



**Sweet-Edwards/EMCON, Inc.**  
Ground Water, Engineering, Waste Management, & Drilling Services

18912 N. Creek Parkway, Suite 210 • Bothell, WA 98011  
Office (206) 485-5000 • FAX (206) 486-9766

February 9, 1990

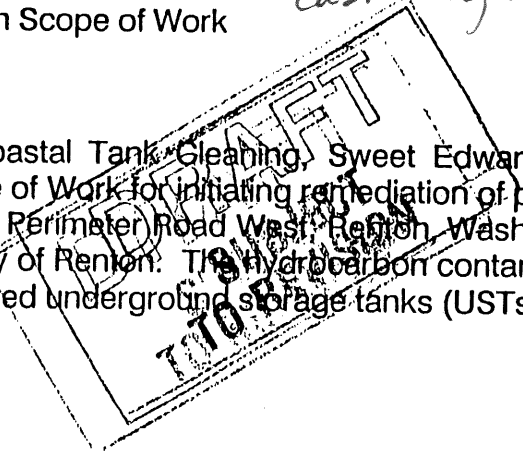
Mr. Joe Hickey  
Department of Ecology  
4350 150th Avenue Northeast  
Redmond, Washington 98052-5301

RE: Initial Site Remediation Scope of Work

*Castaway Rest.*

Dear Mr. Hickey:

On behalf of our client, Coastal Tank Cleaning, Sweet Edwards/EMCON (SE/E) is pleased to submit this Scope of Work for initiating remediation of petroleum hydrocarbon contamination in soil at 1011 Perimeter Road West, Renton, Washington (Figure 1). The property is owned by the City of Renton. The hydrocarbon contamination appears to be related to two recently removed underground storage tanks (USTs).



**1. BACKGROUND**

SE/E understands that two USTs owned by the City of Renton, and which reportedly contained diesel product, were removed from the site in mid-January, 1990, by Coastal Tank Cleaning, Inc. (CTC) under contract to the City of Renton. During removal operations, petroleum-like odors were noted by CTC personnel in soils adjacent to the USTs. After removal of the USTs, we understand that CTC temporarily stockpiled excavated soils on site pending further investigations and testing.

At the request of CTC, SE/E personnel performed a site visit on January 25, 1990, to collect representative soil samples from the open excavation and stockpiled soils. One "grab" sample of ground water from the excavation was also obtained at that time. Both the soil samples and the water sample were analyzed for total petroleum hydrocarbons (TPH, EPA Method 418.1) by Sound Analytical Laboratories, Fife, Washington. The analytical testing results and SE/E's findings are presented in our February 2, 1990, letter to CTC, "Analytical Testing Results of Soil Samples from UST Excavation, Castaway Restaurant Parking Lot, Renton, Washington".

Briefly, analytical testing results indicated that soil in the south and east sidewalls of the excavation exceed Ecology recommended cleanup goals of 200 ppm TPH. The south sidewall sample was also analyzed for fuel hydrocarbons (EPA Method 8015, Modified), which indicated that detected hydrocarbon contamination consisted of gasoline.

The soil and water samples were re-analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX, EPA Method 8020). Results indicate that benzene concentrations in the south and east sidewalls (1,920 ppb and 750 ppb, respectively) exceed Ecology cleanup goals.

SE/E understands that Ecology has been notified of the current situation and soil quality information by Mr. Gary Gordon, Fire Prevention Bureau, City of Renton.

## 2. SOIL EXCAVATION AND STOCKPILING

### 2.1 Soil Removal Equipment

CTC will provide a track-mounted excavator (backhoe) to conduct soil removal operations. The operator will have safety training necessary to meet the requirements of OSHA, 51 CFR Part 244.

### 2.2 Removal Procedure and soil Sampling

Initial excavation will focus on removing soil along the south and east sidewall of the excavation, and extend to a depth of about 6 feet below ground surface where ground water is expected to be encountered. Criteria to determine the extent of soil removal may include the presence of a sheen, discoloration, and product odor. Soils will be screened in the field for the presence of volatile organic compounds using a photoionization detector (PID). Excavation will continue until the above criteria indicate that soils impacted by hydrocarbon contamination have been removed, until further excavation is limited due to logistical concerns such as existing utilities, interference with restaurant or airport operations, or when the limit of the backhoe has been reached. Sidewall soil samples will be collected to document soil quality conditions at the limits of excavation. Each sample will be submitted to Sound Analytical Laboratories and analyzed for TPH (EPA Method 418.1) and for BTEX (EPA Method 8020) on a 24-hour, rapid turnaround basis.

