Soil Gas Survey Work Plan and Historical Chemical use Audit and Assessment Plan

17475 Gale Avenue, City of Industry, California

Prepared by:

ICF Kaiser Engineers, Inc.
10 Universal City Plaza, Suite 2400
Universal City, California

September 1, 1993

ICF KAISER ENGINEERS

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ICF Kaiser Engineers, Inc. (ICF KE) has prepared this work plan for a soil gas survey to be conducted at the former Graham Printing & Lithograph facility located at 17475 Gale Avenue, City of Industry, California. This document also discusses the plan for conducting a Historical Chemical Use Audit and Assessment for the same facility.

1.0 BACKGROUND

1.1 Site Description

The subject property (site) is located at 17475 Gale Avenue in the City of Industry, California. Figure 1 shows the location of the facility. The site is comprised of approximately 221,136 square feet of land located immediately northwest of the intersection of Hatcher and Gale Avenues. The site is currently owned by The RREEF Funds (RREEF).

The site is bordered on the north by the Union Pacific Railroad track, on the south by several commercial stores and the Pomona Freeway, on the east by a vacant lot and Hatcher Avenue and on the west by a light industrial business park. Previous reports indicate that the site was first developed in 1978, and was certified for occupancy on December 1, 1978. The building on site is of the concrete tilt-up variety and covers approximately 106,904 square feet.

1.2 Previous Investigations

Four separate reports document the principal environmental investigations that have been conducted on site. The first report, which is referenced in a letter dated November 30, 1991 to the Los Angeles County-Department of Health Services from Geological Audit Services (GeoAudit), corresponds to a preliminary investigation conducted by Terra Tech Labs (TTL) and was dated December 26, 1988. That first report was not available for review in the preparation of this work plan. The second report, which is referenced in the January 18, 1993 report, corresponds to the installation on site and subsequent sampling of a groundwater monitoring well by GeoAudit. The associated report, dated November 17, 1991, was also not available for review in the preparation of this work plan. The third report, "Subsurface Investigation, 17475 Gale Avenue", was prepared by ATEC Environmental Consultants (ATEC) on January 18, 1993. The fourth significant report, "Phase I Environmental Site Assessment for VACANT INDUSTRIAL BUILDING (Formerly Graham Printing and Lithograph Company), 17475 Gale Avenue - Draft", was prepared by ATEC on April 15, 1993.

According to the GeoAudit letter dated November 30, 1991, during TTL's preliminary investigation a total of six soil borings were drilled, two near the former compressor area and four near the former drum storage area. GeoAudit's letter indicates that the maximum

concentration of total petroleum hydrocarbons (TPH) detected by TTL in the soil samples from the former compressor area was 1,190 parts per million (ppm) at a depth of 5 feet. A surface soil sample collected in the same area contained, according to GeoAudit, 180,000 ppm of TPH, 370 parts per billion (ppb) of acetone, 170 ppb of 2-butanone (MEK), and 240 ppb of 4-methyl-2-pentanone. According to GeoAudit, no TPH was detected by TTL near the former drum storage area. A soil sample collected at a depth of 10 feet in that area indicated the presence of acetone at 40 ppb, MEK at 19 ppb, 1,1,1-trichloroethane (TCA) at 50 ppb, and 4-methyl-2-pentanone at 22 ppb.

According to GeoAudit's November 30, 1991 letter, in September of 1989 GeoAudit installed a groundwater monitoring well at the site. This well has been sampled by GeoAudit on three occasions, November 1990, January 1991, and May 1991. According to GeoAudit, the groundwater monitoring conducted at the site has indicated the presence of recoverable petroleum hydrocarbons, 1,1-dichloroethene (DCE), TCA, and xylenes in the groundwater.

The third investigation consisted of four soil borings, two near the former drum storage area and two near the former compressor area. A total of 24 soil samples were analyzed using EPA Method 418.1 and EPA Method 8240. The January 18, 1993 ATEC report indicated that soil samples from near the former drum storage area contained maximum concentrations of DCE and TCA of 23 ppb and 44 ppb, respectively. The analysis of the soil samples collected near the former compressor area were reported to be either non-detect or below state action levels for volatile organic compounds and total recoverable hydrocarbons.

Groundwater samples from the on-site monitoring well were collected during the third investigation. The samples were analyzed by EPA Method 602 and EPA Method 418.1. Laboratory results indicated the presence of DCE, TCA, and toluene above laboratory detection limits. The level of DCE detected in the well is above the established action level for drinking water of 0.5 ppb.

The fourth report presented general site background and operational status of the subject property and included a regulatory agency data base search.

On April 6, 1993 the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) requested that RREEF perform the following tasks: (1) Conduct a Site Chemical Audit and Assessment; (2) complete an annual cycle of quarterly groundwater monitoring of the on-site groundwater monitoring well; and (3) remediate the site soils that have been identified as being contaminated by petroleum hydrocarbons and volatile organic compounds.

Finally, RREEF has recently been notified by the U.S. EPA that as owner of the site it has been identified as a potentially responsible party for the San Gabriel Valley Groundwater Superfund Site.

1.3 Site Hydrogeology

The site is located in the eastern portion of the Los Angles Central Plain, and is within the West Coast Basin of the San Gabriel Groundwater Basin. Superficial deposits in the area

have been classified as Quaternary Alluvium and are comprised of sands and silty sands which were deposited on broad, gently sloping alluvial fans and in stream point bars. Depth to the first saturated zone beneath the site has been measured at 35.56 feet below ground surface (bgs).

2.0 HEALTH AND SAFETY AND UTILITY CLEARANCE

2.1 Health and Safety Plan

A site-specific Health and Safety Plan (H&S) will be prepared in accordance with 29 CFR 1910.120 and 8 CCR 5192. The H&S Plan will detail safe working practices and will identify contingency plans in case of an accident. Tail gate safety meetings at the site will be conducted daily whenever workers are present on site. The H&S Plan is presented as an attachment to this work plan.

2.2 Utility Clearance

Underground Service Alert (USA) will be notified prior to implementing intrusive work on site. If facility as-built drawings are available from RREEF, they will be used during the utility clearance. Additionally, a passive pipe locator will be used to verify the absence of ferrous utility lines at the proposed sampling locations within the building.

3.0 HISTORICAL CHEMICAL USE AUDIT AND ASSESSMENT

An audit to assess the types of chemicals historically used at the site will be conducted. This audit will be based on a detailed review of ATEC's April 15, 1993 report, as well as information requests from regulatory agencies that could potentially provide relevant information. Specifically, the County of Los Angeles Fire Department, Hazardous Materials Division (LAFD-HMD), the South Coast Air Quality Management District (SCAQMD), and the RWQCB will be contacted. Additionally, information obtained during the site walk conducted by ICF KE on August 10, 1993 will be used to complement the information obtained from these sources.

Figure 2 presents a site plan of the 17475 Gale Avenue facility. According to ATEC's April 15, 1993 report, the site was developed in 1978. ATEC's report indicates that the only tenant on record was the Graham Printing & Lithograph Company (Graham Co.) and that the site has been vacant since late 1992. However, ATEC's report indicates that, according to the Los Angeles County Department of Building and Safety records, the initial occupancy date by Graham Co. is not recorded, although information contained in those records indicates that such date was prior to 1985. ATEC's report indicates that the Graham Co. was a small quantity generator of hazardous wastes. The wastes generated at the facility were identified as D001 wastes (i.e., non-listed, ignitable hazardous wastes). According to ATEC, the areas where chemicals were historically handled included the following: the chemical storage room, located in the northwestern area of the building; the printing press area, particularly in the vicinity of the printing press stands; two sinks that showed evidence of improper chemical disposal, located against the outside wall of the restrooms on the north side of the north section of the building;

the fume hood area, located in the north section of the building along the partition with the south section; a small area stained white, located along the west wall of the south section of the building; the former compressor area; and the former drum storage area (see Figure 2). ATEC indicated that approximately 225 full, partially full, or empty containers with chemicals were still present at the site.

The LAFD-HMD will be contacted to obtain information related to the Hazardous Materials Management Plan, Material Safety Data Sheets, and other relevant documents for the site. The SCAQMD has been contacted to obtain information related to active and inactive air emission permits and AB2588 Toxics "Hot Spots" Inventory Plans and Reports for the site.

