



November 18, 2017

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring – City of Chicago Department of Transportation
Curb and Sidewalk Replacement

CDOT Permit 847114: 341-592 E. North Water St.
CDOT Permit 863244: 319-340 E. Illinois St.
400-478 N. New St.
325-329 E. North Water St.
440 N. McClurg Ct.

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during removal of curbs and sidewalks for City of Chicago Department of Transportation (CDOT) located at the multiple addresses detailed above. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on November 10, 2017 through November 16, 2017. 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. 126496) with attached Ludlum Model 44-10 2"x2" NaI detector (w/ 6" collimated lead shield). The instrument was calibrated on October 11, 2017. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,366 counts per minute (cpm).

The average background count rate for this location was determined to be 1,876 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter detailed above. Survey data was collected scanning the surface of the sidewalk and curbs prior to removal and again the concrete was removed and recording the highest observed count rate. All excavated material was 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 1,600 cpm to 3,500 cpm. No count rates were found at any time that exceeded the threshold limit of 7,366 cpm.

Additional Monitoring

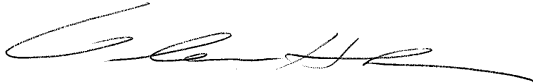
Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

Regulatory Notification of Survey Completion

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 'G. Huber', written in a cursive style.

Glenn Huber, CHP
President

Radiation Survey Form

Location/ Project ID: COOT-440 N. McCue Ct. CHICAGO, IL - SIDEWALK REMOVAL/REPLACEMENT ROW RADILOGICAL SURVEY

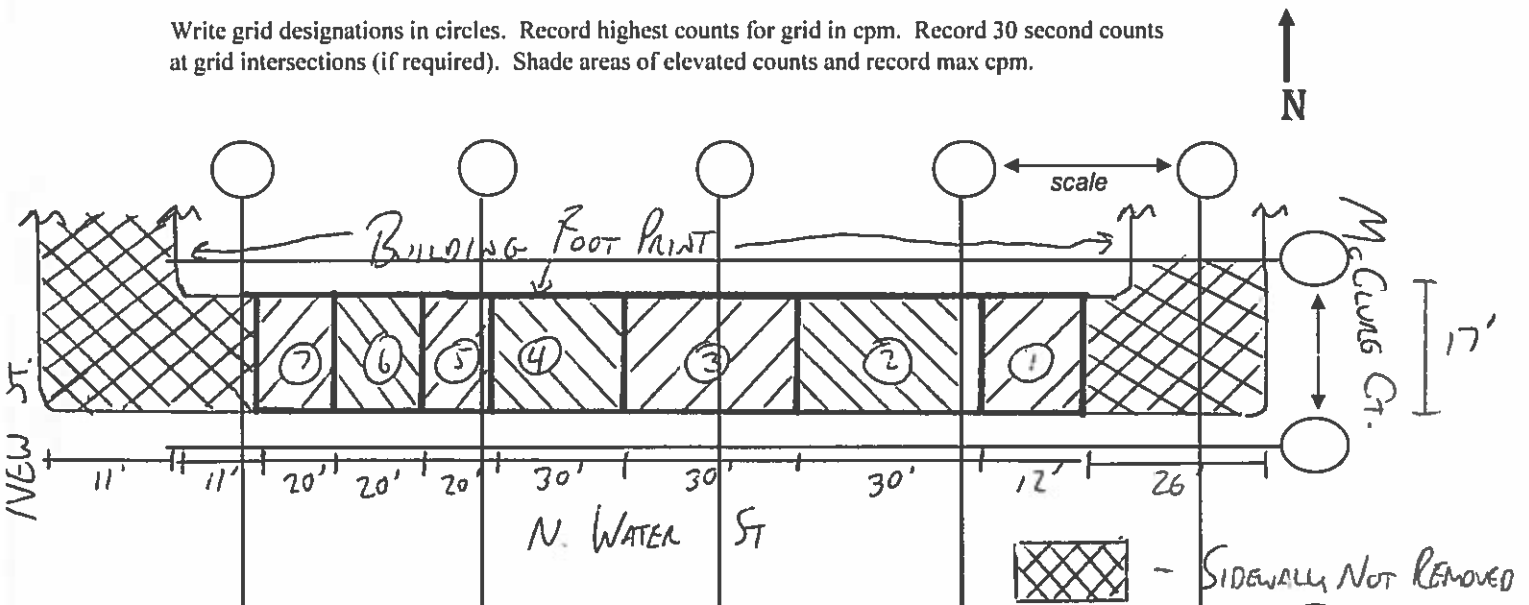
Date: 11/10/17 - 11/11/17 Technician: BRIAN SCHMIDT

Inst Model: LVOLVM-2221 Serial No.: 126496

Probe Type: 1"x1" NaI / 2"x2" NaI Lift Elevation: 0-6" bgs
Shielded / Not Shielded

Background 1876 cpm Action Level: 7366 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.



