

## **Phase I Initial Site Assessment**

5th Street from Victoria Avenue to Palm Avenue  
5th Street from Church Avenue to SR 210  
3rd Street from Palm Avenue to 5th/Church Avenue  
Victoria Avenue from 3rd Street to 6th Street  
Central Avenue from 3rd Street to 5th Street  
Palm Avenue from 3rd Street to 5th Street

Highland, San Bernardino County, CA

### **Prepared for:**

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## **List of Acronyms**

<b>AIRS</b>	Aerometric Information Retrieval System
<b>AST</b>	aboveground storage tank
<b>ASTM</b>	American Society for Testing and Materials
<b>CERCLIS</b>	Comprehensive Environmental Response, Compensation, and Liability Information System
<b>CORRACTS</b>	Corrective Action Report
<b>EPA</b>	Environmental Protection Agency
<b>ERNS</b>	Emergency Response Notification System
<b>ESA</b>	Environmental Site Assessment
<b>FIFRA</b>	Federal Insecticide, Fungicide, and Rodenticide Act
<b>FINDS</b>	Facility Index System
<b>HWS Permit</b>	Active TSD facilities
<b>ISA</b>	Initial Site Assessment
<b>LUST</b>	leaking underground storage tank
<b>MINES</b>	Mines Master Index File
<b>NFRAP</b>	No Further Remedial Action Planned
<b>NPL</b>	National Priority List
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RCRIS LQG</b>	Resource Conservation and Recovery Information System Large Quantity Generators
<b>RCRIS SQG</b>	Resource Conservation and Recovery Information System Small Quantity Generators
<b>RCRIS TSD</b>	Resource Conservation and Recovery Information System Treatment, Storage, and Disposal
<b>REC</b>	Recognized Environmental Condition
<b>SI</b>	Site Inspection
<b>Spills</b>	Spills Database
<b>SWF/LF</b>	Solid Waste Facilities/Landfill
<b>TSCA</b>	Toxic Substances Control Act
<b>USGS</b>	United States Geological Survey
<b>UST</b>	underground storage tank

*Note: A more complete acronym list is located in the EDR Report, Appendix C.*

## 1.0 Executive Summary

HDR Engineering, Inc. (HDR) has conducted a Phase I Initial Site Assessment (ISA) of 5<sup>th</sup> Street from Victoria Avenue to Palm Avenue; 5<sup>th</sup> Street from Church Avenue to just east of SR 210; 3<sup>rd</sup> Street from Palm Avenue to 5<sup>th</sup>/ Church Avenue; Victoria Avenue from 3<sup>rd</sup> Street to 6<sup>th</sup> Street; Central Avenue from 3<sup>rd</sup> Street to 5<sup>th</sup> Street; and Palm Avenue from 3<sup>rd</sup> Street to 5<sup>th</sup> Street, in Highland, San Bernardino County, California. These roadway segments are referred to in aggregate as the “project area” or the “project corridor” in this report, the specific segments of each roadway within the project corridor totals approximately 2.3 miles of roadway. The scope of the roadway improvement project includes widening, addition of turn lanes, acquisition of new right-of-way, and other improvements. Land use within the project corridor consists of residential, light commercial, and light industrial uses. According to HDR’s review of historical sources, including historical aerial photographs, city telephone directories, and personal interviews, the project corridor has developed over the past 70 years as a mixed residential, commercial, and light industrial area that supported the former Norton Air Force Base (AFB) and local industry. Before development, the area was open desert.

This Phase I ISA identifies Recognized Environmental Conditions (RECs) for the project corridor that may adversely affect roadway construction or project corridor right-of-way acquisition (if required). This ISA was conducted in general conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527-05. Any exceptions to or deletions from these ASTM practices are described later in this report.

### Findings and Conclusions

This Phase I ISA includes a summary of the site reconnaissance conducted on August 27, 2009, a review of environmental databases, a review of historical data sources, and a site reconnaissance. This report has revealed one REC, one historic REC, and two sites of moderate concern in connection with the project corridor:

- Safety Kleen, located at 7979 Palm Avenue, has soil contaminated with TPH and VOCs between the east and west warehouse, adjacent to 3<sup>rd</sup> Street. Corrective measures are currently underway. Investigations by Safety Kleen have determined that groundwater contamination has not occurred, and that the extent of soil contamination has not extended past the Safety Kleen property. However, since the 3<sup>rd</sup> Street project includes widening and expansion of right-of-way, soil contamination may be present on or near planned acquisition/excavation areas. HDR has identified this site as a high-risk site and a REC.
- Norton AFB Landfill # 2 is located less than 400 feet from the Central Avenue/ 3<sup>rd</sup> Street intersection, and within 800 feet of the Palm Avenue/ 3<sup>rd</sup> Street intersection. Groundwater contains VOCs, primarily PCE, at levels below the MCLs. Although the site has a number of potential risk factors, these factors are mitigated by the distance and hydrologically down gradient position of the site (relative to the project corridor). HDR has ranked this site as a moderate risk site, but not a REC.
- ARCO Facility No. 05617, located at 27323 5th Street, was a former LUST case that was closed in 2001. HDR has ranked this site as a moderate risk and as a historic REC.
- Locky’s Service Garage, located at 26578 E 5th Street, is a facility that had old cars and equipment in an unpaved yard during the site visit, with no observed soil staining. HDR has ranked this site as a moderate risk but not a REC.

## Recommendations

HDR recommends that the City of Highland notify the selected construction contractor that subsurface impacts may be present within the construction zone in the vicinity of the Safety Kleen site (7979 Palm Avenue). The construction contractor should be prepared for the possibility of encountering impacted soils and be prepared to detect, excavate, document, and dispose of impacted materials in compliance with applicable environmental laws and regulations if contaminated soils are encountered.

Lead testing for aerial deposition of lead (from historic automotive traffic) should be conducted by the contractor and then noted that if tests were positive, they would implement the proper measures for worker safety and disposal.

## 2.0 Introduction

### 2.1 Purpose and Involved Parties

This Phase I ISA documents the evaluation of the project area for indications of “recognized environmental conditions.” A recognized environmental condition (REC) is defined by ASTM Practice E 1527-05 as: *“The presence or likely presence of any hazardous substances or petroleum products on a project site under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the project site or into the ground, groundwater, or surface water of the project site. The term includes hazardous substances or petroleum products even under conditions of storage and use in compliance with local and state laws and regulations. The term is not intended to include de minimus conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of regulatory governmental agencies. Conditions determined to be de minimus are not recognized environmental conditions.”*

HDR received authorization from the City of Highland to conduct a Phase I ISA of the project corridor, defined as 5th Street from Victoria Avenue to Palm Avenue; 5th Street from Church Ave to SR 210; 3rd Street from Palm Avenue to 5th/ Church Avenue; Victoria Avenue from 3rd Street to 6th Street; Central Avenue from 3rd Street to 5th Street; and Palm Avenue from 3rd Street to 5th Street, in Highland, San Bernardino County, California. This Phase I ISA has been prepared for the City of Highland, and only the City of Highland has the right to rely on the contents of this Phase I ISA.

### 2.2 Scope of Services, Significant Assumptions, and Limitations

The services provided for this project consisted of the following:

- Provide a description of the project area including current land uses
- Provide a general description of the topography, soils, geology, and groundwater flow direction
- Review reasonably ascertainable and reviewable regulatory information published by federal, state, local, tribal, health, and/or environmental agencies pertaining to the project area
- Review historical data sources for the project area, including aerial photographs, topographic maps, fire insurance maps, city directories, and other readily available development data
- Conduct an area reconnaissance and an environmental review—including a visual inspection of adjoining properties—with a focus on indications of hazardous

substances, petroleum products, polychlorinated biphenyls (PCBs), wells, storage tanks, solid waste disposal pits and sumps, and utilities

- Prepare a written report of methods, findings, and conclusions.

