

# Health Consultation

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Site Visit Report

DIAMOND HEAD OIL REFINERY DIVISION

KEARNY, HUDSON COUNTY, NEW JERSEY

EPA FACILITY ID: NJD092226000

MAY 11, 2001

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Agency for Toxic Substances and Disease Registry  
Division of Health Assessment and Consultation  
Atlanta, Georgia 30333

## **Health Consultation: A Note of Explanation**

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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# HEALTH CONSULTATION

## Site Visit Report

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KEARNY, HUDSON COUNTY, NEW JERSEY

EPA FACILITY ID: NJD092226000

### Prepared by:

New Jersey Department of Health and Senior Services  
Hazardous Site Health Evaluation Program  
Consumer and Environmental Health Services  
Division of Epidemiology, Environmental and Occupational Health  
Under a Cooperative Agreement with the  
Agency For Toxic Substances and Disease Registry

## Statement of Issues

The US Environmental Protection Agency (USEPA) proposed the addition of the Diamond Head Oil Refinery Division (DHO) site, Kearny, New Jersey to the National Priority List (NPL) on July 27, 2000. The New Jersey Department of Health and Senior Services (NJDHSS) and the Agency for Toxic Substances and Disease Registry (ATSDR) conducted a visit at the DHO site to perform an initial evaluation of the potential for human exposure pathways associated with the site, and to determine whether an immediate public health threat exists.

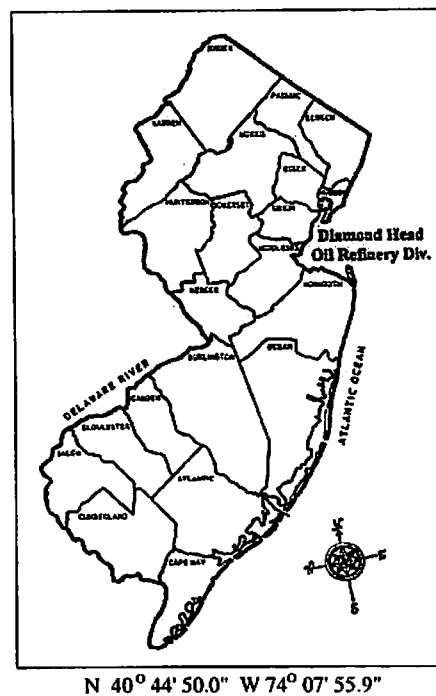
## Site Location

The Diamond Head Oil Refinery Division site is located at 1401 Harrison Turnpike, Kearny, Hudson County, New Jersey (inset and Figure 1). The DHO site is situated on approximately 15 acres, and located in an industrial area of Hudson County. The site is bounded by Harrison Avenue to the north; entrance ramp M of Interstate 280 (I-280) to the east; and I-280 to the south (Figure 2). Along the western border of the site is a business known as the Campbell Distribution Foundry. The directions to the site are listed in Appendix A.

## Background

The DHO site is currently inactive. The site consists of wetland areas, drainage ditches, several small ponds, and the remains of an old oil refinery operation. The remaining on-site structures consist of building foundations and the concrete pads of two former storage tanks. Also present on the site are various types of construction debris.

The Diamond Head Oil Refining Company, Inc. operated an oil reprocessing facility on the site from 1946 until November 1, 1973. From 1973 until November 3, 1976, another owner (PSC Resources), continued the reprocessing operation under the same site name. The site was purchased in 1976 by the Ag-Met Oil Service, Inc. The Ag-Met Oil Service changed its name to Newtown Refining Corporation, but continued with the business involving the collection, refining, and recycling of liquid oily waste into fuel oil and lubricants. In January 1985, Newtown Refining Corporation sold the DHO site to Mimi Urban Development Corporation. On August 23, 1985 Mimi Urban Development Corporation changed its name to Hudson Meadows Urban Development Corporation (HMURDC), the present owner of the site.



During the years of its operation the DHO facility used two large aboveground pits (and possibly underground tanks) to store waste oil on the site. According to the USEPA, the DHO intermittently dumped these stored wastes directly on the ground in several nearby areas. This dumping also created an "oil lake" in the wetland area to the south of the site.

The New Jersey Department of Transportation (NJDOT) acquired the property just south of the DHO site in 1968 for the construction of Interstate -280. According to the USEPA (Hazard Ranking Report) as the NJDOT began construction of I-280, it was necessary to remove 9 million gallons of oil-contaminated water and 5 to 6 million cubic yards of oil sludge from the on-site disposal pits. The NJDOT also reported that during the construction of the highway they found an "underground lake", presumably free product floating upon groundwater. This "underground lake" was found to extend to the eastern limits of the NJDOT right-of-way approaching Frank's Creek to the west.

