address: 735 OHMS WAY  
City: COSTA MESA  
Map Loc: 25  
Status: 9 - Case Closed.

Site: BOAT YARD, THE  
Address: 1672 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 27  
Status: 9 - Case Closed.

Site: ALANOR CORPORATION  
Address: 1697 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 28  
Status: 9 - Case Closed.

Site: CLA-VAL CORPORATION  
Address: 1701 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 29  
Status: 9 - Case Closed.

Site: SKIPJACK BOATS  
Address: 1763 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 32  
Status: 9 - Case Closed.

Site: CRISSMAN'S RENTAL  
Address: 1954 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 36  
Status: 9 - Case Closed.

Site: MESA CONSOLIDATED WATER DIST.  
Address: 1965 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 37  
Status: 3B - Prelim Site Assessment underway.

Site: HARTLEY COMPANY, THE  
Address: 1987 PLACENTIA AVE  
City: COSTA MESA  
Map Loc: 38  
Status: 5C - Pollution characterization.

**NT Toxic Releases**

The California Regional Water Quality Control Boards or local Department of Health Services keeps track of toxic releases to the environment. These lists are known as Unauthorized Releases, Non-Tank Releases, Toxics List or similar, depending on the local agency.

*No listings within the specified range.*

**TPC Toxic Pits**

The Toxic Pits Clean-Up Act (Katz Bill) places strict limitations on the discharge of liquid hazardous wastes into surface impoundments, toxic ponds, pits and lagoons. Regional Water Quality Control Boards are required to inspect all surface impoundments annually. In addition, every facility was required to file a Hydrogeological Assessment Report. Recent legislation allows the Department of Health Services to exempt facilities that closed on or before December 31, 1985, if a showing is made that no significant environmental risk remains (AB1046)

Special exemption provisions have been created for surface impoundments that receive mining wastes.

*No listings within the specified range.*

**SWAT(R) Solid Waste Assessment Test - Regional**

The Solid Waste Assessment Test Program targets sites where there is a possible risk of hazardous waste escaping from solid waste disposal sites (landfills), threatening both water and air quality. Threatening sites are required to submit water quality Solid Waste Assessment Tests to their Regional Water Quality Control Board. Air quality Solid Waste Assessment Tests are submitted to the local Air Quality Management District or Air Pollution Control District.

Site: LEADERSHIP HOUSING SYSTEMS-NEW  
Address: 19TH & WHITTIER AVE  
City: COSTA MESA  
Map Loc: 11  
Status: *Priority Rank 13*

Site: NEWPORT BEACH CITY LANDFILL  
Address: DANA RD & FLAGSHIP RD  
City: NEWPORT BEACH  
Map Loc: 19  
Status: *Priority Rank 14*

Site: ENTIN METALS NO 2  
Address: 1701 POMONA AVE  
City: COSTA MESA  
Map Loc: 40  
Status: *Priority Rank 13*

**WIP**      **Well Investigation Program**

The Well Investigation Program (AB1803) identifies groundwater that is already contaminated and empowers the California Department of Health Services and local health officers to order ongoing monitoring programs. The focus of this program is to monitor and protect drinking water.

*No listings within the specified range.*

**OPERATING PERMITS**

Various agencies issue operating permits or regulate the handling, movements, storage and disposal of hazardous materials and require mandatory reporting. The sources referenced below have been searched within half a mile of the subject site.

The inclusion in this section does not infer that an environmental problem exists presently or has in the past.



**SARA SARA Title III, section 313**

Title III of the Superfund Amendments and Reauthorization Act, Section 313, also known as Emergency Planning and Community Right-to-Know Act of 1986 requires owners or operators of facilities with more than 10 employees and are listed under Standard Industrial Classification (SIC) Codes 20 through 39 to report the manufacture, process or use of more than a threshold of certain chemical or chemical categories listed under section 313.

Site: EATON CORP., AEROSPACE & COMM  
Address: 1640 MONROVIA AVE  
City: COSTA MESA  
Map Loc: 23  
Status:

**HWIS Hazardous Waste Information System**

The Department of Health Services, Toxic Substance Division, California State, maintains a data base keeping track of the movement and disposal of hazardous waste. The data is used to support the Tanner legislation, AB 2948.

*Status Codes: EPA Facility Permit Number*

Site: OMOHUNDRO CO  
Address: 960 W 16TH ST  
City: COSTA MESA  
Map Loc: 45  
Status: EPA ID#: CAD981378045

Site: PRECISION OPTICAL  
Address: 869 W 17TH ST  
City: COSTA MESA  
Map Loc: 46  
Status: EPA ID#: CAD981391386

Site: WINFIELD LOCKS INC  
Address: 1020 W 17TH ST  
City: COSTA MESA  
Map Loc: 47  
Status: EPA ID#: CAD982018764

Site: AMERINCA QUALITY REFINISHERS  
Address: 785 W 17TH ST UNIT A  
City: COSTA MESA  
Map Loc: 48  
Status: *EPA ID#: CAD981569601*

Site: EUROPEAN AUTO RESTORATION INC  
Address: 1665 BABCOCK ST  
City: COSTA MESA  
Map Loc: 51  
Status: *EPA ID#: CAD981992662*

Site: EATON CORPORATION/MSC PRODUCTS  
Address: 1640 MONROVIA AVE  
City: COSTA MESA  
Map Loc: 23  
Status: *EPA ID#: CAD009640319*

Site: COAST CIRCUIT ENGINEERING INC  
Address: 1725 MONROVIA AVE, STE A6  
City: COSTA MESA  
Map Loc: 52  
Status: *EPA ID#: CAD106662018*

Site: BRAXTON MFG CO OF CALIF INC  
Address: 1733 MONROVIA AVE, STE V  
City: COSTA MESA  
Map Loc: 53  
Status: *EPA ID#: CAD067626598*

Site: P W ASSCIOTES  
Address: 942 SUNSET DR  
City: COSTA MESA  
Map Loc: 55  
Status: *EPA ID#: CAD982318537*

Site: GULTON INDUSTRIES (S C DIV)  
Address: 1644 WHITTIER AVE  
City: COSTA MESA  
Map Loc: 56  
Status: *EPA ID#: CAD008237109*

---

Site: BRUCE JONES SURFBOARDS INC  
Address: 1835 WHITTIER AVE, UNIT E3  
City: COSTA MESA  
Map Loc: 57  
Status: EPA ID#: CAL000005185

UST Permitted Underground Storage Tanks - State Water Quality Board

The Corteses Bill (AB2013), enacted in 1983, required registration of all underground storage tanks (UST) with the State Water Quality Board by July 1, 1984. About 176,000 tanks and surface impounds were registered between 1984 and 1987. An amendment (AB 1413) was passed in 1987, effectively removing the State Board from the registration process starting January 1, 1988. The data reflects the information collected by the state between 1984 and 1987 and includes all tanks and surface impounds in use or closed between 1974 and 1987.

Home and farm heating fuel tanks with capacities of 1,100 gallons or less and "structures such as sumps, separators, storm drains, catch basins, oil field gathering lines, refinery pipelines, lagoons, evaporation ponds, well cellars, separation sumps, lined and unlined pits, sumps and lagoons" except those defined as UST under HSWA or may be regulated to protect water quality under the Porter-Cologne Water Quality Control Act.

Site: VANCE & ASSOC., ROOFING INC.  
Address: 837 W 17TH ST  
City: COSTA MESA  
Map Loc: 6  
Status: *Permitted Tanks:*

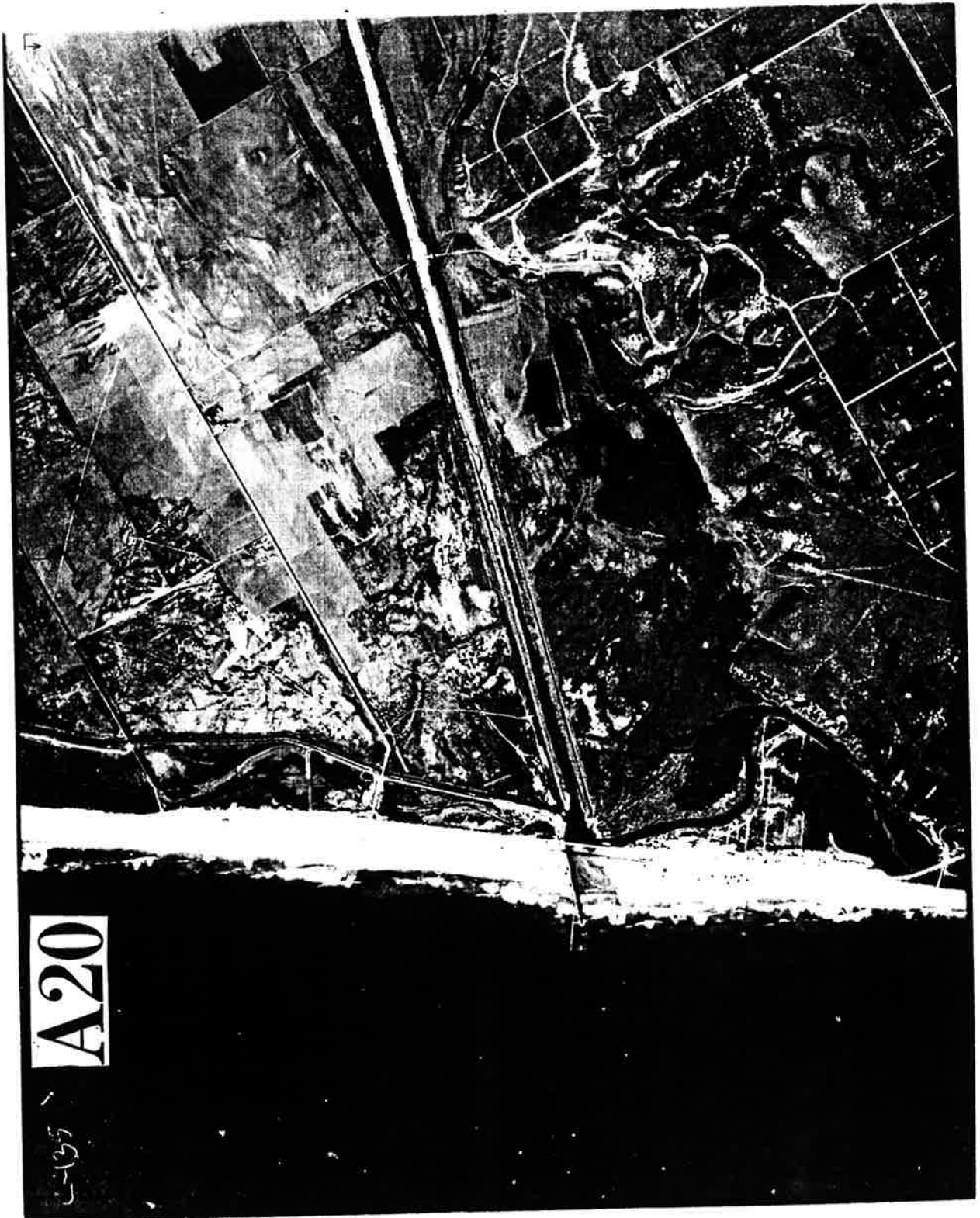
Site: NEWPORT SANITATION CO  
Address: 834 W 18TH ST  
City: COSTA MESA  
Map Loc: 49  
Status: *Permitted Tanks:*

Site: ORANGE COAST PLASTIC MOLDING,  
Address: 850 W 18TH ST  
City: COSTA MESA  
Map Loc: 50  
Status: *Permitted Tanks:*

Site: KAAMA MARINA ENGINEERING INC  
Address: 936 SUNSET DR  
City: COSTA MESA  
Map Loc: 54  
Status: *Permitted Tanks:*

# **APPENDIX B**

## **AERIAL PHOTOGRAPHS**









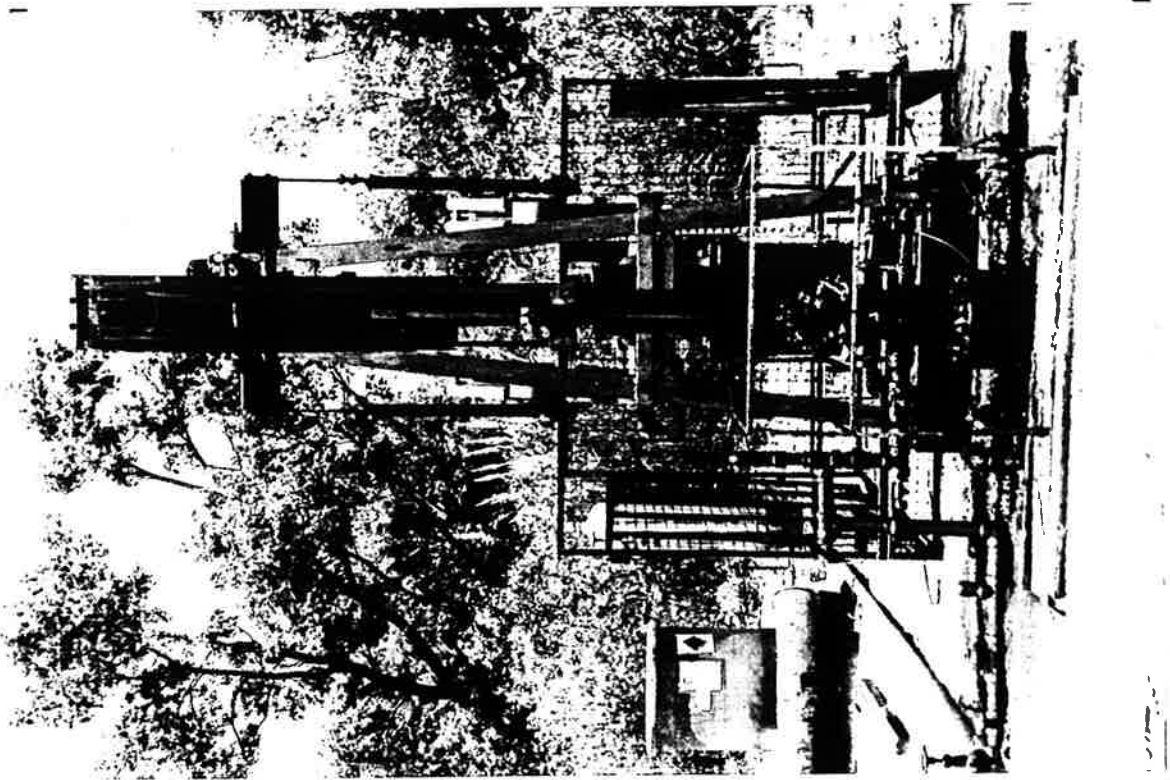




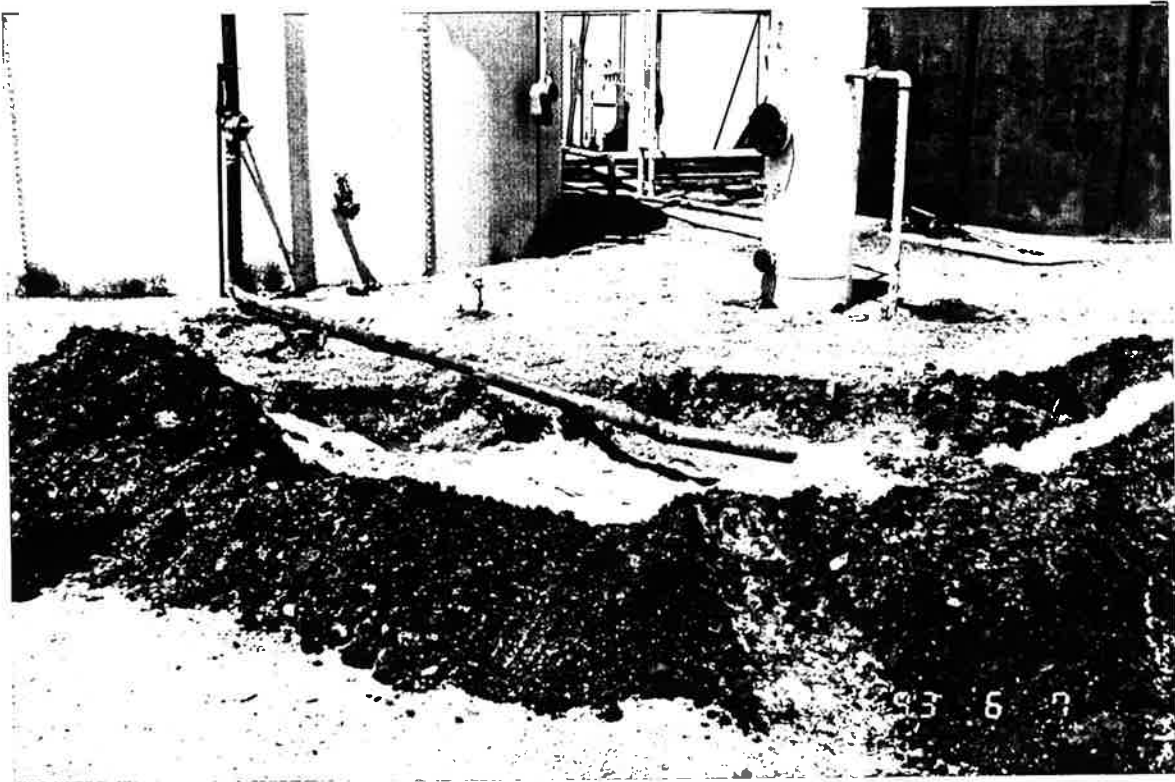


**APPENDIX C**

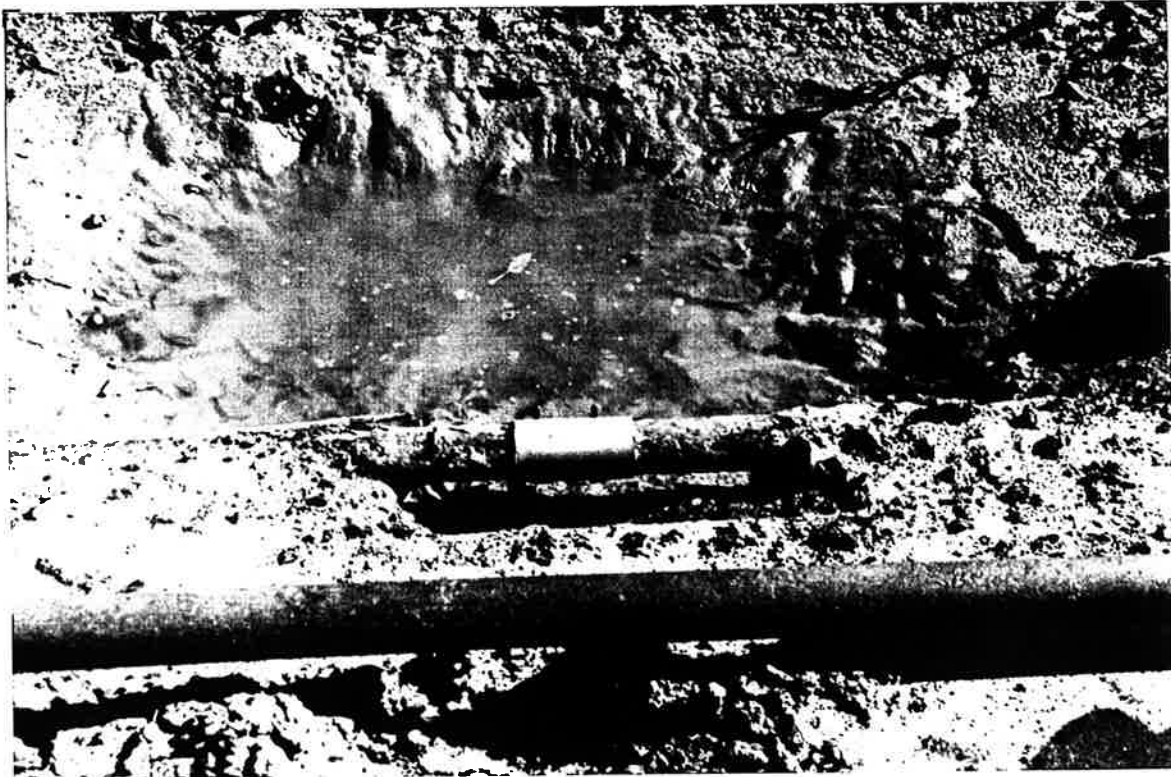
**PHOTOGRAPHIC DOCUMENTATION**



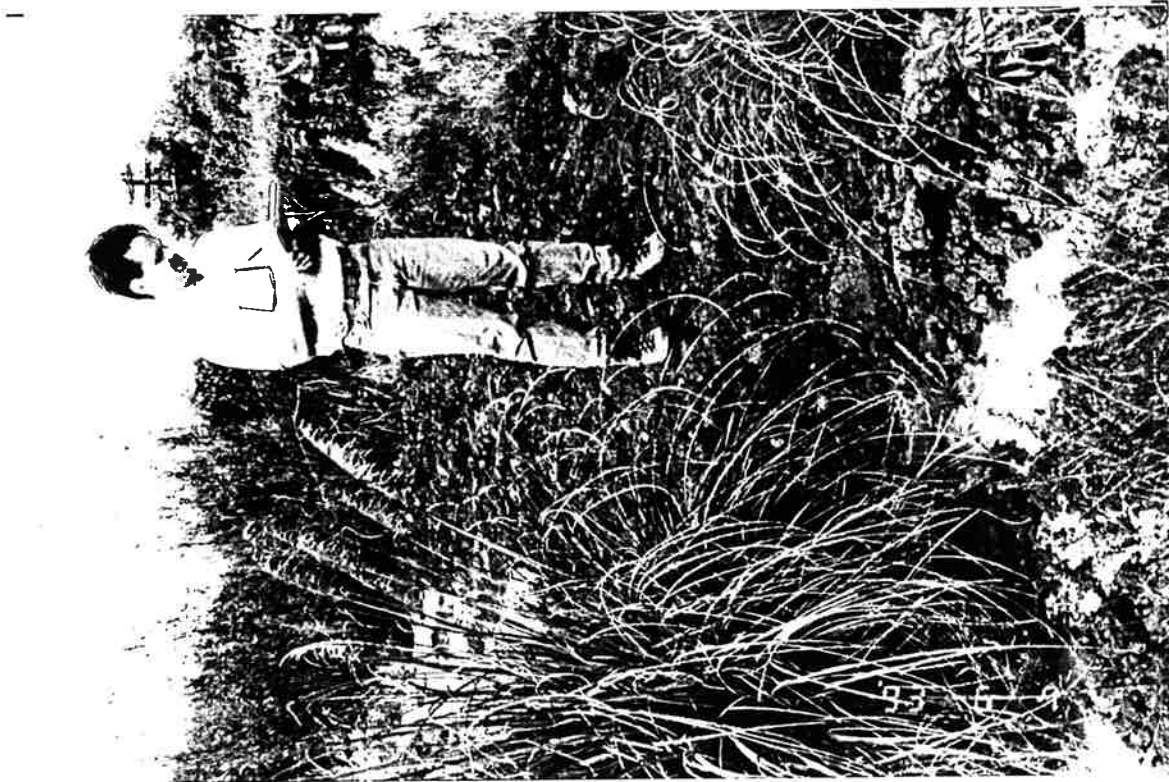
{1} Typical crude oil production well with double-contained corrosion inhibitor



{2} Uncontained crude oil producing a tar-like material



{3} Crude oil buried pipeline showing repair



{4} Spilled crude oil producing an asphalt-like material





{5} Crude oil-impacted soil



{6} Drums



{7} Drums



{8} Main site tank farm sump



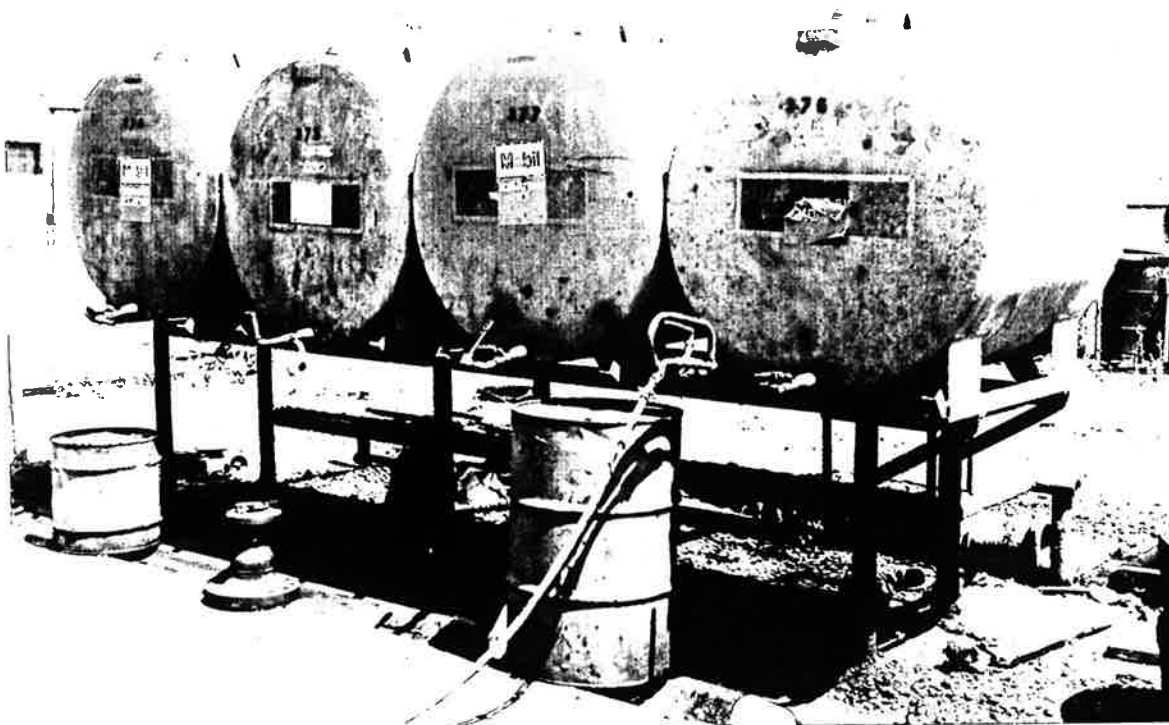
{9} Maintenance Shop/Warehouse sump



{10} Air compression plant sump

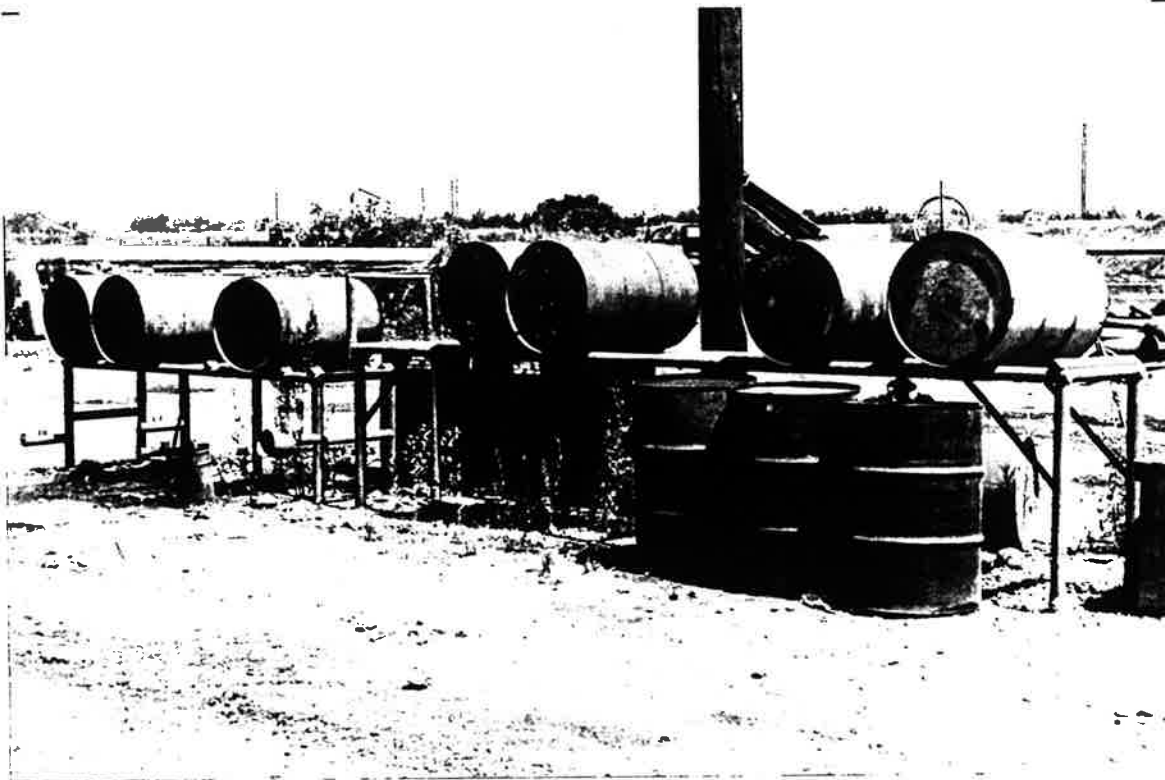


{11} Main site tank farm

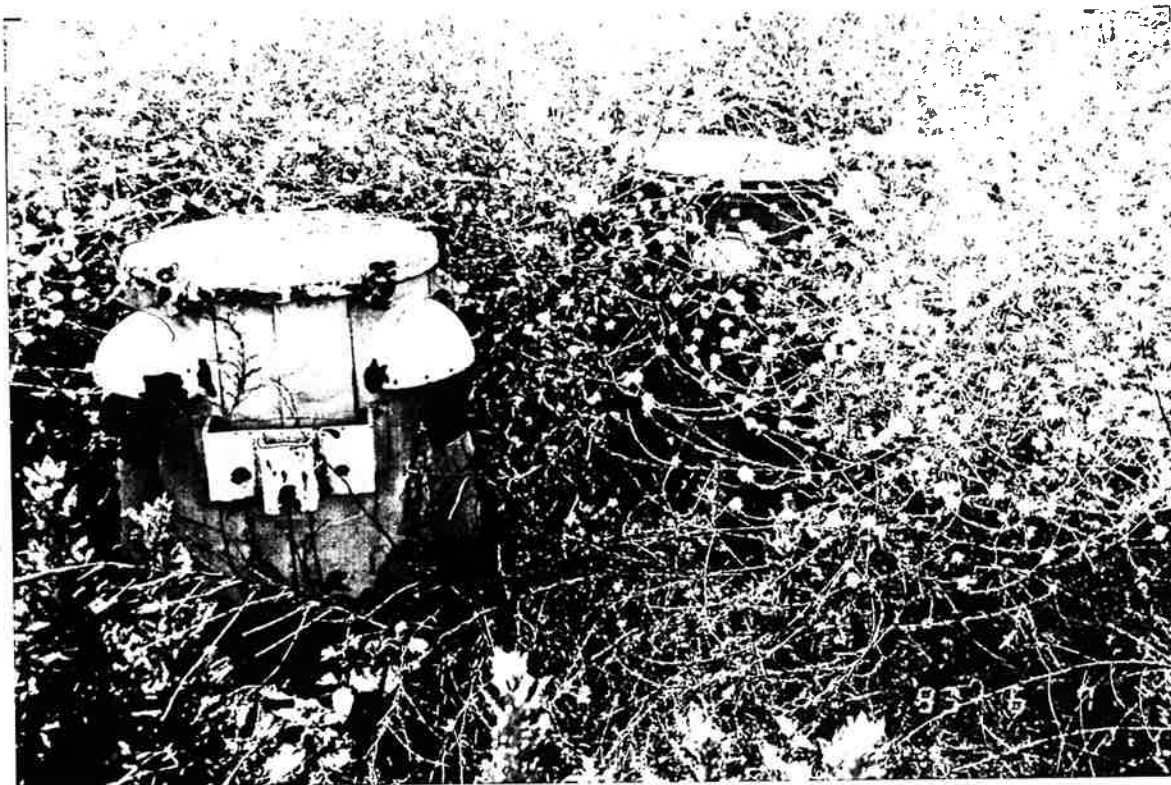


{12} Petroleum product containers





{13} Drum racks



{14} Out-of-service transformers



{15} Solid waste



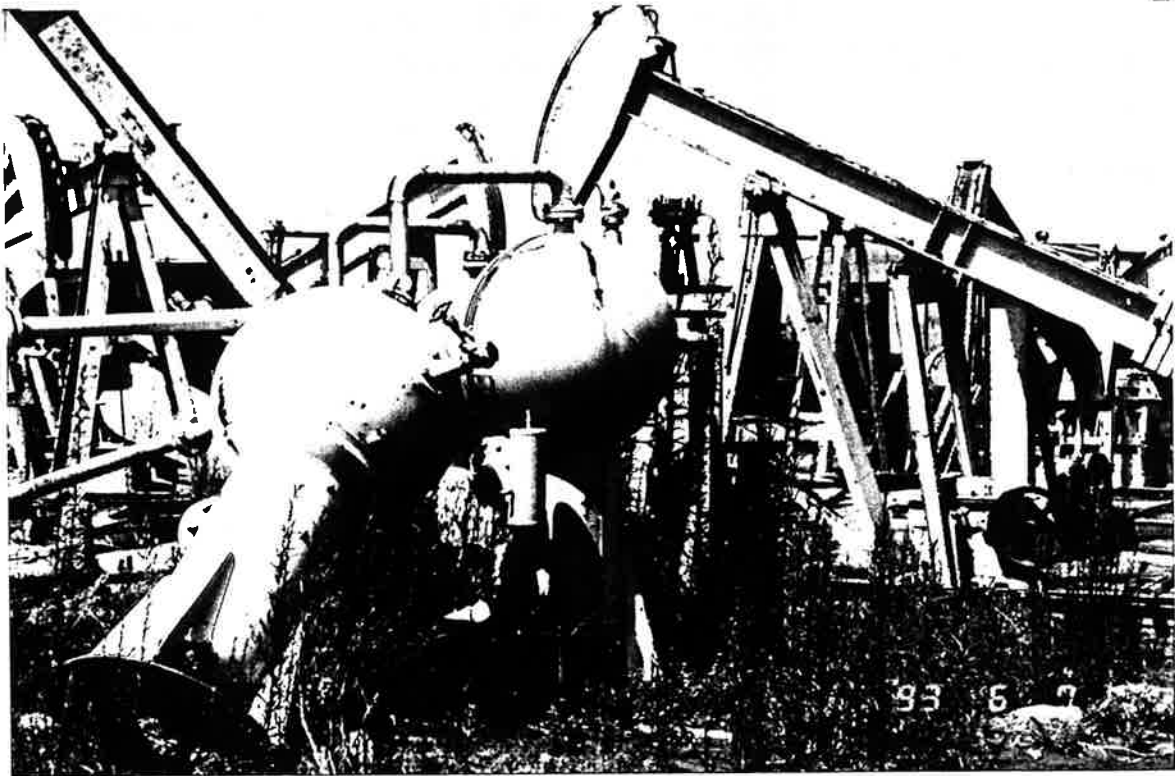
{16} Solid waste



{17} Non-operable motor vehicles



{18} Crude oil production well cellars



{19} Surplus oil production equipment

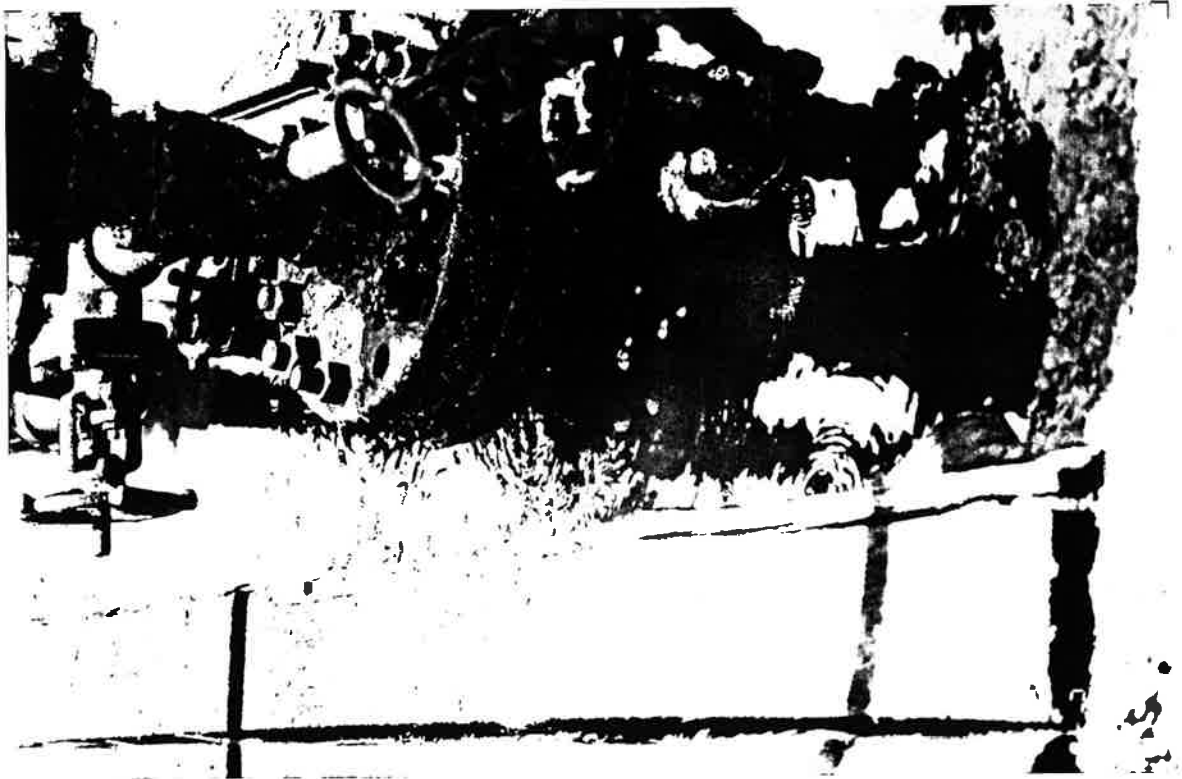


{20} Construction debris

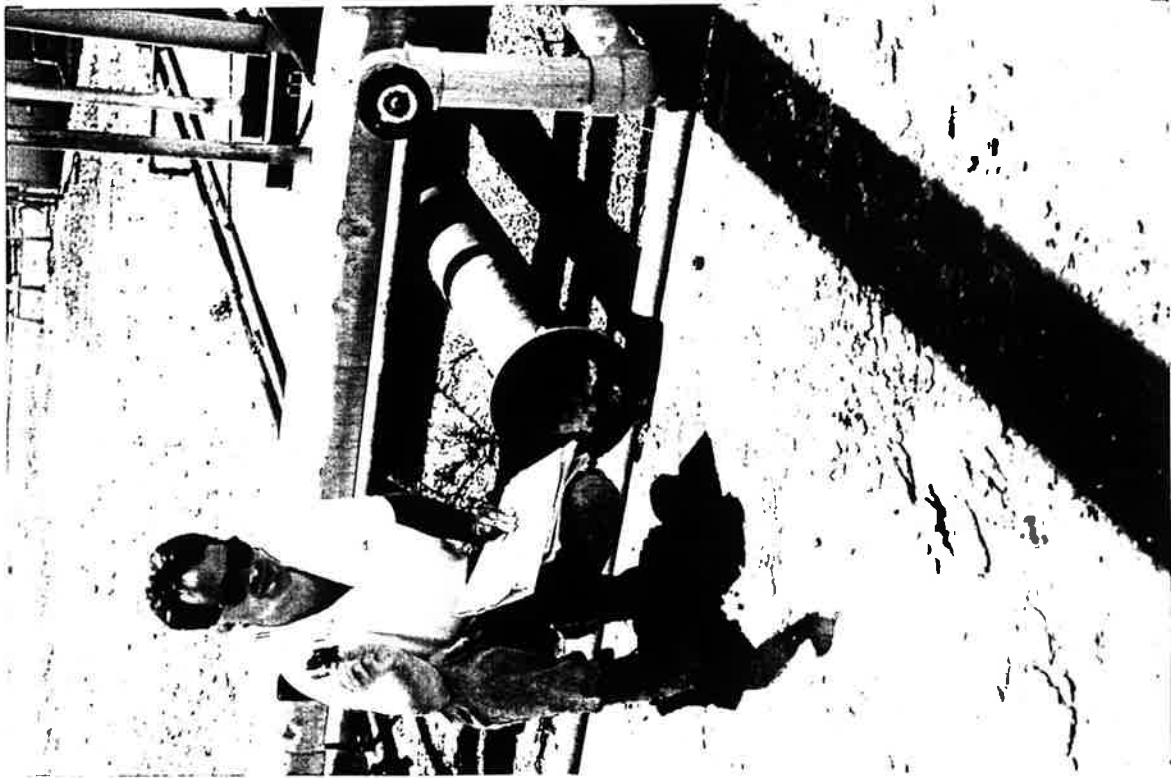




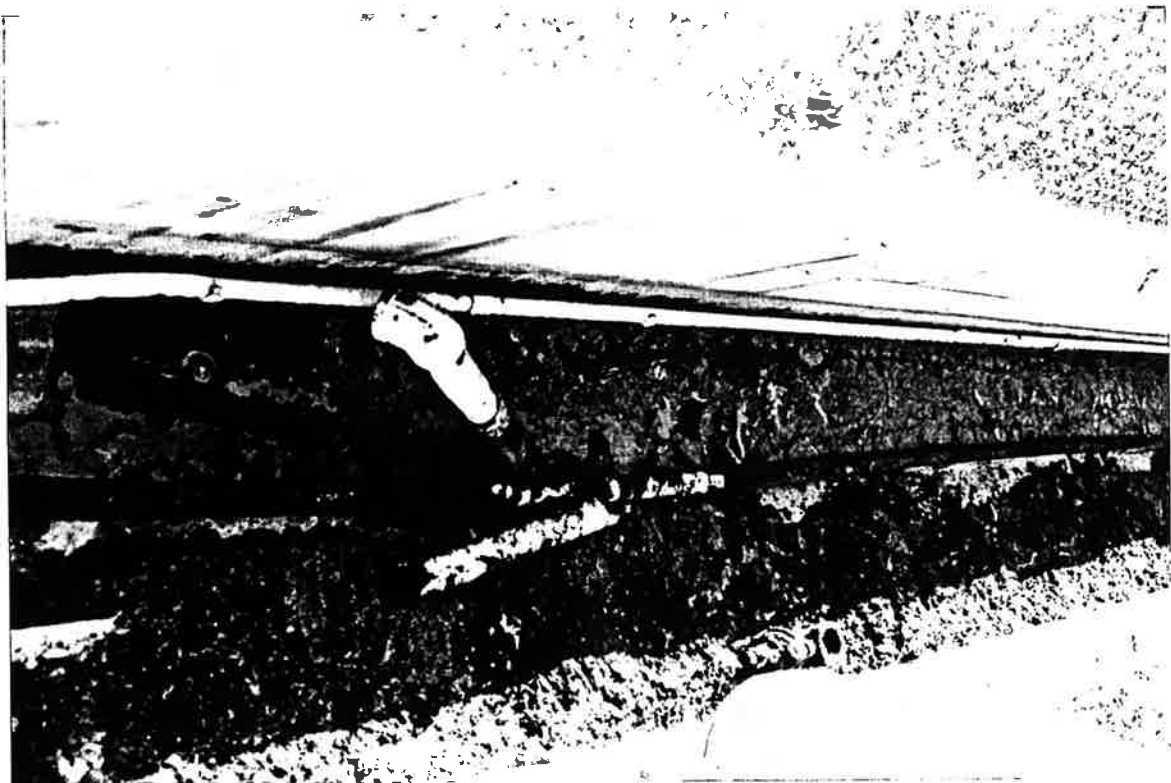
{21} 18th Street drainage culvert



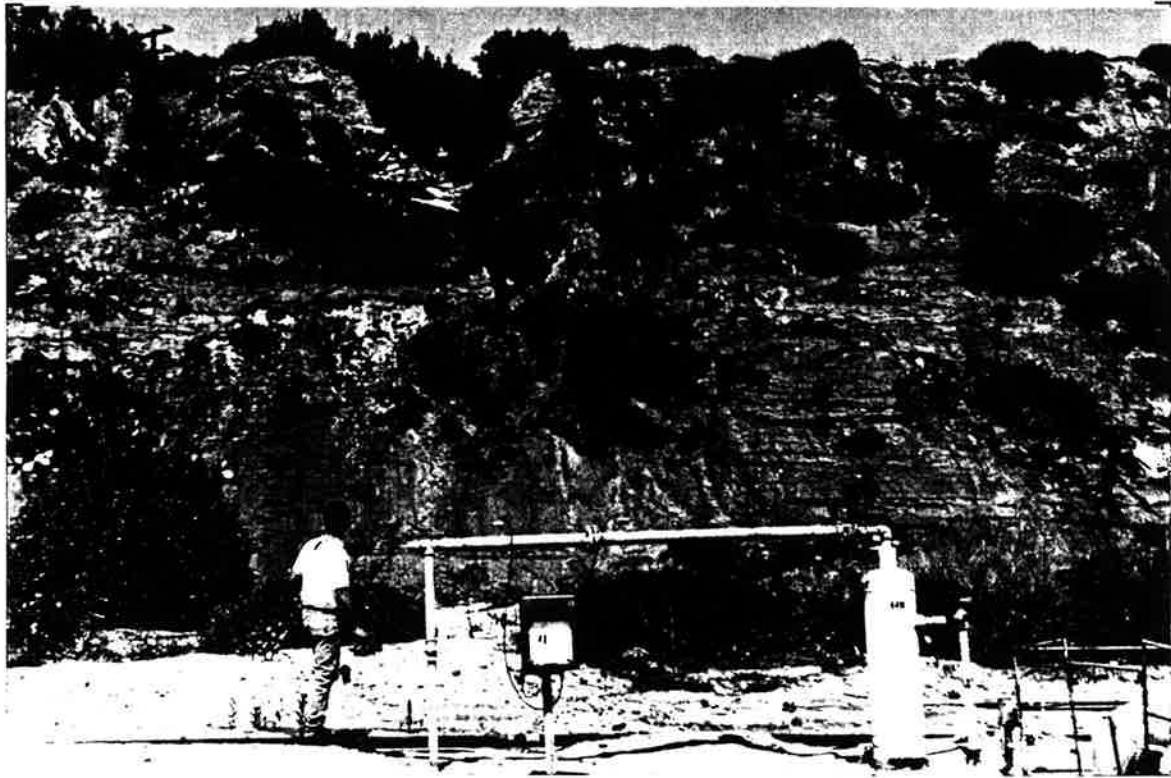
{22} Gas bubbles in a crude oil production well cellar



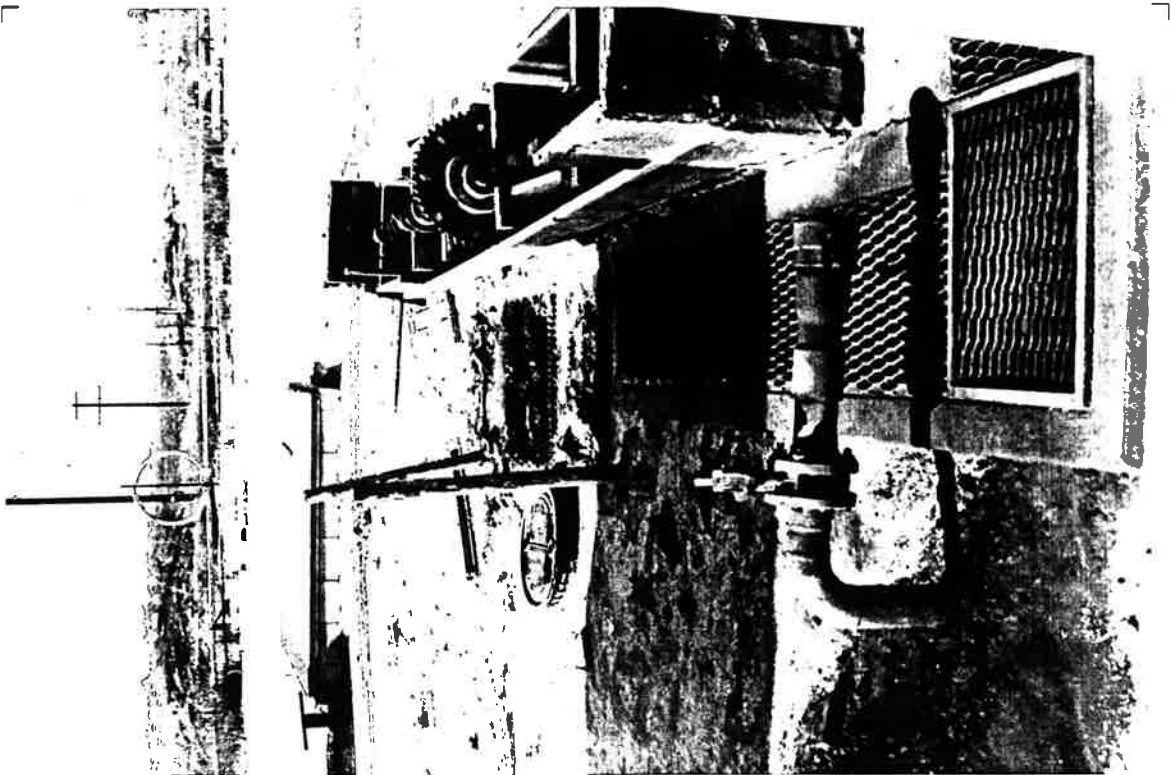
{23} White substance (Calcium Carbonate [Stair, 1993]) in an out-of-service pipe



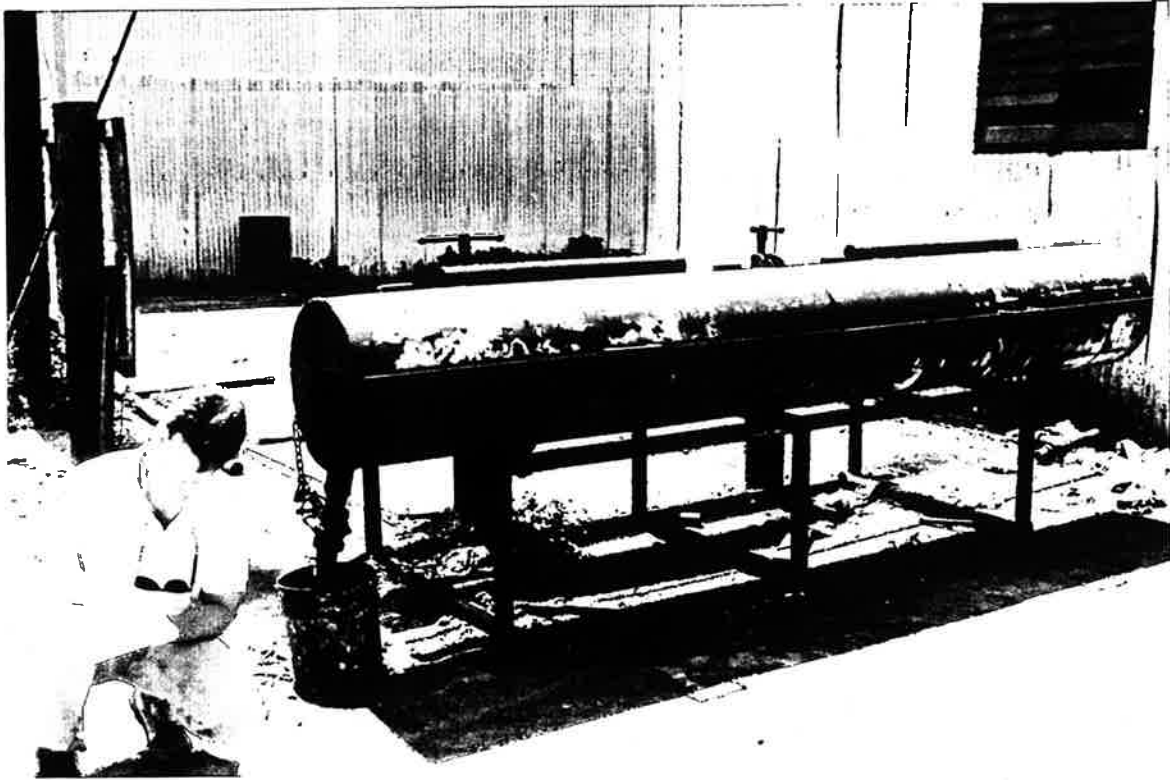
{24} Spilled crude oil in the out-of-service tank farm



{25} Tank bottom materials spread on a slope



{26} Parts cleaning trough adjacent to the air compression plant



{27} Parts cleaning trough adjacent to the maintenance shop/warehouse

┌

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# **APPENDIX D**

## **SITE INTERVIEW**

**WEST NEWPORT OIL COMPANY**

POST OFFICE BOX 1487  
NEWPORT BEACH, CALIFORNIA 92663


Telephone (714) 631-1100

June 10, 1993

GeoSyntec Consultants  
16541 Gothard Street  
Suite 211  
Huntington Beach, CA 92647

Attention: Jeff Raines

Enclosed is a completed copy of the standard environmental  
assessment questionnaire you requested for the Newport  
Banning Ranch.



Jay Stair

Description of Site: Address:

1080 W. 17TH STREET  
COSTA MESA, CA  
92627

Question	Owner <sup>1</sup>		
1. Is the <i>property</i> or any <i>adjoining property</i> used for an industrial use?	<input checked="" type="radio"/> Yes	No	Unk
2. To the best of your knowledge, has the <i>property</i> or any <i>adjoining property</i> been used for an industrial use in the past?	<input checked="" type="radio"/> Yes	No	Unk
3. Is the <i>property</i> or any <i>adjoining property</i> used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	<input checked="" type="radio"/> Yes	No	Unk
4. To the best of your knowledge has the <i>property</i> or any <i>adjoining property</i> been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	<input checked="" type="radio"/> Yes	No	Unk
5. Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the <i>property</i> or at the facility?	<input checked="" type="radio"/> Yes	No	Unk
6. Are there currently, or to the best of your knowledge have there been previously, any industrial <i>drums</i> (typically 55 gal (208 L)) or sacks of chemicals located on the <i>property</i> or at the facility?	<input checked="" type="radio"/> Yes	No	Unk
7. Has <i>fill dirt</i> been brought onto the <i>property</i> that originated from a contaminated site or that is of an unknown origin?	Yes	<input checked="" type="radio"/> No	Unk
8. Are there currently, or to the best of your knowledge have there been previously, any <i>pits, ponds, or lagoons</i> located on the <i>property</i> in connection with waste treatment or waste disposal?	Yes	<input checked="" type="radio"/> No	Unk

# **APPENDIX E**

## **DEFINITIONS**

**CERCLA: Comprehensive Environmental Response, Compensation and Liability Act (Superfund) of 1980.**

**Hazardous Substance:** A substance defined as a hazardous substance pursuant to CERCLA 42 USC § 9601(14), as interpreted by EPA regulations and the courts: (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to Section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC § 6921)(but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC § 6901 et seq.) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317a of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of the EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel.

**NPL:** National priorities list.

**PCB:** Polychlorinated Biphenyls.

**Practically Reviewable:** Information that is practically reviewable means that the information is provided by a data source (e.g. a public agency) in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of data that the extraordinary analysis reveals to be irrelevant.

**Reasonably Ascertainable:** Information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practically reviewable.

**Recognized Environmental Condition:** The presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

**SARA:** Superfund Amendments and Reauthorization Act of 1986.

**APPENDIX F**

**MATERIAL SAFETY DATA SHEETS**

ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN



BUSINESS NAME (DBA) West Newport Oil Company

BUSINESS ADDRESS number 1080 street West 17th Street  
suite city Costa Mesa zip code 92627

MAILING ADDRESS number P.O. Box 1487 street  
(If different) suite city Newport Beach zip code 92663

BUSINESS PHONE area 714 - number 631 - 1100

PRIMARY CONTACT first name Fred last name Jones  
PERSON  
TITLE Superintendent

TYPE BUSINESS OPERATION crude oil production

EMERGENCY CONTACT INFORMATION (after business hours)

EMERGENCY COORDINATOR first name Fred last name Jones  
phone number ( 714 ) - 631 - 1100

EMERGENCY COORDINATOR first name Jay last name Stair  
(alternate) phone number ( 714 ) - 631 - 1100

THE EMERGENCY COORDINATOR SHALL HAVE FULL ACCESS TO THE FACILITY,  
SITE FAMILIARITY AND AUTHORITY TO MAKE DECISIONS FOR THE BUSINESS.



**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**PART I**

**EMERGENCY NOTIFICATIONS**

A handler of hazardous materials is required to immediately report any release or threatened release of a hazardous material to the Orange County Fire Department and to the Governor's Office of Emergency Services. Failure to do so may result in criminal and/or civil prosecution.

**A. AGENCY NOTIFICATIONS**

<u>Organization</u>	<u>Phone Number</u>
1. Fire Department	911
2. Police Department	911
3. Paramedics	911
4. Office of Emergency Services	(800) 852-7550

**INFORMATION REQUIRED**

- \* Name of person and business.
- \* Business street address.
- \* Location of the incident.
- \* Type incident (spill, gas release, etc...).
- \* Nature and volume of materials involved.
- \* Extent of injuries.
- \* Possible hazards to human health and/or the environment.

**B. MISCELLANEOUS CONTACT INFORMATION**

	<u>Phone Number</u>
1. Hazardous Waste Contractor name: <u>IT Corporation</u>	(714) <u>261 - 6441</u>
2. Insurance Company name: _____	( ) _____
3. Poison Control Center (UCI)	(714) 634-5988
4. Poison Control Center (Los Angeles)	(213) 484-5151

**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**PART II**

**BUSINESS PERSONAL EMERGENCY NOTIFICATIONS AND RESPONSIBILITIES**

**A. EMPLOYEE EVACUATION**

- 1. List the type of alarm signals that will be used to initiate an evacuation at the facility:

Employee vehicles are equipped with two-way radios, all  
primary facilities are equipped with telephones.

(Describe)

2. Evacuation routes, emergency exits, and staging areas for employees at the facility:

a. Work area: West Newport Field

Evacuation route: 17th Street, Costa Mesa

Emergency exits: Pacific Coast Highway

Staging area: Change Room

b. Work area: \_\_\_\_\_

Evacuation route: \_\_\_\_\_

Emergency exits: \_\_\_\_\_

Staging area: \_\_\_\_\_

c. Work area: \_\_\_\_\_

Evacuation route: \_\_\_\_\_

Emergency exits: \_\_\_\_\_

Staging area: \_\_\_\_\_

UTILIZE ADDITIONAL COPIES AS REQUIRED

EVACUATION DRILLS SHALL BE CONDUCTED ANNUALLY  
OR MORE FREQUENTLY IF REQUIRED

Records of drills shall be maintained for a period of three years and shall be available for review by fire department personnel. The record shall include the facilitators name, title, facility location, date of drill, and the signature of the facilitator.

**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**3. "EMERGENCY COORDINATOR TASK COMPLETION SHEET"**

\_\_\_ Date and time the incident was reported:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

\_\_\_ "Identify the nature and extent of the incident.

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ Activate internal facility alarms or communication systems.

\_\_\_ Notify the Fire Department.

\_\_\_ Designate an employee to direct emergency response units to the incident scene and to the location of the emergency coordinator.

\_\_\_ Initiate pre-arranged mitigation and evacuation plans.

\_\_\_ Secure all emergency shut off valves (as required).

\_\_\_ Initiate internal company notification.

\_\_\_ Account for all evacuated personnel.

\_\_\_ Have resource material available for use by responding agencies (maps, drawings, Material Safety Data Sheets (MSDS), etc...).

\_\_\_ Identify actions taken by the business to control the incident.

\_\_\_ Secure the incident scene to include treatment, storage or disposal of hazardous materials or waste involved.

\_\_\_ Others: (specify)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THIS FORM SHALL BE GIVEN TO THE EMERGENCY RESPONDERS  
UPON THEIR ARRIVAL AT THE FACILITY**

**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**C. EMPLOYEE RESPONSIBILITIES:**

**JOB TITLE:** Team Leader  
**EMERGENCY FUNCTION (s)**

- a. Coordinate group supervisors
- b. Maintain comprehensive checklist
- c. Emergency notifications
- d. Conducts head count
- e. \_\_\_\_\_

**JOB TITLE:** Chief Troubleshooter  
**EMERGENCY FUNCTION (s)**

- a. Major incident expert
- b. No. 1 to team leader
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

**JOB TITLE:** Operations Supervisor  
**EMERGENCY FUNCTION (s)**

- a. Handle reactors
- b. Handle steam generators
- c. Handle softners
- d. Handle main gas supply
- e. Handle main electrical
- f. Handle air injection

**UTILIZE ADDITIONAL COPIES AS REQUIRED**

**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**C. EMPLOYEE RESPONSIBILITIES:**

**JOB TITLE:** Field Supervisor  
**EMERGENCY FUNCTION ('s)**

- a. Handle rigs
- b. Handle wells
- c. Handle shop
- d. \_\_\_\_\_
- e. \_\_\_\_\_

**JOB TITLE:** Tank Farm Supervisor  
**EMERGENCY FUNCTION ('s)**

- a. Handle tank farm
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

**JOB TITLE:** Compressor Supervisor  
**EMERGENCY FUNCTION ('s)**

- a. Handle compressors
- b. Handle generator
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_

**UTILIZE ADDITIONAL COPIES AS REQUIRED**

**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**PART III**

**TRAINING**

**OUTLINE THE STEPS YOUR BUSINESS SHALL TAKE TO MEET  
THE TRAINING REQUIREMENTS NOTED IN THIS SECTION**

**A. METHODS FOR SAFE HANDLING OF HAZARDOUS MATERIALS:**

- All employees are aware of proper safety rules through
  - 1) regularly scheduled safety meetings
  - 2) instruction from their immediate supervisor
- Company provides & maintains adequate stock of safety and first aid equipment.