The goal of this scope of services is to assist the user in identifying conditions in the project area that may indicate risks regarding hazardous materials storage, disposal, or other impacts. The resulting report may qualify the user for relief from liabilities as one of three “defenses” identified in the 2002 Brownfields Amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 9607 (All Appropriate Inquiry subsections). These three defenses include:

1. The “innocent landowner” defense to potential liabilities under 42 United States Code [U.S.C.] § 9601
2. The “contiguous project corridor owner” defense pursuant to 42 U.S.C. § 9607q
3. The “bona fide prospective purchaser” defense pursuant to 42 U.S.C. §9607r.

Federal regulations at 40 Code of Federal Regulations [C.F.R.] Part 312, promulgated by the United States (U.S.) Environmental Protection Agency (EPA), require that liability release be based (in part) on completion of All Appropriate Inquiries (AAI) prior to purchase of a property. Those inquiries are documented by Phase I reports, or ISAs. EPA has agreed that the recently developed ASTM guidance (ASTM Practice E 1527-05) specifies and interprets AAI requirements.

A user is defined by ASTM Practice E 1527-05 as the party seeking to use Practice E 1527 to complete an ISA of the project area and may include a potential purchaser of land in the project area, a potential tenant of the project area, an owner of land in the project area, a lender, or a project area manager. Investigative areas not included in the standard ASTM ISA scope include: asbestos, lead-based paint, lead in drinking water, radon or urea formaldehyde, wetland issues, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines. The scope of services for ISA projects also does not include the completion of soil borings, the installation of groundwater monitoring wells, or the collection of soil or groundwater samples. Likely sources of vapor intrusion, from potential on-site or off-site sources, are identified. State and national policies and standards relevant to vapor intrusion are in flux and subject to change.

HDR has made certain assumptions in preparing the scope of this assessment:

- Data gathered from public information sources (i.e., libraries or public regulatory agencies) are accurate and reliable.
- Site operations reflect site conditions relative to potential releases, and no intentional concealment of environmental conditions or releases has occurred.
- Interview information is directly reported as gathered by the assessor and is limited by the accuracy of the interviewee’s recollection and experience.
- Published geologic information and site observations made by the environmental professional are used to estimate likely contaminant migration pathways in the subsurface. These estimates by the environmental professional are limited in accuracy and are generally cross-referenced with existing information about similar sites and environmental releases in the area.
- Regulatory information is limited to sites discovered after the late 1980s because reliable records were not kept by regulatory agencies prior to that time frame.

Where a REC has resulted from historical uses or conditions, but apparently no longer persists at the site, the term “historical REC” is used.

The findings and conclusions presented in this report are based on the procedures described in ASTM Practice E 1527-05, informal discussions with various agencies, a review of the available literature cited in this report, conditions noted at the time of this Phase I ISA, and HDR’s interpretation of the information obtained as part of this Phase I ISA. The findings and conclusions are limited to the specific project and properties described in this report, and by the accuracy and completeness of the information provided by others.

An ISA cannot entirely eliminate uncertainty regarding the potential for RECs. Conducting this assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a project area within reasonable limits of time and cost. In conducting its services, HDR used a degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same locality. No other warranty is made or intended. This Phase I ISA generally conforms to the level of documentation required in ASTM Practice E 1527-05. Deviations from the ASTM standard included deletion of certain records sources deemed to be inapplicable, or of limited value, to the specific needs of this client.

### 3.0 Site Description

#### 3.1 Location and Legal Description

The project corridor is located in the City of Highland, San Bernardino County, California and can be generally located north of Interstate 10, east of State Route 30 and south of State Route 330 (Appendix A, Figure 1). The specific project limits and project components are described in Table 1.

**Table 1. - Project Limits and Components**

<b>Project Limits</b>	<b>Project Components</b>	<b>Estimated Excavation Depth (bgs)</b>
5th Street from Victoria Avenue to Palm Avenue	80' curb-to-curb; 104' ROW; on street bike lane	3'; 10' adjacent to City Creek
5th Street from Church Avenue to just East of SR 210; Improvements to the southbound SR 210 on and off ramps.	88' curb-to-curb; 104' ROW; 114' curb-to-curb under SR 210 with on street bike lanes	3'; 5' under SR 210
3rd Street from Palm Avenue to 5th/ Church Avenue	64' curb-to-curb within 88' ROW	5'
Victoria Avenue from 3rd Street to 9th Street	80' curb-to-curb; 104' ROW	3'
Central Avenue from 3rd Street to 5th Street	44' curb-to-curb; 66' ROW	3'
Palm Avenue from 3rd Street to 5th Street	80' curb-to-curb; 104' ROW	3'
1200' west of Victoria Avenue and 5 <sup>th</sup> Street	Regrade City Creek Bypass	3'

#### 3.2 Site and Vicinity Characteristics

The United States Geological Survey 7.5-minute series quadrangle map (Redlands, CA, 1988) indicates that the site elevation is approximately 1,181 feet above mean sea level. The topography near the site slopes downward from the east and northeast to the west and southwest. The topography and geographic location suggest that shallow groundwater flows southwest towards the Santa Ana Wash (see Figure 1 in Appendix A). Development in the project area is a patchwork of residential, light commercial, light industrial and undeveloped land. City Creek runs through the corridor and has been channelized.

### **3.3 Description of Structures, Roads, and Other Site Improvements**

Project corridor development includes residential, light commercial, light industrial and undeveloped land. Light commercial or light industrial businesses include numerous car repair shops, a few restaurants, concrete product manufacturing, and waste recycling businesses. Some of the businesses and residences are in disrepair or appear to have been abandoned. The roads appear to be in good condition. City Creek, running through the project corridor, has been channelized, and the banks are lined with riprap. Typical urban utilities are present throughout the project corridor, both as aboveground and underground installations.

### **3.4 Area Geology and Hydrogeology**

The geological setting of the project corridor is typical of a fault-controlled alluvial basin environment. The San Bernardino Mountains, located to the north of the project corridor, are a granite-core, metamorphosed complex with a general east/west strike. These mountains provide a highly diverse alluvium to the project area, in the form of igneous, metamorphic, and sedimentary donor rock for the alluvial sediments. The sediments underlying the corridor consist of unconsolidated, relatively undisturbed gravels, sands, silts, and clays in varying proportions. While the specific depositional setting varies considerably from one location to another, sediments can be grouped into various lithologic sets. These lithologic sets occur within the regional upper hydrogeologic units (river channel deposits, younger alluvium, older alluvium).

According to the United States Department of Agriculture Soil Conservation Service's soil survey soil maps for STATSGO, the soil along the project corridor is mainly composed of Tujunga gravelly loamy sand. City Creek runs through the project corridor and the soils along the creek are composed of Fluvents gravelly sand. The Tujunga gravelly loamy sand is deep well-drained to excessively well-drained sands and gravels in the Class A hydrologic group. The Fluvents gravelly sand is deep to moderately deep, moderately well to well-drained soils, with moderately coarse textures in the Class B hydrologic group. The project corridor is located within the 110-square mile Bunker Hill groundwater basin, which is subdivided into three water-bearing zones or aquifers (upper, middle, and lower). Locally, overlying the three zones is a perched zone of water; the perched zone is located 25 to 28 feet below ground surface (bgs) and does not contain enough water to be a viable drinking water supply. Potable water can be found beginning in the upper aquifer at about 57 to 150 feet bgs. Regional groundwater flows towards the southwest. Recharge is supplied by runoff from the San Bernardino Mountains (EPA 1997).

## **4.0 User-Provided Information**

The user of the report provided a description of the corridor limits, proposed project scope, and a description of the construction activities that are planned along different segments of the corridor.

## **5.0 Records Review**

### **5.1 Environmental Records Review**

Environmental Data Resources, Inc. (EDR) was contracted by HDR to complete a database search of federal, state, and tribal environmental records for the project site. A computerized environmental information database search was performed for the project site by EDR on August 17, 2009. The databases searched included federal, state, local, tribal, and EDR

proprietary databases as defined by ASTM E 1527-05. The results of the database search are summarized in the following table and paragraphs. Only results within a ¼ mile of the project corridor were investigated. A complete copy of the EDR environmental database report is included in Appendix C.