If laboratory analyses indicated that TPH or BTEX concentrations exceed Ecology's recommended cleanup guidelines, additional soil will be removed and further soil sampling accomplished, as practicable, until Ecology's guideline concentrations have been met.

Soil samples will be collected using either the excavator bucket and stainless steel spoons, or scrapped from the excavation sidewalls using a stainless steel spoon attached to sampling rod. Samples will be placed directly into laboratory-prepared glass

jars with teflon-lined lids, placed into a chilled cooler and transported to the analytical testing laboratory under chain-of-custody protocol.

### 2.3 Stockpiling

The excavated soil suspected of containing petroleum hydrocarbon contamination above Ecology cleanup guidelines will be stockpiled inside the fence at the location shown on Figure 2. This soil will be stockpiled on plastic sheeting, and covered to limit rainfall infiltration. Disposal or treatment options for the excavated soil will be evaluated when samples collected from the excavation indicated that Ecology cleanup goals have been met.

## 3. SOIL REMEDIATION

The volume of soils that will be stockpiled will not be known with any certainty until excavation is complete. As a result, we propose to determine an appropriate disposal or remediation method for contaminated soils after excavation is completed. A general discussion of likely remedial options is presented below.

### 3.1 On-site Treatment

In general, on-site treatment of gasoline-contaminated soils, depending upon contaminant concentrations and the volume of soil to be treated, may consist of some type of passive or active soil aeration. If passive aeration is selected, a plastic lined treatment area would be constructed. Soils would be spread out to a depth of about 8 to 10 inches, and turned or mixed periodically using a rototiller to release gasoline constituents to the air. If active aeration is selected, soils could be placed in the treatment area and mounded. The soil mound would contain perforated plastic pipe which would be connected to a blower located nearby. The blower would induce a vacuum on the piping, thereby drawing air through the soil mound and actively aerating the soil. A typical mounded, active aeration system as described would be on the order of 4 feet high, and could be configured to conform to site conditions (either long and narrow, or short and wide).

### 3.2 Off-Site Disposal

Off-site disposal may be a cost effective method for handling excavated soils depending on contaminant concentrations and the volume of soil removed. However, disposal fees at Cedar Hills Landfill have increased dramatically with the closure of Coal Creek Landfill.

In the event that off-site disposal is the selected disposal method, approval from the Seattle-King County Health Department and Ecology will be required for soils containing elevated TPH and BTEX concentrations (above Ecology guidelines). Information on the contaminant concentrations, soil volume, generator and hauler will be submitted to the Health Department. A document from the Health department authorizing disposal at the landfill will be obtained prior to removing any soil from the site.

**4. HEALTH AND SAFETY**

See Site Safety Plan (Attachment A).

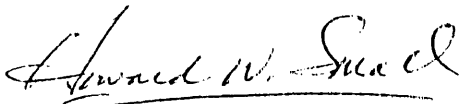
**5. REPORTING**

A draft report summarizing the removal of soil remediation and/or disposal of the soil either on-site or off-site will be prepared following the completion of the work. A progress letter will be submitted to Ecology after the volume of soil stockpiled has been determined and a preferred remediation/disposal method selected.

If you have any questions regarding this proposed work, please call SE/E at 485-5000.

Sincerely,

Sweet-Edwards/EMCON, Inc.



