

21 May 1990  
Project 1459.05

Ms. Susan Hugo  
Alameda County Department of Health Services  
80 Swan Way, Suite 200  
Oakland, California 94621

Subject: Excavation of Soil Affected by Mineral Spirits  
Kaiser Permanente Medical Center  
Oakland, California

Dear Ms. Hugo:

This letter presents the additional information requested by you in your telephone conversation of 17 May 1990 with Ms. Debra Favre of Geomatrix regarding the excavation of soil affected by mineral spirits at the Kaiser Hospital construction site.

- As we discussed, the plan for disposal of the excavated soil has been changed. We had indicated in our 2 May 1990 meeting with you, your supervisor, Kaiser, and Geomatrix representatives that the excavated soil would be disposed at Forward, Inc., a Class II landfill in Stockton, California. Forward, Inc. has been temporarily closed by San Joaquin County. Arrangements have been made with Nevada Hydrocarbons in Sparks, Nevada, to accept the soil for disposal. Testing is being done in accordance with the landfill's requirements and approval is being obtained for disposal from the State of Nevada.
- As requested by you, a minimum of one sample per 200 square feet will be collected from the base and sidewalls of the excavation for confirmation analysis by a DHS-certified hazardous waste laboratory.
- Attached is a copy of the results of analysis of soil using EPA Method 8240.
- Attached is a copy of the site health and safety plan for excavation of soil affected by mineral spirits.

Ms. Susan Hugo  
Alameda County Department of Health Services  
21 May 1990  
Page 2

Kaiser will be sending you the information requested regarding Worker Compensation insurance for the excavation contractors. If you require any further information or have additional questions, please feel free to call either of the undersigned.

Sincerely yours,  
GEOMATRIX CONSULTANTS, INC.



N. Debra Favre  
Project Manager



Tom E. Graf  
Vice President

NDF/TEG/ckk

cc: Fonda Karelitz - Kaiser Foundation Health Plan  
John Adams - Kaiser Foundation Health Plan  
Ken Ayers - Kaiser Permanente Medical Center  
Mark Zemelman - McCutchen, Doyle, Brown & Enersen

# Analytical Report

LOG NO: E90-05-408

Received: 11 MAY 90  
Reported: 18 MAY 90

Ms. Debra Favre  
Geomatrix Consultants  
1 Market Plaza, Spear Tower, Ste.717  
San Francisco, California 94105

Project: 1459.05

## REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-408-1	Phase 1 A&B	11 MAY 90
PARAMETER	05-408-1	
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	05.17.90	
Date Extracted	05.11.90	
Dilution Factor, Times	1	
1,1,1-Trichloroethane, mg/kg	<0.2	
1,1,2,2-Tetrachloroethane, mg/kg	<0.2	
1,1,2-Trichloroethane, mg/kg	<0.2	
1,1-Dichloroethane, mg/kg	<0.2	
1,1-Dichloroethene, mg/kg	<0.2	
1,2-Dichloroethane, mg/kg	<0.2	
1,2-Dichlorobenzene, mg/kg	<0.2	
1,2-Dichloropropane, mg/kg	<0.2	
1,3-Dichlorobenzene, mg/kg	<0.2	
1,3-Dichloropropene, mg/kg	<0.2	
1,4-Dichlorobenzene, mg/kg	<0.2	
2-Chloroethylvinylether, mg/kg	<0.2	
2-Hexanone, mg/kg	<2	
4-Methyl-2-Pentanone, mg/kg	<2	
Acetone, mg/kg	<5	
Acrolein, mg/kg	<5	
Acrylonitrile, mg/kg	<2	
Bromodichloromethane, mg/kg	<0.2	
Bromomethane, mg/kg	<0.2	
Benzene, mg/kg	<0.2	
Bromoform, mg/kg	<0.2	
Chlorobenzene, mg/kg	<0.2	
Carbon Tetrachloride, mg/kg	<0.2	