**Table 2 – Summary of Federal Environmental Database Search**

Database	Description	Facilities within ¼ mile of corridor	Sites of concern to the project
NPL	Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.	1	1
CERCLIS	The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.	1	1
CERC-NFRAP	Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.	1	1
CORRACTS	CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.	2	2
RCRA-TSDF	RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.	2	1
RCRA INFO	The RCRA INFO database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as large, small, or conditionally exempt. Large quantity generators (LQG) produce at least 1,000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. Small quantity generators (SQG) produce 100 to 1,000 kg/month of non-acutely hazardous waste. Conditionally exempt small quantity generators (CESQG) are those that generate less than 100 kg/month of non-acutely hazardous waste.	6	3
US ENG CONTROLS:	A listing of sites with engineering controls in place.	1	1

Database	Description	Facilities within ¼ mile of corridor	Sites of concern to the project
US INST CONTROLS	A listing of sites with institutional controls in place.	1	1
DOD	Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.	1	1
ROD	Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.	1	1
ERNS	Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances.	1	1
FINDS	Facility Index System/Facility Registry System (FINDS) contains both facility information and 'pointers' to other sources that contain further detail.	6	3

**Table 3 – Summary of State and Local Environmental Database Search**

Database	Description	Facilities within ¼ mile of corridor	Sites of concern to the project
ENVIROSTOR	The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.	2	2
SWF/LF	The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.	1	1
State LUST	The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.	2	2
State UST	The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.	4	2
SWRCY	A listing of recycling facilities in California.	1	0

Database	Description	Facilities within ¼ mile of corridor	Sites of concern to the project
CDL	A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute determination that the location either requires or does not require additional cleanup work.	2	0
CA FID UST	The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.	1	0
HIST UST	Historical UST Registered Database.	7	1
SWEEPS UST	Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990s. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.	5	1
DEED	The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes .	1	1
HMIRS	The Hazardous Materials Incident Report System contains hazardous material spill incidents reported to the Department of Transportation. The source of this database is the U.S. EPA.	1	1
CHMIRS	The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.	2	1
NPDES	A listing of NPDES permits, including stormwater.	4	1
HIST CORTESE	The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].	2	2
San Bern. Co. Permit	San Bernardino County Fire Department Hazardous Materials Division.	34	2
HAZNET	The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency	49	2
EMI	Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies	3	0

## 5.2 Summary of Listed Records of Concern to the Project

The EDR database search identified a total of 146 listings within ¼ mile of the project corridor. Of the 146 records listed in the EDR report, 36 listings are associated with sites of concern to the project. The remaining listings are for sites or conditions that the assessor has determined to be of low risk to the project site. Violations are not always associated with listings in the EDR report. Some of the listings contain both facility information and ‘pointers’ to other sources that contain more details. The 36 listings provide information about 3 sites of concern.

### **Former Norton Air Force Base**

Norton AFB was listed in the following databases:

- NPL
- CERCLIS
- CORRACTS
- RCRA-TSDF
- RCRA INFO
- US ENG CONTROLS
- US INST CONTROLS
- DOD
- ROD
- FINDS
- ENVIROSTOR
- SWF/LF
- DEED.

The only site on the former Norton AFB of concern is Landfill # 2. It is located less than 400 feet to the east southeast of the Central Avenue/3<sup>rd</sup> Street intersection, and within 800 feet west southwest of the Palm Avenue/3<sup>rd</sup> Street intersection. This landfill operated from 1958 to 1980, and accepted general refuse, construction debris, and industrial waste, including spent solvents, acids, refrigerants, paint strippers, paints, thinners, waste oil, and sludge. Investigations of this former landfill indicate the presence of landfill gas containing methane and VOCs (primarily tetrachloroethylene (PCE) and vinyl chloride) and PCE. Trichloroethylene (TCE), 1,2-dichloroethylene (1,2-DCE), and vinyl chloride have infrequently been detected above their MCLs. Groundwater contains VOCs, primarily PCE, at levels below the MCLs. The site has engineering and institutional controls in place to limit human contact with the residual contaminants.

### **Safety Kleen**

Safety Kleen, located at 7979 Palm Avenue, is a RCRA Large Quantity Generator (LQG) that treats, stores, transports, and disposes of hazardous wastes, including mineral spirit solvents and special blends of chlorinated and water-phase solvents. The spent solvents are collected and stored on-site until transportation to a reclamation facility. Safety Kleen is listed in the following databases:

- CERC-NFRAP
- CORRACTS
- RCRA-TSDF
- RCRA INFO
- FINDS
- ENVIROSTOR
- State LUST
- State UST
- HIST UST
- SWEEPS UST
- HMIRS
- CHMIRS
- NPDES
- HIST CORTESE

- San Bern. Co. Permit
- HAZNET.

Safety Kleen has had small spills with documented clean-up actions in the past. TPH and VOC-contaminated soil exists on the Safety Kleen property between the east and west warehouse, adjacent to 3rd Street. The contaminated soil is associated with a former 10,000 gallon waste mineral spirits UST, a former 1,000 gallon waste mineral spirits UST, and a former “return and fills” area. Corrective measures are currently underway. Investigations by Safety Kleen have determined that groundwater contamination has not occurred.

### **ARCO Facility No 05617**

ARCO Facility No 05617 is a service station located at 27323 5th Street. ARCO Facility No. 05617 is listed in the following databases:

- RCRA INFO
- FINDS
- State LUST
- State UST
- HIST CORTESE
- HAZNET.

According to the State LUST database, leaking gasoline tank piping and contaminated soil was discovered in 1999. The case was closed in 2001.

### **Locky’s Service Garage**

Locky’s Service Garage, located at 26578 E 5th Street, is of potential concern because the facility had old cars and equipment in an unpaved yard during site reconnaissance. This facility is listed in the San Bern. Co. Permit database as a special generator.

## **5.3 Local Government Information**

HDR contacted San Bernardino County officials from the Department of Health and the Department of Environmental Services, and they stated that their respective departments do not store hazardous materials files.

HDR contacted staff from the Santa Ana Regional Water Quality Board and submitted a records request for several sites of concern along the project corridor. Historical and recent records for the Safety Kleen site were provided by the Water Quality Board, and excerpts are included in Appendix D.

## **5.4 Historical Use Information**

The objective of reviewing historical use information is to develop a history of previous land uses in the vicinity of the project area and to assess these uses for potential hazardous materials impacts that may affect the project. HDR reviewed those historical sources that were readily available and reviewable, and likely to provide useful information, given the time and cost constraints inherent in ISA projects. Historical topographic maps and aerial photos were reviewed at the A. K. Smiley Public Library in Redlands, CA.

### **Fire Insurance Maps**

Fire insurance maps are produced by private fire insurance companies to indicate uses of the project area on specified dates. HDR requested fire insurance maps from EDR, the

copyright holder for the Sanborn map collection; however, no Sanborn fire insurance map coverage exists for the project corridor.

### City Directory Information

HDR obtained city telephone directory information for select addresses located along the project corridor. City directories were researched by EDR. The Haines Criss-Cross directories were reviewed for the years between 1975 and 2007. The following information was gathered for the following sites:

The M&G Market, located at 26710 E 5<sup>th</sup> Street appeared to be a former service station, but no records existed of USTs at this address. This property had the following historical city directory listings, indicating that this property was not a service station.

- 1975, Circle K Food Mart
- 1981, Circle K Food Mart
- 1984, Circle K Food Mart
- 1995, Beverage Barn
- 2007, New Delhi Import Export.

Locky's Service Garage, located at 25678 E 5<sup>th</sup> Street, is an auto service garage with an unpaved yard. City directory listings were reviewed to determine how long this business has parked cars on the unpaved service. The historical city directory listings indicate that this property has been a service garage for at least 25 years.

- 1984, Meyer's Service Garage
- 1995, Meyer's Service Garage
- 2007, Residential.

Safety Kleen, located at 7979 Palm Avenue, is a hazardous waste recycler. The historical city directory listings indicate that this property has been operated by Safety Kleen for least 28 years.

- 1981, Safety Kleen Corp.
- 1984, Safety Kleen Corp.
- 1995, Safety Kleen Corp.
- 2007, Safety Kleen Corp.

### Historical Aerial Photographs

Historical aerial photographs are valuable for the environmental assessor to review features or properties along the project corridor over a long period of time. HDR reviewed historical aerial photographs provided by EDR. Historical aerial photographs were reviewed from 1930, 1938, 1953, 1966, 1977, 1989, 1994, 2002, and 2005, with the longest gap in coverage being 16 years (between 1950 and 1966).

