

Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

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May 24, 2019

Mike Lanenga SET Environmental 450 Sumac Road Wheeling, Illinois 60090

RE: 130 E. Ohio St. Thorium Monitoring – City of Chicago Department of Water

Management

CDOT Permit: 1098659

Dear Mr. Lanenga:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to provide radiation monitoring during the excavation for replacement of a City of Chicago Department of Water Management manhole in the alley north of 130 E. Ohio St. in Chicago, Illinois. The monitoring was performed by Jeremy Kieser, SAHCI Health Physicist, on May 21, 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. 126497) with attached Ludlum Model 44-10 2"x2" Nal detector (w/ 6" collimated lead shield). The instrument was calibrated on October 15, 2018. The US Environmental Protection Agency (USEPA) action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,319 counts per minute (cpm).

The average background count rate for this location was measured as 2,288 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 and recording the highest count rate for the floor and walls to an excavation depth of 10 feet below ground surface. Material excavated below 3 feet below ground surface was surveyed in the excavator bucket prior to loading in the truck for disposal.

The maximum gamma count rate for each 18-inch lift was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 2,500 cpm to 2,800 cpm. No count rates were found at any time that exceeded the threshold limit of 6,319 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.

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Glenn Huber, CHP

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	Kaulation Survey Form									
	Locat	tion/ Proj	ject ID: j	098659	130 E Ohio St Alley - DWM					
	Date: May 21, 2019				Technician: Jeremy Kieser					
	Inst Model: Ludlum 2221				Serial No.: 126497					
	Prob			/ 2"x2" Nal / Not Shielded	Lift Elevation: Surface to 10ft					
	Background 2288 cpm				Action Level: <u>6319</u> cpm					
	_	_		-	I highest counts for grid in cpm. Record 30 second counts areas of elevated counts and record max cpm.					
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