# Analytical Report

LOG NO: E90-05-408

Received: 11 MAY 90  
Reported: 18 MAY 90

Ms. Debra Favre  
Geomatrix Consultants  
1 Market Plaza, Spear Tower, Ste.717  
San Francisco, California 94105

Project: 1459.05

## REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-408-1	Phase 1 A&B	11 MAY 90

PARAMETER	05-408-1
-----------	----------

Chloroethane, mg/kg	<0.2
Chloroform, mg/kg	<0.2
Chloromethane, mg/kg	<0.2
Carbon Disulfide, mg/kg	<0.2
Dibromochloromethane, mg/kg	<0.2
Ethylbenzene, mg/kg	<0.2
Freon 113, mg/kg	<0.2
Methyl ethyl ketone, mg/kg	<2
Methylene chloride, mg/kg	<0.2
Styrene, mg/kg	<0.2
Trichloroethene, mg/kg	<0.2
Trichlorofluoromethane, mg/kg	<0.2
Toluene, mg/kg	<0.2
Tetrachloroethene, mg/kg	<0.2
Vinyl acetate, mg/kg	<0.2
Vinyl chloride, mg/kg	<0.2
Total Xylene Isomers, mg/kg	<0.2
cis-1,2-Dichloroethene, mg/kg	<0.2
trans-1,2-Dichloroethene, mg/kg	<0.2
trans-1,3-Dichloropropene, mg/kg	<0.2

### Semi-Quantified Results \*\*

C9-C13 HYDROCARBON MATRIX, mg/kg

800

\*\* Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

## SITE HEALTH & SAFETY PLAN

### 1.0 PURPOSE

This site health and safety plan establishes procedures to protect Geomatrix employees and the public from the potential hazards at the site. The observance of procedures in this plan are mandatory for all Geomatrix employees at the site.

This plan shall be used only after the plan has been reviewed by the Project Manager and Project Health and Safety Officer. Prior to entering the site, Geomatrix personnel shall read this plan and sign the attached form verifying that they read the plan and understand the requirements of the plan.

### 2.0 ADMINISTRATIVE INFORMATION

Project Name: Kaiser Hospital-Oakland

Project Start Date: February 2, 1990      Project Number: 1459.03, 1459.05

Project Address: Kaiser Permanente Medical Center  
280 West MacArthur Boulevard  
Oakland, California

Client: Kaiser Foundation Health Plan

Client Contact: John Adams, Project Manager

Telephone No.: (415) 987-2845

Project Manager: Debra Favre

Telephone No. (415) 957-9557 (work)      (415) 751-1825 (home)

Project Health & Safety Officer: Debra Favre

Telephone No.: (415) 957-9557 (work)      (415) 751-1825 (home)

Site Safety Officer: Cheri Young

Telephone No.: (415) 957-9557 (work)      (707) 769-8388 (home)

**SITE HEALTH & SAFETY PLAN (cont.)**

**3.0 PROJECT DESCRIPTION**

Site physical description: Construction site located behind the Kaiser Hospital tower and is entered from Broadway. Permanent structures include the mechanical building, cooling tower, and emergency cooling tower.

Type of investigation: Excavation of soil containing mineral spirits and groundwater monitoring.

**3.1 Areas and Media Affected by Potential Hazard(s)**

Hillside and hillside toe, and beneath the mechanical building. Soil affected by mineral spirits.

**3.2 Hazardous Substances Known or Suspected at Site**

CHEMICAL	MEDIA	CONCENTRATION	PRIMARY HAZARD
Mineral spirits	Soil	High 200 ppm Average 50 ppm	Inhalation Skin adsorption

**3.3 Potential Physical Hazards at Site**

**SAFETY HAZARDS:**

Heavy equipment, excavation.

**UNDERGROUND UTILITY HAZARDS:**

An underground utility check shall be performed prior to initiating any subsurface investigation or work.