**1930** – A few rural residences and one orchard were present in the project vicinity. Otherwise, the project area consisted of natural scrub desert and the Santa Ana alluvial washes, including present-day City Creek. Part of present-day 3<sup>rd</sup> Street and Palm Avenue had been developed.

**1938** – A few more rural residences were present than in the 1930 photograph. More roads, including the portion of 3<sup>rd</sup> Street from Palm to the present-day Church Avenue/ 5<sup>th</sup> Street, had been constructed.

**1953** – The alluvial wash that is now City Creek had been partially channelized. 5<sup>th</sup> Street and Central Avenue (between 3<sup>rd</sup> and 5<sup>th</sup> Street) had been constructed. Norton AFB was present. More residential and, presumably, commercial development had been constructed.

**1966** – The alluvial wash that is now City Creek had been fully channelized. Residential neighborhoods to the north of City Creek were present. More residential and, presumably, commercial development had been constructed. The present-day Landfill # 2 at Norton AFB appeared to be active.

**1977** – The present-day Landfill # 2 at Norton AFB appeared to have changed since the 1966 photograph. A commercial building had been constructed at the present day location of Safety Kleen.

**1989**– An additional building had been constructed at the present day location of Safety Kleen. A sand and gravel operation had been developed at the 3<sup>rd</sup> Street/ Alabama Avenue intersection.

**1994** – A gas station had been built at present day ARCO site, located at 27323 5th Street.

**2002**– The Norton AFB Landfill # 2 had apparently been consolidated into a smaller area, west of the 3<sup>rd</sup> St/ Alabama Avenue intersection.

**2005**– An industrial facility at the 3<sup>rd</sup> Street/ Alabama Avenue intersection had been built.

### **Historical Topographic Maps**

Historical topographic maps provide an overview of the area relative to potential previous land uses. HDR reviewed historical topographic maps of the project corridor and adjoining properties for the following years: 1901, 1954, 1967, 1980, 1988, and 1996. These maps served to verify the information gathered in the historic aerial photograph review.

**1901** – Very little development was present, with some rural roads and residences.

**1954** – 3<sup>rd</sup> Street, 5<sup>th</sup> Street, Palm Avenue, Victoria Avenue, and Central Avenue between 3<sup>rd</sup> and 5<sup>th</sup> Street had been developed. Norton AFB was present.

**1967**– An unimproved road is present at the Norton AFB Landfill #2.

**1980**– A structure was present at the present-day location of Safety Kleen.

**1988, 1996**– The amount and distribution of structures is similar to 1980.

## **5.5 Environmental Liens and Additional Information**

No information regarding the chain-of-title ownership history or environmental liens recorded against the project corridor was provided by the user. Environmental lien searches were not conducted as part of the scope of work for this project.

## **5.6 Summary of Previous Environmental Investigations**

### **Former Norton Air Force Base Landfill # 2**

The former Norton AFB has had numerous environmental investigations for potential contamination sites. Norton AFB Landfill # 2 (the only site of concern on the former base, located near the project corridor) operated from 1958 to 1980, and accepted general refuse, construction debris, and industrial waste (including spent solvents, acids, refrigerants, paint strippers, paints, thinners, waste oil, and sludge) using a trench and fill practice. The trench was cut into native material, and covered with 1-3 feet of native material. The landfill was closed in 1998. Investigations of this former landfill indicated the presence of landfill gas

containing methane and VOCs (primarily tetrachloroethylene (PCE) and vinyl chloride). Trichloroethylene (TCE), 1, 2-dichloroethylene (1,2-DCE), and vinyl chloride have infrequently been detected above their MCLs. Groundwater contains VOCs, primarily PCE, at levels below the MCLs.

### **Safety Kleen, 7979 Palm Avenue**

Safety-Kleen Systems, Inc. (Safety-Kleen) began operation in 1968 to provide solvent reclamation and supply service for customers engaged in automotive repairs, industrial maintenance, and dry cleaning. The facility has been operating as a hazardous waste storage facility since June 1977. The facility handles hazardous wastes including petroleum-based cleaners (mineral spirits), aqueous-based parts washing solution, used oil, antifreeze, freon, paint waste/lacquer thinner, and dry cleaning solvents. The California Department of Toxic Substances Control is currently working with the facility to address known contaminant releases to the subsurface, and to implement a subsurface investigation to identify extent and severity of subsurface impacts. At this time, the extent and severity of impacts is unknown.

## **6.0 Site Reconnaissance and Interviews**

### **6.1 Site Reconnaissance**

On August 27, 2009, HDR conducted a reconnaissance of the project corridor. Many automotive shops were present within the corridor. Specific sites of concern included the following:

- Locky's Service Garage, located at 26578 E 5<sup>th</sup> Street, had old cars and equipment in an unpaved yard (Photograph 1).
- The M&G Market, located at 26710 E 5<sup>th</sup> Street, appeared to be a historic gas station, although no records were available to verify former USTs at this address. The architecture indicates that the site may have formerly been a "Circle K" store. Circle K stores do not always provide fueling services, and the lack of space for a fuel island suggests that underground fuel storage tanks never existed at this address.
- The CEMEX and MATICH industrial facilities along Alabama Avenue had some asphalt and concrete waste along the road right-of-way (Photograph 3).
- The former Norton AFB Landfill #2 was visible from 3<sup>rd</sup> Street (Photograph 4).
- At Safety Kleen, located at 7979 Palm Avenue, 55 gallon drums and used oil storage tanks were being stored outdoors (Photograph 5). The location of past releases from leaking USTs was noted (Photograph 6).
- The ARCO service station, located at 27323 E 5<sup>th</sup> Street, is the site of a recent LUST and cleanup (Photograph 7).
- An old shop (use unknown) on 3<sup>rd</sup> Street appeared to be abandoned (Photograph 8).

### **6.2 Interviews**

#### **Site Interviews**

Interviews with private property owners were not included in the scope of this Phase I ISA.

## Off-Site Interviews

HDR contacted San Bernardino County officials from the Departments of Health and Environmental Services, and they stated that their respective departments do not store hazardous materials files. HDR contacted Maria Molina from the San Bernardino County Fire Department. However, an in-person interview, in conjunction with a records request, was required to conduct the interview and had to have been scheduled at least two weeks in advance. This was not feasible given the field work schedule and project schedule.

HDR contacted staff from the Santa Ana Regional Water Quality Board and submitted a records request for several sites of concern along the project corridor. Historical and recent records for the Safety Kleen site were provided by the Water Quality Board (Appendix D).

## 6.3 Known Current and Past Uses of the Site and Adjoining Properties

The project corridor was rural with very few residences prior to the development of Norton AFB in 1942. After the base opened, an increase in commercial and residential development occurred with gradual development occurring to the present time. The area is currently mixed residential, commercial, and industrial in nature. Portions of the corridor have been subject to traffic for over 80 years. As a result, aerial deposition of lead from leaded gasoline may be present in surface soils adjacent to the corridor roadways. Therefore, a risk of lead exposure to construction/excavation workers from ingesting dust and direct contact exists.

## 6.4 Utilities and PCBs

Typical municipal utilities such as water, sewer, electrical, telecommunications cable, and residential gas appeared to be underground.

## 7.0 Data Gap Analysis

The ASTM E 1527-05 standard requires a listing of “data gaps” encountered during the investigative process that may affect the validity of the conclusions drawn by the environmental professional. The ASTM E 1527-05 standard also requires that the environmental professional estimate the relative importance of the data gaps. Generally, gaps in available data are related to the availability of historical data sources for specific sites of concern. The environmental professional uses multiple historical data sources as a method to provide coverage for data gaps. Historical information is collected on a recurring basis, and the passage of time between data sets may or may not constitute a significant gap in data coverage. For this project, the following items may constitute a data gap as defined by ASTM:

- Absence of Sanborn fire insurance maps

The inability to obtain and review the Sanborn fire insurance maps do not appear to present significant data gaps because of the presence of other supporting historical information.