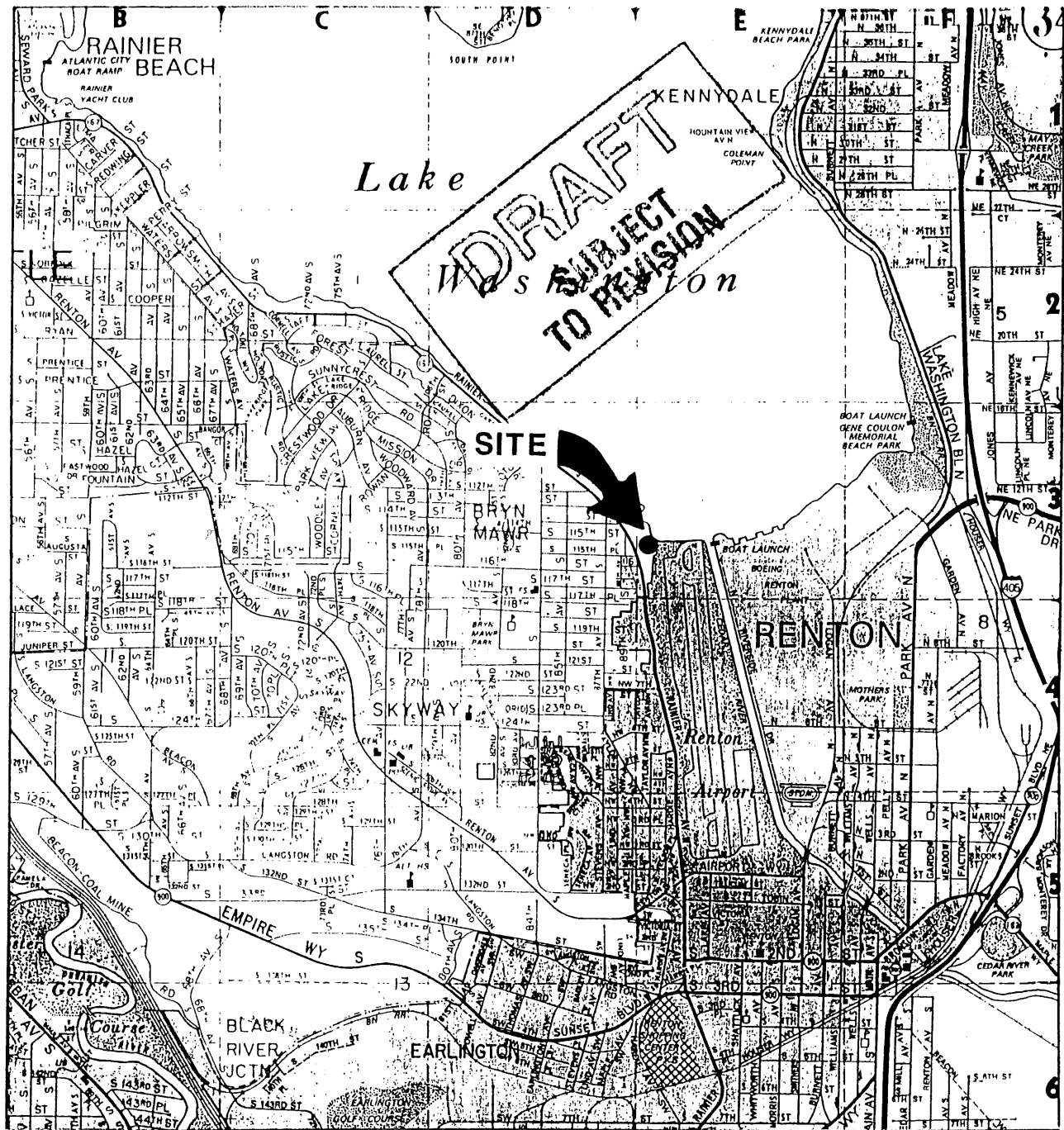
Howard W. Small  
Project Geologist



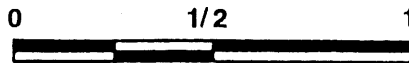
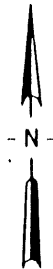
Dave Ashcom  
Director, Remediation Services

Enclosures: Attachment A - Site Safety Plan

cc: Mr. Glen Anderson (Coastal Tank Cleaning, Inc.)  
Mr. Gary Gordon (Fire Prevention Bureau, City of Renton)



