CAP approved as amended here 2-16-93 SOS

Environmental Science & Engineering, Inc.

February 15, 1993

Project No. 6-92-5454

Mr. Scott O. Seery, CHMM
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Room 350
Oakland, California 94621

SUBJECT: **Old Graystone Fueling Facility, Santa Rita Correctional Facility, Dublin, California** ADDENDUM TO FEB. 1, 1993 C.A.P.

Dear Mr. Seery:

On behalf of Alameda County General Services Agency (GSA), Environmental Science & Engineering, Inc. (ESE) submits this addendum to the Corrective Action Plan (February 1, 1993) prepared for the subject facility. During our February 10, 1993 meeting, Alameda County Health Care Services Agency (HCSA) expressed concerns regarding sampling location, laboratory analytical methods, size of excavation, volume of soil proposed to be removed, and soil materials for backfill. This letter serves to further clarify and modify the proposed corrective action work.

1) During ESE's subsurface investigation (Report on Soil and Ground Water Investigation, January 15, 1993) at the facility, ESE's site geologist observed soil discoloration and petroleum odor in soil samples and drill cuttings from two to three feet below ground surface. ESE analyzed one sample (sample ID G2-5) for the following:

   - Total Petroleum Hydrocarbons as gasoline (TPH-g) by EPA Method 8015M;
   - Total Petroleum Hydrocarbons as Diesel (TPH-d) by EPA Method 8015M;
   - Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8020;
   - Halogenated Organics (HVOCs) by EPA Method 8010;
   - Semi-volatile Organics (SVOCs) by EPA Method 8270;
   - Oil and Grease by IR, also referred to as Total Recoverable Petroleum Hydrocarbons (TRPH) by Method 418.1;
   - Oil and Grease by gravimetric (TOG) by Method 5520, D & F.

   Laboratory analytical results indicate non-detectable concentrations of all analytes with the exception of TRPH and methylene chloride (refer to item 3). ESE feels the reported TRPH concentration of 90 milligrams per kilogram (mg/Kg) is inconsistent with non-detectable TPH-g, TPH-d, and TOG. In addition, the non-detectable concentrations of nearly all

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analytes (except for TRPH) is inconsistent with the discoloration and odor observed during the subsurface investigation.

To reconcile this inconsistency, ESE proposed to conduct three shallow hand auger borings and collect soil samples at depths of two to three feet in areas where soil discoloration and odor was previously observed. Each of the samples will be analyzed for TPH-g, TPH-d, and TOG. The results of these analyses will provide justification for either soil removal (if impacted by petroleum hydrocarbons) or no action in this upper layer. Attachment 1 to this proposal is a site map, indicating the location of previous soil borings and the location of the three aforementioned hand auger borings.

2) During the removal of tank 12, TOG analysis of a sample collected from beneath the tank invert on the east end resulted in 250 mg/Kg (ESE Tank Closure Report, July 20, 1992). During post tank removal excavation activities, TPH-g analysis of a soil sample collected from the east end of the tank pit at a depth of 22 feet below ground surface resulted in suspected kerosene or diesel profile (ESE Report of Overexcavation, January 7, 1993). These sample results support the possibility that in addition to gasoline, oily compounds may exist in soil beneath the former location of tank 12.

During the soil and ground water investigation, methylene chloride was reported in both soil (sample G2-5) and ground water (sample G5-HP). This compound was also detected in lower concentrations in the laboratory method blank. Methylene chloride is a commonly used laboratory solvent. ESE believes the methylene chloride found in the samples may be due laboratory contamination. HCSA contends that methylene chloride was a commonly used industrial solvent which has been found in unauthorized releases from waste oil tanks.

During post tank removal excavation (trenching) activities, SVOC analysis of a soil sample collected from the ~~east~~ (southwest) end of ~~the tank pit~~ (test trench #2) at a depth of 22 feet below ground surface reported the presence of 2,4-Dimethylphenol, Napthalene, 2-Methylnapthalene, Anthracene, Fluoranthene, Pyrene, and Benzo(K)fluoranthene.

During the removal of tank 12A (waste oil tank), soil beneath the tank was analyzed for TPH-g and TOG. As recommended by Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites (August 10, 1990), soil beneath the tank should also be tested for SVOCs, HVOCs, TPH-d, and BTEX.

In order to assess the effectiveness of the corrective action (excavation), ESE proposes to collect confirmatory samples from the south excavation sidewall (adjacent to tank 12 and 12A). The samples will be analyzed for TPH-g, TPH-D, BTEX, SVOCs, HVOCs, and TOG.