## 8.0 Findings

HDR has conducted a Phase I ISA of the project corridor, identified as 5<sup>th</sup> Street from Victoria Avenue to Palm Avenue; 5<sup>th</sup> Street from Church Avenue to just east of SR 210; 3<sup>rd</sup> Street from Palm Avenue to 5<sup>th</sup>/Church Avenue; Victoria Avenue from 3<sup>rd</sup> Street to 6<sup>th</sup> Street; Central Avenue from 3<sup>rd</sup> Street to 5<sup>th</sup> Street; and Palm Avenue from 3<sup>rd</sup> Street to 5<sup>th</sup> Street, in Highland, San Bernardino County, California. The ISA was performed in general conformance with the scope and limitations of ASTM Practice E 1527-05. Any exceptions to, or deletions from, this practice are described previously in this report.

HDR personnel observed three recognized environmental conditions (RECs), as defined in ASTM Practice E 1527-05, in connection with the project corridor. HDR also observed three sites that HDR considers to be a moderate to high risk, but not RECs. Figure 2 indicates the location of these sites. HDR offers the following description of these sites and issues as follows:

- Safety Kleen, located at 7979 Palm Avenue, is a RCRA Large Quantity Generator that treats, stores, transports, and disposes of hazardous wastes, including mineral spirit solvents, and a special blend of chlorinated and water-phase solvents. Safety Kleen has had small spills and clean-up actions in the past with no remaining soil or groundwater contamination. Regulatory records indicate that TPH and VOC-contaminated soil exists on the Safety Kleen property between the east and west warehouse, adjacent to 3<sup>rd</sup> Street. A former 10,000 gallon waste mineral spirits UST, a former 1,000 gallon waste mineral spirits UST, and a former return and fill area are associated with the contamination. Corrective measures are currently underway. Investigations by Safety Kleen have determined that groundwater contamination has not occurred and that the extent of soil contamination has not extended past the Safety Kleen property. However, since the 3<sup>rd</sup> Street project includes widening and expansion of right-of-way, soil contamination may be present on or near planned acquisition/excavation areas. HDR has identified this site as a high-risk site and a REC.
- Norton AFB Landfill # 2 is located less than 400 feet from the Central Avenue/ 3<sup>rd</sup> Street intersection and within 800 feet of the Palm Avenue/ 3<sup>rd</sup> Street intersection. This landfill operated from 1958 to 1980 and accepted general refuse, construction debris, and industrial waste, including spent solvents, acids, refrigerants, paint strippers, paints, thinners, waste oil, and sludge. Groundwater contains VOCs, primarily PCE, at levels below the MCLs. Although the site has a number of potential risk factors, these factors are mitigated by the distance and hydrological down gradient position of the site (relative to the project corridor). HDR has ranked this site as a moderate risk but not a REC.
- ARCO Facility No. 05617, located at 27323 5th Street, was a former LUST case that was closed in 2001. HDR has ranked this site as a moderate risk and as a historic REC.
- Locky's Service Garage, located at 26578 E 5th Street, is a facility that had old cars and equipment in an unpaved yard during the site visit with no observed soil staining. HDR has ranked this site as a moderate risk but not a REC.

## 9.0 Conclusions

HDR has identified one REC and one historic REC on the project corridor. This conclusion has led to the inclusion of the following statement as required by ASTM E 1527-05:

*HDR has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E 1527-05 of the project corridor, defined as 5<sup>th</sup> Street from Victoria Avenue to Palm Avenue; 5<sup>th</sup> Street from Church Avenue to just east of SR 210; 3<sup>rd</sup> Street from Palm Avenue to 5<sup>th</sup>/ Church Avenue; Victoria Avenue from 3<sup>rd</sup> Street to 6<sup>th</sup> Street; Central Avenue from 3<sup>rd</sup> Street to 5<sup>th</sup> Street; and Palm Avenue from 3<sup>rd</sup> Street to 5<sup>th</sup> Street, in Highland, California. Any exceptions to or deletions from these practices are described in previous sections of this report. This report has revealed evidence of RECs in connection with the project corridor.*

## 10.0 Recommendations

Recommendations included in this report have been developed through the investigative procedures described in the *Scope of Services, Significant Assumptions, and Limitations* section of this report. These findings should be reviewed within the context of the limitations provided in the *Limitations* section.

### Recommendation

HDR recommends that the City of Highland notify the selected construction contractor that subsurface impacts may be present within the construction zone in the vicinity of the Safety Kleen site (7979 Palm Avenue). The construction contractor should be prepared for the possibility of encountering impacted soils and be prepared to detect, excavate, document, and dispose of impacted materials in compliance with applicable environmental laws and regulations if contaminated soils are encountered.

Lead testing for aerial deposition of lead (from historic automotive traffic) should be conducted by the contractor and then noted that if tests were positive, they would implement the proper measures for worker safety and disposal.

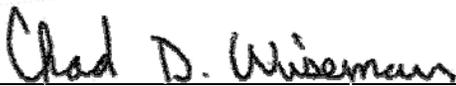
## 11.0 Qualifications of Environmental Professionals

### 11.1 Signatures and Qualifications

*We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in Section 312.10 of 42 C.F.R. Part 312. This Phase I ESA was conducted under the supervision of a qualified environmental professional.*

*We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the AAI in conformance with standards and practices set forth in 40 C.F.R. Part 312.*

The preceding report has been prepared in general conformance with standard industry practice for performance of ESAs, and includes the applicable portions of the investigation procedures codified in ASTM E 1527-05, *Standard Practice for Environmental Site Assessments: Environmental Site Assessment Process*. The end user of this report may rely on the contents, findings, and conclusions to be accurate within the limitations stated in this report and in the ASTM standard. The report also complies with specific requirements supplied by the client.



Environmental Professional  
Chad Wiseman  
Environmental Scientist



Environmental Professional  
Kelly W. Kading, CPG, CHMM  
Senior Professional Associate

### Qualifications of Environmental Professionals

This Phase I ISA was performed by the following HDR employee.

Mr. Chad Wiseman has two years of experience in the assessment and remediation of impacted properties and compliance with environmental regulations. He has a B.S. and M.S. in Biology from Western Washington University.

## Qualifications of QA/QC Review Professionals

Reviews for quality assurance and quality control were performed by the following HDR employee.

Mr. Kelly W. Kading, CPG, CHMM, a qualified assessor as defined by the Arizona Department of Transportation and an environmental professional as defined by ASTM E 1527-05, has more than 21 years of experience in assessment and remediation of impacted properties and compliance with environmental regulations. He has a B.S. in Geology from Colorado State University and is a Certified Professional Geologist (#9173), and a Certified Hazardous Materials Manager (#1995). He specializes in forensic investigation of hazardous materials-impacted properties for municipal and state agencies, as well as commercial clients. His experience covers assessment of more than 3,000 properties ranging from agricultural land to multigenerational industrial properties in 34 states and 2 foreign countries. He is highly knowledgeable of federal, state, and local environmental regulations and standards, and has served on the National Board of Directors of the Academy of Certified Hazardous Materials Managers. He also serves as the national leader of HDR's Phase I Best Practices Team.

## 12.0 References

ASTM Practice E 1527-05. 2005. *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

Department of Toxics and Substances Control. 2009. *Memorandum to Mr. Brian Culnan, Safety-Kleen Systems, Inc.*

Environmental Data Resources, Inc., Report. 2009. *City of Highland- 5th, 3rd, Victoria, Central.* The EDR DataMap Corridor Study, Inquiry Number 2565099.2s. August 17, 2009.

Safety-Kleen. 1997. Quarterly Groundwater Monitoring and Soil Vapor Extraction Report: Safety-Kleen Service Center, 7979 Palm Avenue, Highland, California.

USEPA. 1997. EPA Superfund Record of Decision, NORTON AIR FORCE BASE (LNDFLL #2). EPA/ROD/R09-97/206.

**Appendix A**  
**Figures**



**Project Name**

**Figure Name**



**City of Highland  
5th, 3rd, Victoria, Central and Palm  
Corridor Project**

**Project Vicinity**

**Figure 1**



**Project Name**

**Figure Name**



City of Highland  
5th, 3rd, Victoria, Central and Palm  
Corridor Project

Project Corridor

Figure 2

**Appendix B**  
**Site Photographs**



Photograph 1: Locky's Service Center. View is toward the north.