LOCATION	ID	DEPTH	CPM
①		0-6"	2100
		6-24"	3100
②		0-6"	1800
		6-24"	2700
③		0-6"	2200
		6-24"	3500
④		0-6"	2400
		6-24"	2700
⑤		0-6"	2200
		6-24"	2600
⑥		0-6"	2200
		6-24"	2800
⑦		0-6"	1900
		6-24"	2500

- SIDEWALK NOT REMOVED

Radiation Survey Form

Location/ Project ID: CDOT-440 N. McCURTIS ST. - CHICAGO, IL - SIDEWALK REMOVAL / REPLACEMENT - ROW RADIOLOGICAL SURVEY

Date: 11/11/17 + 11/14/17

Technician: BRIAN SCHMIDT

Inst Model: LUOLUM - 2221

Serial No.: 126496

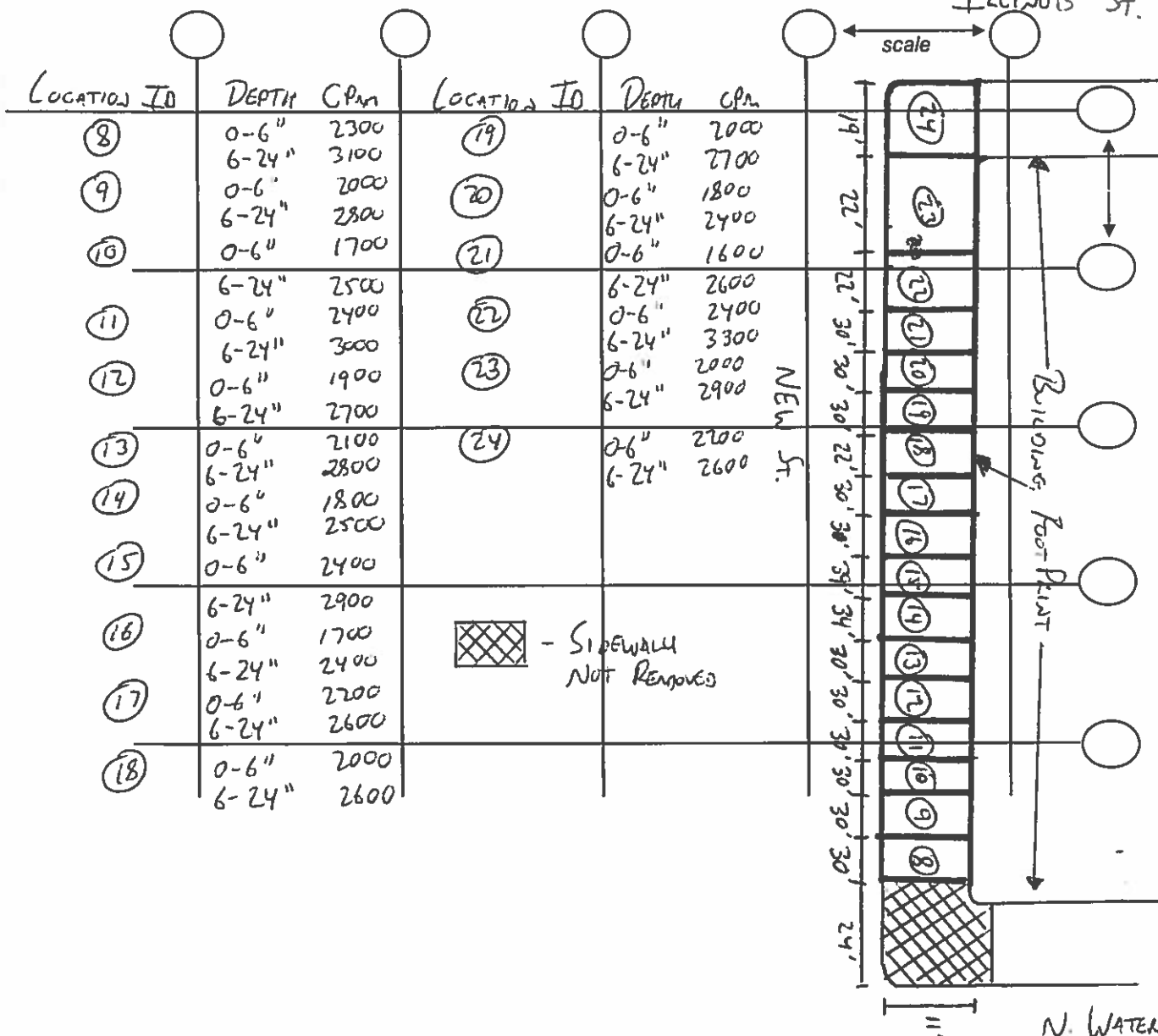
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: 0-6" hgs

Background 1876 cpm

Action Level: 7366 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.



