Addendum to 7/13/99 ETM SWI W.P.

ENVIRONMENTAL TESTING & MGMT.
1792 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112
408.453.1800 FAX: 408.453.1801

September 16, 1999

Scott O. Seery
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

Re: **PROPOSED PROCEDURE FOR GROUNDWATER MONITORING WELL INSTALLATION**

SUBJECT SITE: GERMAN AUTOCRAFT
301 EAST 14TH STREET, SAN LEANDRO

Dear Mr. Seery:

According to your request here is our proposed procedure for installation of monitoring wells.

Please issue a letter approving this plan if you concur with our approach. We intend to submit your letter to the Underground Storage Tank Cleanup Fund as part of a Cost Pre-approval Request.

Sincerely yours,

Tom Price
Project Manager

Attachments: Procedures for installation of wells and monitoring procedures

99 SEP 17 PM 3:42
ENVIRONMENTAL PROTECTION

September 16, 1999

Re: MONITORING WELL INSTALLATION AND MONITORING PROCEDURES

SUBJECT SITE: GERMAN AUTOCRAFT
301 E. 14TH STREET, SAN LEANDRO

I. FIELD WORK FOR SOIL AND WATER INVESTIGATION

Prior to beginning field work, all workers will be briefed on a Health and Safety plan. This plan will be site specific and will address hazardous waste operations and emergency response as required by 29 CFR 1910.120.

A. MONITORING WELL INSTALLATION

Prior to beginning drilling, ETM will obtain permits from the Alameda County Public Works Agency and the City of San Leandro. The proposed location of the monitoring wells is shown on **Figure 1.** The boreholes will be advanced with a truck-mounted hollow stem auger drill rig. The anticipated depth of the monitoring wells is expected to be approximately 40-feet.

Soil samples will be collected every five-feet starting at five-feet below grade or less frequent if deemed appropriate by the geologist, using a 2.5-inch outer diameter California modified split-spoon sampler. In addition to the samples collected every five feet, additional soil samples will be collected at any significant changes in lithology and where apparent contamination is encountered. Once the split-spoon sampler is retrieved, the bottom 6-inch brass sleeve containing soils will be sealed with aluminum foil, plastic end caps and duct tape and stored on ice for potential laboratory analysis. The remaining soil in the middle brass sleeve and the auger spoils will be visually logged for lithology, moisture content, and any obvious hydrocarbon impacts by a qualified technician. Soils from the top-most sleeve are generally cavings and do not represent undisturbed materials, therefore, these soils will not be used for any purpose. All soil samples

will be screened with a hand held PID analyzer. Based on the results of the field inspection, samples will be selected for analyses at a certified laboratory. **All soil samples showing evidence of hydrocarbon contamination will also be submitted for laboratory analyses.** The samples will be transported to the laboratory in iced storage under chain of custody documentation for analysis for TPHg and benzene, toluene, ethyl benzene and total xylenes (BTEX), and methyl tert-butyl ether (MtBE) by EPA Modified Methods 5030 and 8020.

All downhole drilling equipment will be steam cleaned in advance. The split-spoon sampler will be decontaminated between sampling locations by the following:

1. Remove loose soil and debris with a scrub brush using a mixture of tap water and laboratory grade cleaning solution (liquinox).
2. Tap water rinse.

Soils generated by drilling operations will be containerized in labeled, DOT-rated 55-gallon drums. Decontamination derived liquid wastes will be stored in labeled, DOT-rated 55-gallon drums on-site. The disposition of these wastes are the responsibility of the property owner and are not a part of this work plan. Once the laboratory reports are issued, appropriate disposal options for all investigation derived wastes can be developed.