Although the DHO site was closed in 1979, it was not completely fenced until 1982. During this period, available information indicates that dumping of waste oils and other debris continued to occur at the site. In May 1982, the Eastern Chemical Cleaning Company was hired to remediate the site. About 7,500 gallons of liquid waste were removed from the on-site storage tanks. In addition, 27 tons of contaminated soil were removed. Contaminated materials were reportedly disposed of at an off-site location.

Several environmental investigations have been conducted at the site. Preliminary sampling was performed by the New Jersey Department of Environmental Protection (NJDEP) in 1979. Between 1979 and 1991, the U.S. Environmental Protection Agency (USEPA) has conducted environmental delineation at the site.

Most recently, an Expanded Site Inspection (ESI) was conducted in December 1999 by the USEPA through the environmental contractor, Roy F. Weston Inc. In the 1999 ESI, surface and subsurface soils, and groundwater samples were collected throughout the site. In addition, the USEPA collected sediment samples from the on-site wetland and pond areas, as well as the wetland areas along the southern border of the site.

## **Discussion**

### **Observations**

On February 15, 2001, James Pasqualo, J. J. Winegar, Steve Miller and Stella Manchun Tsai of the New Jersey Department of Health and Senior Services (NJDHSS) conducted a site visit. The NJDHSS staff were accompanied by the USEPA's Remedial Project Manager Grisell Diaz-Cotto and the ATSDR Regional Representatives, Tom Mignone and Chris Agnew.

Weather conditions at the time of the inspection were sunny and the temperature was approximately 45 degrees F, with winds from the west at 10 - 20 mph. The following observations were made during the site visit:

- The site is located in a remote industrial area near the entrance to the New Jersey Turnpike (exit 15W) and Route 280 West. The Campbell Distribution Foundry is located west of the site. All other areas of the site are surrounded by county roads and highways. No residential buildings were observed within 1 mile of the site.
- The site is currently inactive with a locked gate. A chain-link fence was installed to prevent trespassers from walking on the site. However, a section of missing fence was observed along the east side of the property (Figure 3). This section of fence was apparently removed to facilitate access by machinery associated with remedial activities. There was no indication of unauthorized access to the site.
- The site is highly vegetated with extensive wetland areas, several small ponds at the southern edge of the property, a landfill to the west of the property, and the foundations of previous buildings and oil tanks from previous operations. Drum carcasses and various types of construction debris were observed on-site at different locations (Figure 4).
- An apparent petrochemical sheen was observed on one of the small ponds (Figure 5).
- A pile of road work debris was dumped near the entrance to the site (Figure 6).

### **Potentially Sensitive Populations**

Based upon observation and available information, there are no potentially sensitive populations associated with the Diamond Head Oil site.

### **On-Site Hazards**

Chemical hazards associated with the DHO site require standard level D protection, precluding direct contact with contaminated soils.

Physical hazards are a concern at the DHO site; the site contains sharp metal objects, holes, and debris.

There were no observed or reported biological hazards associated with the site. However, mosquitos and ticks may be present during warmer weather. Similarly, there are no reported radiological hazards associated with the site.

## **Exposure Assessment**

According to the USEPA Expanded Site Inspection (December 1999), the environmental media at the site, including soils, sediments and groundwater, are contaminated. The contaminants include polychlorinated biphenyls (PCBs), pesticides, volatile organic compounds (VOCs), semi-VOCs and heavy metals, and are present at levels of potential health concern. Environmental/ecological threats to surface water were also suggested. However, no known drinking water intakes are located in any surface waters within 15 miles downstream of the site. In addition, commercial fishing is prohibited in nearby surface waters (USEPA, 1991). Recreational fishing does not occur in the region of the site.

The DHO site is located in a very remote industrial area. It is very unlikely that anyone ventures onto this property, and no signs of on-site trespassing were observed during the site visit. Notwithstanding the documented contamination of environmental media, based upon available information, human exposure pathways are unlikely to be associated with this site.

## **Conclusions**

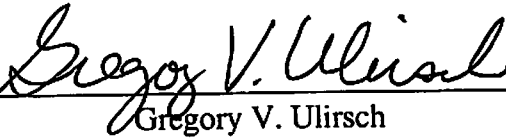
1. The DHO site does not currently present an immediate threat to public health.
2. Potential/completed human exposure pathways are unlikely to exist under the current land use conditions.

