



October 12, 2020

961522

Verneta Simon  
U.S. Environmental Protection Agency  
Region 5  
77 W. Jackson Blvd., SE-5J  
Chicago, IL 60604

RE: Thorium Monitoring at 300 N. Michigan Avenue  
Interim Report January 1, 2020 – September 30, 2020

Dear Ms. Simon:

This report is being submitted by Stan A. Huber Consultants, Inc. (SAHCI) on behalf of 300 N. Michigan, LLC c/o Sterling Bay, LLC. SAHCI was hired by 300 N. Michigan, LLC to provide radiological monitoring during demolition and construction activities at 300 and 310 N. Michigan Avenue in Chicago, Illinois. This report covers monitoring performed by SAHCI from January 1, 2020 – September 30, 2020.

Thorium monitoring was conducted in accordance with the *Thorium Investigation Work Plan for 300 N. Michigan Ave, Chicago, Illinois*, revision dated November 25, 2019 (Work Plan). Per the Work Plan, monitoring for thorium is required during construction activities involving the disturbance or exposure of subsurface fill. The removal action level for thorium at the site has been established as 7.1 picocuries per gram (pCi/g) total radium (radium-226 + radium-228).

The entire footprint of the planned building has been monitored to depths where native material has been reached, with no instances of thorium contamination. The remaining construction activities involve utility work within the ROW surrounding the private property. Thorium monitoring was performed for the following construction activities:

- Pavement Restoration 8/26/20-8/27/20  
66-88 E. Lower Wacker Place  
CDOT #1270799
- Permanent ComEd Electrical Service 9/11/20-9/21/20  
300-324 N. MacChesney Court  
CDOT #1282432 and 1282475

### Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial no. 126496, 126497, and 127242) with attached Ludlum Model 44-10 2"x2" NaI detectors (w/ 6" lead collimator shields). The USEPA action level of 7.1 pCi/g total radium count rate correlation for the instruments are as follows:

Serial No. 126496: 7,102 counts per minute (cpm) – calibrated October 18, 2019

Serial No. 126497: 6,179 cpm – calibrated on October 18, 2019

Serial No. 127242: 7,013 cpm – calibrated on July 28, 2020

The background count rate ranged from 1,386 cpm – 1,993 cpm

#### Surface Gamma Scans – 66-88 E. Lower Wacker Place

On August 26 and 27, 2020 excavations were performed in Lower Wacker Place for the purpose of pavement restoration. Gamma surface scans were performed by Jeremy Kieser using the Ludlum Model 2221 Scaler / Ratemeter (serial no. 127242).

Survey data was collected by entering the excavation after each 18-inch lift and recording the highest count rate for the floors and walls to a maximum excavation depth of 3 feet below ground surface. The count rates in the excavation ranged from 1,600 cpm to 2,100 cpm. No count rates were observed at any time that exceeded the instrument specific threshold limit of 7,013 cpm.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. See Attachment A – 66-88 E. Lower Wacker Place.

#### Surface Gamma Scans – ComEd Electrical Service Excavation

From September 8, 2020 through September 21, 2020, a trench was excavated along the south property line on Lower East Wacker Place and then up North MacChesney Ct. Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above (serial no. 126496 and 126497).

Survey data was collected by entering the excavation after each 18-inch lift and recording the highest count rate for the floors and walls to a maximum excavation depth of 9 feet below ground surface. Fill material excavated greater than 4 feet below ground surface was surveyed as it was removed and stockpiled at the surface.

Count rates exceeding the instrument specific threshold limits of 6,179 cpm and 7,102 were encountered immediately under the pavement surface of N. MacChesney Ct. The elevated counts (6500 cpm maximum) were due to a layer of granite pavers containing Naturally Occurring Radioactive Material (NORM) unrelated to Streeterville thorium contamination. The granite pavers were segregated from the excavated material and all remaining excavated material was found to be well below the threshold limits. With the exception of the granite paver layer, the count rates in the trench ranged from 2,100 cpm to 4,100 cpm.

The maximum gamma count rate for each lift was recorded on the attached Radiation Survey Form. See Attachment B – Com Ed Electrical Service Excavation.

