

### ATSDR Technical Assistance/Inquiry Form

<b>SiteName :</b> BABCOX & WILCOX DISPOSAL SITE	<b>Address:</b> PA RTE 66 & KISKIMERE RD LEECHBURG Pennsylvania 15656
<b>EPA#:</b> PAD980538631	<b>CR#:</b> 3AQG00

**Title:** Evaluation of environmental radioactivity      **Preparer's Name:** CHARP PAUL      **Affiliation:** ATSDR/DHAC/SRAB  
**State:** Pennsylvania      **Requester:** CDC/ATSDR/DRO      **Request Date:** 12/12/2011

**Non-Site Specific:** No

**Question or Request:**

Please review radiologic sampling data of groundwater, surface water, and sediments collected from near the Babcox and Wilcox Shallow Landfill Disposal site.

<b>Issues</b>	
SME/Radiation	

<b>Media</b>	
Ground Water	
Surface Water	
Sediment	

**Response Date:** 12/13/2011

**Response:**

Upon review of the various environmental media which consisted of about 470 analyses of the collected samples with the accompanying QA/QC values, none of the detected radionuclides were above the current EPA Maximum Contaminant Levels (water) nor above and soil comparison values for radionuclides used by ATSDR. Therefore, no adverse health issues would be expected from these contaminants.

ATSDR recommends that the EPA either collect additional samples and have them evaluated for uranium, thorium, plutonium, and americium radionuclides as these are more related to the historical mission of the facility. The evaluation should not be based on chemical but radiological analyses such as alpha spectroscopy which can identify the individual radioisotopes of the aforementioned radionuclides. The EPA may also consider evaluating the existing samples for these radionuclides. In the case of water, filtered and unfiltered analyses would be of interest to ATSDR as well. Holding times should not be an issue as these are metals with sufficiently long half lives (over 400 years) so decay would not be an issue. Of the sample data supplied to ATSDR, one groundwater sample showed sufficient beta radiation (about 3 times above the values in other groundwater samples) and consideration should be given to its re-evaluation and perhaps alpha spec. That sample is B1.1107Q (Client ID R33812-09).

Four sediment samples also should be evaluated by alpha spec as well. These are samples B1.11086Z (client R33812-26), B1.11082V (R33812-22) which also had a duplicate sample showing elevated beta radiation and B1.11086Z (R33812-26).

No soil samples were supplied to ATSDR. Many of the potential alpha spec products (U, Th, Am, Pu) form insoluble oxides or other compounds that may not have migrated off set. ATSDR recommends that subsurface soil samples be collected on-site yet outside the known disposal areas to see if any elevated radionuclides are present in those samples.

**Approval/Concurrence Name:**

**Approval/Concurrence Date:**

12-16-2011

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