



October 7, 2021

Marc Munroe
3 Phase Line Construction
300 Westgate Dr.
Carol Stream, IL 60188

RE: Thorium Monitoring 433-459 E. Erie St.
CDOT Permit #1584223

Dear Mr. Munroe:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for installation of a utility conduit and pole at 433-459 E. Erie Street in Chicago, Illinois. The monitoring of the utility trench excavation was performed September 22 – September 30, 2021, by Brian Schmidt, SAHCI Health Physics Technician.

Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeter (serial no. 126497) 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 6,383 counts per minute (cpm)

The average background count rate for this location was measure as 1,791 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected for the utility pole boring by lowering the detector into the hole and measuring the count rate for each 18-inch lift to a depth of 9 feet below ground surface. Survey data was collected for the trench by entering the excavation and recording the highest count rate for the floor and walls to a maximum excavation depth of 3 feet 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 Forms. The count rates in the excavations ranged from 1,800 cpm to 4,700 cpm. No count rates were found at any time that exceeded the threshold limits of 6,383 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

Radiation Survey Form

Location/ Project ID: 3P-ERIE ST. - UTILITY + LIGHTPOLE INSTALLATION - ROW RADIOLOGICAL SOIL SURVEY

Date: 9/22-30/2021

Technician: BRIAN SCHMIOT

Inst Model: Lucycom-2221

Serial No.: 126497

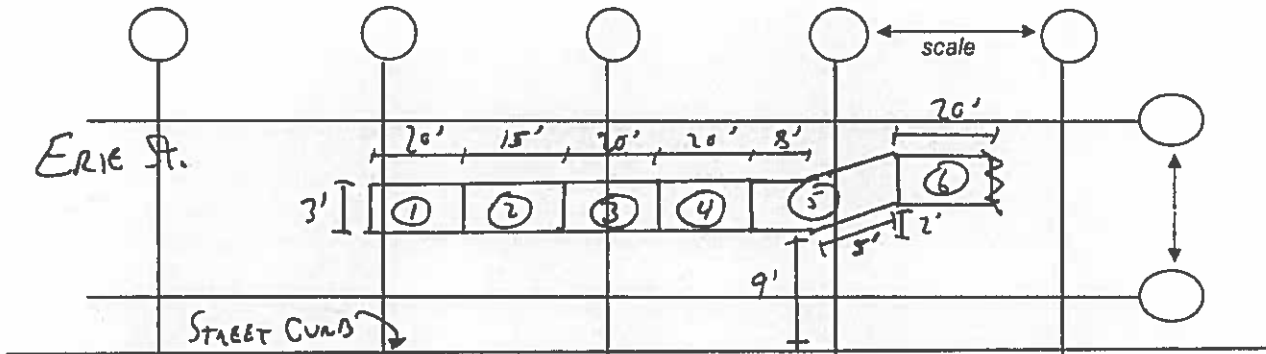
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: 0-36"

Background 179 cpm

Action Level: 6383 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.



LANE SURVEY DR.

Excavation ID	Depth	CPM	Excavation ID	Depth	CPM
①	0-12"	2100	④	0-12"	2900
	12-30"	2400		12-30"	3800
	30-48"	3500		30-48"	4200
	36-54"	4100		36-54"	4600
②	0-12"	1800	⑤	0-12"	2600
	12-30"	2300		12-30"	3400
	30-48"	4100		30-48"	4100
	36-54"	4300		36-54"	3800
③	0-12"	2900	⑥	0-12"	2600
	12-30"	3100		12-30"	3000
	30-48"	3800		30-48"	3600
	36-54"	4200		36-54"	4200

