

February 28, 2019

Buddy Hix
Western Utility Contractors, Inc.
2565 Palmer Ave.
University Park, IL 60466

RE: 633-650 N. St. Clair St. Thorium Monitoring 2/23/19-2/25/19
CDOT Permit # 1061034

Dear Mr. Hix:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during excavation of a fiber optic utility conduit trench in the alley west of 633-650 N. St. Clair St. in Chicago, Illinois. The monitoring was performed by Brian Schmidt and Glenn Huber, SAHCI Health Physics Technicians, on February 23, 2019 – February 25, 2019.

Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial no. 134542 and 132844) with attached Ludlum Model 44-10 2"x2" NaI detectors (w/ 6" collimated lead shields).

Serial number 134542 was calibrated on August 6, 2018. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,262 counts per minute (cpm). The background count rate for this instrument was determined to be 2,262 cpm. This instrument was used by Glenn Huber on February 23 and 25, 2019.

Serial number 126496 was calibrated on August 6, 2018. The USEPA action level of 7.1 pCi/g total thorium for this instrument is 7,391 cpm. The background count rate for this instrument was determined to be 1,913 cpm. This instrument was used by Brian Schmidt on February 24, 2019.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above. 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 an excavation depth of 3 feet below ground surface for the conduit trench. A single location for a manhole installation was excavated to a depth of 6 feet below ground surface. All soil 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 1,700 cpm to 3,000 cpm. No count rates were found at any time that exceeded the instrument specific threshold limits of 6,262 and 7,391 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 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', written in a cursive style.

Glenn Huber, CHP
President

Radiation Survey Form

Location/ Project ID: 633-650 N. St. Clair St. Western Utility CDOT #1061034

Date: 2/23/19 - 2/25/19

Technician: Glenn Huber / Brian Schmidt

Inst Model: Ludlum 2221

Serial No.: 134542 / 132844

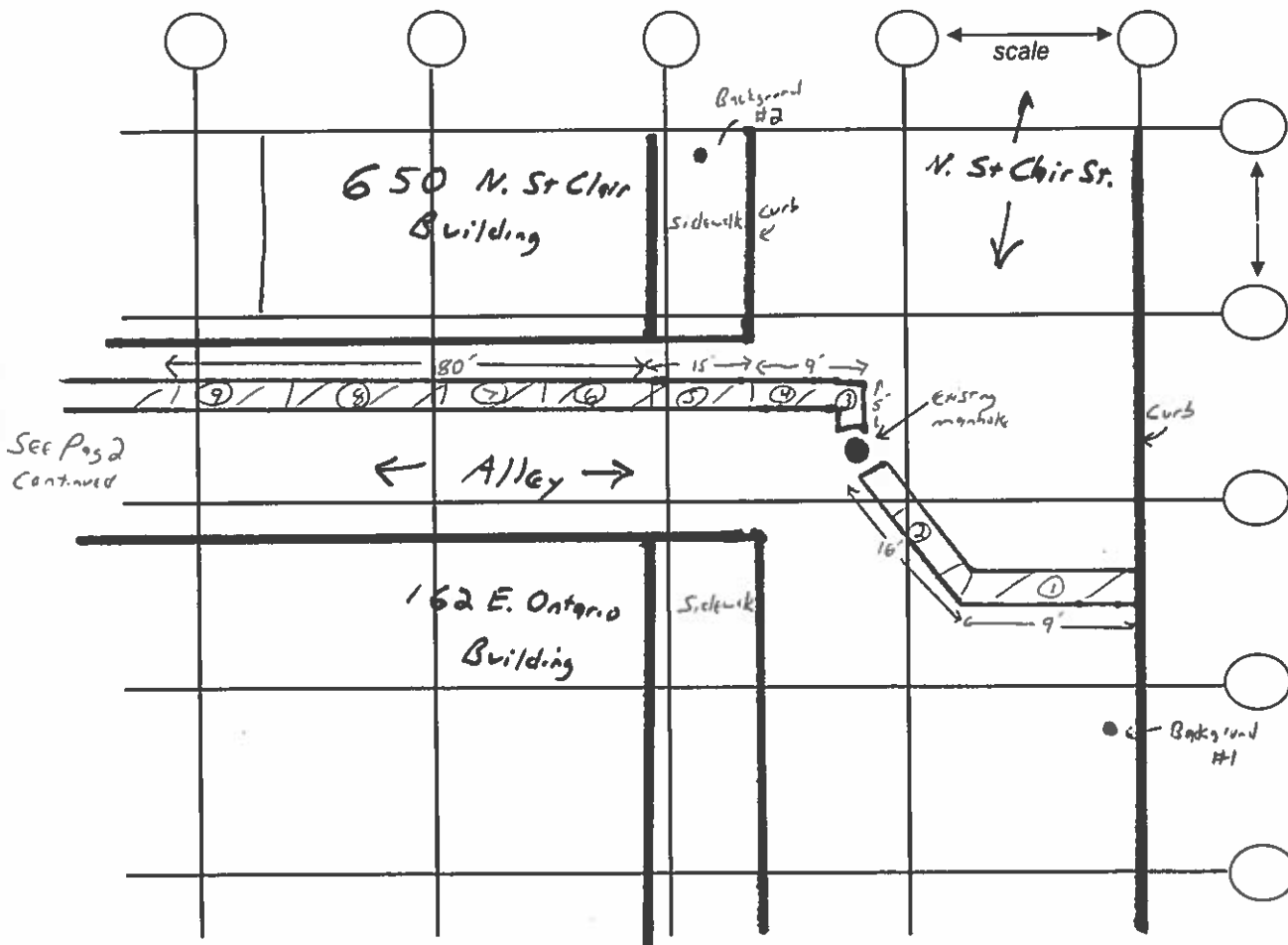
Probe Type: 1"x1" NaI 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: Trench (-3') Manhole (-6')

