



March 13, 2019

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: Thorium Monitoring: 47-100 E. Lower Wacker Dr. (Riverwalk 2FM)
CDOT Permit No.1052438

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the performance of a single geotechnical boring at 47-100 E. Lower Wacker Dr. in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on March 1, 2019. 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. 132844) with attached Ludlum Model 44-10 2"x2" NaI detector (w/ 6" collimated lead shield). The instrument was calibrated on October 15, 2018. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,391 counts per minute (cpm).

The background count rate for this location was found to average 1,773 cpm.

Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was by monitoring the core samples that were collected at 1.5 foot intervals to a maximum depth of 20 feet below ground surface.

The maximum gamma count rate for each boring interval was recorded on the attached Radiation Survey Form. The count rates of the core samples ranged from 1,200 cpm to 1,900 cpm. No count rates were found at any time that exceeded the threshold limit of 7,391 cpm.

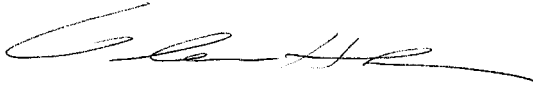
Additional Monitoring

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.

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.

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: RIVERWALK - CHICAGO, IL - ELEVATOR PIT BORING - RADIOLOGICAL SOIL SURVEY

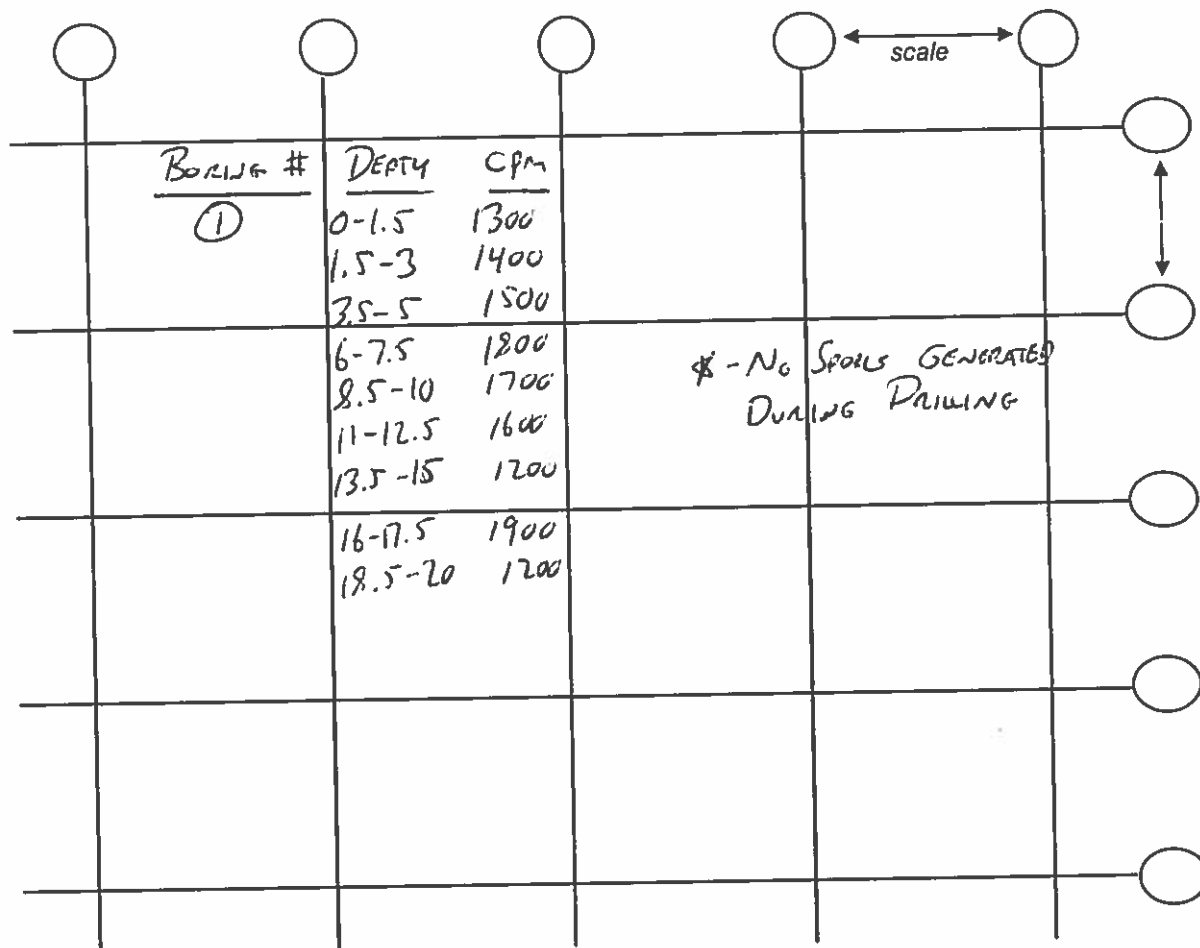
Date: 3/1/2019 Technician: BILLY SCHMIDT

