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

March 3, 2022

Angel Camacho
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Water Management
CDOT Permit: 1643830 450 E. Ontario St.

Dear Mr. Camacho:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for an emergency repair of a Chicago Department of Water Management manhole at 450 E. Ontario St. in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on February 9, 2022. 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 Scaler / Ratemeter (serial no. 134542) with attached Ludlum Model 44-10 2”x2” NaI Detector (w/ 6” collimated lead shield). The instrument was calibrated on May 5, 2021. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,396 counts per minute (cpm).

The average background count rate for this location was measured at 1,811 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 and recording the highest count rate for the floor and walls to a depth of 12 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 1,800 cpm to 3,400 cpm. No count rates were found at any time that exceeded the threshold limit of 7,396 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.

Glenn Huber, CHP
President

sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: DUM - ONTARIO & LAKE SHORE DRIVE - MANHOLE REPLACEMENT - ROW RADIOLOGICAL SOIL SURVEY

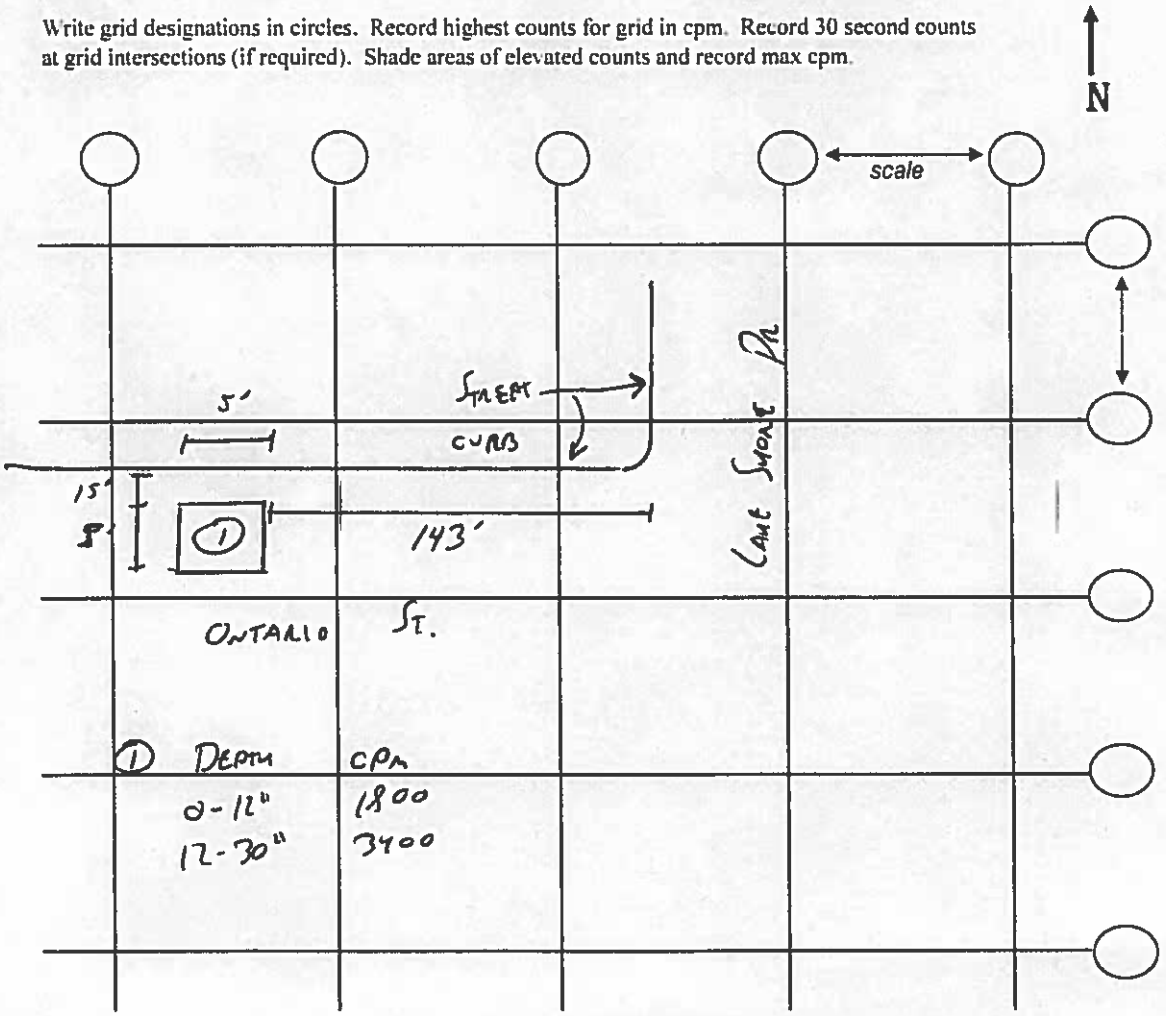
Date: 2/9/2022 **Technician:** BRIAN SCHMIDT

Inst Model: LUDLUM - 2221 **Serial No. :** 134542

Probe Type: 1"x1" NaI / (2"x2" NaI) (Shielded) / Not Shielded **Lift Elevation:** 0-12"

Background 1811 cpm **Action Level:** ~~6758~~ 7396 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.



①	DEPTH	CPM
	0-12"	1800
	12-30"	3400