

## Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

200 North Cedar Road - New Lenox, Illinois 60451-1751 - (800) 383-0468 or (815) 485-6161 - FAX (815) 485-4433 - Email sahci@sahci.com - Home Page www.sahci.com

November 24, 2020

Paul Muszynski Electric Conduit Construction 816 Hicks Drive Elburn, IL 60119

RE: Thorium Monitoring 120-215 E. Ontario St.

CDOT Permit #1306983

Dear Mr. Muszynski:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation and installation of a fiber optic and power conduit at 120-215 E. Ontario Street in Chicago, Illinois. The monitoring was performed by Glenn Huber, Brian Schmidt and Mark Dewald, SAHCI Health Physics Technicians, on November 9, 2020 through November 13, 2020.

#### Instrumentation

Surface gamma scans were performed using Ludlum Model 2221 Scaler / Ratemeters (serial no. 132844 and 134542) with attached Ludlum Model 44-10 2"x2" Nal Detectors (w/ 6" collimated lead shields). Both instruments were last calibrated on July 28, 2020.

The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for instrument serial number 132844 is 7,592 counts per minute (cpm). The USEPA action level of 7.1 pCi/g total thorium for instrument serial number 134542 is 7,228 cpm.

The background count rate for this location ranged from 1,202 cpm – 1,768 cpm.

### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by entering the excavation trench and recording the highest count rate for the floor and walls to a maximum excavation depth of 4 feet below ground surface. Soil was loaded directly into a truck for offsite 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 1,300 cpm to 3,800 cpm. No count rates were found at any time that exceeded instrument specific threshold limits of 7,592 cpm and 7,228 cpm, respectively.

### **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.

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.

Glenn Huber, CHP President

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CDOT #1306983

## Radiation Survey Form

Location/ Project ID: 120-215 E. Ontario St. ECC

Date: 11/9/20-11/10/20 Technician: Glenn Huber

Inst Model: Ludlum 2221 Serial No.: 134542

Probe Type: 1"x1" Nal / 2"x2" Nal Lift Elevation: Surface to -3 ' BGS
Shielded Not Shielded

Background 1,768 cpm Action Level: 7,228 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.

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Radiation Survey Form

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|                     | Inst Model:                            | LUDLUM  | - 7221                                | Ser                        | rial No. :                  | _13               | 12844                   |          |   | -          |     |
|                     | Probe Type                             |   | / 2 x2" Na<br>/ Not Shielded          | Lift                       | Elevatio                    | n:                | 0-364                   |          |   |            |     |
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Radiation Survey Form

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|---|--|-------------|
| Location/ Project ID: ECC - Sr. CLAIR St                      | T. + ONTALD ST PAGER LISTALL - KOW   | CALL SURVEY |
| Date: 11/11-12/2020   | Technician: Bugs Schalot   |             |
| Inst Model: Ludium - 2721                                     | Serial No.: 132844   | <u></u> -   |
| Probe Type: 1"x1" Nat / (2"x2" Nat<br>Shielded / Not Shielded | Lift Elevation: 0-36"  | <u>.</u>    |
| Background 1701 cpm   | Action Level: 7792 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.

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CDOT #1306983

# Radiation Survey Form

Location/ Project ID: 120-215 E. Ontario St. ECC

| Date:11/13/20  | Technician: _     | Mark Dewald        |
|--|-------------------|--------------------|
| Inst Model: Ludlum 2221                                  | Serial No. :      | 134542             |
| Probe Type: 1"x1" Nat (2"x2" Na<br>Shielded / Not Shield | Lift Elevation:   | Surface to -4' BGS |
| Background 1,202 cpm                                     | Action Level: _7, | 228 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.

