



November 22, 2021

Paul Muszynski  
Electric Conduit Construction  
3333 S. Iron St.  
Chicago, IL 60608

RE: Thorium Monitoring at 103-130 E. South Water St.  
CDOT Permit # 1609537

Dear Mr. Muszynski:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation for installation of a fiber optic conduit at 103-130 E. South Water St. in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on November 18, 2021.

#### 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 last 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 background count rate for this location was measured at 1,693 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 maximum excavation depth of 4 feet below ground surface. Soil, concrete, and asphalt were loaded directly into a truck for offsite disposal.

The maximum gamma count rate for each 18-inch lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 1,400 cpm to 2,700 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 (CDPH) 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.

Glenn Huber, CHP  
President

### Radiation Survey Form

Location/ Project ID: ECG - PAPER INSTALL - MICHIGAN + S. WATER ST - ROW RADIOLOGICAL SOIL SURVEY

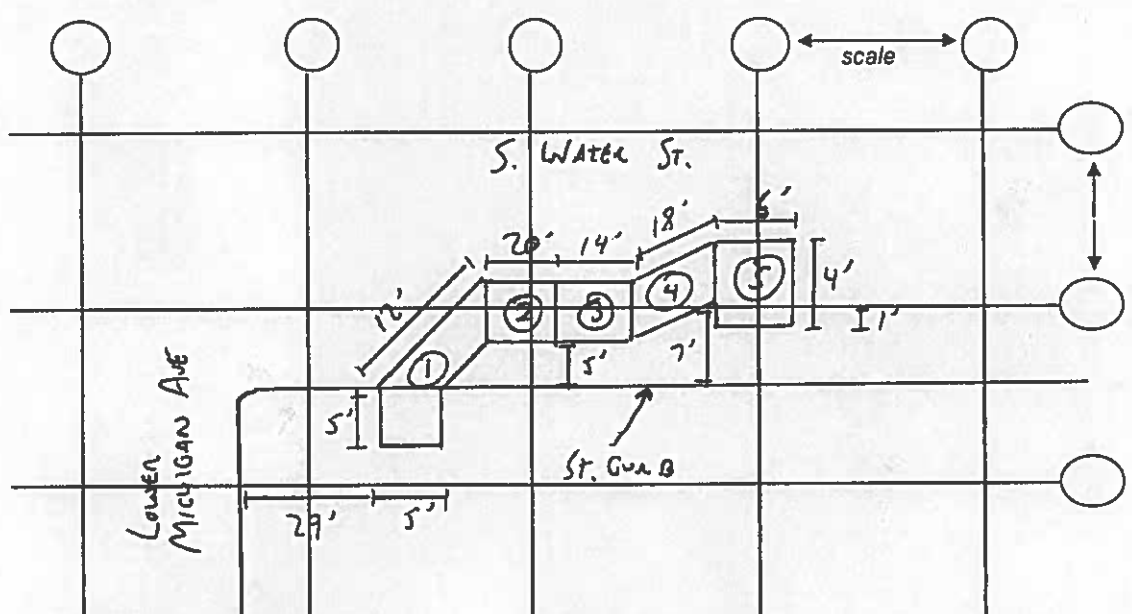
Date: 11/18/2021 Technician: BRIAN SCHMIDT

Inst Model: LOWM-2221 Serial No.: 134542

Probe Type: 1"x1" NaI / 2"x2" NaI / Shielded / Not Shielded Lift Elevation: 0-48"

Background 1693 cpm Action Level: 7,396 GAH / 6758 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	IP	DEPTH	CPM	EXCAVATION ID	DEPTH	CPM
①		0-12"	1500	④	0-12"	1700
		12-30"	1800		12-30"	2300
		30-48"	2100		30-48"	2400
		36-54"	2200		36-54"	2100
②		0-12"	1400	⑤	0-12"	1900
		12-30"	1800		12-30"	2500
		30-48"	2300		30-48"	2500
		36-54"	2500			
③		0-12"	1700		48-66"	2700
		12-30"	2000			
		30-48"	2300			
	36-54"	2600				