Stan A. Huber Consultants, Inc.
Health Physics and Radiation Safety Services

200 North Cedar Road – New Lenox, Illinois 60451-1751 – (800) 383-0468 or (815) 485-6161 – FAX (815) 485-4433 – Email sahci@sahci.com – Home Page www.sahci.com

July 27, 2022

976915

Angel Camacho
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring – 65 E. Chicago Riverwalk Elevator Pit
City of Chicago Dept. of Assets, Information, and Services (AIS)
Dig Ticket: 601196475 (Private Property)

Dear Mr. Camacho:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during concrete thickness borings and excavation for an elevator pit at 65 E. Chicago Riverwalk. Thorium monitoring for the borings was performed on March 17, 2022, by Brian Schmidt. Monitoring for the elevator pit excavation was performed on July 1, 2022, through July 19, 2022 by Mark Dewald. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring.*

Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial no. 126496 and 134542) with attached Ludlum Model 44-10 2”x2” NaI Detectors (w/ 6” collimated lead shields). The instruments were last calibrated on May 3, 2022. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for instrument 134542 was 6,758 counts per minute (cpm) and 7,819 cpm for instrument 126496.

The average background count rate for this location ranged from 1,338 cpm to 1,611 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above. Survey data for the 6 borings were collected by scanning the spoils generated during the concrete drilling process (12” max depth). Survey data was collected during the elevator pit excavations by entering the excavation and recording the highest count rate for the floor and walls to an excavation depth of 36 inches below ground surface. Material excavated from 36 inches to 72 inches was scanned in the excavator bucket as it was removed.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Forms. The count rates in the excavation ranged from 1,400 cpm to 2,900 cpm. No count rates were found at any time that exceeded the threshold limits of 6,758 cpm and 7,819 cpm, respectively.

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

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Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: Riverwalk (Near Wabash St. Bridge)-Elevator Pit Concrete Thickness Drilling Investigation - Radiological Soil Survey

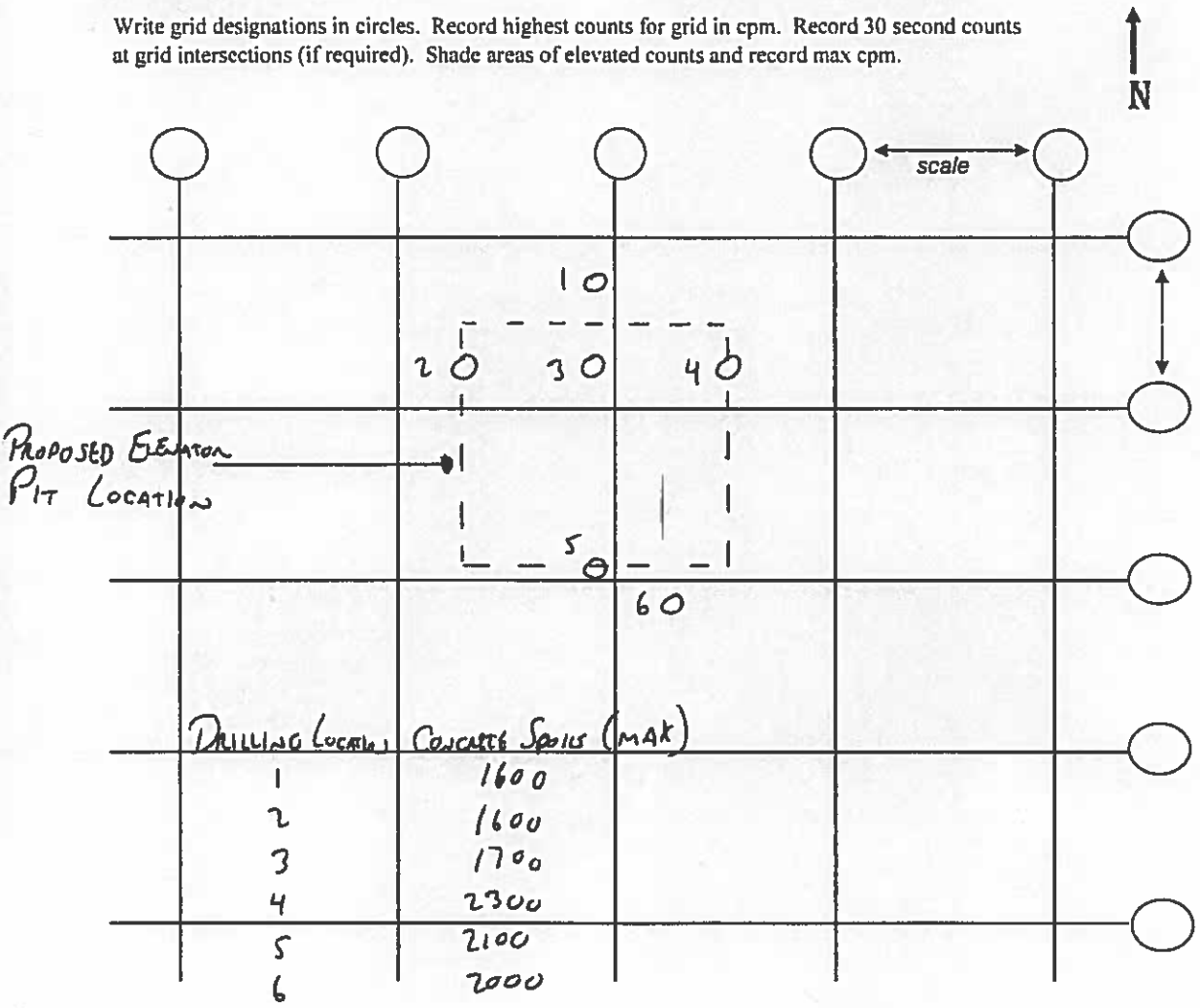
Date: 3/17/2022 **Technician:** Brian Schmitt

Inst Model: Ludlum-2221 **Serial No. :** 134542

Probe Type: 1"x1" NaI / ~~2"x2" NaI~~ **Lift Elevation:** 0-12"
~~Shielded~~ / Not Shielded

Background 1611 cpm **Action Level:** 6758 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.



