

INITIAL STUDY

The Department of Toxic Substances Control (DTSC) has completed the following Initial Study for this project in accordance with the California Environmental Quality Act (§ 21000 et seq., California Public Resources Code) and implementing Guidelines (§15000 et seq., Title 14, California Code of Regulations).

I. PROJECT INFORMATION

Project Name: Heil Separator Area, Union Carbide Corporation (UCC) Torrance (Mariner Avenue) Terminal Facility Removal Action Workplan

Site Address: 19500 Mariner Avenue (between Hawthorne Blvd. and Prairie Ave.)

City: Torrance State: CA Zip Code: 90503 County: Los Angeles

Company Contact Person: Timothy A. King

Address: P.O. Box 8361

City: South Charleston State: West Virginia Zip Code: 25303 Phone Number: (304) 747-3763

Project Description:

INTRODUCTION

This project provides for approval and implementation of a draft Removal Action Workplan (RAW) for remediation work at the Heil Separator Area, UCC Torrance (Mariner Avenue) Terminal Facility. The RAW is being performed under the terms of UCC's Voluntary Cleanup Agreement (VCA) with the California Department of Toxic Substances Control (DTSC). UCC has agreed to work cooperatively with the DTSC under a VCA to address environmental impacts at the facility from a historic release of a hydrocarbon mixture known as dripolene, which was a by-product formerly produced at the facility during the production of ethylene.

Dripolene is a pyrolysis fuel oil-water emulsion liquid that was generated along with quench water during the thermal cracking process for ethylene production. The Heil Separator Area located in the eastern portion of the facility was utilized for the separation of the dripolene from the quench water. A Remedial Investigation (RI) conducted by Montgomery Watson in 2000 confirmed the release of dripolene in the Heil Separator area (Montgomery Watson, 2000). From the RI, contaminants of concern at the site were identified to include select volatile organic compounds (VOCs), semi-VOCs, and dense non-aqueous phase liquid (DNAPL) (dripolene) within perched groundwater beneath the site. DNAPL is also known as "free product." Historical data (1989-2003) based on the existing deeper groundwater monitoring wells (i.e. wells MW-1 through MW-4) completed in the Gage-Gardena aquifer does not show any impact from the site to the deeper aquifer.

The RAW is a document that details the steps to be taken in the implementation of the selected remedial response actions at the site identified in a Feasibility Study (FS) (URS, 2003a) that was completed in August 2003 and approved by DTSC. The FS identified enhanced free product recovery, and monitored natural attenuation (MNA) or other in-situ technologies as the preferred remedial alternative for the site. In MNA, risk reduction occurs through a combination of natural processes including biodegradation, adsorption, dilution and dispersion. The RAW describes the process of implementation of these remedial response actions.

Free product recovery will be accomplished using a combination of manual bailing techniques and an automatic free product recovery system. UCC will perform a pilot test using an automated free product recovery system to obtain information for optimized recovery of DNAPL. Information from the pilot test will be used to select the most appropriate pump controller setpoints (e.g. pump on and off cycle times) to maximize pump flow rates. UCC will install and operate the automated free product recovery system if the pilot test demonstrates that more free product can be recovered with the automated system than with bailing or passive skimmers. The automated system will consist of a dedicated submersible "product only" pneumatic pump, pump controller, storage drum, and high-level shutoff. The pilot test is planned for an approximate two-week period following DTSC approval of the RAW. Implementation of the automated product recovery system, if appropriate, would commence thereafter, subject to DTSC concurrence. Based on previous

investigation activities at the site, DNAPL has been detected in two monitoring wells (MW-5 and MW-10) near the Heil Separator. DNAPL has been recovered from these wells by manual bailing. Based on the thickness of DNAPL measured in these wells, there is a good likelihood that automatic product recovery from at least one well would be effective. To date, it is estimated that less than 100 gallons of DNAPL have been removed from the Heil Separator Area.

Other in situ technologies may be considered if, after the free product is removed to the maximum extent practical, groundwater sampling data indicate that MNA is not effective at stabilizing the dissolved-phase groundwater plume in the perched zone. Also, other in situ technologies would be considered if groundwater in the Gardena Gage aquifer becomes impacted by chemicals of concern (COC) from the Heil Separator Area at concentrations greater than maximum contaminant levels or water quality objectives. Other in situ technologies include, but are not limited to, in situ chemical oxidation using Fenton's Reagent or enhanced bioremediation (e.g., nutrient and/or oxygen amendments). The following remedial action objectives have been identified in the FS:

- Remove DNAPL (driplene) to the maximum extent practical;
- Prevent human incidental ingestion and direct dermal contact with COCs in surface soil that pose an excess cancer risk greater than one in a million (10^{-6}) or a Hazard Index (HI) greater than one;
- Prevent human inhalation of VOCs and SVOCs volatilizing from surface soil to air that pose an excess cancer risk greater than 10^{-6} or HI greater than one;
- Ensure existing contaminant conditions do not change so as to threaten human health and/or the environment; and
- Restore water quality, at a minimum, to water quality objectives that are protective of beneficial uses of the Gardena-Gage Aquifer within a reasonable timeframe.

Installation of New Perched Zone Groundwater Monitoring Well

A new groundwater monitoring well will be installed on the property west of the source area within the perched zone. Geologic borings will be conducted to determine the most suitable location for the new well. The well installation will take one day to complete. Two to four workers will be at the site during installation activities.

Gauging of Groundwater Monitoring Wells

Gauging of on site groundwater monitoring wells will be conducted on a quarterly basis. A total of seventeen site groundwater monitoring wells will be gauged for static water level to monitor groundwater flow and changes in water level. Wells MW-1 through MW-4 are groundwater monitoring wells completed in the deeper Gage-Gardena aquifer. Wells MW-1A, MW-5 through MW-12, MW-13A, MW-14A, and MW-16A are perched aquifer monitoring wells. All well locations are depicted on Figure 1-2. These monitoring wells will also be checked for the possible presence of liquid-phase hydrocarbon and gauged for static depth(s) to DNAPL. Each time a well is gauged, the depth to the bottom of the well will also be checked for the presence of DNAPL. All measurements will be recorded on a well gauging sheet. All well gauging equipment will be washed between each use using a soapy wash, rinsed with clean water, and followed by a thorough rinse by deionized water. The recovered DNAPL, purged groundwater, and decontamination water will be collected in Department of Transportation (DOT)-rated drums and stored at the project site. The drums will be appropriately labeled with general information, including the following data: location, contents, contact information, and the statement "pending analytical testing."