Photograph 2: M&G market. View is toward the north.



Photograph 3: CEMEX driveway along Alabama Avenue. View is toward the south-southeast.



Photograph 4: Former Norton AFB closed Landfill #2. View is toward the south southwest.



Photograph 5: Safety Kleen facility. View is toward the north.



Photograph 6: Safety Kleen facility; Location of the LUST release. View is toward the northwest.



Photograph 7: ARCO gas station LUST site. View is toward the southwest.



Photograph 8: Unimproved shop building. View is toward the northeast.

**Appendix C**  
**EDR Information**

## **Appendix D**

**Excerpts from Reviewed Regulatory Files for SAFETY KLEEN  
Systems, Inc.**



Linda S. Adams  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Maureen F. Gorsen, Director  
5796 Corporate Avenue  
Cypress, California 90630



FEB 11 2009



Arnold Schwarzenegger  
Governor

February 9, 2009

Mr. Brian Culnan  
Senior Remediation Manager  
Safety-Kleen Systems, Inc.  
1050 North Third Street, Suite "M"  
Laramie, Wyoming 82072

DTSC APPROVES REVISED RCRA CORRECTIVE MEASURES STUDY WORKPLAN,  
SAFETY-KLEEN SYSTEMS INC., 7979 PALM AVENUE, HIGHLAND, CALIFORNIA  
(EPA ID NO. CAT000613927)

Dear Mr. Culnan:

The Department of Toxic Substances Control (DTSC) has reviewed the Revised RCRA Corrective Measures Study (CMS) Work Plan for the subject facility dated December 1, 2008. The Revised CMS Work Plan was prepared by Santec on behalf of Safety-Kleen.

Safety-Kleen provided responses to DTSC comments in several correspondences that occurred between February 2008 and October 2008. The DTSC comments are adequately addressed in the Revised CMS Work Plan dated December 1, 2008. Based on the information provided in the Revised CMS Work Plan, DTSC hereby approves the CMS Work Plan.

DTSC requires the implementation of CMS Work Plan activities within 45 days from the approval date. DTSC plans to oversee the field activities at the site. Therefore, please submit the field activities work schedule to DTSC at least 15 days before the start of field activities.

If you have any questions regarding this letter, please contact me at (714) 484-5343.

Sincerely,

Pratap Balsara, Project Manager  
RCRA Corrective Action Unit  
Brownfields and Environmental Restoration Program

Certified Mail Receipt No.: 7007 0220 0003 3942 1105  
Return Receipt Requested

Mr. Brian Culnan  
February 9, 2009  
Page 2

cc: ✓ Mr. Tom Mbek-ekanem  
Regional Water Quality Control Board  
3737 Main Street, Suite 500  
Riverside, California 92501-3339

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Ms. Ellen Delmar  
Brownfields and Environmental Restoration Program  
Department of Toxic Substances Control  
5796 Corporate Avenue  
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**QUARTERLY GROUNDWATER MONITORING  
AND SOIL VAPOR EXTRACTION REPORT  
SAFETY-KLEEN SERVICE CENTER  
7979 PALM AVENUE  
HIGHLAND, CALIFORNIA**

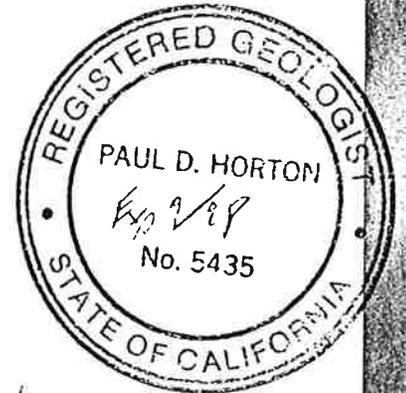
**SECOR Job No. 70005-025-04**

**Prepared For:**  
Safety-Kleen Corp.  
16540 S.E. 130th Avenue  
Clackamas, Oregon 97015

*Complete Report  
in  
Expands*

**Submitted By:**  
SECOR International Incorporated  
1390 Willow Pass Road  
Suite 360  
Concord, California 94520

January 24, 1997



**Prepared By:**

*Kirsten L. Wagle*

Kirsten L. Wagle  
Staff Engineer

**Reviewed By:**

*Paul D. Horton*  
Paul D. Horton, R.G.  
Principal Hydrogeologist

*Greg D. Hoehn*  
Greg D. Hoehn  
Principal Geologist

**SAFETY-KLEAN BRANCH SERVICE CENTER  
7979 PALM AVENUE  
HIGHLAND**

January 10, 1995 (prepared Nov. 7, 1994)

**Draft Phase I RCRA facility investigation report**

The objective is to determine the nature and extent of the impact on soil and ground water related to Safety-Klean Corp. (SKC).

Operations at the facility include, small quantity chemical distribution chain of spent mineral Spirits, spent immersion cleaners, dry cleaning wastes, paint wastes, and spent antifreeze.

Prior to 1990, SKC distributed and collected various hazardous material and waste such as mineral spirit solvents, special blend of chlorinated and water-phase solvents (immersion cleaner, old formula). After 1990, the immersion cleaner has been reformulated (new immersion formula).

The spent solvents are collected and stored on site until transportation to the Reedly facility for reclamation.

**Regional geology and hydrogeology**

The Santa Ana River (SAR) is located 1/2 mile south of the site. The site is on a series of coalescing alluvial fans extended from the San Bernardino mountains to the north.

Ground water recharge is through infiltration and runoff in the S.B. mountains. The runoff collects in SAR and Mill Creek and enters ground water system to the northeast of the facility. The ground water flow direction in this area is toward southwest. The ground water flows to San Jacinto Fault and is forced around the fault zone and beneath the SAR. The ground water is the main source of city's water supply and the wells indicate a depth of 200 to 300 feet below ground surface (BGS).

**RCRA facility investigation**

Ten borings to be drilled to a depth of approx. 40 feet BGS or to the ground water if the VOCs are detected. Three soil samples from each boring were selected for analysis of TPH-MS and VOCs.

Two boreholes (B-8 and B-10) were converted to vadose zone wells. B-8 was converted in dual screening with a Shallow (10 to 40 feet BGS in VW-1-S) and Deep (45-65 feet BGS in VW-1-D). B-10 was converted to vadose zone VW-2 (screened 10-40 feet BGS).

One soil sample from B-8 and B-10 were analyzed for physical properties. A vapor extraction pilot test (VEPT) was performed on the new wells.

The VOCs in the ten borings did not extend to ground water. No ground water wells were required.

The VEPT was performed by a vacuum pump, granulated activated carbon vessels and a thermal oxidizer.

The analytical results indicate that the contamination in B-7 is limited to 25 to 40 feet BGS, B-8 is from 20 to 65 feet BGS, and B-10 is 15 to 25 feet BGS.

#### **Conclusion**

The soil borings and tests defined the extent of the VOC contamination adequately.

The native soil allows the vertical and limited lateral movement of the VOCs. With total estimated TPH-MS found in soil of 2,000 to 6,000 pounds.

The result of metal tests showed levels at or below the background testing in the partial closure activities.

Based on the results, the ground water has not been impacted.

The native soil is conducive to substantial air flow and the area of influence of the vadose zone wells could adequately recover the TPH-MS and VOCs found in the soils beneath the site.

# SOIL BORING DATA TABLE 1

Facility name: Safety-Klean Corp.