3) In ESE's Corrective Action Plan dated February 1, 1993, ESE proposed to conduct confirmatory sampling of the final excavation on a ten-foot grid. After further discussion and evaluation, ESE proposes to modify this sampling plan to sample on a twenty-foot grid. During confirmatory sampling of the final excavation, ESE will also sample any areas which exhibit odor, unusual discoloration, or are otherwise suspected of petroleum contamination. In areas where the excavation extends to ground water, only the side walls of the excavation (including the capillary fringe) will be sampled.

4) A site plan illustrating the proposed limits and depths of the excavation is provided as Attachment 2. ESE's preliminary estimate of excavated soil volume is approximately 2,000 cubic yards.

5) Upon completion of this corrective action, GSA will contract with a State of California General Contractor to backfill and compact the excavation. GSA proposes to place clean granular import fill above areas where the excavation extends to ground water. In other areas and above this clean import fill, GSA will place additional import fill or fill obtained from on-site borrow pits. Should fill be obtained from on-site borrow pits, the history of the borrow site will be researched prior to use of this soil.

ESE appreciates your attention to this project. Please contact Patrick Galvin at (510) 685-4053 with any questions or comments regarding this proposed work.

Sincerely,

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Patrick Galvin
Senior Engineer

Susan S. Wickham, RG 3851
Senior Geologist

Attachments (2)

cc: Peter Kinney (GSA)

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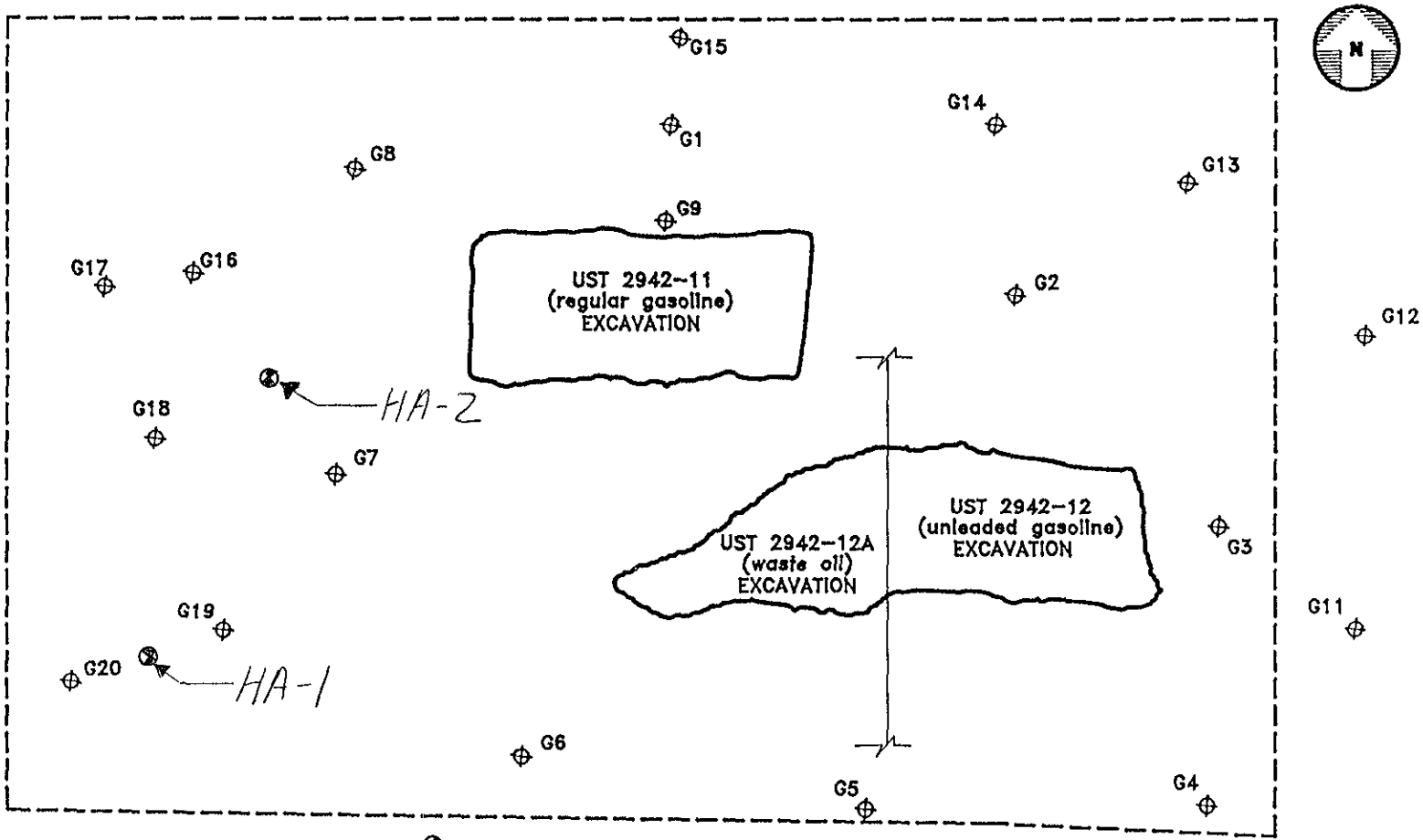

