Wickham, Jerry, Env. Health

From: David Allen [dallen@aquascienceengineers.com]
Sent: Tuesday, August 24, 2010 11:23 AM
To: Wickham, Jerry, Env. Health
Cc: Russ Lim
Subject: Lim Property, RO0479

Mr. Wickham,

Aqua Science Engineers (ASE) conducted an air-sparging test at the 250 8th Street, Oakland site on August 19, 2010. We only recently realized that the ACHCSA had requested a workplan for the test. In our error, the test was conducted without the preparation of the requested workplan. Basically, the test was completed as follows:

A compressed air and helium gas mixture was pumped into a newly installed ozone-sparging well (the well was installed in July) at a rate of 3 cfm @ 50 psi. These parameters match the operating parameters of the H20 Engineering Ozone Sparging Unit that we are considering purchasing for the site.

Observations wells located 11', 19' and 22' away from the ozone-sparging well were fitted with caps, pressure gauges, and a sample port for measuring the helium.

A helium tank with a regulator allowing 15 to 20 cubic feet per hour of helium was plumbed to the injection piping, and a helium detector was used to measure the helium concentration in the observation wells.

Measurements of positive pressure and helium were collected each hour during the 8 hour test. Positive pressure was observed in the two observation wells that were furthest away from the injection well. Helium was observed in all three observation wells, but most obviously in observation well MW-3, which was 22'feet away from the injection well.

Based on the test results, ASE believes that ozone-sparging with an H20 Engineering system would be favorable at this site. The results indicate that the ozone-sparging well radius of influence is at least 20'feet, and thus, ASE will be able to reduce the number of wells needed for coverage of the plume at the site.

We will prepare and submit to you and Geotracker a report of the test activities and results, along with the revised proposed ozone-sparging well locations. Should you have any questions or comments, please feel free to contact us. Regards.

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