



March 29, 2023

981448

Angel Camacho  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Water Management  
CDOT Permit: 1793003 300 E. Grand Ave.

Dear Mr. Camacho:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for a Chicago Department of Water Management manhole frame repair at 300 E. Grand Avenue in Chicago, Illinois. The monitoring was performed by Mark Dewald, SAHCI Health Physics Technician, on March 16, 2023. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

A second manhole was scheduled to be repaired at 303 E. Grand Ave., but excavation was not required at this location.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 99147) with attached Ludlum Model 44-10 2"x2" NaI Detector (w/ 6" collimated lead shield). The instrument was calibrated on May 3, 2022. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,936 counts per minute (cpm).

The average background count rate for this location was measured at 1,452 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 surrounding the manhole and recording the highest count rate on the floors and walls outside of the catch basin to a depth of 12 inches below ground surface. All asphalt and concrete were loaded directly into a truck for disposal.

The maximum gamma count rate for the single 12 inch lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 1,200 cpm to

1,400 cpm. No count rates were found at any time that exceeded the threshold limit of 6,936 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", written in a cursive style.

Glenn Huber, CHP  
President

## Radiation Survey Form

**Location/ Project ID:** 300 E. Grand Ave. - DWM Catch Basin Repair

**Date:** 3/16/2023

**Technician:** Mark Dewald

**Inst Model:** Ludlum 2221

**Serial No. :** 99147

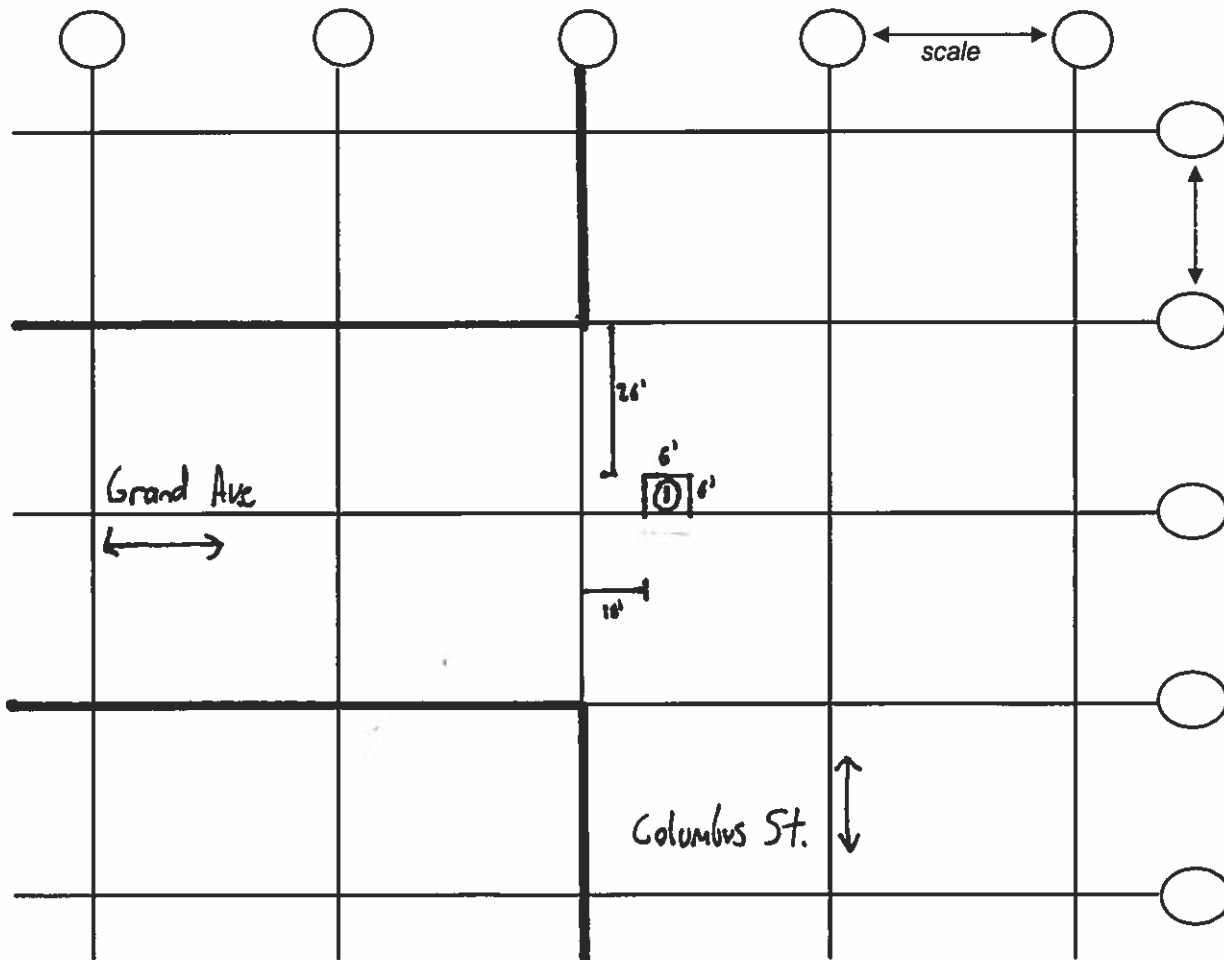
**Probe Type:** 1"x1" NaI 2"x2" NaI  
 Shielded  Not Shielded

**Lift Elevation:** Surface to -12" BGS

**Background** 1,452 cpm

**Action Level:** 6,936 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.



|        |       |        |
|--------|-------|--------|
|        | 0-12" | 12-30" |
| Area 1 | 1200  | 1400   |