During the site walk conducted by ICF KE on August 10, 1993, the following observations were made:

- The inventory of containers with chemicals and waste materials has been removed from the property.
- Additional areas identified as potential sources exist within the building, particularly on the floor near the two sinks identified by ATEC as showing evidence of improper chemical disposal and in one of the rooms in the partitioned space on the east side of the north section of the building.
- Some isolated staining, not attributable to leaking from the roof, was observed in two areas, south of the printing press stands and near the west wall in the north section of the building.
- The building has had at least two additional tenants, according to Mr. Michael Cosentino, with Grubb & Ellis, property managers. Mr. Cosentino indicated that the building was originally occupied by Coleman Air Conditioning (Coleman), for an unknown number of years, prior to Graham Co.'s occupancy. Coleman operated a show room at the site. No additional information was available regarding the type of activities conducted by Coleman at the site. More recently, the south section of the building, previously occupied by Graham Co., was occupied by Han Ton Sock Co., a clothing importing business and wholesale distributor, who used the space as a warehouse.
- The offices located on the west side of the north section of the building are identified with a different street address: 1201 Hatcher Ave.

The last two observations listed above will be used to expand the search of information as part of the Historical Chemical Use Audit and Assessment. The findings of the Historical Chemical Use Audit and Assessment will be included as an attachment to the letter report that will summarize the results of the soil gas survey.

4.0 SOIL GAS SURVEY

ICF KE will manage and oversee the performance of the soil gas survey in accordance with this work plan. The contractor used for this soil gas survey will be Optimal Technology, Inc.

4.1 Sampling Locations

A total of approximately 48 soil gas samples will be collected at 24 locations. Figure 3 presents the approximate location of the proposed soil gas survey sampling points. In general terms, the sampling locations will typically be arranged in groups of three or more points to assess the areal distribution of contaminants and make possible the preparation of isoconcentration maps.

A total of approximately 34 soil gas samples will be collected from approximately 17 locations inside the building. The specific locations will be in areas identified as potential sources for releases based on information from ATEC's April 15, 1993 report, as well as on ICF KE's observations during the August 10, 1993 site walk. The concrete floor slab will be saw cut or drilled through to expose the soil beneath the floor.

Approximately 14 soil gas samples will be also collected at various locations on the exterior of the facility, in the vicinity of the former compressor area and the drum storage area. These two areas have been identified by prior investigations and the RWQCB as areas of known contamination. The sampling locations in these areas will be arranged to complement the information from prior investigations in order to assess the horizontal extent of contamination. The sampling points on the exterior of the building are on paved areas, with the exception of two points located on unpaved ground outside the fence that surrounds the property, immediately north of the groundwater monitoring well, as shown on Figure 3.

Additional sampling locations may be selected during the implementation of this work plan, depending on the results of the samples analyzed in the field, in order to better assess the areal extent of contamination.

At least one permanent probe will be inserted, sampled, and analyzed as a quality control check on the soil gas sampling protocol. The location of this permanent probe will be determined in the field with staff from the RWQCB.

In the event that high VOCs results are obtained from samples collected near floor drains or sinks, a passive pipe locator will be used to try to determine the location of the drain line under the floor and additional soil gas sampling locations may be placed along that line.

During the implementation of this work plan it may be necessary to relocate a sampling point. Causes for the relocation of a sampling point may include lack of utility clearance for a proposed sampling location or inability to push a gas probe to the required depth. Any relocation of a sampling point will be properly documented, including the reason for the relocation.

4.2 Sampling Procedure

In accordance with accepted practices for soil gas surveys, the sampling probe assembly will only have internal threading. The assembly will not have any external couples or connectors that could create enlarged holes and prevent adequate sealing between the probe and the surrounding soil.

Soil vapor sampling locations will be selected, marked, and cleared for utilities prior to sample collection. At each sample location, a soil probe is inserted into the soil, sealed at the surface using bentonite clay, and then purged and sampled with a gas-tight syringe through a silicone tube using a vacuum pump.

Sampling will be performed by hydraulically pushing soil vapor probes to a depth of approximately 5.0 feet bgs. Overlying concrete will be saw cut or drilled through to allow probe placement. At each sampling location a vacuum pump will be attached to the probe. Silicone tubing will be inserted into the probe to the sampling depth and will connect the probe and the vacuum pump. After the probe and the silicone tubing are inserted, bentonite clay is placed around the probe rod at the surface to prevent ambient air from being drawn into the annulus space.

The vacuum pump will be equipped with a flow regulator and a flow meter. The length of the sampling train and, subsequently, the volume of the sampling train vary with the sampling depth. The probe will be purged at least three volumes prior to sample collection. Gas-tight syringes will be used to collect the soil gas samples by puncturing the silicone tubing. New silicone tubing will be used at each sampling point to prevent cross contamination. New sampling probes will be used after each sample and blanked prior to placement by collecting a sample through the entire sampling train using ambient air. If contamination is detected in these blanks, appropriate corrective actions will be taken to identify and eliminate the source of contamination, if possible. If the attempts to eliminate the source of contamination are unsuccessful, the results from the blanks will be evaluated as to their significance with respect to the actual soil gas results. All blank samples will be documented and reported. Samples will be injected into the gas chromatograph (GC) in the on-site mobile laboratory immediately after sample collection.

Depending on the concentration detected at a depth of approximately 5.0 feet bgs, a determination will be made in the field as to the need to collect samples at greater depths to obtain a vertical profile of the contamination at that location. If high concentrations are detected at approximately 5.0 feet bgs, an additional sample may be collected at a depth of approximately 12.0 feet bgs. If appropriate, based on the results obtained from the sample collected at approximately 12.0 feet bgs, an additional sample may be collected at a depth of approximately 20.0 feet bgs.

Data pertaining to the purging and sampling of the soil vapor probes will be recorded in the field. The information recorded will include sample number, sample collection time, location, sample depth, sample train volume, purge time and flow rate, volume purged, sample volume, ambient air temperature, barometric pressure, and other pertinent site specific observations.

After sampling, the sample probe will be removed and the open hole will be backfilled with hydrated bentonite chips. The floor surface will be restored to a condition similar to the pre-existing one, to the extent possible.

4.3 Sample Analysis

At the beginning of the soil gas survey, a site specific purge volume versus contaminant concentration test will be conducted in an area where the concentrations of volatile

organic compounds (VOCs) are expected to be highest, to ensure that samples are representative of site conditions. The purge rate and purge time will be adjusted to achieve optimal purge volume.

The samples will be analyzed on site using a mobile laboratory equipped with a GC. The compounds of primary concern, selected based on the results of prior investigations, include the following:

- Total VOCs;
- TCA;
- DCE;
- Acetone;
- MEK;
- 4-methyl-2-pentanone (MIBK); and
- xylenes.

Samples will be analyzed using EPA Method 8010/8020 and the results for all the method's target compounds will be reported.

Appropriate detection limits will be used, with typical values ranging between 0.01 µg/L and 1.0 µg/L. However, higher detection limits may have to be used due to field conditions (e.g., if a sample presents a very high concentration and it is necessary to dilute it). In the event that a sample has to be diluted, the undiluted sample will be analyzed first and the results of that analysis will be reported as well.

The chromatographs for the calibration standards of the target compounds will be available to the mobile laboratory staff to ensure that those compounds can be identified. These chromatographs will be included in the letter report.

If anomalous results (i.e., soil gas concentrations two or three orders of magnitude different from trends indicated by surrounding samples at the same depth) are obtained at a sampling point, an additional sample will be collected at the same point and analyzed. Collection of an additional soil gas sample will be properly documented.

Quality assurance and quality control and reporting procedures will be implemented in accordance with the RWQCB guidelines for soil gas investigations.

5.0 DECONTAMINATION/CONTAINMENT/DISPOSAL

5.1 Decontamination

Reusable sampling equipment will be decontaminated prior to and after each use according to the following protocol:

- Wash with non-phosphate detergent, distilled water and stiff brush.
- Double rinse with distilled water.
- Air dry.

5.2 Containment

Decontamination rinseate will be containerized in 5-gallon buckets and transferred to Department of Transportation (DOT) approved 55-gallon drums until characterized for proper disposal.

A drum inventory will be maintained and will contain the following information:

- Drum number;
- Content; and
- Date.

5.3 Disposal

Decontamination rinseate and other investigation derived waste will be segregated, appropriately labeled, and left for disposal by RREEF. Laboratory data from the analyses of investigation samples will be used to assess appropriate disposal options.