Implementing DNAPL Recovery System

DNAPL has been observed in monitoring wells MW-5 and MW-10 during previous groundwater monitoring activities. UCC will install an automated DNAPL recovery system at wells MW-5 and/or MW-10 to perform a pilot test and determine the effectiveness of this technology. The automated system will consist the following components:

- § 4-inch DNAPL pump for each well location;
- § 4-inch well cap for each well location;
- § An electronic timer with tank shutoff;
- § Product discharge tubing;
- § Air supply tubing;
- § Air exhaust tubing;
- § Air source for the pump (gas cylinder or air compressor);
- § Power source for the timer (110 AC or 12v DC battery);
- § Safety rope; and

§ Valves for both air and product lines.

During gauging events when the automated DNAPL recovery system pilot test is not running in monitoring wells MW-5 and MW-10, manual removal of DNAPL from these wells, or other wells in which DNAPL is measured, will be performed using a disposable bailer until the automated system is installed. Bailing will continue, either manually or automatically, until significant volumes of DNAPL can no longer be collected from the well. Bailed DNAPL, groundwater, and equipment decontamination water will be placed in labeled 55-gallon drums that will be temporarily stored on site until they are disposed of at an appropriate off-site facility. Used bailers and personal protective equipment (PPE) will be disposed off site at a permitted facility. The total volumes of DNAPL and groundwater removed from the well will be recorded on a well gauging sheet.

Groundwater Sampling

All seventeen monitoring wells will be sampled on a quarterly basis. Previous groundwater sampling events indicated that monitoring wells MW-5 and MW-10 contained DNAPL. MW-5 and MW-10 were undergoing continuous, manual DNAPL bailing; therefore, they were not sampled during these annual events. Samples will also be collected from these wells.

Project Duration

The project is anticipated to commence upon project approval and last two years. The estimated completion date is 2006. A deed restriction will be placed on the site at a future date to preclude sensitive uses.

SITE DESCRIPTION AND BACKGROUND

The Heil Separator Area is located at the Union Carbide Corporation (UCC) Distribution Facility at 19500 Mariner Avenue in Torrance, California (refer to Figure 1-1). The Heil Separator, located in the easternmost portion of the site (refer to Figure 1-2), was utilized for the separation of the dripolene from the quench water. UCC currently operates this 37-acre facility as a terminal and distribution center. Approximately 80 percent of the facility surface is impervious, consisting of buildings, roads, or paved areas. The remaining 20 percent is unpaved or grassy. The facility consists of "old" and "new" bulk terminals, a distilled spirits plant, a concrete-lined stormwater retention basin, and the Heil Separator. The facility includes eight permanent buildings used for office space, warehousing, and maintenance. Six buildings are located at the south end of the site and two buildings are located along the north side of the site. Fifty-six above ground storage tanks (ASTs) and eight underground storage tanks (USTs) are used to store chemical products on-site. One AST, located near the eastern boundary of the facility, is used to store wastewater collected from the Heil Separator. A current facility plot plan is shown as Figure 1-2.

The facility was built in 1956 for polyethylene manufacturing. Originally, the area of the plant was approximately 100 acres. The majority of the site was used to formulate polyethylene from various gases. The site also included an ethylene glycol blending, canning, and distribution operation; and a chemical and plastics receiving and distribution operation.

UCC used a thermal cracking process for the production of ethylene. Prior to thermal cracking, feedstock gas underwent a distillation process to remove impurities. The cracked gas was then quenched with water, cooled, and purified. Quench water used in the cracking process contained a material known as dripolene. The ethylene was then used in a separate process to produce polyethylene.

In addition to the production of polyethylene, a catalytic oxidation process was used to produce ethylene glycol. Raw materials and chemical products were then stored, canned and/or shipped as part of the facilities chemical distribution activities.

The glycol production unit was demolished in 1969. Approximately forty acres of the property were sold for the Old Towne Mall and K-Mart Complex. The remaining facility was operated until 1982, when the manufacturing operations were discontinued and much of the facility was decommissioned. The decommissioned portions of the property were sold and redeveloped.

Project Activities: Refer to Project Description

II. DISCRETIONARY APPROVAL ACTION BEING CONSIDERED BY DTSC

- Initial Permit Issuance
- Closure Plan
- Removal Action Workplan
- Permit Renewal
- Regulations
- Interim Removal
- Permit Modification
- Remedial Action Plan
- Other (Specify)

Program/ Region Approving Project: State of California, Department of Toxic Substances Control, So. Cal. Region

DTSC Contact Person: Johnson P. Abraham

Address: 5796 Corporate Avenue

City: Cypress State: CA Zip Code: 90630 Phone Number: (714) 484-5476

III. ENVIRONMENTAL RESOURCES POTENTIALLY AFFECTED

The boxes checked below identify environmental resources in the following ENVIRONMENTAL SETTING/IMPACT ANALYSIS section found to be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact."

- None Identified
- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology And Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

IV. ENVIRONMENTAL IMPACT ANALYSIS

The following pages provide a brief description of the physical environmental resources that exist within the area affected by the proposed project and an analysis of whether or not those resources will be potentially impacted by the proposed project. Preparation of this section follows guidance provided in DTSC's California Environmental Quality Act Initial Study Workbook [Workbook]. A list of references used to support the following discussion and analysis are contained in Attachment A and are referenced within each section below.

Mitigation measures which are made a part of the project (e.g.: permit condition) or which are required under a separate Mitigation Measure Monitoring or Reporting Plan which either avoid or reduce impacts to a level of insignificance are identified in the analysis within each section.

1. Aesthetics

Project activities likely to create an impact. The project activities will not create an impact.

Description of Environmental Setting:

The project is located in an industrial area. There are no aesthetic resources within view of the project. The site is surrounded by industrial and commercial properties for a radius of approximately 0.25 mile. Nearby industrial properties include the ExxonMobil Oil Refinery, as well as facilities for manufacturing and/or distributing paint, coolants, and compressed air. The Atchison Topeka and Santa Fe Railway is located to the east of the site.

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Have a substantial adverse effect on a scenic vista.

As stated above, the project is located in a developed, industrial area. There presently no scenic vista in the site vicinity.

- b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway.

Presently, there are no such resources at or near the site. The site is not located within a designated scenic highway. Please refer to the Environmental Setting and response a.

- c. Substantially degrade the existing visual character or quality of the site and its surroundings.

Project activities associated with the RAW do not have the potential to degrade the existing visual character of the site or its surroundings. The existing view in the direction of the project site is of an industrial facility. Also refer to the Environmental Setting.

- d. Create a new source of substantial light of glare that would adversely affect day or nighttime views in the area.

A source of glare will not be created. Project activities associated with the RAW include gauging at groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling. These activities will take place during daylight hours only. No artificial lighting will be necessary to carry out the project.

