

February 27, 2025

705373

Angel Camacho  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Transportation  
CDOT Permit No. 2046909 – 100 E. Hubbard St.

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiological monitoring during the installation of two street light foundations at 100 E. Hubbard St. in Chicago, Illinois. The monitoring was performed by Jeremy Kieser, SAHCI Health Physicist, on February 17 and 18, 2025. 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. 127242) with attached 2"x2" NaI probe (w/ 6" collimated lead shield). The instrument was calibrated on May 7, 2024. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,943 counts per minute (cpm).

The average background count rate for this location was determined to be 1,836 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by scanning the surface and walls of the two excavations to a maximum depth of 108 inches below ground surface. Material excavated below 36 inches was surveyed in the excavator bucket as it was removed. Excavated material was loaded directly into a truck for disposal

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. The count rates ranged from 1,600 cpm to 2,600 cpm. No count rates were found at any time that exceeded the threshold limit of 6,943 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: DOT 2036909

Date: Feb 17 & 18, 2025

Technician: Jeremy Kieser

Inst Model: 2221

Serial No.: i27242

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

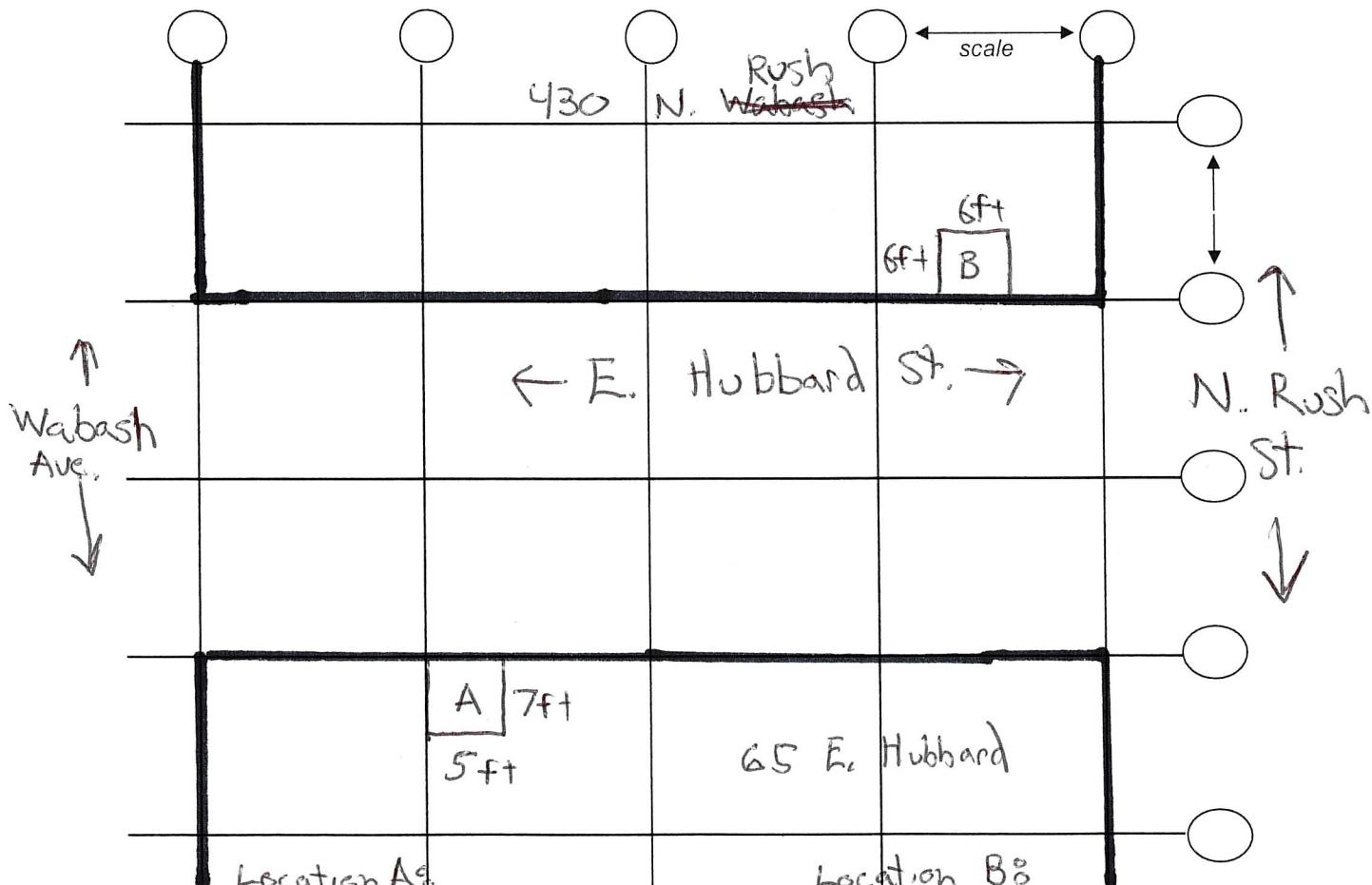
Lift Elevation: Surface to 9ft

Background 1836 cpm

Action Level: 6943 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.

↑  
N



Location A<sub>9</sub>

Surface: 1600 cpm  
18 inches: 2100 cpm  
36 inches: 2200 cpm  
54 inches: 1800 cpm  
72 inches: 1700 cpm  
90 inches: 1700 cpm  
108 inches: 1800 cpm

Location B<sub>8</sub>

Surface: 2200 cpm  
18 inches: 2500 cpm  
36 inches: 2600 cpm  
54 inches: 1800 cpm  
72 inches: 1800 cpm