6.0 PREPARE LETTER REPORT AND SOIL REMEDIATION WORK PLAN

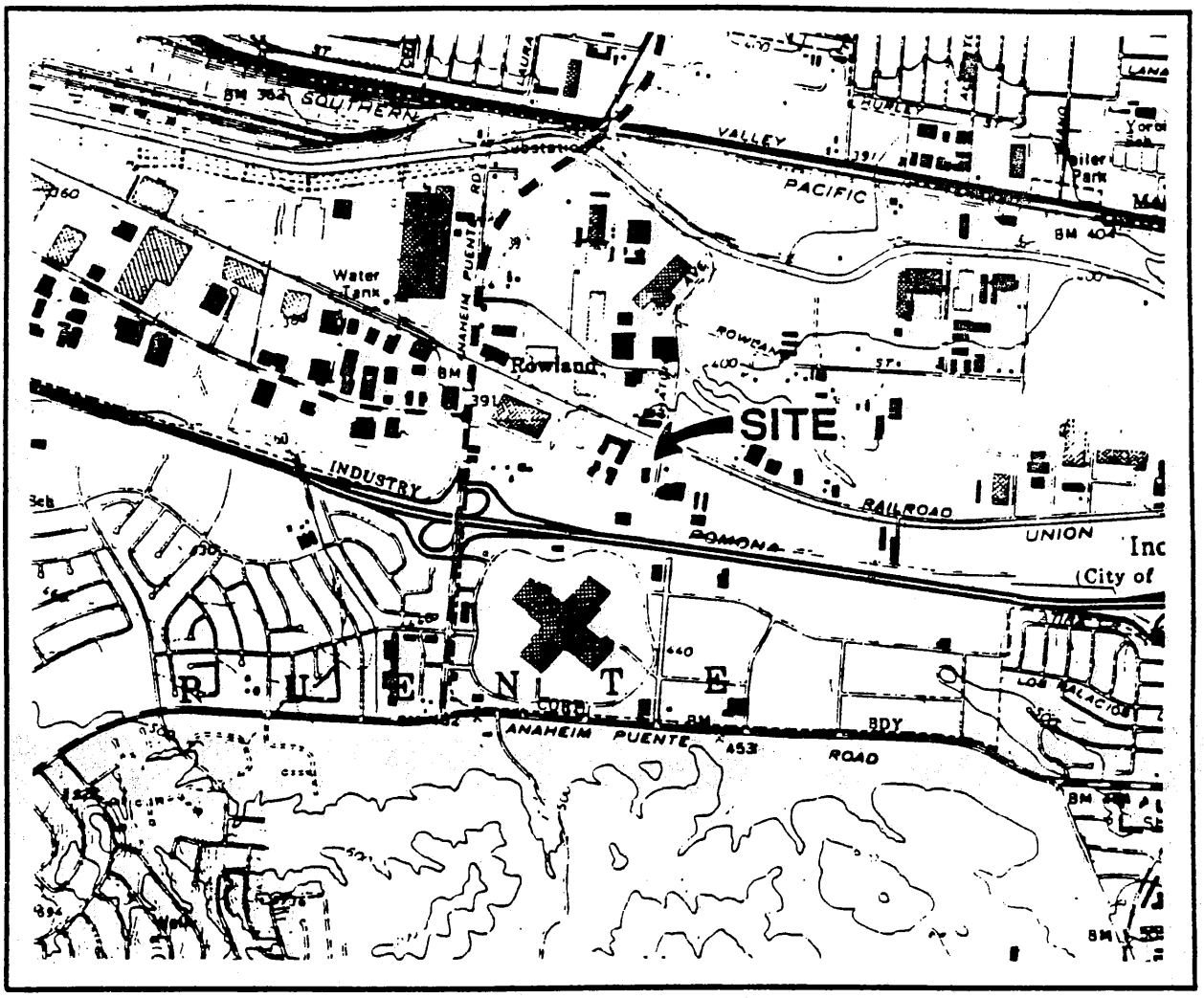
6.1 Prepare Letter Report

A letter report of findings of the soil gas survey will be prepared. The report will include isoconcentration maps for each sampling depth for total VOCs and, to the extent allowed by the data, for individual VOCs, individual aromatic hydrocarbons, and total aromatic hydrocarbons. The report will also include recommendations for additional soil sampling, if appropriate. The findings of the Historical Chemical Use Audit and Assessment will be included as an attachment to the letter report.

6.2 Prepare Soil Remediation Work Plan

A work plan for soil remediation based on previous investigations and on the results of the soil gas survey will be prepared. The work plan will detail volumes of soil to be remediated and field methodologies to be implemented. In addition, the work plan will address any additional soil sampling that may be required to characterize the site so that remediation can proceed.

Figure 1
Site Location Map
17475 Gale Ave.
City of Industry, CA.



Reference: USGS 7.5 Minute Topographic Quadrangles.
Baldwin Park and La Habra, California
1966, photorevised 1980 (Baldwin Park)
1964, photorevised 1981 (La Habra)

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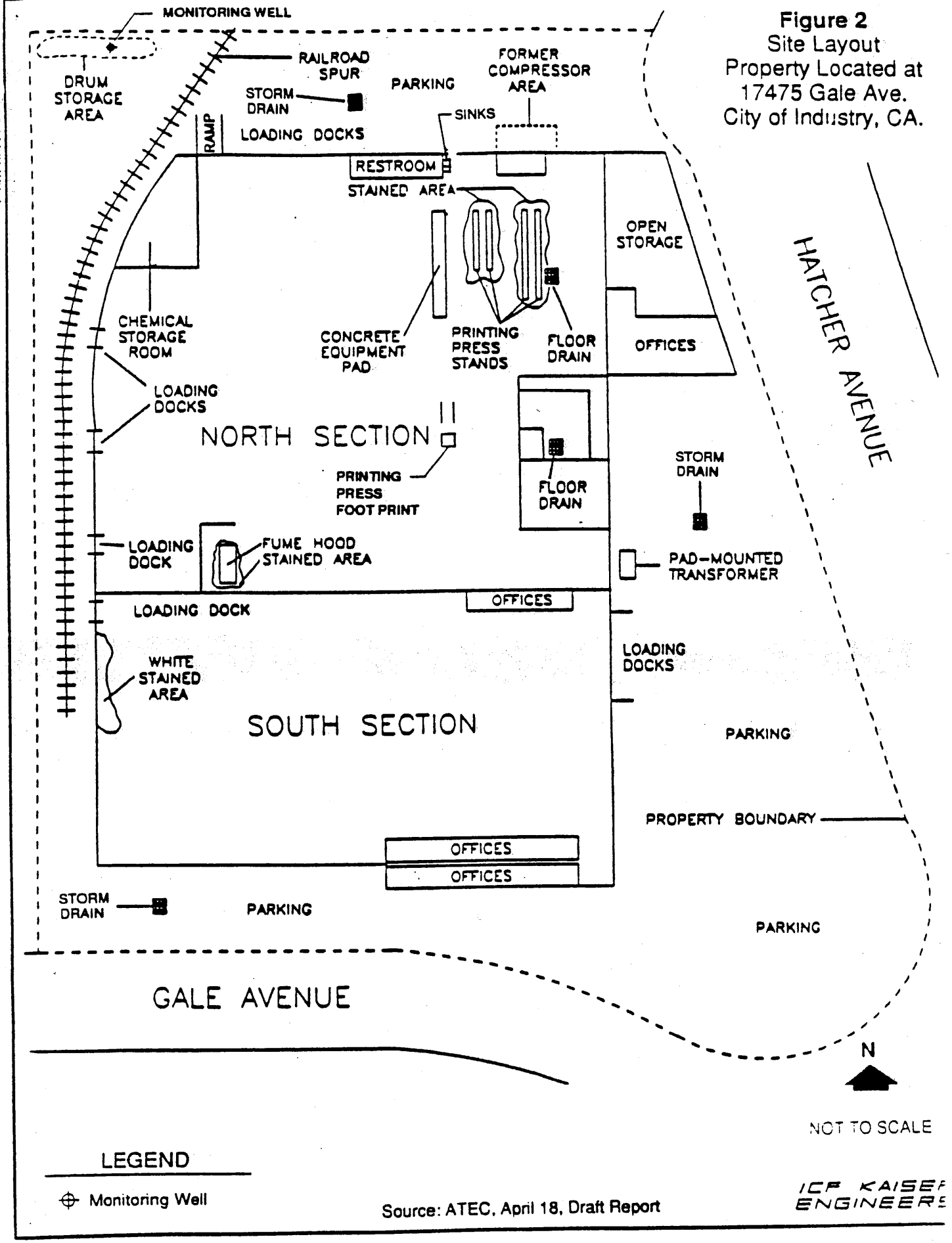

Figure 2
Site Layout
Property Located at
17475 Gale Ave.
City of Industry, CA.