#### Asbestos

Although no specific asbestos testing was performed, soils were visually screened during excavation for evidence of potentially asbestos containing mantles or mantle strings, per Section 4.1 of the Work Plan. No potentially asbestos-containing materials were identified, so no abatement is required at this time.

## Conclusions

Since no count rates were identified above the 7.1 pCi/gram Removal Action Level, no additional soil sampling, air monitoring, or personnel monitoring were performed. As of September 30, 2020, no radiological contamination has been identified which would require notification of USEPA and/or remediation.

## Upcoming Work Schedule

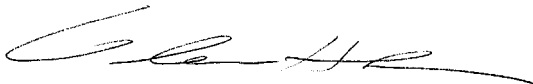
The basement slab removal covered the entire footprint of the new building, and native clay/soil was observed underneath at all locations. Since native material has been reached at all locations and no fill material remains, radiological monitoring will not be required during any remaining construction activities within the building footprint

There are activities planned outside of the building footprint which will likely require radiological monitoring. The exact dates of the excavations have not been scheduled but should take place during Q4 2021 and into 2021. These include:

- People's Gas service off Lower Wacker Place ROW 10/26/20 – 11/6/20 (partial)  
- to be completed Q2 2021
- Water, Storm and Sanitary Services in Lower Michigan: 10/14/20 – 10/29/20
- Communication Utilities in Lower Michigan, Wacker Place and MacChesney Court: TBD 2021
- Final Curb, Gutter, Sidewalk and Paving Work in Lower Michigan, Wacker Place and MacChesney Court: TBD 2021

Thank you for your assistance with this project. I will be providing a copy of this report to the City of Chicago Department of Public Health, as required. 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

# Attachment A

Pavement Restoration - 66-88 E. Lower Wacker Place

300 N. Michigan Avenue

*Performed by:*

*Stan A. Huber Consultants, Inc.  
200 N. Cedar Rd.  
New Lenox, IL 60451*

## Radiation Survey Form

(CH)

