From: Wetmore, Cynthia
To: Cynthia Babich
Cc: Miranda Maupin; pemodog@sbcglobal.net; LEONIDO-JOHN, STEVEN; Barton, Dana; Sanchez, Yolanda; Yogi, David; Safouh.Sayed@dtsc.ca.gov; Scandura, John@DTSC; Senga, Robert@DTSC; James Wells
Subject: Phase I testing.
Date: Tuesday, March 17, 2015 2:38:06 PM
Attachments: image003.png

Hi Cynthia,

As John Lyon's mentioned in the previous call, EPA is operating under a confidentiality order which limits what we can discuss to only publicly available information, which for purposes of the functional testing includes only the Phase I functional test. As EPA moves to approve each phase or step, EPA will work to get a releasable document to share with you. The Phase I test and results are as follows.

The Phase I test was developed to test one component of the HiPOx unit, the ozone generator. The design requires the ozone generator in HiPOx system to operate with a range between 23.7 to 27.2 mg/l of ozone. Previous Functional testing in December demonstrated that the system could produce 23.7 mg/L. Phase I was designed to demonstrate the system's ability to produce 27.2 mg/L ozone. The ozone when mixed with hydrogen peroxide forms a strong oxidant that reduces concentrations of all organic compounds including pCBSA.

The Phase I test was run on February 26, 2015. Although the HiPOx ozone dose system was set at 27.3 mg/L, the system was not able to maintain that rate. An average ozone dose of 25.9 mg/L, was achieved for the test. Samples were collected after each unit and the concentrations are as follows:

Constituent	Concentration in Groundwater (ug/L)				Concentration in Air (ppmv)	
	Influent	Post-HiPOx	Post-Air Stripper	Post-LGAC	VGAC Influent	Discharge Stack
pCBSA	48,000	34,000	31,000	<5	NA	NA
MCB	8,400	3,400	85	<0.5	5.7	<0.0005
CF	1,700	1,600	34	<0.5	5.5	<0.0005
Benzene	<100	<40	0.34 J	<0.5	0.14	<0.0005
1,2-DCA	<100	<40	0.78	<0.5	0.020	<0.0005
PCE	67 J	48	<0.5	<0.5	0.12	<0.0005
TCE	<100	<40	<0.5	<0.5	0.021	<0.0005
TBA	<2,000	<800	12	10	NA	NA
Arsenic	6.9	5.7	5.0	2.1	NA	NA

EPA does not believe the Phase I test met its objective to verify the full range of the ozone dosage system.

-Cynthia W.

Cynthia Wetmore, Technical Support Section
US.EPA, Region IX, Superfund Division
75 Hawthorne Street, San Francisco, 94105
(415)972-3059