Source: ATEC, April 18, Draft Report

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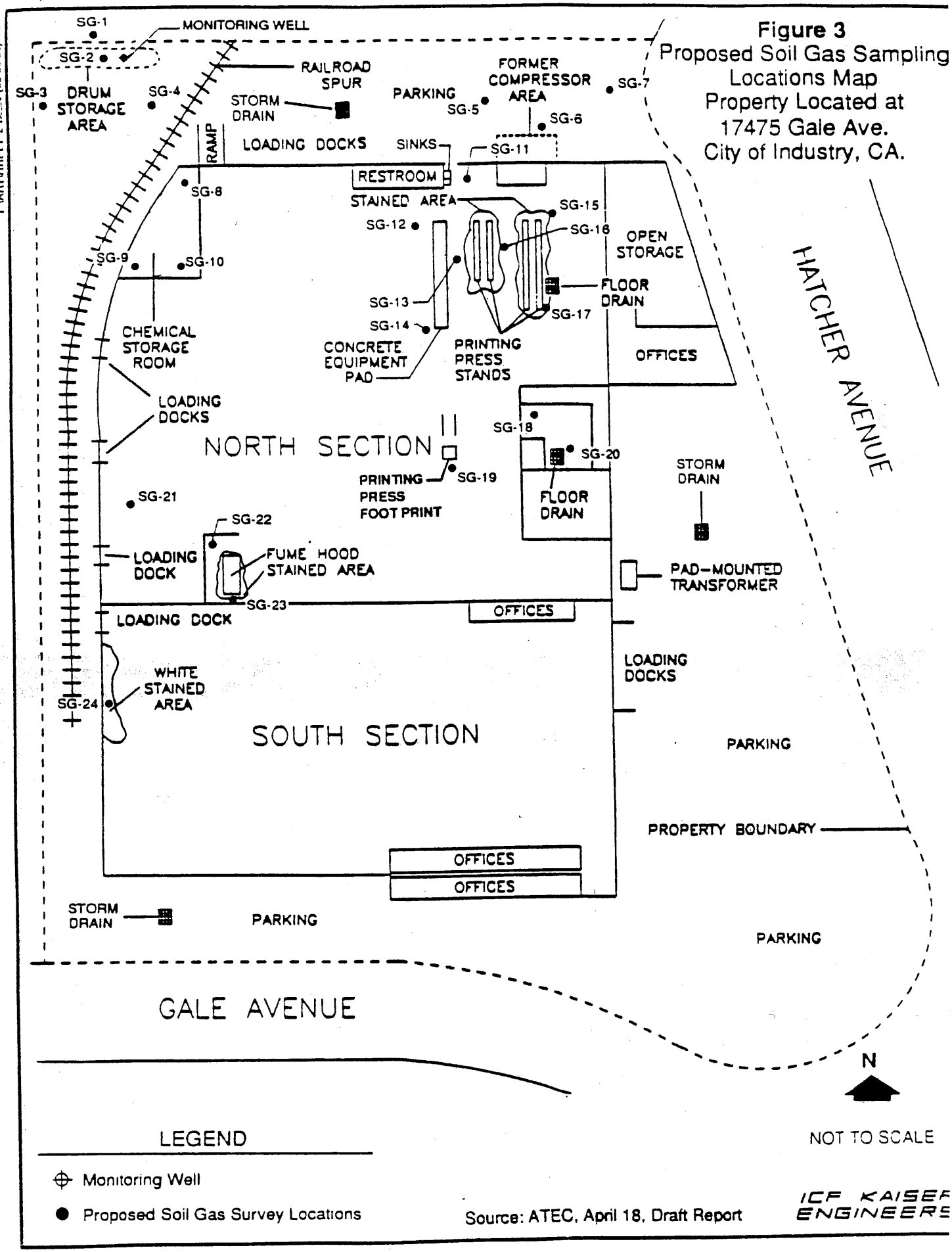

Figure 3
Proposed Soil Gas Sampling Locations Map
Property Located at
17475 Gale Ave.
City of Industry, CA.

ATTACHMENT

SOIL GAS SURVEY WORK PLAN
17475 GALE AVENUE, CITY OF INDUSTRY

HEALTH AND SAFETY PLAN

TASK SPECIFIC
SITE SAFETY AND HEALTH PLAN

SOIL GAS SURVEY
17475 GALE AVENUE
CITY OF INDUSTRY, CALIFORNIA

Prepared by:

ICF Kaiser Engineers

August, 1993

HEALTH AND SAFETY PLAN

SOIL GAS SURVEY

17475 GALE AVENUE
CITY OF INDUSTRY, CALIFORNIA

APPROVALS ICF KAISER ENGINEERS

Prepared by:

T. Deborah VanNewkirk
Office Health and Safety Officer

Approved by:

Gerald Joy, CIH, CSP.
Group Health and Safety Director

for Thomas L. Watson.
Project Manager

SECTION 1

INTRODUCTION

This task specific Site Safety and Health Plan (SSHP) was prepared by ICF Kaiser Engineers (ICF) for work to be conducted at the former Graham Printing & Lithograph facility located at 17475 Gale Avenue, City of Industry, California. This SSHP was prepared in accordance with guidelines set forth in Title 29 of the Code of Federal Regulations, Part 1910.120 (29 CFR 1910.120) and Title 8 of the Code of California Regulations, Section 5192 (8 CCR 5192). The provisions of this SSHP apply only to ICF personnel field activities associated with the soil gas investigation activities.

The health and safety guidelines and requirements presented herein are based on a review of available information and an evaluation of potential hazards. This plan describes the health and safety procedures and equipment required for activities at this site to minimize the potential for exposures to field personnel. Should circumstances during the course of field work be extraordinarily different than anticipated, field work shall be temporarily stopped, so that potential hazards can be evaluated and appropriate health and safety precautions implemented.

The provisions of this SSHP will be implemented by ICF personnel. All subcontractors are responsible for their own health and safety program. However, subcontractors shall also comply with the requirements of this SSHP.

SECTION 2

SUMMARY

2.1 Project Summary

ICF will perform field activities as outlined in the workplan dated August, 1993. Field activities include the following:

- ICF will notify Underground Service Alert (USA) for utility clearance prior to implementing intrusive work on site. Additionally, a passive pipe locator will be used to verify the absence of ferrous utility lines at the proposed sampling locations within the building.

- A soil gas survey will be conducted at the site. The survey consists of installing shallow probes in various locations of the site and collecting soil gas samples.

Field activities are scheduled to begin in August, and last approximately two days. There will be two ICF personnel on site throughout the activities. A list of personnel involved in the field activities is provided in Section 3 of this SSHP.

2.2 Area Description/History

The subject property (site) is located at 17475 Gale Avenue in the City of Industry, California. Figure 1 shows the location of the facility. The site is comprised of approximately 221,136 square feet of land located immediately northwest of the intersection of Hatcher and Gale Avenues. The site is currently owned by The RREEF Funds (RREEF).

The site is bordered on the north by the Union Pacific Railroad track, on the south by several commercial stores and the Pomona Freeway, on the east by a vacant lot and Hatcher Avenue and on the west by a light industrial business park. Previous reports indicate that the site was first developed in 1978, and was certified for occupancy on December 1, 1978. The building on site is of the concrete tilt-up variety and covers approximately 106,904 square feet.

Four separate reports document the principal environmental investigations that have been conducted on site. The first report, which is referenced in a letter dated November 30, 1991 to the Los Angeles County-Department of Health Services from Geological Audit Services (GeoAudit), corresponds to a preliminary investigation conducted by Terra Tech Labs (TTL) and was dated December 26, 1988. That first report was not available for review in the preparation of this workplan. The second report, which is referenced in the January 18, 1993 report, corresponds to the installation on site and subsequent sampling of a groundwater monitoring well by GeoAudit. The associated report, dated November 17, 1991, was also not available for review in the preparation of this workplan. The third report, "Subsurface Investigation, 17475 Gale Avenue", was prepared by ATEC Environmental Consultants (ATEC) on January 18, 1993. The fourth significant report, "Phase II Environmental Site Assessment for VACANT INDUSTRIAL BUILDING (Formerly Graham Printing and Lithograph Company), 17475 Gale Avenue", was prepared by ATEC on April 15, 1993.

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Groundwater samples from the on-site monitoring well were collected during the third investigation. The samples were analyzed by EPA Method 602 and EPA Method 418.1. Laboratory results indicated the presence of DCE, TCA, and toluene above laboratory detection limits. The level of DCE detected in the well is above the established action level for drinking water of 0.5 ppb.

The fourth report presented general site background and operational status of the subject property and included a regulatory agency data base search. ATEC conducted a limited asbestos survey to identify the predominant asbestos-containing materials (ACMs) within the building. Asbestos fibers in concentrations of one percent or greater were detected in the samples collected from floor tile mastic materials inside the building.

According to ATEC's April 15, 1993 report, the site was developed in 1978. ATEC's report indicates that the only tenant on record was the Graham Printing & Lithograph Company (Graham Co.) and that the site has been vacant since late 1992. However, ATEC's report indicates that, according to the Los Angeles County Department of Building and Safety records, the initial occupancy date by Graham Co. is not recorded, although information contained in those records indicates that such date was prior to 1985. ATEC's report indicates that the Graham Co. was a small quantity generator of hazardous wastes. The wastes generated at the facility were identified as D001 wastes (i.e., non-listed, ignitable hazardous wastes). According to ATEC, the areas where chemicals were historically handled included the following: the chemical storage room, located in the northwestern area of the building; the printing press area, particularly in the vicinity of the printing press stands; two sinks that showed evidence of improper chemical disposal, located against the outside wall of the restrooms on the north side of the north section of the building; the fume hood area, located in the north section of the

building along the partition with the south section; a small area stained white, located along the west wall of the south section of the building; the former compressor area; and the former drum storage area. ATEC indicated that approximately 225 full, partially full, or empty containers with chemicals were still present at the site. Table 4-2 of this SSHP presents the inventory prepared by ATEC.