Specific References: 1, 2, and 3

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

2. Agricultural Resources

Project activities likely to create an impact: **The project is located in an industrial area. Project activities will not create an impact. Project activities associated with the RAW include gauging of groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling.**

Description of Environmental Setting: **The site is within a “M2” (Heavy Manufacturing) zone and is surrounded by industrial and commercial properties for a radius of approximately 0.25 mile. Nearby industrial properties include the ExxonMobil Oil Refinery, as well as facilities for manufacturing and/or distributing paint, coolants, and compressed air.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

The Torrance facility was built in 1956 for polyethylene manufacturing and was originally owned by UCC. The facility occupied approximately 100 acres. It operated until 1982, when the manufacturing operations were discontinued and much of the facility was decommissioned. Currently the facility is operated by UCC as a terminal and distribution center on approximately 37 acres. There are no agricultural lands or

resources within or adjacent to the project site; therefore, the RAW will not result in the conversion of any farmland to non-agricultural purposes.

- b. Conflict with existing zoning or agriculture use, or Williamson Act contract.

The site is within a “M2” (Heavy Manufacturing) zone and the zoning will not change as a result of the project.

- c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural uses.

Project activities will not involve any changes in the existing environment that could result in the conversion of farmlands to non-agricultural uses.

Specific References: 1 and 2

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

3. Air Quality

Project activities likely to create an impact: **Project activities associated with the RAW include gauging at groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling. The pilot test will be performed during an approximate two-week period by one to two remediation workers. Gauging of the wells and groundwater sampling will be conducted on a quarterly basis. The compressor to be used for the automatic DNAPL recovery system is electrically powered and will not create air emissions.**

The project will also include the installation of a new perched zone groundwater monitoring well on the property west of the source area. The well installation activities will be completed in one day. It is anticipated that two to four workers will be at the site during the installation. A cone penetrometer technology (CPT) soundings, hollow stem auger drill rig, and support truck will be at the site during the installation activities.

Description of Environmental Setting: **The California Air Resources Board (CARB) regulates mobile emission sources and oversees the activities of County Air Pollution Control Districts (APCDs) and Regional Air Quality Management Districts (AQMDs) in California. The South Coast Air Quality Management District (SCAQMD) is the regional agency empowered to regulate stationary sources in the South Coast Air Basin (SCAB) in which the project is located. The SCAQMD develops and enforces air quality regulations for stationary sources, issues permits for new and modified facilities, participates in air quality planning, and operates a regional air quality monitoring network.**

The SCAQMD has adopted two attainment plans in an attempt to achieve compliance with State and federal air quality standards. The 1997 Air Quality Management Plan (AQMP) was approved in 1996 by the SCAQMD Governing Board. The AQMP establishes two tiers of air pollution control strategies. Proposed projects are evaluated for conformity with the provisions of the AQMP. The 1999 Amendment to the 1997 Ozone State Implementation Plan (SIP) was prepared to address concerns expressed by the United States Environmental Protection Agency with the ozone control strategy provided in the 1997 AQMP. Together, these documents provide the framework for air quality planning within the SCAB, and lay out the SCAQMD’s strategy to reduce emissions of non-attainment pollutants.

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Conflict with or obstruct implementation of the applicable air quality plan.

The project will comply with all rules and regulations of the SCAQMD. Well installation activities will only take one day. Two to four workers and two pieces of equipment will be at the site during the well installation. While project construction activities may result in an incremental increase in criteria pollutants from construction vehicles and equipment, the increase is of a small enough magnitude to be considered less than significant.

Remediation activities associated with the RAW will not result in long-term air emissions. The proposed project will not conflict with or obstruct the implementation of applicable air quality plans. The recovery pump and air compressor that will be used as part of the project are electrically powered and will therefore not result in air emissions. Project activities associated with the RAW include gauging at groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling. The pilot test will be performed during an approximate two-week period by one to two remediation workers. Gauging of the wells will be conducted on a quarterly basis and groundwater samples will be collected quarterly in the first year by one to two remediation workers. Upon approval from the DTSC, groundwater sampling will then be conducted annually. The increase in vehicle trips to the site is not considered significant and will not result in long-term air quality impacts.

- b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

While project construction activities may result in an incremental increase in criteria pollutants from construction vehicles and equipment, the increase is of a small enough magnitude to be considered less than significant. Project activities associated with the RAW will not significantly contribute to pollutant emissions resulting in the violation of an existing air quality standard. DNAPL will be stored in closed drums when it is removed from the wells to prevent volatilization.

- c. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Areas are classified under the Clean Air Act as either “attainment” or “non-attainment” areas for each criteria pollutant, based on whether the NAAQS have been achieved or not. The proposed project is located within the SCAB which has not attained the state and federal standards for three (O₃, CO, and PM₁₀) of the six pollutants, and thus is designated as a non-attainment area. The Basin is in compliance with the state and federal NO₂, SO₂, and Pb standards; however, CO, O₃ and particulate matter less than 10 microns in diameter (PM₁₀) and particulate matter less than 2.5 microns in diameter (PM_{2.5}) exceed the standards. The state AAQS are more stringent than the federal AAQS.

As described above, the project will result in minor short-term air quality impacts from construction activities. Impacts will be considered less than significant.

Activities associated with the RAW will not result in a permanent increase of any criteria pollutants for which the project region is in non-attainment. Therefore, the project will not have the potential to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

- d. Expose sensitive receptors to substantial pollutant concentrations.

Air at the work site will be monitored for worker safety and health. In the event contaminants (volatile organic compounds (VOCs)) reach unsafe (action) levels, the respiratory protection program will be implemented (respirators used). This program is more fully detailed in the RAW, Appendix E, Site Health and Safety Plan. Emissions would not be expected to affect persons beyond the project site location.

The site is within a “M2” (Heavy Manufacturing) zone and is surrounded by industrial and commercial properties for a radius of approximately 0.25 mile. The project will not expose sensitive receptors to substantial pollutant concentrations (refer to responses in Items 3b and 3c above).

- e. Create objectionable odors affecting a substantial number of people.

The project will not result in the emissions of odors. No impact is anticipated.

- f. Result in human exposure to Naturally Occurring Asbestos (see also Geology and Soils, f.).

The project site is not within an area containing naturally occurring asbestos.

Specific References (list a, b, c, etc): **1, 2, 3, and 11**

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

4. Biological Resources

Project activities likely to create an impact: **Well drilling, installation of the pump and other associated equipment at the project site could have the potential to impact biological resources.**

Description of Environmental Setting: **The project site is located in a disturbed, industrial area and consists of a terminal and distribution center. Approximately 80% of the 37-acre facility, including much of the project site, is covered with impervious structures consisting of buildings, roads, or paved areas. The remaining 20 percent is unpaved or grassy. A Department of Fish and Game Rarefind report dated May 3, 2004 for the Torrance quadrant was reviewed. The report lists several species that occur in the Torrance quadrant. The tricolored blackbird (*Agelaius tricolor*) which is classified as a species of concern is found in the Torrance quadrant. However, the bird requires open water and nests in reeds, and there is no water body on the site that provides habitat for the birds. The Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) is also listed in the report. The blue butterfly is found in open space and coastal sage scrub. Other species of plants and animals listed in the report are found in coastal, sandy areas and not in disturbed areas, such as the project site. There are no water bodies nearby that would support the types of wildlife habitats that are described in the Torrance listings.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Please refer to the Environmental Setting above. The Department of Fish and Game Rarefind report dated May 3, 2004 for the Torrance quadrant was reviewed. Due to the project site's disturbed condition, it does not provide habitat value for wildlife, and there presently is no wildlife residing there.

- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

There are no locally designated riparian habitat or other sensitive natural communities species on or adjacent to the project site.

- c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The project site is not within a or adjacent to a wetlands area.

- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

There are no identified migratory species dwelling at the site that will be affected. The project will not create a new barrier to wildlife dispersal. No wildlife migration corridors will be affected by the project. Native wildlife is absent on the project site.

- e. Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The project site is an active terminal and distribution center zoned for heavy manufacturing. The project will not conflict with locally adopted conservation plans and policies.

- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The proposed project site is not located within a known habitat conservation planning area; therefore, no impacts are anticipated.

Specific References (list a, b, c, etc): 1, 2 and 12

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

5. Cultural Resources

Project activities likely to create an impact: **Project activities are not expected to create an impact on cultural resources.**

Description of Environmental Setting: **The project site is in a disturbed area and consists of a terminal and distribution center. Approximately 80% of the 37-acre facility, including the project site, is covered with impervious structures consisting of buildings, roads, or paved areas. The Torrance facility was built in 1956 for polyethylene manufacturing. The facility occupied approximately 100 acres. It operated until 1982, when the manufacturing operations were discontinued and much of the facility was decommissioned. Currently the facility is operated by UCC as a terminal and distribution center on approximately 37 acres.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5.

The project will not involve the construction or demolition of structures; however, a groundwater monitoring well will be installed as part of the project. Known uses of the project site have been limited to manufacturing purposes. The proposed RAW will not cause any adverse change in the significance of a historical resource as defined in 15604.5.

- b. Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5.

The site does not have archaeological significance. The proposed RAW will not change any archaeological resource.

- c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The proposed RAW will not destroy a paleontological resource or site, or a unique geologic feature.

- d. Disturb any human remains, including those interred outside of formal cemeteries.

There is no record of the project site housing human remains or past cemeteries. No impacts are anticipated.

Specific References (list a, b, c, etc): **1 and 7**

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

6. Geology and Soils

Project activities likely to create an impact: **The project includes installation of a new perched zone groundwater monitoring well on the property west of the source area. Geologic borings to determine the next location for the well will also be conducted. No project activities are expected to create a geology and soils impact.**

Description of Environmental Setting: **The Heil Separator Area lies in the Torrance Plain, a physiographic province within the broad coastal plain of the greater Los Angeles area. The broad coastal plain is bordered on the west and south by the Pacific Ocean, on the north by the Santa Monica Mountains, on the east by the Puente Hills, and on the southeast by the Santa Ana Mountains and the San Joaquin Hills. The Torrance Plain is an older geomorphic surface that is west of and parallel to the belt of hills that occur along the Newport-Inglewood structural zone, and is bounded on the west and southwest by the El Segundo Sand Hills and Palos Verdes Hills. The Newport-Inglewood structural zone is a composite faulted anticlinal belt that transects the coastal plain in a northwest-southeast direction and extends from Beverly Hills in the north to Seal Beach in the south. The belt of hills is the surface expression of deformation along the Newport-Inglewood fault zone and includes, from north to south, the Beverly, Baldwin, Rosecrans, Dominguez, Signal, Bixby Ranch, and Landing Hills. The Torrance Plain is a broad featureless area only slightly dissected by local streams.**

The Torrance Plain is located within the West Coast groundwater basin, a northwest-southeast trending sub-basin of the Los Angeles coastal groundwater basin. The physiographic boundaries of the West Coast basin are the Ballona Escarpment on the north; the Baldwin, Rosecrans and Dominguez Hills on the east; and the Pacific Ocean on the south and west. The Palos Verdes Hills bound the southwest corner of the basin.

The site-specific geology and hydrogeology consists of five stratigraphic units (Units 1 through 5) and two water bearing zones (a perched groundwater table and the deeper Gardena-Gage Aquifer). A detailed discussion of site geology and hydrogeology is provided in the Phase II RI Report (Montgomery Watson, 2000), and is summarized below.

Units 1 and 2 consist of unconsolidated sands containing varying amounts of silt and clay. The demarcation between Units 1 and 2 occurs at approximately 20 feet below ground surface (bgs), where a notable increase in permeability occurs.

The top of Unit 3 is located approximately 55 to 60 bgs, and is comprised of lower permeability silts with varying amounts of sand and clay. Unit 3 is largely a discontinuous zone, but is laterally extensive beneath the Heil Separator Area. Unit 3 acts as a barrier to the downward movement of water, resulting in the formation of a perched groundwater body. Unit 3 is classified as the perching unit. The top of Unit 4 is located approximately 60 to 70 bgs. The unit is comprised approximately 25 to 30 feet of silty sands similar in characteristics to Unit 2. Lower permeability lenses within Unit 4 are comprised of clayey-silt deposits.

Unit 5 is encountered at a depth of about 90 feet bgs and is approximately 10 feet thick. Unit 5 overlies the Gardena-Gage Aquifer. The Gardena-Gage Aquifer is a regional system, which is unconfined beneath the Heil Separator Area. Depth to water in this unit is approximately 95 to 100 feet bgs and the unit is reportedly approximately 150 feet thick (CDWR, 1961).

Analysis of Potential Impacts. Describe to what extent project activities would:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42).

The site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest known active fault that is zoned under the Alquist-Priolo Special Studies Zone Act is the Newport-Inglewood fault zone, located approximately five miles northeast of the project site.

- Strong seismic ground shaking.

The project is located within Southern California, which is considered a seismically active region that can be expected to experience strong seismic shaking from future earthquakes generated by active faults. Earthquakes that will produce strong shaking at the project site may occur on mapped active or potentially active faults in the region, or on faults with little or no surface expression. The proposed RAW will do nothing to expose people or structures to the effects of strong seismic ground shaking. Impacts are considered less than significant.

- Seismic-related ground failure, including liquefaction.

The project site is not located within an area susceptible to liquefaction.

- Landslides.

The project site is not located within an area prone to earthquake-induced landslides. The proposed removal action will do nothing to expose people or structures to the effects of landslides

b. Result in substantial soil erosion or the loss of topsoil.