WASHINGTON



SCALE IN MILES

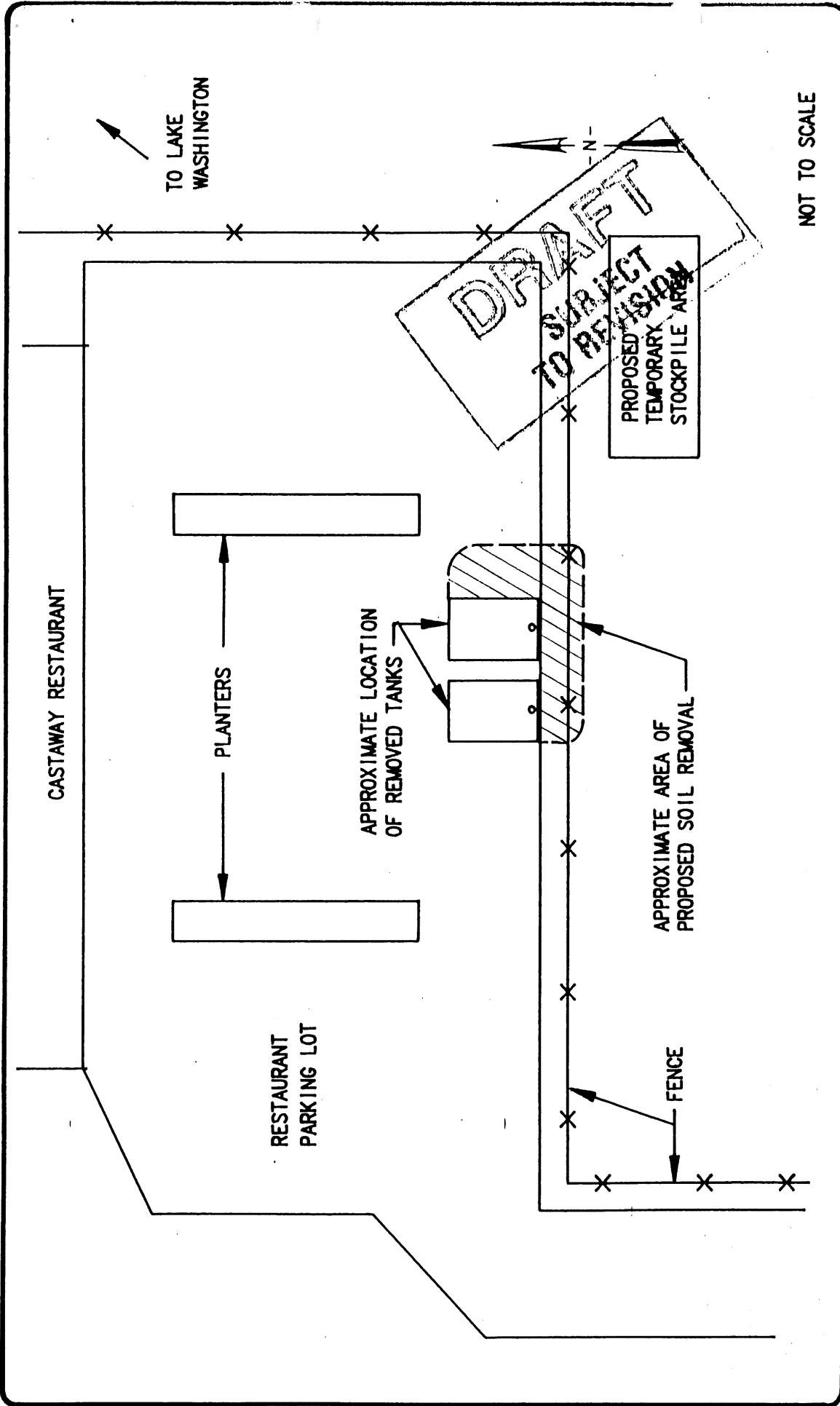


**Sweet-Edwards**  
EMCON

DATE 1-90  
DWN. MP  
APPR. HS  
REVIS. \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_  
U9302.02

Figure  
CITY OF RENTON  
1011 PERIMETER ROAD WEST  
RENTON, WASHINGTON  
SITE VICINITY MAP

133396



DATE	1-90
OWN.	MP
APPR.	HS
REVIS.	
PROJECT NO.	U9302.02

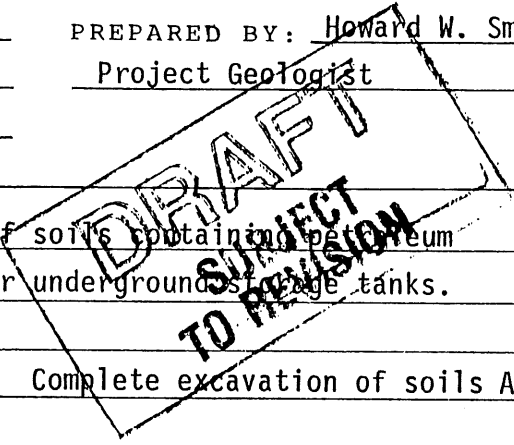
Figure 2  
 CITY OF RENTON  
 1011 PERIMETER ROAD WEST  
 RENTON, WASHINGTON  
 SITE AND REMEDIATION PLAN