Drilling Location	Concrete Spoils (MAR)
1	1600
2	1600
3	1700
4	2300
5	2100
6	2000

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Radiation Survey Form

Location/ Project ID: 65 E. Riverwalk Elevator Pit Excavation

Date: 7/1-19/22 **Technician:** Mark Dewald

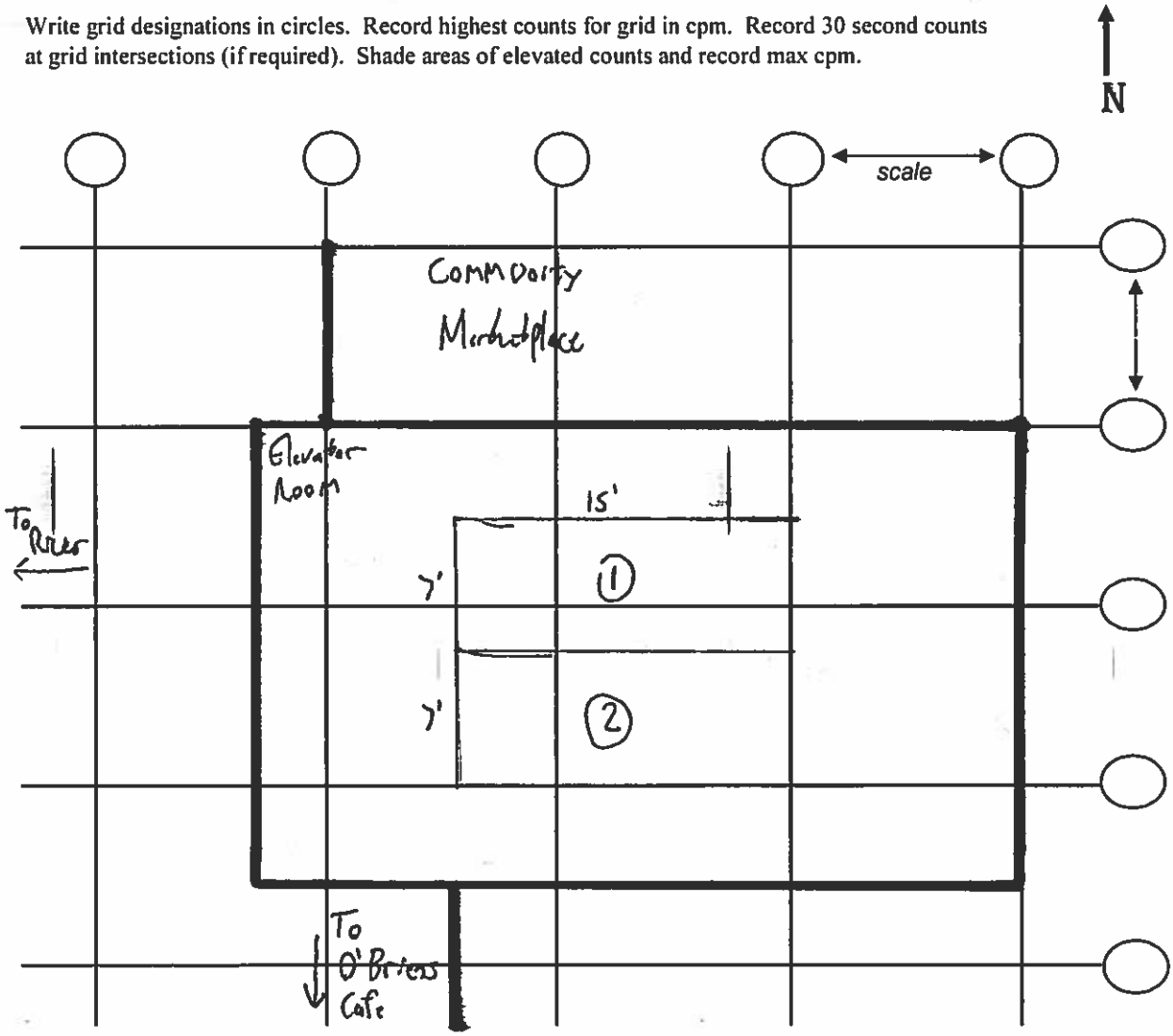
Inst Model: Ludlum 2221 **Serial No. :** 126496

Probe Type: 1"x1" NaI **2"x2" NaI** **Lift Elevation:** Surface to -72" BGS

Shielded / Not Shielded

Background 1,338 **cpm** **Action Level:** 7,819 **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.



	0-18"	18-36"	36-54"	54-72"	72-90"
Area 1	1400	2500	2600	1800	2900
Area 2	2700	2500	2300	1900	2800