Inst Model: LVOLVM-2221 Serial No.: 132844

Probe Type: 1"x1" NaI / 2"x2" NaI Lift Elevation: 0-20'
Shielded / Not Shielded

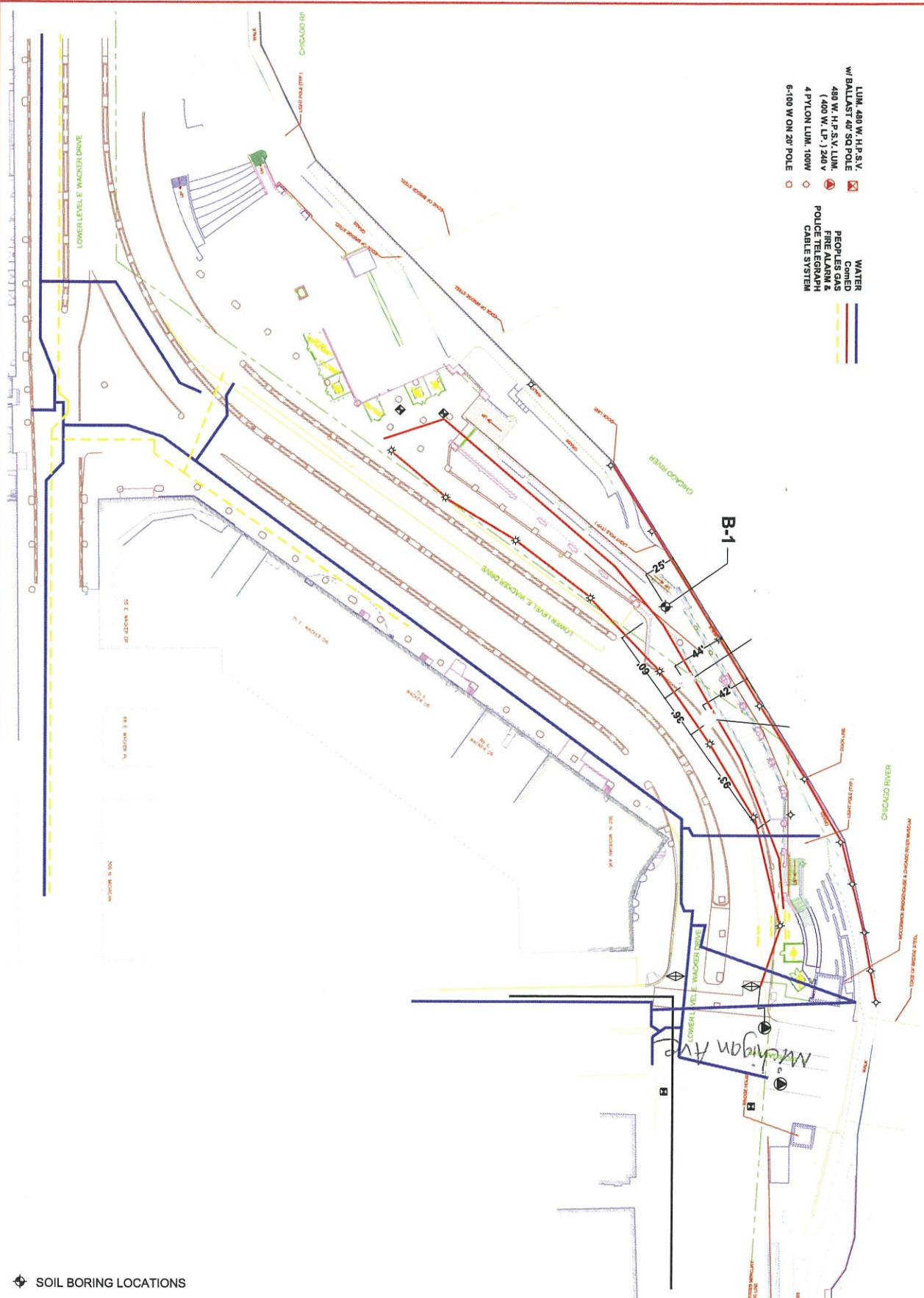
Background 1773 cpm Action Level: 7391 cpm

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.



- ☑ LUM. 480 W. H.P. S.Y.
- ☑ w/ BALLAST 40' SQ. POLE
- 480 W. H.P. S.Y. LUM.
- (400 W. L.P.) 240 V
- 4 PYLON LUM. 100W
- 6-100 W ON 20' POLE

- WATER
- COMED
- PEOPLES GAS
- FIRE ALARM &
- POLICE TELEGRAPH
- CABLE SYSTEM



⊕ SOIL BORING LOCATIONS

NOTE:
 BOREHOLE DEPTH = APPROXIMATE 60 FEET
 BOREHOLE DIAMETER = APPROXIMATE 8 INCHES



DATE	11/02/18
SHEET	1
PROJECT NO.	16-12375-A
SCALE	Approx. 1"=70'
ENGINEER	AEK
DRAFTING	LGM
ECS REVISIONS	
<p style="text-align: center;">Lower Wacker Drive Chicago, IL Chicago's First Lady</p>	



BORING LOCATION DIAGRAM
 Chicago Riverwalk