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ENGEO INCORPORATED

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MATERIALS TESTING

Project No.
5403.3.002.01

March 27, 2002

Mr. David Weiss
AAA Truck & Van Parts
3884 Depot Road
Hayward, CA 94545

AUG 1 2 2002

Subject: AAA Truck & Van Parts
3884 Depot Road
Hayward, California

WORK PLAN FOR THE INSTALLATION OF GROUNDWATER MONITORING WELLS

References:
1. Alameda County Environmental Health Services; Groundwater Monitoring Wells for 3884 Depot Road, Hayward, California; February 11, 2002
2. ENGEO Inc.; Limited Site Characterization, AAA Truck & Van Parts, 3884 Depot Road, Hayward, California; January 4, 2002.

Dear Mr. Weiss:

ENGEO Incorporated is pleased to present this work plan for the installation of groundwater monitoring wells at the subject property located in Hayward, California. The work plan is intended to address the request of the Alameda County Environmental Health Department (ACEHD) in the letter dated February 11, 2002 (Reference 1). The purpose of the groundwater monitoring wells is to monitor impacts to groundwater identified in the Limited Site Characterization conducted by ENGEO (Reference 2). The scope of work will include the following:

- Construction of three 20-foot-deep, 2-inch-diameter groundwater monitoring wells, with soil sampling and laboratory analysis.
- Survey of the three wells for X, Y and Z coordinates.
- Sampling of the three wells on a quarterly basis through four quarters (four sampling episodes).
- Laboratory analysis of groundwater samples for Total Petroleum Hydrocarbons as Gasoline, Diesel, and Motor Oil, Total Oil and Grease, and Volatile Organic Compounds.

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MONITORING WELL INSTALLATION AND DEVELOPMENT

The proposed location of the monitoring wells is shown on Figure 2. The location of the wells was based on groundwater information gathered from Geoprobes and physical constraints associated with the existing development. The well borings will be advanced using a truck-mounted drill rig equipped with $8^{1}/_{4}$-inch-diameter hollow-stem augers.

The monitoring wells will consist of 2-inch-diameter PVC casing with flush joints, installed down through the hollow-stem auger. The wells will be constructed with approximately 12 feet of screened casing (0.010-inch slot width) and an appropriate length of solid PVC well casing (2-inch-diameter Schedule 40 PVC). The total depth of the monitoring wells is estimated at 20 feet. A sand-filter pack will be placed from the base of the well to the top of the screened interval. A ±12-inch-thick bentonite seal will be placed at the top of the filter pack. The remaining annular space will be backfilled with a cement-bentonite grout seal. The well will be completed within a flush-mounted 8-inch-diameter manhole. The top of the well casings will be surveyed and secured with a locking waterproof cap. The drill cuttings will be placed within sealed 55-gallon drums, pending a review of the field PID screenings. Upon review of the laboratory analyses, a disposal plan for the soil cuttings will be developed.

After the cement-bentonite grout has set for 72 hours, the wells will be developed using a surge block and bailer to produce relatively non-turbid groundwater. We anticipate that ten to twenty well volumes of water will be removed during the development process. The purged water will be stored on site in Department of Transportation approved drums until the results of the laboratory testing are available. At that time a remediation/disposal plan for the purged water will be developed.

Soil and Groundwater Sampling

Soil samples will be recovered from the monitoring well borings on five-foot depth intervals down to the saturated zone. A photoionization detector will be used in the field to screen the soil samples for volatile organic vapors. Soil samples will be sealed with Teflon, plastic end caps, and tape. If samples are shown to exhibit significant field PID readings or obvious staining, the samples will be preserved in a cooled ice chest for transportation under documented chain of custody to a DTSC certified analytical laboratory.

The monitoring wells will be purged and groundwater samples recovered for laboratory analysis after a minimum of forty-eight hours after well development activities.

Following completion of the monitoring well, ENGEO will prepare a Department of Water Resources (DWR) Well Installation Form for submittal to DWR and the Alameda County Environmental Health Department.

Laboratory Testing

Laboratory analysis will be performed by STL-San Francisco in Pleasanton, California. The soil and groundwater samples will be tested for Total Petroleum Hydrocarbons as Gasoline (TPHg), Diesel (TPHd), and Motor Oil (MO) (by EPA Method 8015Mod), Total Oil and Grease (TOG) (EPA Method 1664), and Volatile Organic Compounds (VOCs) (EPA Method 8260B). Based on the presence of naturally occurring organic compounds identified in the previous site characterization in the soils beneath the site, a silica gel cleanup will be performed on the diesel, motor oil, and oil and grease samples prior to analysis. According to ACEHD personnel, based upon the initial groundwater analysis report, subsequent monitoring episodes may substitute the VOCs by Method 8260B with BTEX by EPA Method 8020.

Quarterly Ground-Water Sampling

The three monitoring wells will be sampled on a continued quarterly basis through four quarters. A quarterly sampling report summarizing current and historical data will be provided for each event. Upon submittal of the fourth quarter report, ENGEO will consult with the ACEHD with regard to future monitoring requirements.