## **Recommendations**

1. A full review of available site data and information through the public health assessment process is indicated to verify the absence of human exposure pathways and community concerns.
2. The perimeter fence should be restored to discourage potential site access.
3. Future changes in land use may create human exposure pathways related to the contaminants on-site; therefore, an additional evaluation may be required if land use or conditions at the site change.

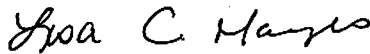
## Certification

This Health Consultation was prepared by the New Jersey Department of Health and Senior Services (NJDHSS) under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was begun.

  
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Gregory V. Ulirsch  
Technical Project Officer  
Superfund Site Assessment Branch (SSAB)  
Division of Health Assessment and Consultation (DHAC)  
ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.

  
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for Richard E. Gillig  
Chief, SSAB, DHAC  
ATSDR



### **Information Sources**

USEPA 2000, Hazard Ranking System Documentation Package, Diamond Head Oil Refinery Div., Kearny, Hudson County, New Jersey, July 2000, prepared by Roy F. Weston Inc.

USEPA 1991, Final Draft, Site Inspection Report, Diamond Head Oil Refinery Div.,Kearny, Hudson County, New Jersey, December 31, 1991, prepared by Halliburton NUS Environmental Corporation.

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## **Appendix A**

**Diamond Head Oil  
1401 Harrison Turnpike  
Kearny, Hudson County, New Jersey**

### **Directions**

**New Jersey Turnpike to Exit 15 W.**

**After toll booths, follow the sign to Kearny and proceed west on the Harrison Turnpike.**

**The entrance to the site is located approximately 100 yards down the road on the lefthand side.**

## **Appendix B**

### **Contact List**

#### **New Jersey Department of Health and Senior Services**

**James Pasquale**Project Manager(609) 633 - 2043

**Sharon Kubiak**Health Educator

**Stella Man-Chun Tsai**Health Assessor

**Steven M. Miller**Environmental Scientist

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#### **Agency For Toxic Substances and Disease Registry**

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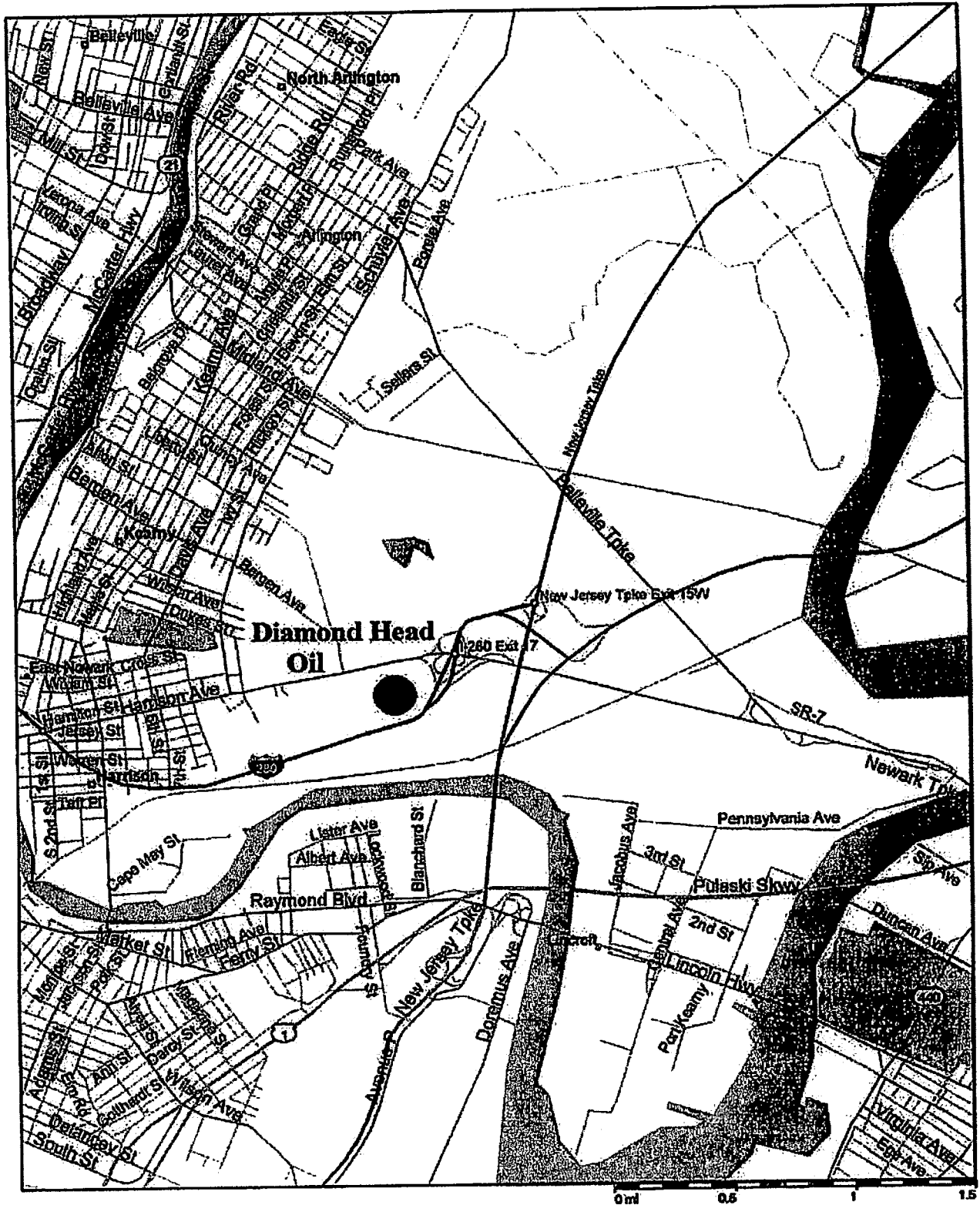