Location/ Project ID: 100824888

CDOT# 1270799

Date: August 26 & 27, 2020 Technician: Jeremy Kieser

Inst Model: 2221

Serial No. : 127242

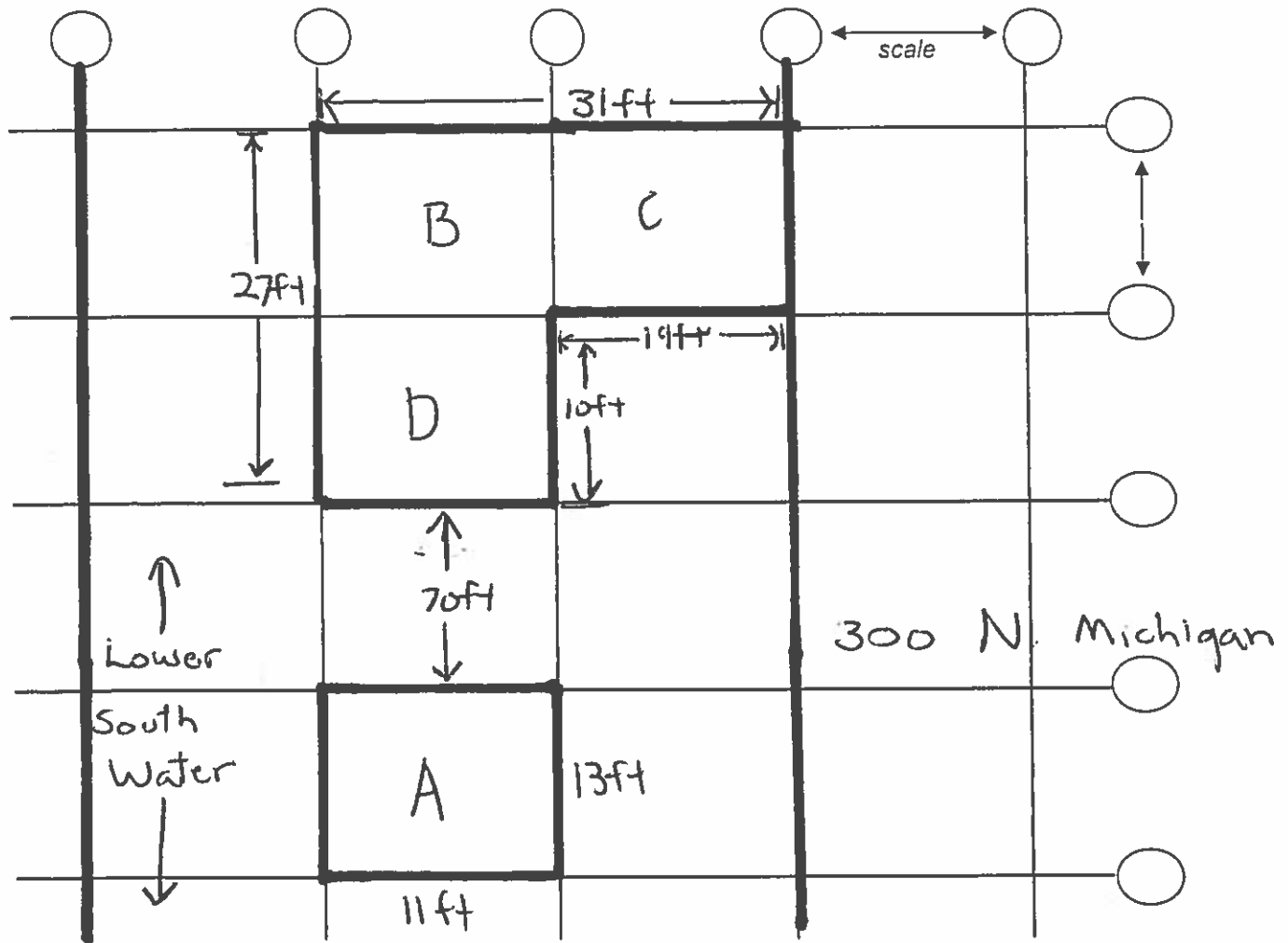
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface to 3ft

Background 1600 cpm

Action Level: 7013 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 A:  
Surface: 1600 cpm  
1ft: 1600 cpm

