

August 2, 2016

Jack Las  
Western Utility Contractors, Inc.  
2565 Palmer Ave.  
University Park, IL 60466

RE: N. St. Clair St. and Grand Ave. Thorium Monitoring

Dear Mr. Las:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation and repair of an existing Comcast utility duct located along N. St. Clair Street and Grand Avenue in Chicago, Illinois. Four separate excavations were performed along the duct line. The monitoring was performed on July 13, 14, and 20, 2016.

#### Instrumentation

Surface gamma scans were performed by Brian Schmidt and Glenn Huber using the following instruments:

Ludlum Model 2221 Scaled / Ratemeter (serial no. 126496) with attached 2"x2" NaI probe (6" lead shielded). The instrument was calibrated on October 15, 2015. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,054 counts per minute (cpm). The average background count rate for this location was determined to be 1,963 cpm.

Ludlum Model 2221 Scaled / Ratemeter (serial no. 1234542) with attached 2"x2" NaI probe (6" lead shielded). The instrument was calibrated on August 13, 2015. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 5,816 counts per minute (cpm). The average background count rate for this location was determined to be 1,251 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeters described above. Data was collected by monitoring the soil in each 18 inch lift as it was removed from the excavation and recording the highest count rate for the floor and walls to an excavation depth of 3 feet below ground surface. No soil was stockpiled during the project and all excavated materials were loaded directly into trucks after screening.

The maximum gamma count rates for each 18 inch lift are detailed on the attached Radiation Survey Forms. The count rates in the excavations ranged from 1,200 cpm to 4,100 cpm. No count rates were found at any time that exceeded the instrument specific threshold limits of 7,054 cpm and 5,816 cpm.

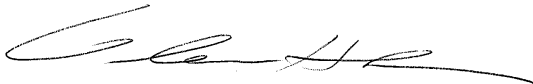
#### Additional Monitoring

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.

You will need to forward a copy of this report to the City of Chicago Department of Public Health (Attn: Rahmatunsia Begum) with the CDOT Permit Number in the subject line. I will be providing a copy of this report to 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

### Radiation Survey Form

Location/ Project ID: WESTERN Utility - 5410 ST + ST. CLAIR ST. - UTILITY REPAIR. EXCAVATION - CHICAGO, IL

Date: 7/13/2016

Technician: BRIAN SCHMIDT

Inst Model: CUDUM-2221

Serial No.: 126496

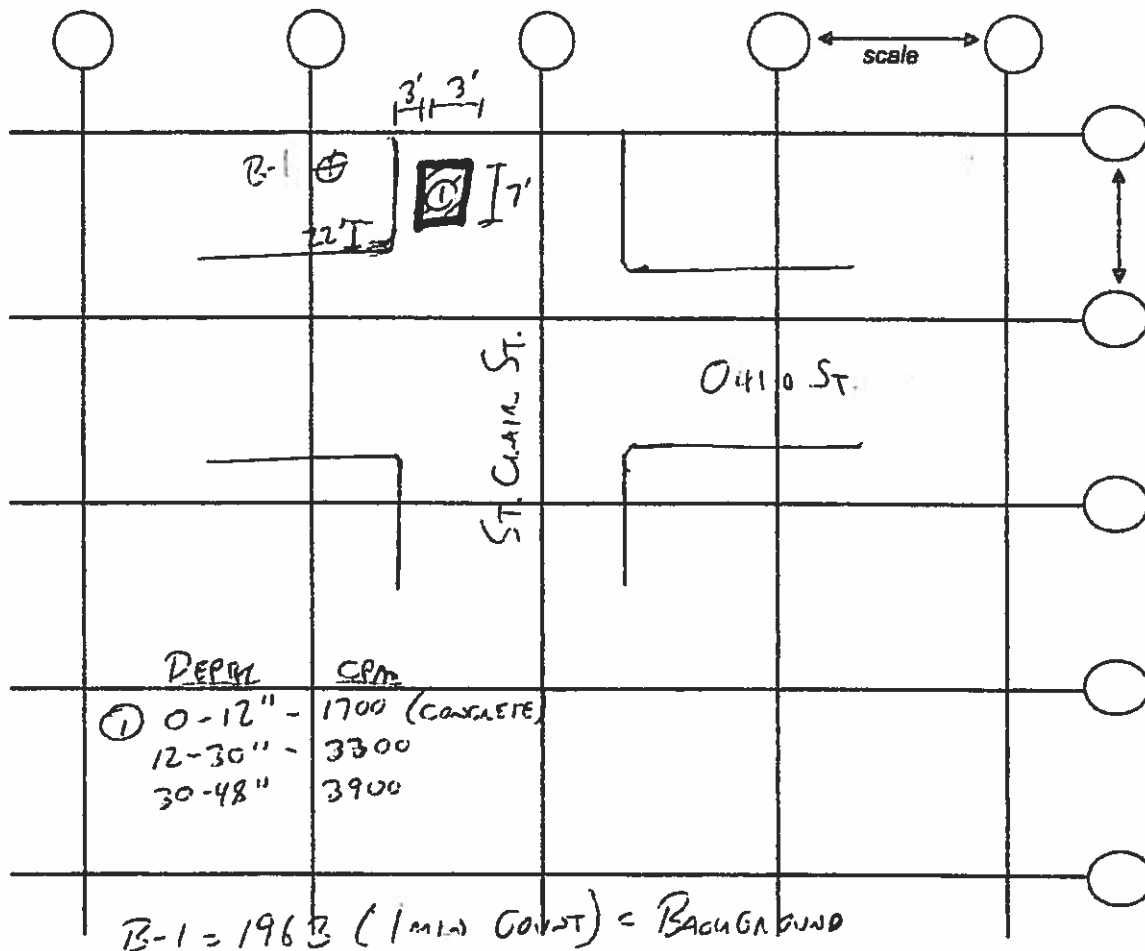
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: 0 - 30"