DATA ANALYSIS AND REPORT PREPARATION

Following completion of field and laboratory work, we will review the field and laboratory test data from this study and previous investigation. A final report will be prepared under the direct supervision of, and signed by, a Certified Hydrogeologist. The report will include an analysis of the data collected and will provide conclusions and recommendations regarding the property. ENGEO will work closely with the ACEHD to develop a plan for ultimate closure of the site.

We are pleased to be of continued service to you on this project. If you have any questions, please contact us.

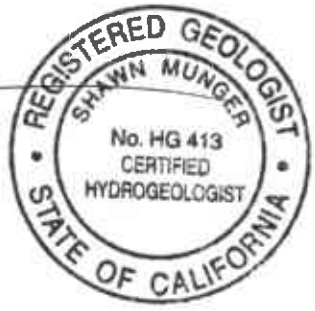
Very truly yours,

ENGEO INCORPORATED

Keith Nowell
Geologist
kn/jd:workplan

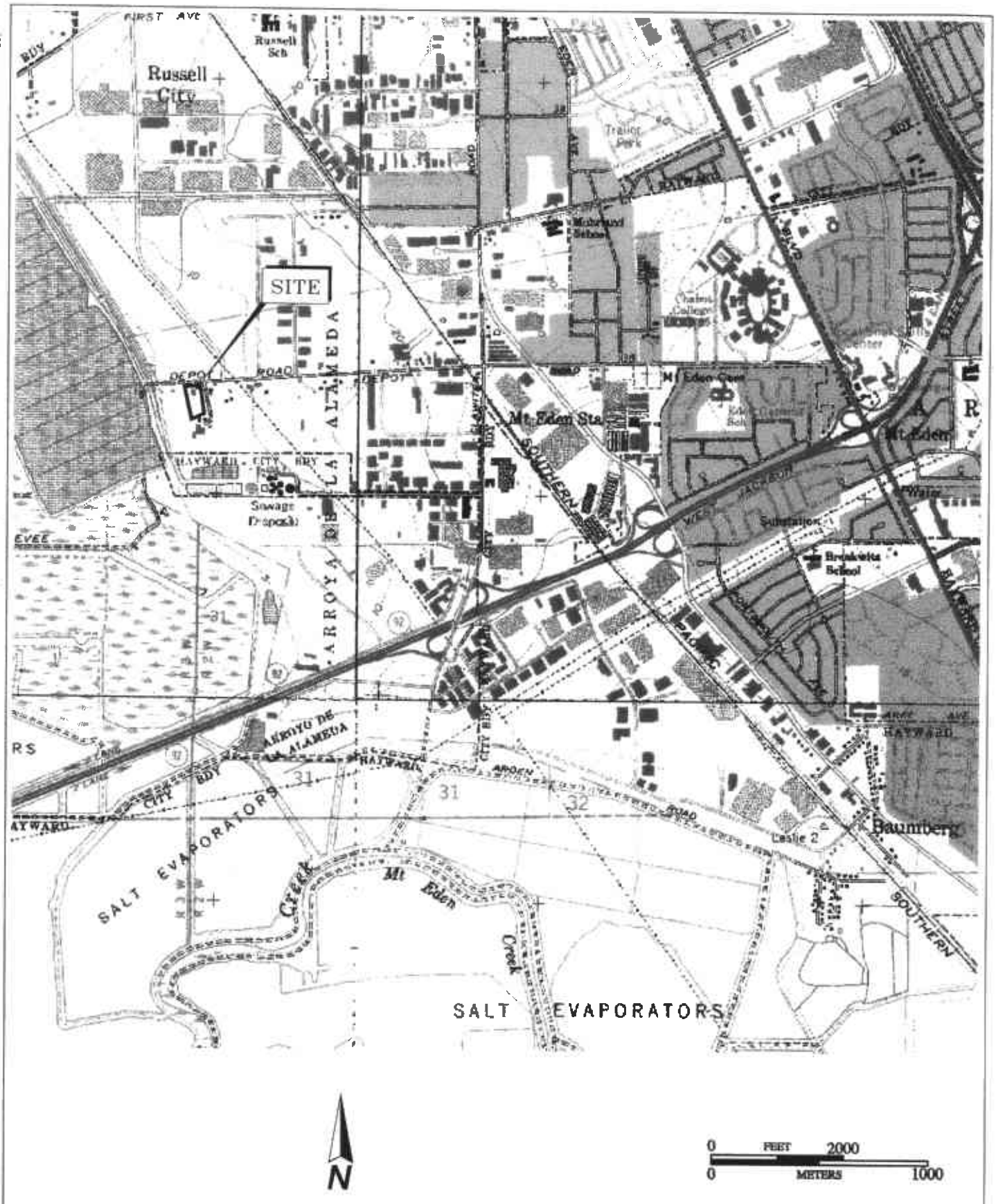
Reviewed by:

Shawn Munger
Principal, CHG 413



Attachments: Figures 1 and 2

cc: 1 – Ms. Eva Chu, Alameda County Environmental Health Services



BASE MAP SOURCE: USGS

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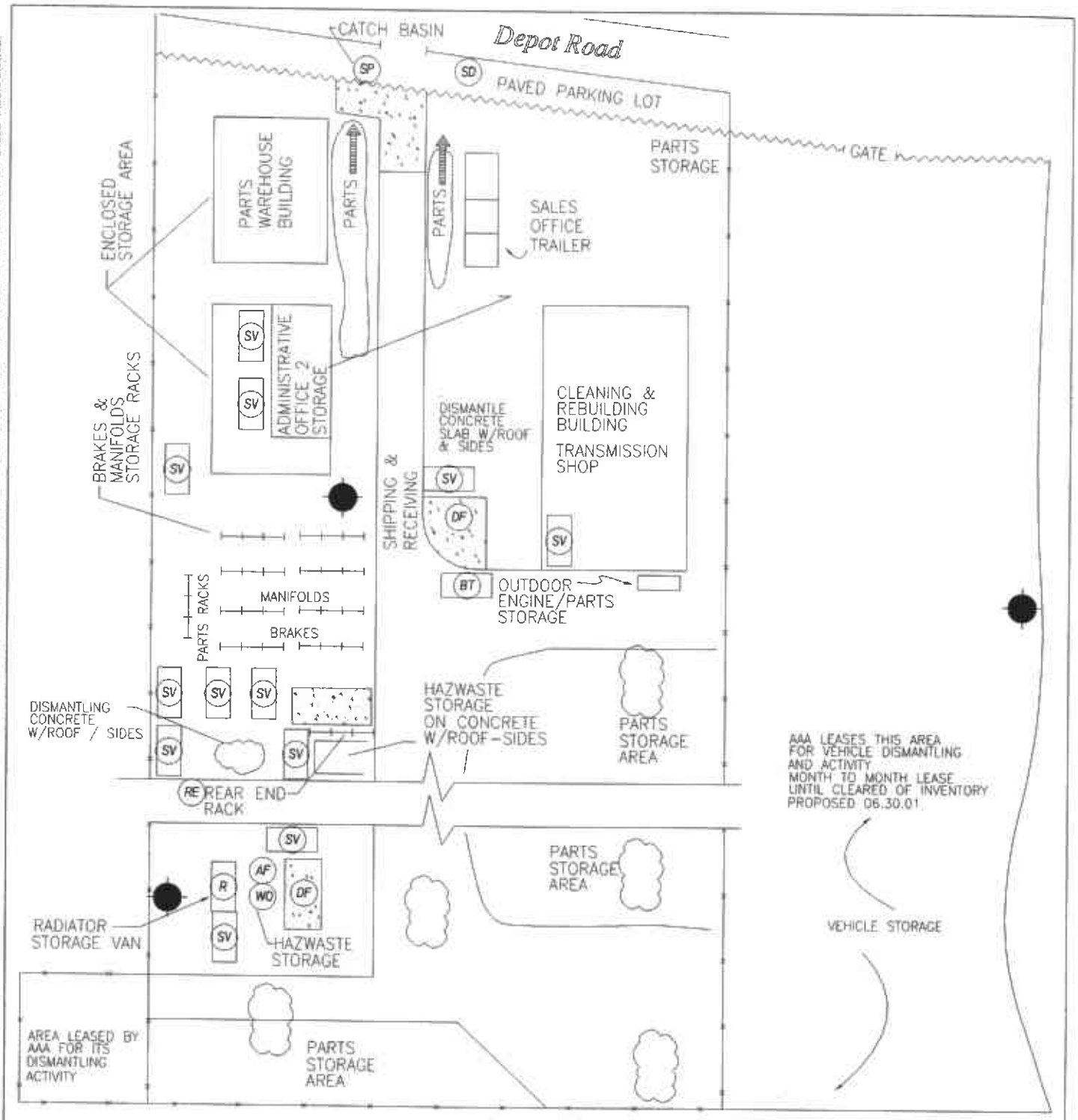
SITE LOCATION MAP
AAA TRUCK PARTS
HAYWARD, CALIFORNIA

PROJECT NO.: 5403.3.002.01		FIGURE NO. 1
DATE: MARCH 2002		
DRAWN BY: CLL	CHECKED BY:	



EXPLANATION

APPROXIMATE LOCATION OF PROPOSED MONITORING WELL

N

0 FEET 25

0 METERS 12.5

BASE MAP SOURCE: NEST ENVIRONMENTAL SERVICES

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SITE PLAN
AAA TRUCK PARTS
HAYWARD, CALIFORNIA

PROJECT NO.: 5403.3.002.01		FIGURE NO. 2
DATE: MARCH 2002		
DRAWN BY: DLB	CHECKED BY:	

ORIGINAL FIGURE PRINTED IN COLOR

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