Location B:  
Surface: 1700 cpm  
18 inch: 1700 cpm  
36 inch: 1800 cpm

Location C:  
Surface: 1900 cpm  
1ft: 2100 cpm

Location D:  
Surface: 1600 cpm  
1ft: 1600 cpm

# Attachment B

Permanent ComEd Electrical Service Survey

300 N. Michigan Avenue

*Performed by:*

*Stan A. Huber Consultants, Inc.  
200 N. Cedar Rd.  
New Lenox, IL 60451*

**Radiation Survey Form**

Location/ Project ID: 300 Michigan Ave. - Lion Mathes

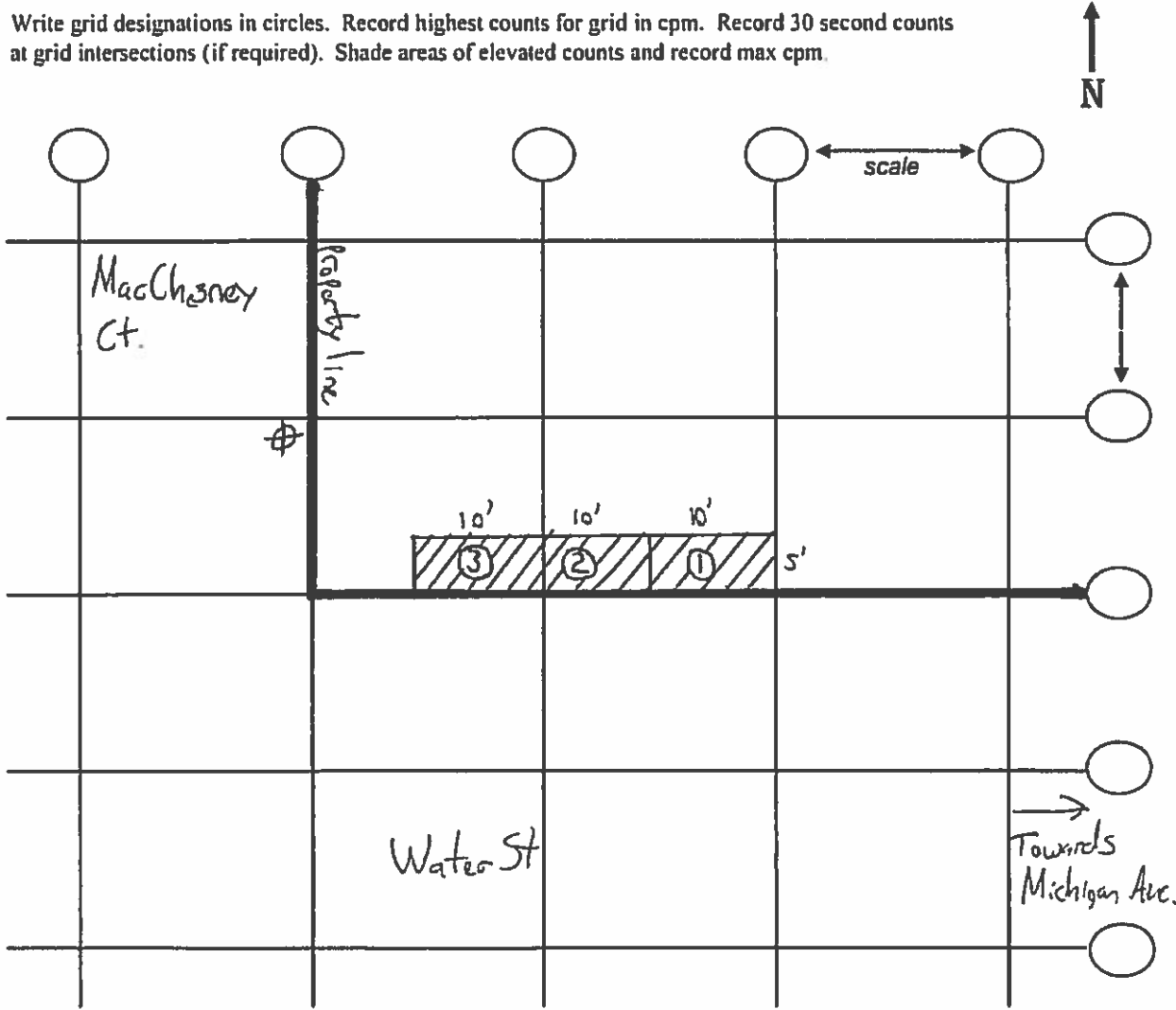
Date: 9/8-10/2020 Technician: Mark Dawald

Inst Model: Iudlum 2221 Serial No. : 126497

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

Background 1386 cpm Action Level: 6179 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.