Radiation Survey Form

Location/ Project ID: 3P - ERIE ST. - UTILITY + LIGHT POLE INSTALLATION - ROW RADIOLOGICAL SOIL SURVEY

Date: 9/22-30/2021

Technician: BRIAN SCHMIDT

Inst Model: LUDLUM-222

Serial No.: 126497

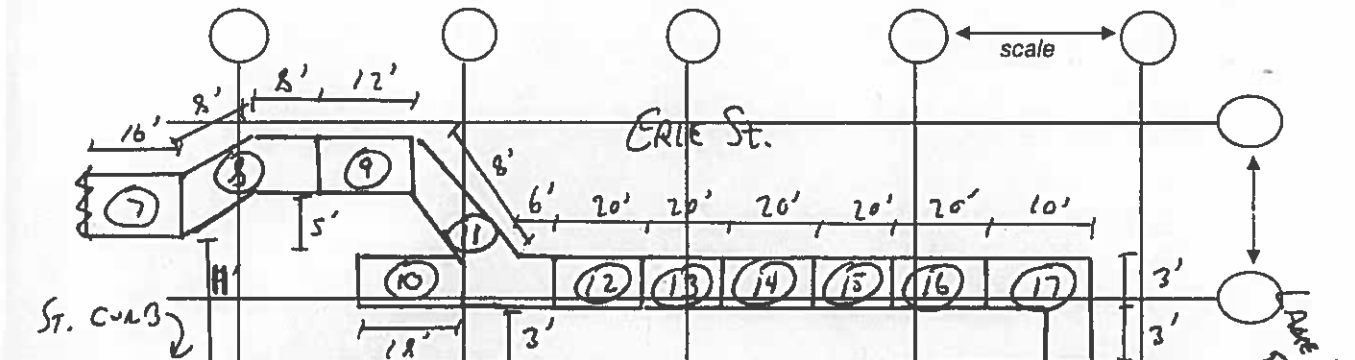
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: 0-108"

Background 1791 cpm

Action Level: 6383 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.



Excavation ID	DEPTH	CPM	Excavation ID	DEPTH	CPM	Excavation ID	DEPTH	CPM
LP-1 (9/22) (LIGHT POLE INSTALLATION)	0-8"	2100	10	0-12"	2200	15	0-12"	2400
	18-36"	2900		12-30"	2600		12-30"	2900
	36-54"	3400		30-48"	3500		30-48"	3300
	54-72"	3700		36-54"	3600		36-54"	3600
7	72-90"	4100	11	0-12"	2900	16	36-54"	3600
	90-108"	4700		12-30"	3200		0-12"	2600
	108-126"	3800		30-48"	4000		12-30"	2900
	0-12"	2700		36-54"	4400		30-48"	3000
8	12-30"	2800	12	12-30"	2900	17	36-54"	3200
	30-48"	3300		30-48"	3400		0-12"	2500
	36-54"	3800		36-54"	3700		12-30"	2800
	0-12"	1900		0-12"	2400		30-48"	3100
9	12-30"	2600	13	12-30"	3200	14	36-54"	2900
	30-48"	2900		30-48"	3600		0-12"	2100
	36-54"	2400		36-54"	3900		12-30"	2500
	0-12"	2100		0-12"	2400		30-48"	2800
10	12-30"	2500	14	12-30"	2700	15	36-54"	3700
	30-48"	2800		30-48"	2800		0-12"	2500
	36-54"	3200		36-54"	3300		12-30"	2800
	0-12"	1900		0-12"	2400		30-48"	3100
11	12-30"	2600	15	12-30"	3200	16	36-54"	2900
	30-48"	2900		30-48"	3600		0-12"	2100
	36-54"	3400		36-54"	3900		12-30"	2500
	0-12"	1900		0-12"	2400		30-48"	2800
12	12-30"	2600	16	12-30"	2900	17	36-54"	3200
	30-48"	3300		30-48"	3400		0-12"	2500
	36-54"	3800		36-54"	3700		12-30"	2800
	0-12"	1900		0-12"	2400		30-48"	3100
13	12-30"	2600	17	12-30"	3200	18	36-54"	2900
	30-48"	2900		30-48"	3600		0-12"	2100
	36-54"	3400		36-54"	3900		12-30"	2500
	0-12"	1900		0-12"	2400		30-48"	2800
14	12-30"	2600	18	12-30"	2900	19	36-54"	3200
	30-48"	3300		30-48"	3400		0-12"	2500
	36-54"	3800		36-54"	3700		12-30"	2800
	0-12"	1900		0-12"	2400		30-48"	3100
15	12-30"	2600	19	12-30"	3200	20	36-54"	2900
	30-48"	2900		30-48"	3600		0-12"	2100
	36-54"	3400		36-54"	3900		12-30"	2500
	0-12"	1900		0-12"	2400		30-48"	2800
16	12-30"	2600	20	12-30"	2900	21	36-54"	3200
	30-48"	3300		30-48"	3400		0-12"	2500
	36-54"	3800		36-54"	3700		12-30"	2800
	0-12"	1900		0-12"	2400		30-48"	3100
17	12-30"	2600	21	12-30"	3200	22	36-54"	2900
	30-48"	2900		30-48"	3600		0-12"	2100
	36-54"	3400		36-54"	3900		12-30"	2500
	0-12"	1900		0-12"	2400		30-48"	2800