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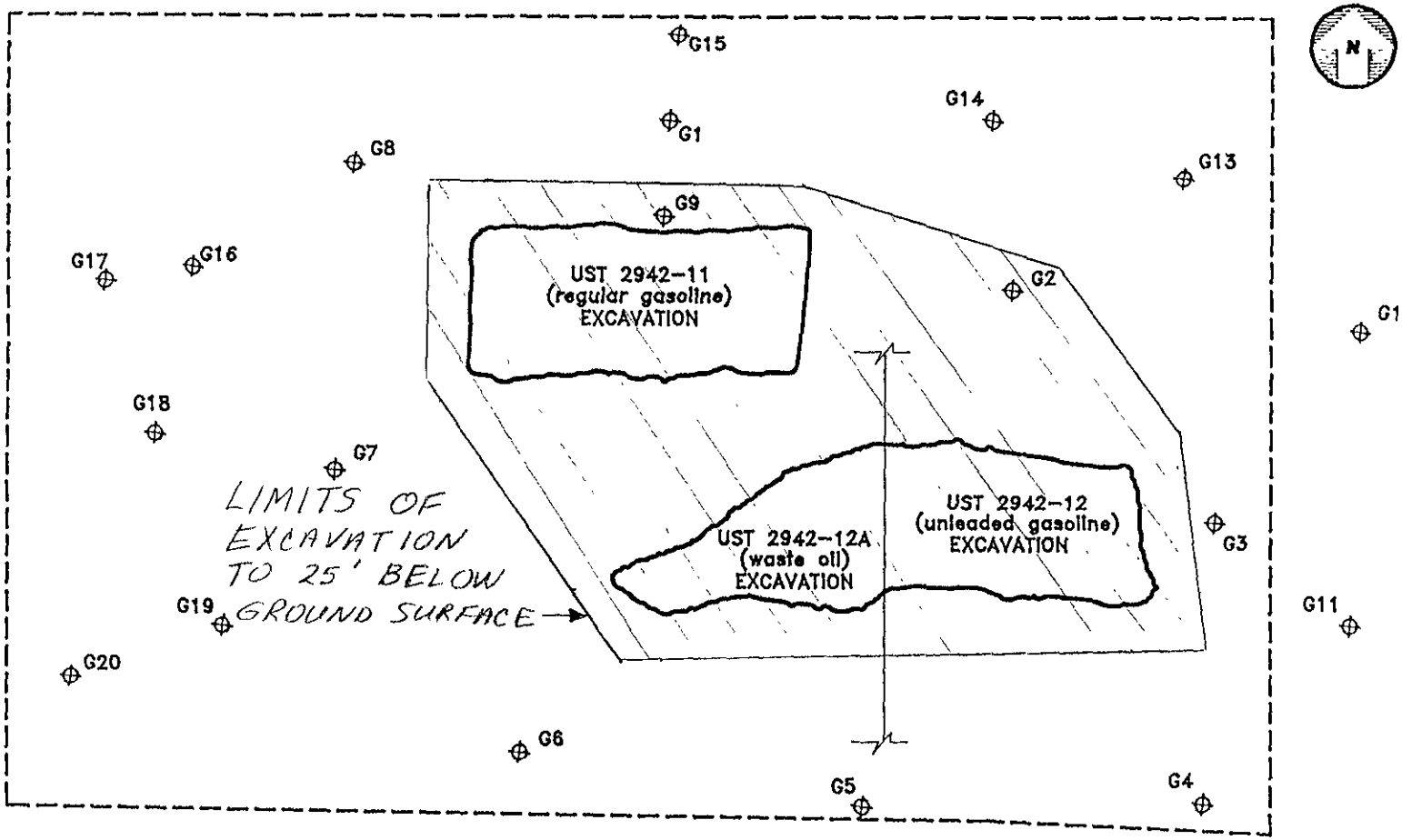
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	APPROVED BY	REVISED	FIGURE 1 HAND AUGER BORING

ATTACHMENT 1



LEGEND

- Soil Boring
- Boundary of Asphalt
- Steel Pipe
- Boundary of Excavation

? G10

SCALE
0 20 FEET

Environmental Science & Engineering, Inc. (A CILCORP Company)	DATE	PROJ/PROP 6-92-5454	ALAMEDA COUNTY GSA SANTA RITA JAIL FACILITY DUBLIN, CA
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	DRAWN BY DWR	CAD FILE 54542002	FIGURE 2 LIMITS OF EXCAVATON
	APPROVED BY	REVISED	

ATTACHMENT 2