Radiation Survey Form

Location/ Project ID: C00T-440 N. MCGUIG ST - CHICAGO, IL - SIDEWALK REMOVAL/REPLACEMENT - ROW RADIOLOGICAL SURVEY

Date: 11/14/17

Technician: BRIAN SCHMIDT

Inst Model: WALM-2221

Serial No.: 126496

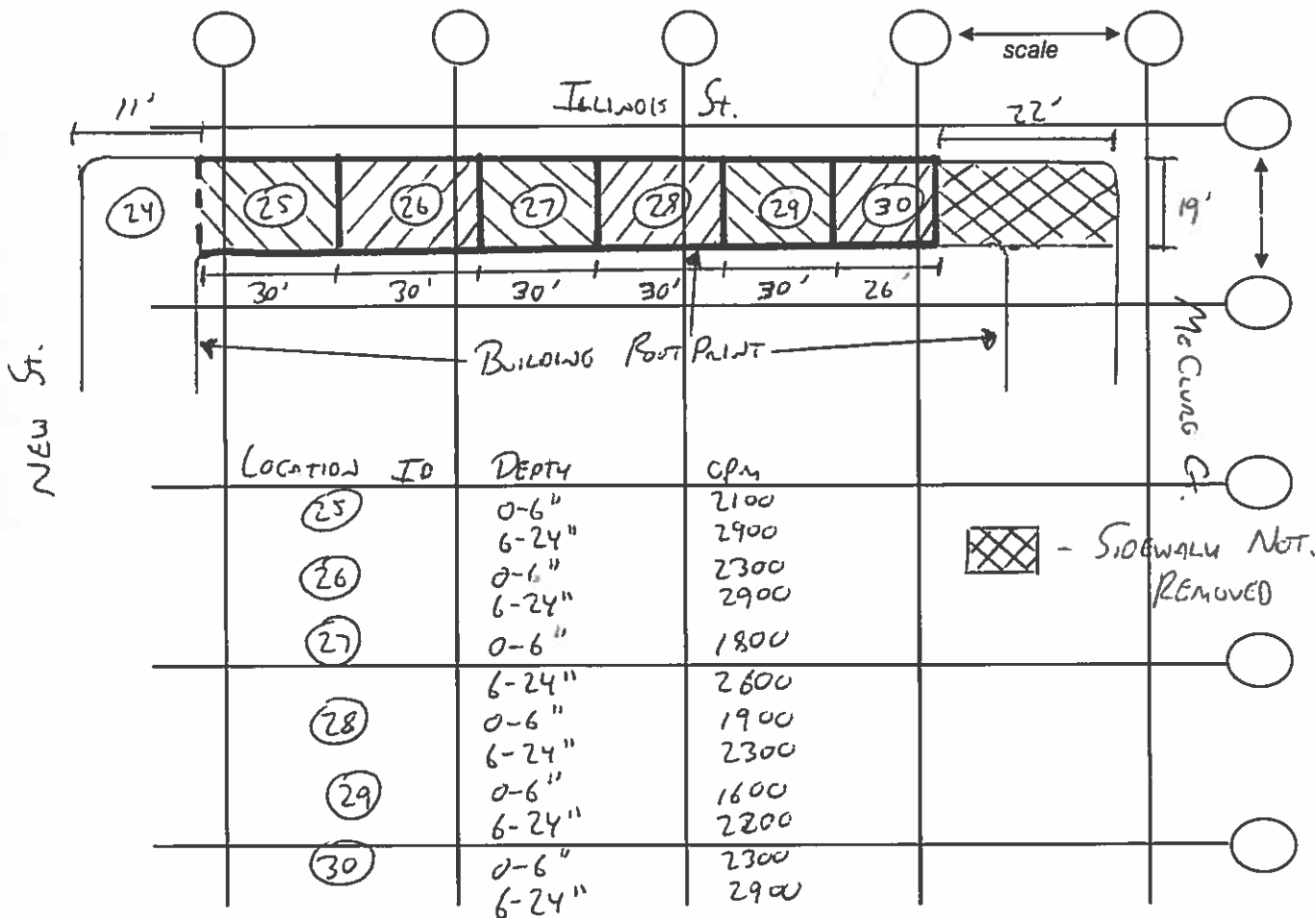
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: 0-6" bgs

Background 1876 cpm

Action Level: 7366 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.



Radiation Survey Form

Location/ Project ID: CDOT-440 N. McCune Ct. - CHICAGO, IL - STREET CURB REMOVAL/REPLACEMENT ROW RADIOLOGICAL SURVEY

Date: 11/16/17 Technician: BRIAN SCHMIDT

Inst Model: LUOVAN-2221 Serial No.: 126496

Probe Type: 1"x1" NaI / 2"x2" NaI Lift Elevation: 0-6"
Shielded / Not Shielded

Background 1876 cpm Action Level: 7366 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.

