

# 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

September 4, 2018

Mike Lanenga SET Environmental 450 Sumac Road Wheeling, Illinois 60090

RE: 400 E. Riverwalk Thorium Monitoring 8/29/18

Industrial Fence, Inc. (for 2FM)

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the drilling of 6 borings for traffic bollards at 400 E. Riverwalk in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on August 29, 2018. All activities were conducted under the guidance of document *SET General Procedure for Thorium Monitoring*.

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 126496) with attached Ludlum Model 44-10 2"x2" Nal probe (w/ 6" collimated lead shield). The instrument was calibrated on October 11, 2017. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,366 counts per minute (cpm).

The average background count rate for this location was determined to be 2,109 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Surface gamma scans were performed on all boring spoils generated to a maximum depth of 4 feet below ground surface.

The maximum gamma count rate for each 2.0-foot boring interval was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,700 cpm to 4,500 cpm. No count rates were found at any time that exceeded the instrument specific threshold limits of 7,366 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.

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Glenn Huber, CHP

President

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Radiation Survey Form

| \$8   | Naulatioi   | Juivey                                       | , OIIII                               | 1 2 1 - 1                        |
|---|---|--|---------------------------------------|----------------------------------|
| Location/ Project ID:   | PIVERWALU - CH                                    | 1/cago , FL -                                | BULLINO POST                          | INSTALLATION - ROW RAD<br>SURVET |
| Date: 8/29/2018   |   | Technician:                                  | BRIAN Scyn                            | 1101                             |
| Inst Model:   | - 2221  | Serial No. :                                 | 126496                                |                                  |
| Probe Type: 1"x1" Nal   | / 2x2*Na/<br>Not Shielded                         | Lift Elevation                               | : 08:05 0                             | -4"                              |
| Background 2109   | cpm   | Action Level:                                | 7366 cpm                              |                                  |
| Write grid designations in circle at grid intersections (if required) | es. Record highest cou<br>). Shade areas of eleva | nts for grid in cpm.<br>ated counts and reco | Record 30 second cour<br>ord max cpm. | nts <b>V</b>                     |
|   | $\overline{)}$                                    | $\bigcirc$                                   | scale                                 | +                                |
|   |   | ?  |                                       |                                  |
|   |   | PEDESTRIPA<br>TUNG                           | LAME SHORE PRIME                      |                                  |
|   |   |  |                                       |                                  |
|   | B-1<br>B-2<br>B-3                                 | B-4  | B-6 \$BA                              | CNOVO                            |
| BORING IO B-4 B-5   | DEPTH CPN<br>0-2' 170<br>2-4' 450                 | 0  |                                       |                                  |
| B-5   | 0-2' 210  | 96   |                                       |                                  |
| B-6   | 7-4' 400<br>0-2' 1700<br>2-4' 3700                | <b>Q</b>                                     | BACKGROV                              | NO =<br>[/mi=ute Count)          |
| 3-3   | 2-4' 410  | اری<br>ا                                     | 2109 cpm                              | [ MINTE COUNT)                   |
| B-2   | 0-2' 2700   | 7  |                                       | +                                |
| 11 3-1  | 2-4' 4100   | ار   |                                       |                                  |