⊕ → background location

▨ → excavated area

### Radiation Survey Form

Location/ Project ID: NASH BROS. - 300 N. MICHIGAN AVE - ROW ELECTRICAL SERVICE INSTALL - RADIOLOGICAL SOIL SURVEY

Date: 9/11-21/2020

Technician: BRIAN SCHMIDT

Inst Model: LOG-LUN-2221

Serial No.: 126496

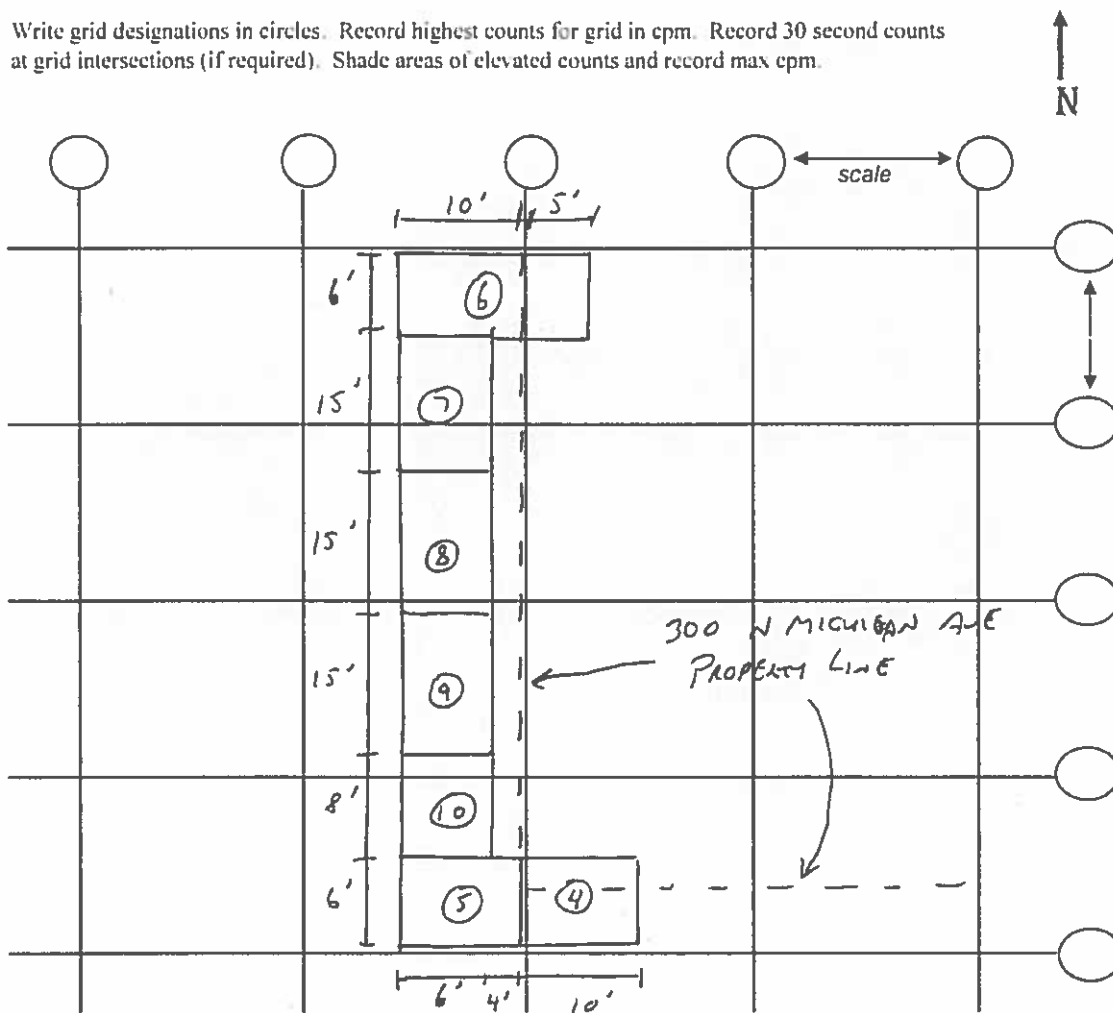
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: 0-96"

Background 1993 cpm

Action Level: 7102 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

*Stan A. Huber Consultants, Inc.*

Location:	300 N. Michigan Electric Line	Instrument ID:	Ludlum Model 2221 Scaler/Ratemeter w/ Model 44-10 NaI Detector (w/ 6" Lead Shield)
Name:	Mark Dewald and Brian Schmidt		
Date:	9/8/20 - 9/21/20	7.1 pCi/g CPM:	7,102 CPM (serial no. 126496) 6,179 CPM (serial no. 126497)

	Survey Results (counts per minute)									
	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9	Area 10
0-12"	2100	2500	2800	2400	2300	5400*	6500*	6400*	6100*	6100*
12-30"	2200	2900	3600	2800	2700	3800	4100	3000	3400	3400
30-48"	3500	3400	3100	2900	2900	3100	3700	3300	2800	2800
48-66"	3400	3100	3600	3300	3100	3400	3900	3500	3200	3200
66-84"	3100	3200	3300	3600	2700	3500	3300	3900	3000	3000
84-102"	N/A	N/A	N/A	3300	3400	3800	3400	3200	2300	2300
96-104"	N/A	N/A	N/A	N/A	N/A	3100	3100	2800	2100	2100

Note: Elevated readings in location 6-10 due to granite pavers immediately below pavement surface in MacChesney Ct.

N/A = Trench not excavated to this depth at this location