Figure 1 - Diamond Head Oil, general site location.

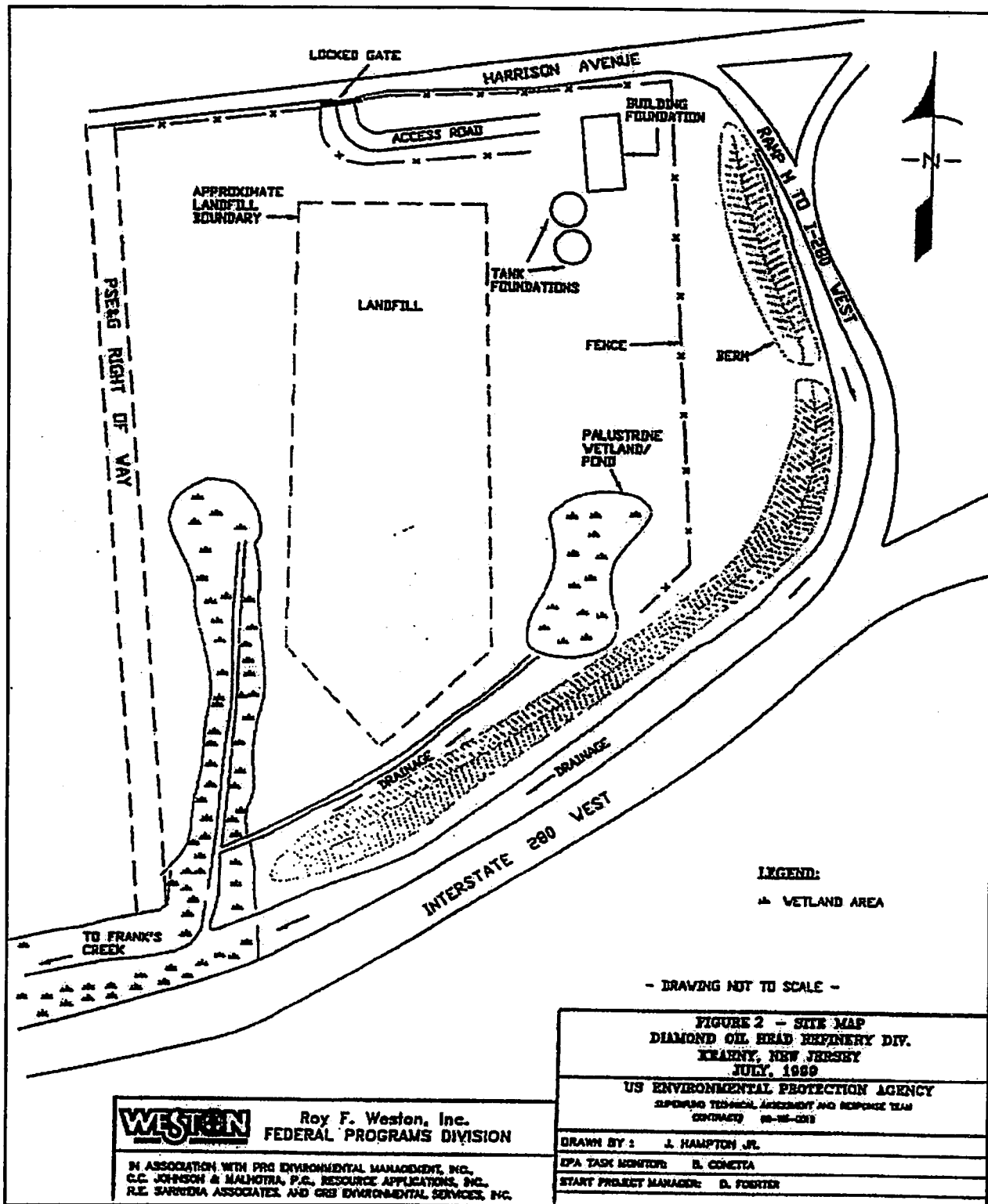
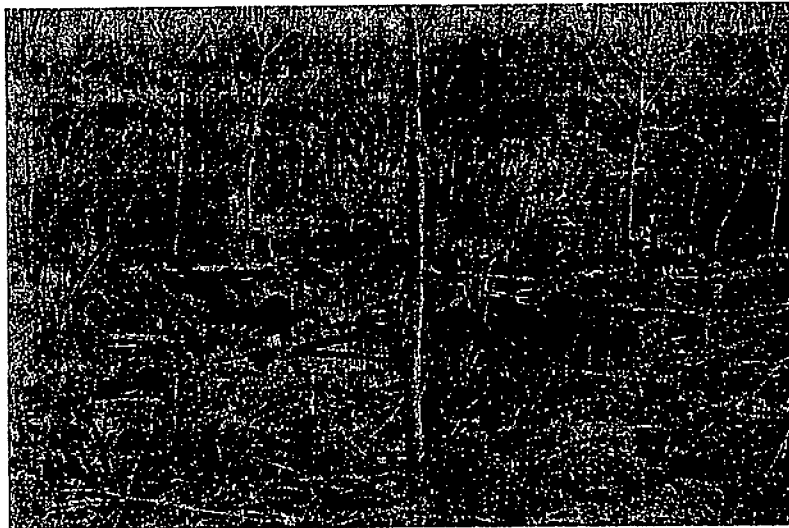


