

October 4, 2021

Angel Camacho
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Water Management
CDOT Permit: 1579579 – 500-731 N. St. Clair St,

Dear Mr. Camacho:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for a new water main installation at 500-731 N. St. Clair Street in Chicago, Illinois. Three test pits were conducted near the alley between Grand Avenue and Illinois Street prior to the planned trenching. The water main trenching did not occur since utility obstructions were identified. The project has been temporarily suspended.

The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on September 13 and 14, 2021. 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. 126497) 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 6,383 counts per minute (cpm).

The average background count rate for these locations was measured at 1,876 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 maximum depth of 48 inches below ground surface. Material excavated below 48 inches was monitored 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 rate for each lift was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,800 cpm to 3,600 cpm. No count rates were found at any time that exceeded the threshold limit of 6,383 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. An additional monitoring report will be issued at the conclusion of the water main installation.

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: RELIABLE - GRAND - ST. CLAIR ST. - TESTPITS - ROW RADIOLOGICAL
SOIL SURVEY

Date: 9/13-14/2021

Technician: BRIAN SCHMIDT

Inst Model: LUDLUM - 2221

Serial No.: 126497

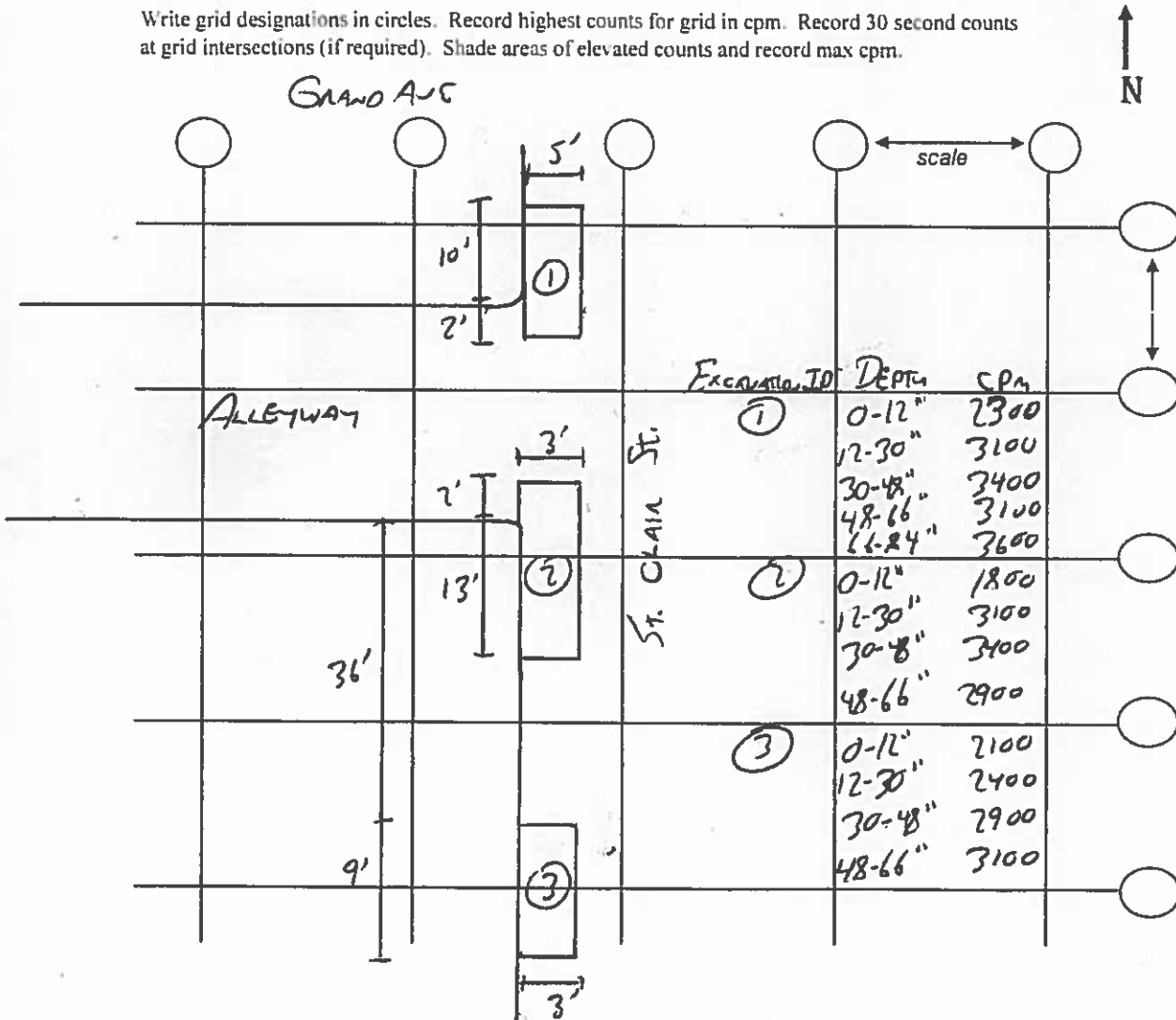
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: 0-66"

Background 1876 cpm

Action Level: 6383 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.



ILLINOIS ST.