Background 1963 cpm

Action Level: 7054 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: WESTERN UTILITY - OHIO ST. + ST. CLAIR ST. - UTILITY REPAIR EXCAVATION - CHICAGO, IL

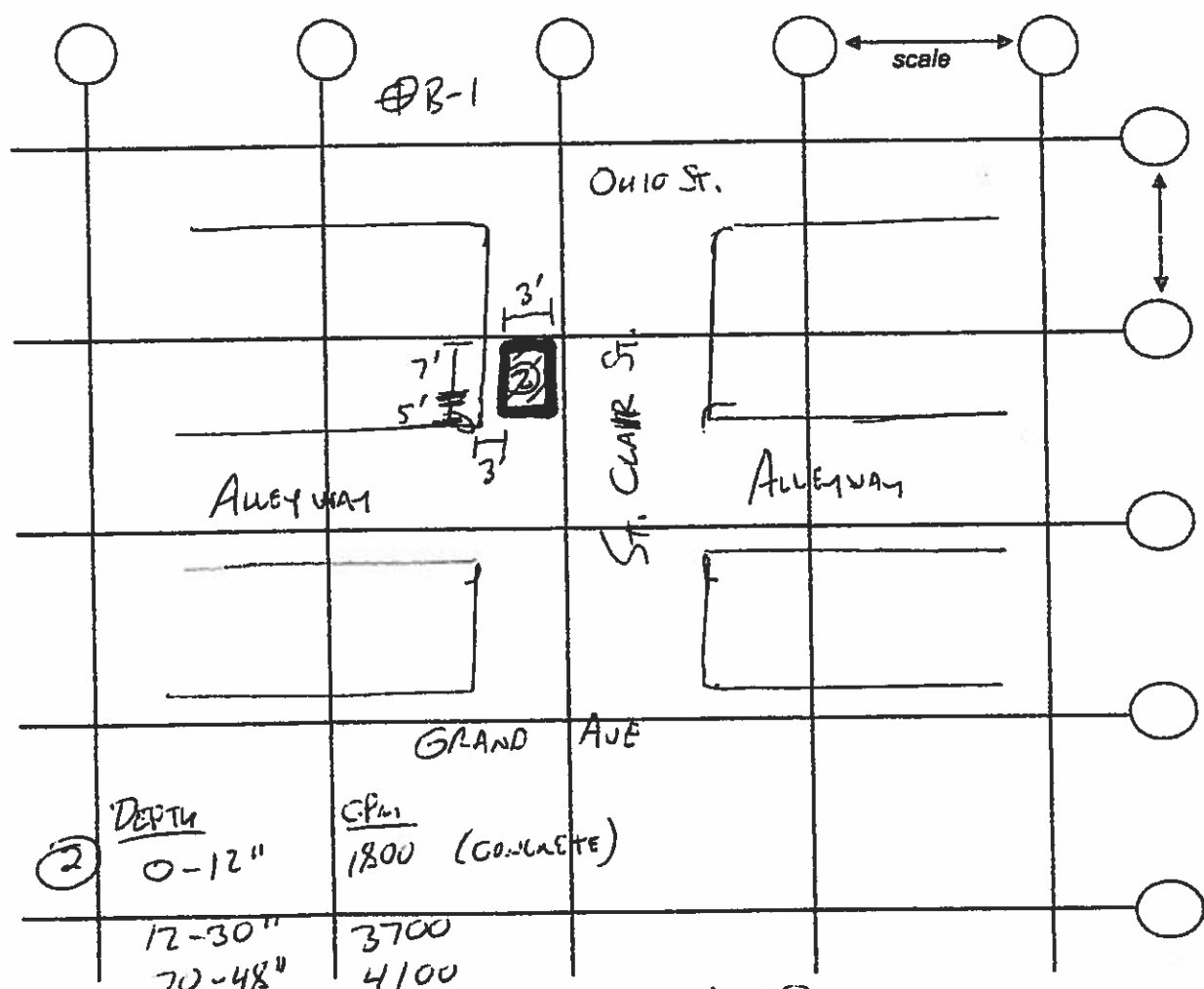
Date: 7/14/2016 Technician: BRIAN SCUMIOT