Figure 2 - Diamond Head Oil, on-site detail (adapted from Hazard Ranking Package; USEPA July 2000).



**Figure 3 - A broken gate at the eastern property boundary.**



**Figure 4 - Drums and construction debris in on-site wetland areas.**

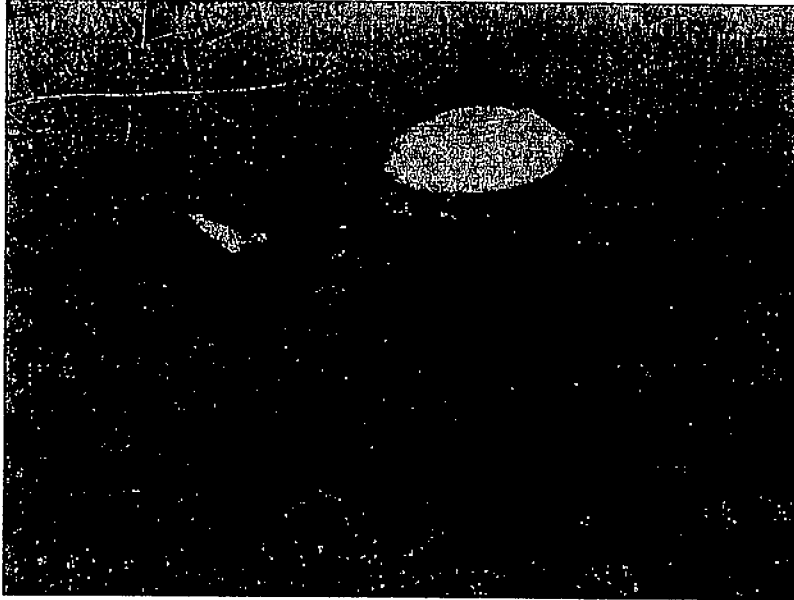


Figure 5 - Petrochemical "sheen" on the surface of a small pond.



Figure 6 - Road debris.