Background 2262/1913 cpm

Action Level: 6262, 7391 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: 633-650 N. St. Clair St. Western Utility CDOT #1061034

Date: 2/23/19 - 2/25/19

Technician: Glenn Huber / Brian Schmidt

Inst Model: Ludlum 2221

Serial No.: 134542 / 132844

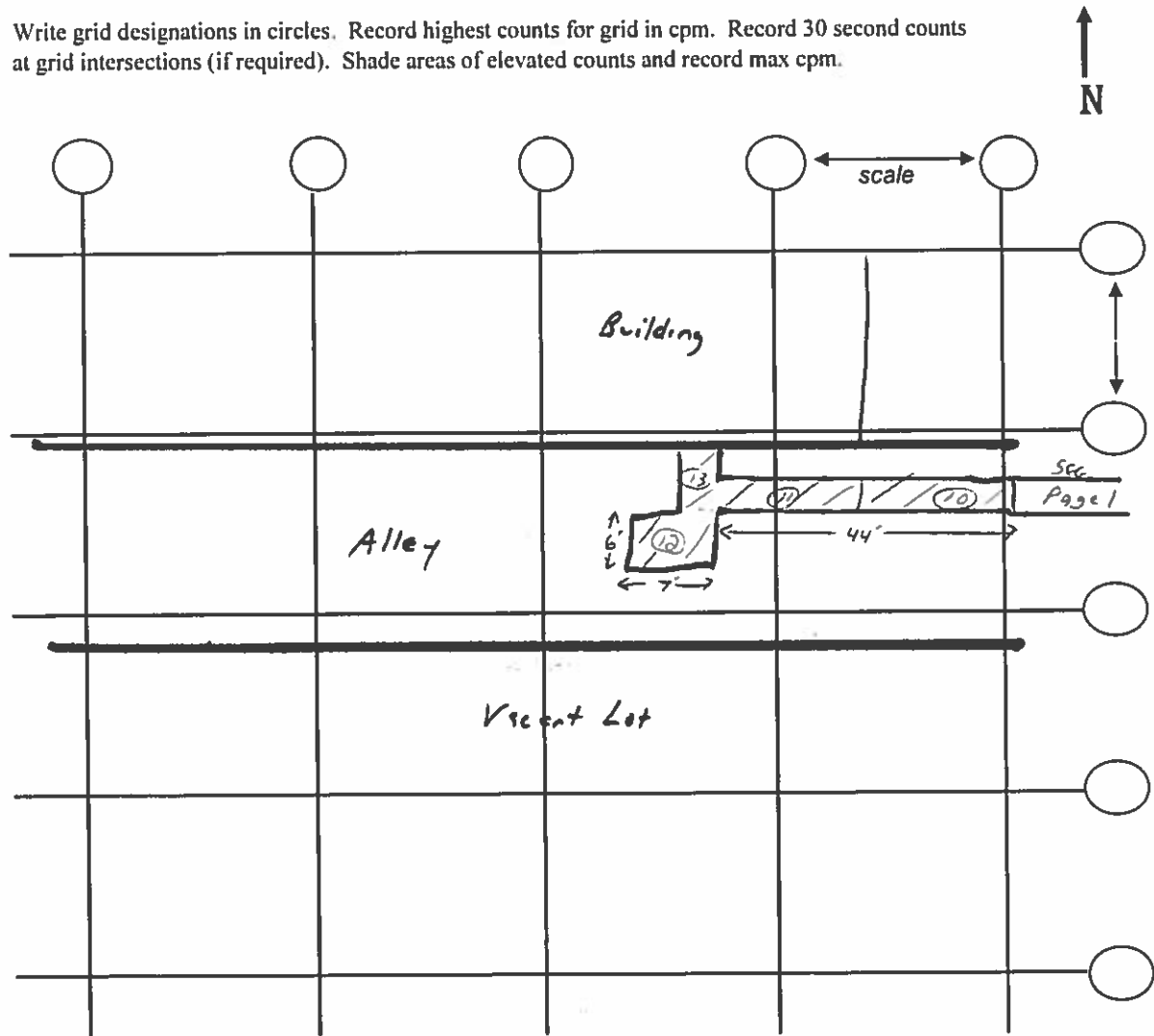
Probe Type: 1"x1" NaI / 2"x2" NaI
Shielded / Not Shielded

Lift Elevation: Trench (-3') Manhole (-6')

Background: 2262/1913 cpm

Action Level: 6262, 7391 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 Data

Project ID: 633-650 N. St. Clair St. Western Utility Contractors
 Date: 2/23/19 - 2/25/19
 Technicians: Glenn Huber (1)
 Brian Schmidt (2)
 Instrument ID: Ludlum 2221 #134542 (1)
 Ludlum 2221 #132844 (2)
 7.1 pCi/g Action Level: 6,262 cpm (1)
 7,391 cpm (2)

Location #1 GH	CPM
Surface	1800
-18"	2100
-36"	2400

Location #8 BS	CPM
Surface	1700
-18"	2900
-36"	3000

Location #2 GH	CPM
Surface	2000
-18"	2400
-36"	2600

Location #9 BS	CPM
Surface	1900
-18"	2600
-36"	2800

Location #3 GH	CPM
Surface	2100
-18"	2000
-36"	2300

Location #10 BS	CPM
Surface	2100
-18"	2400
-36"	2600

Location #4 GH	CPM
Surface	2200
-18"	2300
-36"	2300

Location #11 GH	CPM
Surface	2000
-18"	2300
-36"	2700

Location #5 GH	CPM
Surface	2400
-18"	2300
-36"	2500

Location #12 GH	CPM
Surface	2200
-18"	2300
-36"	2000
-54"	1800
-72"	2000

Manhole Install

bucket

bucket

Location #6 BS	CPM
Surface	2200
-18"	2300
-36"	2600

Location #13 GH	CPM
Surface	2300
-18"	2100
-36"	2300

Location #7 BS	CPM
Surface	1900
-18"	2700
-36"	2900