During the site walk conducted by ICF on August 10, 1993, the following observations were made: (1) The inventory of containers with chemicals and waste materials has been removed from the property; (2) additional areas identified as potential sources exist within the building, particularly on the floor near the two sinks identified by ATEC as showing evidence of improper chemical disposal and in one of the rooms in the partitioned space on the east side of the north section of the building; (3) some isolated staining, not attributable to leaking from the roof, was observed in two areas, south of the printing press stands and near the west wall in the north section of the building; (4) the building has had at least two additional tenants, according to Mr. Michael Cosentino, with Grubb & Ellis, property managers. Mr. Cosentino indicated that the building was originally occupied by Coleman Air Conditioning (Coleman), for an unknown number of years, prior to Graham Co.'s occupancy. Coleman operated a show room at the site. No additional information was available regarding the type of activities conducted by Coleman at the site. More recently, the south section of the building, previously occupied by Graham Co., was occupied by Han Ton Sock Co., a clothing importing business and wholesale distributor, who used the space as a warehouse; and
(5) the offices located on the west side of the north section of the building are identified with a different street address: 1201 Hatcher Ave.

The chemicals of most concern are chlorinated solvents and petroleum hydrocarbons and they are addressed in the Hazard Evaluation (Section 4) portion of this SSHP.

SECTION 3

KEY PERSONNEL AND RESPONSIBILITY

3.1 Chain of Command, ICF

Mr. Thomas L. Watson is the Senior Project Manager. Mr. Alejandro Fernández, CHMM, is the Project Manager (PM). Mr. John Pings is the Senior Project Scientist (SPS). Ms. Laura Boyles is the Project Scientist and will act as the Site Safety Officer (SSO). Mr. Gerald Joy, C.I.H., C.S.P., is the Group Health and Safety Director (GHSD). Ms. Ines Cadavid-Parr is the Regional Health and Safety Officer. Mr. Pings or Mr. Watson may also be designated as SSO. Mr. Watson or Mr. Fernández may also be designated as SPS. The project field staff have completed 40 hours of comprehensive health and safety training, which meets the requirements of 29 CFR 1910.120 and 8 CCR 5192. The SSO has the authority to monitor and correct health and safety problems as noticed on site.

The Project Manager (PM) or his designee is responsible for generating, organizing, and compiling the site safety and health plan that describes all planned field activities and potential hazards that may be encountered at the site. The PM is also responsible for assuring that adequate training and safety briefing(s) for the project are provided to the project team. The PM has provided a copy of this SSHP to each member of the project field team and subcontractor(s) prior to the beginning of field activities. The PM is also responsible for providing a copy of the SSHP to subcontractor staff prior to conducting any field activities.

The GHSD is responsible for developing and coordinating ICF's health and safety program. For specific projects, the GHSD is responsible for reviewing and approving the draft SSHP for accuracy and incorporating new information or guidelines that aid the PM or SSO in further definition and control of the potential health and safety hazards associated with the project.

The Project Scientist (SPS) is responsible for ensuring that all data acquisition is performed in accordance with the Work Plan and SSHP, and that deviations from the plan are based upon field conditions encountered and are well documented in the field notes. The field staff's health and safety responsibilities include:

1. Following the SSHP.

2. Reporting to the SSO and PM any unsafe conditions or practices.

3. Reporting to the SSO and PM all facts pertaining to incidents that result in injury or exposure to toxic materials.

4. Reporting to the SSO and PM equipment malfunctions or deficiencies.

The SSO has on-site responsibility for ensuring that all team members, including subcontractors, comply with the SSHP. It is the SSO's responsibility to inform the subcontractors and other field personnel when chemical and physical hazards arise. Additional SSO responsibilities include:

1. Providing site safety briefing for team members.

2. Updating equipment or procedures to be used on site based on new information gathered during the site investigation.

3. Inspecting all personal protective equipment prior to on-site use.

4. Assisting the PM in documenting compliance with the SSHP by completing the standard ICF forms.

5. Assisting in and evaluating the effectiveness of decontamination procedures for personnel, protective equipment, sampling equipment and containers, and heavy equipment and vehicles.

6. Enforcing the "buddy system" as appropriate for site activities.

7. Posting location and route to the nearest medical facility; arranging for emergency transportation to the nearest medical facility.

8. Posting the telephone numbers of local public emergency services; i.e., police and fire.

9. Posting the required OSHA information poster.

10. Stopping operations that threaten the health and safety of the field team or surrounding populace.

11. Entering the exclusion area in emergencies after he/she has notified emergency services and has prepared adequate personal protective measures.

12. Observing field team members for signs of exposure, stress, or other conditions related to pre-existing physical conditions of team members.

13. Notifying the RHSO of any problems, injuries or accidents.

ICF personnel will abide by the health and safety guidelines required by Latham & Watkins.

3.2 Subcontractor Personnel Responsibilities

All subcontractors are responsible for their own health and safety program and SSHP. A written health and safety plan must be available to ICF for review if requested.

3.3 Visitors

Visitors to the work areas at the site will be briefed on the hazards present at the specific location. Visitors not involved with the project will not be allowed on site without previous approval from ICF. Table 3-1 below presents a list of the project contacts.

Table 3-1

PROJECT CONTACTS

NAME	TELEPHONE
Thomas Watson Senior Project Manager	(818) 509-3145
Alejandro Fernández Project Manager	(818) 509-3106
John Pings Senior Project Scientist	(818) 509-3189
Laura Boyles Project Scientist/Site Safety Officer	(818) 509-3178
Ines Cadavid-Parr Regional Health and Safety Officer	(818) 509-3135
Gerald Joy Group Health and Safety Officer	(412) 497-2056
Greg Gilroy District Manager, The RREEF Funds	(714) 634-4664
Kim Richards, Esq. Latham & Watkins	(213) 485-1234

SECTION 4

HAZARD EVALUATION

The potential hazards to personnel working at this site have been identified as chemical and physical. Each potential hazard relative to the potential for exposure is described below.

4.1 Chemical Contamination

Table 4-1 presents general information on the chemicals of concern. The information includes exposure limits and recommendations, routes of exposure, typical signs and symptoms of exposure and ionization potentials. The personnel protection measures for specific field activities at the site will be based on direct instrument readings that will screen for volatile organic compounds (VOCs) and dust/particulate levels.

Table 4-1
CHEMICALS ASSOCIATED WITH THE 17475 GALE AVENUE, CITY OF INDUSTRY FACILITY [1]

CHEMICAL CAS NUMBER	EXPOSURE LIMIT[2] (ppm)	IDLH LEVEL (ppm)	ROUTES OF EXPOSURE	SYMPTOMS OF EXPOSURE	IONIZATION POTENTIAL (eV)
VOLATILE ORGANIC COMPOUNDS					
Acetone 67-64-1	PEL = 750	20,000	Inhalation, ingestion, skin and/or eye contact	Irritation of eyes, nose and throat; headache, dizzines; dermatitis	9.69
2-Butanone (MEK) 78-93-3	PEL = 200	3,000	Inhalation, ingestion, skin and/or eye contact	Irritation of eyes and nose; headache; dizziness; vomiting	9.54
Hexone (4-methyl 2-pentanone) 108-10-1	PEL = 50	3,000	Inhalation, ingestion, skin and/or eye contact	Irritation of eyes and mucus membranes; headache; narcosis, coma; dermatitis	9.30
Methyl chloroform (1,1,1-TCA) 71-55-6	PEL = 350 Ca[3]	1,000	Inhalation, ingestion, skin and/or eye contact	Headache, lassitude, CNS depression, poor equilibrium; irritation of eyes; dermatitis; cardiac arrhythmias	11.00
Vinylidene chloride (1,1-DCE) 75-35-4	PEL = 1	N.A.	Inhalation, ingestion, skin and/or eye contact	Irritation of skin and mucus membranes; narcotic in high concentrations	-
Xylenes (o-, m-, p-) 1330-20-7	PEL = 100	1,000	Inhalation, ingestion, absorption, skin and/or eye contact	Dizziness, excitement, drowsiness, incoordination, staggering gait; irritation of eyes nose and throat; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis.	8.56
METALS	mg/m^3	mg/m^3			
Cadmium 7440-4309	PEL = 0.005 Ca[3]	Ca [50]	Inhalation, ingestion, skin and/or eye contact	Pulmonary edema, dyspnea, cough, chest tightness, substernal pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia, emphysema, proteinuria, mild anemia; [carc.]	N.A.
Chromium 7440-47-3	TLV - 0.5 PEL = 1.0	N.E.	Inhalation, ingestion, skin and/or eye contact	Histologic fibrosis of lungs; sensitization dermatitis	N.A.
Chromium (VI)	TLV = 0.05	Ca	Inhalation, ingestion, skin and/or eye contact	Histologic fibrosis of lungs; sensitization dermatitis; [carc.]	N.A.
Lead	PEL = 0.05	700	Inhalation, ingestion, skin and/or eye contact	Weakness, lassitude, insomnia; facial pallor; palsy, anorexia, low weight, malnutrition; constipation, abdominal pain, colic; anemia; gingival leadline; tremor; paralysis of wrists, ankles; encephalopathy; nephropathy; irritation of eyes; hypotension	NA

