

Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

200 North Cedar Road - New Lenox, Illinois 60451-1751 - (800) 383-0468 or (815) 485-6161 - FAX (815) 485-4433 - Email sahci@sahci.com - Home Page www.sahci.com

April 20, 2017

Jared Szajkowski Western Utility Contractors, Inc. 2565 Palmer Ave. University Park, IL 60466

RE: 220 E. Illinois St. Thorium Monitoring 4/19/17

CDOT Permit # 766823

Dear Mr. Szajkowski:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation for a RCN conduit installation at 220 E. Illinois St. in Chicago, Illinois. This survey is the second part of this project, with the first portion being completed on March 14, 2017. The monitoring was performed by Glenn Huber, SAHCI Health Physicist, on April 19, 2017.

<u>Instrumentation</u>

Surface gamma scans were performed using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 134542) with attached 2"x2" Nal probe (w/ 6" collimated lead shield). The instrument was calibrated on August 8, 2016. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,338 counts per minute (cpm).

The average background count rate for this location was determined to be 1,364 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 4.5 feet below ground surface. Soil excavated below 4.5 feet below ground surface was surveyed in the excavator bucket to a maximum depth of 6 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 1,400 cpm to 2,000 cpm. No count rates were found at any time that exceeded the threshold limit of 6,338 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.

Call He

Glenn Huber, CHP

President

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Radiation Survey Form

Location/ Project ID: Western Utility Contractors: 220 E. Illinois St. Date: _4/19/17 Glenn Huber Technician: 134542 Ludlum 2221 Serial No.: Inst Model: surface to -6'BGS Lift Elevation: _ 1"x1" Na(/ 2"x2" Nal Probe Type: Shielded / Not Shielded Action Level: ___6338 1364 cpm Background 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. N scale 5.dewalt Surface = 1.6ksp--1.5'=1.8ksp-Illinus ST -3 = 1.6 top