Sweet-Edwards  
 EMCON

# SITE SAFETY AND OPERATIONS PLAN

SITE: City of Renton DATE: February 8, 1990  
 LOCATION: 101 N. Perimeter Road West PREPARED BY: Howard W. Small  
Renton, WA Project Geologist  
 CLIENT CONTACT: \_\_\_\_\_  
 PROJECT OBJECTIVE(S): Remediation of soils containing petroleum  
contamination associated with two former underground storage tanks.  
 SCHEDULED ACTIVITIES/TIME PERIOD: Complete excavation of soils ASAP.



## BACKGROUND REVIEW

	PRELIMINARY	COMPLETE
ACCESS, OVERHEAD/UNDERGROUND UTILITIES, ETC. _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WASTE CHARACTERIZATION _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HAZARD/SAFETY LEVEL DETERMINATION: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>

COMMENTS: \_\_\_\_\_  
Tanks have been removed. Contractor to be responsible for location and  
avoidance of underground or overhead utilities.

## WASTE TYPE(S) / CHARACTERISTICS

LIQUID  SOLID  SLUDGE  GAS   
 CORROSIVE  IGNITABLE  REACTIVE  VOLATILE   
 TOXIC  RADIOACTIVE  UNKNOWN  OTHER

SPECIAL CONSIDERATIONS/COMMENTS: Petroleum, gas and diesel fuel  
contamination. Exposure to possible pure and break down products.

S-E/E 100-03a



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**FACILITY DESCRIPTION**

SIZE: Two removed underground storage tanks. BUILDINGS/STRUCTURES: None within 100 feet.

TOPOGRAPHY/ACCESS: Generally flat with slight slope to the north.

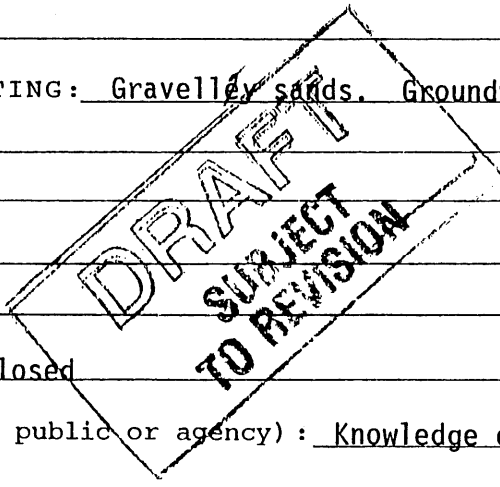
GENERAL GEOLOGIC/HYDROLOGIC SETTING: Gravelly sands. Groundwater encountered at approximately 6' bgs.

STORAGE/DISPOSAL METHOD(S): \_\_\_\_\_

STATUS (active; closed; unknown) : Closed

HISTORY (injury; illness; complaints, public or agency) : Knowledge of soil contamination.

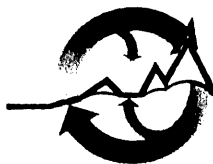
SPECIAL CONDITIONS/COMMENTS: \_\_\_\_\_



**HAZARD EVALUATION**

Safety precaution regarding exposure to petroleum contaminated soils during excavating operations. SE/E personnel will monitor air quality in the breathing zone using a photoionization detector (PID) device. In the event that PID Measurements exceed 10 ppm in the breathing zone, site personnel will be notified. Use of half-face respirators with organic vapor cartridges, or work area ventilation using brush fans will be implemented above a measurement of 10 ppm continuous in the breathing zone.

S-E/E 100-03b



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**OPERATIONS PLAN**

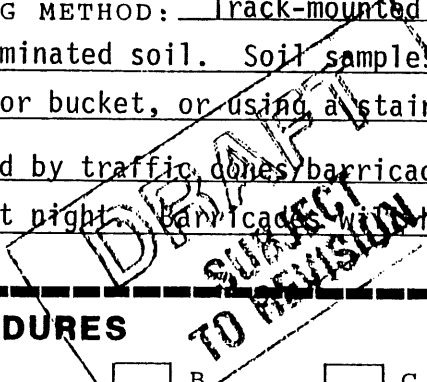
MAP/SITE SKETCH ATTACHED AS EXHIBIT X.