Table 4-1 (continued)
CHEMICALS ASSOCIATED WITH THE 17475 GALE AVENUE, CITY OF INDUSTRY FACILITY [1]

CHEMICAL CAS NUMBER	EXPOSURE LIMIT[2] (ppm)	IDLH LEVEL (ppm)	ROUTES OF EXPOSURE	SYMPTOMS OF EXPOSURE	IONIZATION POTENTIAL (eV)
Chlorodiphenyl (PCB) 53469-21-9 11097-69-1	PEL = 0.5 REL = 0.001	Ca [5]	Inhalation, ingestion, skin and/or eye contact, absorption	Irritation of eyes and skin; chloracne; liver damage; [carc.]	N.A.
Asbestos 1332-21-4	0.2 f/cc	Ca	Inhalation, ingestion, skin and/or eye contact,	Dyspnea, interstitial fibrosis, restricted pulmonary function, finger clubbing, [carc.]	N.A.

(1) Chemicals listed are those detected on site during previous investigations and unconfirmed potential contaminants.

(2) Most restrictive value listed: REL = NIOSH, recommended exposure limit (for up to a 10-hr. workday during a 40-hr. work week); PEL = OSHA, permissible exposure limit (during any 8-hr. work shift of a 40-hr. work week); STEL - NIOSH/OSHA short-term exposure limit (a 15 minute exposure not to be exceeded at any time during the work day); Ceil - NIOSH/OSHA, concentration not to be exceeded at any time during the day; TLV = ACGIH, threshold limit value (concentration not to be exceeded during any 8-hr. work shift of a 40-hr. week).

(3) NIOSH, occupational carcinogen.

(4) NIOSH, no evidence found for existence of an IDLH.

(5) IDLH based on the lower explosive limit.

TABLE 4-2

INVENTORY OF WASTE MATERIALS AT GALE AVENUE SITE

MARCH 26, 1993

Quantity	Size	Content
3	55 gal.	Developer
2	30 gal.	Algicide
2	55 gal.	Oil spills on ground (with absorbent)
50	2 gal.	Inks (dried)
1	55 gal.	Citric acid
1	55 gal.	Paint (dried)
1	55 gal.	Paint sludge
14	55 gal.	Oil, gum, "Alkaless Plus 2", paint sludge
2	30 gal.	Safe-Lube oil
2	55 gal.	Ink sludge, solvcote
12	55 gal.	Lubricating oil, HydroBlend, 1-1-1 Trichloroethane
17	55 gal.	Waste coating, ink glue, press coating
26	55 gal.	Purge water and soil
8	55 gal.	Fuel solvent
2	55 gal.	Rainwater and trash
1	20 lb.	Grease
1	50 lb.	Paraffin wax
210	5 lb.	Ink
100	15 lb.	Ink
30	20 lb.	Ink
-	150 lb.	Used rags (ink-stained)
1	30 lb.	Grease
-	100 lb.	Ink (dried)
-	20 lb.	Fuses
-	40 lb.	Ink, solvent, trash, paper, sawdust
5	-	Lead-acid batteries
1	3 gal.	Aquaseal
10	1 gal.	Degreaser
5	4 gal.	Kodak Clean
15	5 gal.	Silicone emulsion
1	5 gal.	Kodak developer
3	1 pt.	Phosphoric cleaner
3	1 gal.	Fountain driver
1	1 gal.	Resin
1	5 gal.	Floor wax

Source: ATEC, April 15, 1993.

4.2 Physical Hazards

4.2.1 General

Physical hazards associated with this project include working around heavy equipment (drill rig), electrocution, noise and heat stress.

Noise levels around the soil gas rig during probe installation, and around drill rig during soil sampling may exceed a comfortable range in which case ear plugs are recommended. The use of ear plugs is highly recommended at all times during soil gas field activities. Hearing protective devices (HPDs) will be available on site at all times. Use of HPDs will be required whenever the noise level equals or exceeds 85 dBA.

Drums previously found on site should have been staged and removed from the site. If any additional drums are found during field activities, ICF personnel will not move, handle, or otherwise disturb the drum(s). The SSO and PM will be notified immediately.

ICF personnel will not enter any areas identified as having Asbestos Containing Materials (ACMs) and will not disturb any structures reasonably expected to contain polychlorinated biphenyls (PCBs) (e.g., lighting ballasts).

4.3.2 Heat Stress - Discussion

Hyperthermia is a common hazard to employees working on projects involving exposure to hazardous substances, most particularly when impermeable protective clothing is used. This problem can occur at ambient temperatures below what is normally considered "hot weather." The body normally sheds excess heat primarily through radiation (capillaries in the skin dilate, transferring heat from the body core to the surface), and evaporation of sweat. Thermodynamically, evaporation is much more effective than radiation. Heat stress results when the body's regulating mechanisms are inadequate to dispose of internally generated, and externally supplied heat.

Heat is normally generated internally through metabolic processes, and the quantity of heat generated corresponds to the level of muscle activity. External heat sources include radiant bodies (the Sun, furnaces, fires, etc.), and convection (temperature difference between the skin and ambient air). External heat gain can occur through conduction from hot surfaces, but this is normally not significant since such contact will be avoided (it is a very important factor if submersed in water, however).

The overall heat balance of a human can be written as an equation:

$$H = M \pm R \pm C - E$$

where:
- H = body heat burden
- M = metabolic heat gain
- R = radiant or infrared heat load
- C = convective heat load
- E = evaporative heat loss.

The "normal" person maintains a core body temperature of 37°C ± 1°C, (98.5°F ± 1.8°F). Core body temperatures should not exceed 38°C (100.4°F) as a result of the total heat burden. Heat stroke occurs when the core temperature is greater than 40°C, and death is probable at core temperatures ≥42°C.

Working outdoors in hot, sunny weather places the worker under increased heat load from M, R, and C. If the heat loss from E, is less than the sum of M, R, and C, the total body heat balance will increase. Unfortunately, the use of impermeable protective clothing can reduce the heat loss from E to near zero.

4.2.3 Heat Stress - Controls

Heat stress is difficult to control in environmental work. Most work takes place outdoors, and, in much of the country, during the spring and summer months. There are three factors that impact on control of heat stress: worker acclimatization, replacement of fluid lost through sweating, and reducing work schedules.

Acclimatization is the process by which the body adapts to higher environmental temperatures, and is very significant in preventing heat related illnesses. Acclimatization is a gradual adaptation requiring seven to ten days to complete. In an acclimatized worker, the heart rate is lower, the resting body temperature is lower, sweating begins more rapidly, and the sweat is more dilute (less salt loss). Acclimatization is temporary, and much of the benefit can be lost if the worker is not exposed to heat stress for a week or so. Lack of acclimatization is the reason heat-related illnesses are more common, and more severe in the early summer.

Replacement of lost fluids is critical for all workers weather acclimated or not. Intake of fluid must be increased beyond that which satisfies thirst, and it is important to avoid "fluid debt," which will not be made up as long as the individual is sweating. Two 8 oz. glasses of water should be taken **prior** to beginning work, then up to 32 oz per hour during the work shift; fluid replacement at frequent intervals is more effective. The best fluid to drink is water; liquids like coffee or soda do not provide efficient hydration, and may increase loss of water. If commercial electrolyte drinks (Gatorade, Squincher, etc.) are used, the drink should be diluted ⅓ to ½ with water, or 8 oz of water should be taken with each 8 oz of electrolyte. Additional salt is usually not needed; and **salt tablets should never be taken.** Replacement fluids should be cool, but not cold.

A reduced work schedule lowers the contribution of the metabolic heat gain by periodically reducing the level of activity. Breaks should be taken in a cool, shaded location, and any impermeable clothing should be removed. Dry clothing or towels should be available to minimize chills when taking breaks. No manual labor may be performed during breaks, but paperwork, and other similar light tasks may be performed.

