

Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

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April 18, 2014

Dave Cozzi SET Environmental 450 Sumac Road Wheeling, Illinois 60090

RE: 400 E. Ontario St. – City of Chicago Department of Water Management Thorium Monitoring

Dear Mr. Cozzi:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during repair of a water line at 400 E. Ontario St. in Chicago, Illinois. The monitoring was performed on April 16, 2014. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

Instrumentation

Surface gamma scans were performed by Glenn Huber using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 134542) with attached 2"x2" Nal probe. The instrument was calibrated on October 18, 2013. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 17,574 counts per minute (cpm).

The average background count rate for this location was found to be between 4,700 and 5,600 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Data was collected by entering the excavation after each 18 inch lift and recording the highest count rate for the floors and walls to an excavation depth of 3 feet. After the excavation was 3 feet deep, surveys were performed of the buckets of soil as they were removed from the excavation, prior to loading. No soil was stockpiled during the project and all excavated soils were loaded directly into the truck after screening.

The maximum gamma count rate for each 1.5 foot lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 4500 cpm to 7800 cpm. No count rates were found at any time that exceeded the threshold limit of 17,574 cpm.

Additional Monitoring

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

You will need to forward a copy of this report to the City of Chicago Department of Public Health (Attn: Rahmatunsia Begum) with the CDOT Permit Number in the subject line. I will be providing a copy of this report to USEPA, as required.

Thank you for your assistance with this project. If you have any questions or need additional information please call me at (815) 485-6161.

Sincerely,

Stan A. Huber Consultants, Inc.

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Glenn Huber, CHP

President

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Radiation Survey Form

Location/ Project ID: SET Environmental / Chicago Dept. of Water Mant.		
Date: 4/16/14	Technician: <u>Slenn Huber</u>	
Inst Model:	Serial No.:	
Probe Type: 1"x1" Nal / 2"x2" Nal Shielded / Not Shielded	Lift Elevation: Surface - Treet	
Background 4.7-5.6 kcpm	Action Level: _/>, 574_cpm	
Write grid designations in circles. Record highest counat grid intersections (if required). Shade areas of elevat	•	
	400 E. Ontario St. N	
	scale	
McClurg Ct.	Side walk	
↓		
6 35' -		
tocurrer		
Survey data: depth kepm	Onterio St.	
-1.5' 7.2 -3' 7.8		
* -4.5 4.6 * -6 4.5 *-7 4.5		
*-> ' 4.5		