**B. PROCEDURES FOR NOTIFICATION OF AND COORDINATION WITH EMERGENCY AGENCIES:**

Chain of command/reporting is as follows:

field hands report to supervisor  
supervisor reports to team leader  
team leader initiates pertinent notification/procedures

**C. USE OF EMERGENCY RESPONSE EQUIPMENT AND SUPPLIES UNDER THE CONTROL OF THE HANDLER:**

See A.

**D. EMERGENCY MITIGATION PROCEDURES IN RESPONSE TO A RELEASE OR THREATENED RELEASE OF A HAZARDOUS MATERIAL:**

See B.

**E. PROCEDURES FOR ASSURANCE OF TRAINING AND MAINTENANCE OF TRAINING RECORDS:**

Maintenance List at safety meetings is standard procedure.

**ORANGE COUNTY FIRE DEPARTMENT  
BUSINESS EMERGENCY PLAN**

**PART IV**

**PREVENTION**

**LIST ACTIONS WHICH HAVE BEEN ACCOMPLISHED TO ABATE HAZARDS  
RELATING TO THE USE, HANDLING OR STORAGE OF HAZARDOUS MATERIALS**

Please do not limit yourself to this format. Utilize additional copies of this page as required, or attach additional sheets as necessary.

**HAZARDOUS MATERIALS  
STORAGE LOCATION**

**PREVENTIVE MEASURES**

- |                          |                                                                              |
|--------------------------|------------------------------------------------------------------------------|
| 1. <u>Shop/Warehouse</u> | <u>Storage on paved ground;</u><br><u>Oxygen, Acetylene racks separated.</u> |
| 2. _____                 | _____                                                                        |
| 3. _____                 | _____                                                                        |
| 4. _____                 | _____                                                                        |

**Comments relating to the listed storage areas:**

- Material Safety Data Sheets on file on site.
- EPA Spill Prevention Control Plan on file.
- 24 hours manned coverage of field.
- Annual DOG inspection required.
- Annual Orange Co. building and safety inspection.
- Member of Clean Coastal Waters oil spill containment co-op.
- Quarterly SCAQMD inspections
- Annual EPA inspection

# SITE LAYOUT

West Newport Oil Company  
 West Newport Field  
 1080 W. 17th St.  
 Costa Mesa

- 1 - CHANGE ROOM
- 2 - OPERATOR'S SHACK
- 3 - MAIN OFFICE
- 4 - COMPRESSOR
- 5 - WATER SOFTENERS
- 6 - REACTORS
- 7 - TANK FARM
- 8 - SHOP

EXIT GATE TO  
 17th STREET

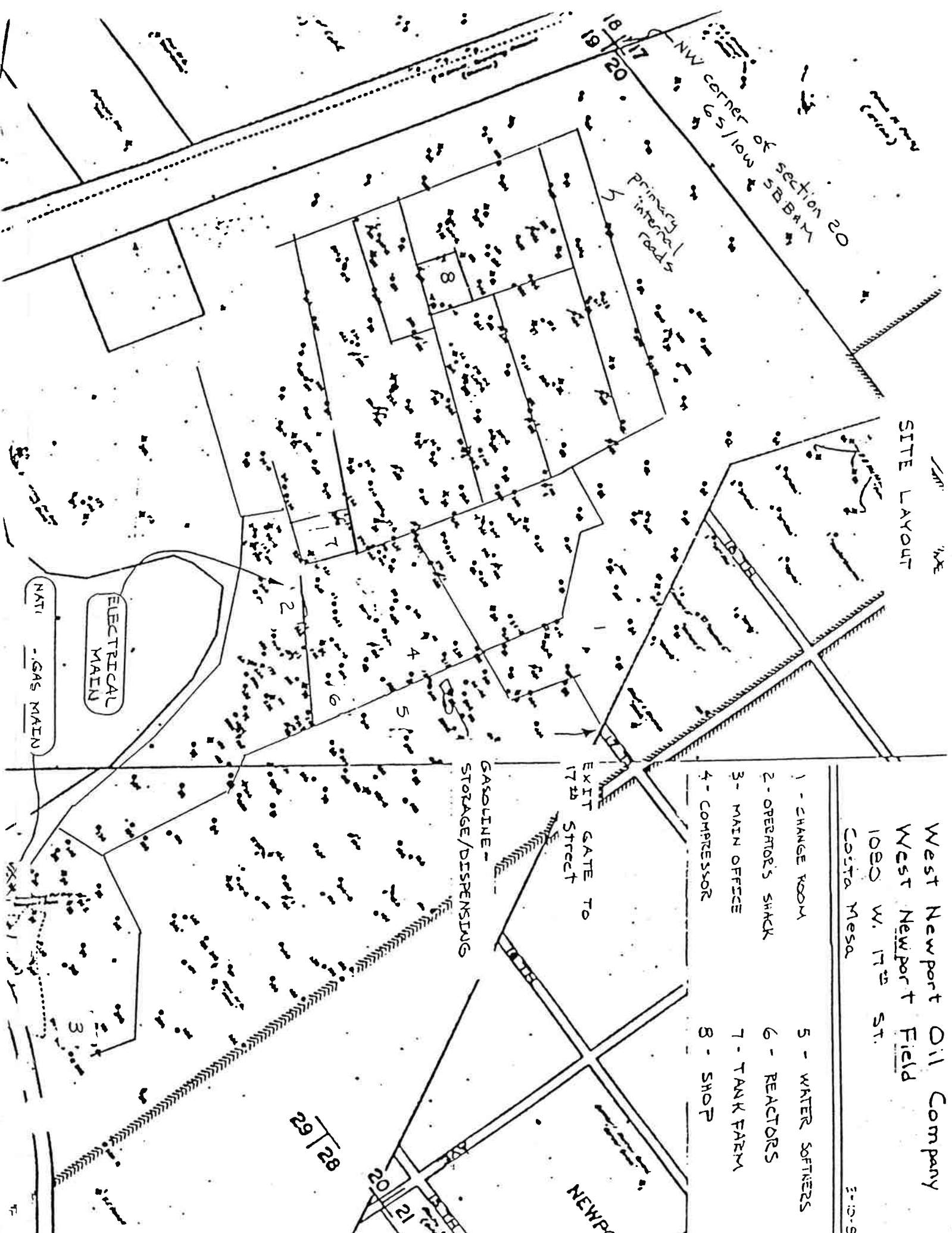
GASOLINE -  
 STORAGE/DISPENSING

primary  
 internal  
 roads

NW corner of section 20  
 65' low 5B BAY

ELECTRICAL  
 MAIN

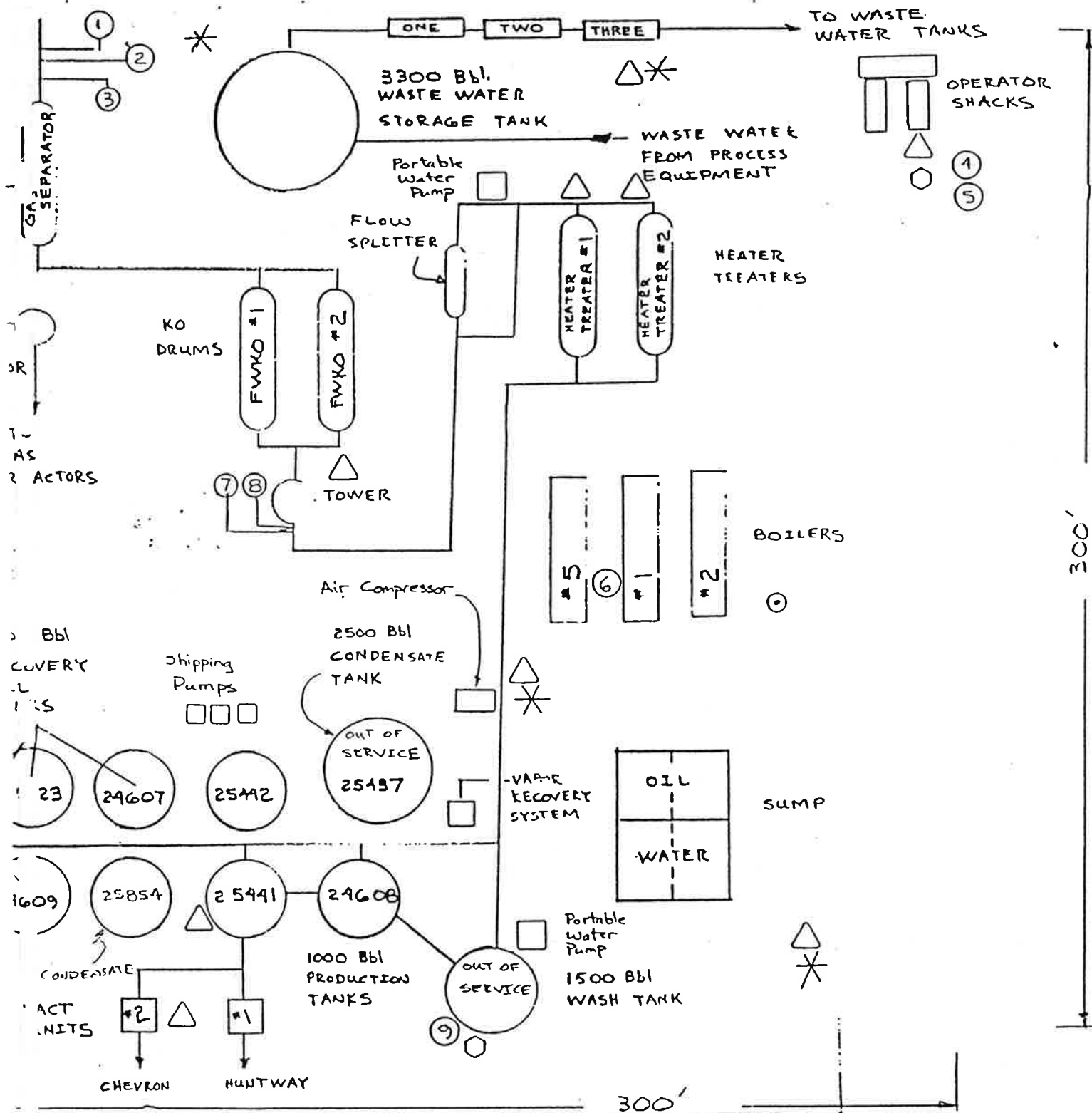
NATURAL  
 GAS MAIN





## TANK FARM - SCHEMATIC

ALL FACILITIES/EQUIPMENT ARE OPEN AIR  
SKIM TANKS



-884

Diesel  
SP-0355  
solvent  
degreaser

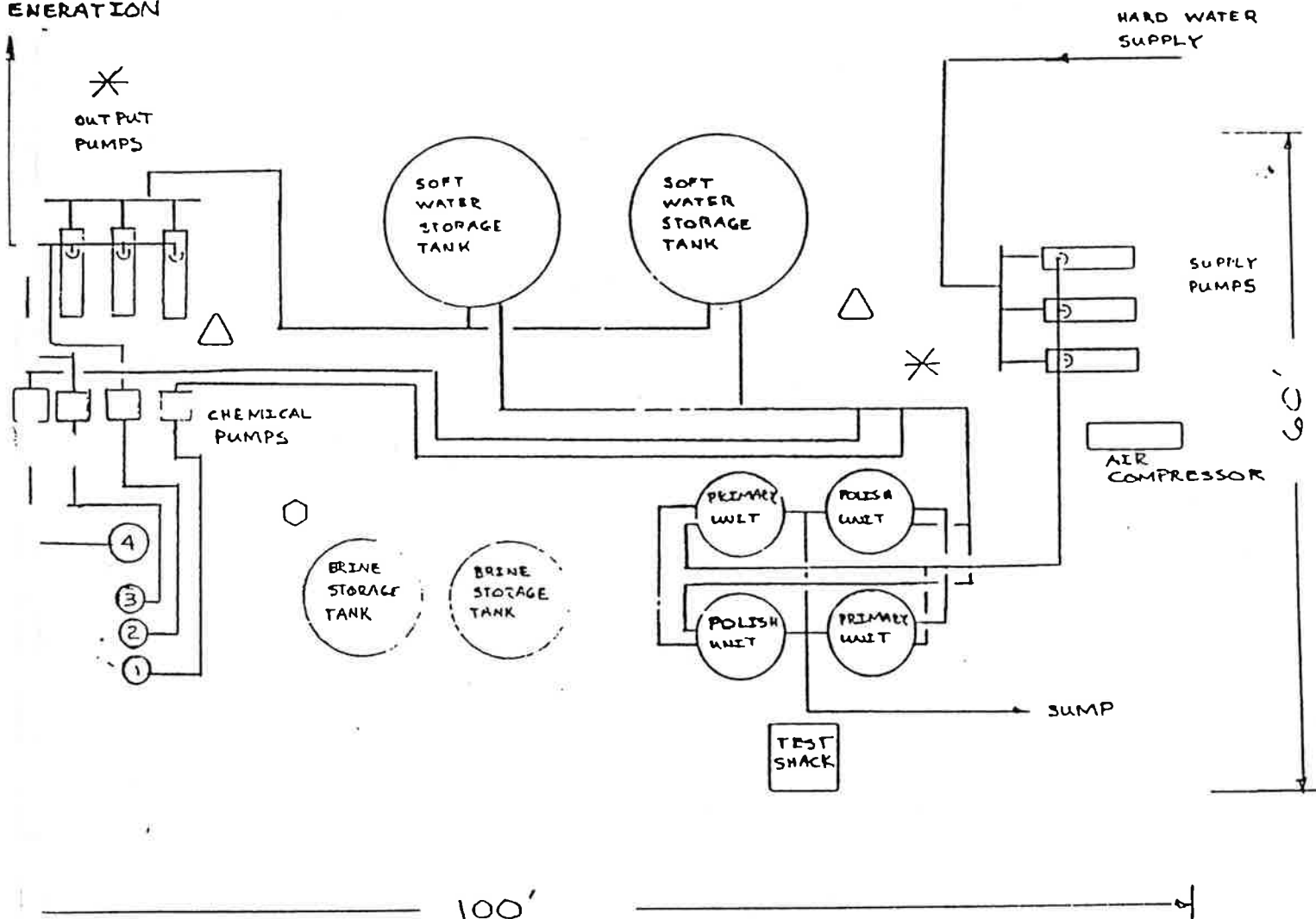
- ⑥ corrosion inhibitor
- ⑦ SP-0355
- ⑧ WF 173
- ⑨ corrosion inhibitor
- ⑩ sodium silicate

- △ Fire Extinguisher
- Eye/Face Shower
- ⊙ Gas Main
- \* Electrical Main

WATER SOFTNER UNIT

## SCHEMATIC

ALL FACILITIES / EQUIPMENT ARE OPEN AIR

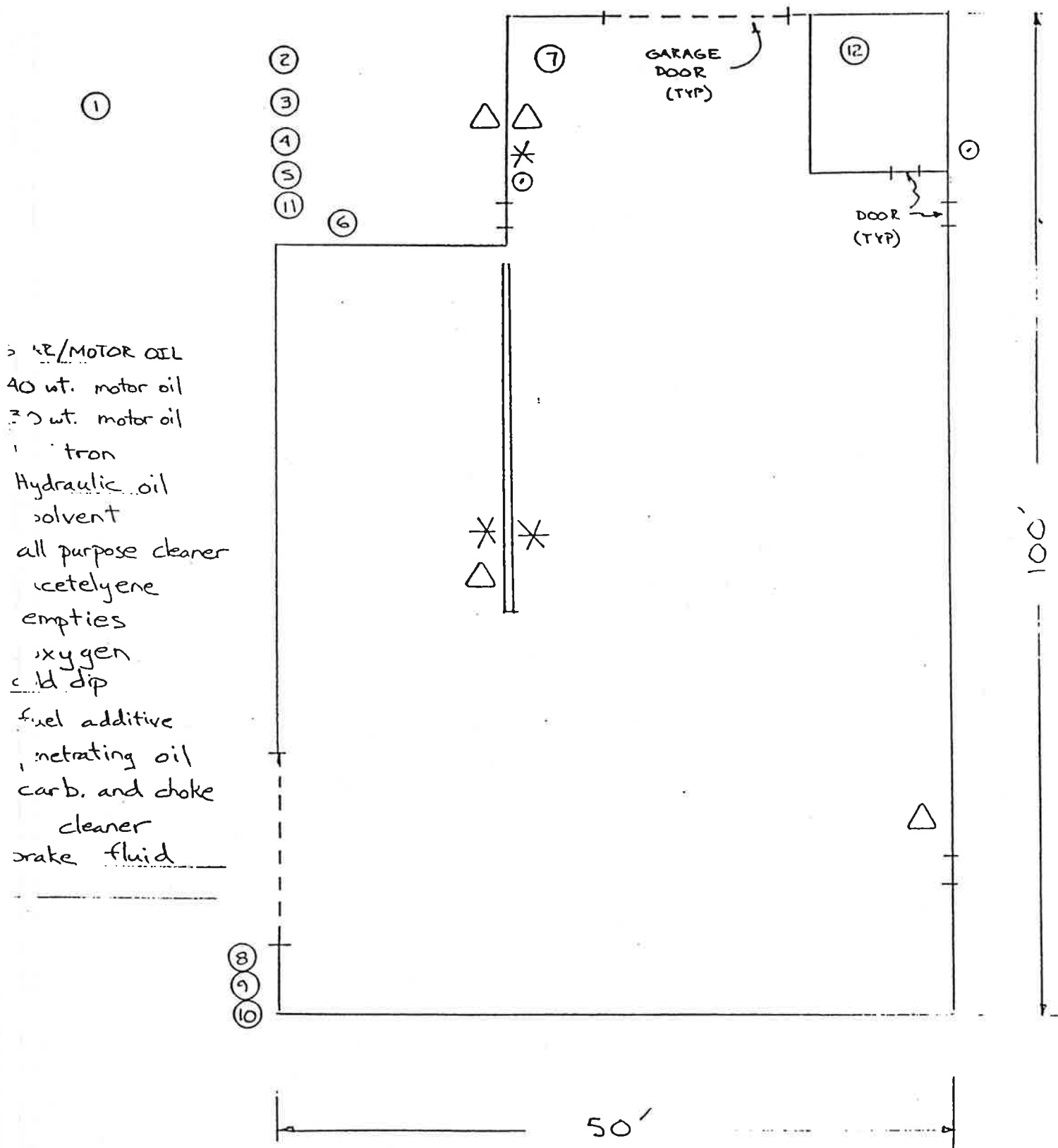
OFT WATER  
APPLY TO  
TANK  
GENERATION

ALL PIPING IS NOT SHOWN TO KEEP DRAWING SIMPLE

- ① West R-204
- ② West B-409
- ③ West B-121
- ④ West B-508

- △ Water Hose
- Eye/Face Shower
- \* Electrical Main

- △ Fire Extinguisher
- ⊙ Gas Main
- ✕ Electrical Main



# COMPRESSOR PLANT

SCHEMATIC

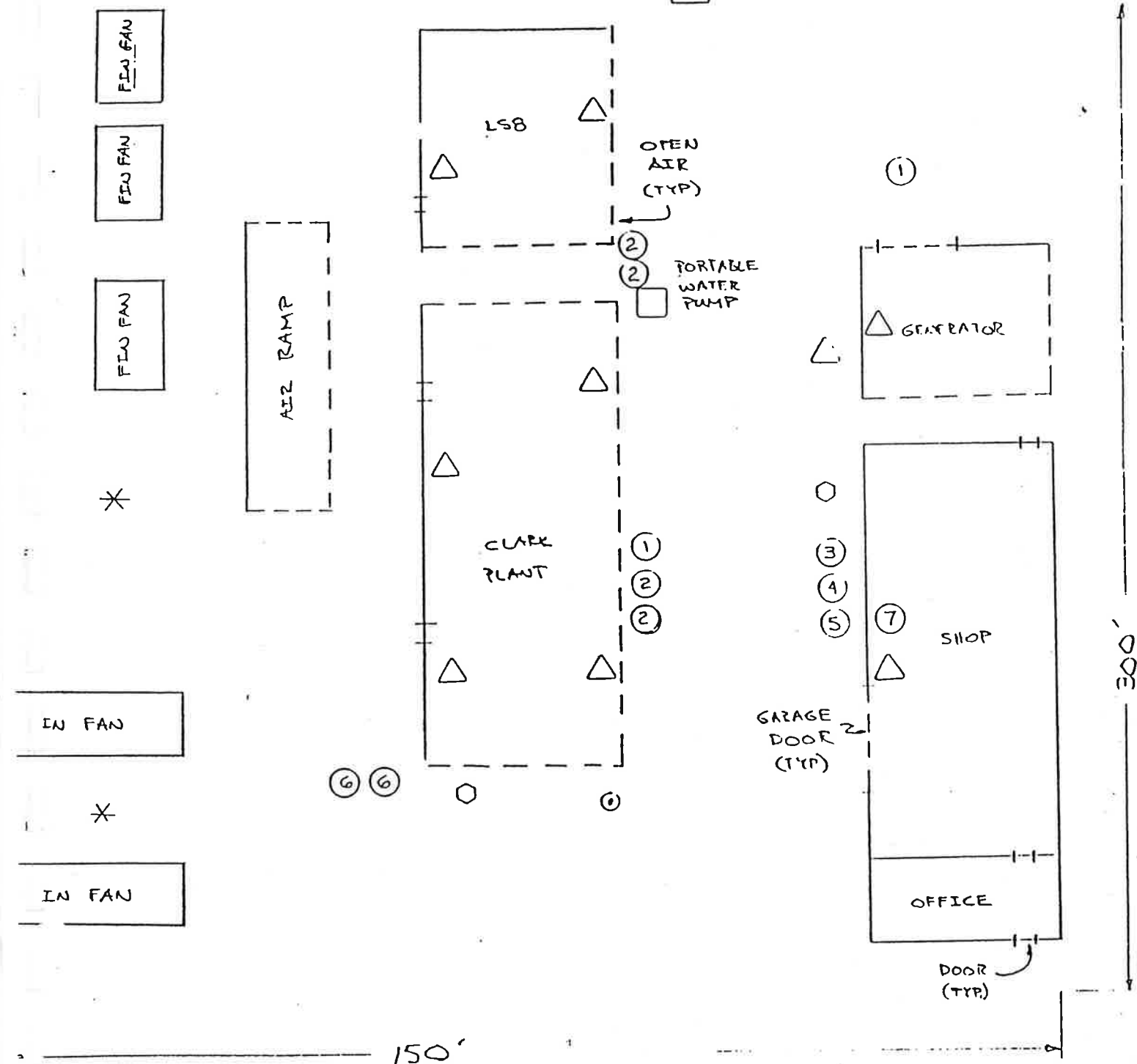
- (1) ANDEROL
- (2) 100-40 MOTOR OIL
- (3) SOLVENT
- (4) CORROSION INHIBITOR
- (5) ALL PURPOSE CLEANER
- (6) AMMONIA TANKS
- (7) DIESEL FUEL ADDITIVE

DIESEL

DIESEL

- △ - Fire Extinguisher
- - Eye/Face Shower
- ⊙ - Gas Main
- \* - Electrical Main

GENERATOR SWITCHGEAR



# MATERIAL SAFETY DATA SHEET

RECEIVED  
JUN 19 1991

TECHNICAL SERVICE COMPANY  
801 WEST 14th STREET  
LONG BEACH, CALIFORNIA 90813

## 1 PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

TRADE NAME: S - 463

CHEMICAL FAMILY / OTHER NAMES:  
Phosphonate Salt

DOT PROPER SHIPPING NAME:

Not D.O.T. Regulated

DOT HAZARD CLASS: N/AP

**\*\*24 HOUR EMERGENCY ASSISTANCE\*\***  
TECHNICAL SERVICE COMPANY  
(213) 436-9901

HEALTH:	1	Rating Code
FIRE:	1	0 = Least
REACTIVITY:	0	1 = Slight
OTHER:	N/AP	2 = Moderate
		3 = High
		4 = Severe

UN / NA ID NUMBER: N/AP

ERG: N/AP

C A S NUMBER: N/AP

## 2 SUMMARY OF HAZARDS

OSHA HAZARD

Irritant

COMPONENT

Alkyl Amine Phosphonic Acid

## 3 FIRE AND EXPLOSION

FLASH POINT/METHOD 210 F (SETA CC)      AUTOIGNITION TEMP      N/AV

FLAMMABLE LIMITS (1% Volume in air at normal atmospheric temp and press)  
UPPER      N/AP      LOWER      N/AP

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Low hazard. Liquid may burn upon heating to temperatures at or above the flash point. Toxic gases will form upon combustion.

EXTINGUISHING MEDIA      Alcohol-type foam, Dry chemical, Water spray

SPECIAL FIRE FIGHTING PROCEDURES      Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If leak or spill has not ignited, use water spray to disperse vapors. Use approved respiratory and eye protective equipment for chemical hazards.

## HEALTH HAZARDS

PRIMARY HAZARD Minor Eye Irritation

## ROUTE OF EXPOSURE

## SIGNS AND SYMPTOMS

INHALATION Not expected to produce adverse health hazards from inhalation.

EYE CONTACT May cause minor eye irritation and should be removed promptly.

SKIN ABSORPTION Not expected to produce adverse health hazards from skin absorption.

SKIN CONTACT May cause slight irritation of the skin.

INGESTION Not expected to produce adverse health hazards from ingestion.

EFFECTS OF OVER-EXPOSURE No information is available on the chronic health hazards of this product.

## PROTECTIVE EQUIPMENT

RESPIRATORY No special respiratory protective equipment normally required under anticipated conditions of normal use with adequate ventilation.

VENTILATION No special ventilation is required under anticipated conditions of normal use.

EYE Protection including chemical splash goggles and/or face shield should be worn when handling / using this product. Contact lenses should not be worn.

SKIN Not normally considered a skin hazard, however chemical resistant gloves should be worn.

OTHER Use good personal hygiene practices. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. Promptly remove soiled clothing and wash thoroughly before re-use. Shower after work using plenty of soap and water.

SUBSTANCE	CAS #	SOURCE	TYPE	UNITS
N/AP				

**INHALATION** If respiratory irritation occurs, move to fresh air. If any effects continue, obtain medical attention.

**EYE CONTACT** Remove contact lenses if present. Gently rinse the eye(s) with clean water (lukewarm if possible) for 15 minutes. Tilt the head back. Hold eyelid(s) open and pour water slowly over the eyeball(s) at the inner corner, letting water run out the outer corner(s). Do not let victim rub eyes or keep tightly shut. Obtain medical attention if needed.

**SKIN CONTACT** Remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush area with water for 15 minutes. If sticky, use waterless handcleaner first. If irritation persists, obtain medical attention.

**INGESTION** Give 2 glasses of water or milk to dilute if victim is completely conscious/alert. Induce vomiting. Obtain medical attention.

**PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED** Shut off source if possible to do so safely. Prevent liquid from entering sewers or public waters. Impound / recover large land spill. Soak up small spill with absorbant. On water, contain and minimize dispersion and collect. Report to proper authorities.

**WASTE DISPOSAL METHODS** Consult an expert on disposal of recovered material. Ensure conformity with local, state, and federal disposal regulations.

9

## PHYSICAL AND CHEMICAL DATA

BOILING POINT 212 F AP	EVAPORATION RATE (ETHER = 1) 1.5 Calc	SOLUBILITY IN WATER Complete
FREEZING POINT N/DA	VAPOR PRESSURE 14.7 mm Hg @ 100 F AP	VOL CHARACTERISTICS N/DA
SP. GRAVITY 1.2 (WATER = 1)	VAPOR SP. GR. N/DA (AIR = 1.0 @ 60 - 90 F)	STABILITY Stable
HAZARDOUS POLYMERIZATION Will Not Occur	VIS. (UNITS, TEMP, METHOD) N/DA	pH 5.5 - 6.0

OTHER PHYSICAL AND CHEMICAL PROPERTIES N/AP

APPEARANCE AND ODOR Clear amber liquid, Slight odor

CONDITIONS TO AVOID None

MATERIALS TO AVOID Strong oxidizing agents, heat, sparks, open flame

HAZARDOUS DECOMPOSITION PRODUCTS Unknown

10

## ADDITIONAL PRECAUTIONS

**HANDLING AND STORAGE** Do not use aluminum or mild steel for handling storage or transportation. Store in tightly closed, properly vented containers away from heat, open flame and strong oxidizing agents. Carefully vent internal pressure before removing closure. Handle empty containers with care.

**GENERAL COMMENTS** Some of the information presented and conclusions drawn herein are from sources other than direct test data of the product.

This product is designed specifically for industrial use only, and to be used and applied by trained personnel who have been provided with the proper protective equipment. It is not meant to be taken internally or used in any manner other than which it is intended.

**NOTE - QUALIFICATIONS:** EQ = EQUAL AP = APPROXIMATELY LT = LESS THAN  
N/AV = NOT AVAILABLE UK = UNKNOWN N/AP = NOT APPLICABLE TR = TRACE  
GT = GREATER THAN N/DA = NO DATA AVAILABLE

The information in this MSDS was obtained from sources which we believe are reliable. However, THIS INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS. The conditions or methods of handling, storage and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE, OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.



TECHNICAL SERVICE COMPANY

MATERIAL SAFETY DATA SHEET SUPPLEMENT

PRODUCT: S - 463 Scale Inhibitor

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REGULATORY STATUS

CERCLA: None

SARA TITLE III

Sec 302 (Emergency planning notification):	None
Sec 304 (Emergency release reporting):	None
Sec 311 (MSDS Submission):	None
Sec 312 (Inventory reporting):	None
Sec 313 (Toxic Chemical Release reporting):	None
Sec 311/312 (Hazard Categories):	None

PROP 65: None

DOT: See Page 1, Section 1

# MATERIAL SAFETY DATA SHEET

TECHNICAL SERVICE COMPANY  
801 WEST 14th STREET  
LONG BEACH, CALIFORNIA 90813

## 1 PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

TRADE NAME: C - 668  
CORROSION INHIBITOR CONCENTRATE

CHEMICAL FAMILY / OTHER NAMES:  
Imidoamine

DOT PROPER SHIPPING NAME:  
Flammable Liquid, N.O.S.  
(Contains: Light Cycle Oil,  
Isopropyl Alcohol)

DOT HAZARD CLASS:  
Flammable Liquid

**\*\*24 HOUR EMERGENCY ASSISTANCE\*\***  
TECHNICAL SERVICE COMPANY  
(213) 436-9901

HEALTH:	2	Rating Code
FIRE:	3	0 = Least
REACTIVITY:	0	1 = Slight
OTHER:	N/AP	2 = Moderate
		3 = High
		4 = Severe

UN / NA ID NUMBER: 1993      ERG: 27

C A S NUMBER: N/AP, Mixture

## 2 SUMMARY OF HAZARDS

### OSHA HAZARD

Irritant  
Sensitizer  
Flammable  
Combustible

### COMPONENT

Amine/quaternary compound,  
Isopropanol, Light cycle oil  
Amine/quaternary compound  
Isopropanol  
Light cycle oil

## 3 FIRE AND EXPLOSION

FLASH POINT/METHOD 76 F (SETA CC)      AUTOIGNITION TEMP      N/AV

FLAMMABLE LIMITS (1% Volume in air at normal atmospheric temp and press)  
UPPER 12.0      LOWER 0.8

UNUSUAL FIRE AND EXPLOSION HAZARDS      Flammable liquid. Can release vapors that form flammable mixtures at temperatures at or above flash point. Vapors may travel long distances before igniting/flashing back to vapor source. Toxic gases will form upon combustion, including: smoke, fumes, carbon monoxide, carbon dioxide, nitrogen oxide and oxides of sulfur.

EXTINGUISHING MEDIA      Dry chemical, Carbon dioxide, Water spray, Water fog, alcohol type foam

SPECIAL FIRE FIGHTING PROCEDURES      Use water spray to cool fire exposed surfaces and to protect personnel. Shut of "fuel" to fire. If leak or spill has not ignited, use water spray to disperse vapors. Use approved respiratory and eye protective equipment for chemical hazards.

**PRIMARY HAZARD** Skin and eye irritant

**ROUTE OF EXPOSURE**

**SIGNS AND SYMPTOMS**

**INHALATION** High vapor concentrations are irritating to the respiratory tract. May cause dizziness and headaches. Are anesthetic and may have other central nervous system effects. This material or its emissions may affect mucous tissue and/or aggravate mucous membrane dysfunction.

**EYE CONTACT** Vapors may irritate. Splashes: irritation with burning or stinging sensation, watering eyes, inflammation of eyelids and possible light sensitivity. May injure eye tissue if not removed promptly.

**SKIN ABSORPTION** This material is expected to be a health hazard on prolonged or repeated skin contact. Prolonged/repeated exposure may result in defatting/drying of the skin, which may result in irritation and dermatitis.

**SKIN CONTACT** Irritating. May cause skin sensitization. Prolonged or repeated skin contact may cause partial or whole body dermatitic rash. All contact should be avoided by persons with known hypersensitivity to amines.

**INGESTION** Ingestion or subsequent vomiting could result in aspiration which could cause chemical pneumonia. May induce mild narcosis or drowsiness. Mucous membrane irritant.

**THIS MATERIAL IS NOT MEANT TO BE TAKEN INTERNALLY !**

**EFFECTS OF OVER-EXPOSURE** Repeated skin contact should be avoided due to irritation and possible sensitization. This product contains aromatic hydrocarbons which are suspected carcinogens on prolonged/repeated skin contact.

**RESPIRATORY** If operating conditions create airborne concentrations which exceed the Occupational Exposure Limits, use NIOSH/OSHA approved respiratory protective equipment.

**VENTILATION** Use adequate explosion-proof ventilation to keep airborne concentrations of this material below the Occupational Exposure Limits. This material is not meant to be used at indoor locations.

**EYE** Protection including chemical splash goggles and/or face shield must be worn when handling this product. Contact lenses should not be worn.

**SKIN** Where contact may occur, wear chemical resistant gloves. For open systems where contact is likely, wear chemical resistant: gloves, apron, boots and impervious arm protection.

**OTHER** USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE SOILED CLOTHING AND WASH THOROUGHLY BEFORE RE-USE. SHOWER AFTER WORK USING PLENTY OF SOAP AND WATER.

SUBSTANCE	CAS #	SOURCE	TYPE	UNITS
Isopropanol	67-63-0	OSHA/ACGIH	TWA STEL	400 ppm 500 ppm

## EMERGENCY AND FIRST AID

**INHALATION** If respiratory irritation or any signs or symptoms, as described in this bulletin occur, remove victim to fresh air. If any of these effects continue seek medical attention.

**EYE CONTACT** Remove all chemical as quickly as possible. Gently rinse the eye(s) with clean, lukewarm water for a minimum of 15 minutes. Tilt head back. Hold eyelid(s) open and pour water slowly over the eyeball(s) at the inner corner, letting water run out the outer corner(s). Do not let victim rub eye(s) or keep tightly shut. Obtain emergency medical attention.

**SKIN CONTACT** Immediately remove contaminated clothing; wash skin thoroughly with mild soap and water. If sticky, use waterless hand cleaner first. Flush with water for 15 minutes. If irritation persists, seek medical attention.

**INGESTION** Do not induce vomiting! This may result in aspiration which can cause chemical pneumonia. Seek emergency medical attention.

## SPILL AND DISPOSAL

**PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED**

Flammable liquid. Release causes immediate fire/explosion hazard. Liquids and/or vapors may ignite. Evacuate and limit access. Kill all sources of ignition. Stop release if safe to do so. Prevent flow to sewers/public waters. Restrict water use for cleanup. Impound/recover large land spill. Blanket with fire fighting foam. Soak containers. On water: material is partially soluble. May float or sink. May biodegrade. Contain or minimize dispersion and collect. If allowed by local and environmental agencies, sinking and/or suitable dispersants may be used in non-confined areas. Report to appropriate authorities.

**WASTE DISPOSAL METHODS** Consult an expert on disposal of recovered material. Ensure conformity with local, state, and federal disposal regulations.

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## PHYSICAL AND CHEMICAL DATA

BOILING POINT 180 F	EVAPORATION RATE (ETHER = 1) N/DA	SOLUBILITY IN WATER Moderate
FREEZING POINT N/DA	VAPOR PRESSURE 36.2 mmHg @ 100 F (REED)	VOL CHARACTERISTICS Moderate
SP. GRAVITY 0.94 (WATER = 1 @ 60 f)	VAPOR SP. GR. N/DA (AIR = 1.0 @ 60 - 90 F)	STABILITY Stable
HAZARDOUS POLYMERIZATION Will not occur	VIS. (UNITS, TEMP, METHOD) N/DA	pH N/AP

OTHER PHYSICAL AND CHEMICAL PROPERTIES N/AP

APPEARANCE AND ODOR Dark amber liquid, aromatic / alcohol odor

CONDITIONS TO AVOID Heat, sparks, open flame

MATERIALS TO AVOID Strong oxidizing agents

## HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion may produce carbon monoxide, carbon dioxide, oxides of nitrogen, and oxides of sulfur

10

## ADDITIONAL PRECAUTIONS

HANDLING AND STORAGE Store in tightly closed, properly vented containers away from heat, sparks, open flame, & strong oxidizing agents. Carefully vent internal pressure before removing closure. Metal containers should be grounded before transfer. Handle empty containers with care; residue may be flammable. Vapor space above stored liquid may be explosive or flammable. Do not pressurize, cut, heat, or weld empty containers

GENERAL COMMENTS Some of the information presented and conclusions drawn herein are from sources other than direct test data of the product.

This product is designed specifically for industrial use only, and to be used and applied by trained personnel who have been provided with the proper protective equipment. It is not meant to be taken internally or used in any manner other than which it is intended.

NOTE - QUALIFICATIONS: EQ = EQUAL AP = APPROXIMATELY LT = LESS THAN  
N/AV = NOT AVAILABLE UK = UNKNOWN N/AP = NOT APPLICABLE TR = TRACE  
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The information in this MSDS was obtained from sources which we believe are reliable. However, THIS INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS. The conditions or methods of handling, storage and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE, OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.

TECHNICAL SERVICE COMPANY

MATERIAL SAFETY DATA SHEET SUPPLEMENT

PRODUCT: C - 668 CORROSION INHIBITOR CONCENTRATE

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REGULATORY STATUS

CERCLA: NONE

SARA TITLE III

Sec 302 (Emergency planning notification):	NONE
Sec 304 (Emergency release reporting):	NONE
Sec 311 (MSDS Submission):	NONE
Sec 312 (Inventory reporting):	NONE
Sec 313 (Toxic Chemical Release reporting):	NONE
Sec 311/312 (Hazard Categories):	

Immediate Health, Delayed Health, Fire

PROP 65: WARNING

This product contains a chemical known to the State of California to cause cancer and/or reproductive toxicity.

Contains less than 40 ppm Ethylene Oxide.  
Contains no detectable State listed  
Polynuclear aromatics.

DOT: See Page 1, Section 1

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

U.S. Department of Labor  
Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072



IDENTITY (As Used on Label and List)  
Natural Gas

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

## Section I

Manufacturer's Name	Emergency Telephone Number
Distributor: Southern California Gas Co.	(213) 689-2345
Address (Number, Street, City, State, and ZIP Code)	Telephone Number for information
810 South Flower St.	(213) 689-2345
Los Angeles, CA 90017	Date Prepared
	August 28, 1986
	Signature of Preparer (optional)

## Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
				Approximate
Methane (principle component) (CAS# 74-82-8)		None		90
Ethane (CAS# 74-84-0)		None		5
Propane (CAS# 74-98-6)		None		1
Butane (CAS# 106-97-8)		None		5

## Section III — Physical/Chemical Characteristics

Boiling Point	* N/A	Specific Gravity (H <sub>2</sub> O = 1)	* N/A
Vapor Pressure (mm Hg.)	* N/A	Melting Point	* N/A
Vapor Density (AIR = 1)	.58 - .62	Evaporation Rate (Butyl Acetate = 1)	* N/A

Solubility in Water 3.5 ml/ 100 ml water at 17°C

Appearance and Odor Colorless, odorless gas without odorants. When odorant is added - Characteristic gas odor.

## Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	* N/A	Flammable Limits	Auto ignition	LEL	UEL
		Temp. 900F - 1200F		4%	16%
Extinguishing Media	Flame can be extinguished with CO <sub>2</sub> , dry chemical, or halo carbon gas.				
Special Fire Fighting Procedures	* NONE				

Unusual Fire and Explosion Hazards A hazard from re-ignition or explosion exists if the flame is extinguished without stopping flow of gas and/or cooling surroundings and eliminating ignition source. Use water spray to cool surroundings and exposures.

(Reproduce locally)

CSHA 174, Sept. 1985

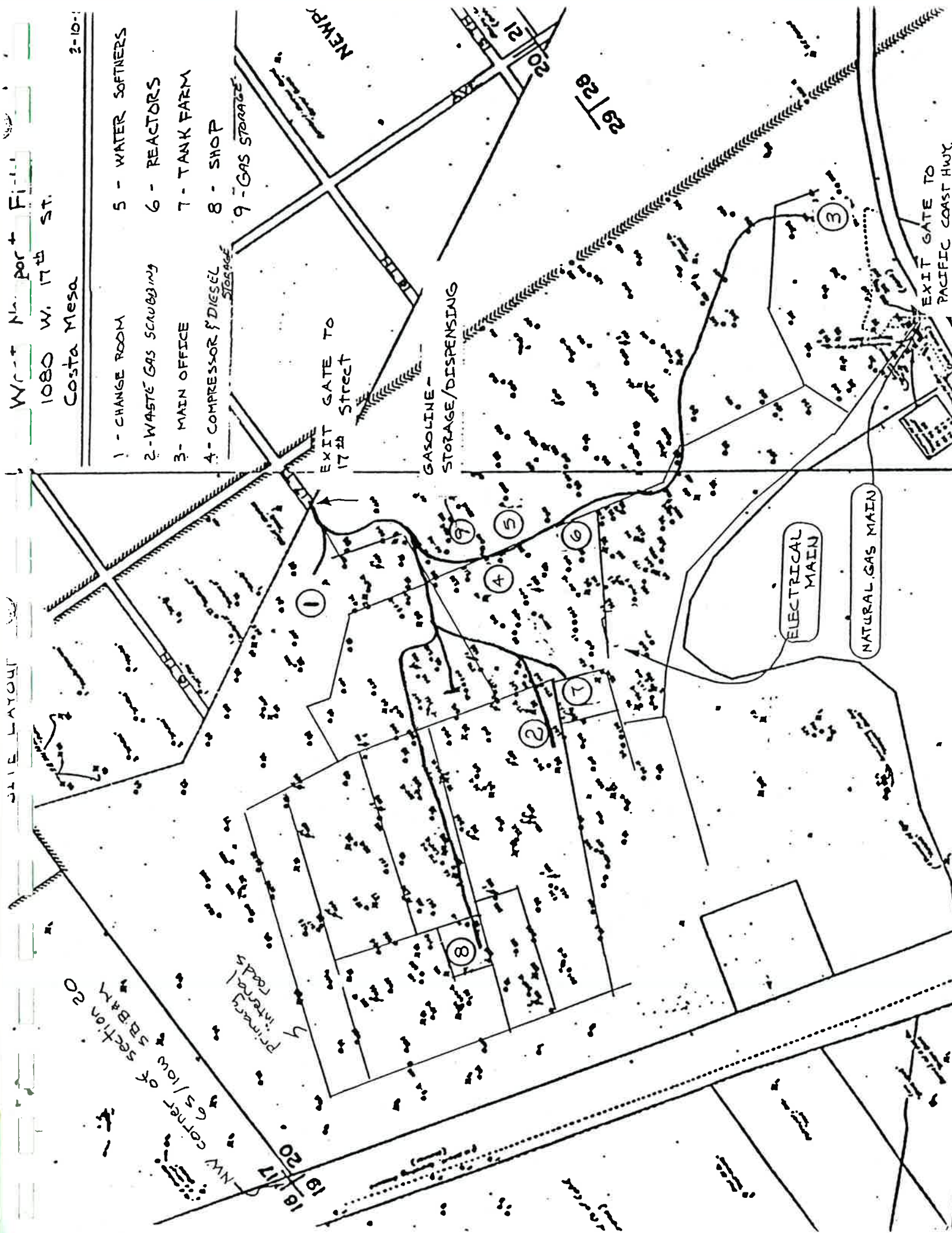
Filed in: AS-M, ASCP, DIST, MKSV, N/BC



SITE LAYOUT

W. Port + F. 11  
1080 W. 17th St.  
Costa Mesa

2-10-1



- 1 - CHANGE ROOM
- 2 - WASTE GAS SCRAMBLING
- 3 - MAIN OFFICE
- 4 - COMPRESSOR & DIESEL STORAGE
- 5 - WATER SOFTENERS
- 6 - REACTORS
- 7 - TANK FARM
- 8 - SHOP
- 9 - GAS STORAGE

EXIT GATE TO  
17th Street

GASOLINE -  
STORAGE/DISPENSING

ELECTRICAL  
MAIN

NATURAL GAS MAIN

EXIT GATE TO  
PACIFIC COAST HWY.



**SECTION VI - SPILL OR LEAK PROCEDURES**

\*\*\*HIGHWAY OR RAILWAY SPILLS\*\*\*  
Call CHEMREC (800) 424-9300 Cont. U.S.  
(Collect) (202) 483-7616 from Alaska & Hawaii

**SECTION VII - DISPOSAL METHOD:**

USE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

**SECTION VIII - STORAGE AND SPECIAL PRECAUTIONS**

**USE AND STORAGE PRECAUTIONS:**

CONTAINERS TIGHTLY CLOSED. KEEP CONTAINERS COOL, DRY, AND AWAY FROM SOURCES OF IGNITION. USE AND STORE THIS PRODUCT WITH ADEQUATE VENTILATION. AVOID INHALATION OF FUMES AND PERSONAL CONTACT WITH THE PRODUCT. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT SURFIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, OR TO SPARKS 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 THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z39.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, PAINTING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

**SECTION IX - FIRE AND EXPLOSION HAZARD DATA**

**HAZARD RANKING**

HEALTH HAZARD: 2  
FLAMMABILITY: 2  
REACTIVITY: 0  
OTHER: -

0 = LEAST  
1 = SLIGHT  
2 = MODERATE  
3 = HIGH  
4 = EXTREME

HMIS HEALTH: 1  
HAZARD FLAM: 1  
CLASS REACT: 1  
P.P.E.: -

**LOWER EXPLOSIVE LIMIT (% VOL.)**

1.0

**UPPER EXPLOSIVE LIMIT (% VOL.)**

6.0

**FLASH POINT**

107, 1CC F

**USE AND STORAGE MEDIA:**

ALL FIRES: EXTINGUISH WITH DRY CHEMICAL, CO2 OR FOAM. LARGE FIRES: THE USE OF DRY CHEMICAL OR FOAM IS RECOMMENDED. WATER MAY BE AN INEFFECTIVE EXTINGUISHING AGENT.

**EXPLOSION HAZARDS:**

MATERIAL IS COMBUSTIBLE AND MAY BE IGNITED BY HEAT OR FLAME. THIS MATERIAL WILL NOT, BUT WILL NOT IGNITE READILY.

**EXTINGUISHING PROCEDURES:**

THE USE OF A SCBA IS RECOMMENDED FOR FIRE FIGHTERS. WATER SPRAY MAY BE USEFUL IN VAPORIZING VAPORS AND COOLING CONTAINERS EXPOSED TO HEAT AND FLAME. AVOID SPREADING LIQUID WITH WATER USED FOR COOLING PURPOSES.

ETP14901  
PLA 160105 LUBRICANTS

NUDEDEX INC. TURNER PLACE, P.O. BOX 365, PISCATAWAY, N.J. 08854  
EMERGENCY TELEPHONE NO 1(201)763-7173

SECTION 01 IDENTIFICATION OF PRODUCT

TRADE NAME & SYNONYMS  
CHEMICAL NAME & SYNONYMS  
CHEMICAL FAMILY  
MOLECULAR FORMULA  
\*\* REGISTERED U.S. TRADEMARK OF NUDEDEX INC.

MSDS/PRODUCT NUMBER : 7953813  
REVISION DATE : 4500  
MOLECULAR WEIGHT : N/A

RECEIVED  
SEP 21 1983  
WEST NEWPORT  
OIL COMPANY

COMPONENTS	PERCENT	THRESHOLD LIMIT VALUE	SECTION 02 HAZARDOUS COMPONENTS OF MIXTURES	PERCENT	THRESHOLD LIMIT VALUE
NONE					

SECTION 03 PHYSICAL DATA

APPEARANCE AND ODOR : LIGHT AMBER OIL, SLIGHT MILD ODOR.

BOILING POINT : >660F  
VAPOR PRESSURE : 100.02 MM HG @ 300F  
VAPOR DENSITY : NOT VOLATILE  
SOLUBILITY IN WATER : NEGLIGIBLE

MELTING POINT : <-25F  
SPECIFIC GRAVITY : LESS THAN 1  
PERCENT VOLATILE : NOT VOLATILE  
EVAPORATION RATE : NOT VOLATILE

SECTION 04 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : >450F CDC  
FIRE EXTINGUISHING MEDIA : WATER SPRAY, FOAM, CO2 OR DRY CHEMICAL  
SPECIAL FIRE FIGHTING PROCEDURE : BURNING WILL PRODUCE TOXIC FUMES. WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL TURN-OUT GEAR TO FIGHT FIRE. AVOID SPREADING LIQUID AND FIRE BY WATER FLOODING.

UNUSUAL FIRE AND EXPLOSION HAZARDS : EXPOSURE TO HEAT BUILDS UP PRESSURE IN CLOSED CONTAINERS. COOL WITH WATER SPRAY.

SECTION 05 HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE : NOT APPLICABLE  
EFFECTS OF OVER EXPOSURE : LOW ORAL AND DERMAL TOXICITY. MISTS OR FUMES FROM EXCESSIVE HEATING MAY CAUSE IRRITATION, NAUSEA, VOMITING.

EMERGENCY 1ST AID PROCEDURE : CONTACT - WASH SKIN WITH SOAP AND WATER; FLUSH EYES WITH WATER FOR 15 MINUTES. CALL A PHYSICIAN IF IRRITATION DEVELOPS. INHALATION - REMOVE TO FRESH AIR, GIVE ARTIFICIAL RESPIRATION OR OXYGEN IF NECESSARY. INGESTION - INDUCE VOMITING IF VICTIM IS CONSCIOUS. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

**MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN**

REVISED:01/24/91

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*

MOBIL PEGASUS 100/40

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(609) 737-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800) 424-9300 (CHEMTREC)
USE OR DESCRIPTION:	PRODUCT TECHNICAL INFORMATION:
GAS ENGINE LUBRICANT	(800) 662-4525

\*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: Dark Amber Liquid	ODOR: Mild	PH: NA
VISCOSITY AT 100 F, SUS: 694.0	AT 40 C, CS: 132.0	
VISCOSITY AT 210 F, SUS: 72.0	AT 100 C, CS: 13.0	
FLASH POINT F(C): > 425(218)	(ASTM D-92)	
MELTING POINT F(C): NA	POUR POINT F(C): 5(-15)	
BOILING POINT F(C): > 600(316)		
RELATIVE DENSITY, 15/4 C: 0.886	SOLUBILITY IN WATER: Negligible	
VAPOR PRESSURE-mm Hg 20C: < .1		

NA=Not Applicable NE=Not Established D=Decomposes  
FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

\*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

None

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*-Suggested-TLV, M=Mobil, O=OSHA, S=Supplier  
NOTE: Limits shown for guidance only. Follow applicable regulations.

\*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
THRESHOLD LIMIT VALUE: 5.00 mg/m3 Suggested for Oil Mist  
EFFECTS OF OVEREXPOSURE: Slight eye irritation. Slight skin irritation.

\*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: Flush with water.  
SKIN CONTACT: Wash contact areas with soap and water.  
INHALATION: Not expected to be a problem.  
INGESTION: Not expected to be a problem. However, if greater than 1/2 liter(pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. Do not induce vomiting or give anything by mouth to an unconscious person.

\*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*  
 GOVERNMENTAL INVENTORY STATUS: All components registered in accordance with TSCA.

## DOT:

Shipping Name: Not applicable  
 Hazard Class: Not applicable

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D); does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity, and is not formulated with the contaminants listed in the Toxicity Characteristic (TC) Rule as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (302) REPORTABLE HAZARD CATEGORIES: None

This product contains no chemicals reportable under SARA (313) toxic release program.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
FORMALDEHYDE	50-00-0	12
ISOPROPYL ALCOHOL	67-63-0	12
ZINC (ELEMENTAL ANALYSIS) (.04%)	7440-66-6	15

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
 6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,  
 11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
 16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
CONTAIN THE FOLLOWING BASE OIL: DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	> 90.00	64742-54-7
2,5-FURANDIONE, DIHYDRO-, POLYBUTENYL DERIVATIVES, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE	< 7.00	68583-75-5

\*\*\*\*\* APPENDIX \*\*\*\*\*  
FOR MOBIL USE ONLY: (FILL NO: RN1391D2\*062) MCN: , MHC: 1\* 1\* NA 1\*  
1\*, MPPEC: A, PPEC: A, US90-837 APPROVE 01/24/91

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265



**PRODUCT NALCO 8330-M INHIBITOR**

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

**SECTION 1 PRODUCT IDENTIFICATION**

**TRADE NAME:** NALCO 8330-M INHIBITOR

**DESCRIPTION:** An aqueous solution of borate, silicates, nitrate and nitrite

NFPA 704M RATING 2 HEALTH 0 FLAMMABILITY 0 REACTIVITY 0 OTHER  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

**SECTION 2 HAZARDOUS INGREDIENTS**

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Sodium nitrite	7632-00-1	1-10

**SECTION 3 PRECAUTIONARY LABEL INFORMATION**

**CAUTION:** May be harmful if swallowed. May cause irritation to skin and eyes. Avoid contact with eyes, and prolonged or repeated contact with skin. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

**SECTION 4 FIRST AID INFORMATION**

**EYES:** Flush with water for 15 minutes. Call a physician.  
**SKIN:** Flush with water for 15 minutes.  
**INGESTION:** Induce vomiting. Give water. Call a physician. at once.

**NOTE TO PHYSICIAN:** No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

**CAUTION:** If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

**SECTION 5 HEALTH EFFECTS INFORMATION**

**PRIMARY ROUTES OF EXPOSURE:** Eye, Skin



PRODUCT

NALCO 8330-H INHIBITOR

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

## SECTION 5 HEALTH EFFECTS INFORMATION

( CONTINUED )

EYE CONTACT: Can cause transient irritation.  
SKIN CONTACT: Can cause transient irritation.  
INGESTION: Can cause kidney damage. Can be harmful or fatal.

### SYMPTOMS OF EXPOSURE:

CHRONIC: Sodium nitrite. Causes formation of methemoglobinemia leading to cyanosis and possibly death if ingested. Repeated ingestion of small amounts causes blood pressure to drop, rapid pulse, headaches and visual disturbances. Can cause central nervous system effects e.g. headaches, tremors, drowsiness and convulsions.

AGGRAVATION OF EXISTING CONDITIONS: Sodium nitrite - Pregnant women are particularly sensitive to methemoglobinemia

## SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but acute studies have been conducted on a similar product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD<sub>50</sub> = 3,703 mg/kg

95% Confidence Limit = 2,604 - 5,265 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD<sub>50</sub> = Greater than 3,038 mg/kg

COMMENTS: No pharmacotoxic symptoms were exhibited by the rabbits. Pathological examination showed no gross alterations.

### PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 0.4/8.0 Minimal irritation

### PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 6.0/110.0 Mild irritation

COMMENTS: The conjunctiva showed redness through 72-hours. Afterwards no redness or swelling was noted. No iridial nor corneal involvement was noted. Seven days after exposure no irritation was noted.

CHRONIC TOXICITY RESULTS: Experimental animal studies with sodium nitrite have shown reproductive effects in the offspring of the treated parents. These effects are nontransmissible. Tumorigenic data is equivocal. Mutation studies in bacterial assays have been positive.



PRODUCT: NALCO 8330-M INHIBITOR

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

## SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Amber	FORM: Liquid	ODOR: Faint organic
DENSITY:	9.42 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.13 @ 60 Degrees F	ASTM D-1298
pH (NEAT) =	11.7	ASTM E-70
BOILING POINT:	Greater than 212 Degrees F	
	@ 760 mm Hg	ASTM D-86
FLASH POINT:	Greater than 200 Degrees F (FMCC)	ASTM D-93

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

## SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: Greater than 200 Degrees F (FMCC) ASTM D-93

EXTINGUISHING MEDIA: Not applicable.

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve NOx or SOx under fire conditions.

## SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: N-nitrosamines, many are cancer causing agents to laboratory animals, may be formed when certain amines are mixed with nitrous acid, organic or inorganic nitrites or atmospheres with high nitrous oxide concentrations.

MATERIALS OF CONSTRUCTION: Avoid contact with organic materials (eg. rags, sawdust, hydrocarbon oils or solvents) and avoid reducing agents (eg. hydrazine, sulfites, sulfides, aluminum or magnesium dust) which can generate heat, fires, explosions and the release of toxic fumes.

Avoid contact with strong acids (eg. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) which can generate heat, splattering or boiling and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO<sub>2</sub>, NOx, SOx may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

## SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection is not normally needed since the volatility and toxicity are low. If significant mists or





PRODUCT

NALCO 8330-M INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

## SECTION 10 PERSONAL PROTECTION EQUIPMENT

( CONTINUED )

aerosols are generated, wear a NIOSH approved or equivalent respirator, (ANSI Z 88.2, 1980 for requirements and selection).

If it is possible to generate significant levels of vapors or mists, a NIOSH approved or equivalent respirator is recommended.

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

VENTILATION: General ventilation is recommended.

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

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

## SECTION 11 SPILL AND DISPOSAL INFORMATION

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

### SPILL CONTROL AND RECOVERY:

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

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

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

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



PRODUCT NALCO 8330-M INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

## SECTION 12 ENVIRONMENTAL INFORMATION

### AQUATIC DATA:

96-hour static acute LC<sub>50</sub> to Bluegill Sunfish = Greater than 1,000 ppm

TOXICITY RATING: Essentially Non-Toxic

96-hour static acute LC<sub>50</sub> to Rainbow Trout = 980 - 1100 ppm

TOXICITY RATING: Essentially Non-Toxic

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

## SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

ORM-E NA 9188

CONTAINS

- SODIUM NITRITE

## SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

### FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Sodium nitrite - Chronic effects

CERCLA/SUPERFUND, 40 CFR 117, 302:

This product contains sodium nitrite, a Reportable Quantity (RQ) substance and if 2,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

### TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

### U. S. DEPARTMENT OF AGRICULTURE (USDA):

USDA Inspection and Grading Programs - Food Safety and Inspection Service:

This product is authorized by USDA for use in federally inspected meat and poultry plants. Authorized use is under category G7

**SECTION 14 REGULATORY INFORMATION**
**( CONTINUED )**

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

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

Sodium nitrite - SECTION 311

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

**STATE REGULATIONS:**

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

**STATE RIGHT TO KNOW LAWS:**  
 Regulated in those states using TLV's for sodium nitrite.

**SECTION 15 ADDITIONAL INFORMATION**

None

**SECTION 16 USER'S RESPONSIBILITY**

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

**SECTION 17 BIBLIOGRAPHY**

SEE NALCO'S MSDS SECTION DESCRIPTION



PRODUCT: NALCO 8330-M INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

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SECTION 17 BIBLIOGRAPHY

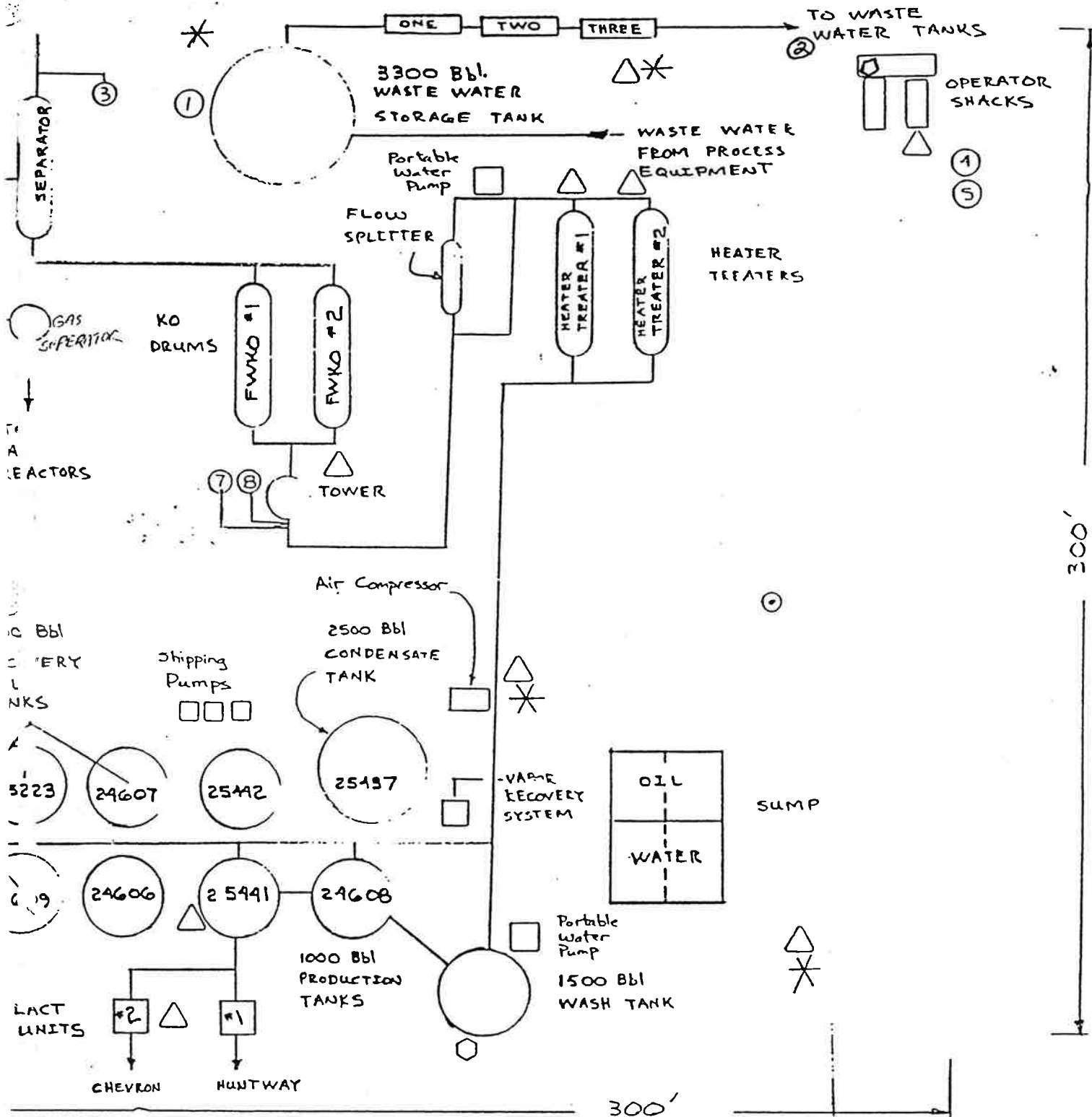
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PREPARED BY: John J. Kasper, MSc., Toxicologist  
DATE ISSUED: 01/02/85

## TANK FARM - SCHEMATIC

1. INTRODUCTION  
FROM  
FIELD



N 1074 = 165 GLS.

