

Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

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February 6, 2018

Greg Preisch Electric Conduit Construction 816 Hicks Drive Elburn, IL 60119

RE: 435 N. Michigan Ave. Thorium Monitoring 2/5/18

CDOT Permit #909515

Dear Mr. Preisch:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation for repair of a manhole at 435 N. Michigan Ave. in Chicago, Illinois. The monitoring was performed by Justin Maxwell, SAHCI Health Physicist, on February 5, 2018.

<u>Instrumentation</u>

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 126497) with attached Ludlum Model 44-10 2"x2" Nal detector (w/ 6" collimated lead shield). The instrument was calibrated on October 11, 2017. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,542 counts per minute (cpm).

The background count rate for this location was found to average 1,180 cpm.

Soil Gamma Scans

Survey data was collected on 11/7/17 by entering the excavation after the single 12-inch lift and recording the highest count rate for the floors and walls to an excavation depth of 1 feet below ground surface. All excavated material 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 excavations ranged from 1,200 cpm to 1,600 cpm. No count rates were found at any time that exceeded the threshold limit of 6,542 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 US Environmental Protection Agency, 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

Madiati	on our vey rolling			
Location/ Project ID: Lower Michigan, north bound lane, manhole, near 435 N Michigan				
Date: <u>Feb. 5, 2018</u>	Technician: Justin Maxwell			
Inst Model: Ludlum Model 2221	Serial No.: 126497 Probe: 171991			
Probe Type: 1"x1" Nal /(2"x2" Nal Not Shielded	Lift Elevation: Surface - 1'			
Background <u>1180</u> cpm	Action Level: 6542 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.				
\bigcirc	scale			
	435 N Michigan			
← E Hubbard St	N Michigan Ave			

← North Water St →

Surface: 1.2 kcpm 1': 1.6 kcpm