



September 4, 2020

Nicole Espinoza  
Electric Conduit Construction  
3333 S. Iron St.  
Chicago, IL 60608

RE: Thorium Monitoring 30-105 E. Hubbard St.  
CDOT Permit #1280933

Dear Ms. Espinoza:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for restoration of a failing utility trench at 30-105 E. Hubbard Street in Chicago, Illinois. The monitoring was performed by Mark Dewald, SAHCI Health Physicist, on September 3, 2020.

#### Instrumentation

Surface gamma scans were performed using a 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 last calibrated on October 18, 2019. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,179 counts per minute (cpm).

The background count rate for this location was measured as 1,512 cpm (average).

#### 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 trench and recording the highest count rate for the floor and walls to a maximum excavation depth of 12 inches below ground surface. Asphalt and concrete were 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 in the excavation ranged from 1,100 cpm to 4,400 cpm. No count rates were found at any time that exceeded the threshold limit of 6,179 cpm.

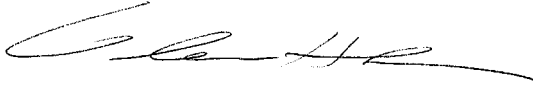
#### Additional Monitoring

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', with a long horizontal flourish extending to the right.

Glenn Huber, CHP  
President

## Radiation Survey Form

Location/ Project ID: 30-105 E. Hubbard St

Date: 9/3/2020

Technician: Mark Oswald

Inst Model: ludlum 2221

Serial No.: 126497

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

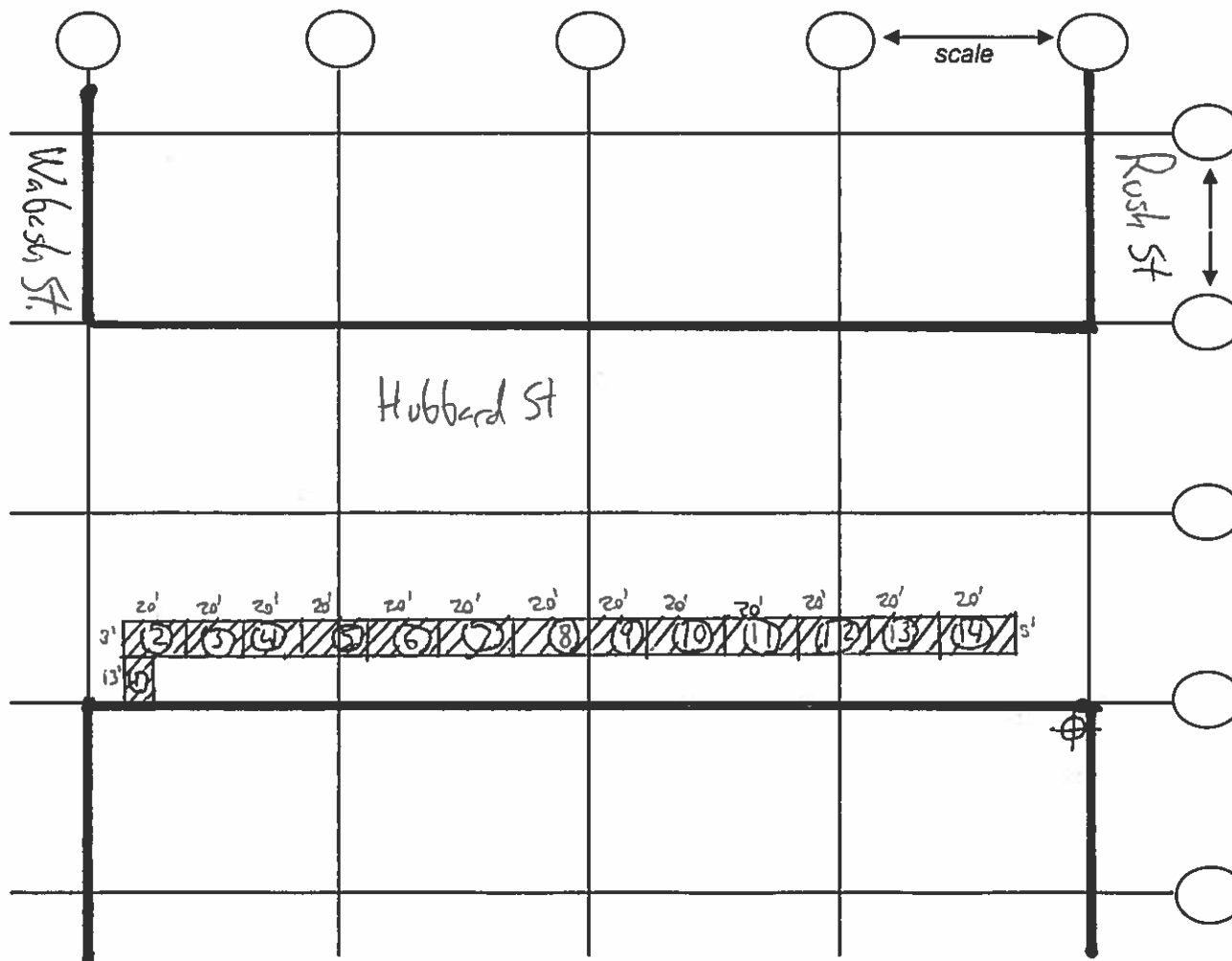
Lift Elevation: 0-12"

Background 1512 cpm

Action Level: 6179 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



excavated area →

background location →

## Radiation Survey Data

30-105 E. Hubbard St. - Electric Conduit Construction

Date: 9/3/2020  
Technician: Mark Dewald  
Instrument ID: Ludlum Model 2221 (sn 126497)  
w/ Ludlum Model 44-10 Shielded NaI  
Background: 1512 cpm  
7.1 pCi/g: 6179 cpm

| Area | Surface<br>Max CPM | -12"- 30"<br>Max CPM |
|------|--------------------|----------------------|
| 1    | 1600               | 1900                 |
| 2    | 1500               | 1800                 |
| 3    | 1800               | 3000                 |
| 4    | 1700               | 3300                 |
| 5    | 1400               | 3800                 |
| 6    | 1800               | 3000                 |
| 7    | 1300               | 3900                 |
| 8    | 1200               | 3800                 |
| 9    | 1500               | 3300                 |
| 10   | 1300               | 4200                 |
| 11   | 1100               | 4100                 |
| 12   | 1400               | 4400                 |
| 13   | 1800               | 3700                 |
| 14   | 1900               | 3400                 |