

Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

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August 10, 2017

Buddy Hix Western Utility Contractors, Inc. 2565 Palmer Ave. University Park, IL 60466

RE: 170-179 N. Harbor Dr. Thorium Monitoring 8-9-17

CDOT Permit # 839825

Dear Mr. Hix:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation for a Comcast conduit installation at 170-179 N. Harbor Drive in Chicago, Illinois. The monitoring was performed by Justin Maxwell, SAHCI Health Physicist, on August 9, 2017.

Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 126497) with attached Ludlum Model 44-10 2"x2" Nal probe (w/ 6" collimated lead shield). The instrument was calibrated on October 14, 2016. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,233 counts per minute (cpm).

The average background count rate for this location was determined to be 1,303 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey 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 below ground surface. All soil was loaded directly into a truck for disposal.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 1,700 cpm to 2,000 cpm. No count rates were found at any time that exceeded the threshold limit of 6,233 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.

Regulatory Notification of Survey Completion

I will be providing a copy of this report to both the City of Chicago Department of Public Health and 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

Page	- 1	of	1
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Radiation Survey Form

Location/ Project ID:	1		
Date: <u>9-9-17</u>	Technician: Justin Maxwell		
Inst Model: Ludlum 2221	Serial No.: 126497 Pabe: 171991		
Probe Type: 1"x1" Nal / 2"x2" Nal Shielded / Not Shielded	Lift Elevation:		
Background 1303 cpm	Action Level: <u>6233</u> cpm		
Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts at grid intersections (if required). Shade areas of elevated counts and record max cpm.			
9 9	scale		
	Temporary Dog Park		
	Sidewalk		
	corneast		
	11/7/// Iso 8.5' 36'		
5 E	North Harbor Tower		
Side wall			

surface: 1.7 kcpm -1.5': 1.7 kcpm

-3.0': 2.0 kcpm