STB 525 150 GLS.

CW0252H = 300 GLS.

SOLVENT = 1000 GLS.

INSTANT EMULSIFIER = 165 GLS.

⑥ EB 137 N = 200 GLS.

⑦ SCW0252H = 200 GLS.

⑧ WC 412 = 110 GLS.

⑨ ALLOTEC 612-613-614 = 550 GLS.

⑩ sodium silicate = 3000 GLS.

△ Fire Extinguisher

○ Eye/Face Shower

⊙ Gas Main

\* Electrical Main

## MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED:06/10/91

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*  
CRUDE OIL (SOUR)

SUPPLIER: MOBIL OIL CORP.  
 CHEMICAL NAMES AND SYNONYMS: CRUDE OIL  
 USE OR DESCRIPTION: CRUDE OIL

HEALTH EMERGENCY TELEPHONE: (609) 737-4411  
 TRANSPORT EMERGENCY TELEPHONE: (800) 424-9300 (CHEMTREC)  
 PRODUCT TECHNICAL INFORMATION: (800) 662-4525

## \*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: Black Liquid ODOR: Mild PH: NA  
 VISCOSITY AT 100 F, SUS: < 50.0 AT 40 C, CS: < 5.0  
 VISCOSITY AT 210 F, SUS: NA AT 100 C, CS: NA  
 FLASH POINT F(C): > 1(-17) (ASTM D-56)  
 MELTING POINT F(C): NA POUR POINT F(C): NE  
 BOILING POINT F(C): 0(-18)  
 RELATIVE DENSITY, 15/4 C: 0.8-0.9 SOLUBILITY IN WATER: Negligible  
 VAPOR PRESSURE-mm Hg 20C: < 300.0

NA=Not Applicable NE=Not Established D=Decomposes  
 FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

## \*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

	WT PCT (APPROX)	EXPOSURE LIMITS MG/M3	PPH	SOURCES (AND NOTES)
PETROLEUM CRUDE OIL (8002-05-9)	100	525	100	A*
THIS MIXTURE CONTAINS THE FOLLOWING COMPONENTS:				
BENZENE (71-43-2)	0.16	3	1	O-PEL
		30	10	A
		30	10	M

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*=Suggested-TLV, M=Mobil, O=OSHA, S=Supplier  
 NOTE: Limits shown for guidance only. Follow applicable regulations.

## \*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---

EFFECTS OF OVEREXPOSURE: \*\*\*\*Note: This product contains polycyclic aromatic hydrocarbons (PCAs). Under conditions of poor personal hygiene and prolonged, repeated contacts, some PCAs have been suspected as a cause of skin cancer in humans. \*\*\*\* Warning: H2S a highly toxic gas may be present, see MSDS toxicology section. Loss of sense of smell at 100 ppm; above 100 ppm, drowsiness, loss of consciousness and possible respiratory failure or death. Moderate skin irritation. Respiratory irritation, dizziness, nausea, loss of consciousness. Prolonged repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

\*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: Flush thoroughly with water. If irritation persists, call a physician.

SKIN CONTACT: Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INHALATION: Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance and call a physician. If breathing has stopped, use mouth to mouth resuscitation.

INGESTION: Do not induce vomiting. Give 1 to 2 glasses of water. Get medical assistance. (Note to physician: Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.)

\*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): > 1(-17) (ASTM D-56)

FLAMMABLE LIMITS. LEL: NE UEL: NE

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Use water to keep fire exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Water spray may be used to flush spills away from exposures. For fires in enclosed areas, firefighters must use self-contained breathing apparatus. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable. Vapor accumulation could flash and/or explode if ignited.

NFPA HAZARD ID: Health: 1, Flammability: 3, Reactivity: 0

\*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (Thermal, Light, etc.): Stable

CONDITIONS TO AVOID: Heat, sparks, flame and build up of static electricity.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides. Sulfur oxides.

Metal oxides. Carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

\*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

**ENVIRONMENTAL IMPACT:** Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

**PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:** Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. For large spills: Contain material and pump back to holding tank for later disposal. Eliminate all ignition sources. Remove leaking containers to detached area.

**WASTE MANAGEMENT:** Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

\*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

**EYE PROTECTION:** No special equipment required.

**SKIN PROTECTION:** Impervious gloves should be worn.

**RESPIRATORY PROTECTION:** Approved respiratory protective equipment must be used in high vapor or mist concentrations.

**VENTILATION:** Ventilation required and equipment must be explosion proof. Use away from all ignition sources.

\*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

**HANDLING:** Trace amounts of H<sub>2</sub>S may be present. Keep face clear of tank and/or tank car openings. Avoid contact with skin. Avoid inhalation of vapors or mists. Use in well ventilated area away from all ignition sources. Avoid sparking conditions. Ground and bond all transfer equipment.

**STORAGE:** Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters. Store away from all ignition sources in a cool area equipped with an automatic sprinkling system. Outside or detached storage preferred. Storage containers should be grounded and bonded.

**MATERIALS MUST BE LABELED AS:** Extremely Flammable.



## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): LD50: > 5 g/kg 0/10 Rats died at this dosage level. Slightly toxic ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): LD50: > 2 g/kg 0/06 Rabbits died at this dosage level. Slightly toxic ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Moderately toxic ---Based on testing of similar products and/or the components.

EYE IRRITATION (RABBITS): Expected to be non-irritating. ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): May cause moderate irritation on prolonged or repeated contact. ---Based on testing of similar products and/or the components.

## ---GENETIC TOXICOLOGY (SUMMARY)---

\*\*\*Positive ames test.

## ---CHRONIC TOXICOLOGY (SUMMARY)---

\*\*\*Skin tumorigenicity: Positive in mice.

## ---OTHER TOXICOLOGY DATA---

\*\*\*Trace amounts of hydrogen sulfide, a toxic gas, may be present when this material is handled in liquid form. Keep face clear of tank and/or tank car openings.

\*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*  
GOVERNMENTAL INVENTORY STATUS: All components registered in accordance with TSCA.

## DOT:

Shipping Name: Crude oil, petroleum  
Hazard Class: Flammable liquid  
ID Number: UN 1267  
ERG Number: 27  
Railroad STCC: 4910165

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined to be hazardous.

RCRA INFORMATION: The disposal of the unused product may be subject to RCRA regulations per 40 CFR Part 261 for the reasons including but not limited to ignitability, corrosivity, reactivity or formulation with the contaminants listed in the Toxicity Characteristic (TC) Rule as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Disposal of the used product may be regulated.

BENZENE: .1600 PCT (TCLP)  
FLASH: > 1(-17) F(C)

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:  
This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312 - FORMERLY 302) REPORTABLE HAZARD CATEGORIES:  
FIRE CHRONIC ACUTE

THIS PRODUCT CONTAINS THE FOLLOWING SARA (313) TOXIC RELEASE CHEMICALS:

BENZENE (COMPONENT ANALYSIS) 71-43-2 0.16%

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
BENZENE (COMPONENT ANALYSIS) (.16%)	71-43-2	1, 2, 3, 4, 5, 6, 12, 14, 15, 17, 18
PETROLEUM DISTILLATES, N.O.S.	8002-05-9	1, 7, 8, 9, 11, 12, 14, 16, 17, 18

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,  
11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT	PERCENT	CAS NUMBER
PETROLEUM CRUDE OIL (8002-05-9)	100.00	8002-05-9
BENZENE (71-43-2)	.16	71-43-2
HYDROGEN SULFIDE (7783-06-4)	<.01	7783-06-4

\*\*\*\*\* APPENDIX \*\*\*\*\*  
FOR MOBIL USE ONLY: MCN: , MHC: 1\* 1\* 2\* 0\* 2\*, MPPEC: DV, PPEC: G,  
EP870212 APPROVE 11/27/90  
\*\*\*\*\*

SYNONYM TRADE NAMES:  
CRUDE OIL, SOUR (VARIOUS)

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION  
ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ  
FOR FURTHER INFORMATION, CONTACT:  
MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265

# MATERIAL SAFETY DATA SHEET

(Solvent)

Product Name: MINERAL SPIRITS 75

Product Code No: 11006

Page 1 of 5  
Issue Date: 7/23/86

## MANUFACTURER:

UNION OIL CHEMICALS DIVISION  
UNION OIL COMPANY OF CALIFORNIA  
1345 N. MEACHAM  
SCHAUMBURG, ILLINOIS 60196

CONTACT FOR FURTHER INFORMATION:  
HSDS COORDINATOR (312) 490-2500

Transportation Emergencies:  
Call CHEMTREC  
(800) 424-9300, Cont. U.S.  
(202) 483-7616 (Collect)  
from Alaska & Hawaii  
Health Emergencies:  
CALL LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.)  
(213) 664-2121

## PRODUCT IDENTIFICATION

PRODUCT NAME: MINERAL SPIRITS 75

SYNOPSIS NAME: VOLATILE SOLVENT

CHEMICAL FAMILY: HYDROCARBON MIXTURE

DI PROPER  
SYNOPSIS NAME: PETROLEUM NAPHTHA

ID NUMBER: UN1255

DI HAZARD  
CLASSIFICATION: COMBUSTIBLE LIQUID

SYNOPSIS NUMBER: 64741-41-9

## SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS CAS NO. TLV UNITS AGENCY TYPE

STODDARD SOLVENT	8052-41-3	100.00 PPM 500.00 PPM	ACGIH OSHA	THA THA
C9-C12 PARAFFINS		NOT ESTABLISHED		
C9-C12 CYCLOPARAFFINS		NOT ESTABLISHED		
ROMATIC HYDROCARBONS		NOT ESTABLISHED		

## SECTION II - EMERGENCY AND FIRST AID PROCEDURES

\*\*\*EMERGENCY\*\*\*

Have physician call LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.) (213) 664-2121

## 1. CONTACT:

IF IRRITATION OR REDNESS FROM EXPOSURE TO VAPORS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. IF IRRITATION OR REDNESS PERSISTS, SEEK MEDICAL ATTENTION. FOR DIRECT CONTACT, FLUSH THE AFFECTED EYE(S) WITH CLEAN WATER. SEEK MEDICAL ATTENTION.

**SECTION II - EMERGENCY AND FIRST AID PROCEDURES**

\*\*\*EMERGENCY\*\*\*

Have physician call LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.) (213) 664-2121

**CONTACT:**

REMOVE CONTAMINATED CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

**INHALATION (BREATHING):**

IF IRRITATION OF NOSE OR THROAT DEVELOPS, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, ARTIFICIAL RESPIRATION SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

**INGESTION (SHALLOWING):**

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

**SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY**

**CONTACT:**

THIS PRODUCT MAY CAUSE EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO ITS VAPORS OR MISTS MAY CAUSE BURNING, TEARING AND REDNESS.

**SKIN CONTACT:**

THIS PRODUCT MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED EXPOSURE TO THIS MATERIAL MAY CAUSE REDNESS AND BURNING, DRYING AND CRACKING OF THE SKIN AND DERMATITIS. PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

**INHALATION (BREATHING):**

INHALATION OF EXCESSIVE CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE: IRRITATION OF THE NOSE AND THROAT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). PERSONS WITH IMPAIRED LUNG FUNCTION OR ASTHMA-LIKE CONDITIONS MAY EXPERIENCE ADDITIONAL BREATHING DIFFICULTIES DUE TO THE IRRITANT PROPERTIES OF THIS MATERIAL.

**INGESTION (SHALLOWING):**

INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE: IRRITATION OF THE DIGESTIVE TRACT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SHALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE.

**COMMENTS:**

THIS SUBSTANCE HAS NOT BEEN IDENTIFIED AS A CARCINOGEN OR PROBABLE CARCINOGEN BY NTP, IARC OR OSHA.

#### SECTION IV - SPECIAL PROTECTION INFORMATION

##### ENVIRONMENTAL INFORMATION:

CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, SYSTEMS SAFE FOR SUCH LOCATIONS SHOULD BE USED.

##### LABORATORY PROTECTION:

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

##### PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

##### EYE PROTECTION:

IMPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

##### OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

#### SECTION V - REACTIVITY DATA

##### STABILITY:

E

##### COMPATIBILITY (MATERIALS TO AVOID):

THIS PRODUCT IS INCOMPATIBLE WITH STRONG ACIDS OR BASES, OXIDIZING AGENTS AND SELECTED AMINES.

##### HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE.

##### HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

#### SECTION VI - SPILL OR LEAK PROCEDURES

\*\*\*HIGHWAY OR RAILWAY SPILLS\*\*\*  
Call CHEMREC (800) 424-9300 Cont. U.S.  
(Collect) (202) 483-7616 from Alaska & Hawaii

##### SITUATIONS IN CASE OF RELEASE OR SPILL:

STAY UPWIND AND AWAY FROM SPILL. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL. IF SPILL IS INDOORS, VENTILATE AREA OF SPILL. FOAM, ESPECIALLY HIGH EXPANSION FOAM, MAY BE USED TO SUPPRESS VAPORS. KEEP OUT OF DRAINS, SEWERS OR EFFLUENTS. USE SAND OR OTHER INERT MATERIAL TO DAM AND CONTAIN SPILL. DO NOT FLUSH AREA WITH WATER. FOR SMALL SPILLS, DO NOT FLUSH WITH WATER; USE ABSORBENT PADS. CALL SPILL RESPONSE TEAM IF LARGE SPILL. NOTIFY APPROPRIATE STATE/LOCAL AGENCIES.

SECTION VI - SPILL OR LEAK PROCEDURES

\*\*\*HIGHWAY OR RAILWAY SPILLS\*\*\*  
Call CHEMTREC (800) 424-9300 Cont. U.S.  
(Collect) (202) 483-7616 from Alaska & Hawaii

DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

STORAGE AND STORAGE PRECAUTIONS:

KEEP CONTAINERS TIGHTLY CLOSED. KEEP CONTAINERS COOL, DRY, AND AWAY FROM SOURCES OF IGNITION. USE AND STORE THIS PRODUCT WITH ADEQUATE VENTILATION. AVOID INHALATION OF VAPORS AND PERSONAL CONTACT WITH THE PRODUCT. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT WELD, CUT, GRIND, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z39.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

HAZARD RANKING

HEALTH HAZARD: 2  
FLAMMABILITY: 2  
REACTIVITY: 0  
OTHER: -

0 = LEAST  
1 = SLIGHT  
2 = MODERATE  
3 = HIGH  
4 = EXTREME

HMS HEALTH: 1  
HAZARD FLAM: 1  
CLASS REACT: 1  
P.P.E.: -

LOWER EXPLOSIVE LIMIT (% VOL.)

1.0

UPPER EXPLOSIVE LIMIT (% VOL.)

6.0

FLASH POINT

107, TCC F

EXTINGUISHING MEDIA:

SMALL FIRES: EXTINGUISH WITH DRY CHEMICAL, CO2 OR FOAM. LARGE FIRES: THE USE OF DRY CHEMICAL OR FOAM IS RECOMMENDED. WATER MAY BE AN INEFFECTIVE EXTINGUISHING AGENT.

EXPLOSION HAZARDS:

THIS MATERIAL IS COMBUSTIBLE AND MAY BE IGNITED BY HEAT OR FLAME. THIS MATERIAL WILL BURN, BUT WILL NOT IGNITE READILY.

FIGHTING PROCEDURES:

THE USE OF A SCBA IS RECOMMENDED FOR FIRE FIGHTERS. WATER SPRAY MAY BE USEFUL IN MINIMIZING VAPORS AND COOLING CONTAINERS EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

ION IX - PHYSICAL DATA

<u>BOILING POINT</u>	<u>VAPOR DENSITY (AIR = 1)</u>	<u>VAPOR PRESSURE</u>
15 TO 395 F	4.8	2.0 MM HG @ 20C
<u>EVAPORATION RATE (N-BUTYL ACETATE = 1)</u>	<u>% VOLATILE</u>	<u>% SOLUBILITY IN WATER</u>
0.13	100%	NEGLIGIBLE (< 5%)
<u>RELATIVE GRAVITY (TEMP/TEMP)</u>	<u>APPEARANCE</u>	<u>ODOR</u>
0.799 (60F/60F)	CLEAR, HAS LITTLE IF ANY COLOR	CHARACTERISTIC

ION XI - DOCUMENTARY INFORMATION

DATE: 7/23/86	PRODUCT CODE NO. 12415
REV. DATE:	PREV. PROD. CODE NO. 2415
DS NO:	PREV. MSDS NO:

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.



Water and Energy Systems Technology, Inc.  
2516 Woodland Drive  
Anaheim, CA 92801

## MATERIAL SAFETY DATA SHEET

### I. PRODUCT IDENTIFICATION

Trade name (as labeled): WEST B 525

Chemical names, common names: Scale Inhibitor

Manufacturer's name: Water and Energy Systems Technology, Inc.

Address: 2516 Woodland Drive, Anaheim, CA 92801

Emergency phone: (714) 761-5191

Business phone: (714) 761-5191

Date prepared: 3/5/87

### II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air	
		ACGIH(TLV)	OSHA(PEL) Other

### III. HAZARDOUS INGREDIENTS

### III. PHYSICAL PROPERTIES

Vapor density (air=1): ND Melting point or range, F: NA

Specific gravity: 1.070 Boiling point or range, F: 211

Solubility in water: Soluble

Vapor pressure, mmHg at 20C: ND

Evaporation rate (butyl acetate=1): 1.1

Appearance and odor: Colorless to light straw liquid, bland odor.

### IV. FIRE AND EXPLOSION

Flash Point, F: NA

Autoignition temperature, F: NA

Flammable limits in air, volume %: lower NA upper NA

Fire extinguishing materials:

<input checked="" type="checkbox"/> water spray	<input checked="" type="checkbox"/> carbon dioxide	other
<input checked="" type="checkbox"/> foam	<input checked="" type="checkbox"/> dry chemical	

Special firefighting procedures:  
NONE

Unusual fire and explosion hazards:  
NONE

\*\*\*\*\*

## V. HEALTH HAZARD INFORMATION

### SYMPTOMS OF OVEREXPOSURE

Inhaled:

None.

Contact with skin or eyes:

May cause irritation or redness on contact with skin or eyes.

Absorbed through skin:

None.

Swallowed:

Low single dose oral toxicity.

---

### HEALTH EFFECTS OR RISKS FROM EXPOSURE

Acute:

May cause local irritation from exposure.

Chronic:

No longterm health effects known from repeated exposures.

---

### FIRST AID: EMERGENCY PROCEDURES

Contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

Skin contact:

Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

Swallowed:

Immediately give 2 to 4 glasses of water and induce vomiting. Continue until vomited fluid is clear. Get prompt medical attention.

---

### SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists below.

YES: Federal OSHA      NTP      IARC      Cal/OSHA (see note)\*

OTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

# ----- MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Persons with pre-existing skin disorders, eye problems, or impaired respiratory functions may be more susceptible to the effects of this substance.

## \*\*\*\*\* VI. REACTIVITY DATA

Stability: X Stable                      \_ Unstable

Conditions to avoid:

Do not mix with other industrial chemicals.

Incompatibility (materials to avoid):

Strong oxidizing agents.

Hazardous decomposition products (including combustion products):

Carbon dioxide or carbon monoxide may be formed.

Hazardous polymerization:              \_ May occur              X Will not occur

## \*\*\*\*\* VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (including employee protection measures):

For small spills mop or wipe up. For large spills, contain by diking with soil or other absorbent material. Keep out of sewers, drains, surface waters, and soil.

Preparing wastes for disposal:

Place waste in D.O.T. approved waste containers.

NOTE: Dispose of all wastes in accordance with federal, state, and local regulations.

## \*\*\*\*\* VIII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:

NORMAL

Respiratory protection:

NIOSH approved respirator in the absence of adequate environmental controls at the point of use.

Eye protection:

Chemical goggles and face shield.

Gloves:

Rubber.

Other clothing and equipment:

Rubber apron and protective clothing.

Work practices, hygienic practices:

Do not get in eyes, on skin, or on clothing.

**Other handling and storage requirements:**

eyewash and safety shower should be nearby and ready for use.

Protective measures during maintenance of contaminated equipment:  
**WEAR PROTECTIVE CLOTHING.**

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, WEST, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGEMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, WEST, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

End of MSDS



CALNOX® S109

SCALE INHIBITOR  
(FORMERLY DI-CHEM H109)

DESCRIPTION

CALNOX® S109 is a liquid, water soluble scale inhibitor. This product prevents deposition and agglomeration of the alkaline earth scales such as calcium carbonate, calcium sulfate, strontium sulfate and barium sulfate.

CALNOX® S109 is an organic phosphonate type scale inhibitor. This product is very stable; does not revert to an ineffective form. CALNOX® S109 maintains its effectiveness at high temperatures.

TYPICAL PHYSICAL PROPERTIES

Specific Gravity	1.12
Density:	9.32 lbs./U.S. gal.
Flash Point:	200+°F
Pour Point:	+24°F
pH:	5.0

USE INFORMATION

CALNOX® S109 is recommended to prevent deposition of the alkaline earth scales in oil production operations. It is an effective scale inhibitor for producing wells, water injection and disposal systems, heater treaters, chem-electric treaters and other surface equipment. CALNOX® S109 is an excellent strontium and barium sulfate inhibitor.

PACKAGING

CALNOX® S109 is available in 55 gallon, closed-head, non-returnable steel drums and in bulk.

HANDLING INSTRUCTIONS

Avoid contact with eyes, skin and clothing. In case of contact with eyes, flush immediately with plenty of water for 15 minutes and seek medical aid. In case of contact with the skin, wash the area thoroughly with water. Contaminated clothing should be removed immediately and washed prior to reuse. For more information, consult the MSDS (OSHA FORM-20).

12/84

**PRODUCT DATA BULLETIN**

BAKER PERFORMANCE CHEMICALS INCORPORATED  
SDS for CALNOX\* S 109

CAUTION CODE 2-1-0

## 1 - Site Specific Information

\*CALNOX is a Registered Trademark of Baker Performance Chemicals Incorporated.

## 2 - SECTION I - IDENTITY

BAKER PERFORMANCE CHEMICALS, INC.  
A Baker Hughes company  
3 20 ESSEX LANE, P.O. BOX 27714  
4 USTON, TX 77227-7714

EMERGENCY TELEPHONE NUMBER:  
CHEMTREC: 1-800-424-5900  
713-599-7400  
TELEPHONE NUMBER FOR INFORMATION:  
713-599-7400

CALNOX S 109

CHEMICAL NAME: Complex Mixture

CHEMICAL FAMILY: Phosphonate

## 3 - SECTION II - REGULATORY CLASSIFICATION

## ENVIRONMENTAL

Q- None

Q= None

SARA S313: No

## OCCUPATIONAL

OSHA Non-Hazardous: Yes

OSHA Hazardous: NA

Acute  
Chronic  
Fire  
Pressure  
Reactive

## TRANSPORTATION

Not Regulated: Yes

Regulated: NA

ID#: NA

DOT Response #: NA

## 4 - SECTION III - HAZARDOUS INGREDIENTS

HAZARDOUS  
COMPONENT

CAS  
#

PEL(OSHA)\*  
TWA STEL A/L

TLV(ACGIH)\*  
TWA STEL

MFG\*  
REC

This product is not hazardous by 29CFR, 1910.1200 regulations.

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

**BAKER PERFORMANCE CHEMICALS INCORPORATED**  
**M DS for CALNOX\* S 109**

**CAUTION CODE 2-1-0**

**SECTION IV - PHYSICAL & CHEMICAL PROPERTIES**

**Specific Gravity @60F:**  
**H<sub>2</sub>O=1)**  
 1.120

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

**Vapor Density**  
**Air=1)**  
 >1

**pH:**  
**5% of Product: 4.7 - 5.3**

**Solubility in Water: Soluble**

**Appearance and Odor: Clear dark amber**  
**with clean odor**

**Flash Point (Method): >200F(TCC)**

**Stability: Stable**

**Max. Decomp. Prod: Carbon monoxide;**  
**oxides of nitrogen**

**Conditions to Avoid: Strong oxidizers**

**Hazardous Polymerization: Will not occur**

**SAFE CONTROL PROCEDURES: Use foam, dry chemical, CO<sub>2</sub>, 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.**

**IR. HAZARDS:**

**Do unusual fire hazards; material is not flammable and/or combustible.**

**SECTION V - HEALTH HAZARDS**

**EFFECTS OF OVEREXPOSURE:**

**INHALATION: Inhalation of vapors may cause irritation of lungs and upper**  
**respiratory tract.**

**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:**

**TARGET ORGANS (29 CFR 1910.1200-APPENDIX A)**

None

BAKER PERFORMANCE CHEMICALS INCORPORATED  
M DS for CALNOX\* S 109

CAUTION CODE 2-1-0

## 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.

**SKIN CONTACT:** Remove contaminated clothing and shoes. Wash skin thoroughly with mild soap and water. If irritation persists, contact a physician. Remove contaminated clothes before reuse.

**INHALATION:** Remove to fresh air. If labored breathing continues, contact a physician.

**INGESTION:** If conscious drink two (2) glasses of water and induce vomiting. Contact a physician. Never give anything by mouth to an unconscious person.

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

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

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 unusual conditions that may increase the inhalation exposure, respiratory protective equipment as described above 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).

Thorough review of the job task (job safety analysis) by a competent



BAKER PERFORMANCE CHEMICALS INCORPORATED  
MSDS for CALNOX\* S 109

CAUTION CODE 2-1-0

### SECTION VII - PROTECTIVE EQUIPMENT RECOMMENDATIONS (continued)

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.

### 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 user at the time of disposal, since the product uses, transformations, uses 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.

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

Karla M. Pruitt  
Regulatory Information Specialist

Date: 5/17/89 Supercedes: 2/16/88

7/89 - The Hazardous Ingredients Section has been updated to include the latest Permissible Exposure Limits (PELs) promulgated by the Occupational Safety and Health Administration (OSHA) at 29 CFR 1910.1000, Table Z-1-A, final rule effective March 1, 1989.

OCT 28 1991

Printed 10-15-1991

FC(R) WC-412 WATER CLARIFIER

ID: 6-007775

WEST NEWPORT  
OIL COMPANY

## GENERAL INFORMATION

BAKER PERFORMANCE CHEMICALS, INC.  
A Baker Hughes company  
3920 ESSEX LANE, P.O. BOX 27714  
HOUSTON, TEXAS 77227-7714

800-424-9300 ChemTrec  
800-231-3606 Emergency  
713-599-7400 Information

## GENERIC NAME

POLYAMINE SALT SOLUTION  
DOT PROPER SHIPPING NAME  
COMBUSTIBLE LIQUID, N.O.S.  
(METHANOL)  
DOT HAZARD CLASS  
COMBUSTIBLE LIQUID

DATE REVISED: 08-21-90

UN/NA NUMBER  
NA 1993

NFPA CLASSIFICATION: HEALTH:(2) FLAMMABILITY:(2) REACTIVITY:(1)  
SPECIFIC HAZARD:(N/A)  
DOT/CERCLA RQ: NONE

## 2 - SUMMARY OF HAZARDS

## WARNING

PHYSICAL HAZARDS: MODERATELY COMBUSTIBLE

ACUTE HEALTH EFFECTS:  
(SHORT-TERM)

NO DATA FOUND; SUSPECT INHALATION HAZARD  
NO DATA FOUND; SUSPECT EYE CONTACT HAZARD  
NO DATA FOUND; SUSPECT SKIN ABSORPTION HAZARD  
NO DATA FOUND; SUSPECT SKIN IRRITATION HAZARD  
NO DATA FOUND; SUSPECT INGESTION HAZARD

CHRONIC HEALTH EFFECTS:  
(LONG-TERM)

THIS PRODUCT CONTAINS METHANOL, WHICH UPON REPEATED INGESTION, MAY CAUSE IRREVERSIBLE BLINDNESS AND METABOLIC ACIDOSIS. REPEATED EXPOSURE OF THE SKIN TO THE MATERIAL MAY CAUSE DEFATTING AND DRYING OF SKIN.

## 3 - COMPONENTS

## COMPONENT NAME

## CAS NUMBER

TRADE SECRET 7775-01#  
WATER  
\*METHANOL

7732-18-5  
67-56-1

\* THIS IS A SARA SECTION 313 LISTED CHEMICAL

## 4 - PHYSICAL AND CHEMICAL DATA

## BOILING POINT

AP 149F

## FREEZING POINT

N/DA

SPECIFIC GRAVITY (H2O=1 AT 39.2F)  
1.06

VISCOSITY UNITS, TEMP. (BROOK)  
105 77F

## PH

8.0

## DRY POINT

N/DA

## VOLATILE CHARACTERISTICS

MODERATE

SOLUBILITY IN WATER  
COMPLETE

i ted 10-15-1991

C(R) WC-412 WATER CLARIFIER  
S : 6-007775

## PHYSICAL AND CHEMICAL DATA (continued)

VAPOR PRESSURE  
AP 24.8 MM HG AT 70F  
VAPOR SP GR (AIR=1 AT 60 - 90F)  
.8

STABILITY  
STABLE  
HAZARDOUS POLYMERIZATION  
NOT EXPECTED TO OCCUR

## APPEARANCE AND ODOR

AMBER LIQUID; ALCOHOLIC ODOR

## CONDITIONS AND MATERIALS TO AVOID

HEAT, SPARKS, OR OPEN FLAMES

STRONG OXIDIZING AGENTS

## HAZARDOUS DECOMPOSITION PRODUCTS

BURNING TO DECOMPOSITION MAY PRODUCE CARBON MONOXIDE AND TRACE OXIDES AND/OR  
COMPOUNDS OF NITROGEN; POSSIBLE HYDROGEN CHLORIDE.

## OCCUPATIONAL EXPOSURE LIMITS

SUBSTANCE	SOURCE	DATE	TYPE	VALUE	TIME
METHANOL	ACGIH	1987	TWA	200 PPM	8 HRS
			STEL	250 PPM	15 MIN
	OSHA	1971	PEL	100 PPM	8 HRS

## FIRE AND EXPLOSION

FLASH POINT METHOD=(D-56 )

AP 135F

AUTOIGNITION TEMP. METHOD=

AP 878F

FLAMMABLE LIMITS (% VOLUME IN AIR)

AT NORMAL ATMOSPHERIC TEMPERATURE AND PRESSURE

LOWER: 6.0

UPPER: 36.5

## FIRE AND EXPLOSION HAZARDS

WHILE NOT NORMALLY COMBUSTIBLE, IF WATER CONTENT IS LOST (AS IN A FIRE),  
MATERIAL MAY RELEASE FLAMMABLE VAPORS IF EXPOSED TO HIGH TEMPERATURE. WHEN  
MIXED WITH AIR AND EXPOSED TO IGNITION SOURCE, VAPORS CAN BURN IN OPEN OR  
EXPLODE IF CONFINED. VAPORS MAY BE HEAVIER THAN AIR. MAY TRAVEL LONG DIS-  
TANCES ALONG GROUND BEFORE IGNITING/FLASHING BACK TO VAPOR SOURCE.

## EXTINGUISHING MEDIA

DRY CHEMICAL

CO2

WATER SPRAY

FOAM

## SPECIAL FIREFIGHTING PROCEDURES

DO NOT ENTER FIRE AREA WITHOUT PROPER PROTECTION. SEE SECTION 4 - DECOMPO-  
SITION PRODUCTS POSSIBLE. FIGHT FIRE FROM SAFE DISTANCE/PROTECTED LOCATION.  
HEAT MAY BUILD PRESSURE/RUPTURE CLOSED CONTAINERS, SPREADING FIRE, INCREAS-  
ING RISK OF BURNS/INJURIES. USE WATER SPRAY/FOG FOR COOLING.AVOID FROTHING/  
STEAM EXPLOSION. BURNING LIQUID MAY FLOAT ON WATER. ALTHOUGH SOLUBLE, MAY  
NOT BE PRACTICAL TO EXTINGUISH FIRE BY WATER DILUTION. NOTIFY AUTHORITIES  
IF LIQUID ENTERS SEWER/PUBLIC WATERS.

## - HEALTH HAZARDS

## ROUTES OF EXPOSURE

## INHALATION

ALTHOUGH NO APPROPRIATE HUMAN OR ANIMAL HEALTH EFFECTS DATA ARE KNOWN TO  
EXIST, THIS MATERIAL IS EXPECTED TO BE AN INHALATION HAZARD.

## EYE CONTACT

ALTHOUGH NO APPROPRIATE HUMAN OR ANIMAL HEALTH EFFECTS DATA ARE KNOWN TO  
EXIST, THIS MATERIAL IS EXPECTED TO CAUSE EYE IRRITATION.

## SKIN ABSORPTION

ALTHOUGH NO APPROPRIATE HUMAN OR ANIMAL HEALTH EFFECTS DATA ARE KNOWN TO  
EXIST, THIS MATERIAL IS EXPECTED TO BE A HEALTH HAZARD BY SKIN ABSORPTION.

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## HEALTH HAZARDS (continued)

## SKIN IRRITATION

ALTHOUGH NO APPROPRIATE HUMAN OR ANIMAL HEALTH EFFECTS DATA ARE KNOWN TO EXIST, THIS MATERIAL IS EXPECTED TO BE A SKIN IRRITANT.

## INGESTION

ALTHOUGH NO APPROPRIATE HUMAN OR ANIMAL HEALTH EFFECTS DATA ARE KNOWN TO EXIST, THIS MATERIAL IS EXPECTED TO BE AN INGESTION HAZARD.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

SEE SUPPLEMENT

## - PROTECTIVE EQUIPMENT / CONTROL MEASURES

## RESPIRATORY PROTECTION

IF EXPOSURE CAN EXCEED THE PEL/TLV, USE ONLY NIOSH/MSHA APPROVED AIR-PURIFYING OR SUPPLIED AIR RESPIRATOR OPERATED IN A POSITIVE PRESSURE MODE PER THE NIOSH/OSHA 1981 OCCUPATIONAL HEALTH GUIDELINES FOR CHEMICAL HAZARDS.

## EYE PROTECTION

EYE PROTECTION SUCH AS CHEMICAL SPLASH GOGGLES AND/OR FACE SHIELD MUST BE WORN WHEN POSSIBILITY EXISTS FOR EYE CONTACT DUE TO SPLASHING OR SPRAYING LIQUID, AIRBORNE PARTICLES, OR VAPOR. CONTACT LENSES SHOULD NOT BE WORN.

## SKIN PROTECTION

WHEN SKIN CONTACT IS POSSIBLE, PROTECTIVE CLOTHING INCLUDING GLOVES, APRON, SLEEVES, BOOTS, HEAD AND FACE PROTECTION SHOULD BE WORN. THIS EQUIPMENT MUST BE CLEANED THOROUGHLY AFTER EACH USE.

## ENGINEERING CONTROLS

GENERAL ROOM OR LOCAL EXHAUST VENTILATION IS USUALLY REQUIRED TO MEET EXPOSURE STANDARD(S).

## OTHER HYGENIC PRACTICES

EMERGENCY EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE IN THE IMMEDIATE VICINITY OF ANY POTENTIAL EXPOSURE.

## OTHER WORK PRACTICES

USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE SOILED CLOTHING/WASH THOROUGHLY BEFORE REUSE. SHOWER AFTER WORK USING PLENTY OF SOAP AND WATER.

## - EMERGENCY AND FIRST AID

## INHALATION

IF OVERCOME BY EXPOSURE, REMOVE VICTIM TO FRESH AIR IMMEDIATELY. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN EMERGENCY MEDICAL ATTENTION. PROMPT ACTION IS ESSENTIAL.

## EYE CONTACT

IN CASE OF EYE CONTACT, IMMEDIATELY RINSE WITH CLEAN WATER FOR 20-30 MINUTES. RETRACT EYELIDS OFTEN. OBTAIN EMERGENCY MEDICAL ATTENTION.

## SKIN CONTACT

IMMEDIATELY REMOVE CONTAMINATED CLOTHING. WASH SKIN THOROUGHLY WITH MILD SOAP/WATER. FLUSH W/LUKEWARM WATER FOR 15 MINUTES. IF STICKY, USE WATERLESS CLEANER FIRST. SEEK MEDICAL ATTENTION IF ILL EFFECT OR IRRITATION DEVELOPS.

## INGESTION

IF SWALLOWED, GIVE LUKEWARM WATER (PINT) AND INDUCE VOMITING IF VICTIM COMPLETELY CONSCIOUS/ALERT. OBTAIN EMERGENCY MEDICAL ATTENTION. NOTIFY PHYSICIAN OF ANY SERIOUS SIDE EFFECTS.

## EMERGENCY MEDICAL TREATMENT PROCEDURES

METHANOL INGESTION IS LIFE-THREATENING. INDUCE VOMITING WITH SYRUP OF IPECAC. FOLLOW EMESIS WITH MODERATE AMOUNTS OF WATER ORALLY. SYMPTOM ONSET MAY BE DELAYED. ETHANOL THERAPY MAY BE INDICATED.

## 0 - SPILL AND DISPOSAL

## PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED

EVACUATE/LIMIT ACCESS. PREVENT FLOW TO SEWERS/PUBLIC WATERS. IMPOUND/RECOVER LARGE LAND SPILL; SOAK UP SMALL SPILL. ON WATER, MATERIAL IS SOLUBLE. CONTAIN/MINIMIZE DISPERSION/COLLECT. REPORT PER REGULATORY

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6-007775

## SPILL AND DISPOSAL (continued)

## REQUIREMENTS.

## WASTE DISPOSAL METHODS

CONTAMINATED PRODUCT/SOIL/WATER MAY BE RCRA/OSHA HAZARDOUS WASTE (SEE 40 CFR 261 AND 29 CFR 1910). IF SPENT SOLVENT INTENDED FOR DISPOSAL, MAY BE DESIGNATED F005; IF SPILL CLEANUP RESIDUE, U154 UNDER RCRA LISTINGS. LAND-FILL SOLIDS AT PERMITTED SITES. USE REGISTERED TRANSPORTERS. BURN CONCENTRATED LIQUIDS IN SYSTEMS DESIGNED FOR LOW FLASH POINT MATERIAL. AVOID FLAMEOUTS. ASSURE EMISSIONS COMPLY WITH APPLICABLE REGULATIONS. DILUTE AQUEOUS WASTE MAY BIODEGRADE. AVOID OVERLOADING/POISONING PLANT BIOMASS. ASSURE EFFLUENT COMPLIES WITH APPLICABLE REGULATIONS.

## ADDITIONAL PRECAUTIONS

## HANDLING AND STORAGE PROCEDURES

COMBUSTIBLE UPON EVAPORATION OF ALL WATER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. STORE AWAY FROM HEAT, OPEN FLAME AND STRONG OXIDIZERS. STORE DRUMS WITH BUNG IN UP POSITION. KEEP OUT OF REACH OF CHILDREN. INSPECT CONTAINERS FREQUENTLY TO IDENTIFY LEAKS.

## DECONTAMINATION PROCEDURES

ISOLATE, VENT, DRAIN, WASH, AND PURGE EQUIPMENT BEFORE MAINTENANCE. REMOVE ALL IGNITION SOURCES. CHECK ATMOSPHERE FOR EXPLOSIVENESS AND OXYGEN DEFICIENCIES. IF ANY RESIDUAL PRODUCT MAY BE PRESENT, TOTAL-ENCAPSULATING IMPERVIOUS PROTECTIVE SUITS, GLOVES, AND BOOTS SHOULD BE WORN. SEE PROTECTIVE EQUIPMENT SECTION 8 FOR PROPER RESPIRATORY PROTECTION.

## 2 - LABEL INFORMATION

## USE STATEMENT

FOR INDUSTRIAL USE ONLY

KEEP OUT OF REACH OF CHILDREN

## SIGNAL WORD

WARNING

## PHYSICAL HAZARDS

COMBUSTIBLE

## HEALTH HAZARDS

INGESTION AND INHALATION HAZARD

SKIN AND EYE IRRITANT

## PRECAUTIONARY MEASURES

KEEP CONTAINER CLOSED.

DO NOT HANDLE NEAR HEAT, SPARKS, OR OPEN FLAME.

AVOID CONTACT WITH EYES, SKIN, AND CLOTHING.

AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.

USE ONLY WITH ADEQUATE VENTILATION/PERSONAL PROTECTION.

PREVENT CONTACT WITH FOOD, CHEWING, OR SMOKING MATERIALS.

WASH THOROUGHLY AFTER HANDLING.

DO NOT TASTE/SWALLOW.

## 3 - SUPPLEMENT

## SUPPLEMENT SECTIONS 2 AND 7 HEALTH HAZARDS

THIS MATERIAL CONTAINS METHANOL, WHICH, WHEN INGESTED, HAS CAUSED ACIDOSIS, OCULAR TOXICITY RANGING FROM DIMINISHED VISUAL CAPACITY TO COMPLETE BLINDNESS, AND DEATH.

## NOTE -- QUALIFIERS AND CODES USED IN THIS MSDS

EQ = EQUAL

LT = LESS THAN

TR = TRACE

N/AP = NOT APPLICABLE

N/DA = NO DATA AVAILABLE

AP = APPROXIMATELY

GT = GREATER THAN

UK = UNKNOWN

N/P = NO APPLICABLE INFORMATION FOUND

dated 10-15-1991

WC-412 WATER CLARIFIER

S : 6-007775

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**DISCLAIMERS**

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SOME OF THE INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE PRODUCT ITSELF.

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE.

THIS MSDS HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1200).

BAKER PERFORMANCE CHEMICALS INCORPORATED  
 1 SDS for AQUANOX\* 8EB 137N

CAUTION CODE 3-2-0

RECEIVED

OCT 28 1991

## SECTION I - IDENTITY

JVLST NEWPORT  
OIL COMPANY

BAKER PERFORMANCE CHEMICALS, INC.  
 Baker Hughes company  
 20 ESSEX LANE, P.O. BOX 27714  
 HOUSTON, TX 77227-7714

EMERGENCY TELEPHONE NUMBER:

CHEMTREC: 1-800-424-9300

800-231-3606

TELEPHONE NUMBER FOR INFORMATION:

713-599-7400

AQUANOX 8EB 137N

CHEMICAL NAME: Complex Mixture

CHEMICAL FAMILY: Polyglycol

## SECTION II - REGULATORY CLASSIFICATION

ENVIRONMENTAL

OCCUPATIONAL

TRANSPORTATION

Q= 16066 Gallons

OSHA Non-Hazardous: NA

Not Regulated: NA

Q= None

OSHA Hazardous: Yes

Regulated: Yes

PARA S313: Yes

X Acute

Combustible Liquid,

X Chronic

N.O.S.

Benzene - 0.8%

X Fire

ID#: NA 1993

Styrene - 0.8%

NA Pressure

DOT Response #: 27

NA Reactive

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

## SECTION III - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT	CAS #	PEL (OSHA) *			TLV (ACGIH) *		MFG* REC
		TWA	STEL	A/L	TWA	STEL	
Petroleum Distillate (Proprietary)	68602-80-2	500					200
Benzene (0.8%)	71-43-2	1	5	0.5	10		
Styrene (0.8%)	100-42-5	50	100		50	100	

7/12/89 - The Hazardous Ingredients Section has been updated to include the latest Permissible Exposure Limits (PELs) promulgated by the Occupational Safety and Health Administration (OSHA) at 29 CFR 1910.1000, Table Z-1-A, final rule effective March 1, 1989.

PAKER PERFORMANCE CHEMICALS INCORPORATED  
MDS for AQUANOX\* 8EB 137N

CAUTION CODE 3-2-0

## SECTION IV - PHYSICAL &amp; CHEMICAL PROPERTIES

Specific Gravity @60F:  
(H2O=1)  
0.934

Reid Vapor Pressure:  
0.45 PSI

Vapor Density  
(Air=1)  
>1

pH:  
5% of Product: 8.5

Solubility in Water: Oil Soluble

Appearance and Odor: Clear Amber liquid  
with aromatic odor

Flash Point (Method): 110F (TCC)

Stability: Stable

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.

## HAZARDS:

Material is combustible.

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.

## SECTION V - HEALTH HAZARDS

## EFFECTS OF OVEREXPOSURE:

INHALATION: Inhalation of high levels of vapors or mists may cause  
dizziness, headache, dizziness, headaches or unconsciousness.

SKIN CONTACT: Eye contact may cause irritation and redness.

SKIN CONTACT: Prolonged or repeated contact with skin may cause irritation  
and contact dermatitis.

INGESTION: DO NOT induce vomiting. If conscious, drink large amounts  
of water and contact a physician.

## OTHER INFORMATION:

Benzene is a contaminant of the petroleum distillate. Exposure to high



BAKER PERFORMANCE CHEMICALS INCORPORATED  
METHODS for AQUANOX\* 8EB 137N

CAUTION CODE 3-2-0

## SECTION V - HEALTH HAZARDS (continued)

Concentrations of benzene may cause breathlessness, irritability, euphoria, dizziness, eye, nose, and respiratory tract irritation. Severe exposures may lead to convulsions and loss of consciousness. Repeated or prolonged exposure to low concentrations may result in various blood disorders, ranging from anemia to leukemia. Benzene is recognized by OSHA, NTP, and IARC as a human carcinogen, and regulated under 29 CFR 1910.1028. For further information regarding the hazards and control of benzene, please see the appendices of the aforementioned regulation.

Benzene is known to the State of California to cause cancer. Benzene is regulated in California under the Safe Drinking Water & Toxic Enforcement Act of 1986 (Proposition 65).

Short-term exposures to high concentrations of airborne styrene may cause irritation to eyes, nose, throat and skin. The central nervous system may be affected leading to stupor and unconsciousness. The IARC has determined styrene to be an animal "positive" and a human "indefinite" carcinogen.

## Styrene Toxicity:

Ihl - Hmn - LCLo = 10000ppm/30M

Ihl - Mus - LC50 = 21600 mg/m3/2H

Ihl - Hmn - TCLo = 600ppm

Ihl - Rat - LC50 = 1220 mg/kg

## Reproductive Toxicity:

Ihl - Rat - TCLo = 300ppm/7H (6-15D preg)

Ethoxylated products may contain residual amounts of ethylene oxide (EtO) which can accumulate in the container headspace and be released to the ambient environment when opened. This phenomenon would tend to increase when the product is agitated as during unloading or blending operations. The Occupational Safety and Health Administration (OSHA) has set the worker exposure level for EtO at 1ppm (8-hour time weighted average). This Standard regulates occupational exposure to EtO from all sources including products containing residual EtO. It is the responsibility of the employer to comply with the OSHA EtO Standard (29 CFR 1910.1047).

EtO is a chemical known to the State of California to cause cancer and reproductive toxicity. EtO is regulated in California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

## TARGET ORGANS (29 CFR 1910.1200-APPENDIX A):

Pulmonary Agents (Lungs)

Eye Hazard

Cutaneous Hazard (Skin)

Hematopoietic Agent (Blood)

BAKER PERFORMANCE CHEMICALS INCORPORATED  
M DS for AQUANOX\* 8EB 137N

CAUTION CODE 3-2-0

## 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 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.

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

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

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 above, 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).

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.

BAKER PERFORMANCE CHEMICALS INCORPORATED  
MSDS for AQUANOX\* 8EB 137N

CAUTION CODE 3-2-0

## SECTION VIII - SPILL &amp; 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 contain 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 - 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 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.

NOTATION: THIS PRODUCT CONTAINS A CANCER HAZARD

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

y. Karla M. Pruitt  
Regulatory Information Specialist

Date: 10/22/91 Supercedes: 9/19/89

12/89 - The Hazardous Ingredients Section has been updated to include the latest Permissible Exposure Limits (PELs) promulgated by the Occupational Safety and Health Administration (OSHA) at 29 CFR 1910.1000, Table Z-1-A, final rule effective March 1, 1989.

10/22/91 - Updated with Reid Vapor Pressure

(Approved by U.S. Department of Labor as "essentially similar" to Form LSH-005-4)  
EXXON CHEMICAL AMERICAS • P.O. BOX 3272, HOUSTON, TEXAS 77001  
A division of EXXON CHEMICAL COMPANY, a division of EXXON CORPORATION

Sodium  
Silicate

PRODUCT

SECTION I - IDENTIFICATION OF PRODUCT

1 MANUFACTURER'S NAME EXXON CHEMICAL AMERICAS		2 EMERGENCY TELEPHONE NO.  713 - 870-6000
3 ADDRESS (Number, Street, City, State and ZIP Code) P. O. BOX 3272, HOUSTON, TEXAS 77001		
4 PRODUCT NAME Sodium Silicate	5 CHEMICAL NAME Not Applicable; blend of materials	
6 CHEMICAL FAMILY Silicate	7 CHEMICAL FORMULA Not Applicable; blend of materials	

SECTION II - HAZARDOUS COMPONENTS OF MIXTURES

The precise composition of this product is proprietary information. A more detailed disclosure will be provided by Exxon Medical or Industrial Hygiene personnel to qualified Medical or Industrial Hygiene personnel as privileged information upon request in case of need for specific treatment.

Sodium Silicate

SECTION III - TYPICAL PHYSICAL DATA

1 APPEARANCE Clear colorless viscous liquid	2 ODOR Mild
3 BOILING POINT (°F/°C) Approx. 400°/204°	4 SPECIFIC GRAVITY/ @ 60°/60°F (15.5/15.5°C) 1.45
5 VAPOR PRESSURE (mm Hg @ 100°F/38°C) 5	6 PERCENT VOLATILE (BY VOLUME) COMPONENTS WITH BOILING POINT TO OR LESS THAN 212°F/100°C Negligible
7 VAPOR DENSITY (AIR = 1) 1	8 EVAPORATION RATE (IN - BUTYL ACETATE = 1) 0.05
9 SOLUBILITY IN WATER Soluble	10

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

11 FLASH POINT (°F/°C SETA CC - ASTM D3278) 210°/99°	12 FLAMMABLE LIMITS (PERCENT BY VOLUME)	13 LEL ---	14 UEL ----
15 EXTINGUISHING MEDIA Not Applicable			
16 SPECIAL FIRE FIGHTING PROCEDURES Not Applicable			

SECTION V - USUAL FIRE AND EXPLOSION HAZARDS

17 Not Applicable

18 DANGEROUS PRODUCTS OF COMBUSTION  
Not Applicable

This information relates only 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 user's 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 any warranty against patent infringement.

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE(S)	OSHA	ACGIH	OTHER
	None Established		
EFFECTS OF OVEREXPOSURE	ACUTE Liquid is irritating to the skin and eyes.		
	CHRONIC Prolonged or repeated skin contact may cause dermatitis.		

## SECTION VI - EMERGENCY AND FIRST AID PROCEDURES

Remove to fresh air. If not breathing, apply artificial respiration and CALL A PHYSICIAN. Immediately flush eyes with plenty of water for at least 15 minutes. CALL A PHYSICIAN.

## SECTION VI - ACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID None
	STABLE	X	

COMPATIBILITY (MATERIALS TO AVOID FOR PURPOSES OF TRANSPORT, HANDLING & STORAGE ONLY)

None

## SECTION VII - HAZARDOUS DECOMPOSITION PRODUCTS

None

## SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
Keep public away. Eliminate source of ignition. Shut off source, if possible to do so safely. Prevent liquid from entering sewers, watercourses, or low areas. Advise authorities if material has entered a watercourse, or sewer or has contaminated soil or vegetation.

HAZARDOUS DISPOSAL (INSURE CONFORMITY WITH LOCAL DISPOSAL REGULATIONS)  
Contain spilled liquid with sand or earth. Recover by pumping or with suitable absorbent. Consult an expert on disposal of recovered material.

## SECTION VIII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Usually not needed.			
VENTILATION	LOCAL EXHAUST	Not Applicable.	SPECIAL Not Applicable.
	MECHANICAL (General)	Not Applicable.	OTHER Not Applicable.
PROTECTIVE GLOVES Chemical resistant gloves.		EYE PROTECTION Not Applicable.	
OTHER PROTECTIVE EQUIPMENT Usually not needed.			

## SECTION IX - HANDLING AND STORAGE PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE  
Keep container closed when not in use. Containers of this material may be hazardous when emptied. Emptied containers retain product residues (vapor, liquid, etc.). Observe all Hazard Precautions outlined in this sheet.

ADDITIONAL PRECAUTIONS  
Keep away from heat, sparks, and open flames.

DATE OF ISSUE JUN 28 1982	REVIEWED BY: <i>David Schiller</i>
REVIEW <input type="checkbox"/> REVISED; SUPERSEDES	MATERIALS SAFETY COORDINATOR #95

BAKER PERFORMANCE CHEMICALS INCORPORATED

MDS for MAGNACLEAR\* W 1074

CAUTION CODE 1-1-0

DEC 1 1991

## - Site Specific Information

MAGNACLEAR is a trademark of Baker Performance Chemicals Incorporated.

## SECTION I - IDENTITY

BAKER PERFORMANCE CHEMICALS, INC.  
 Baker Hughes company  
 20 ESSEX LANE, P.O. BOX 27714  
 DALLAS, TX 77227-7714

EMERGENCY TELEPHONE NUMBER:

CHEMTREC: 1-800-424-9300

800-231-3606

TELEPHONE NUMBER FOR INFORMATION:

713-599-7400

MAGNACLEAR W 1074

CHEMICAL NAME: Chemical Identity  
 Is A Trade Secret

CHEMICAL FAMILY: Polyamino Acrylate

## SECTION II - REGULATORY CLASSIFICATION

ENVIRONMENTAL

None

(C) = None

RA S313: No

OCCUPATIONAL

OSHA Non-Hazardous: Yes

OSHA Hazardous: NA

Acute

Chronic

Fire

Pressure

Reactive

TRANSPORTATION

Not Regulated: Yes

Regulated: NA

ID#:

DOT Response #:

Components of this product are listed on the TSCA inventory.

## SECTION III - HAZARDOUS INGREDIENTS

HAZARDOUS  
 INGREDIENT

CAS  
 #

PEL(OSHA)\*  
 TWA STEL A/L

TLV(ACGIH)\*  
 TWA STEL

MFG\*  
 REC

This product is not hazardous by 29CFR, 1910.1200 regulations.

ppm unless otherwise indicated; (C) denotes ceiling limit

BAKER PERFORMANCE CHEMICALS INCORPORATED  
MS for MAGNACLEAR\* W 1074

CAUTION, CODE 1-1-0

TTC 1 1991

## SECTION IV - PHYSICAL &amp; CHEMICAL PROPERTIES

Specific Gravity @60F:  
(20=1)

1.015

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

Specific Gravity  
(20=1)

&gt;1

pH:  
5% of Product: 5.0

Solubility in Water: Soluble

Appearance and Odor: Clear amber liquid  
with slight amine odor

Flash Point (Method): &gt;200F (TCC)

Stability: Stable

Decomp. Prod: Carbon monoxide; Conditions to Avoid: Oxidizers  
oxides of nitrogen and sulfur

Hazardous Polymerization: Will not occur

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

## HAZARDS:

Unusual fire hazards; material is not flammable and/or combustible.

## SECTION V - HEALTH HAZARDS

## EFFECTS OF OVEREXPOSURE:

INHALATION: Inhalation of high levels of vapors or mists may cause  
dizziness, drowsiness, headaches or unconsciousness.

EYE CONTACT: Eye contact may cause irritation and redness.

SKIN CONTACT: Prolonged or repeated contact with skin may cause irritation  
contact dermatitis.

INGESTION: DO NOT induce vomiting. If conscious, drink large amounts  
water and contact a physician.

## SECTION VI - EMERGENCY &amp; FIRST AID PROCEDURES

EYE CONTACT: Flush eyes immediately with large amounts of water for at

AKER PERFORMANCE CHEMICALS INCORPORATED  
S S for MAGNACLEAR\* W 1074

CAUTION CODE 1-1-0

1991

## SECTION VI - EMERGENCY & FIRST AID PROCEDURES (continued)

at 15 minutes. Call a physician if irritation persists.

HALATION: Remove to fresh air. If labored breathing continues, contact physician.

CONTACT: Remove contaminated clothes. Wash skin thoroughly with mild soap and water. Launder clothes before reuse.

INGESTION: If swallowed, call a physician immediately. ONLY induce vomiting under the instructions of a physician. Never give anything by mouth to an unconscious person.

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

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

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 above, should be worn. Also, due to individual susceptibility and sensitivity, before respirators are used, a medical evaluation should be performed per 29 CFR 1910.134(b)(10).

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.



BAKER PERFORMANCE CHEMICALS INCORPORATED  
MSDS for MAGNACLEAR\* W 1074

CAUTION CODE 1-1-0

1991

## SECTION VIII - SPILL &amp; LEAK PROCEDURES

Wear 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 contain 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 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 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.

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

Prepared by: Karla M. Pruitt  
Regulatory Information Specialist

Date: 11/28/90 Supercedes: 9/14/89

11/28/90 - Updated to include TSCA information.

10/11/04

- RECEIVED -

## MATERIAL SAFETY DATA SHEET

JUL 27 1986

WEST NEWPORT

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

## SECTION I

MANUFACTURER'S NAME <b>Allotec, Inc.</b>		EMERGENCY TELEPHONE NO.
ADDRESS (Number, Street, City, State, and ZIP Code) <b>765 W. 17th St., Costa Mesa, CA 92627</b>		
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS <b>Concentrated Odor Suppressant</b>
CHEMICAL FAMILY <b>Liquid Deodorant</b>	FORMULA <b>610, 612, 614</b>	

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Unif)	ALLOYS AND METALLIC COATINGS	%	TLV (Unif)
PIGMENTS N/A			BASE METAL N/A		
CATALYST N/A			ALLOYS N/A		
VEHICLE N/A			METALLIC COATINGS N/A		
SOLVENTS N/A			FILLER METAL PLUS COATING OR CORE FLUX N/A		
ADDITIVES N/A			OTHERS N/A		
OTHERS N/A					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Unif)
Isopropyl Alcohol				>	1.0

## SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	0.995
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	2.5
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	Complete		
APPEARANCE AND ODOR	Yellow liquid with lemon odor		

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	None	FLAMMABLE LIMITS	N/A L <sub>u</sub>	N/A U <sub>u</sub>
EXTINGUISHING MEDIA	N/A			
SPECIAL FIRE FIGHTING PROCEDURES	None			
UNUSUAL FIRE AND EXPLOSION HAZARDS	None			

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Not Determined

EFFECTS OF OVEREXPOSURE

Prolonged Exposure to skin causes Irritation

EMERGENCY AND FIRST AID PROCEDURES

In case of contact in eyes and skin, wash with plenty of water for 15 min.; If irritation in eyes persists, Contact a medical physician

## SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

STABLE

CONDITIONS TO AVOID

X

INCOMPATIBILITY (Materials to avoid)

None

HAZARDOUS DECOMPOSITION PRODUCTS

N/A

HAZARDOUS  
POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

CONDITIONS TO AVOID

X

## SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush with plenty of water

WASTE DISPOSAL METHOD

Any method of disposal of chemical wastes are subject to local regulations

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

N/A

VENTILATION

LOCAL EXHAUST

N/A

MECHANICAL (General)

SPECIAL

OTHER

PROTECTIVE GLOVES

If needed

EYE PROTECTION

If needed

OTHER PROTECTIVE EQUIPMENT

N/A

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in cool; Dry area

OTHER PRECAUTIONS

Keep out of reach of children

JUL 23 1986

PREPARATION/REVISION DATE  
12-19-85

WEST NEWPORT

## SECTION I

TUNER'S NAME  
M OTEC, INC.EMERGENCY TELEPHONE NO.  
(714) 650-0255

mber, Street, City and ZIP Code

. 17th Street, Unit F, Costa Mesa, CA 92627

NAME  
Instant EmulsifierCOMMON NAME  
ALKIEFAMILY  
SURFACE ACTIVE AGENTSFORMULA  
COMPOUNDED PRODUCTS

## SECTION II HAZARDOUS INGREDIENTS

CHEMICAL AND COMMON NAME	%	APPLICABLE EXPOSURE LIMITS		
		PEL-WISHA/OSHA	TLV-ACGIH	CAS NO.
SODIUM HYDROXIDE	< 3			1310732

## CARCINOGENIC INGREDIENTS

CHEMICAL AND COMMON NAME	%	REFERENCE SOURCE		
		NTP	IARC	WISHA/OSHA
NONE				

# HEALTH EFFECTS

CHRONIC LOCAL EFFECT MAY CONSIST OF MULTIPLE AREAS OF SUPERFICIAL DESTRUCTION OF THE SKIN OR OF PRIMARY IRRITANT DERMATITIS. SIMILARLY, INHALATION OF DUST, SPRAY, OR MIST MAY RESULT IN VARYING DEGREES OF IRRITATION OR DAMAGE TO THE RESPIRATORY TRACT TISSUES AND AN INCREASED SUSCEPTIBILITY TO RESPIRATORY ILLNESS.