SITE CONTROL (for vehicles, workers, public, etc.) SHOWN ON EXHIBIT No

ZONES OF CONTAMINATION:  Known  Projected  Unknown

EXCAVATION, DRILLING OR SAMPLING METHOD: Track-mounted excavator  
to be used to remove petroleum-contaminated soil. Soil samples will  
be collected either from the excavator bucket, or using a stainless steel spoon  
attached to a steel pole.

COMMENTS: Work area to be delineated by traffic cones, barricades and "caution"  
tape. Excavating <sup>ON</sup> to be barricaded at night. Barricades will have flashing  
yellow lights operating after dusk.



**SAFETY EQUIPMENT AND PROCEDURES**

LEVEL OF PROTECTION:  A  B  C  D

ADDITIONS/MODIFICATIONS: Level C upgrade will be used if 10 ppm is  
observed on the PID Device.

SPECIAL SURVEILLANCE EQUIPMENT AND MATERIALS: Micro TIP I  
(photoionization detector)

Gastech Synsidyne tube (Volatile detector)

DECONTAMINATION PROCEDURES: Excavation equipment steam cleaned before  
leaving site. All site personnel will wash exposed skin areas prior to  
eating or leaving site.

P.D.S. STATION(S): Yes

P.D.S. EQUIPMENT, MATERIALS AND SPECIAL FACILITIES: Scrub buckets,  
eye wash, area near excavation operations.

S-E/E 100-03c



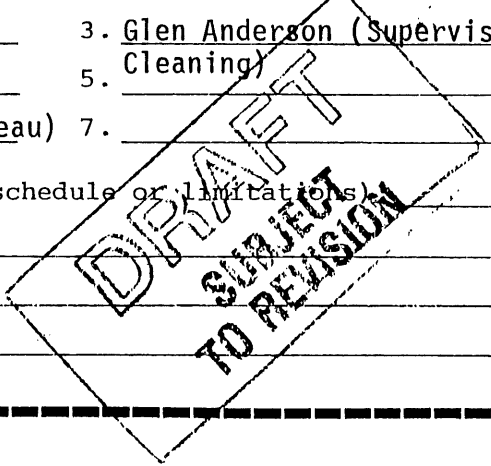
**SITE ENTRY PROCEDURES**

SITE TEAM (No.):  X  Sweet-Edwards  X  Client   Agency   Other

ENTRY BRIEFING DATE: \_\_\_\_\_ LOCATION:  Project site.

- SITE WORK TEAM (name/responsibility)
- 1.  Howard W. Small (Project Geologist)
  - 2.  Coastal Tank Cleaning Personnel
  - 3.  Glen Anderson (Supervisor, Coastal Tank Cleaning)
  - 4.  (to be determined)
  - 5. \_\_\_\_\_
  - 6.  Gary Gordon (Fire Provention Bureau)
  - 7. \_\_\_\_\_

SPECIAL CONDITIONS (e.g., work schedule or limitations) \_\_\_\_\_



**EMERGENCY PROCEDURES**

ACUTE EXPOSURE SYMPTOM(S):

FIRST AID

- |                            |   |
|----------------------------|---|
| 1. <u> Eye irritation </u> | <u> Remove from working area to fresh air </u>    |
| 2. <u> Dizziness </u>      | <u> conditions. Provide support-eye-wash- </u>    |
| 3. <u> Nausea </u>         | <u> transport to hospital if syptoms remain. </u> |
| 4. <u> Headache </u>       | _____   |
| 5. _____                   | _____   |
| 6. _____                   | _____   |

HOSPITALS/EMERGENCY MED. CENTER (Address/phone#)MAP ATTACHED:  Y  N

- 1.  Valley General Hospital 400 S. 43rd Street Renton, WA
- 2.  Riverton General Hospital 12844 Military Road S. Seattle, WA
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

EMERGENCY TRANSPORTATION (fire, ambulance, police):

- 1.  Ambulance 911
- 2.  Police/Fire Department 911
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

S-E/E 100-03d



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