GEOSCIENCE & ENGINEERING CONSULTING

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June 1, 2006

Mr. Barney Chan Hazardous Materials Specialist Alameda County Health Care Services Agency Department of Environmental Health, Local Oversight Program 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502

Subject: Response to Alameda County Health Letter of May 23, 2006 regarding Workplan for

Groundwater Characterization and Interim Corrective Actions

2836 Union Street, Oakland, California

Alameda County Environmental Health Case No. RO0002901

Dear Mr. Chan:

This letter responds to the Alameda County Health Care Services Agency, Department of Environmental Health (Alameda County Environmental Health) letter of May 23, 2006 regarding the Stellar Environmental Solutions, Inc. (SES) May 3, 2006 workplan for groundwater characterization (well installation and monitoring) and interim corrective actions.

### **Technical Comment #1**

Excavation confirmation soil sampling will be conducted at the frequency requested by Alameda County Health (one sidewall sample per 20 lineal feet [likely to be 6-8 samples) and one floor sample per 400 square feet [likely to be 1-2 samples]). Sample locations will be selected to supplement existing proximal borehole data (i.e. to avoid duplication and to maximize coverage).

We propose to initially dewater the corrective action excavation (while the excavation is open) only so much as necessary to keep the excavation dry for excavation, sampling and confirmation soil sampling (pumping may not be required based on field conditions). We anticipate that up to 1,000 gallons of groundwater may be dewatered in this initial phase. One grab-groundwater sample will be collected before pumping.

Following placement of the excavation dewatering point and excavation backfilling, we will conduct one groundwater pumping event in the dewatering point. One pre-pumping and one post-pumping groundwater sample will be collected. We anticipate that a total of 3,000 gallons

of groundwater will be removed (including both the volume from the previous excavation dewatering and the volume from subsequent pumping of the dewatering point). The 3,000-gallon estimate is based on the technical objective of removing the most highly contaminated groundwater, which is the groundwater in the pore spaces in the immediate vicinity of the corrective action excavation. Additional groundwater pumping will be considered based on the results of the pre- and post-pumping groundwater sample analytical results.

#### **Technical Comment #2**

### **Borehole Locations**

Three additional boreholes will be advanced inside the building to further evaluate the extent and magnitude of soil and groundwater contamination in this area. One borehole (BH-14) will be advanced at the extreme southwest corner of the service bay, approximately 30 feet southwest of the former dispenser, and will be advanced to the full program depth (approximately 25' bgs). Midway between BH-14 and the dispenser area we will advance two clustered boreholes, which will be converted to groundwater monitoring wells (screened in the upper and lower water-bearing zones).

### Soil Screening and Sampling

MW-1, MW-5 and BH-14 boreholes: These locations are all at least ten feet from the nearest previous borehole, therefore soil screening and sampling will be conducted over the entirety of the deeper borehole (only) at each location (estimated 25' bgs).

MW-2, MW-3 and MW-4 boreholes: These are all located immediately adjacent to previous boreholes, therefore we will screen and sample soils only from those depths not previously characterized at those locations.

Soil screening and sampling in all the boreholes will be conducted as requested by Alameda County Health (same as originally proposed).

## **Technical Comment #3**

A total of 10 groundwater monitoring wells will be installed at 5 locations, as shown on the revised Figure 2, including one well inside the building. At each location, two wells will be

installed (each a separate small-diameter casing installed in a closely-spaced but separate borehole, with a separate well box). One well will be installed in the upper water-bearing zone (screened from 7' to 13' deep) and one will be installed in the lower water-bearing zone (screened from 20' to 23' deep). We propose to revise (from the original workplan) the well screened intervals, based on availability of commercially-available pre-packed well screens. Wells monitoring the 10 foot-deep water-bearing zone will have 6-foot screen lengths (two 3-foot long sections) and wells monitoring the 20 foot-deep water-bearing zone will have 3-foot screen lengths.

### PROPOSED SCHEDULE

Subcontractor procurement will likely be completed by June 10, 2006, at which time permits will be applied for. We anticipate beginning the soil excavation by July 1, 2006, with the well installations and initial groundwater monitoring event to be conducted by the end of July 2006. The technical documentation report will be submitted to Alameda County Health within 45 days following completion of field activities.

We declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of our knowledge.

Sincerely,

Bruce M. Rucker, R.G., R.E.A.

Project Manager

Brune M. Ruh/.

Richard S. Makdisi, R.G, R.E.A.

( Phones ) Male -

Principal

cc: Mr. Larry Wadler (property owner, Responsible Party and Tank Fund Claimant)

Attachment: Revised Figure 2 showing proposed borehole and well locations