USA  Private Locator  Plans Check  Geophysical

**LOCATION OF UNDERGROUND UTILITIES:** Kaiser Construction Services has located underground utilities.

Other electrical hazards: None

**SITE HEALTH & SAFETY PLAN (cont.)**

**OVERHEAD POWER LINES: None**

The following are minimum clearances for overhead high voltage lines.

<u>Nominal Voltage (phase to phase)</u>	<u>Minimum Required Clearance (feet)</u>
750 - 50,000	10
50,000 - 75,000	11
75,000 - 125,000	13
125,000 - 175,000	15
250,000 - 350,000	21
370,000 - 550,000	27
550,000 - 1,000,000	42

Whenever possible, avoid working under overhead high voltage lines.

**OTHER: None**

**NOISE HAZARDS:** Construction equipment can emit noise at levels above 85 dba.

**HEAT STRESS HAZARDS:** Very slight

**SUNBURN HAZARDS:** Moderate

**TRENCH/EXCAVATION HAZARDS:** Excavation along hillside will be shored to maintain cooling tower foundation. Excavation depth should be limited to 5 feet.

**CONFINED SPACE: None**

**3.3 Scope of Field Activities**

(List all field tasks for project)

- Excavation observation
- Documentation sampling
- Well installation
- Well development
- Groundwater sampling
- Water-level measurements

SITE HEALTH & SAFETY PLAN (cont.)

4.0 PRIMARY RESPONSIBILITIES

4.1 Project Manager

The Project Manager (PM) shall:

1. Direct all project activities at the site.
2. Take responsibility for preparation of the site the health and safety plan.
3. Ensure that all project personnel are aware of the health and safety requirements for the project.
4. Make resources available to provide a safe working environment.
5. Make the Project Health and Safety Officer aware of all pertinent project developments and plans.

4.2 Project Health and Safety Officer

The Project Health and Safety Officer(PHSO) shall:

1. Provide site specific health and safety training to project personnel.
2. Assist PM, as needed, in preparation of the site health and safety plan, and if necessary, modify the plan based on site conditions or incidences.
3. Oversee exposure monitoring to evaluate potential site health hazards.

4.3 Site Safety Officer

The Site Safety Officer (SSO) shall:

1. Ensure that appropriate personal protective equipment is available for site personnel and enforce proper utilization of the equipment by site personnel and visitors.
2. Observe subcontractor's health and safety procedures. If the subcontractor's personnel do not have appropriate protective equipment to perform work without risking exposure, the SSO shall consult with the PM or PHSO before proceeding with the work.
3. Maintain and calibrate monitoring equipment as frequently as necessary.
4. Report accidents, incidents or inadequate work practices observed involving Geomatrix personnel or subcontractors to either the PM or the PHSO.



SITE HEALTH & SAFETY PLAN (cont.)

4.4 Project Personnel

Project site personnel shall:

1. Take all reasonable precautions to prevent injury to themselves and to their co-workers.
2. Perform only those tasks that they can do safely, and immediately report accidents or unsafe conditions to the SSO.
3. Follow the procedures in the site health and safety plan, and report deviation from the procedure in the plan by Geomatrix employees or subcontractor personnel to the SSO.
4. Notify the PM or PHSO of any medical conditions that may affect their ability to work (allergies, respiratory difficulties, etc.)

## SITE HEALTH & SAFETY PLAN (cont.)

### 5.0 SITE CONTROL

The purpose of site control is to minimize the potential exposure to site hazards and to prevent vandalism at the site.

#### 5.1 Site Security

A map of the site is attached showing the locations the soil to be excavated. Only authorized personnel shall be permitted access to the site work areas. If possible, work areas should be cordoned with barriers to limit unauthorized access.

#### 5.2 Communications

A field representative shall contact the project manager or office at least once a day while in the field.

LOCATION OF CLOSEST TELEPHONE: Construction trailer on-site. Telephone number (415) 596-6831.

## SITE HEALTH & SAFETY PLAN (cont.)

### 6.0 AIR MONITORING

The following air monitoring equipment will be used.