## 5. ENTRY

☒ EYE      ☒ SKIN      ☒ ORAL      ☒ INHALATION      ☐ OTHER

### 6. CONDITIONS AGGRAVATED BY EXPOSURE

1. IRRITATION: AIRBORNE CONCENTRATIONS OF DUST, MISTS, OR SPRAY MAY CAUSE DAMAGE TO THE UPPER-RESPIRATORY TRACT AND EVEN TO THE LUNG TISSUE PROPER WHICH COULD PRODUCE CHEMICAL PNEUMONIA, DEPENDING UPON SEVERITY OF EXPOSURE.

2. CONTACT: THIS PRODUCT IS DESTRUCTIVE TO TISSUES CONTACTED AND PRODUCES SEVERE BURNS.

3. ABSORPTION: SEE SKIN CONTACT ABOVE.

4. EYE CONTACT: THIS PRODUCT IS DESTRUCTIVE TO EYE TISSUES ON CONTACT. WILL CAUSE SEVERE BURNS THAT RESULT IN DAMAGE TO THE EYES AND EVEN BLINDNESS.

5. INGESTION: THIS PRODUCT, IF SWALLOWED, CAN CAUSE SEVERE BURNS AND COMPLETE TISSUE PERFORATION OF MUCOUS MEMBRANES OF THE MOUTH, THROAT, ESOPHAGUS AND STOMACH.

### 7. FIRST AID PROCEDURES

1. IN CASE OF CONTACT: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. HOLD-UP EYELIDS APART TO ENSURE FLUSHING OF THE ENTIRE EYE SURFACE. WASHING EYES WITHIN 1 MINUTE IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. SEEK MEDICAL ATTENTION IMMEDIATELY.

2. IN CASE OF CONTACT: IMMEDIATELY WASH WITH PLENTY OF WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND FOOTWEAR. WASH CLOTHING BEFORE REUSE AND DISCARD FOOTWEAR WHICH CANNOT BE DECONTAMINATED. SEEK MEDICAL ATTENTION IMMEDIATELY.

3. NOTE: DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER, IF AVAILABLE, GIVE SEVERAL GLASSES OF MILK. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL ATTENTION IMMEDIATELY.

4. 4. REMOVE PERSON TO FRESH AIR. SEEK MEDICAL ATTENTION IMMEDIATELY.

### SECTION IV CHEMICAL DATA

BOILING POINT (°F)	APPROX.	212	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.078
VAPOR PRESSURE (mm Hg)	NOT APPLICABLE		PERCENT VOLATILE BY VOLUME (%)	93.5%
DENSITY (AIR = 1)	NOT APPLICABLE		EVAPORATION RATE (____ = 1)	SIMILAR TO WATER

SOLUBILITY (Specify Solvents)      ☒ COMPLETE      ☐ INSOLUBLE      ☐ EMULSIFIABLE      ☐ SLIGHT TO PARTIAL

### 8. APPEARANCE AND ODOR

1. E. BLAND ODOR

③

2014

1

ING MEDIA

T APPLICABLE  
FIRE FIGHTING PROCEDURES

T APPLICABLE

L FIRE AND EXPLOSION HAZARDS  
T APPLICABLE

AT ILITY (Materials to avoid)  
NOT MIX WITH ACIDS  
OUS DECOMPOSITION PRODUCTS  
T APPLICABLE

OUS ATION	MAY OCCUR		CONDITIONS TO AVOID NOT APPLICABLE
	WILL NOT OCCUR	XX	
Y	UNSTABLE		
	STABLE	XX	

SECTION VI SPILL OR LEAK PROCEDURES

O E TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
AKS SHOULD BE STOPPED. SPILLS, AFTER CONTAINMENT, SHOULD BE SHOVELED UP OR REMOVED BY  
C UM TRUCK (IF LIQUID) TO CHEMICAL WASTE AREA. NEUTRALIZE RESIDUE WITH DILUTE ACID, FLUSH  
ILL AREA WITH WATER FOLLOWED BY LIBERAL COVERING OF SODIUM BICARBONATE. DISPOSE OF WASH  
1LR AND SPILL BY-PRODUCTS ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

DI POSAL METHOD  
IL MATERIALS RESULTING FROM CLEAN-UP OPERATIONS MAY BE HAZARDOUS WASTES AND, THEREFORE  
BJECT TO SPECIFIC REGULATIONS. PACKAGE, STORE, TRANSPORT, AND DISPOSE OF ALL CLEAN-UP  
ATERIALS AND ANY CONTAMINATED EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE,  
IL LOCAL HEALTH ENVIRONMENTAL REGULATIONS. SHIPMENTS OF WASTE MATERIALS MAY BE SUBJECT  
MANIFESTING REQUIREMENTS PER APPLICABLE REGULATIONS. APPROPRIATE DISPOSAL WILL DEPEND  
NATURE OF EACH WASTE MATERIAL AND SHOULD BE PERFORMED BY COMPETENT AND PROPERLY  
FITTED CONTRACTORS. ENSURE THAT ALL RESPONSIBLE FEDERAL, STATE, AND LOCAL AGENCIES  
CEIVE PROPER NOTIFICATION OF DISPOSAL.

LOCAL EXHAUST ☒

SPECIAL ☐

MECHANICAL (General) ☐

OTHER ☐

ATION

PROTECTIVE GLOVES

WORKER GLOVES SHOULD BE WORN.

EYE PROTECTION

CHEMICAL GOGGLES

PROTECTIVE EQUIPMENT

REQUIRED UNDER NORMAL USE

ENGINEERING CONTROLS

REQUIRED

WORK PRACTICES

AVOID OR MINIMIZE SKIN AND EYE CONTACT

ENGINEERING PRACTICES

USE WITH ADEQUATE VENTILATION. AVOID OR MINIMIZE SKIN AND EYE CONTACT

#### SECTION VIII SPECIAL PRECAUTIONS

CONDITIONS TO BE TAKEN IN HANDLING AND STORING

STATEMENT OF HAZARDS: CAUSES SEVERE BURNS TO SKIN AND EYES. CONTACT WITH EYES CAN

CAUSE PERMANENT EYE DAMAGE. INHALATION OF DUST, MIST OR SPRAY CAN CAUSE SEVERE LUNG

DAMAGE.

MAINTENANCE PERSONNEL

SEE ABOVE STATEMENT

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

3

104

Water and Energy Systems Technology, Inc.  
2516 Woodland Drive  
Anaheim, CA 92801

MATERIAL SAFETY DATA SHEET

\*\*\*\*\*

I. PRODUCT IDENTIFICATION

Trade name (as labeled): R-320

Chemical names, common names: Corrosion Inhibitor

Manufacturer's name: Water and Energy Systems Technology, Inc.  
Address: 2516 Woodland Drive, Anaheim, CA 92801  
Emergency phone: (714) 761-5191  
Business phone: (714) 761-5191

Date prepared: 2-1-90

\*\*\*\*\*

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air		
		ACGIH(TLV)	OSHA(FEL)	Other
Isopropyl alcohol	67-63-0	400 ppm		
1,2-ethanediamine, n-(2-aminoethyl)-	111-40-0			

\*\*\*\*\*

III. PHYSICAL PROPERTIES

Vapor density (air=1): <1      Melting point or range, F: NA  
Specific gravity: 0.987      Boiling point or range, F: 180-190  
Solubility in water: Soluble  
Vapor pressure, mmHg at 20C: ND  
Evaporation rate (butyl acetate=1): >1  
Appearance and odor: Black liquid, amine odor.

\*\*\*\*\*

IV. FIRE AND EXPLOSION

Flash Point, F: 53 TOC  
Autoignition temperature, F: ND  
Flammable limits in air, volume %: lower ND      upper ND  
Fire extinguishing materials:  
    X water spray      X carbon dioxide      other  
    X foam      X dry chemical

Special firefighting procedures:  
Full protective clothing, plus self-contained breathing apparatus.



Unusual fire and explosion hazards:  
NONE

\*\*\*\*\*

#### V. HEALTH HAZARD INFORMATION

##### SYMPTOMS OF OVEREXPOSURE

###### Inhaled:

Vapors and mists are extremely corrosive to the nose, throat, and mucous membranes.

###### Contact with skin or eyes:

Prolonged and repeated liquid contact may cause defatting and drying of the skin which may result in skin irritation and dermatitis.

###### Absorbed through skin:

May cause irritation or redness on contact with skin. May cause a more serious response if confined to the skin or if the skin is abraded. A single prolonged exposure is not likely to result in harmful quantities being absorbed.

###### Swallowed:

Results in severe burning and injury.

---

##### HEALTH EFFECTS OR RISKS FROM EXPOSURE

###### Acute:

May cause local irritation from exposure.

###### Chronic:

Toxic if ingested.

---

##### FIRST AID: EMERGENCY PROCEDURES

###### Eye contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

###### Skin contact:

Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

###### Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

###### Swallowed:

Immediately give 2 to 6 glasses of water and induce vomiting. Continue until vomited fluid is clear. Get prompt medical attention.

-----  
SUSPECTED CANCER AGENT?

☒ NO: This product's ingredients are not found in the lists below.  
☐ YES: Federal OSHA NTP IARC Cal/OSHA (see note)\*

NOTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

-----  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Persons with pre-existing skin disorders, eye problems, or impaired respiratory functions may be more susceptible to the effects of this substance.

\*\*\*\*\*

## VI. REACTIVITY DATA

Stability: ☒ Stable ☐ Unstable

## Conditions to avoid:

Heat, sparks, and open flames.

## Incompatibility (materials to avoid):

Strong oxidizing agents.

## Hazardous decomposition products (including combustion products):

Carbon monoxide, carbon dioxide, ammonia, and oxides of nitrogen.

Hazardous polymerization: ☐ May occur ☒ Will not occur

\*\*\*\*\*

## VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

## Spill response procedures (including employee protection measures):

For small spills mop or wipe up. For large spills, contain by diking with soil or other absorbent material. Keep out of sewers, drains, surface waters, and soil.

## Preparing wastes for disposal:

Place waste in D.O.T. approved waste containers.

NOTE: Dispose of all wastes in accordance with federal, state, and local regulations.

\*\*\*\*\*

## VIII. SPECIAL HANDLING INFORMATION

## Ventilation and engineering controls:

NORMAL

## Respiratory protection:

NIOSH approved respirator in the absence of adequate environmental controls at the point of use.

**Eye protection:**

Chemical goggles and face shield.

**Gloves:**

Rubber.

**Other clothing and equipment:**

Rubber apron and protective clothing.

**Work practices, hygienic practices:**

Do not cut, grind, weld, or drill on or near this container.

**Other handling and storage requirements:**

Store in a cool area.

**Protective measures during maintenance of contaminated equipment:**

WEAR PROTECTIVE CLOTHING.

---

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, WEST, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGEMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, WEST, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

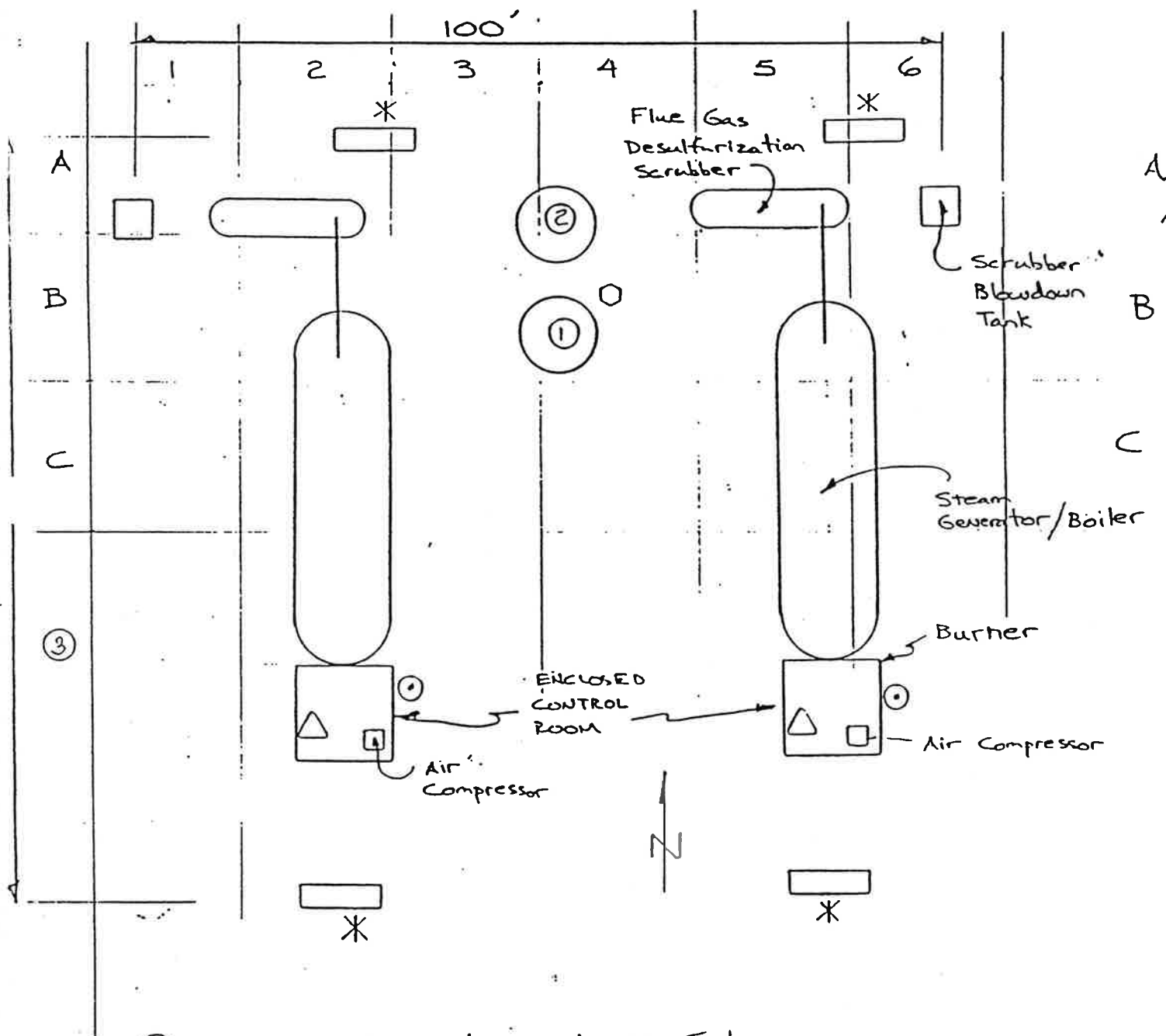
End of MSDS

# FLUE GAS DESULFURIZATION

## SCHEMATIC

- EQUIPMENT IS  
OPEN AIR UNLESS NOTED
- ALL PIPING IS  
NOT SHOWN

- △ Fire Extinguisher
- ⊙ Gas Main
- \* Electrical Main
- Eye/Face Shower

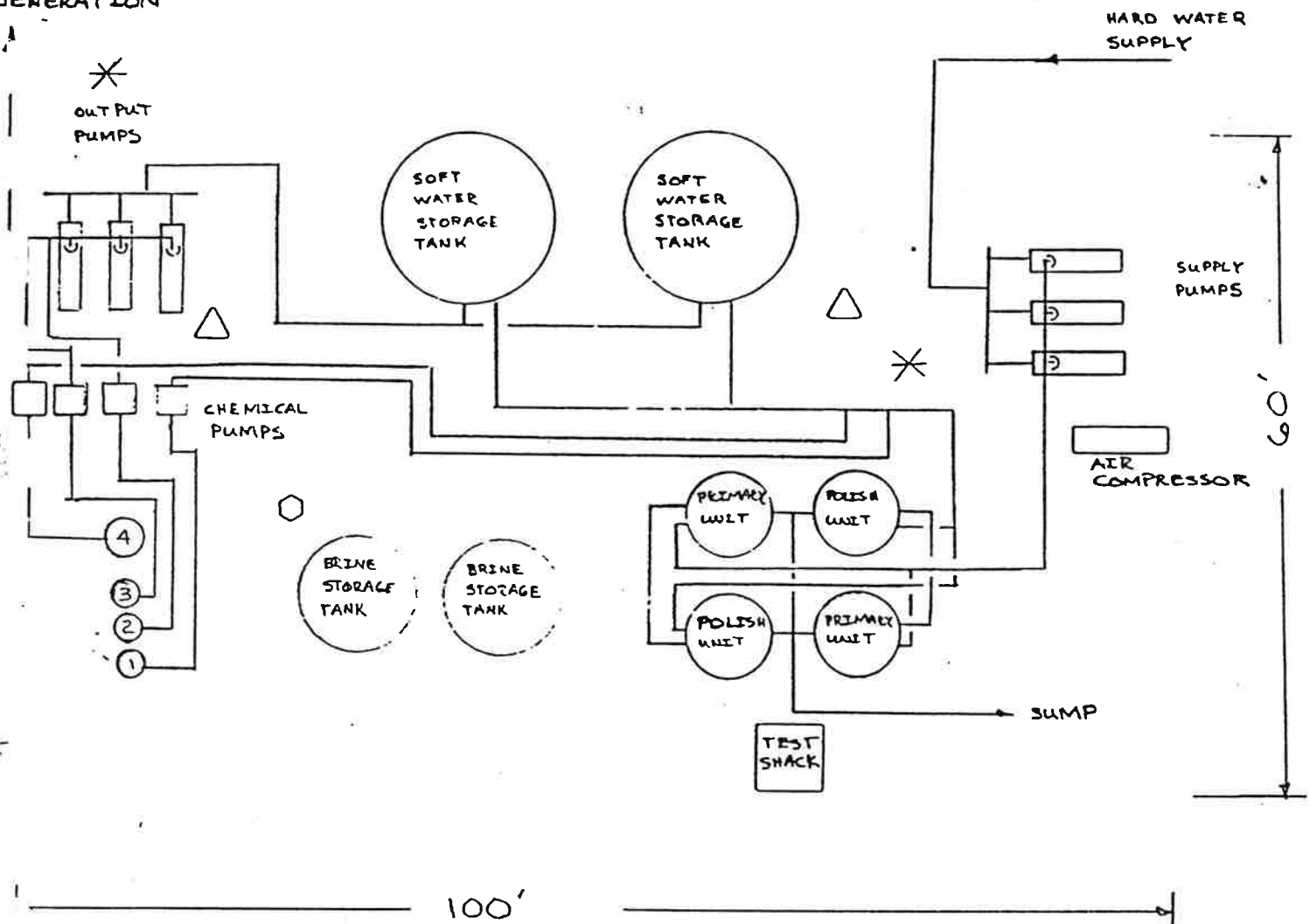


- ① Bulk Soda Ash Tank = 40 Ton
- ② 12% Soda Ash Solution Tank
- ③ DAL CHEM. 2000 DEGREE ER = 55 GLS.

WATER SOFTNER UNIT

## SCHEMATIC

ALL FACILITIES / EQUIPMENT ARE OPEN AIR

SOFT WATER  
SUPPLY TO  
STEAM  
GENERATION

ALL PIPING IS NOT SHOWN TO KEEP DRAWING SIMPLE

- ① West R-904 = 250 GLS.
- ② West B-409 = 250 GLS.
- ③ West B-121 = 250 GLS.
- ④ West B-508 = 1000 GLS.

- △ Water Hose
- Eye/Face Shower
- \* Electrical Main

# MATERIAL SAFETY DATA SHEET

**RHONE-POULENC BASIC CHEMICALS CO.**  
 1 Corporate Drive Box 881 Shelton, CT. 06484 (203)925-3300  
 24-HOUR EMERGENCY TELEPHONE CHEMTREC 1-800-424-9300

**PRODUCT NAME:**

Page: 1 of 1

**SODA ASH (SODIUM CARBONATE, ANHYDROUS)**

Effective Date: April 18, 19

Supersedes: January 4, 19

## I. IDENTIFICATION

**CHEMICAL NAME OF PRIMARY COMPONENT(S):** Sodium Carbonate, anhydrous

**FORMULA:** Na<sub>2</sub>CO<sub>3</sub>

**MOLECULAR WEIGHT:** 105.99

**SYNONYMS:** Disodium carbonate; soda, calcined; soda ash; carbonic acid, disodium salt

**CAS# & NAME:** 497-19-8 Carbonic acid disodium salt

## II. INGREDIENTS/SUMMARY OF HAZARDS

<u>INGREDIENT(S)</u>	<u>CAS NUMBER</u>	<u>OSHA HAZARDOUS (H)/ NON-HAZARDOUS (NH)</u>	<u>PERCENT</u>
sodium carbonate	497-19-8	H	100

### WARNING STATEMENTS:

**WARNING!** CAUSES EYE IRRITATION.  
 PROLONGED OR REPEATED CONTACT MAY CAUSE SKIN IRRITATION.

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.  
 Wear appropriate protective clothing and devices when handling. Avoid breath  
 dust. Do not take internally.

(See Section VI for complete Health Hazard Data)

**NATIONAL FIRE PROTECTION ASSOCIATION RATING**  
**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM**

	NFPA	HMIS
HEALTH	2	2
FIRE	0	0
REACTIVITY	0	0

(4=Extreme/Severe 3=High/Serious  
 2=Moderate 1=Slight 0=Minimum)

**SARA TITLE III HAZARD CLASSIFICATION**

IMMEDIATE (ACUTE) HEALTH	YES
DELAYED (CHRONIC) HEALTH	NO
FIRE	NO
SUDDEN RELEASE OF PRESSURE	NO
REACTIVE	NO

MATERIAL SAFETY DATA SHEET  
RHONE-POULENC BASIC CHEMICALS CO.

**PRODUCT NAME:**

Page: 20

**SODA ASH (SODIUM CARBONATE, ANHYDROUS)**

Effective Date: April 18, 1981

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**III. PHYSICAL DATA**

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SPECIFIC GRAVITY:	2.532
BULK DENSITY:	48-65 lbs./cu.ft.
MELTING POINT [°C (°F)]:	851°C (1564°F)
DECOMPOSITION POINT [°C (°F)]:	400°C (752°F) begins to evolve CO <sub>2</sub>
pH	11.3 (1% aqueous solution)
	11.6 (10% aqueous solution)
SOLUBILITY IN WATER (@ 0 °C):	7g/100g water
APPEARANCE AND ODOR:	white granular solid/odorless

(For additional technical information call 1-203-925-3300)

---

**IV. FIRE AND EXPLOSION HAZARD DATA**

---

FLASH POINT [°C (°F)]:	Noncombustible
FLAMMABLE LIMITS IN AIR:	Not applicable
AUTOIGNITION TEMPERATURE [°C (°F)]:	Not applicable

**SPECIAL FIRE FIGHTING PROCEDURES:**  
Wear a NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Dike area to prevent runoff and contamination of water sources.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**  
Does not contribute any unusual hazards in a fire. Decomposes to form carbon dioxide, a fire extinguishing agent.

---

**V. REACTIVITY DATA**

---

**STABILITY:**  
Stable at ambient temperatures and atmospheric pressure.

**CONDITIONS TO AVOID:**  
Hygroscopic; protect from moisture. Remixing of separated acid and sodium carbonate solutions could cause CO<sub>2</sub> evolution and severe splattering.

**MATERIALS TO AVOID:**  
Reacts with strong acids.  
Can react violently with Al, P<sub>2</sub>O<sub>5</sub>, H<sub>2</sub>SO<sub>4</sub>, F<sub>2</sub>, Li and 2,4,6-trinitrotoluene (1)  
This material upon contact with certain food products or their residues which contain reducing sugars, may react to form deadly carbon monoxide gas. Proper tank entry and occupancy procedures should be observed. Monitor the tank atmosphere for the presence of carbon monoxide gas.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
Carbon dioxide is evolved at very high temperatures (1000°C, 1832°F) or when mixed with acids.

**HAZARDOUS POLYMERIZATION:**  
Will not occur.

MATERIAL SAFETY DATA SHEET  
RHONE-POULENC BASIC CHEMICALS CO.

Page: 3 of

PRODUCT NAME:

SODA ASH (SODIUM CARBONATE, ANHYDROUS)

Effective Date: April 18, 19

VI. HEALTH HAZARD DATA/FIRST AID PROCEDURES

EXPOSURE LIMITS: (None specifically established for this product.)

<u>Chemical Name(s)</u>	<u>ACGIH (TLV)</u>	<u>OSHA (TWA)</u>
Particulates Not Otherwise Classified	10 mg/m <sup>3</sup> (TWA) total dust	15 mg/m <sup>3</sup> total dust 5 mg/m <sup>3</sup> respirable fraction

**TOXICOLOGY DATA:**

Oral LD50 (rats): 3160 mg/kg (2), 4090 mg/kg (3)  
Dermal LD50 (rabbits): No information available  
Inhalation LC50 (rats): 2300 mg/m<sup>3</sup>/2H (3)  
Skin Effects (rabbits): Non-irritant; 4 hr exposure (2)  
Mild irritant 24 hr exposure (3)  
Eye Effects (rabbits): Severe irritant (2)  
Mild irritant (100 mg with 30 sec rinse) (3)

**CARCINOGENICITY:**

This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as a probable human carcinogen.

**EFFECTS OF SINGLE OVEREXPOSURE:**

Swallowing: May cause burns of the mouth, throat, esophagus and stomach. May cause nausea, vomiting, and diarrhea if large quantities are ingested.

Skin Absorption: Skin absorption through intact skin is likely to be negligible.

Inhalation: May be irritating to the nose, throat and respiratory tract.

Skin Contact: May cause skin irritation, seen as redness and swelling. In presence of moisture or sweat, may cause more severe irritation, including burns, following prolonged contact.

Eye Contact: Causes eye irritation.

**EFFECTS OF REPEATED OVEREXPOSURE:**

Repeated exposure may lead to irritation and/or sensitivity of the skin.

**OTHER EFFECTS OF OVEREXPOSURE:**

Concentrated solutions in contact with skin and eyes may cause chemical burn

**EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:**

Skin irritation may be aggravated in persons with existing skin lesions.  
Breathing of dust may aggravate acute or chronic asthma and other chronic pulmonary disease.



## RHONE-POULENC BASIC CHEMICALS CO.

Page: 4 of

**PRODUCT NAME:****SODA ASH (SODIUM CARBONATE, ANHYDROUS)**

Effective Date: April 18, 199

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**VI. HEALTH HAZARD DATA/FIRST AID PROCEDURES (continued)**

---

**EMERGENCY AND FIRST AID PROCEDURES:**

- Swallowing:** If victim is conscious and alert, give two or more glasses of water or milk to drink. Do not induce vomiting. If vomiting does occur, give fluids again. Do not give carbonated beverages or weak acids such as vinegar. Do not give anything by mouth to an unconscious or convulsing person. GET IMMEDIATE MEDICAL ATTENTION.
- Skin:** Immediately wipe excess material off skin with a dry cloth then wash with soap and plenty of water. Remove contaminated clothing and shoes. If heavy contamination has occurred, then discard the clothing in a manner which limits further exposure. Otherwise, thoroughly clean contaminated clothing and shoes before reuse. GET MEDICAL ATTENTION.
- Inhalation:** Remove victim to fresh air. If not breathing administer cardiopulmonary resuscitation or artificial respiration. If breathing is difficult or irritation develops, GET MEDICAL ATTENTION.
- Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes using an eyewash fountain, if available. Lift upper and lower lids and rinse well under them. GET MEDICAL ATTENTION, preferably an ophthalmologist.

**NOTES TO PHYSICIANS:**

All treatments should be based on observed signs and symptoms of distress in patient. Consideration should be given to the possibility that overexposure materials other than this product may have occurred.

If burns result from overexposure, treat in the following manner:

**Ingestion**

Treat asphyxia from glottal edema by maintaining an adequate airway. Treat shock. Maintain normal blood pressure by transfusion and by the administration of 5% dextrose in saline. If symptoms are severe and perforation of the stomach or esophagus is suspected, give nothing by mouth until endoscopic examination has been done. Maintain nutrition by giving carbohydrate or hyperalimentation fluid intravenously. Give prednisolone, 2 mg/kg/d in divided doses for 10 days to reduce progression of fibrocystic and hyaline lung disease. Esophageal stricture may require dilation.

---

**VII. PRECAUTIONS FOR SAFE HANDLING AND USE**

---

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

To the extent possible, clean up spillage using shovels, sweeping, or vacuum. Avoid dust generation. Place in appropriate containers for disposal. Flush area with water.

If spilled on the ground, the affected area should be scraped clean and the material placed in an appropriate container for disposal. Do not flush material to public sewer systems or any waterways. Wear appropriate protective clothing and equipment during clean up activities. Insure adequate decontamination of tools and equipment following clean up.

Large spills should be handled according to a predetermined plan. For assistance in developing a plan, contact the Technical Service Department, 1-203-923-3300.

## RHONE-POULENC BASIC CHEMICALS CO.

Page: 5 of 5

**PRODUCT NAME:**

SODA ASH (SODIUM CARBONATE, ANHYDROUS)

Effective Date: April 18, 1991

---

**VII. PRECAUTIONS FOR SAFE HANDLING AND USE (continued)**

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**WASTE DISPOSAL METHOD:**

Dispose of in accordance with Local, State and Federal regulations.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:**

Do not ingest. Avoid exposure by inhalation. Avoid getting in eyes or on skin and clothing.  
Containers should be stored in a cool, dry, well ventilated area away from flammable materials and sources of heat or flame. Store away from foodstuffs or animal feed. Exercise due caution to prevent damage to or leakage from container.

---

**VIII. SPECIAL PROTECTION INFORMATION**

---

**PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:**

- Manufacture or formulation of this product
- Repair and maintenance of contaminated equipment
- Clean up of leaks and spills
- Any activity that may result in exposures to concentrations that exceed exposure limits.

**RESPIRATORY PROTECTION:**

In dusting conditions, use a NIOSH/MSHA approved dust mask if concentration exceeds suggested exposure limits. Use positive pressure supplied air or self-contained breathing apparatus for emergency or other conditions where a higher level of protection is required.

**VENTILATION:**

Provide adequate ventilation. Use local exhaust as needed to maintain airborne exposure below control limits.

**PROTECTIVE CLOTHING:**

Work clothing. Chemical resistant gloves and boots.

**EYE PROTECTION:**

Chemical safety goggles.

**OTHER PROTECTIVE EQUIPMENT:**

Maintain a sink, safety shower and eyewash fountain in the work area. Have oxygen readily available.

---

**IX. REGULATORY STATUS**

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TSCA Inventory Status: This product is listed on the TSCA Inventory.

Transportation Status: Not regulated

**SARA Title III**

Section 302 Extremely Hazardous Substance List: Not listed  
Section 313 Toxic Chemicals: Not listed

Reportable Quantity (RQ) under US EPA CERCLA:

Not listed

RCRA Hazardous Waste:

Not listed

State/International Right-to-Know Regulations:

Listed for Canada only.

MATERIAL SAFETY DATA SHEET  
RHONE-POULENC BASIC CHEMICALS CO.

Page: 6 of 6

PRODUCT NAME:

SODA ASH (SODIUM CARBONATE, ANHYDROUS)

Effective Date: April 18, 1991

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X. REFERENCES

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- (1) Bretherick, Handbook of Reactive Chemical Hazards, 3rd ed.
- (2) Unpublished RP toxicity study.
- (3) RTEC 1/91
- (4) Dreisbach, Handbook of Poisoning, 12th ed.

The information herein is given in good faith  
but no warranty, expressed or implied, is made.

03500-90

# MATERIAL SAFETY DATA SHEET

For Assistance, Contact:  
Regulatory Affairs Dept.  
PO Box 90 Ames, IA

HACH COMPANY  
PO BOX 907  
AMES, IA 50010

Emergency Telephone 1  
(515) 232-2533

## I. PRODUCT IDENTIFICATION

CATALOG NUMBER: 426 PRODUCT NAME: Titrant Solution Hardness 3  
CAS. NO: Not applicable CHEMICAL NAME: Not applicable  
FORMULA: Not applicable  
CHEMICAL FAMILY: Not applicable

## II. INGREDIENTS

INGREDIENTS	1	2	1WA	CAS NUMBER	NATURE of HAZARD	1RCRA
Propylene Glycol	<30	None listed		57-55-6	May cause irritation	None
Other components, each	<1	Not applicable		Not applicable	Not applicable	NA
Deionized Water	to 100	Not applicable		7732-18-5	None	None

## III. PHYSICAL DATA

STATE: liquid ! APPEARANCE: Clear, colorless ! ODDOR: None  
SOLUBILITY IN: WATER: Miscible ! ACID: Miscible ! OTHER: Not determined  
BOILING PT.: >100C! MELTING PT.: NA ! SPECIFIC GRAVITY: 1.026! pH: 5.0  
VAPOR PRESSURE: Not determined ! VAPOR DENSITY (air=1): ND ! EVAPORATION RATE: 0.63  
METAL CORROSIVITY - ALUMINUM: ND STEEL: ND ! SHELF LIFE: stable >1 year  
STORAGE PRECAUTIONS: Store tightly closed.

## IV. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA

FLASH PT.: Not applicable ! METHOD: NA ! FLAMMABILITY LIMITS - LOWER: NA UPPER: NA  
SUSCEPTIBILITY TO SPONTANEOUS HEATING: None  
SHOCK SENSITIVITY: None ! AUTOIGNITION PT.: ND  
EXTINGUISHING MEDIA: water  
UNUSUAL FIRE AND EXPLOSION HAZARD: Not determined  
HAZARDOUS DECOMPOSITION PRODUCTS: Not determined  
OXIDIZER: No ! NFPA Codes Health: 1 Flammability: 0 Reactivity: 0  
CONDITIONS TO AVOID: Heat, flames

## V. HEALTH HAZARD DATA

THIS PRODUCT IS irritating to eyes and skin.  
ACUTE TOXICITY: Slightly toxic  
ROUTE OF MOST DETRIMENTAL EXPOSURE: Not applicable  
TARGET ORGANS: Not applicable  
CHRONIC TOXICITY: Practically non-toxic  
ROUTE OF MOST DETRIMENTAL EXPOSURE: Not applicable  
TARGET ORGANS: Not applicable  
LONG-TERM EFFECTS: Not applicable  
ROUTE OF EXPOSURE: Not applicable  
TARGET ORGANS: Not applicable  
OVEREXPOSURE: May cause irritation

## VI. PRECAUTIONARY MEASURES

Wash thoroughly after handling.  
Avoid contact with eyes, skin and clothing.

PROTECTIVE EQUIPMENT: adequate ventilation, safety glasses, disposable gloves

## VII. FIRST AID

EYE AND SKIN CONTACT: Immediately flush eyes with water for 15 minutes. Call physician. Flush skin with plenty of water.

INGESTION: Give large quantities of water or milk. Call physician immediately.

INHALATION: Remove to fresh air.

## VIII. SPILL AND DISPOSAL PROCEDURES

IN CASE OF SPILL OR RELEASE: Dilute with water. Pour down the drain with excess water.

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

## IX. TRANSPORTATION DATA

PROPER SHIPPING NAME: NCR

HAZARD CLASS: Not applicable ; ID: NA

DATE: 12/26/85; CHANGE NO.: 3925

## X. REFERENCES

- 1) In-house information
- 2) Judgement of technical person compiling data.
- 3)
- 4)
- 5)
- 6)
- 7)
- 8)

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

# MATERIAL SAFETY DATA SHEET

## SECTION I

Information provided by:

## SECTION II

Product Name:

DOT Category:

DOT Hazard class:

DOT ID No.:

Chemical family:

## SECTION III

Precautionary statement:

## SECTION IV

Component:

## SECTION V

Melting Point:

Boiling Point:

Vapor Pressure (@ 20 °C):

Vapor Density (Air = 1):

Appearance and state at room temperature:

Odor:

Specific Gravity (@ 25 °C):

Solubility in water, percentage by weight:

Percentage volatiles by volume:

Evaporation Rate (n-Butyl Acetate = 1):

pH (as is):

Lower Flammable Limit (Air):

Extinguishing media:

Special firefighting procedures:

## IDENTIFICATION

DALCHEM

P. O. Box 6993

Lafuna Niguel CA 92661

## PRODUCT INFORMATION

2000-

Compound, Cleaning, Liquid

None

None

Alkaline salt solution (proprietary)

## PRECAUTIONARY INFORMATION

Health:

MAY CAUSE SEVERE BURNS

MAY CAUSE PERMANENT EYE DAMAGE. Mist produces irritation to eyes, nose, throat, and lungs.

First Aid:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with water.

## HAZARDOUS INGREDIENTS

This material contains no ingredients which could be expected to cause physiologic impairment at low concentration. However, inasmuch as this material is strongly alkaline, all contact should be avoided.

Name: Sodium Metasilicate

Percentage: 3-7

CAS#: 6534-92-0

Hazard Class: Not Applicable

## PHYSICAL DATA

about 0 °C

about 100 °C

0.3 mm Hg

Non-volatile

Clear, colorless to light straw liquid

None

about 1.1

Infinite

Non-volatile

Non-volatile

about 12.5

Not applicable

Not applicable

Use full protective clothing

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# MATERIAL SAFETY DATA SHEET

Degree of fire and explosion hazard:

## SECTION VI

Flash Point:

Autoignition temperature:

Upper flammable limit (Air):

Stability:

Hazardous polymerization:

Conditions to avoid:

None

## FIRE, EXPLOSION, AND REACTIVITY DATA

Not combustible

Not combustible

Not applicable

Stable

Will not occur

Contact with oxidizing or reducing agents should be avoided as 2000+, like many mixtures containing organic compounds, may form explosive mixtures. Reacts violently with strong acids.

Hazardous decomposition products:

## SECTION V

Eye Contact:

Skin Contact:

Skin Absorption:

Inhalation:

Ingestion:

## SECTION VI

Acute Exposure:

None known by DALCHEM

## ROUTES OF EXPOSURE

Severe irritant, chemical burn very likely.

Severe irritant, corrosive to tissue

Slightly hazardous

Irritant.

Slightly hazardous

## EFFECTS OF OVEREXPOSURE

Irritant, slightly toxic if inhaled or ingested.

Cause burns to mucous membranes. Burns to eye and skin and possible permanent corneal damage.

Slightly toxic with repeat inhalation or ingestion.

The chronic local effect may consist of multiple areas superficial destruction of the skin or primary irritant dermatitis. Similarly inhalation of spray mists may result in varying degrees of irritation.

## EMERGENCY FIRST AID PROCEDURES

Flush with copious quantities of water for at least 15 minutes. Urgently seek the attention of an ophthalmologist. Washing the eyes within one minute of exposure is essential to achieve maximum effectiveness.

Wash off with water. If irritation persists, obtain medical attention.

Remove from exposure. If breathing is difficult or discomfort persists, seek medical attention.

Rinse mouth with water; give copious water to cause dilution in stomach. *Do not* induce vomiting. If vomiting occurs spontaneously, keep airway clear by keeping head below knees.

Wash with copious water.

Chronic Exposure:

## SECTION VII

Eyes:

Skin:

Inhalation:

Ingestion:

Decontamination procedure:

# MATERIAL SAFETY DATA SHEET

## SECTION VIII

Ventilation requirements:

Recommended personal protective equipment:

## SECTION VIII

Respiratory:

Eyes:

Gloves:

Special clothing and equipment:

## SECTION IX

## SECTION X

Procedure for leak or spill:

Waste disposal method:

## SECTION XI

DOT proper shipping name:

DOT classification:

DOT labels:

UN Number:

Emergency action precautions and procedure:

Precautions to be taken in transportation:

## SPECIAL PROTECTION

Good industrial hygiene practice dictates that the work area be provided with adequate mechanically-induced general ventilation. Use local exhaust ventilation where spray or mists may be generated.

Protect eyes and skin from contact.

## SPECIAL PROTECTION

For severe mist use NIOSH/OSHA acid gas respirator with a full face piece or in severe exposure use a self-contained breathing apparatus.

Wear chemical goggles, if splashing, spray, or mist conditions are possible.

Rubber, Neoprene, or other resistant elastomer. Where contact is likely, rubber apron and boots.

## STORAGE AND HANDLING

Use goggles and/or face shields, rubber aprons, gloves and boots where splashing or liquid contact is expected. For exposure to airborne mist use NIOSH/OSHA acid gas respirator with full face piece. Store in suitable containers (Steel or polyethylene).

## DISPOSAL, SPILL, OR LEAK PROCEDURES

Dike and salvage or neutralize. Excess material may be recovered with a vacuum truck. Dilute acid may be used to neutralize residue. Flush spill area with water followed by a liberal covering with sodium bicarbonate.

If material cannot be salvaged, a method is neutralization followed by discharge into a local treatment system in accordance with all local, state, and federal regulations.

## TRANSPORTATION DATA

Compound, Cleaning, Liquid

NA

NA

NA

Flush with large quantities of water.

Protect container(s) against physical damage.



MATERIAL SAFETY DATA SHEET

\*\*\*\*\*

I. PRODUCT IDENTIFICATION

Trade name (as labeled): WEST B-121

Chemical names, common names: Chelant

Manufacturer's name: Water and Energy Systems Technology, Inc.  
Address: 2516 Woodland Drive, Anaheim, CA 92801  
Emergency phone: (714) 761-5191  
Business phone: (714) 761-5191

Date prepared: 11/6/86

\*\*\*\*\*

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air	
		ACGIH(TLV)	OSHA(FEL) Other
NO HAZARDOUS INGREDIENTS			

\*\*\*\*\*

III. PHYSICAL PROPERTIES

Vapor density (air=1): ND Melting point or range, F: NA  
Specific gravity: 1.114 Boiling point or range, F: >220  
Solubility in water: Miscible  
Vapor pressure, mmHg at 20C: ND  
Evaporation rate (butyl acetate=1): <1  
Appearance and odor: Light yellow liquid, bland odor.

\*\*\*\*\*

IV. FIRE AND EXPLOSION

Flash Point, F: NA  
Autoignition temperature, F: ND  
Flammable limits in air, volume %: lower NA upper NA  
Fire extinguishing materials:  
water spray carbon dioxide other  
foam dry chemical

Special firefighting procedures:  
NONE

Unusual fire and explosion hazards:  
NONE

\*\*\*\*\*

## V. HEALTH HAZARD INFORMATION

### SYMPTOMS OF OVEREXPOSURE

#### Inhaled:

May cause irritation of upper respiratory passages.

#### Contact with skin or eyes:

May cause irritation or redness on contact with skin or eyes.

#### Absorbed through skin:

May cause irritation or redness on contact with skin. May cause a more serious response if confined to the skin or if the skin is abraded. A single prolonged exposure is not likely to result in harmful quantities being absorbed.

#### Swallowed:

Low single dose oral toxicity.

---

### HEALTH EFFECTS OR RISKS FROM EXPOSURE

#### Acute:

May cause local irritation from exposure.

#### Chronic:

No longterm health effects known from repeated exposures.

---

### FIRST AID: EMERGENCY PROCEDURES

#### Eye contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

#### Skin contact:

Immediately remove clothing under a safety shower. Flush all affected areas with large amounts of water for at least 15 minutes.

#### Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

#### Swallowed:

Do not induce vomiting. If conscious, immediately give large quantities of water. Call a physician or the nearest Poison Control Center immediately.

---

### SUSPECTED CANCER AGENT?

\_ NO: This product's ingredients are not found in the lists below.  
X YES: Federal OSHA      NTP      IARC      Cal/OSHA (see note)\*

NOTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

---

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE  
NONE KNOWN

\*\*\*\*\*  
VI. REACTIVITY DATA

Stability: X Stable      \_ Unstable

Conditions to avoid:

1 not mix with other industrial chemicals.

Incompatibility (materials to avoid):

Acids, organic chemicals, and food products.

Hazardous decomposition products (including combustion products):

Carbon monoxide, carbon dioxide, ammonia, and oxides of nitrogen.

Hazardous polymerization:      \_ May occur      X Will not occur

\*\*\*\*\*  
VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (including employee protection measures):

For small spills mop or wipe up. For large spills, contain by diking with soil or other absorbent material. Keep out of sewers, drains, surface waters, and soil.

Preparing wastes for disposal:

Dilute acid (preferably acetic acid) may be used to neutralize the final traces immediately after flushing. Use D.O.T. approved containers for waste disposal.

NOTE: Dispose of all wastes in accordance with federal, state, and local regulations.

\*\*\*\*\*  
VIII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:  
NORMAL

Respiratory protection:

NIOSH approved respirator in the absence of adequate environmental controls at the point of use.

Eye protection:

Chemical goggles and face shield.

Gloves:

Rubber.

Other clothing and equipment:

Rubber apron and protective clothing.

Work practices, hygienic practices:

Do not get in eyes, on skin, or on clothing.

Other handling and storage requirements:

An eyewash and safety shower should be nearby and ready for use.

Protective measures during maintenance of contaminated equipment:  
WEAR PROTECTIVE CLOTHING.

End of MSDS

**Other handling and storage requirements:**

An eyewash and safety shower should be nearby and ready for use.

**Protective measures during maintenance of contaminated equipment:**  
**WEAR PROTECTIVE CLOTHING.**

---

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, WEST, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGEMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, WEST, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

End of MSDS

Water and Energy Systems Technology, Inc.  
2516 Woodland Drive  
Anaheim, CA 92801

MATERIAL SAFETY DATA SHEET

\*\*\*\*\*

I. PRODUCT IDENTIFICATION

Trade name (as labeled): WEST B-409

Chemical names, common names: Filming Amine

Manufacturer's name: Water and Energy Systems Technology, Inc.  
Address: 2516 Woodland Drive, Anaheim, CA 92801  
Emergency phone: (714) 761-5191  
Business phone: (714) 761-5191

Date prepared: 11/6/86

\*\*\*\*\*

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air		
		ACGIH(TLV)	OSHA(FEL)	Other
Diethylaminoethanol	100-37-8	50mg/M <sup>3</sup>	--	

\*\*\*\*\*

III. PHYSICAL PROPERTIES

Vapor density (air=1): >1      Melting point or range, F: NA  
Specific gravity: 0.990      Boiling point or range, F: >220  
Solubility in water: Dispersible  
Vapor pressure, mmHg at 20C: ND  
Evaporation rate (butyl acetate=1): <1  
Appearance and odor: Clear amber liquid, amine odor.

\*\*\*\*\*

IV. FIRE AND EXPLOSION

Flash Point, F: 130 TCC  
Autoignition temperature, F: 608  
Flammable limits in air, volume %: lower 6.7 upper 11.7  
Fire extinguishing materials:  
    ☒ water spray      ☒ carbon dioxide      other  
    ☒ foam      ☒ dry chemical

Special firefighting procedures:  
Full protective clothing, plus self-contained breathing apparatus.

Unusual fire and explosion hazards:  
Extinguish all nearby sources of ignition because vapors may be moved by air currents to ignition sources distant from the handling point.

\*\*\*\*\*

## V. HEALTH HAZARD INFORMATION

### SYMPTOMS OF OVEREXPOSURE

#### Inhaled:

May cause irritation of upper respiratory passages.

#### Contact with skin or eyes:

May cause irritation or redness on contact with skin or eyes.

#### Absorbed through skin:

May cause irritation or redness on contact with skin. May cause a more serious response if confined to the skin or if the skin is abraded. A single prolonged exposure is not likely to result in harmful quantities being absorbed.

#### Swallowed:

Swallowing large quantities causes headaches, nausea, vomiting, stomach cramps and diarrhea, and perhaps unconsciousness, or death.

---

### HEALTH EFFECTS OR RISKS FROM EXPOSURE

#### Acute:

May cause local irritation from exposure.

#### Chronic:

Prolonged or repeated exposures to high concentrations can produce severe or fatal CNS depression.

---

### FIRST AID: EMERGENCY PROCEDURES

#### Eye contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

#### Skin contact:

Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

#### Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

#### Swallowed:

Immediately give 2 to 6 glasses of water and induce vomiting. Continue until vomited fluid is clear. Get prompt medical attention.

---

### SUSPECTED CANCER AGENT?

☒ NO: This product's ingredients are not found in the lists below.  
YES: Federal OSHA      NTP      IARC      Cal/OSHA (see note)\*

NOTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

-----  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Persons with pre-existing skin disorders, eye problems, or impaired respiratory functions may be more susceptible to the effects of this substance.

\*\*\*\*\*

VI. REACTIVITY DATA

Stability:                    ☒ Stable                    ☐ Unstable

Conditions to avoid:

Do not mix with other industrial chemicals.

Incompatibility (materials to avoid):

Acids, oxidizing materials, halogen compounds, copper, zinc, and galvanized metals.

Hazardous decomposition products (including combustion products):

Carbon monoxide, carbon dioxide, ammonia, and oxides of nitrogen.

Hazardous polymerization:            ☐ May occur            ☒ Will not occur

\*\*\*\*\*

VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (including employee protection measures):

For small spills mop or wipe up. For large spills, contain by diking with soil or other absorbent material. Keep out of sewers, drains, surface waters, and soil.

Preparing wastes for disposal:

Dilute acid (preferably acetic acid) may be used to neutralize the final traces immediately after flushing. Use D.U.I. approved containers for waste disposal.

NOTE: Dispose of all wastes in accordance with federal, state, and local regulations.

\*\*\*\*\*

VIII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:

Local mechanical exhaust ventilation capable of maintaining emissions at the point of use below the FEL.

Respiratory protection:

NIOSH approved respirator in the absence of adequate environmental controls at the point of use.

Eye protection:

Chemical goggles and face shield.

Gloves:

Rubber.

Other clothing and equipment:

Rubber apron and protective clothing.

Work practices, hygienic practices:

Do not cut, grind, weld, or drill on or near this container.

Other handling and storage requirements:

An eyewash and safety shower should be nearby and ready for use.

Protective measures during maintenance of contaminated equipment:

WEAR PROTECTIVE CLOTHING.

End of MSDS



Water and Energy Systems Technology, Inc.  
2516 Woodland Drive  
Anaheim, CA 92801

## MATERIAL SAFETY DATA SHEET

\*\*\*\*\*

### I. PRODUCT IDENTIFICATION

Trade name (as labeled): WEST B-508

Chemical names, common names: Ammonium bisulfite solution

Manufacturer's name: Water and Energy Systems Technology, Inc.

Address: 2516 Woodland Drive, Anaheim, CA 92801

Emergency phone: (714) 761-5191

Business phone: (714) 761-5191

Date prepared: 11/6/86

\*\*\*\*\*

### II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air		
		ACGIH(TLV)	OSHA(FEL)	Other
Ammonium bisulfite	10192-30-0	NOT ESTABLISHED		

\*\*\*\*\*

### III. PHYSICAL PROPERTIES

Vapor density (air=1): 0.6      Melting point or range, F: NA

Specific gravity: 1.37      Boiling point or range, F: 212

Solubility in water: Miscible

Vapor pressure, mmHg at 20C: 17.5

Evaporation rate (butyl acetate=1): >1

Appearance and odor: Pale green liquid, pungent odor.

\*\*\*\*\*

### IV. FIRE AND EXPLOSION

Flash Point, F: NA

Autoignition temperature, F: NA

Flammable limits in air, volume %: lower NA      upper NA

Fire extinguishing materials:

water spray	carbon dioxide	other
foam	dry chemical	

Special firefighting procedures:  
NONE

Unusual fire and explosion hazards:  
NONE

\*\*\*\*\*

## V. HEALTH HAZARD INFORMATION

### SYMPTOMS OF OVEREXPOSURE

#### Inhaled:

Vapors and mists are extremely corrosive to the nose, throat, and mucous membranes.

#### Contact with skin or eyes:

Vapors will irritate the skin or eyes. Liquids and mists can severely irritate or damage the eyes and cause corneal burns.

#### Absorbed through skin:

None.

#### Swallowed:

Vapors, mists, and liquids are extremely corrosive to the mouth and throat.

---

### HEALTH EFFECTS OR RISKS FROM EXPOSURE

#### Acute:

May cause local irritation from exposure.

#### Chronic:

No specific information available.

---

### FIRST AID: EMERGENCY PROCEDURES

#### Eye contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

#### Skin contact:

Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

#### Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

#### Swallowed:

Do not induce vomiting. If conscious, immediately give large quantities of water. Call a physician or the nearest Poison Control Center immediately.

---

### SUSPECTED CANCER AGENT?

☒ NO: This product's ingredients are not found in the lists below.  
☐ YES: Federal OSHA      NTP      IARC      Cal/OSHA (see note)\*

NOTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

---

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

A moderate irritant with some allergenic properties.

\*\*\*\*\*

## VI. REACTIVITY DATA

Stability:                    ☒ Stable                    ☐ Unstable

Conditions to avoid:  
Protect from toxic sulfur oxide gases.

Incompatibility (materials to avoid):

Strong oxidizers, metals, acids, alkalis, amines, halogens, halogen compounds, anhydrides, and aldehydes.

Hazardous decomposition products (including combustion products):  
Decomposes at high temperatures to form sulfur oxide gases.

Hazardous polymerization:                    ☐ May occur                    ☒ Will not occur

\*\*\*\*\*

## VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (including employee protection measures):  
Small spills should be flushed with a water spray. Large spills should be handled according to a predetermined plan.

Preparing wastes for disposal:  
Place waste in D.O.T. approved waste containers.

NOTE: Dispose of all wastes in accordance with federal, state, and local regulations.

\*\*\*\*\*

## VIII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:  
Local mechanical exhaust ventilation capable of maintaining emissions at the point of use below the PEL.

Respiratory protection:  
NIOSH approved respirator in the absence of adequate environmental controls at the point of use.

Eye protection:  
Chemical goggles and face shield.

Gloves:  
Rubber.

Other clothing and equipment:  
Rubber apron and protective clothing.

Work practices, hygienic practices:  
Do not get in eyes, on skin, or on clothing.

Other handling and storage requirements:  
An eyewash and safety shower should be nearby and ready for use.

Protective measures during maintenance of contaminated equipment:  
WEAR PROTECTIVE CLOTHING.

MATERIAL SAFETY DATA SHEET

\*\*\*\*\*

I. PRODUCT IDENTIFICATION

Trade name (as labeled): WEST B-900  
Chemical names, common names: Resin Cleaner  
Manufacturer's name: Water and Energy Systems Technology, Inc.  
Address: 2516 Woodland Drive, Anaheim, CA 92801  
Emergency phone: (714) 761-5191  
Business phone: (714) 761-5191  
Date prepared: 12/31/86

\*\*\*\*\*

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air		
		ACGIH(TLV)	OSHA(FEL)	Other
Formaldehyde	50000	1000		
Organic acid				

\*\*\*\*\*

III. PHYSICAL PROPERTIES

Vapor density (air=1): 40 Melting point or range, F: NA  
Specific gravity: 1.05? Boiling point or range, F: 212  
Solubility in water: Miscible  
Vapor pressure, mmHg at 20C: 40  
Evaporation rate (butyl acetate=1): 1  
Appearance and odor: Clear, straw liquid, bland odor.

\*\*\*\*\*

IV. FIRE AND EXPLOSION

Flash Point, F: NA  
Autoignition temperature, F: NA  
Flammable limits in air, volume %: lower NA upper NA  
Fire extinguishing materials:  
X water spray X carbon dioxide other  
X foam X dry chemical

Special firefighting procedures:  
NONE

Unusual fire and explosion hazards:  
NONE

\*\*\*\*\*

## V. HEALTH HAZARD INFORMATION

### SYMPTOMS OF OVEREXPOSURE

#### Inhaled:

Vapors and mists are extremely corrosive to the nose, throat, and mucous membranes.

#### Contact with skin or eyes:

May cause irritation or redness on contact with skin or eyes.

#### Absorbed through skin:

May cause irritation or redness on contact with skin. May cause a more serious response if confined to the skin or if the skin is abraded. A single prolonged exposure is not likely to result in harmful quantities being absorbed.

#### Swallowed:

Vapors, mists, and liquids are extremely corrosive to the mouth and throat.

---

### HEALTH EFFECTS OR RISKS FROM EXPOSURE

#### Acute:

Multiple small burns can result from exposure.

#### Chronic:

Toxic if ingested.

---

### FIRST AID: EMERGENCY PROCEDURES

#### Eye contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

#### Skin contact:

Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes: wash before reuse. Get medical attention if irritation persists after washing.

#### Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

#### Swallowed:

Immediately give 2 to 6 glasses of water and induce vomiting. Continue until vomited fluid is clear. Get prompt medical attention.

---

### SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists below.  
YES: Federal OSHA NTP IARC Cal/OSHA (see note)\*

NOTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

A moderate irritant with some allergenic properties.

\*\*\*\*\*

VI. REACTIVITY DATA

Stability: ☒ Stable ☐ Unstable

Conditions to avoid:

Do not mix with other industrial chemicals.

Incompatibility (materials to avoid):

Alkalies and oxidizers.

Hazardous decomposition products (including combustion products):

Carbon dioxide or carbon monoxide may be formed.

Hazardous polymerization: ☐ May occur ☒ Will not occur

\*\*\*\*\*

VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (including employee protection measures):

For small spills mop or wipe up. For large spills, contain by diking with soil or other absorbent material. Keep out of sewers, drains, surface waters, and soil.

Preparing wastes for disposal:

Dilute with water and neutralize with alkali. Neutralized waste may have to be disposed of by an approved contractor.

NOTE: Dispose of all wastes in accordance with federal, state, and local regulations.

\*\*\*\*\*

VIII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:

NORMAL

Respiratory protection:

NIOSH approved respirator in the absence of adequate environmental controls at the point of use.

Eye protection:

Chemical goggles and face shield.

Gloves:

Rubber.

Other clothing and equipment:

Rubber apron and protective clothing.

Work practices, hygienic practices:

Do not get in eyes, on skin, or on clothing.

Water and Energy Systems Technology, Inc.  
2516 Woodland Drive  
Anaheim, CA 92801

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Trade name (as labeled): WEST R-904

Chemical names, common names: Catalyst

Manufacturer's name: Water and Energy Systems Technology, Inc.

Address: 2516 Woodland Drive, Anaheim, CA 92801

Emergency phone: (714) 761-5191

Business phone: (714) 761-5191

Date prepared: 11/6/86

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Numbers	Exposure Limits in Air	
		ACGIH(TLV)	OSHA(PEL) Other

NO HAZARDOUS INGREDIENTS

III. PHYSICAL PROPERTIES

Vapor density (air=1): ND Melting point or range, F: NA

Specific gravity: 1.022 Boiling point or range, F: >220

Solubility in water: Miscible

Vapor pressure, mmHg at 20C: ND

Evaporation rate (butyl acetate=1): <1

Appearance and odor: Red liquid, odorless.

IV. FIRE AND EXPLOSION

Flash Point, F: NA

Autoignition temperature, F: NA

Flammable limits in air, volume %: lower NA upper NA

Fire extinguishing materials:

water spray	carbon dioxide	other
foam	dry chemical	

Special firefighting procedures:  
NONE

Unusual fire and explosion hazards:  
NE

\*\*\*\*\*

## V. HEALTH HAZARD INFORMATION

### SYMPTOMS OF OVEREXPOSURE

Inhaled:

None.

Contact with skin or eyes:

None.

Absorbed through skin:

None.

Swallowed:

Low single dose oral toxicity.

---

### HEALTH EFFECTS OR RISKS FROM EXPOSURE

Acute:

May cause local irritation from exposure.

Chronic:

No specific information available.

---

### FIRST AID: EMERGENCY PROCEDURES

Eye contact:

Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Obtain medical attention immediately.

On contact:

Immediately wash skin with lots of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

Inhaled:

If breathing stops, give artificial respiration. Call a physician immediately.

Swallowed:

Immediately give 2 to 6 glasses of water and induce vomiting. Continue until vomited fluid is clear. Get prompt medical attention.

---

### SUSPECTED CANCER AGENT?

NO: This product's ingredients are not found in the lists below.

YES: Federal OSHA      NTP      IARC      Cal/OSHA (see note)\*

NOTE: California employers using Cal/OSHA-regulated carcinogens must register with Cal/OSHA.

---

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

NONE KNOWN



\*\*\*\*\*  
VI. REACTIVITY DATA

Stability:                    X Stable                    \_ Unstable

Conditions to avoid:  
not mix with other industrial chemicals.

Incompatibility (materials to avoid):  
None.

Hazardous decomposition products (including combustion products):  
None.

Hazardous polymerization:            \_ May occur            X Will not occur

\*\*\*\*\*  
VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Spill response procedures (including employee protection measures):  
For small spills mop or wipe up. For large spills, contain by diking  
with soil or other absorbent material. Keep out of sewers, drains,  
surface waters, and soil.

