

November 21, 2022

978557

Ron Schrack  
Schrack Environmental Consulting, Inc.  
24636 West Renwick Road  
Plainfield, Illinois 60544

RE: 218 E. Grand Ave. – Thorium Monitoring Interim Report November 2022

Dear Mr. Schrack:

Stan A. Huber Consultants, Inc. (SAHCI) was hired by SC Grand Development LLC to provide radiological monitoring during construction activities at 218 E. Grand Avenue in Chicago, Illinois.

Thorium monitoring was conducted in accordance with the *Thorium Investigation Work Plan for 218 E. Grand Avenue*, dated July 15, 2022 (Work Plan), and approved by U.S. EPA on correspondence dated August 1, 2022. Per the Work Plan, monitoring for thorium is required within the boundaries of the property until native material has been reached in addition to surveys required in rights-of-way outside of the property boundaries.

Demolition of the former above-ground parking garage structure has been completed. The site has been delineated into 55 grids so that radiation surveys and locations could be documented. Surface surveys of the concrete slab at street level were started on November 14, 2022. Demolition debris was still present throughout the site, so a complete slab survey could not be completed on the entire site prior to the start of slab removal. Slab removal and subsurface excavation was started only in areas where the surface survey was completed. The surface slab survey was completed on November 19, 2022. Excavation of the grids to native material (approx. 10.5 feet below ground surface) and removal of below grade obstructions continues and is expected to take several weeks to complete.

Thorium monitoring was performed for the following construction activities:

Concrete Slab Removal	11/14/22 – 11/19/22
Excavation	11/14/22 - present

#### Instrumentation

Surface gamma scans were performed using a Ludlum Model 2221 Scaler / Ratemeter (serial no. 126496) with attached Ludlum Model 44-10 2"x2" NaI Detector (w/ 6" collimated lead shield). The instrument was last calibrated on May 3, 2022. The US Environmental Protection Agency (USEPA) Field Action Level (FAL) of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 7,819 counts per minute (cpm).

The average background count rate for this location was measured at 1,759 cpm.

#### Soil Gamma Scans – Concrete Surface Slab

The surface scan of the surface concrete slab was performed on November 14, 2022 – November 19, 2022. Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Survey data was collected by walking over the ground surface of each grid (3-foot spaced transects) and recording the highest count rate for each 20 feet by 20 feet grid. A total of 55 grids are present at the site. Grids 1-15 on the eastern portion of the site have a basement/crawlspace area, so the slab survey did not take place until the 54 inches to 72 inches below ground surface interval.

The maximum gamma count rates on the surface slab were recorded on the attached Radiation Survey Form. The count rates on the slab ranged from 1,800 cpm to 3,400 cpm. No count rates were found at any time that exceeded the threshold limit of 7,819 cpm.

#### Soil Gamma Scans – Excavation

As of November 19, 2022, 21 of the 55 grids have been excavated to native material. 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 each 18-inch lift to a depth of 126 inches below ground surface. Concrete and other subsurface structures are being removed throughout the excavation process for offsite disposal. Excavation of the individual grids only took place once a surface gamma scan was completed on the concrete slab above it. Material that has been screened and found to have count rates below the FAL is placed back into the excavation after native depths have been reached.

The maximum gamma count rates on the surface and each lift were recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 2,300 cpm to 5,300 cpm. No count rates were found at any time that exceeded the threshold limit of 7,819 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.

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.




Glenn Huber, CHP  
President

**Radiation Survey Form**  
**218 E. Grand Ave. Thorium Survey Results**

Technician:	Brian Schmidt	Background: 1759 cpm
Project ID:	218 E. Grand Ave.	
Instrument ID:	Ludlum Model 2221 w/ Ludlum Model 44-10 NaI w/ 6" shield (serial no. 126496)	7.1 pCi/g Thorium FAL: 7,819 cpm

Date	Area #	0-18"	18-36"	36-54"	54-72"	72-90"	90-108"	108-126"	126-144"
11/15/2022	1				2300	2900	3500	3800	2800
11/15/2022	2				2400	3900	3900	4100	2800
11/16/2022	3				2700	4300	3900	4100	2700
11/16/2022	4				2900	3300	3300	3400	2700
11/16/2022	5				2800	3400	3300	3500	2700
11/15/2022	6				2700	4000	3200	2800	2900
11/15/2022	7				2600	4000	3400	2600	2400
11/16/2022	8				2400	3500	4100	4400	2800
11/16/2022	9				2900	3500	3800	3200	2300
11/16/2022	10				3100	3600	3400	4000	2500
11/16/2022	11				2000	2400	3100	3000	2700
	12				3400				
	13				3200				
	14				2800				
	15				2800				
	16	2500							
	17	2500							
	18	2700							
	19	2700							
	20	2500							
11/18/2022	21	2700	3700	4000	4200	3700	3500	3900	2800
11/19/2022	22	2400	3300	3500	3900	3700	3800	3100	2600
	23	2000							
	24	2200							
	25	3000							
11/18/2022	26	3100	3500	3400	3700	3500	3400	3200	2900
11/19/2022	27	2600	4600	4100	3900	3400	3100	3000	2800
	28	2600							
	29	2000							
	30	2300							
11/18/2022	31	2600	3400	5000	3700	3600	3400	3300	2700
11/19/2022	32	2700	4900	4500	5100	5000	3600	3300	2600
	33	2300							
	34	2500							
	35	2400							
11/19/2022	36	2500	3700	5100	3600	3700	3400	3000	2900
	37	2800							
	38	2400							

Date	Area #	0-18"	18-36"	36-54"	54-72"	72-90"	90-108"	108-126"	126-144"
	39	2100							
	40	2000							
11/17/2022	41	2900	3900	4300	4200	3700	3900	3600	2900
	42	2500							
	43	2600							
	44	2300							
	45	2100							
11/17/2022	46	2700	3200	4300	4200	3900	3800	3300	2600
	47	2800							
	48	2300							
	49	2800							
	50	2200							
11/17/2022	51	2700	3800	4300	5300	3800	4300	3600	2800
	52	2600							
	53	2300							
	54	1800							
	55	2000							

 = basement present in grid so surface slab does not start until -54" lift interval

 = Not excavated yet, as of 11/19/22

All results in counts per minute (cpm)

# 535 N. St. Clair St. Site Diagram



820
825
830
835
840
845
850
855
860
865
870
875
880
885
890
895
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995