

February 4, 2017

Mike Lanenga
SET Environmental
450 Sumac Road
Wheeling, Illinois 60090

RE: 201 – 211 E. Grand Ave. Thorium Monitoring – City of Chicago Department of Water Management

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation and repair of a manhole and a catch basin located at 201 – 211 E. Grand Avenue in Chicago, Illinois. The monitoring was performed by Brian Schmidt, SAHCI Health Physics Technician, on January 26, 2017. 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 Scaled / Ratemeter (serial no. 126496) with attached 2"x2" NaI probe (w/ 6" collimated lead shield). The instrument was calibrated on October 14, 2016. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,029 counts per minute (cpm).

The average background count rate for this location was determined to be 1,779 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 excavations after each 18 inch lift and recording the highest count rate for the floors and walls to a maximum excavation depth of 1.5 feet. All soil was loaded directly into a truck for 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 1,700 cpm to 3,900 cpm. No count rates were found at any time that exceeded the threshold limit of 7,029 cpm.

Additional Monitoring

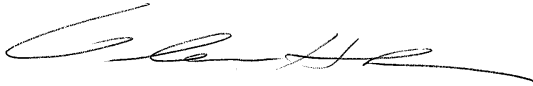
Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

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 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', written in a cursive style.

Glenn Huber, CHP
President

Radiation Survey Form

Location/ Project ID: 201-211E. GRAND AVE. - MANHOLE REPAIR/REPLACEMENT - DWM - CHICAGO, IL ROW RAD SURVEY

Date: 1/26/2017 Technician: BRIAN SCHMIDT

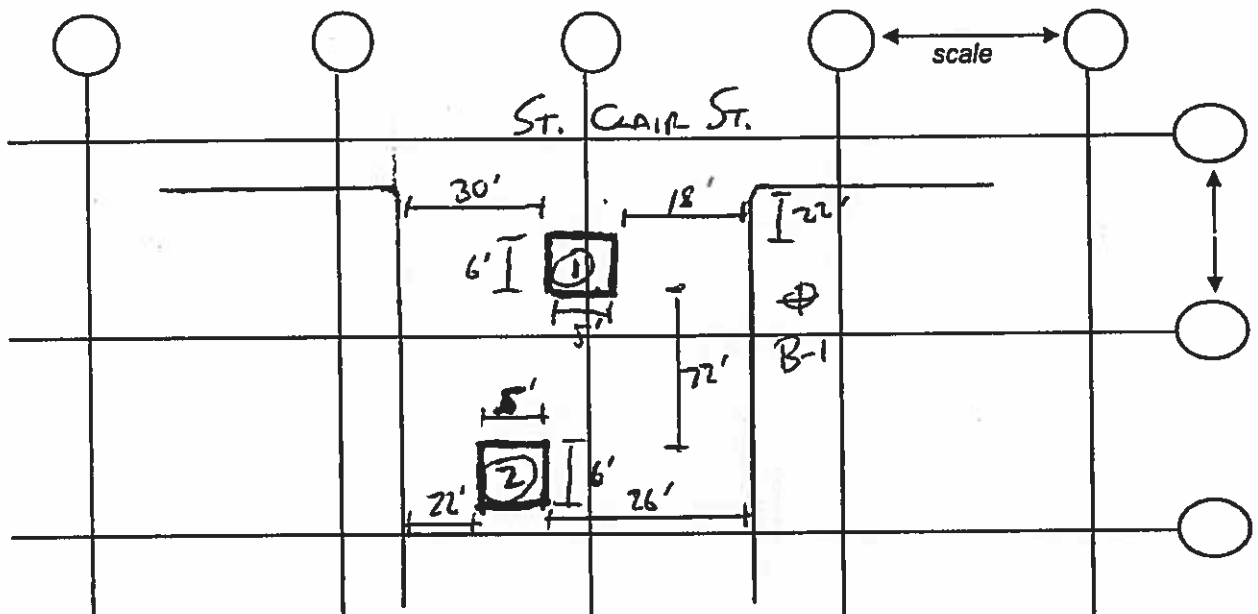
Inst Model: LUOVUM-2221 Serial No.: 126496

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

Lift Elevation: 0-18"

Background 1779 cpm Action Level: 229 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.



EXCAVATION #	DEPTH	CPM
①	0-6"	2500
	6-24"	3900
	18-36"	3300
②	0-6"	1700
	6-24"	3900
	12-30"	3700

GRAND AVE.

B-1 = BACKGROUND = 1779 cpm
(1 MIN COUNT)