



August 15, 2017

Robert W. Acker, P.E.
GEI Consultants, Inc.
Suite 140
400 N. Lakeview Parkway
Vernon Hills, Illinois 60061

RE: 401 N. Michigan Ave. Thorium Monitoring 8/10/17-8/12/17
CDOT Permit #840112

Dear Mr. Acker:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during sidewalk and curb removal at 401 N. Michigan Ave. in Chicago, Illinois. The monitoring was performed by Glenn Huber and Brian Schmidt, SAHCI Health Physics Technicians, on August 10, 2017 through August 12, 2017.

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 (with 6" collimated lead shield). The instrument was calibrated on October 14, 2016. The U.S. Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,029 counts per minute (cpm).

The average background count rate for this location was determined to be 1,800 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by surveying the surface of the ground after the layer of concrete sidewalk and curb was removed. No excavation took place beyond concrete removal.

The maximum gamma count rates for the single lift were recorded on the attached Radiation Survey Form. The surface count rates after concrete removal ranged from from 1,800 cpm to 3,200 cpm. No count rates were identified at any time that exceeded the threshold limit of 7,029 cpm.

Additional Monitoring

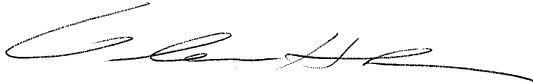
Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

Regulatory Notification of Survey Completion

A copy of this report will need to be submitted to both the City of Chicago Department of Public Health (CDPH) and USEPA, 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 'Glenn Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP
President

Radiological Soil Investigation - Sidewalk Replacement - 401 N. Michigan Ave - Chicago, IL

CHICAGO GUARANTEE SURVEY COMPANY
 A DIVISION OF
 PLCS Corporation
 PROFESSIONAL LAND SURVEYOR
 4515 NORTH ELSTIN AVE. CHICAGO, IL 60630
 TELEPHONE: (773) 486-5445 FAX: (773) 486-5478 EMAIL: INFO@PLCS.COM
Plat of Survey

EXEMPT PARCEL 1
 NON-EXCLUSIVE EASEMENTS FOR THE BENEFIT OF TRACT A FOR PEDESTRIAN IMPROVEMENTS OVER AND ABOVE THE EXISTING EASEMENTS FOR PEDESTRIAN IMPROVEMENTS...
EXEMPT PARCEL 2
 NON-EXCLUSIVE EASEMENT FOR THE BENEFIT OF TRACT A FOR THE USE AND ENJOYMENT OF THE EXPLANADE AND FOR...
EXEMPT PARCEL 3
 GRANT OF THE RIGHT AND AUTHORITY TO ENTER UPON SAID NORTH WATER STREET BETWEEN THE EAST LINE OF MICHIGAN AVENUE...
LEGEND
 Measle
 Combined Sewer and Storm Sewer
 Gas
 Fire
 Electric
 Telephone
 Metal Sign
 Wood Sign
 New Fence
 Guard Rail
 18" x 18" Sign - Electric
 18" x 18" Sign - Telephone
 18" x 18" Sign - Water
 Water Well
 Conduit
 City Electric Conduit
 City Telephone Conduit
 City Water
 8" x 8" Conduit
 12" x 12" Conduit



Soil underneath existing sidewalk surveyed during concrete removal and replacement (Approximately 6-inches bgs final grade)

Maximum Values for each area recorded in counts per minute (cpm)

- 1 - 3200 cpm
- 2 - 2200 cpm
- 3 - 1800 cpm
- 4 - 2100 cpm
- 5 - 2300 cpm



CHICAGO GUARANTEE SURVEY COMPANY
 2015-20482-002
 12 of 2

DATE: 12/16/15
 SHEET: 12 OF 2
 PROJECT: 2015-20482-002
 SURVEYOR: [Name]
 CHECKED: [Name]
 TITLE: SURVEYOR

SURVEY NUMBER:
 STREETS: NORTH MICHIGAN AVENUE & EAST NORTH WATER STREET
 LOCATION: NORTH MICHIGAN AVENUE & EAST NORTH WATER STREET
 ABOUT: ON THE NORTHLINE OF EAST NORTH WATER STREET, ABOUT 17.5 FEET WEST OF WEST LINE OF NORTH MICHIGAN AVENUE, MARK SET AT ANGLE OF 77.00° TO THE SOUTHERLY CORNER OF BRICK & CONCRETE GARAGE, MARK SET AT ANGLE OF 77.00° TO THE SOUTHERLY CORNER OF LOT 33

LEGEND

1	Any Contaminant
2	Asbestos
3	Lead
4	PCB
5	Mercury
6	Chromium
7	Vanadium
8	Antimony
9	Barium
10	Bismuth
11	Cadmium
12	Cobalt
13	Copper
14	Iron
15	Manganese
16	Molybdenum
17	Nickel
18	Phosphorus
19	Selenium
20	Silver
21	Sulfur
22	Tin
23	Zinc

- Design Architect: Foster + Partners
- Architect of Record - Site Improvements: Ross Barney Architects
- Civil Consultant: Infrastructure Engineering, Inc.
- Landscaping Consultant: Jacobs/Ryan Associates
- Electrical Consultant: Primera Engineers, Ltd.
- Lighting Consultant: Schuler Shook
- Structural Consultant: Thornton Tomasetti
- Structural Consultant: Simpson Gumpertz & Heger
- Waterproofing Consultant: Wiss, Janney, Elstner Associates, Inc.

401 North Michigan Ave.
 Riverfront Retail
 Chicago, IL

Issued / Revised	Date
CDOT Permit Set	12/16/15
95% CD Set	02/05/16
CDOT Permit Set REV1	03/29/16
100% CD Set	05/13/16

Approval: _____ Date: _____

SURVEY CONCURSE LEVEL B

AS-002