

April 19, 2019

Mike Lanenga  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: 461 E. Ohio St. Thorium Monitoring – City of Chicago Department of Water  
Management  
CDOT Permit: 1076923

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for repair of a storm sewer catch basin at 461 E. Ohio St. in Chicago, Illinois. The monitoring was performed by Jeremy Keiser, SAHCI Health Physicist, on April 5, 2019. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 126497) with attached 2"x2" NaI detector (w/ 6" collimated lead shield). The instrument was calibrated on October 15, 2018. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,319 counts per minute (cpm).

The average background count rate for this location was measured as 1,920 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 surrounding the existing storm sewer drain and recording the highest count rate for the floor and walls to an excavation depth of 54 inches below ground surface. All asphalt, concrete, and soil were 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 2,000 cpm to 2,400 cpm. No count rates were found at any time that exceeded the threshold limit of 6,319 cpm.

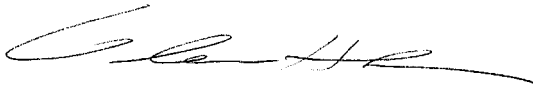
Additional Monitoring

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.

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.

A handwritten signature in black ink, appearing to read 'G. Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP  
President

## Radiation Survey Form

Location/ Project ID: D0T1076923

Date: 4/5/2019

Technician: Jeremy Kieser

Inst Model: Ludlum 2221

Serial No.: 126497

Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface to 54 inches

Background 1920 cpm

Action Level: 6319 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.