Preparing wastes for disposal:  
Place waste in D.O.T. approved waste containers.

OTE: Dispose of all wastes in accordance with federal, state, and  
local regulations.

\*\*\*\*\*  
VIII. SPECIAL HANDLING INFORMATION

Ventilation and engineering controls:  
NORMAL

Respiratory protection:  
NIOSH approved respirator in the absence of adequate environmental  
controls at the point of use.

Eye protection:  
Chemical goggles and face shield.

Gloves:  
Rubber.

Other clothing and equipment:  
Rubber apron and protective clothing.

Work practices, hygienic practices:  
Do not get in eyes, on skin, or on clothing.

Other handling and storage requirements:  
An eyewash and safety shower should be nearby and ready for use.

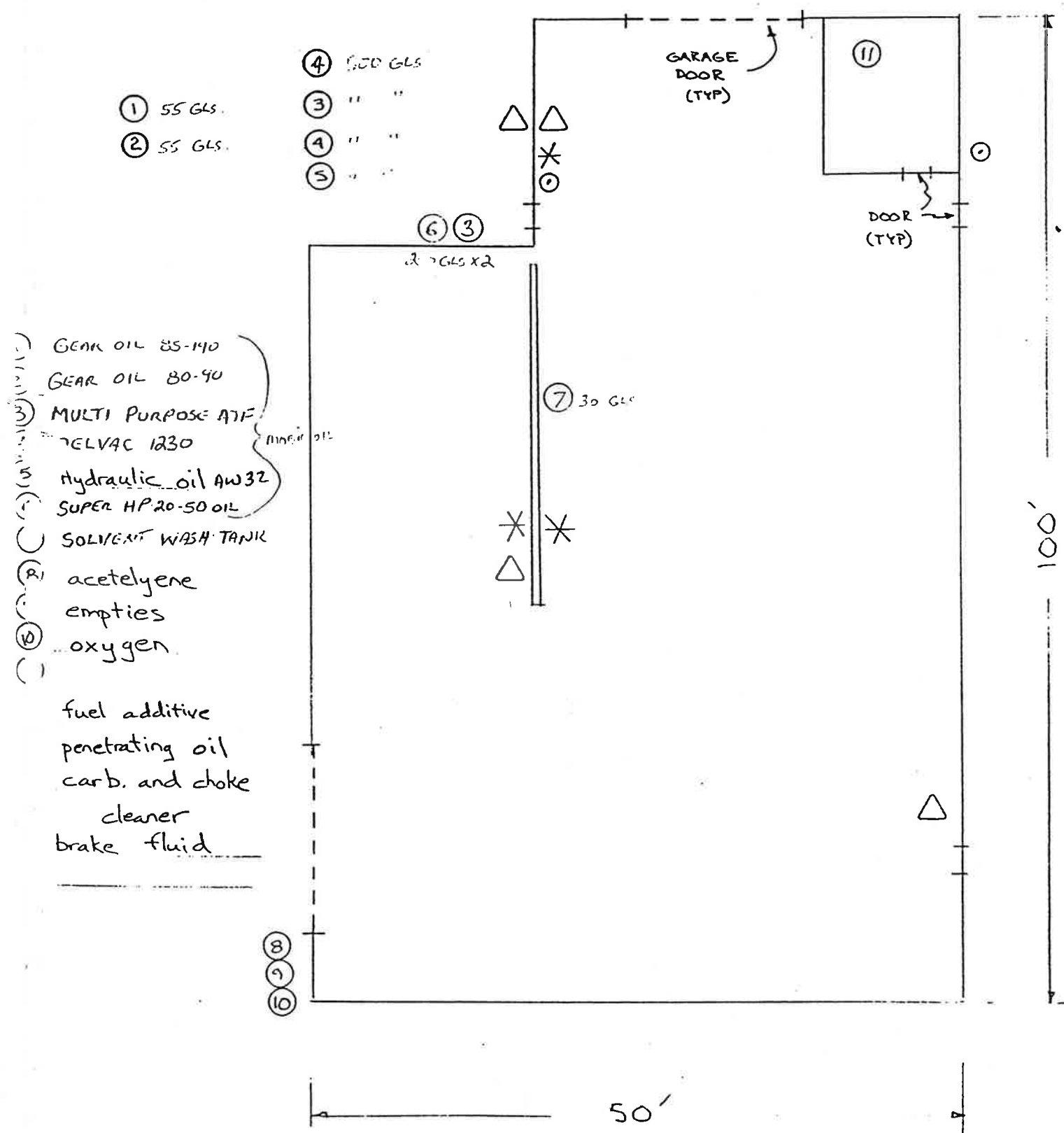
Protective measures during maintenance of contaminated equipment:  
R PROTECTIVE CLOTHING.

End of MSDS

SHOP/WAREHOUSE

## SCHEMATIC

- △ Fire Extinguisher  
 ⊙ Gas Main  
 \* Electrical Main



(Solvent)

Product Name: MINERAL SPIRITS 75  
Product Code No: 11006

Page 1 of 1  
Issue Date: 7/23/83

**MANUFACTURER:**

UNIOCAL CHEMICALS DIVISION  
UNION OIL COMPANY OF CALIFORNIA  
1345 N. MEACHAM  
SCHAUMBURG, ILLINOIS 60196

CONTACT FOR FURTHER INFORMATION:  
MSDS COORDINATOR (312) 490-2100

Transportation Emergencies:  
Call CHEMTREC  
(800) 424-9300; Cont. U.S.  
(202) 483-7616; (Collect)  
from Alaska & Hawaii  
Health Emergencies:  
CALL LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.)  
(213) 664-2121

**PRODUCT IDENTIFICATION**

**PRODUCT NAME:** MINERAL SPIRITS 75  
**OTHER NAME:** VOLATILE SOLVENT  
**CHEMICAL FAMILY:** HYDROCARBON MIXTURE  
**NOT PROPER  
TRADING NAME:** PETROLEUM NAPHTHA  
**ID NUMBER:** UN1255  
**DOT HAZARD  
CLASSIFICATION:** COMBUSTIBLE LIQUID  
**DOT NUMBER:** 64741-41-9

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS	CAS NO.	TLV	UNITS	AGENCY	TYPE
STODDARD SOLVENT	8052-41-3	100.00 PPM 500.00 PPM		ACGIH OSHA	THA THA
C9-C12 PARAFFINS		NOT ESTABLISHED			
C9-C12 CYCLOPARAFFINS		NOT ESTABLISHED			
AROMATIC HYDROCARBONS		NOT ESTABLISHED			

**SECTION II - EMERGENCY AND FIRST AID PROCEDURES**

\*\*\*EMERGENCY\*\*\*  
Have physician call LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.) (213) 664-2121

**SEE CONTACT:**

IF IRRITATION OR REDNESS FROM EXPOSURE TO VAPORS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. IF IRRITATION OR REDNESS PERSISTS, SEEK MEDICAL ATTENTION. FOR DIRECT CONTACT, FLUSH THE AFFECTED EYE(S) WITH CLEAN WATER. SEEK MEDICAL ATTENTION.

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

\*\*\*EMERGENCY\*\*\*  
Have physician call LOS ANGELES POISON  
INFORMATION CENTER (24 hrs.) (213) 664-2121

1 CONTACT:

REMOVE CONTAMINATED CLOTHING. CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF IRRITATION OF NOSE OR THROAT DEVELOPS, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, ARTIFICIAL RESPIRATION SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SWALLOWING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

1E CONTACT:

THIS PRODUCT MAY CAUSE EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO ITS VAPORS OR MISTS MAY CAUSE BURNING, TEARING AND REDNESS.

SKIN CONTACT:

THIS PRODUCT MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED EXPOSURE TO THIS MATERIAL MAY CAUSE REDNESS AND BURNING, DRYING AND CRACKING OF THE SKIN AND DERMATITIS. PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

INHALATION OF EXCESSIVE CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE: IRRITATION OF THE NOSE AND THROAT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). PERSONS WITH IMPAIRED LUNG FUNCTION OR ASTHMA-LIKE CONDITIONS MAY EXPERIENCE ADDITIONAL BREATHING DIFFICULTIES DUE TO THE IRRITANT PROPERTIES OF THIS MATERIAL.

INGESTION (SWALLOWING):

INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE: IRRITATION OF THE DIGESTIVE TRACT. SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., DROWSINESS, DIZZINESS, LOSS OF COORDINATION, AND FATIGUE). ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE.

COMMENTS:

THIS SUBSTANCE HAS NOT BEEN IDENTIFIED AS A CARCINOGEN OR PROBABLE CARCINOGEN BY NTP, IARC OR OSHA.

**SECTION IV - SPECIAL PROTECTION INFORMATION****VENTILATION:**

CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, SYSTEMS DESIGNED FOR SUCH LOCATIONS SHOULD BE USED.

**RESPIRATORY PROTECTION:**

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

**PROTECTIVE GLOVES:**

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

**EYE PROTECTION:**

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

**OTHER PROTECTIVE EQUIPMENT:**

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

**SECTION V - REACTIVITY DATA****STABILITY:**

STABLE

**COMPATIBILITY (MATERIALS TO AVOID):**

THIS PRODUCT IS INCOMPATIBLE WITH STRONG ACIDS OR BASES, OXIDIZING AGENTS AND SELECTED AMINES.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE.

**HAZARDOUS POLYMERIZATION:**

WILL NOT OCCUR

**SECTION VI - SPILL OR LEAK PROCEDURES**

\*\*\*HIGHWAY OR RAILWAY SPILLS\*\*\*  
Call CHEMTREC (800) 424-9300 Cont. U.S.  
(Collect) (202) 483-7616 from Alaska & Hawaii

**PRECAUTIONS IN CASE OF RELEASE OR SPILL:**

STAY UPWIND AND AWAY FROM SPILL. KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL. IF SPILL IS INDOORS, VENTILATE AREA OF SPILL. FOAM, ESPECIALLY HIGH EXPANSION FOAM, MAY BE USED TO SUPPRESS VAPORS. KEEP OUT OF DRAINS, SEWERS OR WATERWAYS. USE SAND OR OTHER INERT MATERIAL TO DAM AND CONTAIN SPILL. DO NOT FLUSH AREA WITH WATER. FOR SMALL SPILLS, DO NOT FLUSH WITH WATER; USE ABSORBENT PADS. CALL SPILL RESPONSE TEAM IF LARGE SPILL. NOTIFY APPROPRIATE STATE/LOCAL AGENCIES.

## SECTION VI - SPILL OR LEAK PROCEDURES

XXXXXXXXXX HIGHWAY OR RAILWAY SPILLS XXXX  
Call CHEMTREC (800) 424-9300 Cont. U.S.  
(Collect) (202) 483-7616 from Alaska & Hawaii

## DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

## SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

## HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINERS TIGHTLY CLOSED. KEEP CONTAINERS COOL, DRY, AND AWAY FROM SOURCES OF IGNITION. USE AND STORE THIS PRODUCT WITH ADEQUATE VENTILATION. AVOID INHALATION OF VAPORS AND PERSONAL CONTACT WITH THE PRODUCT. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN 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 OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

## SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

## HAZARD RANKING

HEALTH HAZARD: 2  
FLAMMABILITY: 2  
REACTIVITY: 0  
OTHER: -0 = LEAST  
1 = SLIGHT  
2 = MODERATE  
3 = HIGH  
4 = EXTREMEHMIS HEALTH: 1  
HAZARD FLAM: 1  
CLASS REACT: 1  
P.P.E.: -

## LOWER EXPLOSIVE LIMIT (% VOL.)

1.0

## UPPER EXPLOSIVE LIMIT (% VOL.)

6.0

## FLASH POINT

107, 100 F

## EXTINGUISHING MEDIA:

SMALL FIRES: EXTINGUISH WITH DRY CHEMICAL, CO2 OR FOAM. LARGE FIRES: THE USE OF DRY CHEMICAL OR FOAM IS RECOMMENDED. WATER MAY BE AN INEFFECTIVE EXTINGUISHING AGENT.

## FIRE &amp; EXPLOSION HAZARDS:

THIS MATERIAL IS COMBUSTIBLE AND MAY BE IGNITED BY HEAT OR FLAME. THIS MATERIAL WILL BURN, BUT WILL NOT IGNITE READILY.

## FIRE FIGHTING PROCEDURES:

THE USE OF A SCBA IS RECOMMENDED FOR FIRE FIGHTERS. WATER SPRAY MAY BE USEFUL IN MINIMIZING VAPORS AND COOLING CONTAINERS EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

BOILING POINT

15 TO 395 F

VAPOR DENSITY (AIR = 1)

4.8

VAPOR PRESSURE

2.0 MM HG @ 20C

REFRACTION RATE (N-BUTYL ACETATE = 1)

0.13

% VOLATILE

100%

% SOLUBILITY IN WATER

NEGLIGIBLE (< 5%)

DENSITY GRAVITY (TEMP/TEMP)

0.799 (60F/60F)

APPEARANCE

CLEAR, HAS LITTLE IF ANY COLOR

ODOR

CHARACTERISTIC

SECTION XI - DOCUMENTARY INFORMATION

ISSUE DATE: 7/23/86

PRODUCT CODE NO. 12415

PREV. DATE:

PREV. PROD. CODE NO. 2415

MSDS NO:

PREV. MSDS NO:

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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APR 26 1991

583013-00 PAGE 1 OF 5

MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED:02/28/91

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*  
MOBIL HYDRAULIC OIL AW 32

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(609) 737-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800) 424-9300 (CHEMTREC)
USE OR DESCRIPTION:	PRODUCT TECHNICAL INFORMATION:
HYDRAULIC OIL	(800) 662-4525

\*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: AMBER LIQUID	ODOR: MILD	PH: NA
VISCOSITY AT 100 F, SUS: 165.0	AT 40 C, CS: 32.0	
VISCOSITY AT 210 F, SUS: 44.0	AT 100 C, CS: 5.4	
FLASH POINT F(C): > 375(191) (ASTM D-92)		
MELTING POINT F(C): NA	POUR POINT F(C): 0(-18)	
BOILING POINT F(C): > 600(316)		
RELATIVE DENSITY, 15/4 C: 0.873	SOLUBILITY IN WATER: NEGLIGIBLE	
VAPOR PRESSURE-MM HG 20C: < .1		

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES  
FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

\*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

NONE

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*=SUGGESTED-TLV, M=MOBIL, O=OSHA, S=SUPPLIER  
NOTE: LIMITS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

\*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
THRESHOLD LIMIT VALUE: 5.00 MG/M3 SUGGESTED FOR OIL MIST  
EFFECTS OF OVEREXPOSURE: NOT EXPECTED TO BE A PROBLEM.

\*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*  
--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: FLUSH WITH WATER.  
SKIN CONTACT: WASH CONTACT AREAS WITH SOAP AND WATER. HIGH PRESSURE  
ACCIDENTAL INJECTION THROUGH THE SKIN REQUIRES IMMEDIATE MEDICAL  
ATTENTION FOR POSSIBLE INCISION, IRRIGATION AND/OR DEBRIDEMENT.  
INHALATION: NOT EXPECTED TO BE A PROBLEM.  
INGESTION: NOT EXPECTED TO BE A PROBLEM WHEN INGESTED. IF  
UNCOMFORTABLE SEEK MEDICAL ASSISTANCE.



## \*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): &gt; 375(191) (ASTM D-92)

FLAMMABLE LIMITS. LEL: .6 UEL: 7.0

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES: WATER OR FOAM MAY CAUSE FROTHING.

USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURE. FOR FIRES IN ENCLOSED

AREAS, FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS OR DRINKING WATER SUPPLY.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE.

NFPA HAZARD ID: HEALTH: 0, FLAMMABILITY: 1, REACTIVITY: 0

## \*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (THERMAL, LIGHT, ETC.): STABLE

CONDITIONS TO AVOID: EXTREME HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

## \*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER (800) 424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT: PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE OR DISPOSAL BY SUPERVISED INCINERATION. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT ANY GOVERNMENT APPROVED WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

## \*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: NO SPECIAL EQUIPMENT REQUIRED.

SKIN PROTECTION: NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION: NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION: NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

## \*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

NO SPECIAL PRECAUTIONS REQUIRED.

## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

DERMAL TOXICITY (RABBITS): NONTOXIC (ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

INHALATION TOXICITY (RATS): NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF MISTS AND/OR VAPORS ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY CUSTOMARY OR REASONABLY FORESEEABLE HANDLING, USE, OR MISUSE OF THIS PRODUCT.

EYE IRRITATION (RABBITS): EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

SKIN IRRITATION (RABBITS): EXPECTED TO BE NON-IRRITATING. ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

## ---SUBCHRONIC TOXICOLOGY (SUMMARY)---

SEVERELY SOLVENT REFINED AND SEVERELY HYDROTREATED MINERAL BASE OILS HAVE BEEN TESTED AT MOBIL ENVIRONMENTAL AND HEALTH SCIENCES LABORATORY BY DERMAL APPLICATION TO RATS 5 DAYS/WEEK FOR 90 DAYS AT DOSES SIGNIFICANTLY HIGHER THAN THOSE EXPECTED DURING NORMAL INDUSTRIAL EXPOSURE. EXTENSIVE EVALUATIONS INCLUDING MICROSCOPIC EXAMINATION OF INTERNAL ORGANS AND CLINICAL CHEMISTRY OF BODY FLUIDS, SHOWED NO ADVERSE EFFECTS.

## ---CHRONIC TOXICOLOGY (SUMMARY)---

THE BASE OILS IN THIS PRODUCT ARE SEVERELY SOLVENT REFINED AND/OR SEVERELY HYDROTREATED. CHRONIC MOUSE SKIN PAINTING STUDIES OF SIMILAR OILS SHOWED NO EVIDENCE OF CARCINOGENIC EFFECTS.

\*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*  
 GOVERNMENTAL INVENTORY STATUS: ALL COMPONENTS REGISTERED IN ACCORDANCE  
 WITH TSCA AND EINECS.

## DOT:

SHIPPING NAME: NOT APPLICABLE  
 HAZARD CLASS: NOT APPLICABLE

US OSHA HAZARD COMMUNICATION STANDARD: PRODUCT ASSESSED IN ACCORDANCE  
 WITH OSHA 29 CFR 1910.1200 AND DETERMINED NOT TO BE HAZARDOUS.

RCRA INFORMATION: THE UNUSED PRODUCT, IN OUR OPINION, IS NOT  
 SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR,  
 PART 261D); DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF  
 IGNITABILITY, CORROSIVITY, OR REACTIVITY, AND IS NOT FORMULATED  
 WITH THE CONTAMINANTS LISTED IN THE TOXICITY CHARACTERISTIC (TC)  
 RULE AS DETERMINED BY THE TOXICITY CHARACTERISTIC LEACHING  
 PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III:  
 THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (302) REPORTABLE HAZARD CATEGORIES: NONE

THIS PRODUCT CONTAINS NO CHEMICALS REPORTABLE UNDER  
 SARA (313) TOXIC RELEASE PROGRAM.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
PHENOL	108-95-2	12
ZINC (ELEMENTAL ANALYSIS) (.04%)	7440-66-6	15

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
 6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,  
 11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
 16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
CONTAINS ONE OR MORE OF THE FOLLOWING	> 95.00	
BASE OILS:		
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		64742-54-7
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC		64742-65-0

\*\*\*\*\* APPENDIX \*\*\*\*\*  
FOR MOBIL USE ONLY: (FILL NO: MTL2553A4P001) MCN: , MHC: 0\* 0\* NA 0\*  
0\*, MPPEC: A, PPEC: A, US91-122 APPROVE 02/28/91

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWES ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265

## MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED:09/21/90

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*  
MOBIL DELVAC 1230

## SUPPLIER:

MOBIL OIL CORP.

## CHEMICAL NAMES AND SYNONYMS:

PET. HYDROCARBONS AND ADDITIVES

## USE OR DESCRIPTION:

AUTOMOTIVE ENGINE OIL

## HEALTH EMERGENCY TELEPHONE:

(609) 737-4411

## TRANSPORT EMERGENCY TELEPHONE:

(800) 424-9300 (CHEMTREC)

## PRODUCT TECHNICAL INFORMATION:

(800) 662-4525

## \*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: Dark Amber Liquid

ODOR: Mild

PH: NA

VISCOSITY AT 100 F, SUS: 541.0

AT 40 C, CS: 104.0

VISCOSITY AT 210 F, SUS: 68.0

AT 100 C, CS: 12.0

FLASH POINT F(C): &gt; 420(216) (ASTM D-92)

MELTING POINT F(C): NA

POUR POINT F(C): 0(-18)

BOILING POINT F(C): &gt; 600(316)

RELATIVE DENSITY, 15/4 C: 0.89

SOLUBILITY IN WATER: Negligible

VAPOR PRESSURE-mm Hg 20C: &lt; .1

NA=Not Applicable NE=Not Established D=Decomposes

FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

## \*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

None

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*=Suggested-TLV, M=Mobil, O=OSHA, S=Supplier

NOTE: Limits shown for guidance only. Follow applicable regulations.

## \*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---

THRESHOLD LIMIT VALUE: 5.00 MG/M3 Suggested for Oil Mist

EFFECTS OF OVEREXPOSURE: Slight eye irritation. Slight skin irritation.

## \*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: Flush with water.

SKIN CONTACT: Wash contact areas with soap and water.

INHALATION: Not expected to be a problem.

INGESTION: Not expected to be a problem. However, if greater than 1/2 liter(pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. Do not induce vomiting or give anything by mouth to an unconscious person.

## \*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): &gt; 420(216) (ASTM D-92)

FLAMMABLE LIMITS. LEL: .6 UEL: 7.0

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing.

Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use self-contained breathing apparatus. Prevent runoff from fire control or dilution from entering streams or drinking water supply.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

NFPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0

## \*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (Thermal, Light, etc.): Stable

CONDITIONS TO AVOID: Extreme heat.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

## \*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

WASTE MANAGEMENT: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the resource conservation and recovery act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

## \*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: Normal industrial eye protection practices should be employed.

SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.

RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.

VENTILATION: No special requirements under ordinary conditions of use and with adequate ventilation.

## \*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

No special precautions required.

\*\*\*\*\*

**XI. TOXICOLOGICAL DATA**

**---ACUTE TOXICOLOGY---**

ORAL TOXICITY (RATS): LD50: > 5 g/kg Slightly toxic (estimated) ---  
 Based on testing of similar products and/or the components.  
 DERMAL TOXICITY (RABBITS): LD50: > 2 g/kg Slightly toxic (estimated) --  
 -Based on testing of similar products and/or the components.  
 INHALATION TOXICITY (RATS): Not applicable ---Harmful concentrations of  
 mists and/or vapors are unlikely to be encountered through any  
 customary or reasonably foreseeable handling, use, or misuse of  
 this product.  
 EYE IRRITATION (RABBITS): May cause slight irritation. ---Based on  
 testing of similar products and/or the components.  
 SKIN IRRITATION (RABBITS): May cause slight irritation on prolonged or  
 repeated contact. ---Based on testing of similar products and/or  
 the components.

**---SUBCHRONIC TOXICOLOGY (SUMMARY)---**

Severely solvent refined and severely hydrotreated mineral base oils  
 have been tested at Mobil Environmental and Health Sciences  
 Laboratory by dermal application to rats 5 days/week for 90 days at  
 doses significantly higher than those expected during normal  
 industrial exposure. Extensive evaluations including microscopic  
 examination of internal organs and clinical chemistry of body  
 fluids, showed no adverse effects.

**---CHRONIC TOXICOLOGY (SUMMARY)---**

The base oils in this product are severely solvent refined and/or  
 severely hydrotreated. Chronic mouse skin painting studies of  
 similar oils showed no evidence of carcinogenic effects.

**---OTHER TOXICOLOGY DATA---**

Studies have shown that mice developed skin cancer after repeated  
 application of used gasoline engine oil to the skin for the lifetime  
 of the animals. No effort was made to wash the oil off between  
 applications. Used oil from diesel engines did not produce this  
 effect. Because of the effects observed in the laboratory tests,  
 service station workers, engine mechanics, and all persons who  
 regularly handle used motor oil should take precautions to minimize  
 contact with the oil. Good personal hygiene practices, including  
 washing any skin contact areas and removing oil soaked clothing,  
 should be followed.

\*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
-----	<-->	<----->
CONTAINS ONE OR MORE OF THE FOLLOWING	> 90.00	
BASE OILS:		
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		64742-54-7
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC		64742-65-0
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED		64742-62-7
LUBRICATING OILS (PETROLEUM), C>25 HYDROTREATED BRIGHT STOCK-BASED		72623-83-7
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED LIGHT PARAFFINIC		64742-56-9
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC		64742-53-6
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC		64742-52-5
DISTILLATES (PETROLEUM), SOLVENT- REFINED HEAVY PARAFFINIC		64741-88-4

MAY CONTAIN ONE OR MORE OF THE FOLLOWING < 10.00

ADDITIVE COMPONENTS:

POLYOLEFIN AMIDE ALKENEAMINE	PMN	86-903
BORONATED SUBSTITUTED SUCCINIMIDE	NJT	800962-5016P
CALCIUM SULFONATE OVERBASED	NJT	800962-5010P
SUBSTITUTED SUCCINIMIDE	NJT	800962-5009P
BUTENE, HOMOPOLYMER		9003-29-6

\*\*\*\*\* APPENDIX \*\*\*\*\*

FOR MOBIL USE ONLY: (FILL NO: MTN745C110) HCN: , MHC: 1\* 1\* NA 1\* -1\*,  
MPPEC: A, PPEC: A, US90-221 APPROVE 07/24/90

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265



**MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN**

REVISED: 07/17/90

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*

MOBIL SUPER HP 20W-50

SUPPLIER:

MOBIL OIL CORP.

CHEMICAL NAMES AND SYNONYMS:

PET. HYDROCARBONS AND ADDITIVES

USE OR DESCRIPTION:

AUTO ENGINE LUBRICANT

HEALTH EMERGENCY TELEPHONE:

(609) 737-4411

TRANSPORT EMERGENCY TELEPHONE:

(800) 424-9300 (CHEMTREC)

PRODUCT TECHNICAL INFORMATION:

(800) 662-4525

\*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: ASTM 5.5 LIQUID

VISCOSITY AT 100 F, SUS: 784.3

VISCOSITY AT 210 F, SUS: 92.2

FLASH POINT F(C): > 415(213) (ASTM D-92)

MELTING POINT F(C): NA

BOILING POINT F(C): > 600(316)

RELATIVE DENSITY, 15/4 C: 0.89

VAPOR PRESSURE-MM HG 20C: < .1

ODOR: MILD

AT 40 C, CS: 151.4

AT 100 C, CS: 18.0

POUR POINT F(C): -15(-26)

PH: NA

SOLUBILITY IN WATER: NEGLIGIBLE

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES  
FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

\*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

NONE

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

\*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
THRESHOLD LIMIT VALUE: 5.00 MG/M3 SUGGESTED FOR OIL MIST  
EFFECTS OF OVEREXPOSURE: SLIGHT EYE IRRITATION. SLIGHT SKIN  
IRRITATION.

\*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: FLUSH WITH WATER.

SKIN CONTACT: WASH CONTACT AREAS WITH SOAP AND WATER.

INHALATION: NOT EXPECTED TO BE A PROBLEM.

INGESTION: NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF GREATER THAN 1/2  
LITER(PINT) INGESTED, IMMEDIATELY GIVE 1 TO 2 GLASSES OF WATER AND  
CALL A PHYSICIAN, HOSPITAL EMERGENCY ROOM OR POISON CONTROL CENTER  
FOR ASSISTANCE. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH  
TO AN UNCONSCIOUS PERSON.

## \*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): &gt; 415(213) (ASTM D-92)

FLAMMABLE LIMITS. LEL: .6 UEL: 7.0

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES: WATER OR FOAM MAY CAUSE FROTHING.

USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURE. FOR FIRES IN ENCLOSED

AREAS, FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS OR DRINKING WATER SUPPLY.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

NFPA HAZARD ID: HEALTH: 0, FLAMMABILITY: 1, REACTIVITY: 0

## \*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (THERMAL, LIGHT, ETC.): STABLE

CONDITIONS TO AVOID: EXTREME HEAT

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

## \*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

WASTE MANAGEMENT: PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE OR DISPOSAL BY SUPERVISED INCINERATION. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT ANY GOVERNMENT APPROVED WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

## \*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: NORMAL INDUSTRIAL EYE PROTECTION PRACTICES SHOULD BE EMPLOYED.

SKIN PROTECTION: NO SPECIAL EQUIPMENT REQUIRED. HOWEVER, GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION: NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

VENTILATION: NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.

## \*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

NO SPECIAL PRECAUTIONS REQUIRED.

## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): LD50: > 5 G/KG SLIGHTLY TOXIC (ESTIMATED) ---  
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.  
DERMAL TOXICITY (RABBITS): LD50: > 2 G/KG SLIGHTLY TOXIC (ESTIMATED) ---  
BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.  
INHALATION TOXICITY (RATS): NOT APPLICABLE ---HARMFUL CONCENTRATIONS OF  
MISTS AND/OR VAPORS ARE UNLIKELY TO BE ENCOUNTERED THROUGH ANY  
CUSTOMARY OR REASONABLY FORESEEABLE HANDLING, USE, OR MISUSE OF  
THIS PRODUCT.  
EYE IRRITATION (RABBITS): MAY CAUSE SLIGHT IRRITATION. ---BASED ON  
TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.  
SKIN IRRITATION (RABBITS): MAY CAUSE SLIGHT IRRITATION ON PROLONGED OR  
REPEATED CONTACT. ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR  
THE COMPONENTS.

## ---SUBCHRONIC TOXICOLOGY (SUMMARY)---

SEVERELY SOLVENT REFINED AND SEVERELY HYDROTREATED MINERAL BASE OILS  
HAVE BEEN TESTED AT MOBIL ENVIRONMENTAL AND HEALTH SCIENCES  
LABORATORY BY DERMAL APPLICATION TO RATS 5 DAYS/WEEK FOR 90 DAYS AT  
DOSES SIGNIFICANTLY HIGHER THAN THOSE EXPECTED DURING NORMAL  
INDUSTRIAL EXPOSURE. EXTENSIVE EVALUATIONS INCLUDING MICROSCOPIC  
EXAMINATION OF INTERNAL ORGANS AND CLINICAL CHEMISTRY OF BODY  
FLUIDS, SHOWED NO ADVERSE EFFECTS.

## ---CHRONIC TOXICOLOGY (SUMMARY)---

THE BASE OILS IN THIS PRODUCT ARE SEVERELY SOLVENT REFINED AND/OR  
SEVERELY HYDROTREATED. TWO YEAR MOUSE SKIN PAINTING STUDIES OF  
SIMILAR OILS SHOWED NO EVIDENCE OF CARCINOGENIC EFFECTS.

## ---OTHER TOXICOLOGY DATA---

STUDIES HAVE SHOWN THAT MICE DEVELOPED SKIN CANCER AFTER REPEATED  
APPLICATION OF USED GASOLINE ENGINE OIL TO THE SKIN FOR THE LIFETIME  
OF THE ANIMALS. NO EFFORT WAS MADE TO WASH THE OIL OFF BETWEEN  
APPLICATIONS. USED OIL FROM DIESEL ENGINES DID NOT PRODUCE THIS  
EFFECT. BECAUSE OF THE EFFECTS OBSERVED IN THE LABORATORY TESTS,  
SERVICE STATION WORKERS, ENGINE MECHANICS, AND ALL PERSONS WHO  
REGULARLY HANDLE USED MOTOR OIL SHOULD TAKE PRECAUTIONS TO MINIMIZE  
CONTACT WITH THE OIL. GOOD PERSONAL HYGIENE PRACTICES, INCLUDING  
WASHING ANY SKIN CONTACT AREAS AND REMOVING OIL SOAKED CLOTHING,  
SHOULD BE FOLLOWED.

\*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*  
 GOVERNMENTAL INVENTORY STATUS: ALL COMPONENTS REGISTERED IN ACCORDANCE  
 WITH TSCA.

D.O.T. SHIPPING NAME: NOT APPLICABLE

D.O.T. HAZARD CLASS: NOT APPLICABLE

US OSHA HAZARD COMMUNICATION STANDARD: PRODUCT ASSESSED IN ACCORDANCE  
 WITH OSHA 29 CFR 1910.1200 AND DETERMINED NOT TO BE HAZARDOUS.

RCRA INFORMATION: THE UNUSED PRODUCT, IN OUR OPINION, IS NOT  
 SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR,  
 PART 261D); DOES NOT EXHIBIT THE HAZARDOUS CHARACTERISTICS OF  
 IGNITABILITY, CORROSIVITY, OR REACTIVITY, AND IS NOT FORMULATED  
 WITH THE METALS CITED IN THE EP TOXICITY TEST. HOWEVER, USED  
 PRODUCT MAY BE REGULATED.

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III:  
 THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (302) REPORTABLE HAZARD CATEGORIES: NONE

THIS PRODUCT CONTAINS THE FOLLOWING SARA (313) TOXIC RELEASE CHEMICALS:

ZINC DIALKYL DITHIOPHOSPHATE 68457-79-4 1.04%

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
COPPER (ELEMENTAL ANALYSIS) (0.012%)	7440-50-8	15
ZINC (ELEMENTAL ANALYSIS) (0.12%)	7440-66-6	15

--- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
 6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,  
 11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
 16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
<----->	<-->	<----->
CONTAINS ONE OR MORE OF THE FOLLOWING	> 80.00	
BASE OILS:		
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		64742-54-7
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC		64742-65-0
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED		64742-62-7
LUBRICATING OILS (PETROLEUM), C>25 HYDROTREATED BRIGHT STOCK-BASED		72623-83-7
DISTILLATES (PETROLEUM), SOLVENT- REFINED HEAVY PARAFFINIC		64741-88-4

MAY CONTAIN ONE OR MORE OF THE FOLLOWING &lt; 20.00

## ADDITIVE COMPONENTS:

BORATED ALKYL AMIDES		
AMINES, POLYETHYLENEPOLY-, REACTION PRODUCTS WITH SUCCINIC ANHYDRIDE POLYISOBUTENYL DERIVS.		84605-20-9
2-PROPENOIC ACID, 2-METHYL-, EICOSYL ESTER, POLYMER WITH 1-ETHENYL-2- PYRROLIDINONE, HEXADECYL 2-METHYL- 2-PROPENOATE, ISODECYL 2-METHYL- 2-PROPENOATE, METHYL 2-METHYL- 2-PROPENOATE AND OCTADECYL 2- METHYL-2-PROPENOATE		68171-46-0
SUBSTITUTED SUCCINIMIDE	NJT	800962-5009P
PHOSPHORODITHOIC ACID, O,O-DI-C1-14	1.08	68649-42-3
ALKYL ESTERS, ZINC SALTS		
BENZENSULFONIC ACID, MONO-C15-30- BRANCHED ALKYL AND DI-C11-13 BRANCHED AND LINEAR ALKYL DERIVS., CALCIUM SALTS OVERBASED		71486-79-8

## \*\*\*\*\* APPENDIX \*\*\*\*\*

FOR MOBIL USE ONLY: (FILL NO: MTN707BE\*007) MCN: , MHC: 1\* 1\* NA 1\*  
1\*, MPPEC: A, PPEC: A, US89-783 APPROVE 07/17/90

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265

173 25 1991

## MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED:11/16/90

### \*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\* MOBIL MULTI-PURPOSE ATF

SUPPLIER:	HEALTH EMERGENCY TELEPHONE:
MOBIL OIL CORP.	(609) 737-4411
CHEMICAL NAMES AND SYNONYMS:	TRANSPORT EMERGENCY TELEPHONE:
PET. HYDROCARBONS AND ADDITIVES	(800) 424-9300 (CHEMTREC)
USE OR DESCRIPTION:	PRODUCT TECHNICAL INFORMATION:
AUTOMATIC TRANSMISSION FLUID	(800) 662-4525

### \*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: Red Liquid	ODOR: Mild	PH: NA
VISCOSITY AT 100 F, SUS: 190.8	AT 40 C, CS: 37.6	
VISCOSITY AT 210 F, SUS: 51.3	AT 100 C, CS: 7.5	
FLASH POINT F(C): > 350(177) (ASTM D-92)		
MELTING POINT F(C): NA	POUR POINT F(C): -40(-40)	
BOILING POINT F(C): > 600(316)		
RELATIVE DENSITY, 15/4 C: 0.831	SOLUBILITY IN WATER: Negligible	
VAPOR PRESSURE-mm Hg 20C: < .1		

NA=Not Applicable NE=Not Established D=Decomposes  
FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

### \*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

None

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*=Suggested-TLV, M=Mobil, O=OSHA, S=Supplier  
NOTE: Limits shown for guidance only. Follow applicable regulations.

### \*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
THRESHOLD LIMIT VALUE: 5.00 mg/m3 Suggested for Oil Mist  
EFFECTS OF OVEREXPOSURE: Slight eye irritation. Slight skin irritation.

### \*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: Flush with water.  
SKIN CONTACT: Wash contact areas with soap and water.  
INHALATION: Not expected to be a problem.  
INGESTION: Not expected to be a problem. However, if greater than 1/2 liter(pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. Do not induce vomiting or give anything by mouth to an unconscious person.

## \*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): &gt; 350(177) (ASTM D-92)

FLAMMABLE LIMITS. LEL: .6 UEL: 7.0

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing.

Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use self-contained breathing apparatus.

Prevent runoff from fire control or dilution from entering streams or drinking water supply.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

NFPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0

## \*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (Thermal, Light, etc.): Stable

CONDITIONS TO AVOID: Extreme heat.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

## \*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

WASTE MANAGEMENT: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the resource conservation and recovery act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

## \*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: Normal industrial eye protection practices should be employed.

SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.

RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.

VENTILATION: No special requirements under ordinary conditions of use and with adequate ventilation.

## \*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

No special precautions required.



## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): LD50: > 5 g/kg Slightly toxic (estimated) ---

Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): LD50: > 2 g/kg Slightly toxic (estimated) --

-Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Not applicable ---Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.

EYE IRRITATION (RABBITS): Caused slight irritation to rabbits. Eye irritation scores: 4.7 at 24 hours, 2.3 at 48 hours, 1.7 at 72 hours

SKIN IRRITATION (RABBITS): Slightly irritating to rabbits. PRIMARY IRRITATION SCORE: .8/8

OTHER ACUTE TOXICITY DATA: \*\*\*DOT skin corrosivity (4 hours): Negative \*\*\*

## ---SUBCHRONIC TOXICOLOGY (SUMMARY)---

Severely solvent refined and severely hydrotreated mineral base oils have been tested at Mobil Environmental and Health Sciences Laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

## ---CHRONIC TOXICOLOGY (SUMMARY)---

The base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of similar oils showed no evidence of carcinogenic effects.

\*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*  
GOVERNMENTAL INVENTORY STATUS: All components registered in accordance with TSCA.

## DOT:

Shipping Name: Not applicable  
Hazard Class: Not applicable

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D); does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity, and is not formulated with the contaminants listed in the Toxicity Characteristic (TC) Rule as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (302) REPORTABLE HAZARD CATEGORIES: None

This product contains no chemicals reportable under SARA (313) toxic release program.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
*** NO REPORTABLE INGREDIENTS ***		

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z,	2 = ACGIH,	3 = IARC,	4 = NTP,	5 = NCI,
6 = EPA CARC,	7 = NFPA 49,	8 = NFPA 325M,	9 = DOT HMT,	10 = CA RTK,
11 = IL RTK,	12 = MA RTK,	13 = MN RTK,	14 = NJ RTK,	15 = MI 293,
16 = FL RTK,	17 = PA RTK,	18 = CA P65.		

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
CONTAINS ONE OR MORE OF THE FOLLOWING	> 85.00	

## BASE OILS:

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC		64742-65-0
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		64742-54-7
DISTILLATES (PETROLEUM), SOLVENT-REFINED HEAVY PARAFFINIC		64741-88-4
DISTILLATES (PETROLEUM), SOLVENT-REFINED LIGHT NAPHTHENIC		64741-97-5

BENZENE, METHYL-	0.09	
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## MAY CONTAIN ONE OR MORE OF THE FOLLOWING

## ADDITIVE COMPONENTS:

BORATED ALKYL AMIDES	< 4.00	NJT 3375770004-05019P
AMINES, POLYETHYLENEPOLY-, REACTION PRODUCTS WITH SUCCINIC ANHYDRIDE POLYISOBUTENYL DERIVS.	< 2.00	84605-20-9
2,5-FURANDIONE, POLYMER WITH ETHENYLBENZENE, C12-28-ALKYL ESTERS	< 2.00	68910-21-4
ALKYL ACRYLATE POLYMERS	< 2.00	NJT 3375770004-05021P

## \*\*\*\*\* APPENDIX \*\*\*\*\*

FOR MOBIL USE ONLY: (FILL NO: RL1342ARA001) MCN: , MHC: 1\* 1\* NA 1 1, MPPEC: A, PPEC: A, US88-159 APPROVE 11/16/90

## \*\*\*\*\*

INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.

## \*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWES ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265

## MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED:12/16/91

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*  
MOBILUBE HD 80W-90

SUPPLIER: 24-HOUR EMERGENCY (CALL COLLECT):  
MOBIL OIL CORP. (609) 737-4411  
CHEMICAL NAMES AND SYNONYMS: CHEMTREC:  
PET. HYDROCARBONS AND ADDITIVES (800) 424-9300  
USE OR DESCRIPTION: PRODUCT AND MSDS INFORMATION:  
AUTOMOTIVE GEAR LUBRICANT (800) 662-4525

## \*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: Brown Viscous Liquid ODOR: Mild PH: NA  
VISCOSITY AT 100 F, SUS: 690.0 AT 40 C, CS: 132.0  
VISCOSITY AT 210 F, SUS: 76.0 AT 100 C, CS: 14.0  
FLASH POINT F(C): > 330(166) (ASTM D-92)  
MELTING POINT F(C): NA POUR POINT F(C): -15(-26)  
BOILING POINT F(C): > 600(316)  
RELATIVE DENSITY, 15/4 C: 0.9 SOLUBILITY IN WATER: Negligible  
VAPOR PRESSURE-mm Hg 20C: < .1

NA=Not Applicable NE=Not Established D=Decomposes  
FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

## \*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

None

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*=Suggested-TLV, M=Mobil, O=OSHA, S=Supplier  
NOTE: Limits shown for guidance only. Follow applicable regulations.

## \*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
THRESHOLD LIMIT VALUE: 5.00 mg/m3 Suggested for Oil Mist  
EFFECTS OF OVEREXPOSURE: Slight eye irritation. Slight skin  
irritation.

## \*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: Flush thoroughly with water. If irritation persists, call  
a physician.

SKIN CONTACT: Wash contact areas with soap and water.

INHALATION: Remove from further exposure. If respiratory irritation,  
dizziness, nausea, or unconsciousness occurs, seek immediate  
medical assistance and call a physician. If breathing has stopped,  
use mouth to mouth resuscitation.

INGESTION: Not expected to be a problem. However, if greater than 1/2  
liter(pint) ingested, immediately give 1 to 2 glasses of water and  
call a physician, hospital emergency room or poison control center  
for assistance. Do not induce vomiting or give anything by mouth  
to an unconscious person.

\*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): > 330(166) (ASTM D-92)

FLAMMABLE LIMITS. LEL: .6% UEL: 7.0%

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing.

Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use self-contained breathing apparatus. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

NFPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0

\*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (Thermal, Light, etc.): Stable

CONDITIONS TO AVOID: Extreme heat.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

\*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

WASTE MANAGEMENT: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

\*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: Normal industrial eye protection practices should be employed.

SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.

RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.

VENTILATION: Use in well ventilated area.

\*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

No special precautions required.

## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): Slightly toxic ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): Slightly toxic ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Not established

EYE IRRITATION (RABBITS): May cause slight irritation. ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): May cause slight irritation on prolonged or repeated contact. ---Based on testing of similar products and/or the components.

## ---SUBCHRONIC TOXICOLOGY (SUMMARY)---

Severely solvent refined and severely hydrotreated mineral base oils have been tested at Mobil Environmental and Health Sciences Laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

## ---CHRONIC TOXICOLOGY (SUMMARY)---

The base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of similar oils showed no evidence of carcinogenic effects.

## \*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*

GOVERNMENTAL INVENTORY STATUS: All components registered in accordance with TSCA and EINECS.

## DOT:

Shipping Name: Not applicable

Hazard Class: Not applicable

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D); does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity, and is not formulated with the contaminants listed in the Toxicity Characteristic (TC) Rule as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312 - FORMERLY 302) REPORTABLE HAZARD CATEGORIES: None

This product contains no chemicals reportable under SARA (313) toxic release program.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
PSEUDOCUMENE	95-63-6	12

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
 6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,  
 11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
 16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
CONTAINS ONE OR MORE OF THE FOLLOWING	> 90.00	
BASE OILS:		
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED		64742-62-7
LUBRICATING OILS (PETROLEUM), C>25 HYDROTREATED BRIGHT STOCK-BASED		72623-83-7
RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED		64742-01-4
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		64742-54-7
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC		64742-65-0

MAY CONTAIN ONE OR MORE OF THE FOLLOWING

## ADDITIVE COMPONENTS:

GEAR OIL ADDITIVE PACKAGE	< 7.00 NJT	003066009-5086P
SULFURIZED OLEFINS	< 3.00 NJT	0000800962-05004P
BORATED SUCCINIMIDE	< 2.00 NJT	003066009-5108P
ALKYLATED PHOSPHORODITHOIC ACID ESTERS	< 2.00 NJT	0000800962-05024P
POLYALKYL METHACRYLATE	< 2.00	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC	0.22	64742-52-5
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC	0.22	64742-53-6

\*\*\*\*\* APPENDIX \*\*\*\*\*  
PRECAUTIONARY EEC LABEL TEXT:

\* - EEC labeling not required.

FOR MOBIL USE ONLY: MCN: , MHC: 1\* 1\* NE 1\* 1\*, MPPEC: A, PPEC: A,  
 US90-876 APPROVE 09/20/91 REQ: US - MARKETING

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265



MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED:11/12/91

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*

MOBILUBE HD 85W-140

SUPPLIER: MOBIL OIL CORP. 24-HOUR EMERGENCY (CALL COLLECT): (609) 737-4411  
 CHEMICAL NAMES AND SYNONYMS: CHEMTREC: (800) 424-9300  
 PET. HYDROCARBONS AND ADDITIVES  
 USE OR DESCRIPTION: PRODUCT AND MSDS INFORMATION: (800) 662-4525  
 AUTOMOTIVE GEAR LUBRICANT

\*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: Brown Liquid ODOR: Mild PH: NA  
 VISCOSITY AT 100 F, SUS: 1713.0 AT 40 C, CS: 323.0  
 VISCOSITY AT 210 F, SUS: 126.6 AT 100 C, CS: 25.6  
 FLASH POINT F(C): > 355(179) (ASTM D-92)  
 MELTING POINT F(C): NA POUR POINT F(C): 10(-12)  
 BOILING POINT F(C): > 600(316)  
 RELATIVE DENSITY, 15/4 C: 0.9 SOLUBILITY IN WATER: Negligible  
 VAPOR PRESSURE-mm Hg 20C: < .1

NA=Not Applicable NE=Not Established D=Decomposes  
 FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

\*\*\*\*\* III. POTENTIALLY HAZARDOUS INGREDIENTS \*\*\*\*\*

None

SEE SECTIONS XII AND XIII FOR REGULATORY AND FURTHER COMPOSITIONAL DATA.

SOURCES: A=ACGIH-TLV, A\*=Suggested-TLV, M=Mobil, O=OSHA, S=Supplier  
 NOTE: Limits shown for guidance only. Follow applicable regulations.

\*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
 THRESHOLD LIMIT VALUE: 5.00 mg/m3 Suggested for Oil Mist  
 EFFECTS OF OVEREXPOSURE: Slight eye irritation. Slight skin irritation.

\*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FO. PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: Flush thoroughly with water. If irritation persists, call a physician.  
 SKIN CONTACT: Wash contact areas with soap and water.  
 INHALATION: Not expected to be a problem.  
 INGESTION: Not expected to be a problem. However, if greater than 1/2 liter(pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. Do not induce vomiting or give anything by mouth to an unconscious person.

## \*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): > 355(179) (ASTM D-92)

FLAMMABLE LIMITS. LEL: .6% UEL: 7.0%

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing.

Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. For fires in enclosed areas, firefighters must use self-contained breathing apparatus.

Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

NFPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0

## \*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (Thermal, Light, etc.): Stable

CONDITIONS TO AVOID: Extreme heat.

INCOMPATIBILITY (Materials to Avoid): Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

## \*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

WASTE MANAGEMENT: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

## \*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: Normal industrial eye protection practices should be employed.

SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.

RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.

VENTILATION: No special requirements under ordinary conditions of use and with adequate ventilation.

## \*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

No special precautions required.

## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): Slightly toxic ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): Slightly toxic ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Not applicable ---Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.

EYE IRRITATION (RABBITS): May cause slight irritation. ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): May cause slight irritation on prolonged or repeated contact. ---Based on testing of similar products and/or the components.

## ---SUBCHRONIC TOXICOLOGY (SUMMARY)---

Severely solvent refined and severely hydrotreated mineral base oils have been tested at Mobil Environmental and Health Sciences Laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

## ---CHRONIC TOXICOLOGY (SUMMARY)---

The base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of similar oils showed no evidence of carcinogenic effects.

## \*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*

GOVERNMENTAL INVENTORY STATUS: All components registered in accordance with TSCA and EINECS.

## DOT:

Shipping Name: Not applicable  
Hazard Class: Not applicable

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D); does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity, and is not formulated with the contaminants listed in the Toxicity Characteristic (TC) Rule as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312 - FORMERLY 302) REPORTABLE HAZARD CATEGORIES: None

This product contains no chemicals reportable under SARA (313) toxic release program.

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

## CHEMICAL NAME

## CAS NUMBER

## LIST CITATIONS

\*\*\* NO REPORTABLE INGREDIENTS \*\*\*

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325H, 9 = DOT HMT, 10 = CA RTK,  
11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

## \*\*\*\*\* XIII. INGREDIENTS \*\*\*\*\*

INGREDIENT DESCRIPTION	PERCENT	CAS NUMBER
<----->	<-->	<----->
CONTAINS ONE OR MORE OF THE FOLLOWING	> 90.00	
BASE OILS:		
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED		64742-62-7
LUBRICATING OILS (PETROLEUM), C>25 HYDROTREATED BRIGHT STOCK-BASED		72623-83-7
RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED		64742-01-4
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC		64742-54-7
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC		64742-65-0

MAY CONTAIN ONE OR MORE OF THE FOLLOWING  
ADDITIVE COMPONENTS:

GEAR OIL ADDITIVE PACKAGE	< 7.00 NJT	003066009-5086P
SULFURIZED OLEFINS	< 3.00 NJT	0000800962-05004P
BORATED SUCCINIMIDE	< 2.00 NJT	003066009-5108P
ALKYLATED PHOSPHORODITHOIC ACID ESTERS	< 2.00 NJT	0000800962-05024P
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC	0.22	64742-52-5
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC	0.22	64742-53-6

\*\*\*\*\* APPENDIX \*\*\*\*\*  
PRECAUTIONARY EEC LABEL TEXT:

\* - EEC labeling not required.

FOR MOBIL USE ONLY: MCN: , MHC: 1\* 1\* NA 1\* 1\*, MPPEC: A, PPEC: A,  
US91-409 APPROVE 09/20/91 REQ: US - MARKETING

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT  
WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR  
PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT  
ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL  
WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE  
USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A  
RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING  
LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING  
PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLONS ROAD, FAIRFAX, VA 22037 (800) 227-0707 X3265

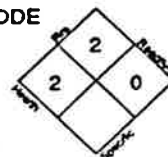
## Any questions, please call:

First Brands Corporation  
83 Wooster Heights Road  
Building 301  
Danbury, CT 06813-1911

Telephone: (203) 731-2300

EMERGENCY TELEPHONE  
(24 Hours)CHEMTREC  
(800) 424-9300  
483-7616 in District of Columbia

## NFPA HAZARD CODE

4 = Extreme  
3 = High  
2 = Moderate  
1 = Slight  
0 = Insignificant**I. IDENTIFICATION**

**PRODUCT NAME** STP<sup>®</sup> Fuel Injector and Carburetor Cleaner

**TYPE** Gasoline Additive

**STOCK** ST2080, ST2088, ST2089, ST2080P, ST2080P3, ST2080CAN

**FORMULA** 12613-98, 13305-25, 13375-55A, 13375-55B

**II. PHYSICAL DATA**

**BOILING POINT, 760 mm Hg** 325°F - 550°F

**FREEZING POINT** Not Determined - Low

**DENSITY (at 68°F)** 6.4-7.0 lbs/gal

**VAPOR DENSITY (Air = 1)** Not determined

**VAPOR PRESSURE (at 100°F)** Not determined

**VOLATILES BY VOLUME** 95%

**SOLUBILITY IN WATER, by Wgt.** Below 0.1%

**EVAPORATION RATE (Butyl Acetate = 1)** Not determined

**APPEARANCE AND ODOR** Light amber liquid with hydrocarbon odor

**VISCOSITY (at 100°C)** <5 Cst

**pH** Not applicable

# MATERIAL SAFETY TA SHEET

BASF Corporation Chemicals Division  
100 Cherry Hill Road, Parsippany, New Jersey 07054, (201) 316-3000

**BASF**

PRODUCT NUMBER: 547278 Zerex Antifreeze

## SECTION I - Registered Trademark

TRADE NAME: Zerex Antifreeze

CHEMICAL NAME: Inhibited Ethylene Glycol

SYNONYMS: Permanent Antifreeze,  
Engine Coolant

FORMULA: Mixture

CHEMICAL FAMILY: Glycols

MOL. WGT.: N/A

## SECTION II - INGREDIENTS

COMPONENT

CAS NO.

%

PEL/TLV - SOURCE

Zerex Antifreeze

100

Not established

Contains:

Ethylene glycol

Phosphates

Proprietary additives

Water

Diethylene Glycol

107-21-1

~94

50 ppm C ACGIH, OSHA Final

7758-11-4

< 2

Not established

N/A

< 4

Not established

7732-18-5

111-48-6

A Title III Sect. 313: Listed.

## SECTION III - PHYSICAL DATA

BOILING/MELTING POINT @760 mm Hg: 330°F/ N/A

pH: 9.0-11.0

VAPOR PRESSURE mm Hg @20 C: 18

SPECIFIC GRAVITY OR BULK DENSITY: 1.135

SOLUBILITY IN WATER: Infinite

APPEARANCE: Green Dyed Liquid

ODOR: Glycol

INTENSITY: Faint

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

ASH POINT (TEST METHOD): 250°F

C.O.C.

AUTOIGNITION TEMP: 775°F

FLAMMABILITY LIMITS IN AIR (% BY VOL)

LOWER: N/A

UPPER: N/A

EXTINGUISHING  
MEDIUM

Use water fog, alcohol foam, CO2 or dry chemical  
extinguishing media. NFPA: 1/1/0

SPECIAL  
REFIGHTING  
PROCEDURES

Firefighters should be equipped with self-contained  
breathing apparatus and turnout gear. Avoid breathing  
vapors or fumes of heated or burning product.

UNUSUAL FIRE  
EXPLOSION  
HAZARDS

Vapors from heated (above flash point) product may travel to  
a source of ignition and flash back.

## EMERGENCY TELEPHONE NUMBER

CHEMTREC 800-424-9300

201-316-3000

THIS NUMBER IS AVAILABLE DAYS, NIGHTS, WEEKENDS, AND HOLIDAYS

PRODUCT NUMBER: 547278 Zerex Antifreeze

SECTION VIII - ENVIRONMENTAL DATA

ENVIRONMENTAL TOXICITY DATA:

Fish Toxicity: LC50 = 1400 mg/l (Bluegill, 96-hour) (Rat, 14-day) (Mussel, 14-day) (Daphnia, 48-hour) (Frog, 14-day) (Bird, 14-day) (Insect, 14-day) (Plant, 14-day) (Microorganism, 14-day)

SPILLS AND LEAK PROCEDURES:

Spills should be contained, solidified, and placed in suitable containers for disposal. This material is not regulated under RCRA or CERCLA ("Superfund"). Clean up quickly as spills are a slipping hazard.

HAZARDOUS SUBSTANCE SUPERFUND:

No RQ (lbs):

WASTE DISPOSAL METHOD:

Incinerate or bury in a licensed facility. Do not discharge into waterways. Discharge to sewer systems with prior approvals is acceptable.

HAZARDOUS WASTE 40CFR261:

No HAZARDOUS WASTE NUMBER:

CONTAINER DISPOSAL:

Dispose of in licensed facility. Recommend crushing or other means to prevent unauthorized reuse.

SECTION IX - SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101-102)

None

HAZARDOUS SUBSTANCE (49CFR CERCLA LIST)

No

REPORTABLE QUANTITY (RQ)

None

D.O.T. HAZARD CLASSIFICATION (CFR172.101-102)

PRIMARY None

SECONDARY N/A

D.O.T. LABELS REQUIRED (49CFR172.101-102)

None

D.O.T. PLACARDS REQUIRED (CFR172.504)

None

POISON CONSTITUENT (49CFR172.203(k))

N/A

BILL OF LADING DESCRIPTION Antifreeze Preparations, (Ethylene Glycol Base)

Proprietary

NO. 332

UN/NA CODE None

DATE PREPARED: 3 / 29 / 88

UPDATED: 2 / 20 / 80

WHILE BASF CORPORATION BELIEVES THE DATA SET FORTH HEREIN ARE ACCURATE AS OF THE DATE HEREOF, BASF CORPORATION MAKES NO WARRANTY WITH RESPECT THERETO AND EXPRESSLY DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. SUCH DATA ARE OFFERED SOLELY FOR YOUR CONSIDERATION, INVESTIGATION, AND VERIFICATION.



# MATERIAL SAFETY DATA SHEET

BASF Corporation Chemicals Division  
100 Cherry Hill Road, Parsippany, New Jersey 07054 (201) 316-3000

**BASF**

PRODUCT NUMBER: 548732 ZEREX BRAKE FLUID - 6 PACK

## SECTION I

\*Registered Trademark

TRADE NAME: ZEREX\* Brake Fluid - 6 Pack

CHEMICAL NAME: N/A

SYNTHESIS: N/A

FORMULA: N/A

PHYSICAL FAMILY: Glycols, glycol ethers

MOL WT.: N/A

## SECTION II - INGREDIENTS

COMPONENT	CAS NO.	%	PEL/TLV - SOURCE
Brake Fluid - 6 Pack		100	Not established
Contains: ethylene Glycol	111-46-6		Not established

II Sect. 313: Not listed.

## SECTION III - PHYSICAL DATA

BOILING POINT @760 mm Hg: 485 F/ N/A	PH: N/A
PRESSURE mm Hg @20 C: Very low	
WEIGHT OR BULK DENSITY: 1.021	
SOLUBILITY IN WATER: Soluble	
Appearance: Clear Liquid	
ODOR: Polyether	INTENSITY: Mild

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

TEST METHOD: 298 F (CQC)	AUTOIGNITION TEMP: N/A
LIMITS IN AIR (% BY VOL)	LOWER: N/A UPPER: N/A
Use water fog, foam or dry chemical extinguishing media.	
Good firefighting practice dictates the use of self-contained breathing apparatus and turn out gear.	
N/A	

## EMERGENCY TELEPHONE NUMBER

1-800-424-9300  
201-316-3000  
THIS NUMBER IS AVAILABLE DAYS, NIGHTS, WEEKENDS AND HOLIDAYS

PRODUCT NUMBER: 548732 ZEREX BRAKE FLUID - 6 PACK

## SECTION VIII - ENVIRONMENTAL DATA

### ENVIRONMENTAL TOXICITY DATA:

None available.

### SPILLS AND LEAK PROCEDURES:

Spills should be contained, solidified, and placed in suitable containers for disposal. This material is not regulated under RCRA or CERCLA ("Superfund").

### HAZARDOUS SUBSTANCE SUPERFUND:

No

RQ (lbs):

### WASTE DISPOSAL METHOD:

Incinerate or bury in a licensed facility.  
Do not discharge into waterways or sewer systems without proper authority.

### HAZARDOUS WASTE 40CFR261:

No

HAZARDOUS WASTE NUMBER:

### CONTAINER DISPOSAL:

Dispose of in licensed facility.  
Recommend crushing or other means to prevent unauthorized reuse.

## SECTION IX - SHIPPING DATA

### PROPER SHIPPING NAME (49CFR172.101-102)

None

### HAZARDOUS SUBSTANCE (49CFR CERCLA LIST)

No

REPORTABLE QUANTITY (RQ) N/A

### HAZARD CLASSIFICATION (CFR172.101-102)

IMMEDIATE  
None

SECONDARY  
None

### D.O.T. LABELS REQUIRED (49CFR172.101-102)

None

### D.O.T. PLACARDS REQUIRED (CFR172.504)

None

### POISON CONSTITUENT (49CFR172.203(K))

None

### DESCRIPTION OF LADING DESCRIPTION

Antifreeze Preparations, Proprietary, Ethylene Glycol Base.

NO. 332

UN/NA CODEN/A

PREPARED: 9 / 5 / 90

UPDATED: 9 / 5 / 90

WHILE BASF CORPORATION BELIEVES THE DATA SET FORTH HEREIN ARE ACCURATE AS OF THE DATE HEREOF, BASF CORPORATION MAKES NO WARRANTY WITH RESPECT THERETO AND EXPRESSLY DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. SUCH DATA ARE OFFERED SOLELY FOR YOUR CONSIDERATION, INVESTIGATION, AND VERIFICATION.