Address: 7979 Palm Ave., Highland

BORING NO.	DEPTH (FEET)	REASON TO TERM.	COMMENTS
B-1	41.5	EXTENT DEFINED	
B-2	41	' '	
B-3	31.5	' '	
B-4	20	AUGER REFUSAL	
B-4A	10.5	' '	
B-4B	41.5	EXTENT DEFINED	
B-5	41.4	' '	
B-6	51.5	AUGER REFUSAL	
B-6A	59	' '	55' SAMPLE ANALYZED
B-6B	49	' '	
B-7	58	EXTENT DEFINED	
B-8	83	' '	
B-9	46.5	' '	
B-10	46.5	' '	

B-6	20	8/3/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	30	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	35	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	40	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	45	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	50	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6a	55	8/8/94	ND	ND	ND	ND	ND	ND	ND	0.028	ND	ND	N/A
B-7	20	8/2/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7	30	;;	ND	ND	ND	ND	ND	ND	ND	0.5J	ND	0.085J	61
B-7	40	;;	0.93	0.084	0.49	1.9J	0.66	2.4J	750	ND	ND	ND	ND
B-7	45	8/3/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7	50	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7	56.5	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8	20	8/3/94	1.9	0.19	1.0	0.37J	0.79	2.3J	2700	0.37J	0.79	2.3J	2700
B-8	30	;;	0.2	0.12	0.69	0.13J	0.88	1.6J	2000	0.13J	0.88	1.6J	2000
B-8	50	;;	3.8	0.27	2.2	0.61J	1.9	5.6J	5100	0.61J	1.9	5.6J	5100
B-8	60	;;	N/A	N/A	N/A	N/A	N/A	N/A	ND	N/A	N/A	N/A	ND
B-8	65	;;	N/A	N/A	N/A	N/A	N/A	N/A	ND	N/A	N/A	N/A	ND
B-8	70	8/4/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8	75	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-8	81.5	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9	23	8/4/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9	35	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9	40	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-9	45	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10	15	8/5/94	0.51	ND	0.1	0.15	0.042	0.18	500	0.15	0.042	0.18	500
B-10	20	;;	4.8	0.23	0.87	0.29J	0.21	2.1J	620	0.29J	0.21	2.1J	620
B-10	25	;;	1.1	ND	0.22	0.33	0.086	ND	ND	0.33	0.086	ND	ND
B-10	35	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10	40	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-10	45	;;	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND = NOT DETERMINED, BELOW DETECTION LIMIT  
J = THE RESULTS ARE QUALIFIED AS ESTIMATES DUE TO SAMPLE MATRIX INTERFERENCE

# METAL ANALYSIS IN SOIL SAMPLES

## TABLE 3

Facility name: Safety-Klean Corp.

Address: 7979 Palm Ave., Highland

### RESULTS OF BACKGROUND TESTING (mg/kg)

BACKGROUND SAMPLING	ARSENIC (7061)	BARIUM (6010)	CADMIUM (6010)	CHROMIUM (6010)	LEAD (6010)	MERCURY (7471)	SELENIUM (7741)	SILVER (6010)
BKG-1	1.48	45	ND	13.8	28.7	0.48	ND	ND
BKG-2	0.29	44.2	ND	8.7	26.4	0.19	ND	ND
BKG-3	0.29	43.3	ND	7.1	72.1	0.16	ND	ND

### RESULTS OF PHASE I RFI (mg/kg)

PHASE I	ARSENIC (7060)	BARIUM (6010)	CADMIUM (7133)	CHROMIUM (6010)	LEAD (6010)	MERCURY (7471)	SELENIUM (7740)	SILVER (6010)	
CAIUI-B8-50	ND	25.8	ND	5.3	3.9	ND	ND	ND	
PHASE I CONTINUED	BERYLLIUM (6010)	COBALT (6010)	MOLYBDENUM (6010)	NICKLE (6010)	ANTIMONY (6010)	THALLIUM (7841)	VANADIUM (6010)	ZINC (6010)	COPPER (6010)
CAIUI-B8-50	ND	2.7	ND	3.9	<0.25	ND	ND	30.1	11.7

# SOIL PARAMETERS FROM GEOTECHNICAL TESTING

## TABLE 4

SAMPLE	DEPTH (Feet)	PERMEABILITY (Kair-md)	POROSITY (Total) %	WATER CONTENT %	DRY BULK DENSITY gm/cc	NATURAL BULK gm/cc
CAIUI-B8-40	40	4944	29.4	21.6	1.87	1.93
CAIUI-B10-30	30	3556	26.5	19.4	1.94	1.99

# VAPOR EXTRACTION PILOT TEST ANALYTICAL DATA

## TABLE 5

Facility name: Safety-Klean Corp.

Address: 7979 Palm Ave., Highland

SOIL SAMPLE (WELL)	UNITS	B-8-S (VW-1-S)	B-8-D (VW-1-D)	B-10 (VW-2)	DP-1 (VW-1-S)
TPH - MS	mg/m <sup>3</sup>	630	270	ND	720
METHYLENE CHLORIDE	??	ND	6	ND	ND
ETHYL BENZENE	??	10	ND	3	10
TETRACHLOROETHENE (PCE)	??	45	24	15	55
1,1,1-TRICHLOROETHANE	??	2	2	ND	3
TRICHLOROETHENE (TCE)	??	1	ND	ND	2
TOTAL XYLENES	??	14	11	4	18
METHANE	PERCENT (%)	ND	ND	ND	ND
CARBON DIOXIDE	??	11	16	10	11
NITROGEN	??	80	81	79	79
OXYGEN	??	8.7	2.9	9.5	8.7

ND = NOT DETECTED, BELOW DETECTION LIMIT

# VAPOR EXTRACTION PILOT TEST RESULTS

## TABLE 6

Facility name: Safety-Klean Corp.

Address: 7979 Palm Ave., Highland

EXTRACTION WELL	TIME FROM START OF THE TEST (MIN.)	APPLIED VACUUM (INCHES OF WATER)	FLOWRATE (CFM)	MONITORING POINT		B-8-S
				DISTANCE (FT)		
				OVM READING (PPM)		
B-10 (VW-2)	9:05	VAC. PRIOR START	0	OVERRANGE		0.05
	10:30	16	280	5511		0.30
	10:45	2	70			0.12
	11:00	2	71.9			0.08
	11:15	2	72			0.08
	11:30		72			0.03
	11:35	5	140			0.10
	11:45	5	140			0.11
	12:00	5	140			0.10
	12:05	10	213			0.14
	12:15	10	213			0.16
	12:30	10	213			0.16
	12:40	15	268			0.20
	12:50	16	273			0.22
	13:00	16	273			0.22
				OBSERVED VACUUM (INCHES OF WATER)		29.6

VAPOR EXTRACTION PILOT TEST RESULTS  
TABLE 6 (CONTINUED)

EXTRACTION WELL	TIME FROM START OF THE TEST (MIN.)	APPLIED VACUUM (INCHES OF WATER)	FLOWRATE (CFM)	MONITORING POINT		B-10
				DISTANCE (FT)	B-8-D	
				OVM READING (PPM)	OBSERVED VACUUM (INCHES OF WATER)	
B-8-S (VW-1-S)	15:10	PRESS. START			+0.07	+0.08
	16:45	2	35		0.06	0.08
	17:00	2	35		0.06	0.08
	17:15	2	68.7		0.08	0.12
	17:25	2	68		0.06	-
	17:30	3	106		0.09	0.18
	17:45	3	100		0.10	0.18
	17:50	3.5	104		0.12	0.20
	18:00	3.5	103	8305	0.12	0.20

