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

October 2, 2021

Angel Camacho
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Transportation
Rush Street Structure Adjustments
CDOT Permits: 1591258, 1591259, and 1591261

Dear Mr. Camacho:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for adjustment of 4 manholes and catch basins at the intersections of E. Grand Avenue and N. Rush Street and E. Ontario Street and N. Rush Street in Chicago, Illinois. The monitoring was performed by Glenn Huber, SAHCI Health Physicist, on September 30, 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. 134542) 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 7,396 counts per minute (cpm).

The average background count rate for these locations was measured at 1,669 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 existing catch basins and manholes and recording the highest count rate for the floor and walls to a maximum depth of 18 inches below ground surface. All asphalt and concrete were loaded directly into a truck for disposal. Limited soil was encountered during excavation.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,500 cpm to 2,400 cpm. No count rates were found at any time that exceeded the threshold limit of 7,396 cpm.

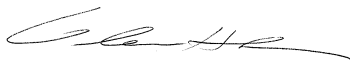
Additional Monitoring

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

sahci
Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: CDOT Structure Adjustment Ontario and Rush

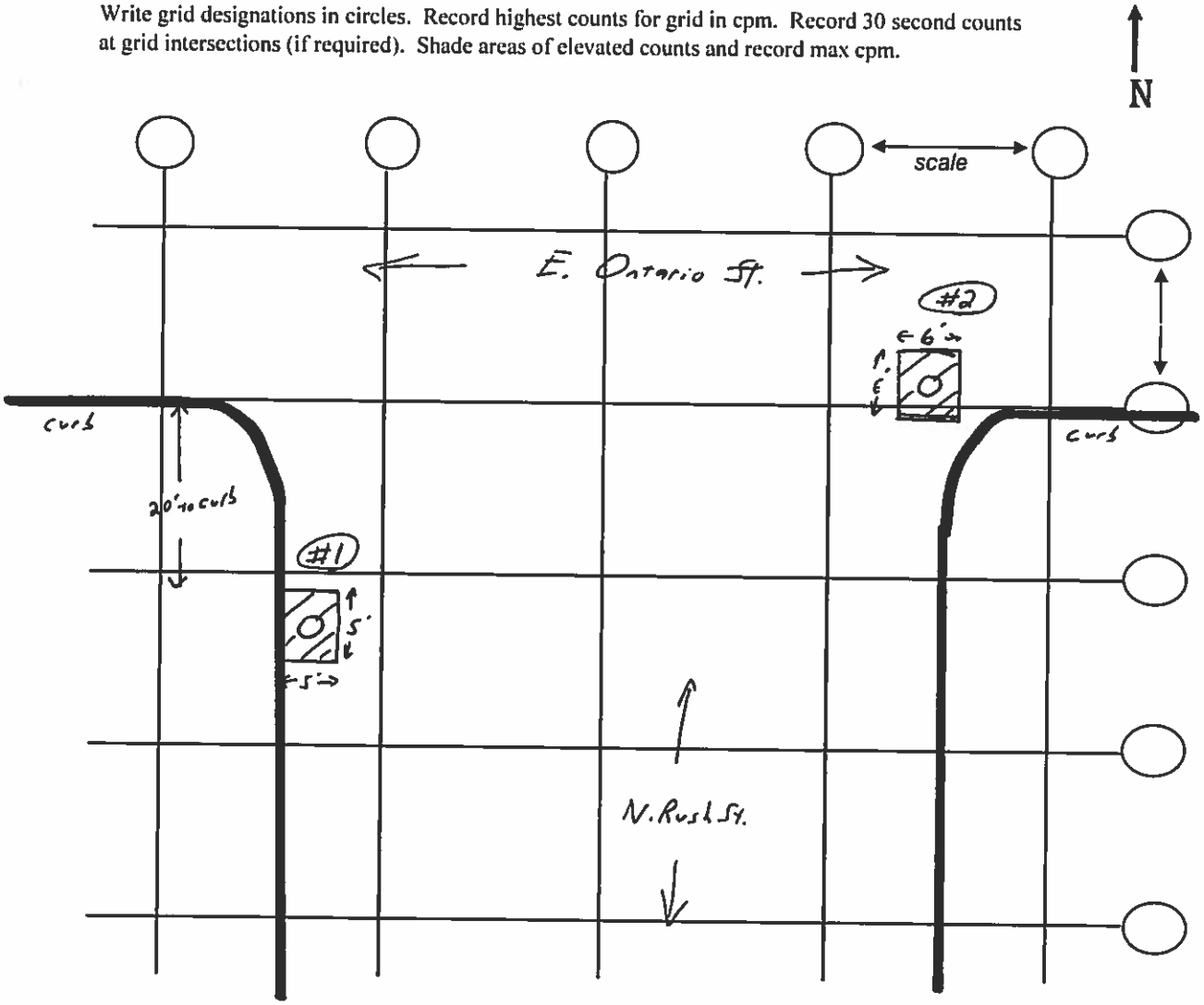
Date: 9/30/21 **Technician:** Glenn Huber

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

Probe Type: 1"x1" NaI / (2"x2" NaI) (Shielded) / Not Shielded **Lift Elevation:** Surface to -18"

Background 1,669 **cpm** **Action Level:** 7,396 **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.