Brake parts cleaner  
spray

# MATERIAL SAFETY DATA SHEET

APPROVED BY U S LABOR DEPT, ESSENTIALLY SIMILAR TO FORM OSHA 174

DUCT IDENTITY: 5-A SOLVENT 1401-1405-1420-1455-1520

## I. SUPPLIER

DELTA DISTRIBUTORS, INC.  
11344 PLANO RD  
DALLAS, TX 75243  
PHONE: 214-341-0510  
CHEMTREC PHONE: 1-800-424-9300

BERRYMAN PRODUCTS INC.  
3800 E. RANDOL MILL RD.  
ARLINGTON, TX 76011

## II. HAZARDOUS INGREDIENTS

### Section 313 Supplier Notification

This product contains the indicated (1) toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372.

MATERIAL	CAS #	PEL (OSHA)	TLV (ACGIH)	SARA TITLE III WT. % (REG. SECTION)
1,1,1 Trichloroethane	71-55-6	350 ppm	350 ppm	100 (311,312,313,RCRA)
	CAS #	CEILING	PEAK (OSHA)	
		None Known	None Known	
		No ACGIH STEL values given		
LOWEST KNOWN LD50 (ORAL)	71-55-6	750 mg/kg (Dogs)		
LOWEST KNOWN LC50 (VAPORS)	71-55-6	14000 ppm (Rats)		

HAZARD RATING  
HEALTH (NFPA): 2 HEALTH (HMIS): 2 FLAMMABILITY: 0 REACTIVITY: 1

(THIS PRODUCT MEETS REQUIREMENTS OF L A RULE 66 & SIMILAR REGULATIONS)

SARA SECTION 313 HAZARDS: Acute Health

OT SHIPPING NAME: Compound Cleaning, Liquid (NA1993)  
DOT DRUM LABEL: None

## III. PHYSICAL DATA

BOILING RANGE :	72 79 86°C / 162 174 187°F
GRAVITY @ 60°F :	1.320
SPECIFIC GRAVITY (Water=1) :	10.996
POUNDS/GALLON :	95.0
VAPOR PRESSURE (mm of Hg) @ 20 :	4.6
VAPOR DENSITY (air=1) :	Negligible
WATER ABSORPTION :	Moderate
ACID ABSORPTION (85% H <sub>2</sub> SO <sub>4</sub> ) :	1.9
DRY TIME (Ether=1) :	100.0
% VOLATILE BY VOL :	Liquid, Water-White
APPEARANCE :	Chlorinated
ODOR :	
SOLVENCY PARAMETERS:	
HKB (Hydrogen Bonding) :	19.2
PKB (Polarity) :	40.8
DKB (Dispersion) :	40.0
REFRACTIVE INDEX :	1.438

DELTA DISTRIBUTORS, INC.  
A SOCO COMPANY

DALLAS, TEXAS 75243

11344 PLANO RD.

Rcvd.

9-19-89

## IV. FIRE &amp; EXPLOSION HAZARDS

LOWER FLAMMABLE LIMIT IN AIR (% by vol): Not Applicable

FLASH POINT (TEST METHOD): Not Applicable

FLAMMABILITY CLASSIFICATION: Non-Combustible

UNUSUAL : Keep container tightly closed. Isolate from  
EXPLOSION : oxidizers, heat, & open flame.  
AND FIRE : Closed containers may explode if exposed to extreme heat.  
PROCEDURES: Applying to hot surfaces requires special precautions.

## V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 350 ppm

PREVENTION : Use only with adequate ventilation.  
OF OVER- : Avoid breathing of vapor or spray mist.  
EXPOSURE : Do not get in eyes, on skin or clothing.

ORGANIC EFFECTS: EYE & SKIN CONTACT: Primary irritation to skin, defatting, dermatitis.  
OF ACUTE : Primary irritation to eyes, redness, tearing, blurred vision.  
OVER- : SWALLOWING: Swallowing can cause abdominal irritation, nausea, vomiting and diarrhea.  
EXPOSURE :

ORGANIC EFFECTS: Concentrated vapor in confined areas may be fatal.  
OF CHRONIC : EYE & SKIN CONTACT: Liquid can cause eye irritation.  
OVER- : Wash thoroughly after handling.  
EXPOSURE :

CANCER HAZARD : This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH,  
: as of this date, greater or equal to 0.1%.

CONDITIONS : Persons with severe skin, liver or kidney problems should avoid use.  
AGGRAVATED :

EMERGENCY & : In case of contact with skin, Wash thoroughly with soap & water;  
FIRST AID : For eyes, immediately flush with plenty of water for  
PROCEDURES: 15 minutes & CALL A PHYSICIAN. Remove & wash contaminated  
: clothing before reuse. (Discard contaminated shoes.)  
: After high vapor exposure, remove to fresh air. If breathing is difficult  
: give oxygen. If breathing has stopped give artificial respiration.  
: CALL A PHYSICIAN immediately!  
: If swallowed, CALL A PHYSICIAN IMMEDIATELY!  
: Never give anything by mouth to an unconscious person.  
: PHYSICIAN: Give oxygen until recovery. Do not give patient  
: sympathomimetic amines such as epinephrine, which can cause arrhythmias.

## VI. REACTIVITY DATA

STABILITY : Stable

CONDITIONS TO AVOID: Isolate from oxidizers, heat, &amp; open flame.

MATERIALS TO AVOID : Isolate from strong oxidizers such as permanganates, chromates &amp; peroxides.

HAZARDOUS : Carbon Monoxide, Carbon Dioxide,  
DECOMPOSITION: Hydrogen Chloride, Phosgene from heating.  
PRODUCTS :

## VII. SAFE HANDLING &amp; USE PRECAUTIONS

SPILL OR LEAK : Stop spill at source. Dike area & contain. Pump spilled liquid & put contaminated soil  
PROCEDURES : in DOT approved containers for disposal. Label immediately.  
: Clean up remainder with absorbent materials.

WASTE DISPOSAL : Dispose of waste by legal methods complying with local, state & Federal regulations.  
METHOD : If questions exist, contact the appropriate agencies.

OTHER : Do not store above 49°C/120°F.  
PRECAUTIONS :  
: Do not drink alcohol shortly before, during or after use.

## VIII. CONTROL MEASURES

RESPIRATORY PROTECTION: Ventilate to keep air below 175 ppm. If over TLV, in accordance with 29 CFR 1910.134,  
(SPECIFY TYPE) : Use NIOSH approved positive-pressure self-contained breathing apparatus.  
: Consult Safety Equipment Supplier. Use explosion-proof equipment.

VENTILATION : LOCAL EXHAUST : Necessary MECHANICAL (GENERAL) : Acceptable  
: SPECIAL : None OTHER : None

PROTECTIVE : Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.  
CLOTHING: Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

## NOTICE

DELTA DISTRIBUTORS, INC. disclaims all expressed or implied warranties of merchantability or fitness for a particular purpose, with respect to the product or information provided herein.

All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.  
DATE : 09/89

DELTA DISTRIBUTORS, INC.  
11344 PLANO RD  
DALLAS, TX 75243  
PHONE: 214-341-0510

5-A SOLVENT  
CONTAINS: 1,1,1 TRICHLOROETHANE

### WARNING!

CONCENTRATED VAPOR IN CONFINED AREAS MAY BE FATAL  
EYE & SKIN CONTACT: PRIMARY IRRITATION TO SKIN, DEFATTING, DERMATITIS  
PRIMARY IRRITATION TO EYES, REDNESS, TEARING, BLURRED VISION  
WASH THOROUGHLY AFTER HANDLING  
SWALLOWING: SWALLOWING CAN CAUSE ABDOMINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA  
PERSONS WITH SEVERE SKIN, LIVER OR KIDNEY PROBLEMS SHOULD AVOID USE

Use only with adequate ventilation.  
Avoid breathing of vapor or spray mist.  
Do not get in eyes, on skin or clothing.  
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.  
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.  
Drinking alcohol shortly before, during or after use can cause unwanted effects. Contact with hot surfaces can produce toxic gases.  
Keep container tightly closed & upright when not in use to prevent leakage.  
DISPOSAL: Recycle or dispose of observing local, state & Federal health, safety & pollution laws. If spilled, mop up & dispose of.  
FIRST AID: In case of contact with skin, Wash thoroughly with soap & water.  
For eyes, immediately flush with plenty of water for 15 minutes & CALL A PHYSICIAN. Remove & wash contaminated clothing before reuse. (Discard contaminated shoes.)  
After high vapor exposure, remove to fresh air. If breathing is difficult give oxygen. If breathing has stopped give artificial respiration.  
CALL A PHYSICIAN immediately!  
If swallowed, CALL A PHYSICIAN IMMEDIATELY!  
Never give anything by mouth to an unconscious person.  
PHYSICIAN: Give oxygen until recovery. Do not give patient sympathomimetic amines such as epinephrine, which can cause arrythmias.  
Consult MSDS for further information.

FOR INDUSTRY USE ONLY

KEEP OUT OF THE REACH OF CHILDREN

DATE: 09/89

DOT SHIPPING NAME: Compound Cleaning, Liquid (NA1993)  
DOT DRUM LABEL: None

Legal responsibility is assumed only for the fact that all studies reported here & opinions are those of qualified experts. Buyer assumes all risk & liability. He accepts & uses this material on these conditions.

### ATTENTION!

THIS CONTAINER HAZARDOUS WHEN EMPTY OR PARTIALLY EMPTY. SINCE CONTAINERS RETAIN PRODUCT VAPOR OR LIQUID RESIDUES, ALL HAZARD PRECAUTIONS MUST BE OBSERVED. RESIDUAL VAPORS MAY EXPLODE ON IGNITION. DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.

HAZARD RATING  
HEALTH (NFPA): 2  
HEALTH (HMIS): 2  
FLAMMABILITY: 0  
REACTIVITY: 1

# MATERIAL SAFETY DATA SHEET

APPROVED BY U S LABOR DEPT. ESSENTIALLY SIMILAR TO FORM OSHA 174

PRODUCT IDENTITY:

BERRYMAN 1A BLEND

## I. SUPPLIER

DELTA DISTRIBUTORS, INC.  
11344 PLANO RD  
DALLAS, TX 75243  
PHONE: 214-341-0510  
CHEMTREC PHONE: 1-800-424-9300

BERRYMAN PRODUCTS INC.  
3800 E. RANDOL MILL RD  
ARLINGTON, TX 76011

## II. HAZARDOUS INGREDIENTS

### Section 313 Supplier Notification

This product contains the indicated (\*) toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372.

MATERIAL	CAS #	PEL (OSHA)	TLV (ACGIH)	SARA TITLE III WT. % (REG. SECTION)
*Toluene	108-88-3	100 ppm	100 ppm	25 (311, 312, 313, RCRA)
*Acetone	67-64-1	750 ppm	750 ppm	22 (311, 312, 313, RCRA)
*Methanol	67-56-1	200 ppm	200 ppm	14 (311, 312, 313, RCRA)
*2-Butoxyethanol	111-76-2	25 ppm	25 ppm	14 (313)
*Methyl Ethyl Ketone	78-93-3	200 ppm	200 ppm	10 (311, 312, 313, RCRA)
Isopropanol	67-63-0	400 ppm	400 ppm	Not Applicable
Light Aliphatic Solvent Naphtha	*64742-89-8	400 ppm	300 ppm	Not Applicable
	CAS #	CEILING	STEL (OSHA & ACGIH)	
Toluene	108-88-3	300 ppm	150 ppm	
Acetone	67-64-1	None Known	1000 ppm	
Methanol	67-56-1	None Known	250 ppm	
Methyl Ethyl Ketone	78-93-3	None Known	300 ppm	
LOWEST KNOWN LD50 (ORAL)	111-76-2	320 mg/kg (Rabbits)		
LOWEST KNOWN LC50 (VAPORS)	111-76-2	700 ppm (Mice)		
LOWEST KNOWN LD50 (SKIN)	111-76-2	440 mg/kg (Rabbits)		

HAZARD RATING  
HEALTH (NFPA): 2 HEALTH (HMIS): 3 FLAMMABILITY: 3 REACTIVITY: 0

SARA SECTION 313 HAZARDS: Acute Health, Chronic Health, Fire

DOT SHIPPING NAME: Paint Related Material (NA1263)  
DOT DRUM LABEL: Flammable Liquid

## III. PHYSICAL DATA

BOILING RANGE :	57 89 172°C / 135 193 342°F
GRAVITY @ 60°F :	
API :	40.6
SPECIFIC GRAVITY (Water=1) :	0.822
POUNDS/GALLON :	6.547
VAPOR PRESSURE (mm of Hg) @ 20 :	72.7
VAPOR DENSITY (air=1) :	2.6
WATER ABSORPTION :	Appreciable
ACID ABSORPTION (85% H <sub>2</sub> SO <sub>4</sub> ) :	Appreciable
DRY TIME (Ether=1) :	14.8
% VOLATILE BY VOL :	100.0
APPEARANCE :	Liquid, Water-White
ODOR :	Ketone
SOLVENCY PARAMETERS:	
HKB (Hydrogen Bonding) :	30.7
PKB (Polarity) :	37.5
DKB (Dispersion) :	31.5
REFRACTIVE INDEX :	1.403



## IV. FIRE &amp; EXPLOSION HAZARDS

LOWER FLAMMABLE LIMIT IN AIR (% by vol): 2.5

ASH POINT (TEST METHOD): -16°C / 2°F (TCC)

FLAMMABILITY CLASSIFICATION: class I B

EXTINGUISHING MEDIA : NFPA Class B extinguishers (CO<sub>2</sub> or foam)  
for class I B liquid fires.

EXTINGUISHING MEDIA : NFPA Class B extinguishers (CO<sub>2</sub> or foam)  
for class I B liquid fires.

SPECIAL FIRE FIGHTING PROCEDURES : Water spray may be ineffective on fire but can protect fire fighters & cool closed containers.  
: Use fog nozzles if water is used. Do not enter confined fire-space without full  
: bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots).  
: Use NIOSH approved positive-pressure self-contained breathing apparatus.

UNUSUAL EXPLOSION AND FIRE PROCEDURES : EXTREMELY FLAMMABLE!! Keep container tightly closed. Isolate from  
oxidizers, heat, sparks, electric equipment & open flame.  
Closed containers may explode if exposed to extreme heat.  
Applying to hot surfaces requires special precautions.  
Empty container very hazardous! Continue all label precautions!

## V. HEALTH EFFECT DATA

THRESHOLD LIMIT VALUE: 125 ppm (Evaporated Blend)

PREVENTION OF OVER-EXPOSURE : Use only with adequate ventilation.  
: Avoid breathing of vapor or spray mist.  
: Do not get in eyes, on skin or clothing.

ORGANIC EFFECTS OF ACUTE OVER-EXPOSURE : INHALING: Anesthetic. Irritates respiratory tract.  
: Can cause serious nervous system depression.  
: Can cause damage to kidneys, blood, nerves, liver & lungs.  
: Repeated exposure over TLV can cause blindness.  
: EYE & SKIN CONTACT: Primary irritation to skin, defatting, dermatitis.  
: Primary irritation to eyes, redness, tearing; blurred vision.  
: Absorption thru skin increases exposure & may be harmful.  
: SWALLOWING: Can be fatal or cause blindness if swallowed.  
: cannot be made non-poisonous.  
: Swallowing can cause abdominal irritation, nausea, vomiting and diarrhea.

ORGANIC EFFECTS OF CHRONIC OVER-EXPOSURE : Vapor harmful. Breathing vapor can cause irritation.  
: Can cause damage to kidneys, blood, nerves, liver & lungs.  
: Repeated exposure over TLV can cause blindness.  
: EYE & SKIN CONTACT: Liquid can cause eye irritation.  
: Wash thoroughly after handling.  
: Absorption thru skin may be harmful.  
: Studies with laboratory animals indicate this product can cause damage to fetus.

CANCER HAZARD : Possible cancer hazard based on tests with laboratory animals using  
: Ethylene Oxide. Overexposure may create cancer risk.

CONDITIONS AGGRAVATED : Persons with severe skin, liver or kidney problems should avoid use.

EMERGENCY & FIRST AID PROCEDURES : In case of contact with skin, wash thoroughly with soap & water  
: For eyes, immediately flush with plenty of water for  
: 15 minutes & CALL A PHYSICIAN. Remove & wash contaminated  
: clothing before reuse. (Discard contaminated shoes.)  
: After high vapor exposure, remove to fresh air. If breathing is difficult  
: give oxygen. If breathing has stopped give artificial respiration.

POISON!!

X CALL A PHYSICIAN X

IF SWALLOWED: Induce vomiting promptly following physician's  
: instructions or by having patient stick finger down throat.  
: After vomiting has been induced, give two teaspoonsful of  
: baking soda in a glass of water.  
: Never give anything by mouth to an unconscious person.  
: Have patient lie down & keep warm. Cover eyes to exclude light.



PRODUCT IDENTITY:

BERRYMAN 1A BLEND

PAGE 3

## VI. REACTIVITY DATA

STABILITY : Stable

CONDITIONS TO AVOID: Isolate from oxidizers, heat, sparks, electric equipment & open flame.

MATERIALS TO AVOID : Isolate from strong oxidizers such as permanganates, chromates & peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS : Carbon Monoxide, Carbon Dioxide from burning.

## VII. SAFE HANDLING & USE PRECAUTIONS

SPILL OR LEAK PROCEDURES : Stop spill at source. Dike area & contain. Pump spilled liquid & put contaminated soil in DOT approved containers for disposal. Label immediately.  
: Clean up remainder with absorbent materials.

WASTE DISPOSAL METHOD : Dispose of waste by legal methods complying with local, state & Federal regulations.  
: If questions exist, contact the appropriate agencies.

OTHER PRECAUTIONS : Vapors may ignite explosively & spread long distances. Prevent vapor buildup.  
: Put out pilot lights & turn off  
: Ignition sources during use & until all vapors are gone.  
: Do not store above 49°C/120°F.  
: Store large amounts in structures made for OSHA Class I B liquids.  
: Avoid free fall of liquid.  
: Ground containers when transferring. Do not flame cut, saw, drill, braze or weld.  
: Empty container very hazardous! Continue all label precautions!

## VIII. CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE) : Ventilate to keep air below 65 ppm. If over TLV, in accordance with 29 CFR 1910.134.  
: Use NIOSH approved positive-pressure self-contained breathing apparatus.  
: Consult Safety Equipment Supplier. Use explosion-proof equipment.

VENTILATION : LOCAL EXHAUST : Necessary  
: SPECIAL : None  
MECHANICAL (GENERAL) : Acceptable  
OTHER : None

PROTECTIVE : Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.  
CLOTHING: Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

## NOTICE

DELTA DISTRIBUTORS, INC. disclaims all expressed or implied warranties of merchantability or fitness for a particular purpose, with respect to the product or information provided herein.

All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

DATE : 10/89

DELTA DISTRIBUTORS, INC.  
11344 PLANO RD  
DALLAS, TX 75243  
PHONE: 214-341-0510

**BERRYMAN-1A BLEND**

CONTAINS: TOLUENE, ACETONE, METHANOL, 2-BUTOXYETHANOL, METHYL ETHYL KETONE, ISOPROPANOL, PETROLEUM NAPHTHA

**DANGER!**

**EXTREMELY FLAMMABLE!!**

**VAPORS CAN CAUSE FLASH FIRE**

**INHALING: ANESTHETIC. IRRITATES RESPIRATORY TRACT**  
**ACUTE OVEREXPOSURE CAN CAUSE SERIOUS NERVOUS SYSTEM DEPRESSION**  
**VAPOR HARMFUL. BREATHING VAPOR CAN CAUSE IRRITATION**  
**ACUTE OVEREXPOSURE CAN CAUSE DAMAGE TO KIDNEYS, BLOOD, NERVES, LIVER & LUNGS**  
**REPEATED EXPOSURE OVER TLV CAN CAUSE BLINDNESS**  
**EYE & SKIN CONTACT: PRIMARY IRRITATION TO SKIN, DEFATTING, DERMATITIS**  
**PRIMARY IRRITATION TO EYES, REDNESS, TEARING, BLURRED VISION**  
**ABSORPTION THRU SKIN INCREASES EXPOSURE & MAY BE HARMFUL**  
**WASH THOROUGHLY AFTER HANDLING**  
**ABSORPTION THRU SKIN MAY BE HARMFUL**  
**STUDIES WITH LABORATORY ANIMALS INDICATE THIS PRODUCT CAN CAUSE DAMAGE TO FETUS**  
**SWALLOWING: CAN BE FATAL OR CAUSE BLINDNESS IF SWALLOWED**  
**CANNOT BE MADE NON-POISONOUS**  
**SWALLOWING CAN CAUSE ABDOMINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA**

**POSSIBLE CANCER HAZARD BASED ON TESTS WITH LABORATORY ANIMALS USING ETHYLENE OXIDE. OVEREXPOSURE MAY CREATE CANCER RISK**  
**PERSONS WITH SEVERE SKIN, LIVER OR KIDNEY PROBLEMS SHOULD AVOID USE**

Isolate from oxidizers, heat, sparks, electric equipment & open flame.

Use only with adequate ventilation.

Avoid breathing of vapor or spray mist.

Do not get in eyes, on skin or clothing.

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.

Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

Vapors may ignite explosively & spread long distances. Prevent vapor buildup.

Put out pilot lights & turn off electric equipment & other

ignition sources during use & until all vapors are gone.

Keep container tightly closed & upright when not in use to prevent leakage.

Empty container very hazardous! Continue all label precautions!

Ground containers when transferring. Do not flame cut, saw, drill, braze or weld.

**DISPOSAL:** Recycle or dispose of observing local, state & Federal health, safety & pollution laws. If spilled, mop up & dispose of.

**FIRST AID:** In case of contact with skin, Wash thoroughly with soap & water

For eyes, immediately flush with plenty of water for

15 minutes & CALL A PHYSICIAN. Remove & wash contaminated

clothing before reuse. (Discard contaminated shoes.)

After high vapor exposure, remove to fresh air. If breathing is difficult

give oxygen. If breathing has stopped give artificial respiration.

**POISON!!**

**CALL A PHYSICIAN**

**IF SWALLOWED:** Induce vomiting promptly following physician's

instructions or by having patient stick finger down throat.

After vomiting has been induced, give two teaspoonsful of

baking soda in a glass of water.

Never give anything by mouth to an unconscious person.

Have patient lie down & keep warm. Cover eyes to exclude light.

Consult MSDS for further information.

**FOR INDUSTRY USE ONLY**

**KEEP OUT OF THE REACH OF CHILDREN**

**DATE: 10/89**

**DOT SHIPPING NAME:** Paint Related Material (NA1263)

**DOT DRUM LABEL:** Flammable Liquid

Legal responsibility is assumed only on the fact that  
all studies reported here & opinions are those of  
qualified experts. Buyer assumes all risk & liability.  
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**ATTENTION!**

**THIS CONTAINER HAZARDOUS WHEN EMPTY OR PARTIALLY EMPTY. SINCE CONTAINERS RETAIN PRODUCT VAPOR OR LIQUID RESIDUES, ALL HAZARD PRECAUTIONS MUST BE OBSERVED. RESIDUAL VAPORS MAY EXPLODE ON IGNITION. DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.**

**HAZARD RATING**  
**HEALTH (HFFA): 2**  
**HEALTH (HMIS): 3**  
**FLAMMABILITY: 3**  
**REACTIVITY: 0**

**RED  
FLAMMABLE  
LABEL**

# 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 <b>Moc Products</b>		EMERGENCY TELEPHONE NO. <b>896-2258</b>
ADDRESS (Number, Street, City, State, and ZIP Code) <b>12306 Montague, Pacoima, Ca. 91331</b>		
CHEMICAL NAME AND SYNONYMS <b>organic mixture</b>		TRADE NAME AND SYNONYMS <b>#1002 PENETRATING OIL</b>
CHEMICAL FAMILY	FORMULA	

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

## SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H <sub>2</sub> O=1)	<b>.710</b>
VAPOR PRESSURE (mm Hg.)	<b>in cans #70 &amp; 50P8IG</b>	PERCENT VOLATILE BY VOLUME (%)	<b>80</b>
VAPOR DENSITY (AIR=1)	<b>greater than 1</b>	EVAPORATION RATE (_____ °3)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	<b>not applicable to spray cans</b>	FLAMMABLE LIMITS	LM	UM
EXTINGUISHING MEDIA	<b>CO<sub>2</sub> dry chemical, foam</b>			
SPECIAL FIRE FIGHTING PROCEDURES				
USUAL FIRE AND EXPLOSION HAZARDS	<b>spray mixed with air will explode if ignited</b>			

**PERMIT VALUE** lowest TLV of all components 500 ppm.

**TOXICITY** Exposure of skin, eye irritation, inhalation of vapor may cause anesthesia, headache, nausea, vomiting, and diarrhea, aspiration into lungs can cause chemical pneumonitis.

**FIRST AID PROCEDURES** For ingestion, do not induce vomiting. call a physician. For contact, flush with plenty of water, remove contact lenses if worn. For inhalation remove to fresh air, give artificial respiration if necessary. If breathing is difficult give oxygen.

## SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
strong oxidizing materials			
DECOMPOSITION PRODUCTS			
DECOMPOSITION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

## SECTION VII - SPILL OR LEAK PROCEDURES

IF TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

is unlikely from spray cans. leaking cans should be placed in plastic bag or open pail until pressure has dissipated.

**DISPOSAL METHOD**

Empty spray cans should not be punctured or incinerated, bury in landfill. liquid should be incinerated or buried in land fill.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

ADDITIONAL PROTECTION (Specify type)			
LOCAL EXHAUST	none	SPECIAL	
MECHANICAL (General)	less than LTV	OTHER	none
WE GLOVES	none	EYE PROTECTION	none
PROTECTIVE EQUIPMENT		none	

## SECTION IX - SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

from sources of ignition. Do not smoke internally. avoid excessive inhalation of spray particles. Do not store above 120 F. Do not incinerate or puncture containers.

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

Signature of Preparer (optional)

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Isobutane Propellant CAS#75-28-5	N/A	800ppm		10
Laygon Insecticide CAS#114-26-1	N/A	0.5mg/M <sup>3</sup>		1
Methylene chloride CAS#75-09-2	500ppm, CL 1000ppm	100ppm		

OSHA 174, Sept. 1985

Section V		Stability Data	
Stability	Stable	X	Conditions to Avoid
	Heat above 130°F		

Stability (Materials to Avoid) None Known

Continuous Decomposition or Byproducts CO, CO<sub>2</sub>, CH<sub>3</sub>NCO, CH<sub>3</sub>NH<sub>2</sub>

Hazardous polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

### Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? ☒ Skin? Ingestion?

Health Hazards (Acute and Chronic) not determined - see appropriate PEL rating on items listed in Section II, but primary routes of entry would be ingestion, inhalation, and contact on all body parts.

Carcinogenicity: None Known NTP? IARC Monographs? OSHA Regulated?

Signs and Symptoms of Exposure Dizziness

Medical Conditions Nasal Irritation

Generally Aggravated by Exposure

Emergency and First Aid Procedures Provide oxygen & consult physician

### Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Use absorbant material and wipe excess with clean rags.

Waste Disposal Method Approved landfill

Precautions to Be Taken in Handling and Storing Store below 130°F.

Other Precautions None

### Section VIII — Control Measures

Respiratory Protection (Specify Type) Not necessary - avoid excess inhalation of fumes.

Ventilation	Local Exhaust	Satisfactory	Special	None
	Mechanical (General)	Not required	Other	None

Protective Gloves Rubber Eye Protection Goggles

Other Protective Clothing or Equipment protect all body parts.

Work/Hygienic Practices Normal.



U.S. Department of Labor  
Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

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

Emergency Telephone Number
800-255-4564
Telephone Number for Information
714/661-2275
Date Prepared
6-16-87
Signature of Preparer (optional)

OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
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1000ppm	Asphyxiant
100ppm	100ppm
200ppm	200ppm

CL-ceiling concentration

Specific Gravity ( $H_2O = 1$ )	Concentrate	1.47
Melting Point		N/A
Evaporation Rate (Butyl Acetate = 1)		14.5

or

Flammable Limits	LEL	UEL
Not Known	N/A	N/A

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# V -- Reactivity Data

Unstable		Conditions to Avoid
Stable	X	

(Materials to Avoid)

None Known

Decomposition or Byproducts HCL, Phosgene

May Occur		Conditions to Avoid
Will Not Occur	X	

## VI -- Health Hazard Data

Entry: Inhalation? X Skin? Ingestion?

Hazards (Acute and Chronic) determined - see appropriate PEL rating on items listed in Section II, but primary mode of entry would be ingestion, inhalation, and contact on all body parts.

Specificity: NTP? IARC Monographs? OSHA Regulated?  
Not Known

Symptoms of Exposure  
Dizziness

Conditions aggravated by Exposure Inhalation may cause nasal irritation.

First Aid Procedures Not known

## VII -- Precautions for Safe Handling and Use

Taken in Case Material Is Released or Spilled Clean with safety solvent.

Disposal Method Approved land fill.

Precautions to Be Taken in Handling and Storing Store between 30-120°F.

Precautions See label precautions.

## VIII -- Control Measures

Protection (Specify Type) Not necessary

Local Exhaust Satisfactory	Special None
Mechanical (General) None	Other None
Neoprene	Eye Protection Glass

Protective Clothing or Equipment To protect body parts

Hygienic Practices Normal hygiene practices







Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Heat above 130°F.
Stability (Materials to Avoid) Unknown			

Continuous Decomposition or Byproducts Halogens, halogen acids, carbonyl halides, phosgene

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI — Health Hazard Data

Routes of Entry:	Inhalation?	Skirt?	Ingestion?
	X		

Health Hazards (Acute and Chronic)  
Not determined - see appropriate PEL rating on items listed in Section II, but primary routes of entry would be ingestion, inhalation, and contact on all body parts.

Carcinogenicity: None Known	NTP?	IARC Monographs?	OSHA Regulated?
-----------------------------	------	------------------	-----------------

Signs and Symptoms of Exposure Nasal irritation

Exacerbating Conditions	Unknown
Chronic Aggravated by Exposure	

First Aid Procedures  
and consult physician. Ingestion: induce vomiting with 2 large glasses of water and touching finger in back of throat.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Allow evaporation.

Disposal Method Approved land fill.

Conditions to Be Taken in Handling and Storing Store below 130°F.

Precautions None

Section VIII — Control Measures

Respiratory Protection (Specify Type) None

Protection	Local Exhaust	Satisfactory	Special	None
	Mechanical (General)	X	Other	None
Protective Gloves	Rubber		Eye Protection	Goggles

Other Protective Clothing or Equipment To protect body parts.

Hygienic Practices Normal hygiene practices.

**DOT HAZARD CLASSIFICATION:**

Identity (Trade Name As Used On Label)  
MISTY ANI & ROACH SPRAY

MSDS Number 424- 2

**CHEM TREC:** 1-800-424-9300

Date Prepared

6/25/90

Prepared By\* 1HJ/STN

1HJ/STN

(404) 386-3083

Emergency Phone Number

(404) 306-3083

NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

[illegible]

NOTICE: THIS PRODUCT MAY CONTAIN ONE OF THE LISTED SARA TITLE III SECTION 313  
CHEMICALS.

57-64-1 Acetone	71-55-6 1,1,1-Trichloroethane	13463-67-7 Titanous Dioxide
50-00-0 Formaldehyde	75-09-2 Methylene chloride	7664-38-7 Peracetic Acid
67-56-1 Methanol	107-21-1 Ethylene glycol*	7761-84-8 Silver nitrate
95-48-7 o-Cresol	114-26-1 Freon <sup>®</sup>	7664-93-9 Sulfuric Acid
94-75-7 1,4-D	100-88-3 Toluene	7600-66-6 Zinc (dust)
72-83-5 Methylcyclopentadiene	127-18-4 Tetrachloroethylene	7647-01-0 Hydrochloric Acid
78-92-2 sec-Butyl alcohol	133-19-7 Nitrotrifluoroacetic Acid	1330-20-7 Xylene (mixture of isomers)
*Possible glycol ethers:		76-15-1 Freon <sup>®</sup> 11

Boiling Point	NA	Specific Gravity (H <sub>2</sub> O = 1) Concentrate Only =	0.850
Vapor Pressure PSIG @ 70°F (Aerosols)	85-100	Vapor Pressure (Non-Aerosols) (mm Hg and Temperature)	NA
Vapor Density (Air = 1)	NE	Evaporation Rate (_____ = 1)	NE
Solubility in Water	None	Water Reactive	No

**Appearance and Odor** Stream spray with chlorinated solvent & petroleum distillate odor.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA				
FLAMMABILITY as per USA FLAME PROJECTION TEST (AEROSOLS) EXTREMELY FLAMMABLE	Auto-Ignition Temperature NE	Flammability Limits in Air % by Volume	LEL NE	UEL NE
Flash Point and Method Used (Non-Aerosols) NA				
Extinguisher Media Foam, dry chemical, carbon dioxide				
Special Fire Fighting Procedures Self contained breathing apparatus				

**Unusual Fire and Explosion Hazards** Do not expose aerosols to temperatures above 130° F or the container may rupture.

## SECTION 4 - REACTIVITY HAZARD DATA

424- 2

Stability	Conditions To Avoid
Stable	Open flame, welding arcs, heat, sparks
Reactivity (Hazard To Avoid)	Plastics, asphalt & vinyl tiles, oxidizers & alkalies
Reactivity (Hazard To Avoid)	Flammable Products CO, $CO_2$ , Hydrogen Chloride, small amounts of chlorine & phosgene
Hazardous Polymerization	Conditions To Avoid
Will Not Occur	None Known

## SECTION 5 - HEALTH HAZARD DATA

Primary Routes of Entry	<input checked="" type="checkbox"/> Inhalation	<input type="checkbox"/> Ingestion	<input type="checkbox"/> Not Hazardous
	<input type="checkbox"/> Skin Absorption	<input type="checkbox"/> Eye	
Health Effects			
Inhalation: Excessive inhalation of vapors can be harmful and may cause nausea, dizziness, headache, emetic effects, respiratory depression, cholinesterase depression.			
Eye Contact: Irritation, burning, contact dermatitis. Temporary corneal injury.			
Skin Contact: Irritation, mild defatting of skin.			
Ingestion: Possible chemical pneumonitis if aspirated into lungs, nausea, vomiting.			
Chronic Effects (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac malformities, central nervous system depression, lung, kidney, liver damage, inhibits cholinesterase.			
Special Conditions: Generally Aggravated by Exposure May aggravate existing eye, skin, or upper respiratory conditions.			

## EMERGENCY FIRST AID PROCEDURES -

Eye Contact	Flush with water for 15 minutes. If irritated, see physician.
Skin Contact	Wash with soap and water. If irritated, see physician.
Inhalation	Remove to fresh air. Resuscitate if necessary. Get medical aid.
Ingestion	DO NOT INDUCE VOMITING. GET PHYSICIAN IMMEDIATELY.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Any Type) If vapor conc. exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.	
Protective Gloves	Eye Protection
Wear if skin is easily irritated	Safety glasses recommended
Ventilation Requirements	Adequate ventilation to keep vapor concentration below TLV.
Other Protective Clothing and Equipment	None
Personal Work Practices	Wash with soap and water before handling food. Remove contaminated clothing.

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

Precautions to be Taken if Material Spilled Or Released	Absorb with suitable medium. Incinerate or landfill according to local, state, or federal regulations. Do not flush to sewer.
Disposal Methods	Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.
Precautions to be Taken in Handling and Storage	Do not puncture or incinerate containers. Do not store at temperatures above 130°F.
Precautions and / or Special Hazards	Avoid food contamination. KEEP OUT OF REACH OF CHILDREN. Remove ignition sources. Avoid breathing vapors.

All the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied.

Material Safety Data Sheet  
to be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

U.S. Department of Labor  
Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072



1. Product Name (as Used on Label and List)  
Belt Dressing

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

Section I

Manufacturer's Name Molok, Inc.	Emergency Telephone Number 800-255-4564
Address (Number, Street, City, State, and ZIP Code) 01 Kansas Ave.	Telephone Number for Information 800-255-4564
Address City, KS 66106	Date Prepared 6-16-87
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identify Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Propellant CAS#74-98-6	1000 ppm	N/A - Asphyxiant		
Ethylene Chloride CAS#75-09-2	500 ppm, CL1000 ppm	100 ppm		

CL - Ceiling Concentration

Section III — Physical/Chemical Characteristics

Boiling Point	104°F	Specific Gravity (H <sub>2</sub> O = 1)	1.21
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	1.45

Solubility in Water  
Not soluble

Appearance and Odor  
Chlorinated solvent odor

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) None (Concentrate)	Flammable Limits N/A	LEL N/A	UEL N/A
-------------------------------------------------	-------------------------	------------	------------

Extinguishing Media

None

Special Fire Fighting Procedures

None

Unstable, Fire and Explosion Hazards  
None

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Contamination with water or heat above 120°F.

Stability (Materials to Avoid) Water  
Hazardous Decomposition or Byproducts CO, CO<sub>2</sub>, HCL & Phosgene

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? X Skin? X Ingestion?

Health Hazards (Acute and Chronic)  
Not determined - see appropriate PEL rating on items listed in Section II, but primary routes of entry would be ingestion, inhalation, and contact on all body parts.

Carcinogenicity: NTP? None Known IARC Monographs? OSHA Regulated?

Signs and Symptoms of Exposure Nasal irritation

Medical Conditions  
Exacerbally Aggravated by Exposure Unknown

Emergency and First Aid Procedures Provide ventilation and oxygen in extreme cases.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken In Case Material Is Released or Spilled Clean with safety solvent.

Safe Disposal Method Approved landfill.

Precautions to Be Taken in Handling and Storing Store below 120°F in dry areas.

Other Precautions None

Section VIII — Control Measures

Respiratory Protection (Specify Type) Generally not necessary

Ventilation	Local Exhaust	Satisfactory	Special	None
	Mechanical (General)	None	Other	None

Gloves Rubber Eye Protection Glass

Other Protective Clothing or Equipment Not required

Other Hygienic Practices Normal hygiene practices.



MOC PRODUCT  
12306 MONTAGUE  
PACOMA, CA 91331  
(818) 896-2258

## EMERGENCY ASSISTANCE

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS  
CALL CHEMTREC (800) 424-9300

## FOR PRODUCT AND SALES INFORMATION

CONTACT MOC PRODUCTS

## PRODUCT IDENTIFICATION

PRODUCT NAME: MOC BRAKE AND CLUTCH CLEANER # 1031  
COMMON NAMES/SYNONYMS:  
AEROTHENE TT: INHIBITED  
1,1,1-TRICHLOROETHANE

HAZARD RATING (NFPA 704)

HEALTH: 2

FIRE: 1

REACTIVITY: 0

SPECIAL: NONE

DATE REVISED: 04/89

HAZARD RATING SCALE:

0 = MINIMAL 3 = SERIOUS  
1 = SLIGHT 4 = SEVERE  
2 = MODERATE

## HAZARDOUS INGREDIENTS

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, PP			HAZARD
			OSHA PEL	ACGIH TLV	OTHER LIMIT	
1,1,1-TRICHLOROETHANE	71-55-6	96.1	350	350	450 (STEL)	OSHA/ACGIH LIST
STABILIZERS, SUCH AS TERT-BUTANOL		BALANCE	100	100	150 (STEL)	FLAMMABLE
1,2-BUTYLENE OXIDE	106-88-7	.5	NONE	NONE	40 (DOW)	FLAMMABLE
DIMETHOXYMETHANE	109-87-5	1.9	1000	1000	NONE	FLAMMABLE

NOTE: ALL POSSIBLE STABILIZERS MAY NOT BE LISTED ABOVE.  
ALL STABILIZERS LISTED MAY NOT BE PRESENT.

## PHYSICAL PROPERTIES

BOILING POINT, DEG F: 165  
MELTING POINT, DEG F: -26 (FREEZING)  
VAPOR PRESSURE, MM HG/20 DEG C: 100  
VAPOR DENSITY (AIR = 1): 4.6  
SPECIFIC GRAVITY (WATER = 1): 1.29  
APPEARANCE AND ODOR: CLEAR,  
COLORLESS LIQUID; MILDLY SWEET ODOR  
WATER SOLUBILITY, %: NIL  
EVAPORATION RATE (BUTYL ACETATE = 1): .1

IF SWALLOWED: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.  
GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

IF SWALLOWED: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION. IF VOMITING OCCURS SPONTANEOUSLY, KEEP VICTIM'S HEAD BELOW HIS HIPS TO PREVENT HIS BREATHING THE VOMITUS INTO HIS LUNGS.

## HEALTH HAZARD INFORMATION

PRIMARY ROUTES OF EXPOSURE: INHALATION, SKIN OR EYE CONTACT.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: MINIMAL EFFECTS EXPECTED AT EXPOSURES BELOW 1,000 PPM. DIZZINESS, DROWSINESS, AND THROAT IRRITATION EXPECTED AS A RESULT OF EXPOSURES ABOVE 1,000 PPM. UNCONSCIOUSNESS AND DEATH POSSIBLE AT EXPOSURES ABOVE 10,000 PPM. BLOOD PRESSURE DEPRESSION, CARDIAC SENSITIZATION, AND VENTRICULAR ARRHYTHMIA CAN RESULT FROM EXPOSURE TO NEAR ANESTHETIC LEVELS.

EYE CONTACT: LIQUID AND VAPORS CAN IRRITATE THE EYES, WITH SLIGHT TEMPORARY CORNEAL INJURY. MAY CAUSE CONJUNCTIVITIS.

SKIN CONTACT: BRIEF CONTACT MAY DRY THE SKIN. PROLONGED OR REPEATED CONTACT MAY IRRITATE THE SKIN, CAUSING DERMATITIS. MAY BE ABSORBED THROUGH THE SKIN, RESULTING IN SYSTEMIC EFFECTS.

SWALLOWED: SWALLOWING THE LIQUID MAY RESULT IN VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, DO NOT ALLOW VOMITUS TO BE BREATHED INTO THE LUNGS AS EVEN A SMALL QUANTITY IN THE LUNGS MAY RESULT IN CHEMICAL PNEUMONITIS AND PULMONARY EDEMA/HEMORRAGE. SINGLE DOSE TOXICITY IS LOW TO MODERATE. CHRONIC EFFECTS OF EXPOSURE: CHRONIC OVEREXPOSURE HAS CAUSED LIVER TOXIC EFFECTS IN EXPERIMENTAL ANIMALS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY THE EXPOSURE: ACUTE AND CHRONIC LIVER DISEASE AND RHYTHM DISORDERS OF THE HEART.

## TOXICITY DATA

ORAL: RAT LD50 = 10.3 G/KG; HUMAN TDLO = 670 MG.KG

DERMAL: RABBIT LD50 = 15 G/KG

INHALATION: MAN TDLO = 350 PPM

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

OTHER DATA: THREE STUDIES HAVE BEEN PERFORMED ON LABORATORY ANIMALS TO EVALUATE THE EFFECTS OF 1,1,1-TRICHLOROETHANE ON REPRODUCTION AND FETAL DEVELOPMENT. TWO OF THE THREE STUDIES INDICATE NO REPRODUCTIVE TOXICITY. THE THIRD STUDY NOTED DELAYS IN NORMAL DEVELOPMENT, BUT THESE DELAYS DID NOT AFFECT LATER LIFE.

1,1,1-TRICHLOROETHANE HAS BEEN SHOWN NOT TO INTERFERE WITH REPRODUCTION. BIRTH DEFECTS ARE UNLIKELY. EXPOSURES HAVING NO EFFECT ON THE MOTHER SHOULD HAVE NO EFFECT ON THE FETUS.



000193-0102 -101V -0918 ) DATE OF ISSUE  
03/12/81 SUPPLIES  
12/16/80

## SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS  
N/A

TRADE NAME & SYNONYMS  
LUSTER-GUARD

CHEMICAL FAMILY  
NONE SOLUTION

FORMULA  
X -- MIXTURE

FACTURE NAME  
MED LABS, DIV. OF NCH CORP.

ADDRESS NUMBER, STREET, CITY, STATE & ZIP CODE  
BOX 181178  
IRVING, TEXAS 75018

PREPARED BY: RICHARD STOLLEY/T.S.CHEM. PRODUCT CODE NUMBER 8818 (HEAVENLY TELEPHONE NUMBER 214-438-1201)

## SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED AS A WHOLE.

CHEMICAL NAME (INGREDIENT) HAZARD TLV PEL CAS#

NO HAZARDOUS INGREDIENTS

PER 29 CFR 1910.1200(d)

## SECTION III - NON-HAZARDOUS INGREDIENTS

NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE SECRET REGISTRY # 409383-8020P

## LUSTER-GUARD

HAZARD) SECTION V - HEALTH HAZARD DATA PAGE: 83

CHRONIC - LONG TERM EXPOSURE

DIRECT CONTACT WITH EYES FOR PROLONGED PERIOD OF TIME MAY CAUSE MARKED IRRITATION

PRIMARY ROUTE OF ENTRY: -- INHALATION -- INGESTION X -- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION:  
TYPICALLY NOT A HAZARD, BUT GET TO FRESH AIR AND TREAT SYMPTOMATICALLY.

EYE CONTACT:  
OBJECT IS TO SEEK MEDICAL ATTENTION IMMEDIATELY. IMMEDIATELY FLUSH WITH PLenty OF WATER FOR AT LEAST 15 MINUTES HOLDING EYELIDS APART TO THOROUGHLY FLUSHING OF THE ENTIRE EYE SURFACE. SEEK MEDICAL ATTENTION IF ANY IRRITATION PERSISTS.

SKIN CONTACT:  
WASH WITH PLENTY OF WATER AND SOAP.

INGESTION:  
LOW ORAL TOXICITY, BUT IF LARGE QUANTITIES HAVE BEEN INGESTED, GIVE TWO GLASSES OF WATER AND INDUCE VOMITING. SEEK MEDICAL ATTENTION.

NOTES TO PHYSICIAN:  
N/A

## SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:

IARC --YES NTP --YES OSHA --YES ACDH --YES OTHER --YES  
X --NO X --NO X --NO X --NO X --NO X --NO

N/A

## SECTION VII - REACTIVITY DATA

STABILITY X --STABLE --UNSTABLE CONDITIONS TO AVOID

N/A

INCOMPATIBILITY (MATERIALS TO AVOID)

N/A

HAZARDOUS DECOMPOSITION PRODUCTS

N/A

BOILING POINT (ATMOSPHERE) 810 SPEC GRAVITY (WATER) 1.010

VAPOR PRESSURE (MM HG) 10 COLOR WHITE

VAPOR DENSITY (AIR) 0.1 ODOR LEMON

PH 9.00% 0.0 CLARITY OPAQUE

PERCENT VOLATILE 00 EVAPORATION RATE 0.10  
BY VOLUME (G) 00 BU AC 1.1

SOLUBILITY IN WATER COMPLETE

VISCOSITY NON-VISCOUS

## SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED) FLAMMABLE (LIMIT) LEL N/A UEL N/A

NON-FLAMMABLE

EXTINGUISHING MEDIA "ALCOHOL" DRY WATER  
X --FOAM X --FOAM X --CO2 X --CHEMICAL X --SPRAY --OTHER

SPECIAL FIRE FIGHTING PROCEDURES

PRODUCT IS NON-FLAMMABLE CHOICE OF EXTINGUISHING MEDIA DEPENDS ON NATURE OF THE FIRE

UNUSUAL FIRE & EXPLOSION HAZARDS

SPRAY EXPOSED CONTAINERS WITH WATER TO PREVENT STEAM GENERATION

WFA HAZARD RATING 0--INSIGNIFICANT; 1--SLIGHT; 2--MODERATE; 3--HIGH; 4--EXTREME  
0 --HEALTH 1 --FLAMMABILITY 0 --REACTIVITY N --SPECIAL

## SECTION V - HEALTH HAZARD DATA

THRESHOLD (LIMIT) VALUE:

NOT ESTABLISHED FOR MIXTURE SEE SECTION II

EFFECTS OF OVEREXPOSURE

ACUTE - SHORT TERM EXPOSURE

DIRECT CONTACT WITH THE EYES MAY CAUSE IRRITATION

## LUSTER-GUARD

CONTAINER) SECTION VII - REACTIVITY DATA PAGE: 84

HAZARDOUS X --NOT MAY CONDITIONS TO AVOID  
X --OCCUR --OCCUR

POLYMERIZATION N/A

## SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IF CASE MATERIAL IS RELEASED OR SPILLED

SMALL SPILL: FLUSH SURFACE WITH LARGE VOLUME OF WATER AND FLUSH DOWN DRAIN

LARGE SPILL: STOP LEAK. CONTAIN SPILL. REMOVE BY DRY VACUUM OR ABSORBENT. ELUO SPILLED MATERIAL IF POSSIBLE. OTHERWISE, PLACE IN CLOSED, LABELED CONTAINER

WASTE DISPOSAL METHOD

DISPOSE OF IN ACCORDANCE WITH STATE, FEDERAL, AND LOCAL REGULATIONS CONCERNING HEALTH POLLUTION

NEUTRALIZING AGENT

N/A

## SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION

GENERAL EXHAUST IS ADEQUATE

RESPIRATORY PROTECTION

N/A

PROTECTIVE GLOVES

N/A

EYE PROTECTION

WEAR PROTECTIVE EYEWEAR IF METHOD OF APPLICATION PRESENTS THE POSSIBILITY OF EYE CONTACT

OTHER PROTECTION

N/A

## SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE

INDOOR HEATED REFRIGERATED OUTDOOR

120 F --MAX 32 F --MIN X --

0000000-000000-100V 1 DATE OF ISSUE 01/22/86 SUPERSEDES 01/01/86

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF

## SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS  
N/A  
TRADE NAME & SYNONYMS  
OWN-START AEROSOL

CHEMICAL FAMILY  
ETHER  
FORMULA  
X -- MIXTURE

MANUFACTURER'S NAME  
CERTIFIED LABS, DIV. OF NCM CORP.

ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)  
BOX 182170  
IRVING, TEXAS 75016

PREPARED BY  
DON PORRAS/ST. CHEMIST  
PRODUCT CODE NUMBER  
8009  
EMERGENCY TELEPHONE NUMBER  
214-438-6164  
EXT 013

## SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME (INGREDIENTS)	MSD D TYPE	TLV	REL	CAS#
DIETHYL ETHER	FLAMMABLE	400PPM	3	1200PM 3 60 29-7

## SECTION III - PHYSICAL DATA

BORING PT. (BAROMETRIC) 84 F	SPEC GRAVITY (20/20) 0.713
VAPOR PRESSURE (MM HG) 80	COLOR COLORLESS
VAPOR DENSITY (AIR=1) 2.94	ODOR ETHER

## OWN-START AEROSOL

CONTINUED SECTION V - HEALTH HAZARD DATA PAGE 03

EYE CONTACT  
IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 10 MINUTES HOLDING EYELIDS APART TO ENSURE FLUSHING OF THE EYE SURFACE  
SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS

SKIN CONTACT  
WASH SKIN WITH PLENTY OF SOAP AND WATER IF IRRITATION PERSISTS  
SEEK MEDICAL ATTENTION

INGESTION  
GIVE LARGE QUANTITIES OF SALT WATER AND INDUCE VOMITING DO NOT MAKE AN UNCONSCIOUS PERSON VOMIT GET MEDICAL ATTENTION IMMEDIATELY

NOTES TO PHYSICIAN  
N/A

## SECTION VI - TOXICITY INFORMATION

DIETHYL ETHER

EYE-IRN 100PPM 1
SKN-RET 360MG OPEN MILD 1
ORL-MUM LOLO 360MG/8G 1
ORL-RAT LOLO 1700MG/8G 1

## SECTION VII - REACTIVITY DATA

STABILITY	X -- STABLE	--UNSTABLE	CONDITIONS TO AVOID
N/A			

INCOMPATIBILITY (MATERIALS TO AVOID)  
REACTS VIGOROUSLY WITH ACETYL PEROXIDE AIR, LIQUID AIR, AND BROMOAZIDE

## HAZARDOUS DECOMPOSITION PRODUCTS

NONE

HAZARDOUS	WILL NOT OCCUR	MAY OCCUR	CONDITIONS TO AVOID
X			

## POLYMERIZATION

N/A

## SECTION VIII - SPILL OR LEAK PROCEDURES

## OWN-START AEROSOL

CONTINUED SECTION III - PHYSICAL DATA PAGE - 02

ON P 100%	SEA	CLARITY TRANSPARENT
PERCENT VOLATILE 99	EVAPORATION RATE 4	BU AE + 1.1
BY VOLUME 100		
SOLUBILITY IN WATER	SOLUBLE	
VISCOSITY	NON-VISCIDUS	

## SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL	UEL
-84 F CEC		1.85	62

EXTINGUISHING MEDIA "ALCOHOL" DRY  
X --FOAM X --CO2 X --CHEMICAL X --WATER X --SPRAY --OTHER

SPECIAL FIRE FIGHTING PROCEDURES  
USE WATER IN FINE SPRAY TO COOL UNBROKEN CONTAINERS TO PREVENT BURSTING FROM EXCESSIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND RUBBER PROTECTIVE CLOTHING SHOULD BE WORN

UNUSUAL FIRE & EXPLOSION HAZARDS  
EXTREMELY FLAMMABLE FIRE FIGHTING SHOULD BE DONE FROM UPWIND TO MINIMIZE POSSIBILITY OF EXPOSURE TO THE PRODUCT SMOKE AND FUMES EVACUATE PEOPLE DOWNWIND AS APPROPRIATE

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

NOT ESTABLISHED FOR MIXTURE SEE SECTION II

EFFECTS OF OVEREXPOSURE

ACUTE - SHORT TERM EXPOSURE:  
MILDLY IRRITATING TO EYES MOST, AND TEMPORARY SKIN CONTACT MAY PRODUCE A DRY SCALY THICKENED SKIN IRRITATION CAN LEAD TO DIZZINESS WEARINESS NAUSEA AND POSSIBLE UNCONSCIOUSNESS EVEN ASPIRATION

CHRONIC - LONG TERM EXPOSURE

PRIMARY ROUTE OF ENTRY X -- INHALATION -- INGESTION -- ABSORPTION

EMERGENCY &amp; FIRST AID PROCEDURES

INHALATION

GET PERSON OUT OF CONTAMINATED AREA TO FRESH AIR IF BREATHING HAS STOPPED ARTIFICIAL RESPIRATION SHOULD BE STARTED OXYGEN MAY BE ADMINISTERED IF READILY AVAILABLE SEEK MEDICAL ATTENTION IMMEDIATELY

## OWN-START AEROSOL

CONTINUED SECTION VIII - SPILL OR LEAK PROCEDURES PAGE 04

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
OPEN ALL WINDOWS DOORS AND WINDOWS EXHAUST ALL OPEN FLAMES DO NOT OPEN OR CLOSE A SWITCH MOVE UP AND PUT RAGS IN AN OPEN CAN OUT DOORS

WASTE DISPOSAL METHOD  
DISPOSE ACCORDING TO CITY, STATE AND EPA GUIDELINES DO NOT INCINERATE

NEUTRALIZING AGENT  
N/A

## SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION  
THE WORK PLACE SHOULD BE PROVIDED WITH ADEQUATE VENTILATION TO MAINTAIN THE AIR CONCENTRATION BELOW THE TLV

RESPIRATORY PROTECTION  
TYPICAL USE OF THIS PRODUCT DOES NOT REQUIRE SPECIAL RESPIRATORY PROTECTION

PROTECTIVE GLOVES  
RUBBER OR PVA GLOVES SHOULD BE WORN TO MINIMIZE SKIN CONTACT

EYE PROTECTION  
GOGGLES SHOULD BE WORN DEPENDING UPON SEVERITY OF EXPOSURE

OTHER PROTECTION

N/A

## SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
80 F --MAX 32 F --MIN	X		X	

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE  
KEEP AWAY FROM HEAT OR OPEN FLAMES

OTHER PRECAUTIONS  
FOLLOW LABEL DIRECTIONS  
KEEP OUT OF REACH OF CHILDREN

0009527-0101 -105V -0234 DATE OF ISSUE 01/01/83 SUPERSEDES 12/01/83

## SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS  
N/A TRADE NAME & SYNONYMS  
CLEANSEN PLUS

CHEMICAL FAMILY  
AQUEOUS ALCOHOL SOLUTION FORMULA  
X --MIXTURE

MANUFACTURER'S NAME  
CERTIFIED LABS, DIV. OF NCH CORP.

ADDRESS DRUMMER, STREET, CITY, STATE & ZIP CODE  
BOX 152178  
IRVING, TEXAS 75018

PREPARED BY: PRODUCT CODE NUMBER EMERGENCY TELEPHONE NUMBER  
KEVIN LAM/T.S.CHEMIST 0234 214-438-1281

## SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED AS A WHOLE

CHEMICAL NAME (INGREDIENTS)	HAZARD	TLV*	PEL*	CAS#
ISOPROPANOL	FLAMMABLE	600PPM	600PPM	67-63-0

## SECTION III - PHYSICAL DATA

BOILING PT (FAHRENHEIT)	178	SPEC GRAVITY @120°F	0.851
VAPOR PRESSURE (MM HG)	25	COLOR	YELLOW
VAPOR DENSITY (AIR=1)	3	ODOR	LEMON

## CLEANSEN PLUS

CONTINUED SECTION V - HEALTH HAZARD DATA PAGE : 02

TARGET ORGANS CONTACT-EYES SKIN  
INGESTION-CENTRAL NERVOUS SYSTEM, LIVER

PRIMARY ROUTE OF ENTRY: X -- INHALATION -- INGESTION -- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES  
INHALATION  
REMOVE PERSON FROM AREA TO FRESH AIR TREAT SYMPTOMATICALLY SEE A PHYSICIAN IF SYMPTOMS PERSIST

EYE CONTACT  
OBJECT IS TO RINSE EYES IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES HOLDING EYELIDS APART TO ENSURE FLUSHING OF THE ENTIRE EYE SURFACE SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS

SKIN CONTACT  
WASH OFF WITH PLENTY OF WATER, APPLY EMOLLIENT RICH CREAM IF IRRITATION PERSISTS

INGESTION  
IF SWALLOWED, DO NOT INDUCE VOMITING GIVE LARGE QUANTITIES OF WATER IF AVAILABLE, GIVE SEVERAL GLASSES OF CITRUS JUICE NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON SEEK MEDICAL ATTENTION IMMEDIATELY

NOTES TO PHYSICIAN:  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-DERMATITIS, CONDITIONS OF THE LIVER

## SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:

IARC	--YES NTP	--YES OSHA	--YES ACOM	--YES OTHER	--YES
X --NO	X --NO	X --NO	X --NO	X --NO	X --NO

ISOPROPANOL  
EYE-IRRM 20PPM 3  
ORAL-IRRM TOXID 1510MG/KG CSM 3  
ORAL-HMAN TOXID 850MG/KG 3  
ORAL-IRRM TOXID 600 PPM 3

## SECTION VII - REACTIVITY DATA

STABILITY X --STABLE --UNSTABLE CONDITIONS TO AVOID

KEEP AWAY FROM HEAT, SPARKS, HOT SURFACES AND OPEN FLAMES

INCOMPATIBILITY (MATERIALS TO AVOID)  
STRONG OXIDIZERS, SUCH AS SODIUM OR CALCIUM HYPOCHLORITES, LIQUID HYDROGEN PEROXIDE

PH # 100%	5	CLARITY	TRANSPARENT
PERCENT VOLATILE BY VOLUME PU	99	EVAPORATION RATE	16 BU AC = 11
SOLUBILITY IN WATER	COMPLETE		
VISCOSITY	NON-VISCOUS		

## SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED)	IS P	ICE	% BY VOLUME IN AIR	FLAMMABLE LIMITS	LD	EL	120	UEL
EXTINGUISHING MEDIA	"ALCOHOL"							
X --FOAM	X --FOAM	X --CO2	X --CHEMICAL					--OTHER

SPECIAL FIRE FIGHTING PROCEDURES  
WEAR NIOSH/MSHA APPROVED RESPIRATOR WHEN FIGHTING FIRES IN CONFINED AREAS TO PREVENT EXPOSURE TO ACID SMOKE AND HAZARDOUS DECOMPOSITION PRODUCTS COOL EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT RUPTURING

## UNUSUAL FIRE &amp; EXPLOSION HAZARDS

WARNING COMBUSTIBLE KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME

MSHA HAZARD RATING 0--INSIGNIFICANT 1--SLIGHT 2--MODERATE 3--HIGH 4--EXTREME  
1 --HEALTH 2 --FLAMMABILITY 0 --REACTIVITY M --SPECIAL

## SECTION V - HEALTH HAZARD DATA

## THRESHOLD LIMIT VALUE

NOT ESTABLISHED FOR MIXTURE SEE SECTION II

## EFFECTS OF OVEREXPOSURE

ACUTE EXPOSURE TO LOW CONCENTRATIONS OF THE MIXTURE MAY RESULT IN MILD IRRITATION TO EYE OR SKIN TISSUE

CHRONIC - LONG TERM EXPOSURE  
PROLONGED CONTACT CAN CAUSE APPRECIABLE IRRITATION TO EYES, LEADING TO CORNEAL OPACITY IN SEVERE EXPOSURES. INGESTION OR INHALATION OF LARGE QUANTITIES OF THE VAPOR MAY CAUSE FLU-LIKE, HEADACHE, DIZZINESS, MENTAL DEPRESSION, NAUSEA, VOMITING, NARCOSIS, ANESTHESIA, COMA

## CLEANSEN PLUS

CONTINUED SECTION VI - REACTIVITY DATA PAGE : 04

HAZARDOUS DECOMPOSITION PRODUCTS  
GASES OF CARBON AND ACID SMOKE

HAZARDOUS	WILL NOT OCCUR	MAY OCCUR	CONDITIONS TO AVOID
POLYMERIZATION N/A			

## SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
SHALL SPILL TAKE UP WITH ABRASANT MATERIAL & PLACE IN NON-LEAKING CONTAINERS SEALED TIGHT FOR PROPER DISPOSAL LARGE SPILL WARNING FLAMMABLE EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL WEAR APPROPRIATE RESPIRATION & PROTECTIVE CLOTHING SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO CONTAIN SPILL PUMP TO STORAGE VESSEL FLUSH AREA

WASTE DISPOSAL METHOD  
DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS CONCERNING HEALTH POLLUTION USE NON-LEAKING CONTAINERS

NEUTRALIZING AGENT

LARGE AMOUNTS OF WATER

## SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION  
AREAS OF USE WITH ADEQUATE VENTILATION SHOULD BE SUFFICIENT IN USE AS A GLASS CLEANER

RESPIRATORY PROTECTION  
IF EXPOSURE MAY EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEE VII) USE A NIOSH APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE USE EITHER A FULL-FACE ATMOSPHERIC-SUPPLYING RESPIRATOR OR AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS

PROTECTIVE GLOVES  
N/A

EYE PROTECTION  
PROTECTIVE EYEWEAR IF METHOD OF USE PRESENTS RISK OF EYE CONTACT

OTHER PROTECTION  
N/A

0005406-0910 -102V - -5820 1 DATE OF ISSUE 84/12/90 SUPERSEDES 0910/90

## SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS  
N/A TRADE NAME & SYNONYMS  
JAGUAR

CHEMICAL FAMILY  
N/A FORMULA  
X -- MIXTURE

MANUFACTURER'S NAME  
CERTIFIED LABS, DIV OF MCH CORP.