Other controls include working at night or during the cooler parts of the day (6am - 10am, 3pm - 7pm), erecting a shade over the work area, and use of cooling garments. The last option is expensive and logistically difficult to implement.

4.2.4 Heat Stress - Work Schedules

Work schedules providing periodic rest periods must be implemented when employees are exposed to heat stress. Schedules may be developed based on instrumental measurements of the environment (temperature, radiant heat, humidity, and wind speed) with the resulting measurement compared to published guidelines (NIOSH REL, ACGIH TLV, for Heat Stress). When using this method, allowance must be made for the use of impermeable protective clothing.

Alternate methods of establishing a work schedule are based on measuring physiological indices (heart rate, or oral temperature), which correlate to the core body temperature. Oral temperature does not correlate well to increasing core temperature (during heat exhaustion, it may be normal or even depressed due to extreme peripheral vasodilation), and is subject to effects from drinking replacement fluids.

Measures of heart rate (pulse) appear to correlate well with heat-related stress, and can be used to estimate the impact of heat stress on individuals with differing levels of fitness (i.e. individuals with a pulse of 150/minute are experiencing about the same level of stress, even though the work output required to reach this rate will be quite higher for a fit person). The heart rate also incorporates the combined effects of environmental heat, muscle activity, and elevated body temperature, making it a useful, and easily measured variable.

The procedure for controlling heat stress via the measurement of heart rate is presented below.

The Site Safety Officer and Site Manager shall determine the potential for heat stress based on planned activities, and weather forecasts.

If the potential for heat stress exists:

All site workers shall be informed of the potential for heat stress during the daily safety meeting.

The site safety officer and site manager shall determine if any hot zone workers are at particular risk for heat stress due to illness, etc.

The site safety officer and site manager shall assure that sufficient quantities of potable water, and electrolyte drinks are available in the decontamination area; and that a shaded rest area is available at, or immediately outside the decontamination area.

All hot zone workers and relief workers shall drink 16 oz. of water prior to beginning work; and at least 16 oz. during each rest period.

The initial work period is set according to the table below.

Within the first minute of each rest period, each worker's heart rate (pulse) shall be measured, and compared to the following:

Initial heart rate: ≤ 110 beats/minute (28 beats/15 sec).

Each worker's heart rate will be measured again three minutes later, and compared to the following:

Recovery heart rate: ≤ 80 beats/minute (20 beats/15 sec).

If both heart rate criteria are met, the subsequent work period may be increased by one third, provided the temperature remains constant. If the initial heart rate is > than 110 beats per minute, or the recovery rate is not less than 80 beats per minute, the subsequent work shift is decreased by one third.

FREQUENCY OF MEASUREMENT		
AMBIENT TEMPERATURE (°F)	NORMAL WORK CLOTHING[1]	IMPERMEABLE WORK CLOTHING
70° - 80°	N/A	90 MIN
80° - 85°	120 MIN	60 MIN
85° - 90	90 MIN	30 MIN
> 90°	60 MIN	15 MIN

[1]Normal work clothing is cotton coveralls, or other cotton clothing with long sleeves and pants.

Note: Individuals with pre-existing medical conditions or restrictions contraindicating exposure to elevated environmental heat are precluded from assignments that involve exposure to high temperatures.

Note: Healthy individuals will vary significantly in their tolerance to heat, and heat tolerance can be affected by minor illnesses (cold, flu) and by prescription, and over-the-counter medications.

Note: The heart rate measure is only a part of the overall situation to be considered; other objective, and subjective symptoms of heat stress, such as: extreme fatigue, nausea, disorientation, lightheadedness, and breathlessness must be fully considered when evaluating the adequacy of control measures.

Note: The heart rate measure will provide guidance that can be significantly different for each member of a field team based on their acclimatization, physical fitness, and heat-tolerance. If it is critical that all team members use the same work/break schedule, the schedule that accommodates the least heat-tolerant team member will be observed.

SECTION 5

TRAINING REQUIREMENTS

All ICF staff working on site have completed training in hazard recognition and basic health and safety issues as required by the occupational safety and health regulations contained in 29 CFR 1910.120 (e). In addition, each employee will be familiar with the requirements of this site safety and health plan, and will participate in site activity and safety briefings. There are not any project-specific training requirements anticipated at this time. The SSO will document all site safety activity and implementation of this plan. Table 5-1 lists the training and compliance status of field personnel working on this project.

Table 5-1. HEALTH AND SAFETY COMPLIANCE STATUS

NAME	MEDICAL CURRENT	FIT TEST CURRENT	CERTIFICATION LEVEL A B C D	TRAINING CURRENT 40HR	8HR	CPR
Thomas Watson	YES	YES	B Sup.	✓	✓	✓
Alejandro Fernandez	YES	YES	B	✓	✓	✓
John Pings	YES	YES	B Sup.	✓	✓	✓
Laura Boyles	YES	YES	B Sup.	✓	✓	✓
Ines Cadavid-Parr	YES	YES	B Sup.	✓	✓	✓

SECTION 6

PERSONAL PROTECTIVE EQUIPMENT

Based on the hazard analysis for this project, the following personal protective equipment (PPE) will be required and used. Changes to these specified items of PPE will not be made without the approval of the site safety officer.

The minimum required level of personal protection for soil gas activities is Level D. Level D consists of:

- hard hat,
- steel-toed boots,
- long pants and shirt with sleeves, and
- safety glasses.

If Level C protection is required during drilling activities it will consist of:

- Tyvek or equivalent coveralls,
- nitrile gloves and liners,
- hard hat,
- chemical resistant boots, and
- full-faced respirators with combination organic vapor high efficiency filter cartridges.

Eye glasses must be ANSI approved (safety glasses). Contact lenses will not be allowed on site at any time during field activities. If at any time throughout the course of this job, there is a potential for more exposure to the personnel, the appropriate personal protective equipment will be required.

All field personnel in the immediate work area must have access to an air-purifying respirator, for which they have been satisfactorily fit-tested. Facial hair and/or beards which interfere with the proper sealing of the respirator are not allowed for field personnel. Personnel who require prescription lenses will be provided with approved spectacle kits for use with respiratory protection.

The following is a list of equipment that must be available throughout the field project:

Personal Protective Equipment

Air-purifying respirator (Full-Face MSA Ultratwin)
Cartridges (MSA) - Organic vapor/acid gas high efficiency type GMA-H
Nitrile gloves
Latex gloves
Safety glasses
Chemical resistant - steel toe boots
Hearing protection
Hard hat

Personal Protective Equipment (continued)

Tyvek or equivalent coveralls

Vehicle Equipment

First-aid kit
Cellular phone or other means of communication
Water (deionized and drinking)
Jumper cables
Spare tire
Fire extinguisher
Eye wash

Monitoring Equipment

Photoionization detector (PID) with calibration gas 11.7 eV lamp
Dust monitor

Decontamination Equipment

Hand soap
Disposable towels
Trash bags

SECTION 8

MEDICAL SURVEILLANCE REQUIREMENTS

Medical surveillance is conducted as an annual routine program that meets the requirements of 29 CFR 1910.120(f). There will not be any special tests or examinations required for staff involved in this project.

SECTION 9

SITE CONTROL MEASURES

The potential chemical and physical hazards have been identified in this SSHP; however, should site-specific or unexpected conditions arise, the SSO will stop all work at the site and the Project Manager will be notified. Work will not be resumed until the SSHP has been revised or re-evaluated, accordingly.

Formal work zones will be established prior to the commencement of field activities. Break or eating areas shall be located away from the work zone and preferably upwind. Also, a decontamination station will be established. The work site shall be secured and cleaned at the end of the work day. Communication between the field team members will consist of verbal communication and hand signals unless personal protective gear is donned (Level C and/or Level B), in which case radio communication will be utilized. A portable telephone will be available throughout field activities.

Work Practices

Safe work practices for this project include:

1. Set up, assemble, and check out all equipment for integrity and proper function before entering the restricted work area and prior to starting work activities.

2. Do not use faulty or suspect equipment.

3. Use only new and intact protective clothing. Change the suit, gloves, etc. if they tear.

4. Do not use hands to wipe sweat away from face. Use a clean towel or paper towels.

5. Practice contamination avoidance at all times.

6. Do not smoke, chew gum or tobacco, eat, drink or apply cosmetics while in the exclusion area.

7. Wash hands, face, and arms as soon as possible upon exiting from the exclusion area, and prior to taking rest breaks, lunch break, and leaving the site at the end of the work day.