Inst Model: LUDLUM-2221 Serial No.: 126496

Probe Type: 1"x1" NaI / 2"x2" NaI / Shielded / Not Shielded Lift Elevation: 0-30"

Background 1963 cpm Action Level: 7054 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.



DEPTH	CPM
② 0-12"	1800 (CONCRETE)
12-30"	3700
30-48"	4100

$R-1 = 1963 \text{ (MIN COUNT)} = \text{BACKGROUND}$

## Radiation Survey Form

Location/ Project ID: Western Utility Contractors - Grand & St. Clair Parklets

Date: 7/20/16 Technician: Glenn Huber

Inst Model: Ludlum 2201 Serial No.: 134542

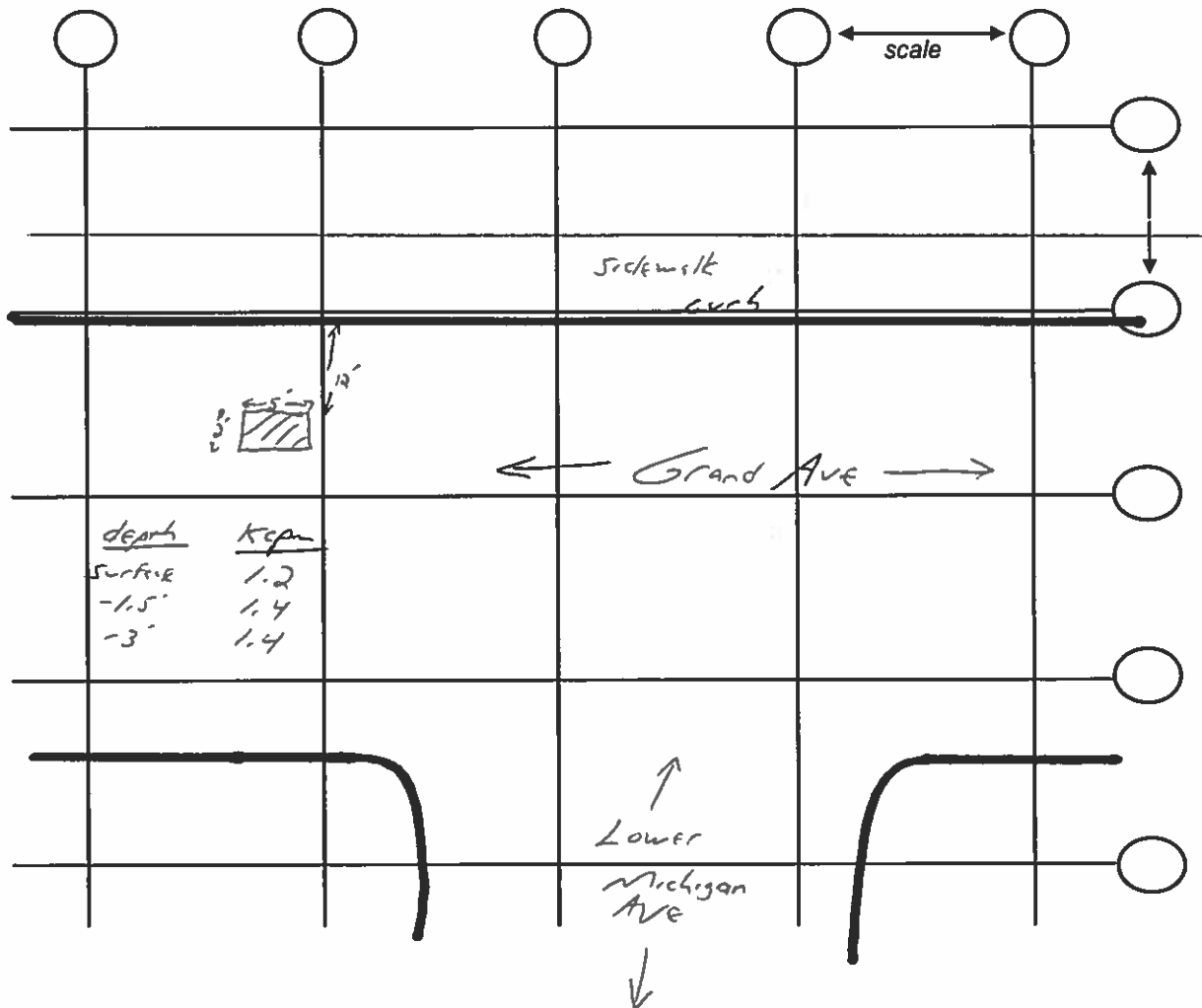
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: Surface → -3'