Geologic borings will be conducted to determine the most suitable location for the new groundwater monitoring well; however, these activities are not anticipated to result in soil erosion or loss of topsoil. Impacts are considered less than significant. Prior to conducting Field activities, a groundwater monitoring well installation permit will be obtained from the Los Angeles County Department Health Services, Environmental Health, Bureau of Environmental Protection. The wells will be installed in accordance with State of California Department of Water Resources Water Well Standards.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Geologic borings will be conducted to determine the most suitable location for the new groundwater monitoring well; however, these activities are not anticipated to cause any existing geologic unit or soil to become unstable.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

The site is not located on expansive soils. No impacts are anticipated.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of water.

No septic tanks or alternative waste disposal systems will be associated with this project. No impacts are anticipated.

f. Be located in an area containing naturally occurring asbestos (see also Air Quality, f.).

The project site is not within an area containing naturally occurring asbestos.

Specific References (list a, b, c, etc): **4, 5, 6, 7, 9, 10, and 11**

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

7. Hazards and Hazardous Materials

Project activities likely to create an impact: **Possible hazards include the following: well drilling, DNAPL extraction/removal/transfer of contaminated materials into drums, inhalation by remediation workers or dermal contact with materials, and exposure by workers to chemical hazards during drilling activities at the site.**

Description of Environmental Setting: **Wells will be drilled for monitoring and for DNAPL extraction. In this process, VOCs may be present. Prior investigative work identified dripolene as the contaminant of concern at the site. The Heil Separator Area located in the eastern portion of the facility was utilized for the separation of the dripolene from the quench water. A Remedial Investigation confirmed the release of dripolene in the Heil Separator area. The project site is located in an industrial area.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Create a significant hazard to the public or the environment throughout the routine transport, use or disposal of hazardous materials.

Project activities associated with the RAW include gauging of groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling. All investigation derived waste (IDW, i.e., purged groundwater and decontamination water) will be collected in 55-gallon U.S. DOT-rated drums and temporarily stored at the site. All drums used during the annual sampling event will be labeled indicating that results of analyses are pending. The purged groundwater and decontamination water generated during the annual monitoring event can be disposed of through the sanitary sewer as approved by the local sanitary district and after the analytical results are received for confirmation of water quality.

Any recovered DNAPL will be stored in a separate DOT-rated, 55-gallon drum with secondary containment near wells MW-5 and MW-10. All drums will be labeled and documented. The DNAPL will be removed and managed at a permitted offsite facility by UCC facility personnel. All waste disposal activities will be conducted in accordance with materials that are hazardous and will be labeled and transported in accordance with Title 49 Code of Federal Regulations (CFR) and Title 22 California Code of Regulations (Cal Code Regs.).

Air at the work site will be monitored for worker safety and health. In the event contaminants (volatile organic compounds (VOCs)) reach unsafe (action) levels, the respiratory protection program will be implemented (respirators used). This program is more fully detailed in the RAW, Appendix E, Site Health and Safety Plan. Emissions would not be expected to affect persons beyond the project site location.

Personal protective equipment will also be used by workers at the site during project activities as appropriate and as detailed in the Health and Safety Plan in Appendix E of the RAW.

The health risk assessment conducted by Montgomery, Watson, Harza in September 2001, evaluated the health effects associated with COCs in soil. Water was evaluated for the following reasons:

- **Perched groundwater is not currently used;**
- **There is a regional groundwater system directly below the site with good water quality and yield that would be a preferred water source;**

- **There are no planned future changes to site use or zoning and the site owner will institute a deed restriction on the property; and**
- **Although the perched zone may be able to produce 200 gallons per day with the current saturated thickness, the limited lateral extent of the perched zone would affect the zone's ability to provide a sustained yield as described in the State Water Resources Control Board Resolution No. 88-63.**

Based on the anticipated project site activities, the following complete exposure pathways were considered in the health risk assessment:

- **On-site commercial workers: Incidental ingestion and dermal contact with surface soils (0-0.5 foot below ground surface [bgs]) and inhalation of dust and volatile chemicals from surface soil (0-0.5 foot bgs);**
- **On-site visitors: Incidental ingestion and dermal contact with surface soils (0-0.5 foot bgs) and inhalation of dust and volatile chemicals from surface soil (0-0.5 foot bgs); and**
- **On-site Construction workers: Incidental ingestion and dermal contact with surface and subsurface soil (0-0.5 foot bgs), and inhalation of dust and volatile chemicals from surface and subsurface soil (0-0.5 foot bgs).**

The method used to estimate the average daily dose of the COCs for each of the assumed (theoretically complete) exposure pathways above was based on U.S. EPA guidance. Both central and reasonable maximum exposure (RME) estimates were calculated for each receptor. The estimated soil exposures for all receptors yielded theoretical upper-bound cancer risk estimates within the acceptable risk range (10^{-6} to 10^{-4}) and estimated central and RME soil exposures for all receptors were below a target hazard index (HI) of 1.0 except for construction workers, where the RME HI slightly exceeded 1.0. However, the central HI for construction workers was well below 1.0.

The results indicate that the COCs detected in site soils are not likely to pose an unacceptable cancer risk or non-cancer effects to current or future receptors at the site under the exposure assumptions listed above.

- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Should an accidental spill occur on the highway while transporting recovered DNAPL for offsite management, all DOT regulations for spills will be complied with. Potential receptors include anyone who comes in direct contact with the waste by way of direct skin contact or by ingesting the waste. If a spill occurs, the driver of the truck will notify the local authorities for implementation of clean-up activities. Since the trucks and drums will be appropriately labeled, any waste spill clean-up workers will be able to adequately use the appropriate protective gear to deal with this waste. Potential impacts are considered less than significant.

- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school.

There are no school sites within 0.5 mile of the project site. No impacts are anticipated

- d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to public or the environment.

The project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

The project site is under a VCA with the California EPA (Department of Toxic Substances Control Docket No. HAS 95/96-032). Previous studies have shown the Heil Separator Area to be impacted by dripolene.

- e. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

A Site Health and Safety Plan has been prepared for the project and is included in the RAW as Appendix E. The Health and Safety Plan delineates the location of the nearest hospital where personnel are to be taken for treatment. Project activities will not interfere with or impair the implementation of any emergency response or evacuation plan.

Specific References (list a, b, c, etc): 1, 2, and 3.

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

8. Hydrology and Water Quality

Project activities likely to create an impact: **Project activities associated with the RAW include the installation of groundwater monitoring wells, gauging at groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling.**

Description of Environmental Setting: **The site-specific geology and hydrogeology consists of five stratigraphic units (Units 1 through 5) and two water bearing zones (a perched groundwater table and the deeper Gardena-Gage Aquifer).**

Units 1 and 2 consist of unconsolidated sands containing varying amounts of silt and clay. The demarcation between Units 1 and 2 occurs at approximately 20 feet below ground surface (bgs), where a notable increase in permeability occurs.

