

November 26, 2018

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring: City of Chicago Department of Transportation
114 E. North Water St.
CDOT Permit No. 1030827

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation of a section of curb and gutter at 114 E. North Water Street in Chicago, Illinois. The monitoring was performed by Glenn Huber, SAHCI Health Physicist, on November 26, 2018. 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 August 6, 2018. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,262 counts per minute (cpm).

The background count rate for this location was found to average 1,336 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 excavations before and after the single 18-inch lift and recording the highest count rate for the floors and walls to an excavation depth of 18 inches below ground surface. All concrete and asphalt were loaded directly into a truck for disposal. No fill soil was encountered during the excavation.

The maximum gamma count rate for each boring interval was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,300 cpm to 1,900 cpm. No count rates were found at any time that exceeded the threshold limit of 6,262 cpm.

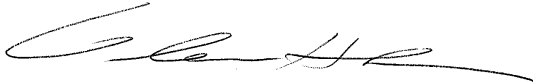
Additional Monitoring

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: CDOT 114 E. North Water St. (SET Environmental)

Date: 11/26/18

Technician: Glenn Huber

Inst Model: Ludlum 2221

Serial No. : 134542

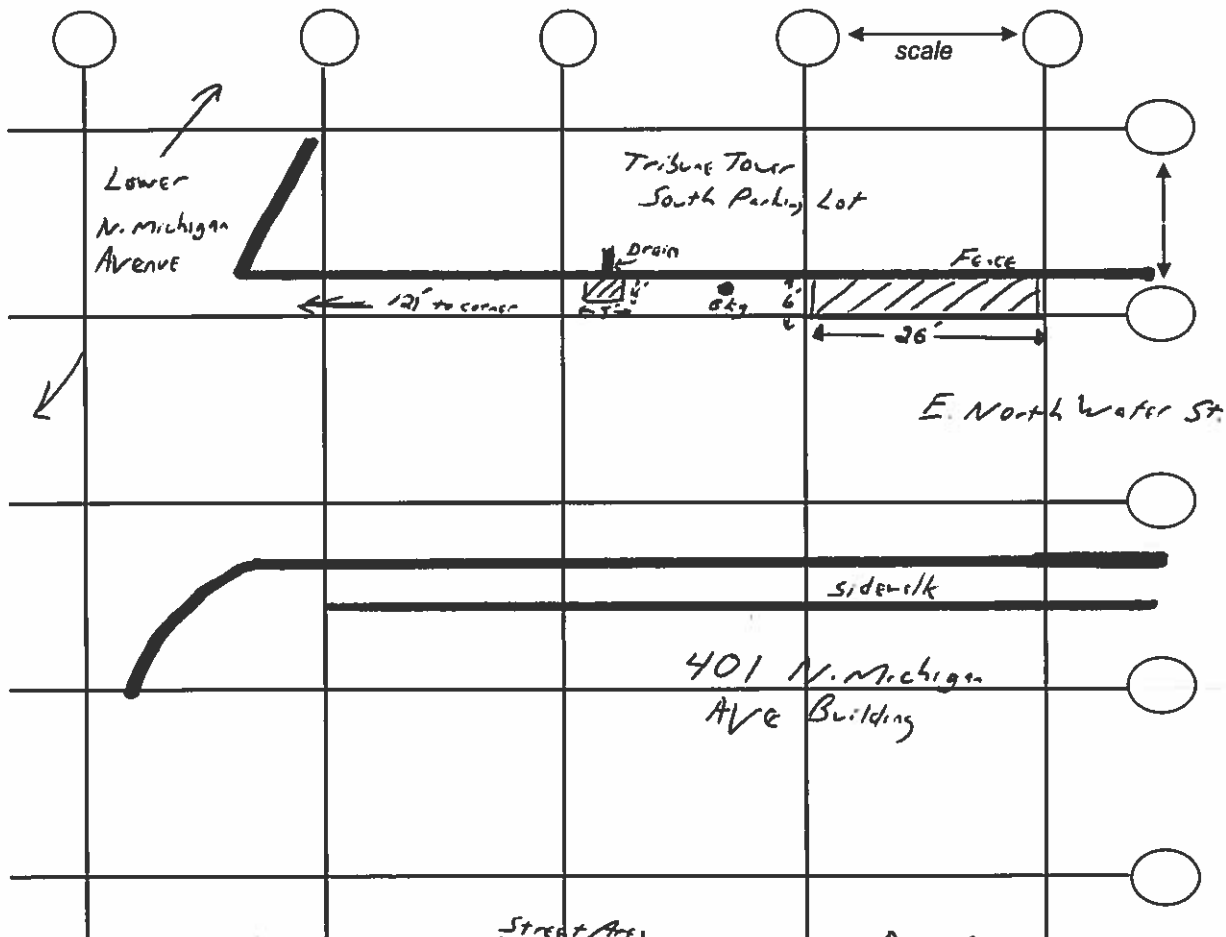
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: surface to - 1.5'

Background 1,336 cpm

Action Level: 6,262 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.



Street Area		Drain Area	
Depth	cpm	Depth	cpm
Surface	1300	Surface	1400
-1.5'	1700	-1'	1900