



March 3, 2022

973863

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

RE: Thorium Monitoring 51-120 E. Illinois St.  
CDOT Permit #1638812

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 fiber optic and power utility conduit at 51-120 E. Illinois St. in Chicago, Illinois. The monitoring of the utility trench excavation was performed February 14 – February 18, 2022, and March 1, 2022, by Mark Dewald, SAHCI Health Physics Technician.

#### 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 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 average background count rate for this location was measure as 1,681 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. 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. One section of trench was excavated to 6 feet below ground surface to identify a water line in the area. 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 1,100 cpm to 2,300 cpm. No count rates were found at any time that exceeded the threshold limits 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 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 "Glenn Huber".

Glenn Huber, CHP  
President

## Radiation Survey Form

**Location/ Project ID:** 3P Utility - 51-120 E. Illinois St.

**Date:** 2/14/22-3/1/22

**Technician:** Mark Dewald

**Inst Model:** Ludlum 2221

**Serial No. :** 127242

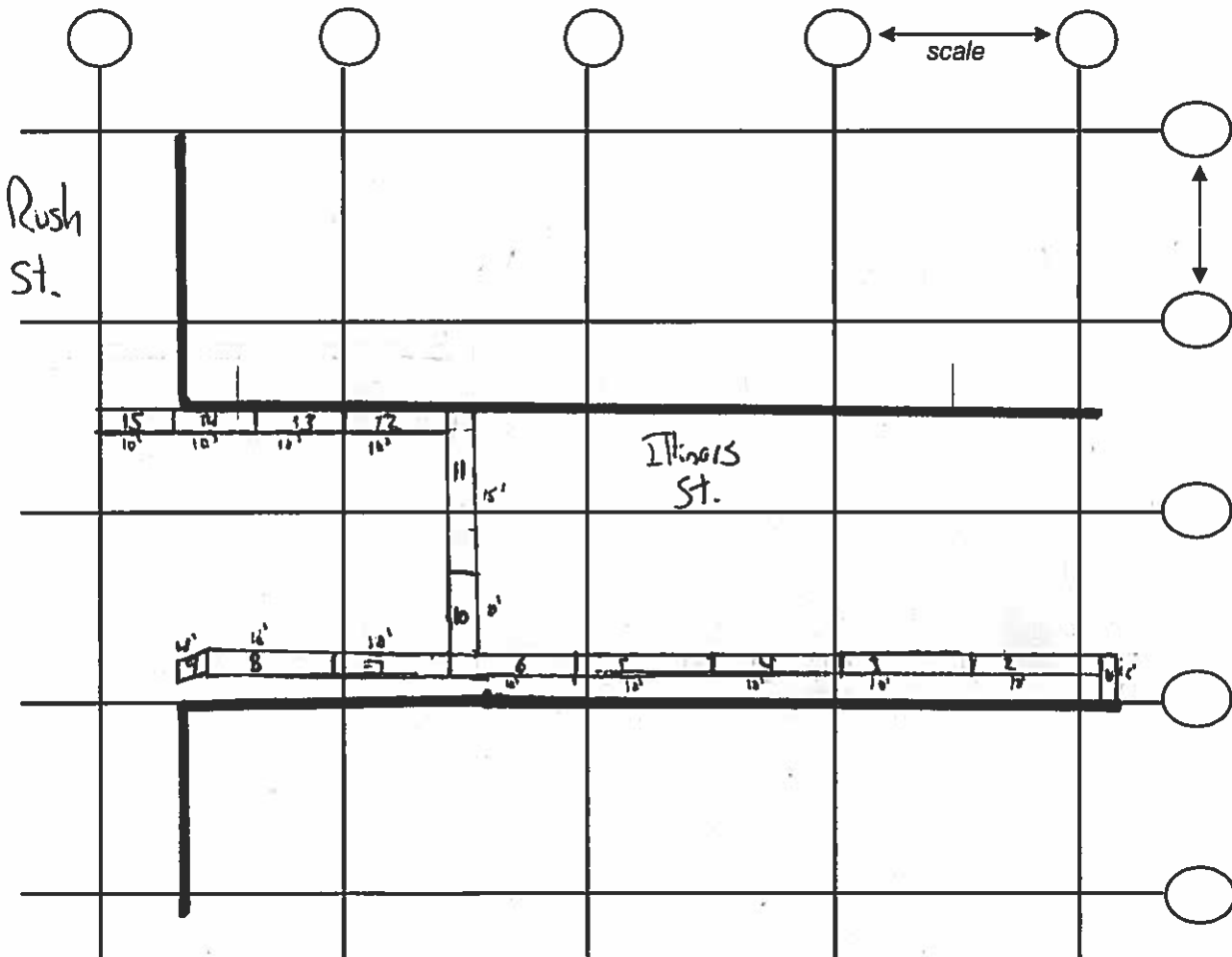
**Probe Type:** 1"x1" NaI 2"x2" NaI  
Shielded / Not Shielded

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

**Background** 1,681 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	Area 9	Area 10	Area 11	Area 12	Area 13	Area 14	Area 15
0-12"	1200	1600	1400	1800	1300	1100	1500	1400	1400	1500	1400	1200	1300	1200	1200
12-30"	1500	1900	1800	2100	1900	1600	2200	1800	1500	1900	1100	1300	1900	1400	1600
30-48"	1700	1800	1800	1900	1400	2200	2300	2000	1400	2000	1500	1300	1800	1700	1800
48-66"										2100					
66-84"										1600					
72-90"										1400					