If necessary, will coordinate with the public agencies for monitoring well installations and inspection of well seal installations. The monitoring wells will be will be drilled to the underlying aquitard or approximately 10-feet below the uppermost groundwater aquifer, and will allow us to verify groundwater gradient. We expect the total depth of the wells to be approximately 40-feet with a 15-foot screened interval. Following drilling, at the locations selected for well construction, 2-inch diameter monitoring wells will be installed. The actual construction of the wells will be determined in the field based on conditions encountered during drilling. The general construction will consist of an appropriate length of 2-inch diameter PVC well screen with 0.02-inch machine slotted, bottom end cap, and an appropriate length of blank

well casing. The top of the well screens will be placed approximately 3-feet above the potentiometric surface, as appropriate. The top of the blank well casings will be fitted with a water-tight locking cap. A #2/12 sand pack consisting of washed and graded silica sand will be placed in the remaining annulus from the bottom of the borehole to approximately 2-feet above the top of the well screening. Two-foot hydrated bentonite seal will be installed on top of the sand packs. A Portland cement-bentonite slurry will fill the remaining annulus. Steel vaults with a locked lids will be placed over the top of the casings.

B. WELL DEVELOPMENT, GROUNDWATER SAMPLING, ELEVATION SURVEY

After a minimum of 48-hours following well constructions, the newly installed monitoring wells will be developed by swabbing, surging, and purging to remove fine-grained sediments entrained in the sand pack and near the well bore due to the drilling operations. Approximately 10 well volumes are anticipated to be removed during development or as water clears and sand pumping becomes minimal.

After a minimum of 48-hours following well development, we will collect a ground water sample from all monitoring wells at the site. Sampling activities will include
1) measuring depth to ground water in each well using an electronic water level indicator,
2) measuring floating product if present as follows: lowering a teflon bailer into the liquid at each well approximately 2 feet, allowing the liquid level in the bailer to equilibrate with the liquid level in the well, and after raising the bailer, measuring the thickness of floating product if present in the transparent bailer with a ruler or noting the presence of sheen and odor, 3) the well will be purged by calculating the standing water volume at the measured static water in the well; that volume will be purged and water parameters measured to ascertain aquifer water entry into the well; once the measured parameters equilibrate the well sample will be collected 4) sampling groundwater by gently pouring from the bailer into a 40-milliliter vial (for volatile organic analysis) until a positive meniscus is formed at the top of the vial, sealing the vial with a cap that

has a teflon septa, and checking to make sure no bubbles are present; 5) transporting samples on iced storage under chain of custody documentation to a State of California, Department of Health Services certified laboratory; and 6) analyzing samples for TPHg, BTEX, and MTBE by EPA Modified Methods 5030 and 8020. All extracted ground water will be stored at the German Autocraft site in labeled, DOT-rated 55-gallon drums and the disposition of these waters by the client will be determined pending laboratory analyses.