Background 1257 cpm

Action Level: 5816 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.



depth	Kcpm
Surface	1.2
-1.5'	1.4
-3'	1.4

= Excavated area

## Radiation Survey Form

Location/ Project ID: Western Utility Contractors - Grand & St. Clair Potholes

Date: 7/29/16

Technician: Glen Huber

Inst Model: Ludlum 2221

Serial No.: 134542

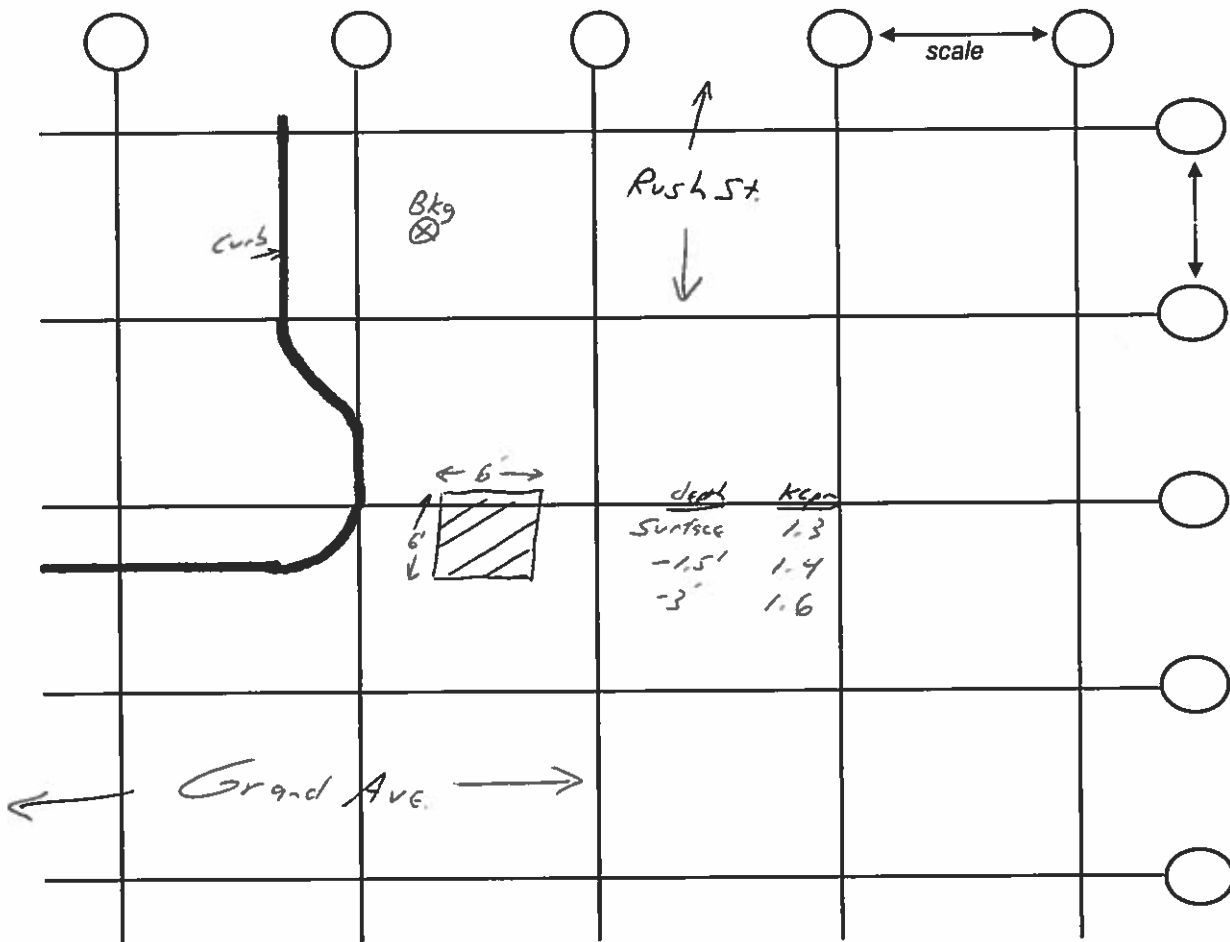
Probe Type: 1"x1" NaI / ~~2"x2" NaI~~  
Shielded / Not Shielded

Lift Elevation: surface → -3'

Background 1251 cpm

Action Level: 5816 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.



= excavated area

Bkg = 1251cpm