The top of Unit 3 is located approximately 55 to 60 feet bgs, and is comprised of lower permeability silts with varying amounts of sand and clay. Unit 3 is largely a discontinuous zone, but is laterally extensive beneath the Heil Separator Area. Unit 3 acts as a barrier to the downward movement of water, resulting in the formation of a perched groundwater body. Unit 3 is classified as the perching unit.

The top of Unit 4 is located approximately 60 to 70 feet bgs. The unit is comprised of approximately 25 to 30 feet of silty sands similar in characteristics to Unit 2. Lower permeability lenses within Unit 4 are comprised of clayey-silt deposits.

Unit 5 is encountered at a depth of about 90 feet bgs and is approximately 10 feet thick. Unit 5 overlies the Gardena-Gage Aquifer. The Gardena-Gage Aquifer is a regional system, which is unconfined beneath the Heil Separator Area. Depth to water in this unit is approximately 95 to 100 feet bgs and the unit is reportedly approximately 150 feet thick.

The Lynwood-Silverado Aquifer underlies the Gardena-Gage Aquifer. However, this groundwater unit has not been encountered through on-site activities. The Lynwood-Silverado Aquifer lies at 300 to 600 feet bgs and has been extensively developed for water supply. Groundwater in the Lynwood-Silverado aquifer beneath the Heil Separator Area is saline due to the migration of a seawater plume associated with a groundwater injection barrier located approximately 4 miles west. This saline water is being extracted by two Dominguez Water Supply wells ¼-mile southeast of the site and treated for municipal use.

The RI work has delineated the nature and extent of impact by COC. The RI has also included the collection of geologic, hydrogeologic, meteorological, physical, geochemical, and biological data and parameters for definition of the environmental setting and COC specific properties that affect contaminant fate and transport. A detailed description of the nature and extent of impacts, including a conceptual fate and transport model, is included in the RI (Montgomery Watson, 2000). Compilation and evaluation of the RI data confirms that the release source is associated with the Heil Separator Area, where the highest concentrations of COC in soil and groundwater are located.

The RI data also confirms that the release material was dripolene. Dripolene was processed through the oil/water

separator located in the Heil Separator Area from approximately 1971 (when the facility upgraded their waste water collection and treatment system) until 1982 (when the manufacturing operations were discontinued and much of the facility was decommissioned). Dripolene is a mixture of water and hydrocarbons (predominately polycyclic aromatic hydrocarbons) with a published Material Safety Data Sheet (MSDS) and supporting chemical analysis performed by UCC in support of operations, and by environmental consultants in support of RI activities.

DNAPL has historically been measured in two perched zone wells (MW-05 and MW-10). Based on previous bailing activities, apparent DNAPL thickness in well MW-5 has declined from 6.37 feet (May 1989) to 0.10 foot, and has remained below 0.25 foot (3 inches) since September 1999. The highest DNAPL thickness measured in well MW-10 was 5.10 feet (June 2000). In October 2002, DNAPL thickness in well MW-10 was measured at 2.20 feet. To date, it is estimated that less than 100 gallons of DNAPL have been removed from the Heil Separator Area.

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Violate any water quality standards or waste discharge requirements.

All investigation derived waste (IDW, i.e., purged groundwater and decontamination water) will be collected in 55-gallon Department of Transportation (DOT)-rated drums and temporarily stored at the site. All drums used during the quarterly sampling event will be labeled indicating that results of analyses are pending. The purged groundwater and decontamination water generated during the quarterly monitoring event can be disposed of through the sanitary sewer as approved by the local sanitary district and after the analytical results are received for confirmation of water quality.

- b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficient in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

The project will not result in the depletion of groundwater supplies or interfere with groundwater recharge. No impacts to the local groundwater table level are anticipated.

- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site.

The project will not alter existing natural drainage patterns or change currents or the course or direction of water movements in a manner which will result in substantial erosion or siltation on- or off-site. The proposed project is not located on or near a stream or river.

- d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site.

The proposed project site is not located within or adjacent to any natural drainage and thus will not alter existing drainage patterns or change currents or the course or direction of water movements.

- e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

The project will not create or contribute to existing runoff that will exceed the capacity of the existing storm drainage system.

- f. Otherwise substantially degrade water quality.

The project is being implemented to restore water quality. At a minimum, water quality will be restored to water quality objectives that are protective of beneficial uses within a reasonable timeframe.

- g. Place within a 100-flood hazard area structures which would impede or redirect flood flows.

The project site is not within a flood zone. No impacts are anticipated.

- h. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

The proposed activities will not cause flooding. There are no dams or levees in the vicinity of the site.

- i. Inundation by seiche, tsunami or mudflow.

The site of the proposed removal action is located in a relatively flat, extensively developed, inland area well away from the coast. Therefore, implementation of the proposed removal action will not have any impact on inundation by seiche, tsunami, or mudflow.

Specific References (list a, b, c, etc): **1, 2, 3, and 8**

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

9. Land Use and Planning

Project activities likely to create an impact: **Removal of contaminants using MNA and a DNAPL extraction process may create an impact.**

Description of Environmental Setting: **The project site is located in an industrial area and is surrounded by industrial and commercial properties for a radius of approximately 0.25 mile. Nearby industrial properties include the ExxonMobil Oil Refinery, as well as facilities for manufacturing and/or distributing paint, coolants, and compressed air. The prominent adjoining land uses to the property are as follows:**

- **North:** Burlington Northern & Santa Fe (BNSF) railroad right-of-way
- **East:** City of Torrance stormwater retention basin
- **South:** Various Commercial Properties
- **West:** Various Commercial Properties

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Land use restrictions are planned by the property owner limiting future use of the property to non-residential purposes. Project implementation will not require a local land use decision nor change the current zoning or land uses of the property. The project will maintain the existing use of the project areas. No land use incompatibilities or conflict with existing plans and policies will result.

- b. Conflict with any applicable habitat conservation plan or natural community conservation plan.

The project will not conflict with any applicable habitat conservations plan or natural community conservation plan.

Specific References (list a, b, c, etc): **1 and 7**

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

10. Mineral Resources

Project activities likely to create an impact. **Well drilling and DNAPL extraction activities have the potential to create an impact.**

Description of Environmental Setting. **The Heil Separator Area is underlain by marine and continental deposits of the Lakewood and San Pedro formations. These formations consist of sand, sandstone, and silty sandstone aquifers separated by silt and/or clay aquitards, and have a cumulative thickness of greater than 600 feet in the Heil Separator Area vicinity.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

The proposed project will not result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the State because the project site is not located in a mineral rich area nor does it involve any mining practices.

- b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

There are no known locally important mineral resources at the project site. The project will have no effects on the availability of a mineral resource.