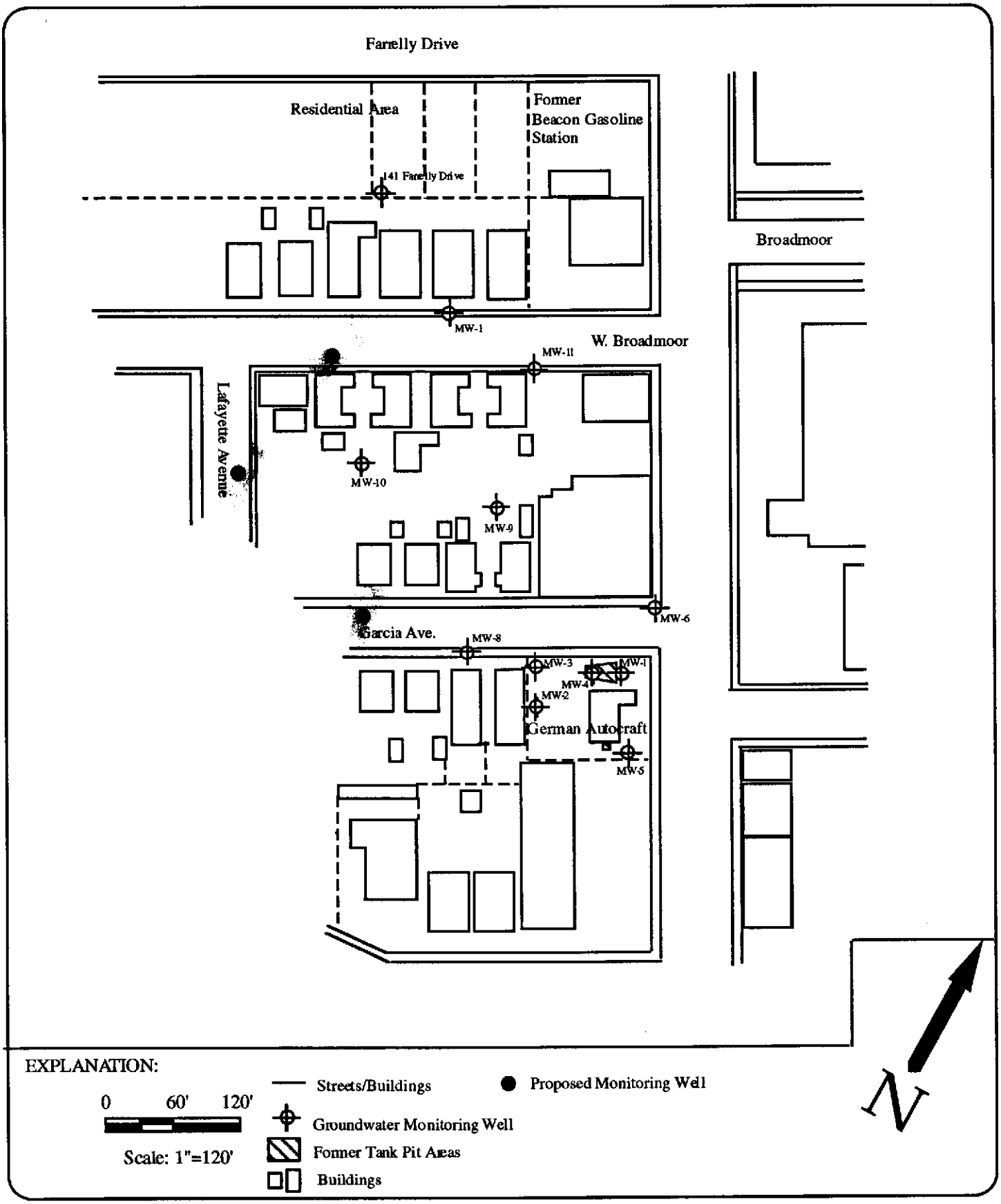
An elevation survey of the monitoring wells will be completed by a California licensed land surveyor. The elevation and water level measurements will be reported in relation to mean sea level to 1/100th of a foot from an established benchmark. This data will allow us to determine the direction of ground water gradient.

C. QUALITY ASSURANCE/QUALITY CONTROL PLAN

As part of quality assurance/quality control measures related to groundwater sampling from the monitoring wells in the program, we will collect samples in triplicate and include one trip blank. Also, duplicate samples will be collected from one of the new monitoring wells and submitted for will submit one duplicate sample for volatile organic analysis (TPHg and BTEX). The duplicate will be submitted as a blind duplicate.

D. TECHNICAL REPORTING

ETM will prepare a report describing methods and findings of the soil and water investigation, monitoring well installation, and findings of the monitoring program. The reports will include: site maps showing relevant features and boring and well locations, boring lithology, soil inspection observations, analytical results of soil sampling, well installation procedures, ground water sampling results, ground water depth data, laboratory chain of custody documentation, analysis of accumulated data and recommendations based on the findings of the investigation.



ENVIRONMENTAL TESTING & MGMT.
111 N. MARKET STREET 6TH FLOOR
SAN JOSE, CA 95113

German Autocraft
301 East 14th Street
San Leandro, California

Figure 2

Date: 7/99