



May 12, 2020

958187

Mike Lanenga  
SET Environmental  
450 Sumac Road  
Wheeling, Illinois 60090

RE: Thorium Monitoring – Chicago Riverwalk Playground Footings Installation  
CDOT Permit: 1223651

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the installation of 21 borings performed for the installation of a playground at the Chicago Riverwalk (Sub-lower Wacker Dr., between Lake Shore Dr. and Columbus Dr.) in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on April 23, 2020. 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 August 6, 2019. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,299 counts per minute (cpm).

The average background count rate for these locations was measured at 1,868 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by monitoring the spoils generated during the boring process and the inside of the completed borings and recording the highest count rate to a maximum boring depth of 4 feet below ground surface.

The maximum gamma count rate for each boring was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 2,400 cpm to 4,600 cpm. No count rates were found at any time that exceeded the threshold limit of 7,299 cpm.

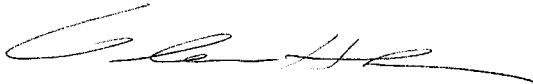
Additional Monitoring

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

Stan A. Huber Consultants, Inc.

Location: Riverwalk Playground  
Name: Brian Schmidt  
Date: 12/19/2019

Instrument ID:  
7.1 pCi/g CPM:

Ludlum Model 2221 Scaler/Ratemeter w/  
Model 44-10 NaI Detector (w/ 6" Lead Shield)  
7,299 CPM (serial no. 132844)

Date	Depth Boring ID	0'-4' (bgs) Survey Results (cpm)
4/23/2020	1	2900
4/23/2020	2	2400
4/23/2020	3	3200
4/23/2020	4	3400
4/23/2020	5	3900
4/23/2020	6	3000
4/23/2020	7	2800
4/23/2020	8	3500
4/23/2020	9	3400
4/23/2020	10	3000
4/23/2020	11	2400
4/23/2020	12	2800
4/23/2020	13	3000
4/23/2020	14	3600
4/23/2020	15	3400
4/23/2020	16	3900
4/23/2020	17	3800
4/23/2020	18	4200
4/23/2020	19	4400
4/23/2020	20	3500
4/23/2020	21	3500
4/23/2020	22	4600

# Riverwalk Playground Boring Location Map