Specific References (list a, b, c, etc):

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

11. Noise

Project activities likely to create an impact. **Construction activities associated with installation of the new groundwater monitoring well could create temporary noise impacts.**

Description of Environmental Setting. **The site is located in an industrial area and is surrounded by industrial and commercial properties for a radius of approximately 0.25 mile. Nearby industrial properties include the ExxonMobil Oil Refinery, as well as facilities for manufacturing and/or distributing paint, coolants, and compressed air.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Installation of the new groundwater monitoring well will require the use of a hollow auger drill rig and support truck for a one-day period. The drill rig may produce continuous noise levels at or above 85 dBA. Workers at the site will wear protective hearing devices. Impacts will be considered less than significant due to the short-term nature of the construction period (one day). The project Health and Safety Plan requires that all

URS personnel within 25 feet of the operating equipment wear hearing protection. Although the noise level during drilling activities is expected to exceed 85 dBA, the noise level will be significantly less than this at the facility property line, which is 200-300 feet from the expected drilling location. The site health and safety plan includes parameters for worker safety and health. In the event these parameters are exceeded, workers must wear hearing protection devices.

- b. Exposure of persons to or generation of excessive groundbourne vibration or groundbourne noise levels.

Refer to response 11(a) above. The site health and safety plan provides for worker safety and health. Workers must wear hearing protection devices if levels are exceeded. Offsite levels will be attenuated by distance.

- c. A substantial permanent increase in ambient noise levels in the vicinity above levels existing without the project.

Refer to response 11(a) above.

- d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Construction activities associated with installation of the new groundwater monitoring well may temporarily increase existing noise levels in areas immediately adjacent to the site; however, impacts are considered less than significant due to the temporary nature of the construction period (one day). The project will not involve any permanent substantial noise level increases in ambient noise levels in the project vicinity. No long-term impacts are anticipated.

Specific References (a, b, c, etc): 1, 2, and 3

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

12. Population and Housing

Project activities likely to create an impact: **Project activities will not create an impact.**

Description of Environmental Setting: **No new employees will be hired at the facility for implementation of the RAW. RAW activities will be confined within the UCC Torrance (Mariner Avenue) Terminal.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Induce substantial population growth in area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Activities associated with implementation of the RAW will not result in population growth or displacement in the area. No new homes or business are proposed as part of the project, necessitating the construction of replacement housing elsewhere.

- b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

The project will not require the acquisition of additional right of way which will displace existing homes. No impacts are anticipated.

- c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The project will not displace existing homes. No impacts are anticipated.

Specific References (list a, b, c, etc): 1

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

13. Public Services

Project activities likely to create an impact: **There are no project activities that could create an impact.**

Description of Environmental Setting: **The City of Torrance and County of Los Angeles provide public services and facilities within the project area. The public services provided include fire protection, police protection, parks, and refuse collection.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
- Fire protection
 - Police protection
 - Schools
 - Parks
 - Other public facilities

The project activities will not require, involve, or result in a change in the need for, or availability of, public services.

Specific References (list a, b, c, etc): 1

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

14. Recreation

Project activities likely to create an impact: **There are no project activities that could create an impact.**

Description of Environmental Setting: **The project site is zoned “M2” (Heavy Manufacturing). The project site is within the UCC Torrance (Mariner Avenue) Terminal. There are no parks or recreation areas within the project site.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

No new employees will be hired at the facility for implementation of the RAW. The project will not involve the construction of new facilities. RAW activities will be confined within the UCC Torrance (Mariner Avenue) Terminal. Hence, project activities will not result in impacts to parks or recreational facilities.

- b. Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The project will not require the construction or expansion of recreational facilities. No impacts are anticipated.

Specific References (list a, b, c, etc): 1, 2, and 3

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

15. Transportation and Traffic

Project activities likely to create an impact: **Delivery, set up, and installation of construction equipment and scheduled groundwater sampling events may create temporary, limited impacts.**

Description of Environmental Setting: **The project is located in the City of Torrance. The facility is accessed via Mariner Avenue or the BNSF rail spur.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

Project activities associated with the RAW include installation of new groundwater monitoring wells, gauging at groundwater monitoring wells, recovery of DNAPL from wells, and groundwater sampling. The two-week pilot test requires one to two workers at the site, two to three days per week. After the pilot test has been conducted, gauging of on site groundwater monitoring wells will be conducted on a quarterly basis by one to two remediation workers. Groundwater samples will be collected quarterly from seventeen monitoring wells. The only increased traffic from this activity is anticipated to be one pickup truck. Waste pickups will not increase as part of the project because wastes will be picked up by trucks that are on a regular pickup schedule as part of the facility's waste management activities.

- b. Exceed, either individually or cumulatively, a level of service standard established by the country congestion management agency for designated roads or highway.

As stated in a. above, the only increased traffic from this activity is anticipated to be one pickup truck to conduct groundwater sampling and operation and maintenance activities related to the proposed DNAPL recovery system. Waste pickups will not increase as part of the project because wastes will be picked up by trucks that are on a regular pickup schedule as part of the facility's waste management activities. The increase in traffic from the project is negligible and will not exceed a level of service standard. There will be no long-term operational traffic impacts.

- c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Trucks leaving the UC facility would typically exit via Mariner Avenue, head east on Del Amo Boulevard to 190th Street, and head east on 190th Street past Van Ness Avenue and enter the 405 Freeway heading

south on the entry ramp just east of Van Ness Avenue. The project will not significantly affect emergency access or access to nearby uses. Fire access will be provided in compliance with state and local fire requirements. No impacts are anticipated.

- d. Result in inadequate emergency access.

The project will not cause any restriction to emergency access.

- e. Result in inadequate parking capacity.

Adequate parking is available onsite for the remediation workers.

- f. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The project will not conflict with alternative transportation programs.

Specific References (list a, b, c, etc): **1, 2, and 3**

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

16. Utilities and Service Systems

Project activities likely to create an impact: **Operation of the DNAPL extraction system could create an impact, as well as use of water and lighting for the project.**

Description of Environmental Setting: **The City of Torrance and the County of Los Angeles provide public services and facilities in the project area. The public services include sewer services, water supply, storm drains, electricity, gas, telephone and refuse collection.**

Analysis of Potential Impacts. Describe to what extent project activities would:

- a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

The project will not result in a need for new or altered levels of wastewater service, nor exceed wastewater treatment requirements of the Regional Water Quality Control Board.

- b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The project will not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

- c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The project will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.

- d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

The project will not result in a need for substantial new water supplies or expanded entitlements. The project will not affect local or regional water supplies, nor increase existing water demand.