Excavation ID	Depth	CPM
1	Surface	1800
	-18"	2400

Excavation ID	Depth	CPM
2	Surface	1700
	-18"	2100

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Stan A. Huber Consultants, Inc.

Radiation Survey Form

Location/ Project ID: CDOT Structure Adjustment Grand and Rush

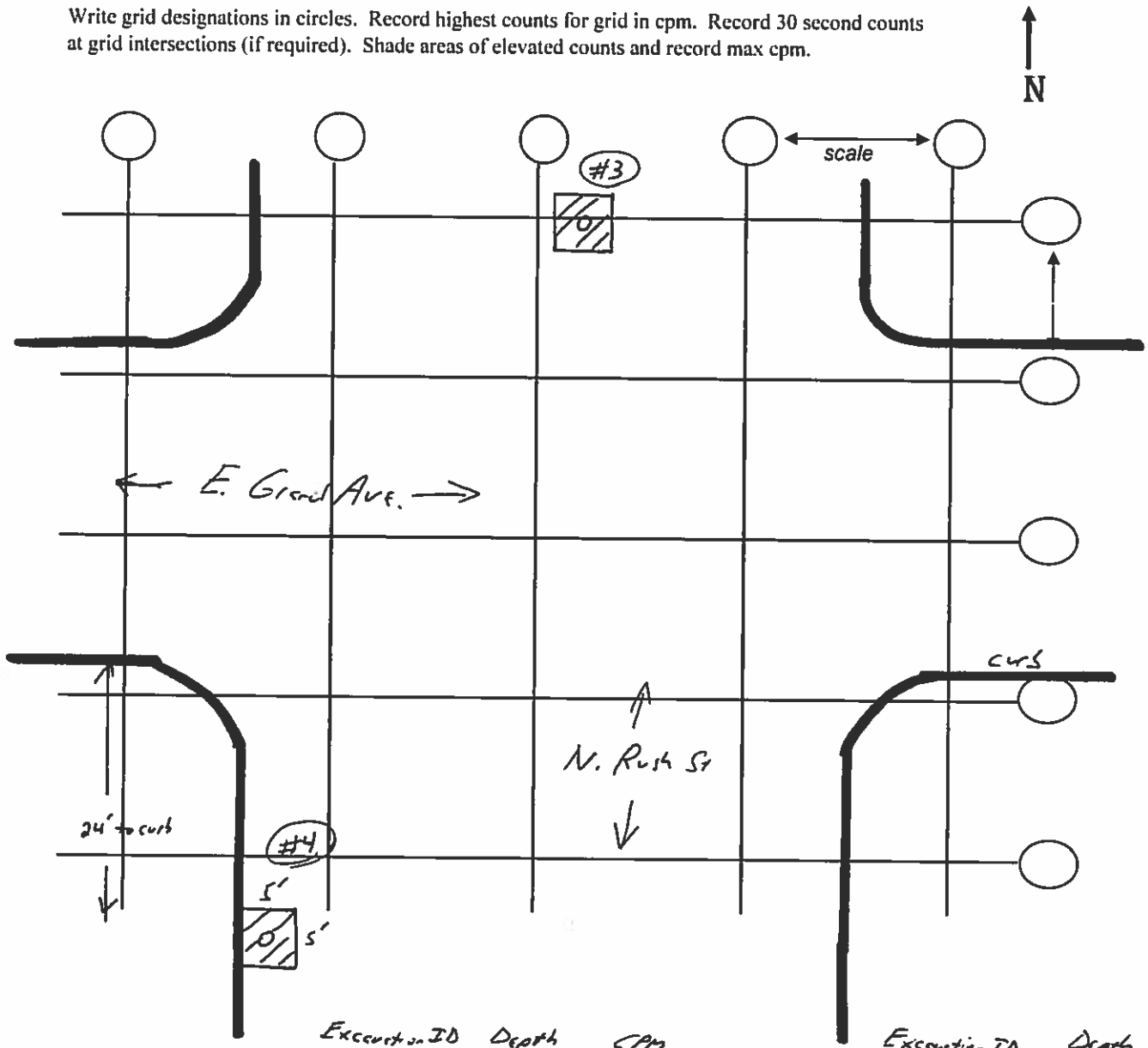
Date: 9/30/21 **Technician:** Glenn Huber

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

Probe Type: 1"x1" NaI / (2"x2" NaI) (Shielded) / Not Shielded **Lift Elevation:** Surface to -18"

Background 1,669 **cpm** **Action Level:** 7,396 **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.



Excavation ID	Depth	CPM
3	~~Surface~~	
	Surface	1500
	-12"	1600

Excavation ID	Depth	CPM
4	Surface	1800
	-18"	2100