- Photoionization Detector
- Draeger Pump and Tubes (specify tubes)
- Combustible Gas Meter
- Oxygen Meter
- Other (specify

Frequency of sampling: (Specify limits)

- Continuous during excavation.
- Intermittent during drilling for well installation.
- Screening of soil samples during excavation.

SITE HEALTH & SAFETY PLAN (cont.)

7.0 PERSONAL PROTECTIVE EQUIPMENT

The following personal protective equipment will be used as specified below.

- Chemical-resistant boots
- Steel-toed boots
- Hard hat
- Ear plugs
- Gloves (specify)
  - Latex inner liner, nitrile outer glove
  - Latex inner liner, rubber outer glove
  - Nitrile outer glove only
  - Rubber outer glove only
- Disposable suit (specify)
  - Tyvek
  - Saranek
- Respirator
  - Disposable dust mask
  - 1/2-face
  - full-face
- Cartridges
  - Organic vapor (black)
  - Dusts, mists, fumes (purple)
  - Combo organic vapor and dust (purple/black)
  - Other (specify)
- Safety glasses/goggles
- Other (specify)

The following protective equipment/clothing shall be worn during the following activities.

ACTIVITY	EQUIPMENT/CLOTHING
Excavation observation	Steel-toed boots, hard hat, ear plugs, gloves, respirator if action level is reached
Well installation	Steel-toed boots, hard hat, ear plugs, gloves, respirator if action level is reached.
Well sampling and water level measurements.	Gloves, hard hat, respirator if action level is reached.

### SITE HEALTH & SAFETY PLAN (cont.)

Respirators shall be worn when air sampling indicates that concentrations exceed the action level of any chemical listed below or conditions arise where the action levels of the chemicals listed below may be exceeded.

CHEMICAL	PEL/TLV	ACTION LEVEL	STOP WORK
Mineral spirits	100 ppm	50 ppm	1000 ppm

An explosion hazard shall be assumed to exist where air concentrations of the following exceed their respective lower explosion levels (LEL).

CHEMICAL	LEL
Mineral spirits	0.8%

## SITE HEALTH & SAFETY PLAN (cont.)

### 8.0 EMERGENCIES

In the event of an accident or emergency condition, the procedure specified below shall be followed immediately.

1. Site safety officer shall take charge of situation.
2. Remove injured or exposed person(s) from immediate danger if possible.
3. If serious injury or life-threatening condition exists call  
911 - Paramedics, fire department, police  
Hospital emergency room  
Clearly describe location, injury and conditions to dispatcher/hospital. Designate a person to direct emergency equipment to the injured person(s).
4. Provide first aid, if necessary.
5. Call the project manager or health and safety officer.
6. Evacuate other on-site personnel to a safe place until it is safe for work to resume.
7. Immediately implement steps to prevent reoccurrence of the accident.
8. The hospital is adjacent to the site.  
Hospital: Kaiser Permanente Medical Center  
Address: 280 W. MacArthur Blvd.  
Oakland, California  
  
Telephone: 596-7600 (emergency only)  
Poison Control Telephone: 1-800-523-2222

SITE HEALTH & SAFETY PLAN (cont.)

9.0 APPROVALS

  
\_\_\_\_\_  
Project Manager

5/18/90  
Date

  
\_\_\_\_\_  
Project Health & Safety Officer

5/18/90  
Date

  
\_\_\_\_\_  
Site Safety Officer

5/21/90  
Date



**SITE HEALTH & SAFETY PLAN (cont.)**

**10.0 ACKNOWLEDGEMENT**

**ACKNOWLEDGEMENT OF RECEIPT OF  
SITE HEALTH AND SAFETY PLAN**

Project Name \_\_\_\_\_ Project Number \_\_\_\_\_

Your signature below indicated that you have received a copy of the health and safety plan for the above identified project, have read it and understand the conditions under which it is to be used.

