



April 20, 2022

Luke Wells  
Electric Conduit Construction  
816 Hicks Drive  
Elburn, IL 60119

RE: Thorium Monitoring at 425-470 E. Ohio St.  
CDOT Permit # 1636246

Dear Mr. Wells:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation for a fiber optic conduit installation at 425-470 E. Ohio St. in Chicago, Illinois. The monitoring was performed by Mark Dewald, SAHCI Health Physics Technician, on April 18 and 19, 2022. Work on this project was initially attempted on February 14, 2022 but could not be completed due to underground obstructions.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 127242) 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 6,995 counts per minute (cpm).

The background count rate for this location was measured at 1,716 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 72 inches below ground surface. Any material excavated below 4 feet was surveyed in the excavator bucket as it was removed. All asphalt, concrete, and soil were loaded directly into a truck for disposal.

The maximum gamma count rates on the surface and each 18-inch lift were recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 1,200 cpm to 2,200 cpm. No count rates were found at any time that exceeded the threshold limit of 6,995 cpm.

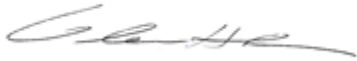
Additional Monitoring

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.

A handwritten signature in black ink, appearing to read 'Glenn Huber', written in a cursive style.

Glenn Huber, CHP  
President

## Radiation Survey Form

**Location/ Project ID:** 441 E. Ontario - Comcast Line - ECC

**Date:** 4/18-19/22

**Technician:** Mark Dewald

**Inst Model:** Ludlum 2221

**Serial No. :** 127242

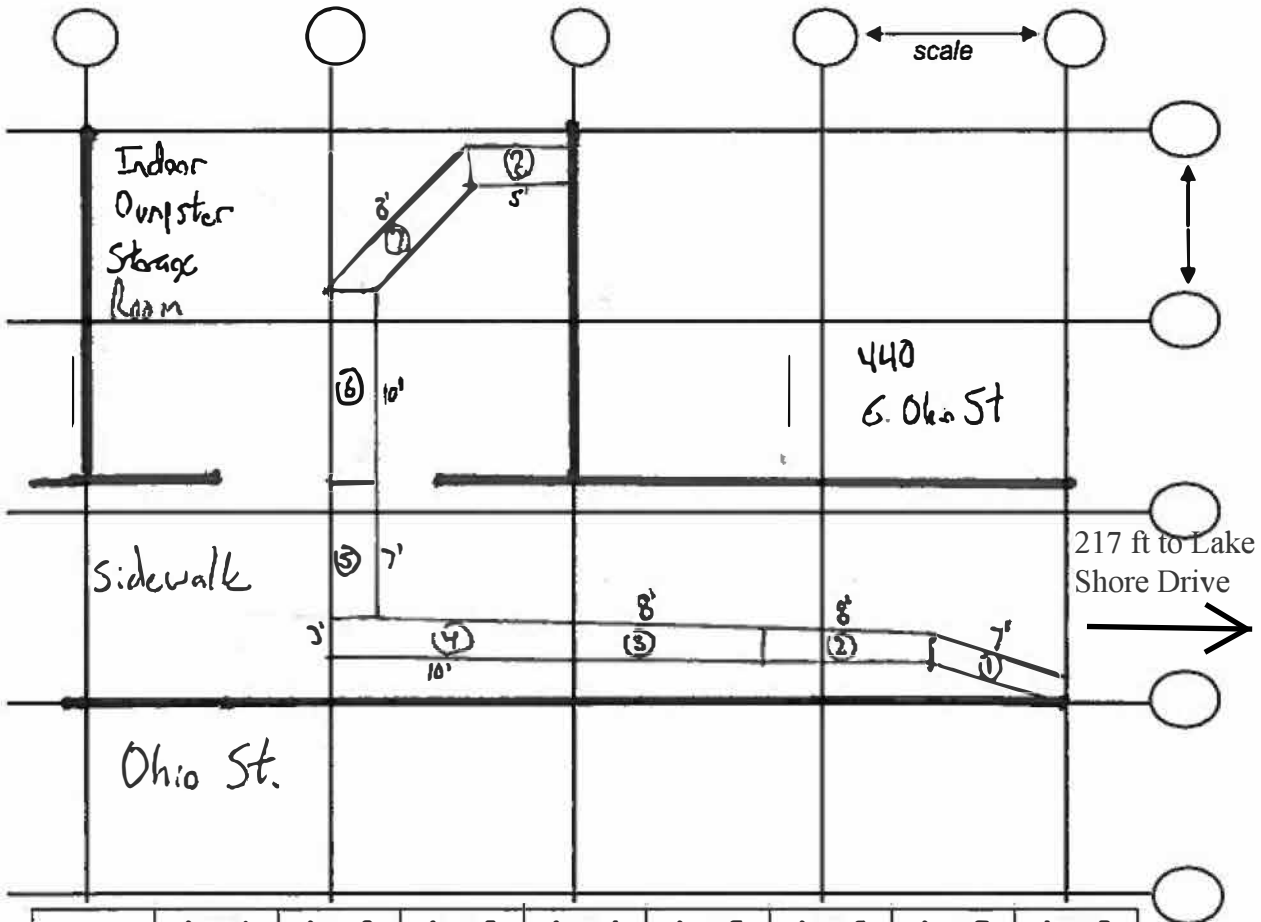
**Probe Type:** 1"x1" NaI 2"x2" NaI  
Shielded / Not Shielded

**Lift Elevation:** Surface to -72" BGS

**Background** 1,716 cpm

**Action Level:** 6,995 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.



	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
0-12"	1400	1500	1600	1500	1500	1400	1700	1600
12-30"	1200	1900	2100	1800	1800	1900	1700	1400
30-48"	1900	2000	2000	2200	1800	1700	1600	1900
48-66"	1800	NA	NA	NA	NA	NA	NA	NA
66-84"	1800	NA	NA	NA	NA	NA	NA	NA
72-90"	1900	NA	NA	NA	NA	NA	NA	NA