- e. Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments.
- The project will not result in the generation of wastewater in excess of the capacities of the current wastewater treatment provider.**
- f. Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs.
- Solid wastes generated by the project will be recycled to the greatest extent possible.**
- g. Comply with federal, state, and local statutes and regulations related to solid waste.
- The project will comply with all federal, state, and local statutes and regulations related to solid wastes. Wastes identified as hazardous will be transported in accordance with Title 49 Code of Federal Regulations (CFR) and Title 22 California Code of Regulations (Cal Code Regs.).**

Specific References (list a, b, c, etc): 1, 2, and 3

Findings of Significance:

- Potentially Significant Impact
- Potentially Significant Unless Mitigated
- Less Than Significant Impact
- No Impact

17. Mandatory Findings of Significance

Analysis of Potential Impacts. Describe to what extent project activities would: **Drilling and installation of new the well, extraction of DNAPL, and transportation of hazardous materials could create potential impacts.**

- a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

Based on the analysis in the Aesthetics, Air, Biological, Geology and Soils, Hydrology, Hazards and Hazardous Materials sections of this Initial Study, the project activities will not degrade the quality of the environment, or cause any substantial adverse effect on human beings or the environment. The project will not have significant impacts on biological resources and will not eliminate any known examples of the major periods of California history or prehistory.

- b. Have impacts that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

The project activities will not have impacts that are cumulatively considerable. The project is only for the remediation of DNAPL in the aquifer.

- c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

The project will not cause substantial adverse impacts on human beings, either directly or indirectly. The DNAPL is confined and will be extracted using the methodology described in this document. In the event the technology is not successful, as demonstrated by water monitoring results, a new RAW or a Remedial Action Plan evaluating new alternatives will be implemented.

Specific References (list a, b, c, etc): 1, 2, and 3

Findings of Significance:

- Potentially Significant Impact
 Potentially Significant Unless Mitigated
 Less Than Significant Impact
 No Impact

V. FINDING OF DE MINIMIS IMPACT TO FISH, WILDLIFE AND HABITAT (Optional)

Prepared only if a Finding of De Minimis Impact to fish, wildlife and habitat is proposed in lieu of payment of the Department of Fish and Game Notice of Determination filing fee required pursuant to section 711.4 of the Fish and Game Code.

Instructions

A finding of “no potential adverse effect” must be made to satisfy the requirements for the Finding of De Minimis Impact as required by title 14, California Code of Regulations, section 753.5. “No potential adverse effect” is a higher standard than “no significant impact” and the information requested to provide substantial evidence in support of a “no potential adverse effect” is not identical in either its standard or content to that in other parts of the Initial Study.

In the *Explanation and Supporting Evidence* section below, provide substantial evidence as to how the project will have **no potential adverse effect** on the following resources:

- a) Riparian land, rivers, streams, watercourse, and wetlands under state and federal jurisdiction.
- b) Native and non-native plant life and the soil required to sustain habitat for fish and wildlife.
- c) Rare and unique plant life and ecological community's dependent on plant life.
- d) Listed threatened and endangered plant and animals and the habitat in which they are believed to reside.
- e) All species of plant or animals as listed as protected or identified for special management in the Fish and Game Code, the Public Resources Code, the Water Code, or regulation adopted there under.
- f) All marine and terrestrial species subject to the jurisdiction of the Department of Fish and Game and the ecological communities in which they reside.
- g) All air and water resources the degradation of which will individually or cumulatively result in a loss of biological diversity among the plants and animals residing in that air and water.

Explanation and Supporting Evidence

Based on the analysis in the Aesthetics, Air, Biological, Geology and Soils, Hydrology, Hazards and Hazardous Materials sections of this Initial Study, the project activities will not degrade the quality of the environment, or cause any substantial adverse effect on human beings or the environment. The project will not have significant impacts on biological resources and will not eliminate any known examples of the major periods of California history or prehistory.

The project is located in an industrial area. The project site consists of a terminal and distribution center. Approximately 80% of the 37-acre facility, including much of the project site, is covered with impervious structures consisting of buildings, roads, or paved areas. The remaining 20 percent is unpaved or grassy. There are no known endangered, threatened, or rare species or their habitats on or adjacent to the project site. The project site does not provide habitat value for wildlife. There are no locally designated riparian habitat, wetland or other sensitive natural communities species on or adjacent to the project site. No impacts are anticipated.

Finding

Based on the explanation and supporting evidence provided above, DTSC finds that the project will have no potential for adverse effect, either individually or cumulatively on fish and wildlife, or the habitat on which it depends, as defined by section 711.2 of the Fish and Game Code.

VI. DETERMINATION OF APPROPRIATE ENVIRONMENTAL DOCUMENT

On the basis of this Initial Study:

- I find that the proposed project COULD NOT have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED DECLARATION will be prepared.
- I find that the proposed project MAY HAVE a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.

DTSC Project Manager Signature		Date
Johnson P. Abraham	Hazardous Substances Scientist	(714) 484-5476
DTSC Project Manager Name	DTSC Project Manager Title	Phone #
DTSC Branch/Unit Chief Signature		Date
Thomas M. Cota	Branch Chief	(714) 484-5459
DTSC Branch/Unit Chief Name	DTSC Branch/Unit Chief Title	Phone #

ATTACHMENT A
INITIAL STUDY REFERENCE LIST

For

Heil Separator Area Union Carbide Corporation (UCC) Torrance (Mariner Avenue) Terminal Facility
Removal Action Workplan

(Project Name)

1. URS, 2003a. *Focused Feasibility Study for the Heil Separator Area Union Carbide Distribution Facility a Wholly Owned Subsidiary of The Dow Chemical Company 19500 Mariner Avenue Torrance, California*. Prepared for Union Carbide Corporation. June 2003.
2. URS, 2003b. *Draft Work Plan for Groundwater Monitoring for the Dow Chemical Torrance Facility 19500 Mariner Avenue, Torrance California*. Prepared for the Dow Chemical Company. October 2003.
3. URS, 2003c. *Draft Task Specific Health and Safety Plan for Groundwater Monitoring Program at 19500 Mariner Avenue, Torrance California*. Prepared for The Dow Chemical Company. October 2003.
4. State of California Department of Conservation, Department of Mines and Geology. State of California Seismic Hazard Zone Map for the Torrance CA, Quadrangle. March 25, 1999.
5. State of California Department of Conservation, Department of Mines and Geology. Alquist-Priolo Earthquake Map Zone Index. Website: http://www.consrv.ca.gov/cgs/rghm/ap/Map_index/F4D.htm
6. Torrance, 2002. *Living With Expansive Soils*. Website: <http://www.ci.torrance.ca.us/city/dept/bldg/soils.htm>
7. Torrance, 2001. General Plan. Updated February 27, 2001.
8. Environmental Systems Research Institute, Inc. 2003. US Flood Hazard Areas.
9. Montgomery Watson, 2000. Phase II Remedial Investigation Report for the Heil Separator Area, August 2000.
10. CDWR, 2002. Watermaster Service in the West Coast Basin, Los Angeles County.
11. California Department of Conservation Division of Mines and Geology. 2002. A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos. Website: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf.
12. California Department of Fish and Game Natural Diversity Database, Rarefind Report, May 3, 2004, Torrance quadrant.