8. Check in and out with the SSO upon arrival and departure.

9. Perform decontamination procedures completely as required by this SSHP.

10 Notify the SSO immediately if there is an accident that causes an injury or illness.

SECTION 10

DECONTAMINATION

Decontamination procedures associated with soil gas sampling activities will take place in the decontamination area identified on site. Probe material will be decontaminated by removing particulate matter by steam cleaning, then flushing with methanol.

A personnel decontamination station will be established. The decontamination station will be set up on visquene and will include at least two 5 gallon buckets; one filled with a clean water and soap mixture and the other with clean water, paper towels, brushes and bags for disposal. All workers, PPE, sampling equipment, and heavy equipment leaving the work area will be decontaminated to prevent the spread of hazardous materials. All workers will wash their hands, arms and face and respirators after removing PPE and prior to leaving the site. Disposable items will be double-bagged for disposal along with other hazardous wastes for proper disposal. Sampling equipment will not be reused so decontamination is not necessary. Support vehicles are to be left outside the exclusion area so that decontamination will not be necessary. All heavy equipment will be steam cleaned prior to removal from the site. Decontamination water will be contained and properly disposed of in accordance with the rules of the site.

SECTION 11

EMERGENCY PROCEDURES

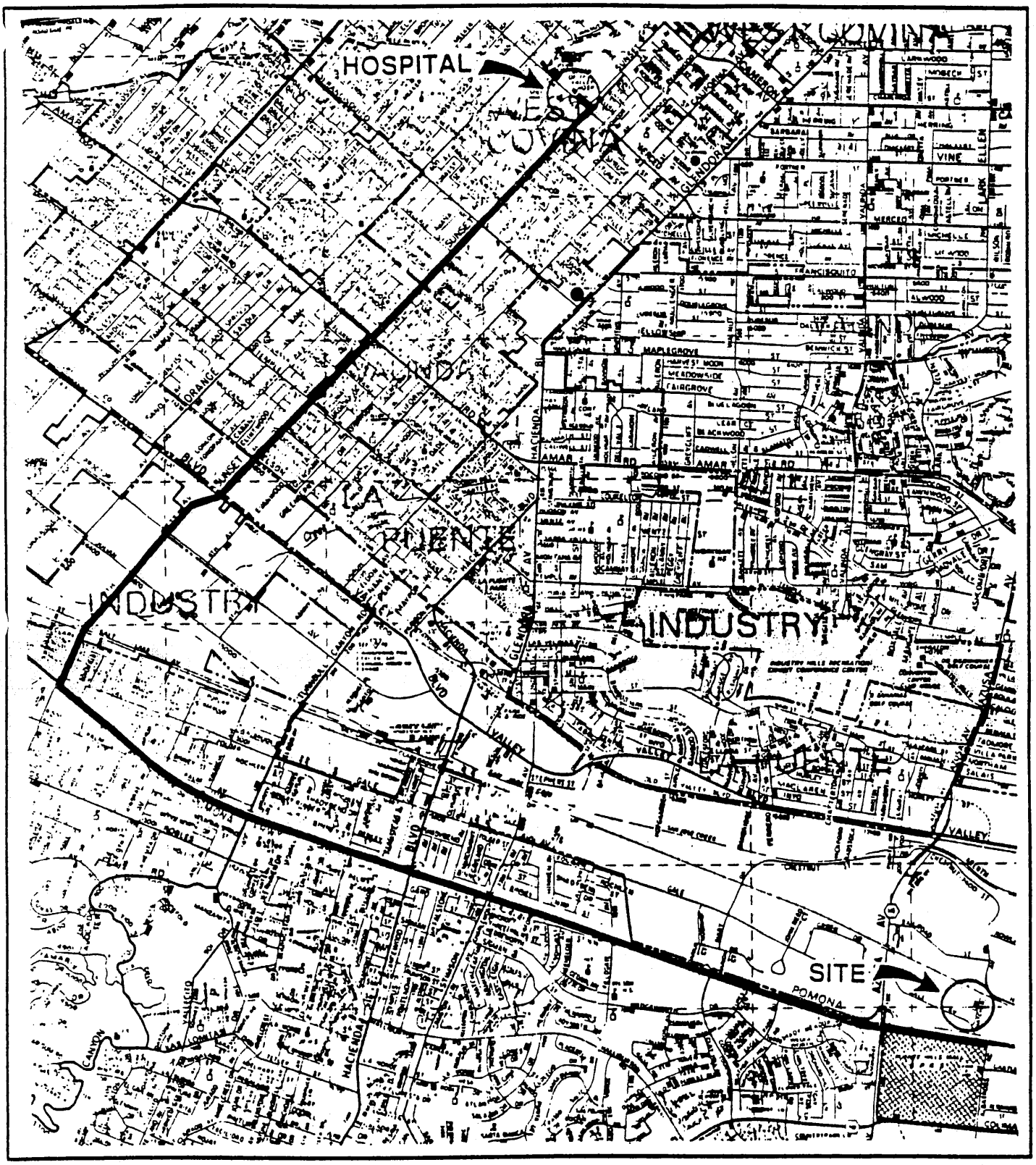
Prior to the beginning of field activities, the SSO will identify a designated meeting place (on site and off site), in the event of an evacuation. In the event of an emergency on site, the SSO will direct the course of action. It may be necessary for the SSO to depend on the other on-site personnel for assistance. The SSO will call for emergency assistance if needed. As soon as practical, the SSO will contact the Project Manager and the Health and Safety Manager. All staff assigned to this project will be briefed on the procedures and responsibilities for implementation. The field staff will be familiar with the emergency procedures of the facility. In the event of a medical emergency, 911 should be used.

The SSO is trained in first-aid and CPR. A first-aid kit and fire extinguisher will be readily available. The emergency telephone numbers to be used to call for assistance are listed below. A copy of this list will be posted in the support zone of the work area. Figure 11-1 presents a map with the route to the closest hospital. The following emergency telephone numbers will be used to call for assistance:

EMERGENCY CONTACTS

NAME	TELEPHONE	NAME	TELEPHONE
Thomas Watson Project Manager	(818) 509-3145	Los Alamitos Medical Center 3751 Katella Avenue Los Alamitos	(714) 598-1311
Ines Cadavid-Parr Regional Health and Safety	(818) 509-3135	Police/Fire/Paramedics	911
Gerald Joy, CIH Group Health and Safety	(412) 497-2056	EPA-Emergency Response Team	(201) 321-6660
Center for Disease Control	(404) 329-3311 (404) 329-3644 (pm)	Poison Control Center	(800) 962-1253
Environmental Emergency National Response Center	(800) 424-8802	National Pesticide Center	(800) 845-7633
Directions to the nearest hospital: Queen of the Valley Hospital 1115 S. Sunset Avenue (818) 962-4011	Gale Ave. West to 7th Ave. (or Hwy. 60 west) (approx. 8 mi.) North on 7th Ave. 7th Ave. becomes S. Sunset Ave. Hospital is at 1115 S. Sunset Ave. (Approx. 3 1/2 mi.). (Notify the Regional Health and Safety Officer and the Group Health and Safety Director)		

Figure 11-1
Hospital Route Map
RREEF # 1



N

Reference: Thomas Bros. Maps
Los Angeles and Orange Counties
1990 Edition

ICF KAISE ENGINEER

SECTION 12

DOCUMENTATION

The implementation of the site safety and health plan must be documented to assure employee participation and protection. In addition, the regulatory requirements must be met for record keeping on training, medical surveillance, injuries and illnesses, exposure monitoring, health risk information, and respirator fit-tests. Documentation of each employee's activities is maintained by the Health and Safety Manager in Universal City, California.

Documentation of the implementation of this plan will be accomplished by using Attachment B and C. In addition, the SSO will conduct a site safety briefing prior to field activities each work day to address any new hazards from the previous days activities and other issues relevant to the project. Documentation of the site safety briefing will be accomplished by recording in the field log book.

ATTACHMENT A

ACCIDENT REPORT FORM

ATTACHMENT B

ICF

SITE SAFETY AND HEALTH PLAN

EMPLOYEE ACKNOWLEDGEMENT

ATTACHMENT B

ICF

SITE SAFETY AND HEALTH PLAN

EMPLOYEE ACKNOWLEDGEMENT

I hereby certify that I have read and understand the safety and health guidelines contained in the ICF Site Safety and Health Plan for:

Project Name: _____

Job No: _____

Employee Name: _____

Signature: _____

Date: _____

In case of emergency, please contact:

_____
(Name)

_____
(Number)

ATTACHMENT C

ICF

SITE SAFETY AND HEALTH PLAN

DAILY BRIEFING

ATTACHMENT C

ICF

SITE SAFETY AND HEALTH PLAN

DAILY BRIEFING

Date: **Time:**	
Site Safety Officer:	
Names of ICF Personnel Present:	**Names of Subcontractor Personnel Present:**
Topics Discussed:	**Action Necessary:**
Notes:	