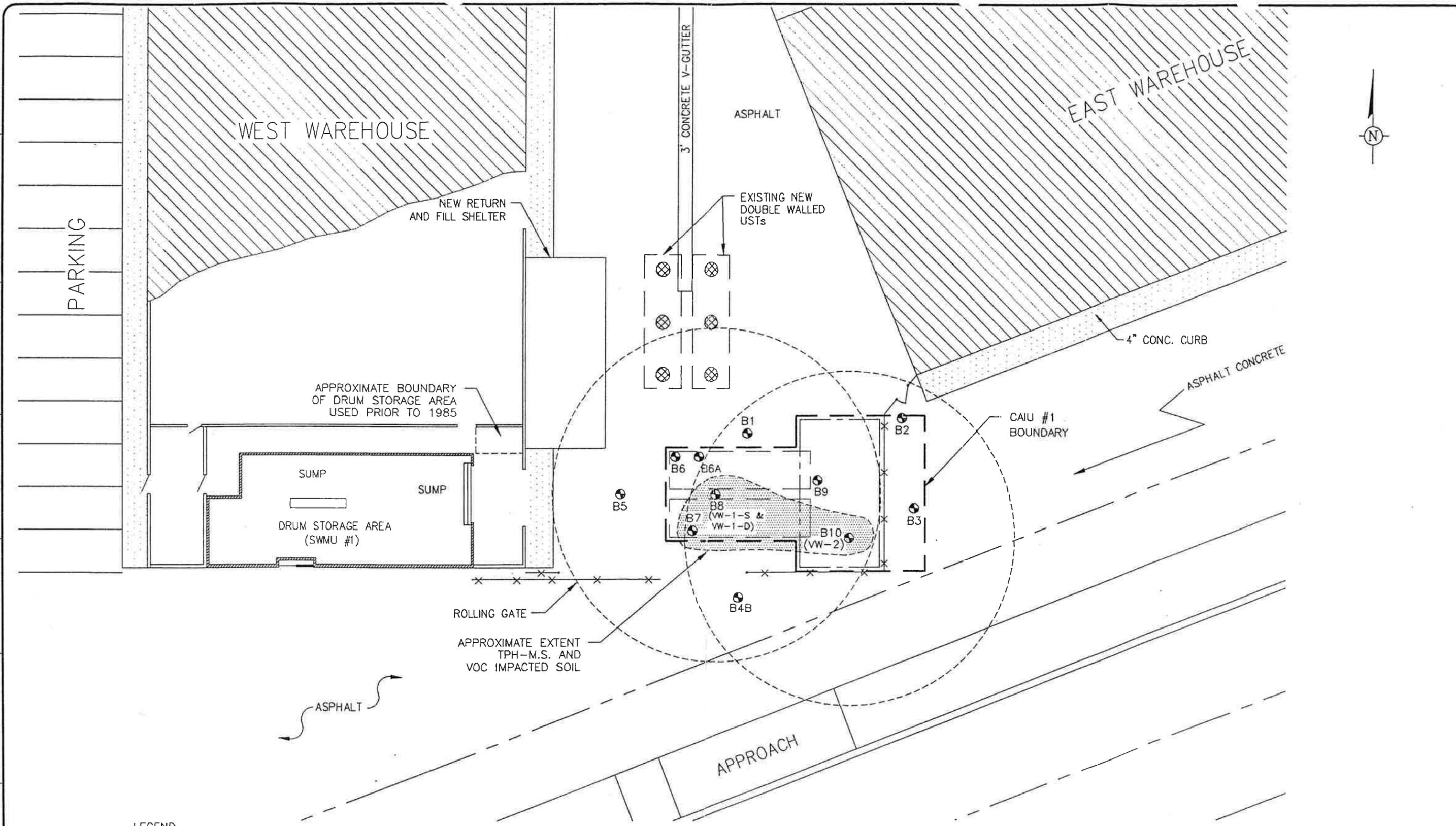
**VAPOR EXTRACTION PILOT TEST RESULTS**  
**TABLE 6 (CONTINUED)**

EXTRACTION WELL	TIME FROM START OF THE TEST (MIN.)	APPLIED VACUUM (INCHES OF WATER)	FLOWRATE (CFM)	MONITORING POINT	B-8-D	B-8-S
				DISTANCE (FT)	29.6	29.6
				OVM READING (PPM)	OBSERVED VACUUM (INCHES OF WATER)	
B-8-D (VW-1-D)	18:40	VAC. PRIOR START	0		0.01	0.00
	18:50	1.5	29		0.10	0.10
	18:52	1.5	30		0.08	0.08
	19:05	1.5	29		0.10	0.08
	19:10	3	57		0.10	0.10
	19:20	3	56		0.10	0.10
	19:22	6	85		0.16	0.14
	19:30	6	82		0.16	0.14
	19:35	6	81		0.16	0.14
	19:37	10	111		0.20	0.20
	19:40	10	110		0.22	0.20
	19:43	10	109		0.24	0.22
	19:50	10	109		0.24	0.22
	19:55	10	109	2789 OVER	0.24	0.22

**SOIL PARAMETERS FROM GEOTECHNICAL TESTING**  
**TABLE 7**

SAMPLE (WELL)	AIR FLOW RATE scfm	INITIAL TPH-MS CONCENTRATION		INITIAL PCE CONCENTRATION		INITIAL RECOVERY RATE	
		mg/m <sup>3</sup>	ppmv	mg/m <sup>3</sup>	ppmv	TPH-MS lbs/day	PCE lbs/day
B-8-S (VW-1-S)	100	630	107	45	6.55	5.769	0.413
B-8-D (VW-1-D)	100	270	46	43	6.26	2.472	0.395
B-10 (VW-2)	100	0.4	0.07	15	2.18	0.004	0.138
DP-1 (VW-1-S)	100	720	122	55	8.00	6.593	0.504

DWG DATE: 5/27/94 | PRJCT NO.: 0C0086.001 | FILE: 4IRD436 | DRAWING: SKH-XPS | CHECKED: DP | APPROVED: RR | DRAFTER: SKP



**LEGEND**

- SOIL BORING LOCATION
- ESTIMATED RADIUS OF INFLUENCE (35 FEET)



0 20 FT

**EXTENT OF IMPACTED SOIL**

SAFETY-KLEEN BRANCH SERVICE CENTER  
7979 PALM AVENUE, HIGHLAND, CA

**Appendix E**  
**CalTrans ISA Checklist**



## Initial Site Assessment (ISA) Checklist

### Project Information

District \_\_\_\_\_ County \_\_\_\_\_ Route \_\_\_\_\_ Post Mile \_\_\_\_\_ EA \_\_\_\_\_

Description Highland, California, 5<sup>th</sup> St from Victoria  
Avenue to Palm Avenue, 5<sup>th</sup> St from Church  
Avenue to SR 210, 3<sup>rd</sup> St from Palm Avenue to  
5<sup>th</sup> Church Ave, Victoria Avenue from 3<sup>rd</sup> - 6<sup>th</sup> St. Central Avenue (3<sup>rd</sup> - 5<sup>th</sup>)  
Palm Avenue (3<sup>rd</sup> - 5<sup>th</sup>)

Is the project on the HW Study Minimal-Risk Projects List (HW1)? No

Project Manager \_\_\_\_\_ phone # \_\_\_\_\_

Project Engineer \_\_\_\_\_ phone # \_\_\_\_\_

### Project Screening

Attach the project location map to this checklist to show location of all known and/or potential HW sites identified.

- Project Features: New R/W? Yes Excavation? Yes Railroad Involvement? No  
Structure demolition/modification? No Subsurface utility relocation? Yes
- Project Setting \_\_\_\_\_  
Rural or Urban Urban  
Current land uses Mixed residential, commercial, industrial  
Adjacent land uses Mixed residential, commercial, industrial  
(industrial, light industry, commercial, agricultural, residential, etc.)
- Check federal, State, and local environmental and health regulatory agency records as necessary, to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information for the proposed project.
- Conduct Field Inspection. Date 8/27/04 Use the attached map to locate potential or known HW sites. See figure 2, Appendix A

#### STORAGE STRUCTURES / PIPELINES:

Underground tanks Yes Surface tanks \_\_\_\_\_  
Sumps \_\_\_\_\_ Ponds \_\_\_\_\_  
Drums Yes Basins \_\_\_\_\_  
Transformers \_\_\_\_\_ Landfill Yes  
Other \_\_\_\_\_

## Initial Site Assessment (ISA) Checklist (continued)

CONTAMINATION: (spills, leaks, illegal dumping, etc.) *Observations from public right-of-way*

Surface staining No Oil sheen No

Odors No Vegetation damage No

Other No

HAZARDOUS MATERIALS: (asbestos, lead, etc.) *No inspections on private property*

Buildings NA Spray-on fireproofing NA

Pipe wrap NA Friable tile NA

Acoustical plaster NA Serpentine NA

Paint NA Other NA

5. Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. Use the attached map to show the location of potential hazardous waste sites.

6. Other comments and/or observations: \_\_\_\_\_

*See Figure 2 in Appendix A*

### ISA Determination

Does the project have potential hazardous waste involvement? Yes If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the investigation? No If "YES," explain; then give an estimate of additional time required: \_\_\_\_\_

A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.

ISA Conducted by Chad D. Williams, HDR Date 9/11/09