**NAME**

**DATE**





SITE LOCATION  
Kaiser Hospital  
Oakland, California

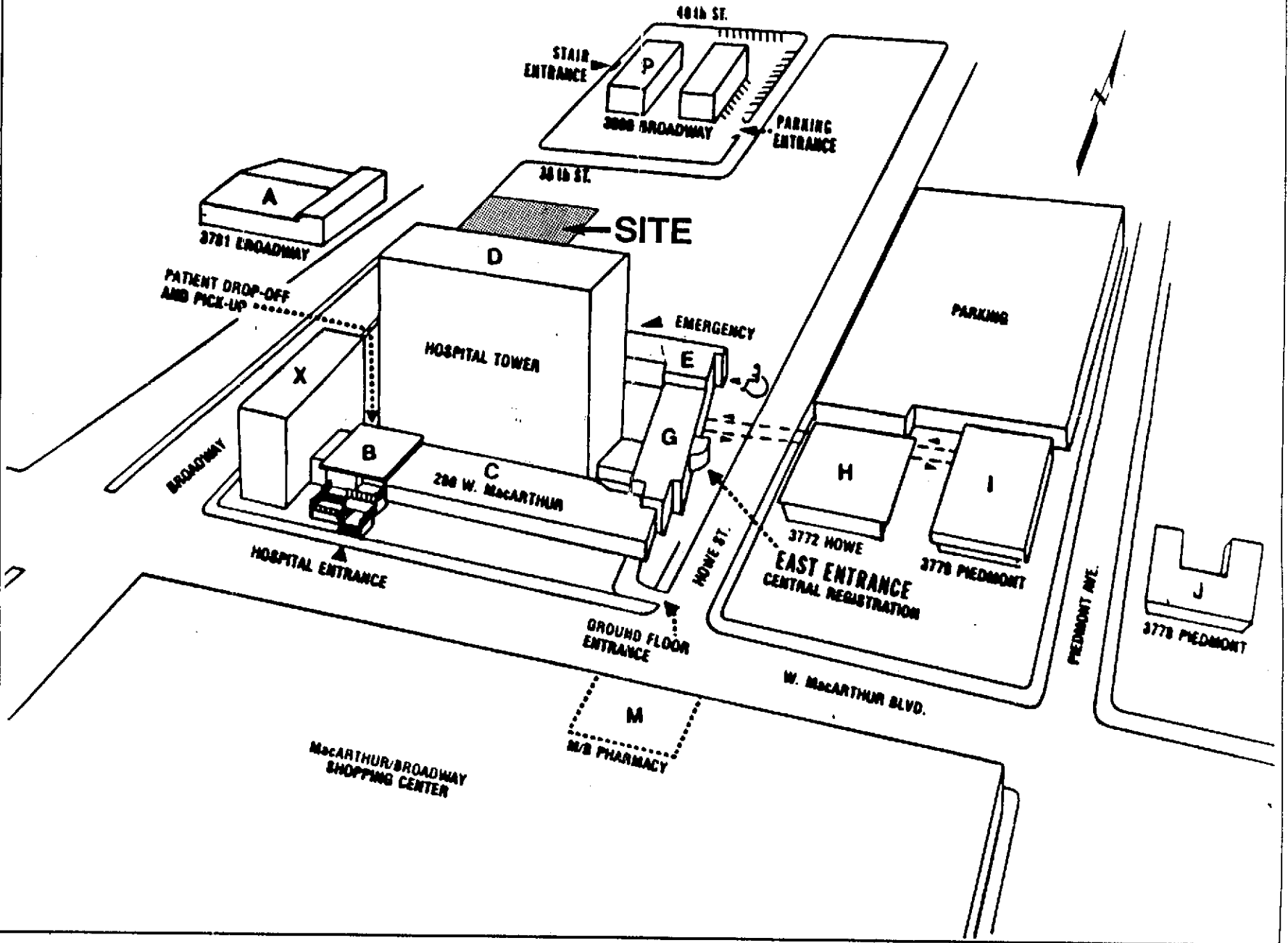


Figure  
1  
Project No.  
1459E