ADDRESS NUMBER, STREET, CITY, STATE & ZIP CODE  
BOX 152170  
IRVING, TEXAS 75015

PREPARED BY: PRODUCT CODE NUMBER EMERGENCY TELEPHONE NUMBER  
KELLY SEALER/ T.CHEMIST 5820 214-438-1201

## SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED AS A WHOLE

CHEMICAL NAME (INGREDIENTS)	HAZARD	TLV	PEL	CAS#
D-LIMONENE	EYE IRR	N/A	N/A	68919-57-9
NONYLPHENOLXYPOLYETHOXYETHANOL	EYE IRR	N/A	N/A	24037-38-3

## SECTION IIIA - NON-HAZARDOUS INGREDIENTS

NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE SECRET ACTIVITY # 40363-5216P

## JAGUAR

CONTINUED

## SECTION V - HEALTH HAZARD DATA

PAGE : 02

CHRONIC - LONG TERM EXPOSURE  
DIRECT CONTACT WITH EYES FOR PROLONGED PERIOD OF TIME WILL CAUSE IRRITATION AND REDDING

PRIMARY ROUTE OF ENTRY -- INHALATION -- INGESTION X -- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION:

NOT A HAZARD

EYE CONTACT:

FLUSH EYES WITH PLENTY OF WATER FOR 8-10 MINUTES. SEEK MEDICAL ATTENTION IF ANY IRRITATION PERSISTS.

SKIN CONTACT:

N/A

INGESTION:

IF SWALLOWED, DRINK TWO GLASSES OF WATER. SEE A PHYSICIAN IF DISCOMFORT OCCURS.

NOTES TO PHYSICIAN:

N/A

## SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:

IARC	--YES NTP	--YES OSHA	--YES ACGIH	--YES OTHER	--YES
X --NO	X --NO	X --NO	X --NO	X --NO	X --NO

D-LIMONENE

ORL-RAT LD50 8800MG/KG 1

ORL-RAT LD50 8400MG/KG 1

D-LIMONENE HAS BEEN SHOWN TO BE A DERMAL SENSITIZER AND REPRODUCTIVE AND TERATOGENIC EFFECTS IN SOME STUDIES

NONYLPHENOLXYPOLYETHOXYETHANOL

ORL-RAT LD50 3210MG/KG 2

## SECTION VII - REACTIVITY DATA

STABILITY X --STABLE --UNSTABLE CONDITIONS TO AVOID

N/A

INCOMPATIBILITY (MATERIALS TO AVOID)

N/A

BOILING POINT (MM HG) 338 F. SPEC GRAVITY (WATER) 0.840

VAPOR PRESSURE (MM HG) 61 COLOR WHITE

VAPOR DENSITY (AIR=1) N/A ODOR ORANGE

PH 9.00% 0.0-0.5 CLARITY OPAQUE

PERCENT VOLATILE 50 (EVAPORATION RATE) 0.10

BY VOLUME (L) 0.01 AC = 1.1

SOLUBILITY IN WATER APPRECIABLE

VISCOSITY VISCOUS

## SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED) FLAMMABLE LIMITS N/A LEL N/A UEL

NON-FLAMMABLE

EXTINGUISHING MEDIA "ALCOHOL" X --FOAM X --FOAM X --CO2 X --CHEMICAL X --WATER X --OTHER

SPECIAL FIRE FIGHTING PROCEDURES

PRODUCT IS NON-FLAMMABLE. CHOICE OF ABOVE MEDIA DEPENDS ON THE NATURE OF THE FIRE

## UNUSUAL FIRE &amp; EXPLOSION HAZARDS

N/A

N/A HAZARD RATING 0 (NEGLIGIBLE) 1 (SLIGHT) 2 (MODERATE) 3 (HIGH) 4 (EXTREME)

1 --HEALTH 2 --FLAMMABILITY 3 --REACTIVITY 4 --SPECIAL

## SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

NOT ESTABLISHED FOR MIXTURE SEE SECTION II

EFFECTS OF OVEREXPOSURE

ACUTE - (SHORT TERM EXPOSURE)

DIRECT CONTACT WITH EYES MAY CAUSE IRRITATION

## JAGUAR

CONTINUED

## SECTION VII - REACTIVITY DATA

PAGE 04

HAZARDOUS DECOMPOSITION PRODUCTS

NONE KNOWN

HAZARDOUS	WILL NOT OCCUR	MAY OCCUR	CONDITIONS TO AVOID
X --NO	X --NO	X --NO	X --NO

POLYMERIZATION

N/A

## SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
FLOOD SURFACE WITH PLENTY OF WATER AND FLUSH DOWN DRAIN

WASTE DISPOSAL METHOD

DISPOSE OF IN ACCORDANCE WITH STATE, FEDERAL, AND LOCAL REGULATIONS CONCERNING WASTE POLLUTION

NEUTRALIZING AGENT

N/A

## SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION

N/A

RESPIRATORY PROTECTION

TYPICAL USE OF THIS PRODUCT DOES NOT REQUIRE RESPIRATORY PROTECTION

PROTECTIVE GLOVES

N/A

EYE PROTECTION

TYPICAL USE OF THIS PRODUCT DOES NOT REQUIRE USE OF EYE PROTECTION

OTHER PROTECTION

N/A

## SECTION X - STORAGE AND HANDLING INFORMATION

# MATERIAL SAFETY DATA SHEET

PRODUCT NAME 5-56 (Aerosol) 5005, 5006	# MSDS005004
MANUFACTURED BY: CRC CHEMICALS 5005T, 5006T	Phone (215) 674-4300
5 IS DRIVE, WARMINSTER, PA. 18974	

INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	Other Limits	%
Petroleum Distillate	64742-47-8	NA	NA	200ppm	
Prohibited Paraffinic Oil	NA		For mist 5mg/m <sup>3</sup>	(Est.) 3	53
Isobutane	74-98-6	NA	1000		28
Isobutane	75-28-5	NA		800	
The oil and additives are not hazardous according to OSHA standards.					
Additives are primarily fatty acids and fatty acid esters.					
Contains no chemical listed in Section 313 of SARA Title III					
Isobutane and Isobutane function as propellents.					
Pressure = 45 psig at 70°F.					

PHYSICAL DATA (less propellant)		
Specific Gravity .8167	Vapor Pressure 0.23	% Volatile 70
Boiling Point 380°F (initial)	Evaporation Rate slow 0.01 (Toluene = 1)	
Freezing Point NA	Vapor Density Heavier than air	
Appearance and Odor Amber liquid, pleasant odor.		
Solubility Negligible in water. Dissolves in most organic solvents.		

FLAME AND EXPLOSION DATA		
Flashpoint <20°F	Method COC	Flammable Limits propellant portion
Extinguishing Media CO <sub>2</sub> , Dry chemical foam		LEL 1.8 UEL 9.5
Special Hazards Aerosol containers may explode when heated above 130°F.		
Propellant is considered extremely flammable.		

REACTIVITY AND STABILITY	
Stability Stable	
Hazardous decomposition products CO <sub>2</sub> & Carbon monoxide (Fire)	
Materials to avoid Strong Oxidizing agents.	

PROTECTION INFORMATION	
Precaution Adequate ventilation to maintain oil mist below PEL when sprayed.	
Personal Protection Use NIOSH approved respirators for high mist concentration.	
Resistant to Solvent	Eye & Face Safety glasses
Other Protective Equipment Not normally required for aerosol use.	

## HEALTH HAZARD DATA

Primary Routes of Entry Skin, inhalation

### Signs and Symptoms of Exposure

Acute Overexposure may cause burning and irritation of eyes. Skin contact will cause dryness. Inhalation of mist may cause breathing problems. Vapors may cause headaches and nausea.

Chronic Overexposure Prolonged exposure to skin may cause development of dermatitis.

Medical Conditions Generally Aggravated by Exposure NA

Chemical Listed as Carcinogen  
Central Carcinogen

National Toxicology  
Program

Yes ☐  
No ☒

IARC  
Monographs

Yes ☐  
No ☒

OSHA

Yes ☐  
No ☒

Emergency and First Aid Procedures (If symptoms persist, call a physician).

Inhalation Remove to fresh air. Apply artificial respiration if needed.

Eyes Flush for 15 min. with large amounts of water.

Skin Remove contaminated clothing. Wash exposed skin with soap and water.

Ingestion DO NOT induce vomiting, call a doctor.

### SPILL OR LEAK PROCEDURES

Precautions to be taken in  
Handling and Storage

Store in a cool, dry area.

Steps to be taken in case

materials is released or spilled

Ventilate area, remove sources of ignition, absorb with inert material and place in a closed container.

Waste Disposal Partially used or full aerosols are hazardous waste if discarded. Dispose of in conformance with Federal, State & Local regulations.

### SPECIAL PRECAUTIONS AND USE DIRECTIONS

Aerosol may explode if contents are heated above 130°F. Vapors are heavier than air and will tend to collect in low areas.

PREPARED BY: Allen B. Reed

ORIGINAL DATE OR DATE OF REVISION 1/90

# GAS STATION FACILITY

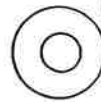
\* □

GAS  
PUMP



UNDER GROUND

10,000 GALLON  
DOUBLE WALL FIBER GLASS



FILL  
CONNECTION

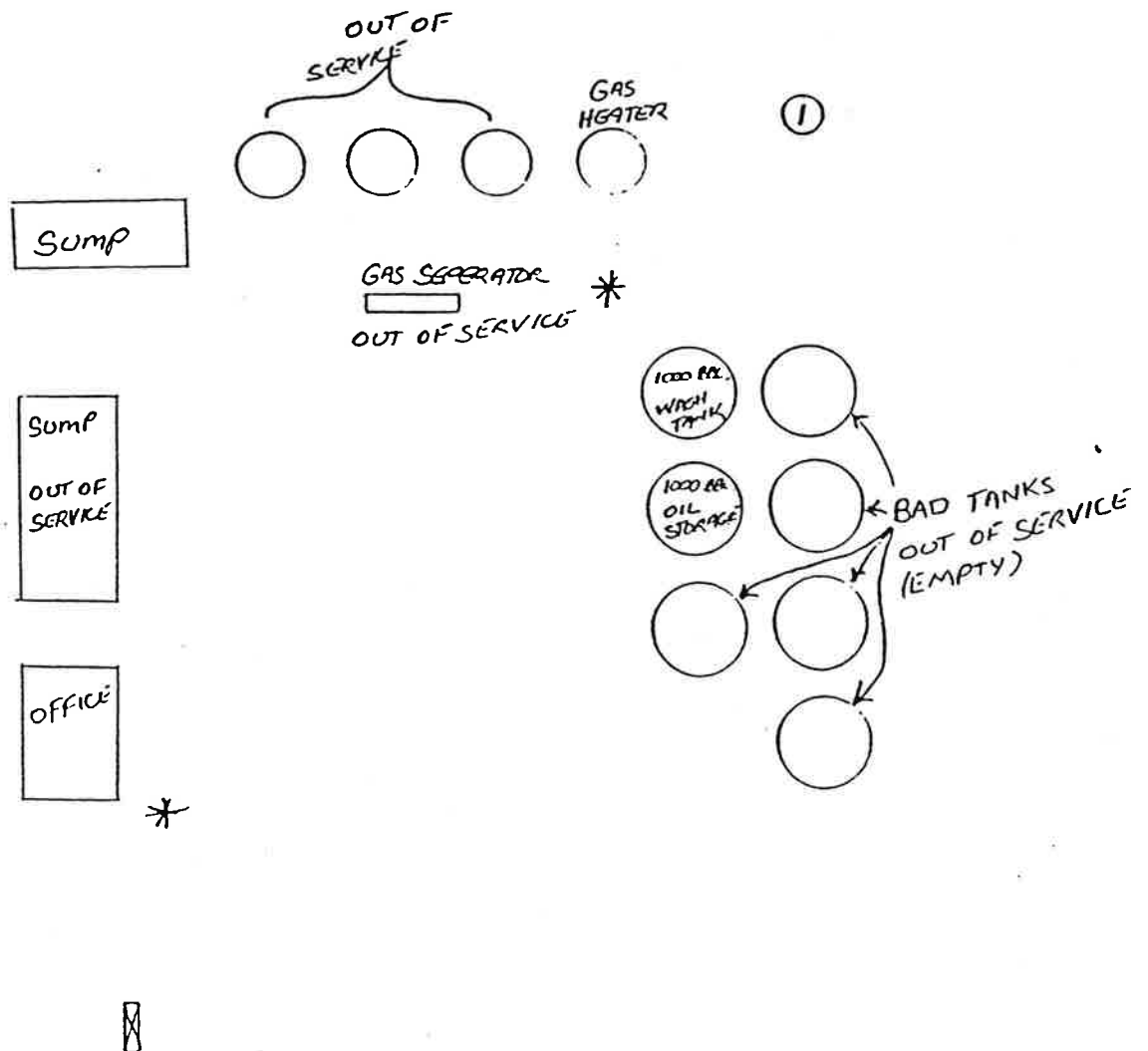
○ = FIRE EXTINGUISHER

\* = ELECTRICAL MAIN

□ = LIQUID DETECTOR



# ARMSTRONG TANK FARM (P.E. LEASE)



① = ALLOTEC 612

\* = FIRE EXTINGUISHERS

☒ = MSDS BOX



## MOBIL OIL CORPORATION MATERIAL SAFETY DATA BULLETIN

REVISED: 03/19/88

\*\*\*\*\* I. PRODUCT IDENTIFICATION \*\*\*\*\*  
MOBIL UNLEADED GASOLINE

## SUPPLIER:

MOBIL OIL CORP.

## CHEMICAL NAMES AND SYNONYMS:

PETROLEUM HYDROCARBONS

## USE OR DESCRIPTION:

MOTOR FUEL

## HEALTH EMERGENCY TELEPHONE:

(212) 883-4411

## TRANSPORT EMERGENCY TELEPHONE:

(800) 424-9300 (CHEMTREC)

## \*\*\*\*\* II. TYPICAL CHEMICAL AND PHYSICAL PROPERTIES \*\*\*\*\*

APPEARANCE: CLEAR LIQUID

ODOR: HYDROCARBON

PH: NA

VISCOSITY AT 100 F, SUS: &lt;30.0

AT 40 C, CS: &lt;1.0

VISCOSITY AT 210 F, SUS: NA

AT 100 C, CS: NA

FLASH POINT F(C): -40(-40) (ASTM D-56)

MELTING POINT F(C): NA

POUR POINT F(C): NA

BOILING POINT F(C): &gt; 80( 27)

RELATIVE DENSITY, 15/4 C: 0.7-0.76

SOLUBILITY IN WATER: NEGLIGIBLE

VAPOR PRESSURE-MM HG 20C: 400.0

NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES  
FOR FURTHER INFORMATION, CONTACT YOUR LOCAL MARKETING OFFICE.

## \*\*\*\*\* III. INGREDIENTS \*\*\*\*\*

	WT PCT (APPROX)	EXPOSURE LIMITS MG/M3	SOURCES PPM (AND NOTES)
HAZARDOUS INGREDIENTS:			
UNLEADED GASOLINE	100	900	300 A

SEE SECTION XII FOR COMPONENT REGULATORY INFORMATION.

SOURCES: A=ACGIH-TLV, A\*=SUGGESTED-TLV, M=MOBIL, O=OSHA, S=SUPPLIER  
NOTE: LIMITS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.

## \*\*\*\*\* IV. HEALTH HAZARD DATA \*\*\*\*\*

--- INCLUDES AGGRAVATED MEDICAL CONDITIONS, IF ESTABLISHED ---  
EFFECTS OF OVEREXPOSURE: GASOLINE VAPORS WHEN ADMINISTERED IN HIGH CONCENTRATIONS OVER A PROLONGED PERIOD OF TIME, CAUSE KIDNEY DAMAGE AND KIDNEY CANCER IN RATS AND LIVER CANCER IN MICE (SEE SECTION XI.)  
) SLIGHT EYE IRRITATION. MODERATE SKIN IRRITATION. RESPIRATORY IRRITATION, DIZZINESS, NAUSEA, LOSS OF CONSCIOUSNESS. PROLONGED REPEATED SKIN CONTACT WITH LOW VISCOSITY MATERIALS MAY DEFAT THE SKIN RESULTING IN POSSIBLE IRRITATION AND DERMATITIS.

## \*\*\*\*\* V. EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

--- FOR PRIMARY ROUTES OF ENTRY ---

EYE CONTACT: FLUSH WITH WATER.

SKIN CONTACT: WASH CONTACT AREAS WITH SOAP AND WATER. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

INHALATION: REMOVE FROM FURTHER EXPOSURE. IF UNCONSCIOUSNESS OCCURS, SEEK IMMEDIATE MEDICAL ASSISTANCE AND CALL A PHYSICIAN. IF BREATHING HAS STOPPED, USE MOUTH TO MOUTH RESUSCITATION.

INGESTION: DO NOT INDUCE VOMITING. ADMINISTER VEGETABLE OIL. GET MEDICAL ASSISTANCE. (NOTE TO PHYSICIAN: MATERIAL IF ASPIRATED INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS. TREAT APPROPRIATELY. )

## \*\*\*\*\* VI. FIRE AND EXPLOSION HAZARD DATA \*\*\*\*\*

FLASH POINT F(C): -40(-40) (ASTM D-56)

FLAMMABLE LIMITS. LEL: 1.1 UEL: 7.6

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.

SPECIAL FIRE FIGHTING PROCEDURES: USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. IF A LEAK OR SPILL HAS NOT IGNITED, USE WATER SPRAY TO DISPERSE THE VAPORS AND TO PROTECT MEN ATTEMPTING TO STOP LEAK. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURES. FOR FIRES IN ENCLOSED AREAS, FIREFIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS. PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS OR DRINKING WATER SUPPLY.

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTREMELY FLAMMABLE. VAPOR ACCUMULATION COULD FLASH AND/OR EXPLODE IF IN CONTACT WITH OPEN FLAME.

NFPA HAZARD ID: HEALTH: 1, FLAMMABILITY: 3, REACTIVITY: 0

## \*\*\*\*\* VII. REACTIVITY DATA \*\*\*\*\*

STABILITY (THERMAL, LIGHT, ETC.): STABLE

CONDITIONS TO AVOID: HEAT, SPARKS, FLAME AND BUILD UP OF STATIC ELECTRICITY.

INCOMPATIBILITY (MATERIALS TO AVOID): HALOGENS, STRONG ACIDS, ALKALIES, AND OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

## \*\*\*\*\* VIII. SPILL OR LEAK PROCEDURE \*\*\*\*\*

ENVIRONMENTAL IMPACT: REPORT SPILLS AS REQUIRED TO APPROPRIATE AUTHORITIES. U. S. COAST GUARD REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL TO COAST GUARD TOLL FREE NUMBER 800-424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: ADSORB ON FIRE RETARDANT TREATED SAWDUST, DIATOMACEOUS EARTH, ETC. SHOVEL UP AND DISPOSE OF AT AN APPROPRIATE WASTE DISPOSAL FACILITY IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL. RUNOFF MAY CREATE FIRE OR EXPLOSION HAZARD IN SEWER SYSTEM. ELIMINATE ALL IGNITION SOURCES. REMOVE LEAKING CONTAINERS TO DETACHED AREA.

WASTE MANAGEMENT: PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE OR DISPOSAL BY SUPERVISED INCINERATION. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT ANY GOVERNMENT APPROVED WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL.

## \*\*\*\*\* IX. SPECIAL PROTECTION INFORMATION \*\*\*\*\*

EYE PROTECTION: GENERALLY EYE CONTACT IS UNLIKELY WITH THIS TYPE MATERIAL. IF EYE CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL TYPE GOGGLES SHOULD BE WORN.

SKIN PROTECTION: IF PROLONGED OR REPEATED SKIN CONTACT IS LIKELY, IMPERVIOUS GLOVES SHOULD BE WORN. GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

RESPIRATORY PROTECTION: APPROVED RESPIRATORY EQUIPMENT MUST BE USED WHEN VAPOR OR MIST CONCENTRATIONS ARE UNKNOWN OR EXCEED THE TLV.

VENTILATION: VENTILATION REQUIRED AND EQUIPMENT MUST BE EXPLOSION PROOF. USE AWAY FROM ALL IGNITION SOURCES.

## \*\*\*\*\* X. SPECIAL PRECAUTIONS \*\*\*\*\*

HANDLING: AVOID CONTACT WITH SKIN. AVOID INHALATION OF VAPORS OR MISTS. USE IN WELL VENTILATED AREA AWAY FROM ALL IGNITION SOURCES. AVOID SPARKING CONDITIONS. GROUND AND BOND ALL TRANSFER EQUIPMENT.

STORAGE: DRUMS MUST BE GROUNDED AND BONDED AND EQUIPPED WITH SELF-CLOSING VALVES, PRESSURE VACUUM BUNGS AND FLAME ARRESTERS. STORE AWAY FROM ALL IGNITION SOURCES IN A COOL AREA EQUIPPED WITH AN AUTOMATIC SPRINKLING SYSTEM. OUTSIDE OR DETACHED STORAGE PREFERRED. STORAGE CONTAINERS SHOULD BE GROUNDED AND BONDED.

MATERIALS MUST BE LABELED AS: EXTREMELY FLAMMABLE. SEE APPENDIX FOR PRECAUTIONARY LABEL. FL-154

## \*\*\*\*\* XI. TOXICOLOGICAL DATA \*\*\*\*\*

## ---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): LD50: > 5 G/KG 1/10 RATS DIED AT THIS DOSAGE LEVEL. CONSIDERED TO BE NO MORE THAN SLIGHTLY TOXIC BASED ON SINGLE DOSE LEVEL TESTING AT 5 G/KG.

DERMAL TOXICITY (RABBITS): LD50: > 2 G/KG 0/10 RABBITS DIED AT THIS DOSAGE LEVEL. CONSIDERED TO BE NO MORE THAN SLIGHTLY TOXIC BASED ON SINGLE DOSE LEVEL TESTING AT 2 G/KG.

INHALATION TOXICITY (RATS): MODERATELY TOXIC(ESTIMATED) ---BASED ON TESTING OF SIMILAR PRODUCTS AND/OR THE COMPONENTS.

EYE IRRITATION (RABBITS): CAUSED SLIGHT IRRITATION TO RABBITS. EYE IRRITATION SCORES: 5 3 AT 1 HOUR, 3.3 AT 24 HOURS, 2.3 AT 48 HOURS, 1.0 AT 72 HOURS

SKIN IRRITATION (RABBITS): MODERATELY IRRITATING TO RABBITS. PRIMARY IRRITATION SCORE: 3.2/8

## ---CHRONIC TOXICOLOGY (SUMMARY)---

RECENT STUDIES WITH LABORATORY ANIMALS HAVE SHOWN THAT GASOLINE VAPORS WHEN ADMINISTERED IN HIGH CONCENTRATIONS OVER A PROLONGED PERIOD OF TIME, CAUSED KIDNEY DAMAGE AND KIDNEY CANCER IN RATS AND LIVER CANCER IN MICE. AS FAR AS SCIENTISTS KNOW, LOW LEVEL OR INFREQUENT EXPOSURE TO GASOLINE VAPORS IS UNLIKELY TO BE ASSOCIATED WITH CANCER OR OTHER SERIOUS DISEASES IN HUMANS.

## ---OTHER TOXICOLOGY DATA---

GASOLINE CONSISTS OF A COMPLEX BLEND OF PETROLEUM/PROCESSING DERIVED PARAFFINIC, OLEFINIC, NAPHTHENIC AND AROMATIC HYDROCARBONS WHICH MAY CONTAIN UP TO 5 PERCENT BENZENE; AND DOSAGES OF MULTIFUNCTIONAL ADDITIVES.

## \*\*\*\*\* XII. REGULATORY INFORMATION \*\*\*\*\*

GOVERNMENTAL INVENTORY STATUS: ALL COMPONENTS REGISTERED IN ACCORDANCE WITH TSCA.

D.O.T. SHIPPING NAME: GASOLINE

D.O.T. HAZARD CLASS: FLAMMABLE LIQUID

TRANSPORT NO: UN1203

US OSHA HAZARD COMMUNICATION STANDARD: PRODUCT ASSESSED IN ACCORDANCE WITH OSHA 29 CFR 1910.1200 AND DETERMINED TO BE HAZARDOUS.

RCRA INFORMATION: THE DISPOSAL OF THE UNUSED PRODUCT MAY BE SUBJECT TO RCRA REGULATIONS PER 40 CFR PART 261 FOR THE REASONS INCLUDING, BUT NOT LIMITED TO THOSE LISTED BELOW. DISPOSAL OF THE USED PRODUCT MAY BE REGULATED.

LEAD: 0.0016 PCT

FLASH: -40(-40) F(C)

U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III: THIS PRODUCT CONTAINS NO EXTREMELY HAZARDOUS SUBSTANCES .

THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
UNLEADED GASOLINE		7,8,9,11,12,13,14, 16,17,18

## --- KEY TO LIST CITATIONS ---

1 = OSHA Z, 2 = ACGIH, 3 = IARC, 4 = NTP, 5 = NCI,  
6 = EPA CARC, 7 = NFPA 49, 8 = NFPA 325M, 9 = DOT HMT, 10 = CA RTK,  
11 = IL RTK, 12 = MA RTK, 13 = MN RTK, 14 = NJ RTK, 15 = MI 293,  
16 = FL RTK, 17 = PA RTK, 18 = CA P65.

--- NTP, IARC, AND OSHA INCLUDE CARCINOGENIC LISTINGS ---

NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

\*\*\*\*\*  
INFORMATION GIVEN HEREIN IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS.  
\*\*\*\*\*

PREPARED BY: MOBIL OIL CORPORATION

ENVIRONMENTAL AFFAIRS AND TOXICOLOGY DEPARTMENT, PRINCETON, NJ

FOR FURTHER INFORMATION, CONTACT:

MOBIL OIL CORPORATION, PRODUCT FORMULATION AND QUALITY CONTROL  
3225 GALLOWS ROAD, FAIRFAX, VA 22037 (703) 849-3265

\*\*\*\*\* APPENDIX \*\*\*\*\*

FOR MOBIL USE ONLY: MHC: 1 1 2\* 1 2 PPEC: RD870212 APPROVE REVISED:  
10/02/86

\*\*\*\*\*

PRECAUTIONARY LABEL TEXT:

GASOLINE

DANGER.

EXTREMELY FLAMMABLE.

HARMFUL OR FATAL IF SWALLOWED.

VAPOR HARMFUL.

LONG-TERM EXPOSURE TO VAPORS HAS  
CAUSED CANCER IN LABORATORY ANIMALS.

KEEP AWAY FROM HEAT, SPARKS AND FLAME.

AVOID PROLONGED BREATHING OF VAPOR.

KEEP CONTAINER CLOSED.

USE ONLY WITH ADEQUATE VENTILATION.

NOT TO BE USED AS A SKIN CLEANSING AGENT.

NEVER SIPHON BY MOUTH.

KEEP AWAY FROM EYES AND SKIN.

FAILURE TO USE CAUTION MAY CAUSE SERIOUS INJURY OR ILLNESS.

FIRST AID: IF SWALLOWED, DO NOT INDUCE VOMITING.  
CALL A PHYSICIAN IMMEDIATELY.

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING,  
GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH AND  
CALL A PHYSICIAN.

ATTENTION.

EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUE, INCLUDING  
FLAMMABLE OR EXPLOSIVE VAPORS, DO NOT CUT, PUNCTURE OR  
WELD ON OR NEAR CONTAINER. ALL LABEL WARNINGS AND  
PRECAUTIONS MUST BE OBSERVED UNTIL CONTAINER HAS BEEN  
THOROUGHLY CLEANED OR DESTROYED.

REFER TO PRODUCT MATERIAL SAFETY DATA BULLETIN FOR  
FURTHER SAFETY AND HEALTH INFORMATION.

MOBIL OIL CORPORATION, NEW YORK, N.Y. FL-154(5-84)

\*\*\*\*\*

D.O.T. SHIPPING NAME: GASOLINE

D.O.T. HAZARD CLASS: FLAMMABLE LIQUID

D.O.T. HAZARD IDENTIFICATION NUMBER: UN1203

# MATERIAL SAFETY DATA SHEET

TECHNICAL SERVICE COMPANY  
801 WEST 14th STREET  
LONG BEACH, CALIFORNIA 90813

## 1 PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

TRADE NAME: S - 463

CHEMICAL FAMILY / OTHER NAMES:  
Phosphonate Salt

DOT PROPER SHIPPING NAME:

Not D.O.T. Regulated

**\*\*24 HOUR EMERGENCY ASSISTANCE\*\***

TECHNICAL SERVICE COMPANY

(213) 436-9901

HEALTH:	1	Rating Code
FIRE:	1	0 = Least
REACTIVITY:	0	1 = Slight
OTHER:	N/AP	2 = Moderate
		3 = High
		4 = Severe

UN / NA ID NUMBER: N/AP

ERG: N/AP

DOT HAZARD CLASS: N/AP

C A S NUMBER: N/AP

## 2

## SUMMARY OF HAZARDS

OSHA HAZARD

COMPONENT

Irritant

Alkyl Amine Phosphonic Acid

## 3

## FIRE AND EXPLOSION

FLASH POINT/METHOD 210 F (SETA CC)      AUTOIGNITION TEMP      N/AV

FLAMMABLE LIMITS (1% Volume in air at normal atmospheric temp and press)

UPPER      N/AP	LOWER      N/AP
-----------------	-----------------

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Low hazard. Liquid may burn upon heating to temperatures at or above the flash point. Toxic gases will form upon combustion.

EXTINGUISHING MEDIA      Alcohol-type foam, Dry chemical, Water spray

SPECIAL FIRE FIGHTING PROCEDURES      Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If leak or spill has not ignited, use water spray to disperse vapors. Use approved respiratory and eye protective equipment for chemical hazards.

PRIMARY HAZARD      Minor Eye Irritation

## ROUTE OF EXPOSURE

## SIGNS AND SYMPTOMS

INHALATION      Not expected to produce adverse health hazards from inhalation.

EYE CONTACT      May cause minor eye irritation and should be removed promptly.

SKIN ABSORPTION      Not expected to produce adverse health hazards from skin absorption.

SKIN CONTACT      May cause slight irritation of the skin.

INGESTION      Not expected to produce adverse health hazards from ingestion.

EFFECTS OF OVER-EXPOSURE      No information is available on the chronic health hazards of this product.

RESPIRATORY      No special respiratory protective equipment normally required under anticipated conditions of normal use with adequate ventilation.

VENTILATION      No special ventilation is required under anticipated conditions of normal use.

EYE      Protection including chemical splash goggles and/or face shield should be worn when handling / using this product. Contact lenses should not be worn.

SKIN      Not normally considered a skin hazard, however chemical resistant gloves should be worn.

OTHER      Use good personal hygiene practices. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. Promptly remove soiled clothing and wash thoroughly before re-use. Shower after work using plenty of soap and water.

SUBSTANCE	CAS #	SOURCE	TYPE	UNITS
N/AP				

**INHALATION** If respiratory irritation occurs, move to fresh air. If any effects continue, obtain medical attention.

**EYE CONTACT** Remove contact lenses if present. Gently rinse the eye(s) with clean water (lukewarm if possible) for 15 minutes. Tilt the head back. Hold eyelid(s) open and pour water slowly over the eyeball(s) at the inner corner, letting water run out the outer corner(s). Do not let victim rub eyes or keep tightly shut. Obtain medical attention if needed.

**SKIN CONTACT** Remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush area with water for 15 minutes. If sticky, use waterless handcleaner first. If irritation persists, obtain medical attention.

**INGESTION** Give 2 glasses of water or milk to dilute if victim is completely conscious/alert. Induce vomiting. Obtain medical attention.

**PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED** Shut off source if possible to do so safely. Prevent liquid from entering sewers or public waters. Impound / recover large land spill. Soak up small spill with absorbant. On water, contain and minimize dispersion and collect. Report to proper authorities.

**ASTE DISPOSAL METHODS** Consult an expert on disposal of recovered material. Ensure conformity with local, state, and federal disposal regulations.



BOILING POINT 212 F AP	EVAPORATION RATE (ETHER = 1) 1.5 Calc	SOLUBILITY IN WATER Complete
FREEZING POINT N/DA	VAPOR PRESSURE 14.7 mm Hg @ 100 F AP	VOL CHARACTERISTICS N/DA
SP. GRAVITY 1.2 (WATER = 1)	VAPOR SP. GR. N/DA (AIR = 1.0 @ 60 - 90 F)	STABILITY Stable
HAZARDOUS POLYMERIZATION Will Not Occur	VIS. (UNITS, TEMP, METHOD) N/DA	pH 5.5 - 6.0

OTHER PHYSICAL AND CHEMICAL PROPERTIES N/AP

APPEARANCE AND ODOR Clear amber liquid, Slight odor

CONDITIONS TO AVOID None

MATERIALS TO AVOID Strong oxidizing agents, heat, sparks, open flame

HAZARDOUS DECOMPOSITION PRODUCTS Unknown

**HANDLING AND STORAGE** Do not use aluminum or mild steel for handling storage or transportation. Store in tightly closed, properly vented containers away from heat, open flame and strong oxidizing agents. Carefully vent internal pressure before removing closure. Handle empty containers with care.

**GENERAL COMMENTS** Some of the information presented and conclusions drawn herein are from sources other than direct test data of the product.

This product is designed specifically for industrial use only, and to be used and applied by trained personnel who have been provided with the proper protective equipment. It is not meant to be taken internally or used in any manner other than which it is intended.

**NOTE - QUALIFICATIONS:** EQ = EQUAL AP = APPROXIMATELY LT = LESS THAN  
N/AV = NOT AVAILABLE UK = UNKNOWN N/AP = NOT APPLICABLE TR = TRACE  
GT = GREATER THAN N/DA = NO DATA AVAILABLE

The information in this MSDS was obtained from sources which we believe are reliable. However, THIS INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS. The conditions or methods of handling, storage and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE, OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.

TECHNICAL SERVICE COMPANY

MATERIAL SAFETY DATA SHEET SUPPLEMENT

PRODUCT: S - 463 Scale Inhibitor

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REGULATORY STATUS

CERCLA: None

SARA TITLE III

Sec 302 (Emergency planning notification):	None
Sec 304 (Emergency release reporting):	None
Sec 311 (MSDS Submission):	None
Sec 312 (Inventory reporting):	None
Sec 313 (Toxic Chemical Release reporting):	None
Sec 311/312 (Hazard Categories):	None

PROP 65: None

DOT: See Page 1, Section 1

# MATERIAL SAFETY DATA SHEET

TECHNICAL SERVICE COMPANY  
801 WEST 14th STREET  
LONG BEACH, CALIFORNIA 90813

## 1 PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

TRADE NAME: C - 668  
CORROSION INHIBITOR CONCENTRATE

CHEMICAL FAMILY / OTHER NAMES:  
Imidoamine

DOT PROPER SHIPPING NAME:  
Flammable Liquid, N.O.S.  
(Contains: Light Cycle Oil,  
Isopropyl Alcohol)

DOT HAZARD CLASS:  
Flammable Liquid

**\*\*24 HOUR EMERGENCY ASSISTANCE\*\***  
TECHNICAL SERVICE COMPANY  
(213) 436-9901

HEALTH:	2	Rating Code
FIRE:	3	0 = Least
REACTIVITY:	0	1 = Slight
OTHER:	N/AP	2 = Moderate
		3 = High
		4 = Severe

UN / NA ID NUMBER: 1993      ERG: 27

C A S NUMBER: N/AP, Mixture

## 2 SUMMARY OF HAZARDS

### OSHA HAZARD

Irritant  
  
Sensitizer  
Flammable  
Combustible

### COMPONENT

Amine/quaternary compound,  
Isopropanol, Light cycle oil  
Amine/quaternary compound  
Isopropanol  
Light cycle oil

## 3 FIRE AND EXPLOSION

FLASH POINT/METHOD 76 F (SETA CC)      AUTOIGNITION TEMP      N/AV

FLAMMABLE LIMITS (1% Volume in air at normal atmospheric temp and press)  
UPPER 12.0      LOWER 0.8

UNUSUAL FIRE AND EXPLOSION HAZARDS      Flammable liquid. Can release vapors that form flammable mixtures at temperatures at or above flash point. Vapors may travel long distances before igniting/flashing back to vapor source. Toxic gases will form upon combustion, including: smoke, fumes, carbon monoxide, carbon dioxide, nitrogen oxide and oxides of sulfur.

EXTINGUISHING MEDIA      Dry chemical, Carbon dioxide, Water spray, Water fog, alcohol type foam

SPECIAL FIRE FIGHTING PROCEDURES      Use water spray to cool fire exposed surfaces and to protect personnel. Shut of "fuel" to fire. If leak or spill has not ignited, use water spray to disperse vapors. Use approved respiratory and eye protective equipment for chemical hazards.

PRIMARY HAZARD      Skin and eye irritant

## ROUTE OF EXPOSURE

## SIGNS AND SYMPTOMS

**INHALATION**      High vapor concentrations are irritating to the respiratory tract. May cause dizziness and headaches. Are anesthetic and may have other central nervous system effects. This material or its emissions may affect mucous tissue and/or aggravate mucous membrane dysfunction.

**EYE CONTACT**      Vapors may irritate. Splashes: irritation with burning or stinging sensation, watering eyes, inflammation of eyelids and possible light sensitivity. May injure eye tissue if not removed promptly.

**SKIN ABSORPTION**      This material is expected to be a health hazard on prolonged or repeated skin contact. Prolonged/repeated exposure may result in defatting/drying of the skin, which may result in irritation and dermatitis.

**SKIN CONTACT**      Irritating. May cause skin sensitization. Prolonged or repeated skin contact may cause partial or whole body dermatitic rash. All contact should be avoided by persons with known hypersensitivity to amines.

**INGESTION**      Ingestion or subsequent vomiting could result in aspiration which could cause chemical pneumonia. May induce mild narcosis or drowsiness. Mucous membrane irritant.

THIS MATERIAL IS NOT MEANT TO BE TAKEN INTERNALLY !

**EFFECTS OF OVER-EXPOSURE**      Repeated skin contact should be avoided due to irritation and possible sensitization. This product contains aromatic hydrocarbons which are suspected carcinogens on prolonged/repeated skin contact.

**RESPIRATORY**      If operating conditions create airborne concentrations which exceed the Occupational Exposure Limits, use NIOSH/OSHA approved respiratory protective equipment.

**VENTILATION**      Use adequate explosion-proof ventilation to keep airborne concentrations of this material below the Occupational Exposure Limits. This material is not meant to be used at indoor locations.

**EYE**      Protection including chemical splash goggles and/or face shield must be worn when handling this product. Contact lenses should not be worn.

**SKIN**      Where contact may occur, wear chemical resistant gloves. For open systems where contact is likely, wear chemical resistant: gloves, apron, boots and impervious arm protection.

**OTHER**      USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE SOILED CLOTHING AND WASH THOROUGHLY BEFORE RE-USE. SHOWER AFTER WORK USING PLENTY OF SOAP AND WATER.

SUBSTANCE	CAS #	SOURCE	TYPE	UNITS
Isopropanol	67-63-0	OSHA/ACGIH	TWA	400 ppm
			STEL	500 ppm

**INHALATION** If respiratory irritation or any signs or symptoms, as described in this bulletin occur, remove victim to fresh air. If any of these effects continue seek medical attention.

**EYE CONTACT** Remove all chemical as quickly as possible. Gently rinse the eye(s) with clean, lukewarm water for a minimum of 15 minutes. Tilt head back. Hold eyelid(s) open and pour water slowly over the eyeball(s) at the inner corner, letting water run out the outer corner(s). Do not let victim rub eye(s) or keep tightly shut. Obtain emergency medical attention.

**SKIN CONTACT** Immediately remove contaminated clothing; wash skin thoroughly with mild soap and water. If sticky, use waterless hand cleaner first. Flush with water for 15 minutes. If irritation persists, seek medical attention.

**INGESTION** Do not induce vomiting! This may result in aspiration which can cause chemical pneumonia. Seek emergency medical attention.

**PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED**

Flammable liquid. Release causes immediate fire/explosion hazard. Liquids and/or vapors may ignite. Evacuate and limit access. Kill all sources of ignition. Stop release if safe to do so. Prevent flow to sewers/public waters. Restrict water use for cleanup. Impound/recover large land spill. Blanket with fire fighting foam. Soak containers. On water: material is partially soluble. May float or sink. May biodegrade. Contain or minimize dispersion and collect. If allowed by local and environmental agencies, sinking and/or suitable dispersants may be used in non-confined areas. Report to appropriate authorities.

**WASTE DISPOSAL METHODS** Consult an expert on disposal of recovered material. Ensure conformity with local, state, and federal disposal regulations.

## PHYSICAL AND CHEMICAL DATA

<b>BOILING POINT</b> 180 F	<b>EVAPORATION RATE</b> (ETHER = 1) N/DA	<b>SOLUBILITY IN WATER</b> Moderate
<b>FREEZING POINT</b> N/DA	<b>VAPOR PRESSURE</b> 36.2 mmHg @ 100 F (REED)	<b>VOL CHARACTERISTICS</b> Moderate
<b>SP. GRAVITY</b> 0.94 (WATER = 1 @ 60 f)	<b>VAPOR SP. GR.</b> N/DA (AIR = 1.0 @ 60 - 90 F)	<b>STABILITY</b> Stable
<b>HAZARDOUS POLYMERIZATION</b> Will not occur	<b>VIS.</b> (UNITS, TEMP, METHOD) N/DA	<b>pH</b> N/AP

OTHER PHYSICAL AND CHEMICAL PROPERTIES N/AP

APPEARANCE AND ODOR Dark amber liquid, aromatic / alcohol odor

CONDITIONS TO AVOID Heat, sparks, open flame

MATERIALS TO AVOID Strong oxidizing agents

## HAZARDOUS DECOMPOSITION PRODUCTS

Incomplete combustion may produce carbon monoxide, carbon dioxide, oxides of nitrogen, and oxides of sulfur

## ADDITIONAL PRECAUTIONS

**HANDLING AND STORAGE** Store in tightly closed, properly vented containers away from heat, sparks, open flame, & strong oxidizing agents. Carefully vent internal pressure before removing closure. Metal containers should be grounded before transfer. Handle empty containers with care; residue may be flammable. Vapor space above stored liquid may be explosive or flammable. Do not pressurize, cut, heat, or weld empty containers

**GENERAL COMMENTS** Some of the information presented and conclusions drawn herein are from sources other than direct test data of the product.

This product is designed specifically for industrial use only, and to be used and applied by trained personnel who have been provided with the proper protective equipment. It is not meant to be taken internally or used in any manner other than which it is intended.

NOTE - QUALIFICATIONS: EQ = EQUAL AP = APPROXIMATELY LT = LESS THAN  
N/AV = NOT AVAILABLE UK = UNKNOWN N/AP = NOT APPLICABLE TR = TRACE  
GT = GREATER THAN N/DA = NO DATA AVAILABLE

The information in this MSDS was obtained from sources which we believe are reliable. However, THIS INFORMATION IS PROVIDED WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS ACCURACY OR CORRECTNESS. The conditions or methods of handling, storage and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE, OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.

TECHNICAL SERVICE COMPANY

MATERIAL SAFETY DATA SHEET SUPPLEMENT

PRODUCT: C - 668 CORROSION INHIBITOR CONCENTRATE

---

REGULATORY STATUS

CERCLA: NONE

SARA TITLE III

Sec 302 (Emergency planning notification):	NONE
Sec 304 (Emergency release reporting):	NONE
Sec 311 (MSDS Submission):	NONE
Sec 312 (Inventory reporting):	NONE
Sec 313 (Toxic Chemical Release reporting):	NONE
Sec 311/312 (Hazard Categories):	Immediate Health, Delayed Health, Fire

PROP 65: WARNING

This product contains a chemical known to the State of California to cause cancer and/or reproductive toxicity.

Contains less than 40 ppm Ethylene Oxide.  
Contains no detectable State listed  
Polynuclear aromatics.

DOT: See Page 1, Section 1

# MATERIAL SAFETY DATA SHEET

TECHNICAL SERVICE COMPANY  
801 WEST 14th STREET  
LONG BEACH, CALIFORNIA 90813

## 1 PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

**TRADE NAME:** SC - 555 COMBINATION  
CORROSION/SCALE INHIBITOR

**CHEMICAL FAMILY / OTHER NAMES:**  
Quaternary Ammonium Compound /  
Phosphonate Solution

**DOT PROPER SHIPPING NAME:**  
Flammable Liquid, N.O.S.,  
(Contains: Isopropanol, Quaternary  
Ammonium Compound)

**DOT HAZARD CLASS:**  
Flammable Liquid

**\*\*24 HOUR EMERGENCY ASSISTANCE\*\***  
TECHNICAL SERVICE COMPANY  
(213) 436-9901

<b>HEALTH:</b>	2	Rating Code
<b>FIRE:</b>	3	0 = Least
<b>REACTIVITY:</b>	0	1 = Slight
<b>OTHER:</b>	N/AP	2 = Moderate
		3 = High
		4 = Severe

**UN / NA ID NUMBER:** 1993 **ERG:** 27

**C A S NUMBER:** N/AP, Mixture

## 2 SUMMARY OF HAZARDS

### OSHA HAZARD

Corrosive  
Irritant  
  
Flammable

### COMPONENT

Quaternary Ammonium Compound  
Quaternary Ammonium Compound  
Isopropanol  
Isopropanol

## 3 FIRE AND EXPLOSION

**FLASH POINT/METHOD** 79 F (PMCC) **AUTOIGNITION TEMP** 750 F **AP**

**FLAMMABLE LIMITS** (1% Volume in air at normal atmospheric temp and press)  
**UPPER** 12 **AP** **LOWER** 2 **AP**

**UNUSUAL FIRE AND EXPLOSION HAZARDS** Release flammable vapors at temperatures at or above flash point. Vapors can burn in open or explode if confined. When heated corrosive vapors may be generated. Vapors may be heavier than air and may travel long distances along ground before igniting/flash-back to vapor source. Water dilution may not be sufficient to raise flash point.

**EXTINGUISHING MEDIA** Dry chemical, Carbon dioxide, Alcohol type foam, Water spray, Water fog

**SPECIAL FIRE FIGHTING PROCEDURES** Use approved respiratory and eye protective equipment for chemical hazards. Use water spray/fog to cool fire exposed surfaces and to protect personnel.



**PRIMARY HAZARD** Eye, skin irritation

**DATE OF EXPOSURE****SIGNS AND SYMPTOMS**

**INHALATION** May produce symptoms of depression, headache, dizziness, loss of appetite, weakness, lack of coordination, severe irritation to the mucous membranes and other serious central nervous system effects.

**EYE CONTACT** Severe irritation with burning, tearing and redness. May injure eye tissue if not removed promptly.

**SKIN ABSORPTION** This material is not expected to be a hazard by skin absorption.

**SKIN CONTACT** May cause immediate irritation, blistering and / or dermatitis in some individuals.

**INGESTION** This material is expected to be an ingestion hazard. Will cause nausea and vomiting and other serious effects.

**EFFECTS OF OVER-EXPOSURE** No information is available on the long term hazards or over exposure for this product. Prolonged/repeated contact should be avoided. See signs and symptoms as described above.

**RESPIRATORY** If operating conditions create airborne concentrations which exceed the occupational exposure limits, use NIOSH/OSHA approved respiratory protective equipment.

**VENTILATION** Use adequate explosion-proof ventilation to keep the airborne concentrations of this material below the occupational exposure limits. This product is not meant to be used at indoor locations.

**EYE** Chemical splash goggles and full face shield must be worn when handling this product. Contact lenses should not be worn.

**SKIN** Where contact may occur, wear chemical resistant: gloves, apron, impervious arm protection and boots.

**OTHER** Use good personal hygiene practices. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. Promptly remove soiled clothing and wash thoroughly before re-use. Shower after work using plenty of soap and water.

SUBSTANCE	CAS #	SOURCE	TYPE	UNITS
sopropanol	67-63-0	OSHA/ACGIH	TWA STEL	400 ppm 500 ppm

**INHALATION** If respiratory irritation or any signs of symptoms as described in this bulletin occur, move to fresh air. Keep warm and quiet. Be prepared to perform CPR. Do not leave unattended. If any of these effects continue, obtain emergency medical attention.

**EYE CONTACT** Immediately brush/blot/wipe remaining chemical from face. Flush with clean water (lukewarm if available) for 15 minutes minimum. Tilt head back. Hold eyelid(s) open and pour water slowly over the eyeball(s) at the inner corner, letting water run out of the outer corners. Remove contact lenses if present and continue rinsing. Do not rub eyes or keep tightly shut. Obtain emergency medical attention.

**SKIN CONTACT** Begin flushing effected area, then remove contaminated clothing. Wash skin thoroughly with mild soap and water, flush for 15 minutes. If sticky, use waterless handcleaner first. If irritation persists, obtain medical attention.

**INGESTION** Do not induce vomiting. This may result in aspiration which can cause chemical pneumonia. If victim is completely conscious and alert rinse mouth with water, give lukewarm water or milk (1-2 glasses) to dilute. Do not give anything by mouth to an unconscious or semi-conscious person. Do not give stimulants (coffee, tea, carbonated drinks, etc.). Obtain emergency medical attention.

**PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED** Flammable liquid. Release causes immediate fire/explosion hazard. Liquid/vapors may ignite. Evacuate/limit access. Kill all sources of ignition. Stop release if safe to do so. Prevent flow to sewers/public waters. Restrict water use in clean-up. Blanket with fire fighting foam. Impound/recover large spill. Soak up small spill with inert absorbant. On water: material soluble; may float, sink or disperse. Contain, minimize and collect dispersion. Report to appropriate authorities.

**WASTE DISPOSAL METHODS** Consult an expert on disposal of recovered material. Ensure conformity with local, state, and federal disposal regulations.

BOILING POINT 180 F AP	EVAPORATION RATE (ETHER = 1) N/DA	SOLUBILITY IN WATER Complete
FREEZING POINT N/DA	VAPOR PRESSURE 31.2 mm Hg @ 68 F AP	VOL CHARACTERISTICS Moderate
SP. GRAVITY 1.02 +/- (WATER = 1)	VAPOR SP. GR. GT 1 (AIR = 1.0 @ 60 - 90 F)	STABILITY Stable
HAZARDOUS POLYMERIZATION Will not occur	VIS. (UNITS, TEMP, METHOD) N/DA	pH 5.5 - 6.5 AP

OTHER PHYSICAL AND CHEMICAL PROPERTIES N/ap

APPEARANCE AND ODOR Amber liquid, alcohol odor

CONDITIONS TO AVOID Heat, sparks, open flame

MATERIALS TO AVOID Strong oxidizing agents, Strong alkalies

HAZARDOUS DECOMPOSITION PRODUCTS May produce oxides of carbon,  
Oxides of nitrogen, Corrosive vapors

## 10 ADDITIONAL PRECAUTIONS

HANDLING AND STORAGE Flammable liquid. Store in tightly closed, properly vented containers. Carefully vent internal pressure before removing closure. Metal containers should be grounded before beginning transfer. Handle empty containers with care, residue may be flammable. Vapor space above stored liquid may be flammable/explosive.

GENERAL COMMENTS Some of the information presented and conclusions drawn herein are from sources other than direct test data of the product.

This product is designed specifically for industrial use only, and to be used and applied by trained personnel who have been provided with the proper protective equipment. It is not meant to be taken internally or used in any manner other than which it is intended.

NOTE - QUALIFICATIONS: EQ = EQUAL AP = APPROXIMATELY LT = LESS THAN  
N/AV = NOT AVAILABLE UK = UNKNOWN N/AP = NOT APPLICABLE TR = TRACE  
GT = GREATER THAN N/DA = NO DATA AVAILABLE

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TECHNICAL SERVICE COMPANY

MATERIAL SAFETY DATA SHEET SUPPLEMENT

PRODUCT: SC - 555 COMBINATION CORROSION AND SCALE INHIBITOR

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REGULATORY STATUS

CERCLA: None

SARA TITLE III

Sec 302 (Emergency planning notification): None

Sec 304 (Emergency release reporting): None

Sec 311 (MSDS Submission): None

Sec 312 (Inventory reporting): None

Sec 313 (Toxic Chemical Release reporting): None

Sec 311/312 (Hazard Categories):  
Immediate Health, Delayed Health, Fire

PROP 65: None

DOT: See Page 1, Section 1

## **APPENDIX G**

# **UNDERGROUND STORAGE TANK DATA**

9-17-87

Phone call w/ Brad Forslund

Orange County  
Hazardous Waste Specialist

said results from analysis dated 8-31-87  
indicate the soil sampled is clean and  
the area can be back-filled.

Jon McCloskey

9/17/87

COUNTY OF ORANGE/HEALTH CARE AGENCY  
ENVIRONMENTAL HEALTH (714) 834-8020  
1725 WEST 17TH STREET, P.O. BOX 355  
SANTA ANA, CA 92702  
WASTE MANAGEMENT SECTION

42515

CHAIN OF CUSTODY

ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.

PLEASE WRITE LEGIBLY.

ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.

TO BE COMPLETED BY LABORATORY ANALYST

LAB NO.: IT #42515  
DATE RECEIVED: 8/20/87  
SAMPLE(S) CONDITION (PLEASE CHECK):  
CHILLED: ☒ COUNTY SEAL(S) INTACT: ☒  
CONTAINER IN GOOD CONDITION: ☒  
DATE ANALYSIS COMPLETED: 8-26-87  
ANALYST: Thomas R. [Signature]

5. TO BE COMPLETED BY SAMPLE COLLECTOR

SAMPLE LOCATION: 1080 W. 17TH ST.  
AT COMMTRCA  
DATE OF COLLECTION: 8/20/87  
SAMPLE COLLECTOR: BLAD FANSON  
TELEPHONE NO.: (714) 834-6648

SAMPLE INFORMATION

LE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS
1	8015	CRACK SAND; BLAD IF TPH IS 7100 ppm THAN IN 8020

CHAIN OF CUSTODY

1.	<u>[Signature]</u> SIGNATURE	<u>HAR. WASTE SPEC.</u> TITLE	<u>8/20/87 - 8/20/87</u> INCLUSIVE DATES
2.	<u>Tom McCleary</u> SIGNATURE	<u>Engineer - WNOX</u> TITLE	<u>8/20/87 - 8/20/87</u> INCLUSIVE DATES
	<u>Patty Snyder</u> SIGNATURE	<u>Sample control assist</u> TITLE	<u>8/20/87 - 8/20/87</u> INCLUSIVE DATES
	<u>Thomas R. [Signature]</u> SIGNATURE	<u>Chemist</u> TITLE	<u>8/20/87 - 9/8/87</u> INCLUSIVE DATES
5.	<u>[Signature]</u> SIGNATURE	<u>Sample Control</u> TITLE	<u>9-8-87</u> INCLUSIVE DATES
6.	_____ SIGNATURE	_____ TITLE	_____ INCLUSIVE DATES



## CERTIFICATE OF ANALYSIS

Prepared for: West Newport Oil Company  
P.O. Box 1487  
Newport Beach, CA 92663

Date: August 31, 1987

Attn: Tom McCloskey

Date Received: August 20, 1987 P.O. Number Verbal-Tom McCloskey Job Number 42515/dan

One (1) soil sample labeled: "TC-1"

The sample was extracted with hexane and analyzed for high boiling point volatile petroleum hydrocarbons on a Varian model 3700 gas chromatograph equipped with a flame ionization detector. Diesel fuel was used as the calibration standard. The results are listed below.

Sample ID

TC-1

Micrograms Per Gram

High Boiling Point Volatile Petroleum Hydrocarbons

ND<10

ND - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

I certify that this report truly represents the finding of  
analysis performed by me or under my direct supervision.

*Thomas Robinson*  
Thomas Robinson  
Chemist

Reviewed and Approved

*Patricia M. Chapman*  
Patricia M. Chapman  
Group Leader





TOM URAM  
DIRECTOR

L. REX EHRLING, M.D.  
HEALTH OFFICER

1725 WEST 17TH STREET  
SANTA ANA, CA 92706

TELEPHONE: 714/834-7661

MAILING ADDRESS: P.O. BOX 355  
SANTA ANA, CA 92702

PUBLIC HEALTH AND MEDICAL SERVICES

ENVIRONMENTAL HEALTH

APPLICATION FOR:

(CHECK ONE)

☒ PERMIT TO OPERATE  
(COMPLETE PAGE 1 & 2)

☒ FACILITY MODIFICATION  
(COMPLETE PAGE 1)

DATE 9/29/30

BUSINESS INFORMATION

NAME West Newport Oil Company

STREET ADDRESS 1080 W. 17th St.

CITY Costa Mesa

1. NUMBER OF TANKS  
AT THIS LOCATION

After removal.

TYPE OF BUSINESS

3/1  
GASOLINE STATION

FARM

GOVERNMENT

X OTHER

FEET TO FIRST GROUNDWATER 100 FT.

TYPE OF CONSTRUCTION

INDICATE NO. OF TANK(S)

1 INSTALLATION(S)

REPAIR(S)/RELINE(S)

3 CLOSURE(S) REMOVAL(S)

SYSTEM MODIFICATION (E.G., REPIPE)

OTHER (SPECIFY)

NEW OWNER

NAME (CORP., INDIVIDUAL, PUBLIC AGENCY)

West Newport Oil Company

STREET ADDRESS 1080 W. 17th St.

MAILING ADDRESS P.O. Box 1487

CITY Newport Beach

STATE California ZIP 92663

PHONE NO. 714 631-1100

24 HOUR EMERGENCY CONTACT PERSON

DAYS F.L. Jones 714 631-1100  
NAME TELEPHONE

NIGHTS F.L. Jones 714 548-6628  
NAME TELEPHONE

APPLICANT

NAME Tom McCloskey  
PLEASE PRINT

SIGNATURE Tom McCloskey

COMPANY NAME West Newport Oil Co.

PHONE NO. 714 631-1100

FACILITY OPERATOR (CONTACT PERSON)

NAME F.L. Jones

BUSINESS PHONE NO. 714 631-1100

NEW INSTALLATIONS, CLOSURES, REPAIRS AND SYSTEM MODIFICATIONS OF UNDERGROUND STORAGE TANKS REQUIRE THE SUBMITTAL OF 14 SETS OF PLANS TO THIS DIVISION. THESE PLANS MUST BE APPROVED PRIOR TO THE INITIATION OF ANY CONSTRUCTION OR MODIFICATION.

OFFICE USE ONLY

PERMIT NO. \_\_\_\_\_ APPROVAL DATE 2/3/87 BY Jim

CHECK NO. 86-708 FEES: PLAN CHECK \_\_\_\_\_ EMPLOYEE NO. 122

TANK I. D.		#1	#2	#3	#4
MOTOR VEHICLE FUEL, PLEASE SPECIFY THE GRADE	PROPOSED	unleaded			
	CURRENTLY				
CAS NO. (IF TRADE SECRET, PLEASE STATE)					
TYPE (TANK, SUMP, OTHERS)		tank			
DOUBLE WALL/SINGLE WALL		double wall			
YEAR MANUFACTURED/INSTALLED		1986/1986			
VAULTED/NOT VAULTED		N.V.			
PRIMARY	MANUFACTURER	Xerxes			
	CAPACITY (GALLON)	10,000			
	CONSTRUCTION MATERIAL	fiberglass			
	THICKNESS (UNITS)				
	LINING/COATING (EXTERIOR/INTERIOR)				
SECONDARY	MANUFACTURER	Xerxes			
	CAPACITY (GALLON)				
	CONSTRUCTION MATERIAL	f.g.			
	THICKNESS (UNITS)				
	LINING/COATING (EXTERIOR/INTERIOR)				
TYPE OF LEAK DETECTION AND MANUFACTURER		LEAK ALERT BY universal			
LOCATION (UNDER/ABOVE GROUND)		underground			
SUCTION/PRESSURE GRAVITY/UNKNOWN		suction			
PRIMARY	CONSTRUCTION MATERIAL	carbon steel			
	MANUFACTURER				
SECONDARY	CONSTRUCTION MATERIAL	f.g.			
	MANUFACTURER				
TYPE OF LEAK DETECTION AND MANUFACTURER		N.A. head short			
OVERFILL/SPILL CONTAINMENT, PROTECTION (TYPE)		catch basin w/ integral drain	OPW #81 + ball check.		
FOR TANKS INSTALLED PRIOR TO 1/1/84 SPECIFY THE MONITORING SYSTEM		—			

ATTACH A DIAGRAM (8 1/2" X 11") INCLUDE THE LOCATIONS OF THE UNDERGROUND STORAGE TANK(S).  
IF NEEDED, AUXILIARY EQUIPMENT, BUILDINGS AND OTHER LANDMARKS.

