



November 3, 2018

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: 1-36 W. Hubbard St. Thorium Monitoring 10/25/18-10/26/18 (CDOT)
CDOT Permit #975185

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the removal and replacement of a sidewalk ramp and repair of 6 manholes at 1-36 W. Hubbard St. in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on October 25 - 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. 132844) with attached Ludlum Model 44-10 2"x2" NaI probe (w/ 6" collimated lead shield). The instrument was calibrated on August 6, 2018. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,391 counts per minute (cpm).

The average background count rate for this location was determined to be 1,847 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Surface gamma scans were performed on the surface of the sidewalk and road surface and again after removal to a maximum depth of 1 foot below ground surface.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,500 cpm to 2,300 cpm. No count rates were found at any time that exceeded the instrument specific threshold limits of 7,391 cpm.

Additional Monitoring

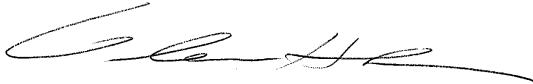
Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

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.

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

Glenn Huber, CHP
President

Radiation Survey Form

1-36 W. Hubbard St. GAH 11/3/18

Location/ Project ID: 153 E. HUBBARD ST. - ADA RAMP INSTALLATION & MANHOLE REPLACEMENT LOW RAD SURVEY

Date: 10/25-26/2018

Technician: Brian Schmitt

Inst Model: Ludlum-2221

Serial No.: 132844

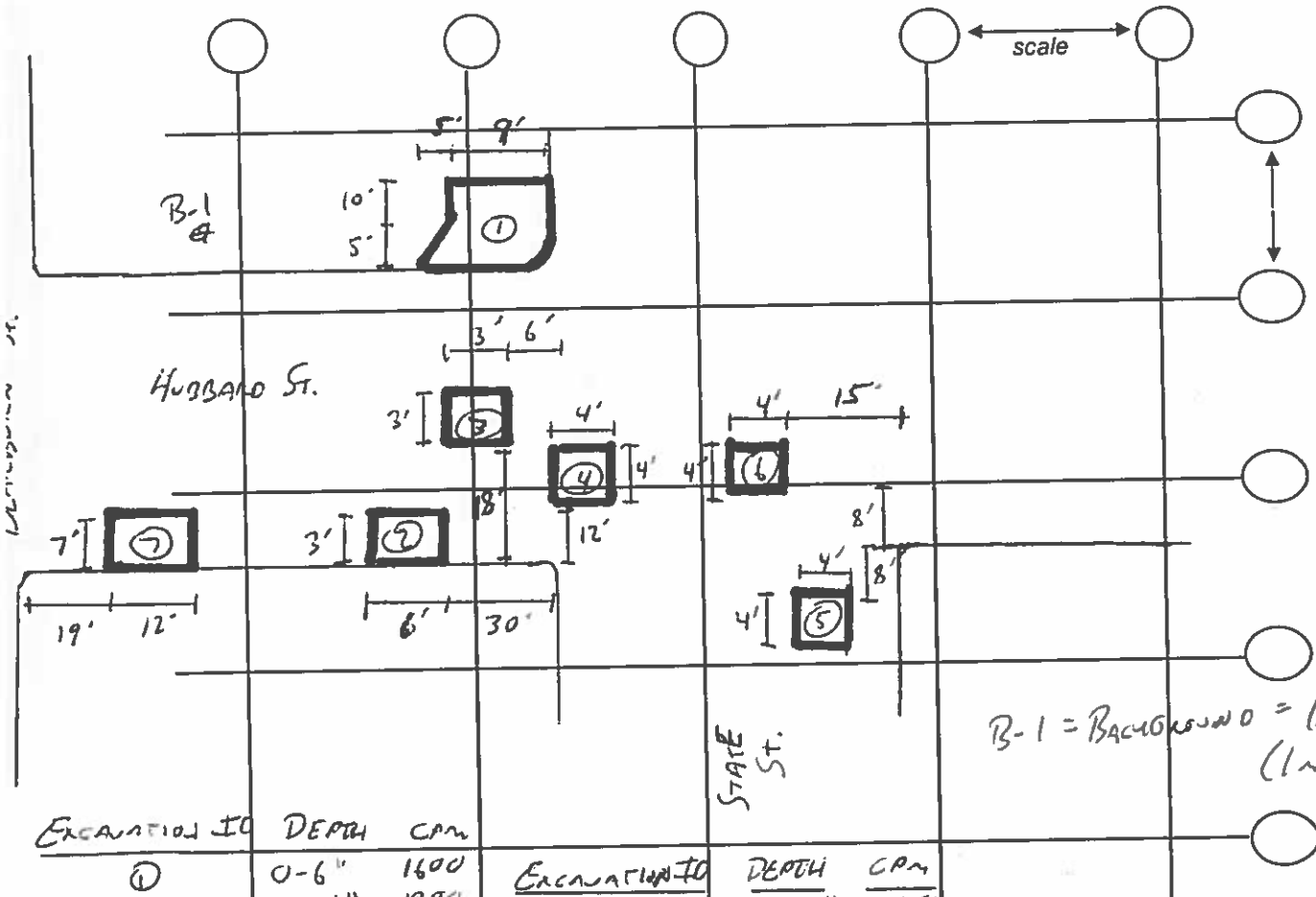
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: 0-12"

Background 1847 cpm

Action Level: 7391 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.



B-1 = BACKGROUND = 1847 cpm (1 min count)

Excavation ID	DEPTH	CPM	Excavation ID	DEPTH	CPM
①	0-6"	1600	⑤	0-12"	1600
	6-24"	1900	⑥	12-30"	1800
②	0-12"	1700	⑦	0-12"	1500
	12-30"	2200		12-30"	2000
③	0-12"	1600		0-12"	2200
	12-30"	2200		12-30"	2200
④	0-12"	1900			
	12-30"	2300			