# ORANGE COUNTY HEALTH CARE AGENCY PUBLIC HEALTH / ENVIRONMENTAL HEALTH

RECEIVED

## PERMIT TO OPERATE

## AUG 31 1997 UNDERGROUND STORAGE TANKS

PERMIT NUMBER 7776-2	NUMBER OF TANKS OPERATED UNDER THIS PERMIT 1	ISSUANCE DATE 08-12-92	EXPIRATION DATE 08-11-97
FACILITY NEWPORT OIL CO 1080 W 17TH ST MESA, CA 92627	OWNER WEST NEWPORT OIL CO 1080 W 17TH ST COSTA MESA, CA 92627	OPERATOR FRED JONES	

## RENEWAL

- underground storage tanks (USTs) located at this facility are permitted to operate under the following conditions are complied with:
- Any changes to the information provided in the UST permit application must be reported, within thirty (30) days, to this Agency.
  - The replacement, repair, or upgrade of all or part of any UST or pipes connected thereto must be reported, and approved by this Agency, prior to the commencement of work.
  - All unauthorized releases must be reported to this Agency within the time limits and according to the manner specified in Title 23, Sections 2650-55 of the California Code Regulations (CCR).
  - Written records, as required by Section 2712(b), of Title 23, CCR, of all monitoring & maintenance performed shall be maintained on-site for a period of at least three (3) years from the date the monitoring was performed. Written records of all monitoring and maintenance performed in the last three (3) years shall be shown to representatives of this Agency upon request during any site inspection.
  - If ownership of the USTs is transferred, the new owner must submit a Transfer of Ownership application to this Agency within thirty (30) days of the change in ownership.
  - This permit is valid for a period of five (5) years from the date of issuance. An application for renewal must be made by the owner of the UST and received by this Agency prior to the expiration of this permit.
  - The USTs must be monitored in accordance with the approved method. This monitoring method is identified below and can be found in Sections 2632 & 2640-48 of Title 23, CCR and Sections 25291 & 25292 of the Health and Safety Code (H&SC).
  - The USTs must be properly closed in accordance with the requirements of Sections 2670-72, of Title 23, CCR and Section 25298 of the H&SC.

Section 25299 of the H&SC states that owners and operators of USTs are liable for civil penalties of not less than Five Hundred Dollars (\$500.00) or more than Five Thousand Dollars (\$5000.00) per day for violating the conditions of the permit or any other provisions of this law or regulations.

## \* \* MONITORING METHOD \* \*

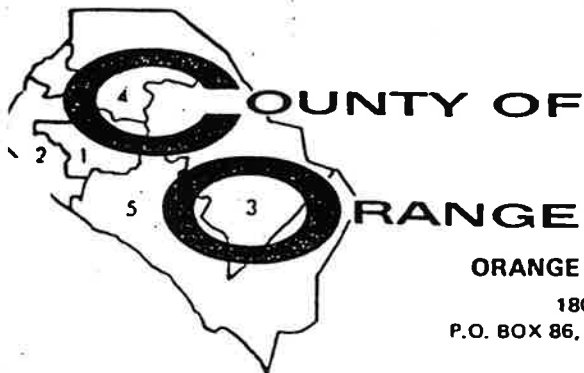
33-NEW DBL WALL TANKS/CONTINUOUS LEAK DETECTORS/DOUBLE WALL PIPING

## UNDERGROUND STORAGE TANK PROGRAM

OFFICE ADDRESS: 2009 E. EDINGER AVE, SANTA ANA, CA 92705

MAILING ADDRESS: P.O. BOX 355, SANTA ANA, CA 92702

TELEPHONE: (714) 667-3700



**ORANGE COUNTY FIRE DEPARTMENT**  
 180 SOUTH WATER STREET  
 P.O. BOX 86, ORANGE, CALIFORNIA 92666-0086  
 (714) 538-3551

**LARRY J. HOLMS**  
 DIRECTOR OF FIRE SERVICES

SERVING THE UNINCORPORATED AREAS OF ORANGE COUNTY AND THE CITIES OF

CYPRESS  
 IRVINE  
 LA PALMA  
 LOS ALAMITOS  
 PLACENTIA  
 SAN JUAN CAPISTRANO  
 SEAL BEACH  
 TUSTIN  
 VILLA PARK  
 YORBA LINDA

# **PERMIT**

Date 7-8-87

Inspection # \_\_\_\_\_

FMZ No. \_\_\_\_\_  
 (For Fire Dept. Use Only)

DBA WEST NEWPORT OIL CO PHONE 631-1100  
 ADDRESS 1070 W. 17th ST.  
 BLDG/SUITE \_\_\_\_\_ CITY NEWPORT BEACH ZIP 92663  
 (COSTA MESA)  
 OWNER/AGENT \_\_\_\_\_ TITLE \_\_\_\_\_  
 EMERGENCY CONTACT 1. \_\_\_\_\_ PHONE \_\_\_\_\_  
 EMERGENCY CONTACT 2. \_\_\_\_\_ PHONE \_\_\_\_\_

STATEMENT: I hereby acknowledge that I have read this application; that information given is correct; and that I am the owner, or the duly authorized agent of the owner. This application does not constitute a permit until it has been approved by the Fire Marshal. All permits or certificates issued shall be presumed to contain the provision that the applicant, his agents and employees shall carry out the proposed activity in compliance with all laws and regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. Any permit or certificate which purports to sanction a violation of any applicable law or regulation shall be void and any approval of plans and specifications in the issuance of such permit shall likewise be void.

**APPLICABLE PERMIT(S)**  
 See back of this form for listing of permit code number(s)

Signature (owner or agent)

Date Signed

7-8-87

**COMMENTS** A site plan of your facility shall be included with this application.

UNDERGROUND STORAGE TANKS REMOVED:

1000 GAL. DIESEL UL D497800

2000 GAL. DIESEL UL 752X104

9,940 GAL. UNLEADED GASOLINE UL 668551

Cleared By: [Signature]

Approved By: [Signature]  
 Fire Marshal

Use print or type. (Form designed for use on elite (12-pitch typewriter).

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CA1001001201284512270</b>		2. Manifest Document No. <b>1</b>		3. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>West Newport Oil Co.</b> <b>P.O. Box 1487 Newport Beach CA 92663</b>				4. State Manifest Document Number <b>87157270</b>					
4. Generator's Phone <b>(714) 631-1100</b>				5. State Generator's ID <b>H1A1H0136011005171</b>					
5. Transporter 1 Company Name <b>Niero Sons Trucking</b>				6. US EPA ID Number <b>CA1708001161116</b>		7. State Transporter's ID <b>802952</b>			
7. Transporter 2 Company Name				8. US EPA ID Number		9. State Transporter's ID <b>7141990-6855</b>			
9. Designated Facility Name and Site Address <b>Dico Oil Company</b> <b>1845 E. Willow St. Signal Hill, CA 90806</b>				10. US EPA ID Number <b>CA1A098017131026</b>		11. State Facility's ID			
						12. Facility's Phone			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers		13. Total Quantity		14. Unit	
				No.		Type		Wt/Vol	
a. <b>WASTE PETROLEUM OIL MIXTURE</b> <b>LIQUID NA 1270 FLAMABLE</b>				01011710101400		61		State <b>221</b>	
b.								EPA/Other	
c.								State	
d.								EPA/Other	
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above		a.		b.	
						c.		d.	
15. Special Handling Instructions and Additional Information <b>ALTERNATE DUMP SITE PRI</b> <b>1835 E 24TH ST</b> <b>CA17080011059</b> <b>SIGNAL HILL, CA 90806</b>									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name <b>TOM McCloskey</b>				Signature <b>Tom McCloskey</b>				Month Day Year <b>07/07/81</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed/Typed Name <b>WALTER G. LEE</b>				Signature <b>Walter G Lee</b>				Month Day Year <b>07/07/81</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature				Month Day Year	
19. Discrepancy Indication Space									
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.									
Printed/Typed Name				Signature				Month Day Year	

**WEST NEWPORT OIL COMPANY**

POST OFFICE BOX 1487  
NEWPORT BEACH, CALIFORNIA 92663

Telephone (714) 631-1100

Nov. 26, 1986

Orange County Environmental Health  
Attn: Sylvia Marson  
P.O. Box 355  
Santa Ana, Ca. 92702

Dear Environmental Health Agent:

Enclosed are four sets of plans for the removal of three underground storage tanks. Also enclosed are four sets of plans for the installation of a new double walled fiberglass underground storage tank. The following provides specific description of our plans.

**REMOVAL SPECIFICATIONS**

- Site and tank specifics are shown on facility plot plan attached
- Disposition of removed tanks
  - 1) 10,000 gallon unleaded gasoline tank and associated piping shall be thoroughly purged as specified, cut up into junk, and scrapped for recycle.
  - 2) 2,000 gallon diesel tank and associated piping shall be thoroughly purged as specified, cut up into junk, and scrapped for recycle.
  - 3) 1,000 gallon diesel tank and associated piping is destined for re-use, for the same service, though above ground. Its new location is to be within 1000 feet of the current one.
- Notification
  - 1) 24 hour advance notice shall be given to Orange County Fire Department (John Moore, Field Inspector, phone #854-0303) prior to removal.
  - 2) 48 hour advance notice shall be given to Environmental Health prior to removal.
- Purging
  - 1) All tanks shall be thoroughly purged with a minimum of 10 pounds dry ice per every 1000 gallon of commodity capacity.

- Soil Testing

- 1) EPA test 8015 and EPA test 8020 shall be conducted on soil samples taken from the excavation of the 10,000 gallon unleaded gasoline tank. Environmental Health staff present shall direct sampling locations. Samples shall be appropriately handled to insure bona fide analyses can be made. A copy of lab results shall be forwarded to Environmental Health.
- 2) EPA test 8015 shall be conducted on soil samples taken from both 2,000 and 1,000 gallon diesel tanks. Environmental Health staff present shall direct sampling locations. Samples shall be appropriately handled to insure bona fide analyses can be made. A copy of lab results shall be forwarded to Environmental Health.

INSTALLATION SPECIFICATIONS

- Installation and monitoring standards are intended to conform with California Administrative Code, Title 23, Subchapter 16, Article 3, Section 2631 and 2632.
- Tank shall be Xerxes double walled type as shown on the attached drawing titled "Tank Dimensions".
- Installation and pressure testing of the tank prior to placing it in service is to be per manufacturer's instructions.
- Attached are site and tank drawings titled "Tank Dimensions", "Plot Plan w/Piping Schematic", "Excavation, Bedding and Backfill Section", "Elevation View", along with a facility orientation plot plan.
- Leak monitoring system shall be a continuous liquid monitoring, annual probe wired to a panel located within 50 feet of the tank pump. See attached brochure.
- Catch basin on fill pipe shall be similar to attached brochure and will be equipped with integral drain valves.
- A monitoring procedure and response plan to an indicated leak in the system is also attached.

Sincerely,  
WEST NEWPORT OIL COMPANY

Tom McCloskey  
Engineer

TMC/dc  
Enclosures

APPROVED  
GRANCE COUNTY HEALTH CARE AGENCY  
WASTE AND HAZARDOUS SECTION  
Date 2/3/87 Plan # 86-708

This approval shall not be construed to permit the violation of any law, nor does it approve the attached brochure and foundation plans. Plans must be resubmitted for approval if any additional changes are made to the application.

In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Telephone (714) 834-8175.

A copy of these approved plans must be available at the site at all times.



EXISTING TANKS  
TO BE REMOVED

- ① - 10,000 gal  
unleaded gasoline
- ② - 2,000 gal.  
diesel
- ③ - 1,000 gal.  
diesel

NEW TANK TO  
BE INSTALLED

- ④ - 10,000 gal.  
unleaded gasoline

ing associated with underground  
storage tanks shall be removed  
and properly disposed of.

ORANGE COUNTY HEALTHCARE AGENCY  
ENVIRONMENTAL HEALTH  
WASTE MANAGEMENT SECTION

Plan Reviewed By

Date

Plan #

This approval shall not be construed to  
permit the violation of any law, nor does it  
prevent further corrections of errors found  
on the plans. Plans must be resubmitted for  
approval if any additional changes are made  
by the applicant.

In addition to this approval, all applicable  
permits required by the local fire department,  
building department, and the Air Quality  
Management District must be obtained.

Underground tank installation, removal, and  
repair inspections are required and must be  
scheduled 48 hours in advance. Telephone  
(714) 834-6175.

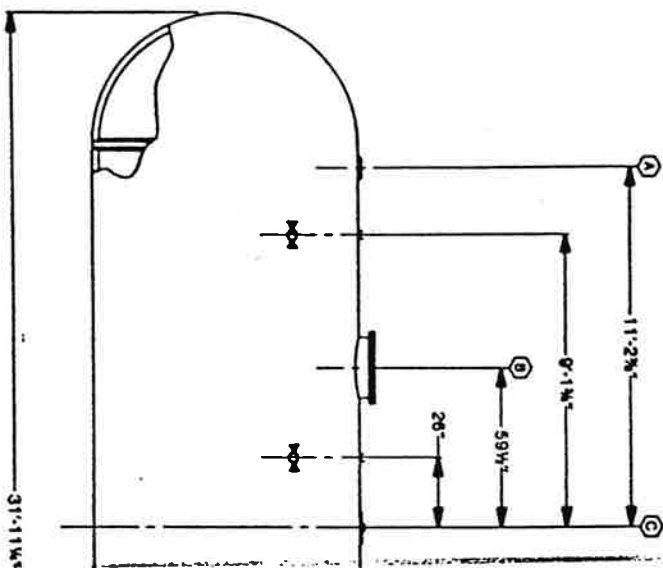
A copy of these approved plans must be  
available at the site at all times.

ing associated with underground  
storage tanks shall be removed  
and properly disposed of.

West Newport Oil Company



8 FT. 10,000 GAL.



**APPROVED**

ORANGE COUNTY HEALTH CARE AGENCY  
ENVIRONMENTAL HEALTH  
WASTE MANAGEMENT SECTION

*dm* *2/3/87* *86-708*  
Plan Reviewed By Date Plan #

This approval shall not be construed to permit the violation of any law, nor does it prevent further corrections of errors found on the plans. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Telephone (714) 834-6175.

A copy of these approved plans must be available at the site at all times.

**SYMBOL IDENTIFICATION**

- ⊙ 6" NPT Monitor/Vent (2" NPT & Plug on Primary Tank)
- ⊙ 22" Diameter Manway with 3 fittings in each cover

**NOTES**

- ⊙ Lift Lug
- \*\*\* Hold down strap location (optional)

**Specification:**

The contractor shall provide Fiberglass Reinforced Plastic (FRP) U.L. labeled underground storage tanks as shown on the drawings. Sizes and fittings shall be as shown. The tanks shall be Century-Cast™ Tanks as manufactured by XERXES CORPORATION.

Tanks shall be tested and installed with pea gravel or crushed stone as specified in the current installation instructions provided with the tank.

CUSTOMER West Newport Oil Co DESTINATION & METHOD

RECOMMENDED SERVICE Unleaded Gasoline

QUANTITY MODEL ACTUAL CAP APPROX. WT. CUST. DRWG. NO.  
7,000 7,000 7,000

NO.	REVISION	DATE

**XERXES CORPORATION**

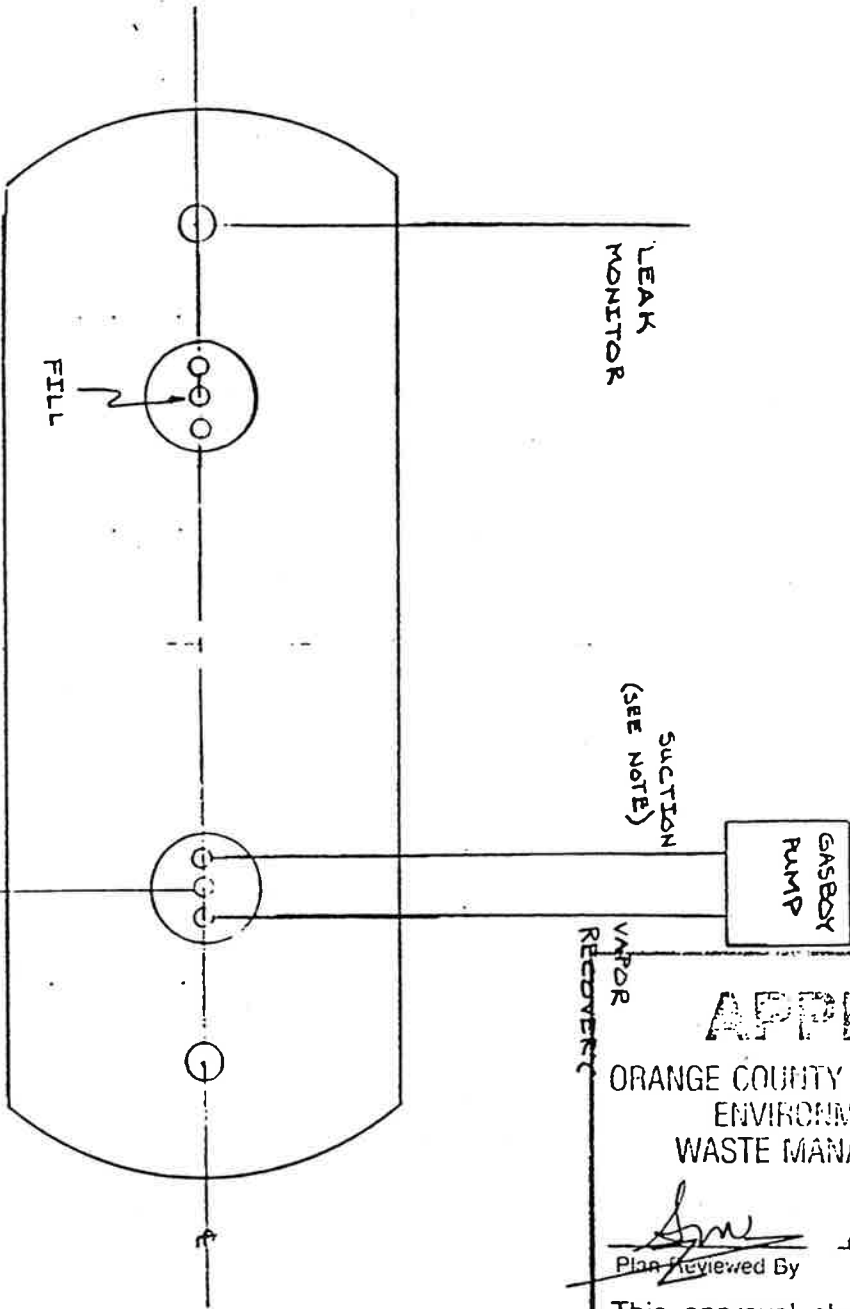
REF:   BY  

ink Dimensions

# WEST NEWPORT OIL COMPANY

## INSTALLATION OF UNDERGROUND STORAGE TANK

### PLOT PLAN W/ PIPING SCHEMATIC



NOTE:  
SUCTION PIPING TO BE 2"  
INSIDE OF 3" WITH SPLIT, CLAMP  
ON ELBO. ANNUALS TO BE  
MI L. EAP MONITORING

VENT w/ CHECK VALVE

**APPROVED**

ORANGE COUNTY HEALTH CARE AGENCY  
ENVIRONMENTAL HEALTH  
WASTE MANAGEMENT SECTION

*[Signature]* 2/3/87 86-708  
Plan Reviewed By Date Plan #

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In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Telephone (714) 831-6175.

A copy of these approved plans must be available at the site at all times.



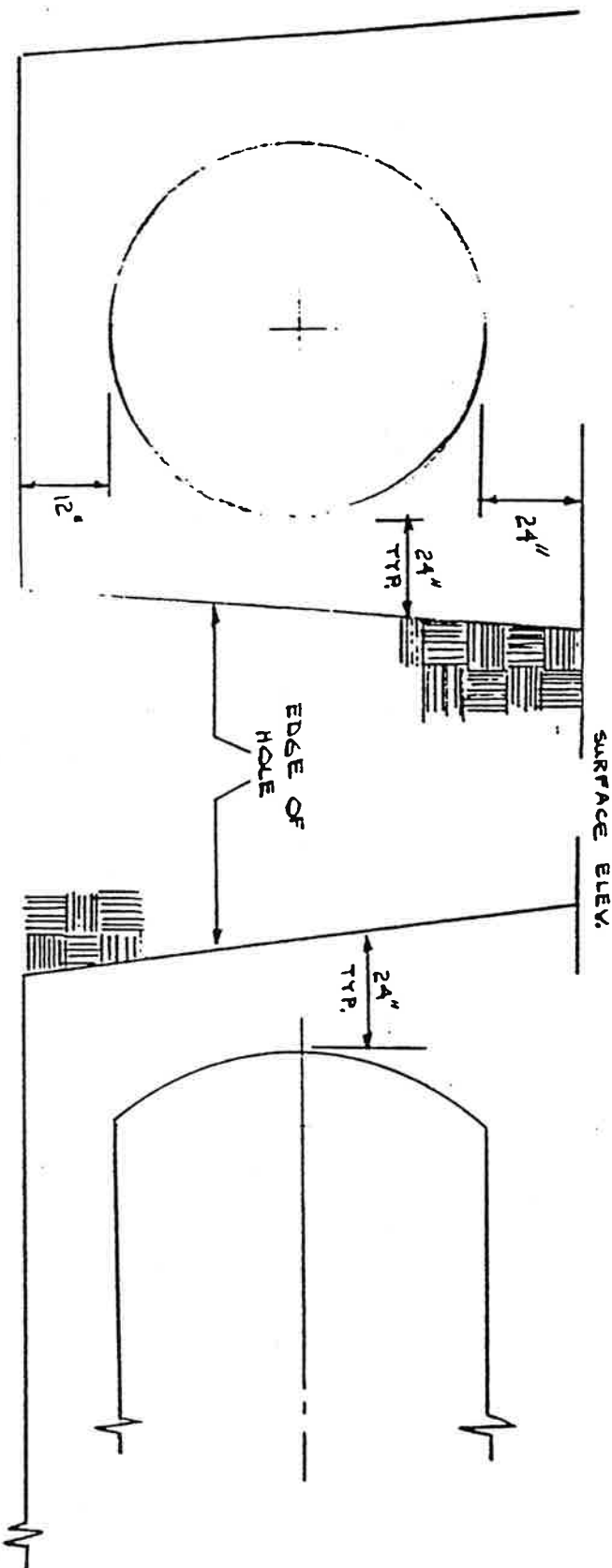
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# WEST NEWPORT OIL COMPANY

## INSTALLATION OF UNDERGROUND STORAGE TANK

### EXCAVATION, BEDDING, AND BACKFILL DETAIL

- TES: 1) BEDDING AND BACKFILL MATERIAL TO BE  
PEA GRAVEL ( $\frac{1}{8}" < \phi < \frac{3}{4}"$ ), BACKFILL TO SURFACE  
2) DIMENSIONS SHOWN ARE MINIMUM, NOT TO SCALE



**APPROVED**

ORANGE COUNTY HEALTH CARE  
ENVIRONMENTAL  
WASTE MANAGEMENT SECTION

Plan Reviewed By Jim Date 2/3/87 Plan # 86-708

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In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Telephone (714) 834-0175.

A copy of these approved plans must be available at the site at all times.

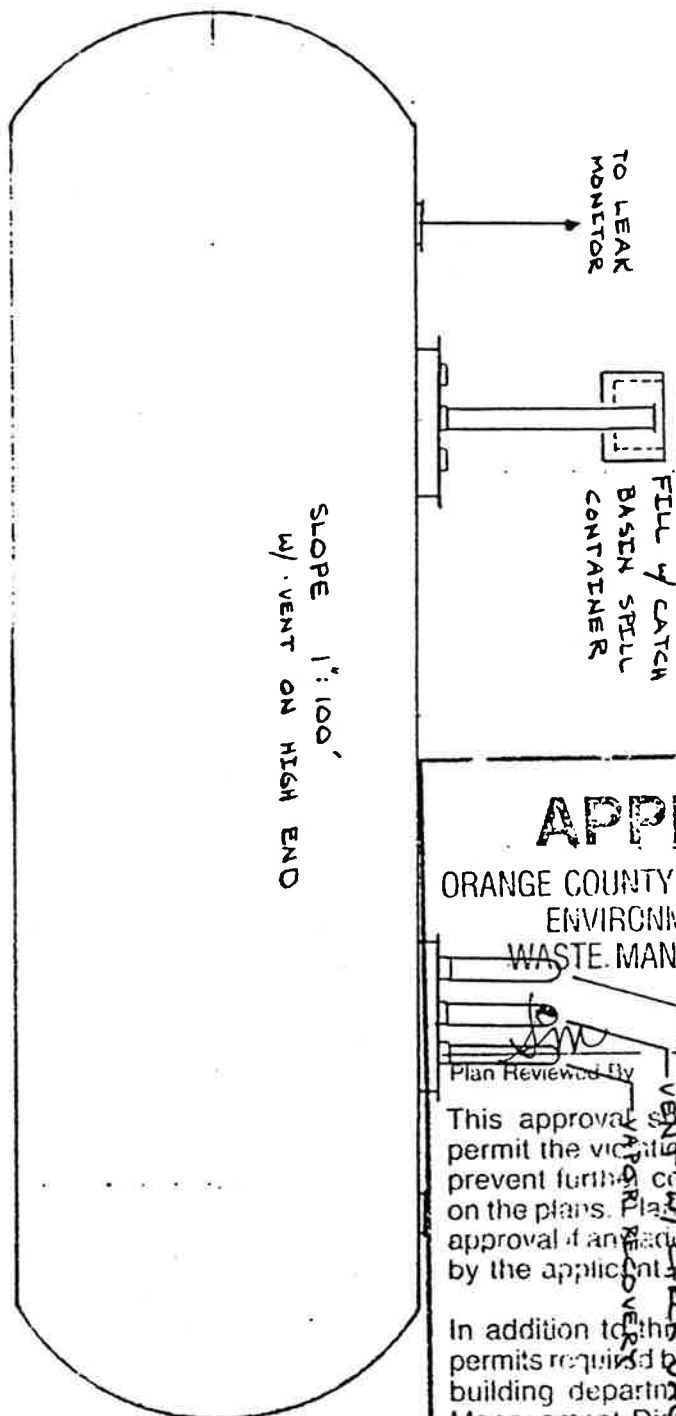
END VIEW

SIDE VIEW

# WEST NEWPORT OIL COMPANY

## INSTALLATION OF UNDERGROUND STORAGE TANK

### ELEVATION VIEW



**APPROVED**

ORANGE COUNTY HEALTH CARE AGENCY  
ENVIRONMENTAL HEALTH  
WASTE MANAGEMENT SECTION

Plan Reviewed By: *[Signature]* Date: 2/3/87 Plan #: 86-708

This approval shall not be construed to permit the violation of any law, nor does it prevent further corrections of errors found on the plans. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair in operations are required and must be scheduled in advance. Telephone (714) 837-3170.

A copy of these approved plans must be available at the site at all times.

Precision Test is required per  
California Safety Code  
Chapter 6.7 Section 291(g)

NOTE:  
SUCTION PIPING TO BE 2"  
INSIDE OF 3" WITH SPLIT,  
CLAMP ON ELBOWS. ANNULUS TO BE  
MONITORED WITH LEAK MONITORING  
PIPE

LOOKING NORTH

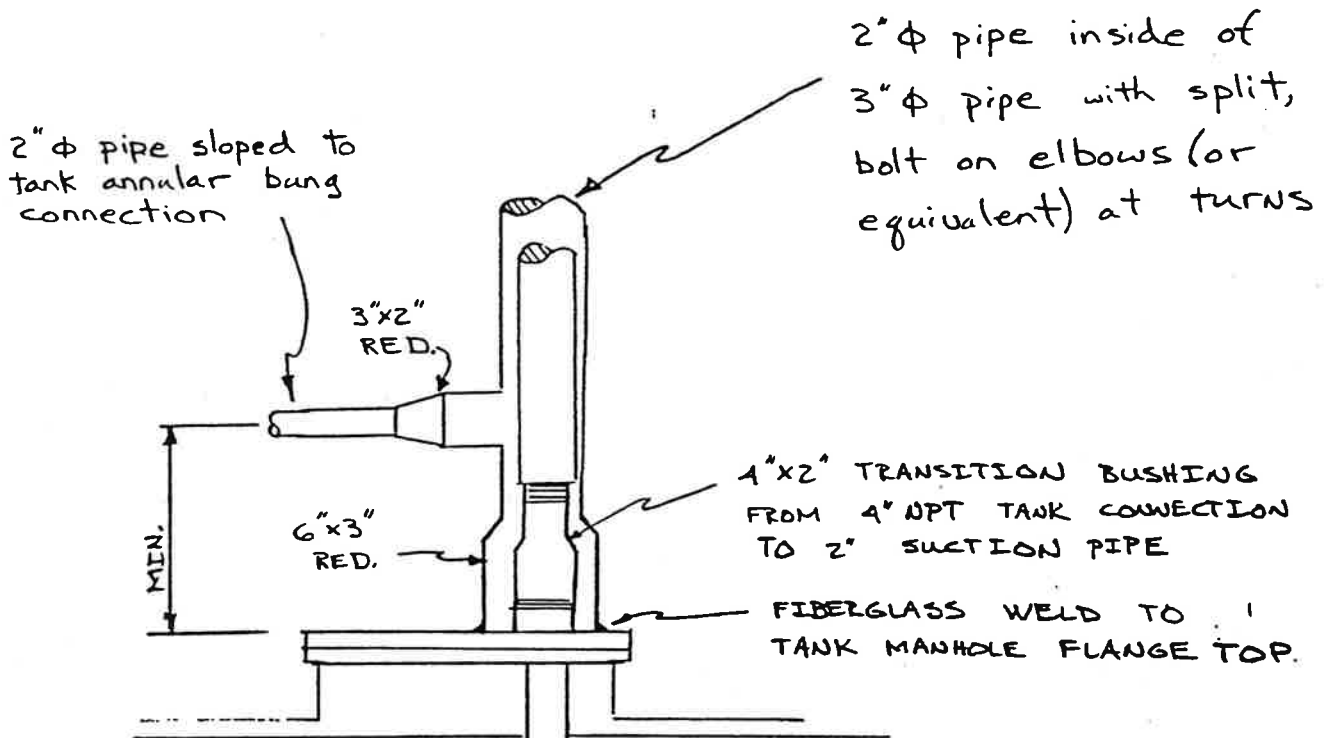
REV

**Monitoring Procedure and Response Plan  
for Indicated Leak in Underground Storage Tank**

- Facility location is operated 24 hours a day, 7 days a week, 52 weeks a year.
- Any leak alert alarm will be spotted within 24 hours of the initial moment of alert by an operator on duty.
- The alarm will be checked for malfunction immediately.
- Should alarm be working correctly, within 24 hours the annular space shall be evacuated with a vacuum type pump available on site. Recovered liquid shall be contained for inspection.
- Environmental Health shall be notified within 24 hours of recovery of liquid and recommended remedial action shall be implemented in a timely manner.
- First groundwater is expected no higher than 75 feet subsurface.

# WEST NEWPORT OIL COMPANY

## Detail of Suction Piping at Tank Connection



**APPROVED**

ORANGE COUNTY HEALTH AGENCY  
WASTE MANAGEMENT SECTION

Reviewed By: San Date: 3/30/87 Plan #: 88-708

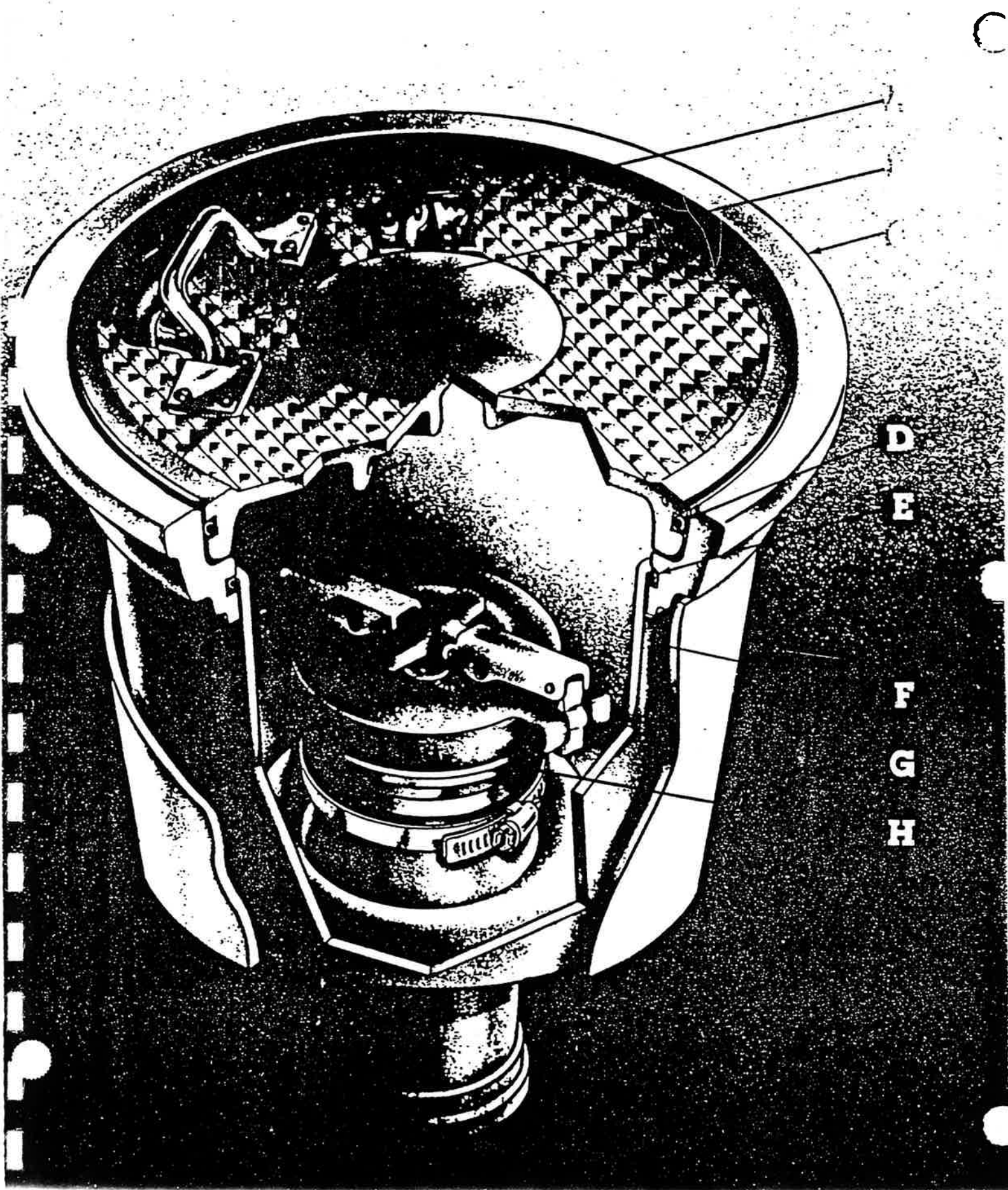
This approval shall not be construed to permit the violation of any law, nor does it prevent further corrections of errors found on the plans. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits required by the local jurisdiction, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Telephone (714) 634-3175.

A copy of these approved plans must be available at the site at all times.

**OPW® 84 Series Spill Container**



D  
E  
  
F  
G  
H



# OPW 84 Series Spill Container

## **A** Sealing Cover

Strong, lightweight corrosion resistant cover is easy to remove and replace. Has integral handle and seal.

## **B** Pop-Up Handle

Lays flat when not in use. When needed, handle pops up so cover can be lifted off easily.

## **C** Body Ring

Strong cast iron, reinforced design, locks into surrounding concrete. Internal surface is specially coated to achieve long seal life.

## **D** Cover Seal

Surface water is prevented from entering container by a unique, large cross-section o-ring seal. Made of an abrasion-resistant, low swell compound, the seal is lubricated for continuous easy sealing. When needed, seal is easily replaced.

## **E** Container Seal

Consistent seal between container and body ring is achieved with a large cross-section o-ring seal.

## **F** Container

Catches petroleum spills. Replaceable container is corrosion-resistant and flexible to accommodate tank shift and installation misalignment. This unique design allows field replacement in the event of damage.

## **G** Concrete Form

All 84 Series Spill Containers are furnished with a fiber board concrete and backfill form. This makes installation easy and allows for simple replacement of the container.

## **H** Riser Seal

This soft, large cross-section seal achieves a liquid tight joint between container and riser. The seal is clamped in place, is easy to install and replace as required.

## **Prevent Groundwater Pollution**

The OPW 84 Series Spill Container is designed to prevent petroleum products from entering the soil near the fill or vapor connections on underground storage tanks, thereby helping to prevent groundwater pollution.

Often, through normal tank filling operations, or in the event of tank overfill, small amounts of petroleum product can be spilled upon disconnect of the delivery fitting. The OPW 84 Spill Container will catch this spillage and prevent it from entering the backfill surrounding the tank.

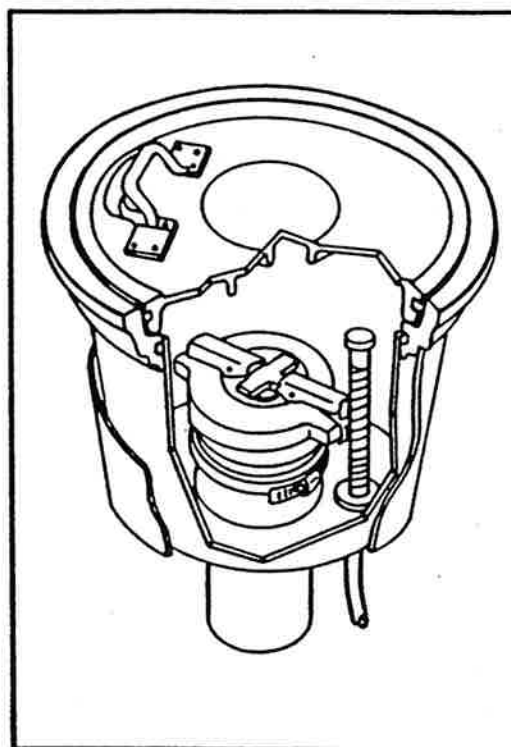
The OPW 84 Spill Container is the first-line of defense against groundwater pollution and also assists the modern petroleum marketer in meeting his objectives of:

- preventing product loss
- preventing costly cleanup procedures
- meeting environmental requirements.

## **OPW 84 D with Drain Valve**

The OPW 84-D is furnished complete with an integral drain valve. This valve can be used to quickly and conveniently drain captured liquid back into the storage tank. The valve is a high flow design for rapid draining, and includes a flexible extender that will not interfere with delivery fittings. The screen, and the entire valve assembly can be removed for cleaning and maintenance. The OPW 84-D is furnished with a drain hose and riser pipe section to adapt to various installation conditions.

(Refer to Installation Instructions H-10511-PA for recommended arrangement).

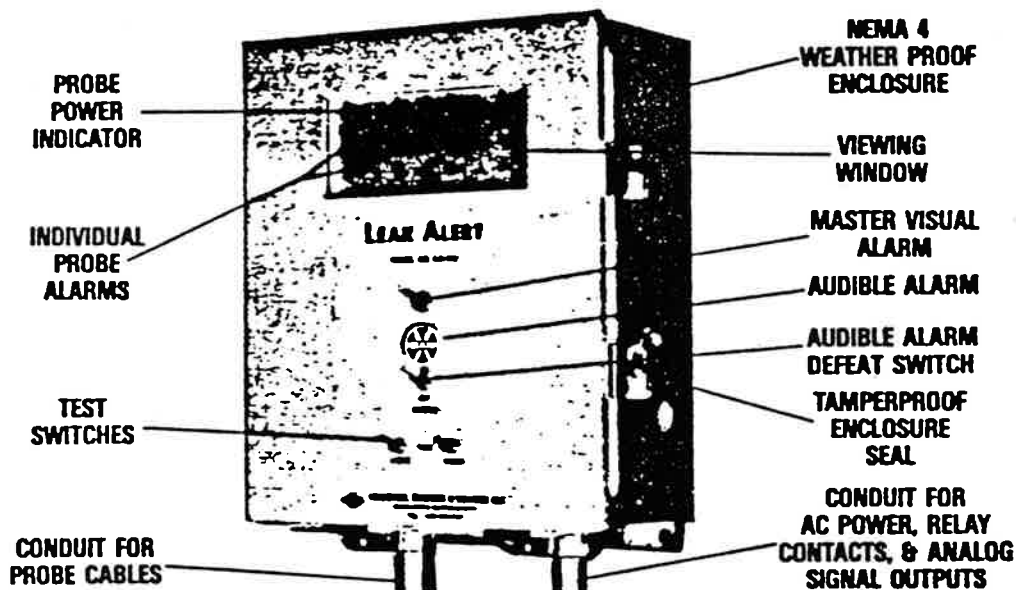




## The Leak Alert System •

Introducing Leak Alert, a highly reliable, state-of-the-art system for continuous monitoring of underground storage tanks. Designed and developed by Universal Sensors & Devices, this exciting but economical new electronic system provides both visual and audible warnings of leaking fluids and/or the vapors often generated by leaking fluids.

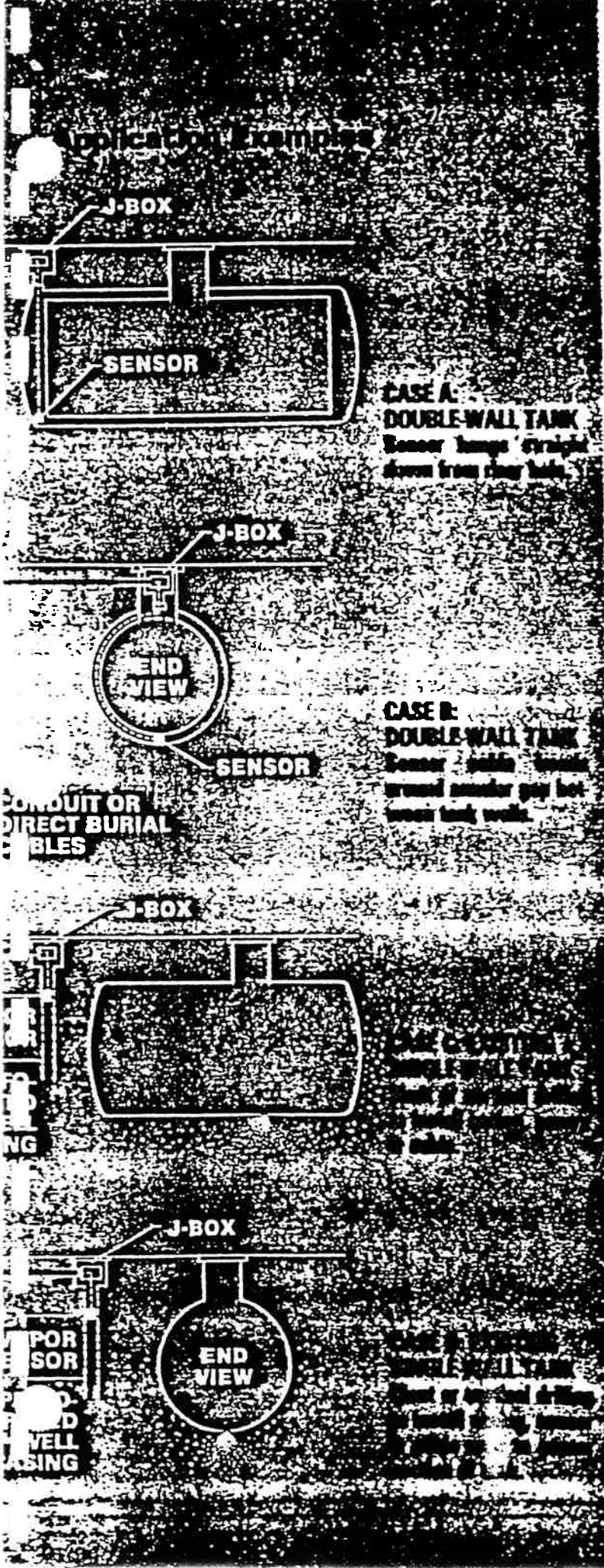
The Leak Alert System offers two types of sensing probes: (1) a thermal element capable of detecting the presence of any liquid, and (2) a metal-oxide-semiconductor (MOS) sensor that recognizes the presence of most combustible and organic gases. A single alarm panel will work simultaneously with both types of sensors — up to 16 channels in all, depending on Leak Alert model selected.



### System Features

- No moving parts; non-corrosive sensor materials for long service life.
- Compact sensing probes with flexible cables; operate in double-walled steel or FRP tanks, wet or vadose zone monitoring wells.
- Simple installation; probe can easily be removed for inspection or calibration.
- Models available to monitor up to 4, 8 or 16 sensors per alarm panel.
- Field adjustable alarm set-point for background vapor screening.
- Built-in audio & visual alarms.
- Auxiliary relay output for remote alarm, phone dialer, or pump shutdown applications.
- Optional analog output for recording or control instrumentation.

• The Leak Alert Systems have been approved for use by the Electrical Testing Laboratory, Department of Building and Safety,



# Specifications

Alarm Panel Box	NEMA Type 4 enclosure, for indoor & out door applications.
Power Requirements	115 vac $\pm$ 10 vac @ 60 Hz. power supply.
Power Consumption	2 watts per channel, maximum.
Audible Alarm	75 dB at 100 cm.
Relay Contact	SPDT, 5 amps, 125 vac.
Visual Alarms	Bright red indicators for both overall & individual alarms.
Safety Barrier	Intrinsically safe interface between sensors & electronic control panel.
Sensor Cable	No. 22 AWG, stranded, with PVC jacket.
Home Run Cable	No. 18 AWG, 4-conductor, direct burial or conduit type.
Location	Sensors designed to meet Class I, Division I, Groups C&D. Alarm panel to be located in non-hazardous area.



Available sensors include a gas-detecting metal-oxide-semiconductor (left) and a liquid-sensing thermal element (right).

9-17-87

Phone call w/ Brad Forslund

Orange County  
Hazardous Waste Specialist

said results from analysis dated 8-31-87  
indicate the soil sampled is clean and  
the area can be back filled.

Jon McCloskey  
9/17/87

COUNTY OF ORANGE/HEALTH CARE AGENCY  
ENVIRONMENTAL HEALTH (714) 834-8020  
1725 WEST 17TH STREET, P.O. BOX 355  
SANTA ANA, CA 92702  
WASTE MANAGEMENT SECTION

42515

CHAIN OF CUSTODY

ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.

EASE WRITE LEGIBLY.

ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.

TO BE COMPLETED BY LABORATORY ANALYST

AB NO.: IT # 42515  
DATE RECEIVED: 8/20/87  
SAMPLE(S) CONDITION (PLEASE CHECK):  
CHILLED: ☒ COUNTY SEAL(S) INTACT: ☒  
CONTAINER IN GOOD CONDITION: ☒  
DATE ANALYSIS COMPLETED: 8-26-87  
ANALYST: Thomas Palmer

5. TO BE COMPLETED BY SAMPLE COLLECTOR

SAMPLE LOCATION: 1080 W. 17TH ST.  
ALCANTARA  
DATE OF COLLECTION: 8/20/87  
SAMPLE COLLECTOR: BRAD FISZON  
TELEPHONE NO.: (714) 834-6648

SAMPLE INFORMATION

LE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS
<u>C-1</u>	<u>8015</u>	<u>CRACK SAND; REMOVED IF TPH IS 7100 ppm</u> <u>TOTAL REM 8020</u>

CHAIN OF CUSTODY

1. <u>Brad Fiszon</u>	<u>HAZ. WASTE SPEC.</u>	<u>8/20/87 - 8/20/87</u>
SIGNATURE	TITLE	INCLUSIVE DATES
2. <u>Tom McCleary</u>	<u>Engineer - WNOX</u>	<u>8/20/87 - 8/20/87</u>
SIGNATURE	TITLE	INCLUSIVE DATES
3. <u>Patty Snyder</u>	<u>Sample Control Ass't</u>	<u>8/20/87 - 8/20/87</u>
SIGNATURE	TITLE	INCLUSIVE DATES
4. <u>Thomas Palmer</u>	<u>Chemist</u>	<u>8/20/87 - 9/8/87</u>
SIGNATURE	TITLE	INCLUSIVE DATES
5. <u>C. Peter Smith</u>	<u>Sample Control</u>	<u>9-8-87</u>
SIGNATURE	TITLE	INCLUSIVE DATES
6. _____	_____	_____
SIGNATURE	TITLE	INCLUSIVE DATES



## CERTIFICATE OF ANALYSIS

Prepared for: West Newport Oil Company  
P.O. Box 1487  
Newport Beach, CA 92663

Date: August 31, 1987

Attn: Tom McCloskey

Date Received: August 20, 1987 P.O. Number Verbal-Tom McCloskey Job Number 42515/dan

One (1) soil sample labeled: "TC-1"

The sample was extracted with hexane and analyzed for high boiling point volatile petroleum hydrocarbons on a Varian model 3700 gas chromatograph equipped with a flame ionization detector. Diesel fuel was used as the calibration standard. The results are listed below.

Sample ID

TC-1

Micrograms Per Gram

High Boiling Point Volatile Petroleum Hydrocarbons

ND<10

VD - This compound was not detected; the limit of detection for this analysis is the amount stated in the table above.

I certify that this report truly represents the finding of  
performed by me or under my direct supervision.

*Thomas Robinson*  
Thomas Robinson  
Chemist

Reviewed and Approved

*Patricia M. Chapman*  
Patricia M. Chapman  
Group Leader



# COUNTY OF ORANGE

## HEALTH CARE AGENCY

TOM URAM  
DIRECTOR

L. REX EHRLING, M.D.  
HEALTH OFFICER

1725 WEST 17TH STREET  
SANTA ANA, CA 92706

TELEPHONE: 714/834-7601

MAILING ADDRESS: P.O. BOX 355  
SANTA ANA, CA 92702

### PUBLIC HEALTH AND MEDICAL SERVICES

#### ENVIRONMENTAL HEALTH

#### APPLICATION FOR:

(CHECK ONE)



PERMIT TO OPERATE  
(COMPLETE PAGE 1 & 2)

DATE 9/29/30



FACILITY MODIFICATION  
(COMPLETE PAGE 1)

#### FACILITY INFORMATION

NAME West Newport Oil Company

STREET ADDRESS 1080 W. 17<sup>th</sup> St.

CITY Costa Mesa

NUMBER OF TANKS  
AT THIS LOCATION 3

TYPE OF BUSINESS After Removal

☐ GASOLINE STATION  
☐ FARM  
☐ GOVERNMENT  
☒ OTHER

FEET TO FIRST GROUNDWATER 100 FT.

#### TYPE OF CONSTRUCTION

INDICATE NO. OF TANK(S)

1 INSTALLATION(S)

       REPAIR(S)/RELINING(S)

3 CLOSURE(S) (REMOVAL(S))

       SYSTEM MODIFICATION (E.G., REPIPE)

       OTHER (SPECIFY)       

#### OWNER

NAME (CORP., INDIVIDUAL, PUBLIC AGENCY)

West Newport Oil Company

STREET ADDRESS 1080 W. 17<sup>th</sup> St.

MAILING ADDRESS P.O. Box 1487

CITY Newport Beach

STATE California ZIP 92663

PHONE NO. 714 631-1100

#### 24 HOUR EMERGENCY CONTACT PERSON

DAYS F.L. Jones 714 631-1100  
NAME TELEPHONE

NIGHTS F.L. Jones 714 548-6628  
NAME TELEPHONE

#### APPLICANT

NAME Tom McCloskey  
PLEASE PRINT

SIGNATURE Tom McCloskey

COMPANY NAME West Newport Oil Co.

PHONE NO. 714 631-1100

#### FACILITY OPERATOR (CONTACT PERSON)

NAME F.L. Jones

BUSINESS PHONE NO. 714 631-1100

NEW INSTALLATIONS, CLOSURES, REPAIRS AND SYSTEM MODIFICATIONS OF UNDERGROUND STORAGE TANKS REQUIRE THE SUBMITTAL OF (4) SETS OF PLANS TO THIS DIVISION. THESE PLANS MUST BE APPROVED PRIOR TO THE INITIATION OF ANY CONSTRUCTION OR MODIFICATION.

#### OFFICE USE ONLY

PERMIT NO.        APPROVAL DATE 2/3/87 BY Jim

CHECK NO. 810-708 FEES: PLAN CHECK        EMPLOYEE NO. 122

TANK I. D.		#1	#2	#3	#4
MOTOR VEHICLE FUEL. PLEASE SPECIFY THE GRADE	PROPOSED	unleaded			
	CURRENTLY				
CAS NO. (IF TRADE SECRET, PLEASE STATE)					
TYPE (TANK, SUMP, OTHERS)		tank			
DOUBLE WALL/SINGLE WALL		double wall			
YEAR MANUFACTURED/INSTALLED		1986/1986			
VAULTED/NOT VAULTED		N.V.			
PRIMARY	MANUFACTURER	Xerxes			
	CAPACITY (GALLON)	10,000			
	CONSTRUCTION MATERIAL	fiberglass			
	THICKNESS (UNITS)				
	LINING/COATING (EXTERIOR/INTERIOR)				
SECONDARY	MANUFACTURER	Xerxes			
	CAPACITY (GALLON)				
	CONSTRUCTION MATERIAL	f.g.			
	THICKNESS (UNITS)				
	LINING/COATING (EXTERIOR/INTERIOR)				
TYPE OF LEAK DETECTION AND MANUFACTURER		LEAK ALERT BY universal			
LOCATION (UNDER/ABOVE GROUND)		under ground			
SUCTION/PRESSURE GRAVITY/UNKNOWN		suction			
PRIMARY	CONSTRUCTION MATERIAL	carbon steel			
	MANUFACTURER				
SECONDARY	CONSTRUCTION MATERIAL	f.g.			
	MANUFACTURER				
TYPE OF LEAK DETECTION AND MANUFACTURER		N.A. head short			
OVERFILL/SPILL CONTAINMENT, PROTECTION (TYPE)		catch basin w/ integral drain	OPW #81 + ball check		
FOR TANKS INSTALLED PRIOR TO 1/1/84 SPECIFY THE MONITORING SYSTEM		—			

ATTACH A DIAGRAM (8 1/2" X 11") INCLUDE THE LOCATIONS OF THE UNDERGROUND STORAGE TANK(S),  
PIPEING, AUXILIARY EQUIPMENT, BUILDINGS AND OTHER LANDMARKS.



# ORANGE COUNTY HEALTH CARE AGENCY PUBLIC HEALTH / ENVIRONMENTAL HEALTH

RECEIVED

## PERMIT TO OPERATE

AUG 31 1992

## UNDERGROUND STORAGE TANKS

11 NUMBER 7776-2	NUMBER OF TANKS OPERATED UNDER THIS PERMIT 1	ISSUANCE DATE 08-12-92	EXPIRATION DATE 08-11-97
FACILITY NEWPORT OIL CO 300 W 17TH ST SANTA MESA, CA 92627		OWNER WEST NEWPORT OIL CO 1000 W 17TH ST COSTA MESA, CA 92627	OPERATOR FRED JONES

## RENEWAL

- underground storage tanks (USTs) located at this facility are permitted to operate provided the following conditions are complied with:
- Any changes to the information provided in the UST permit application must be reported, within thirty (30) days, to this Agency.
  - The replacement, repair, or upgrade of all or part of any UST or pipes connected thereto must be reported, and approved by this Agency, prior to the commencement of work.
  - All unauthorized releases must be reported to this Agency within the time limits and according to the manner specified in Title 23, Sections 2650-55 of the California Code Regulations (CCR).
  - Written records, as required by Section 2712(b), of Title 23, CCR, of all monitoring & maintenance performed shall be maintained on-site for a period of at least three (3) years from the date the monitoring was performed. Written records of all monitoring and maintenance performed in the last three (3) years shall be shown to representatives of this Agency upon request during any site inspection.
  - If ownership of the USTs is transferred, the new owner must submit a Transfer of Ownership application to this Agency within thirty (30) days of the change in ownership.
  - This permit is valid for a period of five (5) years from the date of issuance. An application for renewal must be made by the owner of the UST and received by this Agency prior to the expiration of this permit.
  - The USTs must be monitored in accordance with the approved method. This monitoring method is identified below and can be found in Sections 2632 & 2640-48 of Title 23, CCR and Sections 25291 & 25292 of the Health and Safety Code (H&SC).
  - The USTs must be properly closed in accordance with the requirements of Sections 2670-72, of Title 23, CCR and Section 25298 of the H&SC.

Section 25299 of the H&SC states that owners and operators of USTs are liable for civil penalties of not less than Five Hundred Dollars (\$500.00) or more than Five Thousand Dollars (\$5,000.00) per day for violating the conditions of the permit or any other provisions of state law or regulations.

## \* \* MONITORING METHOD \* \*

- 33-NEW DBL WALL TANKS/CONTINUOUS LEAK DETECTORS/DOUBLE WALL PIPING

## UNDERGROUND STORAGE TANK PROGRAM

OFFICE ADDRESS: 2009 E. EDINGER AVE, SANTA ANA, CA 92705

MAILING ADDRESS: P.O. BOX 355, SANTA ANA, CA 92702

TELEPHONE: (714) 667-3700





# COUNTY OF ORANGE

ORANGE COUNTY FIRE DEPARTMENT  
180 SOUTH WATER STREET  
P.O. BOX 86, ORANGE, CALIFORNIA 92666-0086  
(714) 538-3551

LARRY J. HOLMS  
DIRECTOR OF FIRE SERVICES

SERVING THE UNINCORPORATED AREAS OF  
OF ORANGE COUNTY AND THE CITIES OF

CYPRESS  
IRVINE  
LA PALMA  
LOS ALAMITOS  
PLACENTIA  
SAN JUAN CAPISTRANO  
SEAL BEACH  
TUSTIN  
VILLA PARK  
YORBA LINDA

## PERMIT

Date 7-8-87

Inspection # \_\_\_\_\_

FMZ No. \_\_\_\_\_  
(For Fire Dept. Use Only)

DBA WEST NEWPORT OIL CO PHONE 631-1100

ADDRESS 1070 W. 17th ST.

BLDG/SUITE \_\_\_\_\_ CITY NEWPORT BEACH ZIP 92663  
(COSTA MESA)

OWNER/AGENT \_\_\_\_\_ TITLE \_\_\_\_\_

EMERGENCY CONTACT 1. \_\_\_\_\_ PHONE \_\_\_\_\_

EMERGENCY CONTACT 2. \_\_\_\_\_ PHONE \_\_\_\_\_

STATEMENT: I hereby acknowledge that I have read this application; that the information given is correct; and that I am the owner, or the duly authorized agent of the owner. This application does not constitute a permit until it has been approved by the Fire Marshal. All permits or certificates issued shall be presumed to contain the provision that the applicant, his agents and employees shall carry out the proposed activity in compliance with all laws and regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. Any permit or certificate which purports to sanction a violation of any applicable law or regulation shall be void and any approval of plans and specifications in the issuance of such permit shall likewise be void.

Signature (owner or agent)

*Jim McClure*

Date Signed

7-8-87

### APPLICABLE PERMIT(S)

See back of this form for listing of permit code number(s)

A site plan of your facility shall be included with this application.

### COMMENTS

UNDERGROUND STORAGE TANKS REMOVED:

1000 GAL. DIESEL UL D497800

2000 GAL. DIESEL UL 752X104

9,940 GAL. UNLEADED GASOLINE UL 6668551

Cleared By: Don W. Stue Approved By: Don W. Stue

Fire Marshal

Please print or type. (Form designed for use on elite (12-pitch typewriter).

UNIFORM HAZARDOUS  
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest  
Document No.2. Page 1  
of 1Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

A. State Manifest Document Number

4. Generator's Phone

B. State Generator's ID

5. Transporter 1 Company Name

6. US EPA ID Number

C. State Transporter's ID

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity14.  
Unit  
Wt/Vol

1. Waste No.

a. WASTE Petroleum Oil Mixture  
LIQUID NA 1270 FLAMABLE

0011710101400 GA

State 221

EPA/Other

b. State

EPA/Other

c. State

EPA/Other

d. State

EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information

ALTERNATE DUMP SITE PRI  
1835 E 24TH ST  
CA 95806  
SIGNAL HILL, CA 90806

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Signature

Month Day Year

Tom McCloskey

Tom McCloskey

07/07/81

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

WALTER G. LEE

Walter G Lee

07/07/81

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

GENERATOR  
TRANSPORTER  
ACI