



April 18, 2014

Robert W. Acker  
GEI Consultants, Inc.  
115 Lake Street, Unit 202  
Libertyville, IL 60048

RE: Thorium Monitoring at 259 E. Erie St on April 15, 2014

Dear Mr. Acker:

Stan A. Huber Consultants, Inc (SAHCI) was contracted by your firm to provide radiation monitoring after the excavation of sidewalk at 259 E. Erie St. in Chicago, Illinois. The monitoring was performed on April 15, 2014.

#### Instrumentation

I performed surface gamma scans using a Ludlum Model 2221 Scaler / Ratemeter with attached 2"x2" NaI probe. The instrument was calibrated on October 18, 2013. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 17,574 counts per minute (cpm). The average background count rate for this location was found to be between 5,200 cpm and 6,600 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Data was collected by surveying the surface of the ground after the sidewalk along both Fairbanks Ct. and Ontario St. had been removed. The depth of the excavation ranged from the surface to 2.5 feet deep.

The maximum gamma count rates observed are detailed on the attached Radiation Survey Form. The count rates for the sidewalk ranged from 5,600 cpm to 16,800 cpm. There were two locations along Ontario St. with elevated count rates approaching the threshold limit correlating to 7.1 pCi/g total thorium. These areas were re-surveyed using a 6" collimated lead shield to ensure that there were no levels that exceeded 7.1 pCi/g. These locations along with additional survey data are identified on the Radiation Survey Form.

No count rates were found at any time that exceeded the threshold limit of 17,574 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,

A handwritten signature in black ink, appearing to read 'Glenn Huber', with a long horizontal flourish extending to the right.

Glenn Huber, CHP  
President – Stan A. Huber Consultants, Inc.

# Radiation Survey Form

Location/ Project ID: GEI Consultants : 259 E. Erie St

Date: 4/15/14

Technician: Glen Huber

Inst Model: Ledlon 2221

Serial No. : 134542

Probe Type: 1"x1" NaI / 2"x2" NaI  
\* Shielded / Not Shielded  
*Additional Surveys*

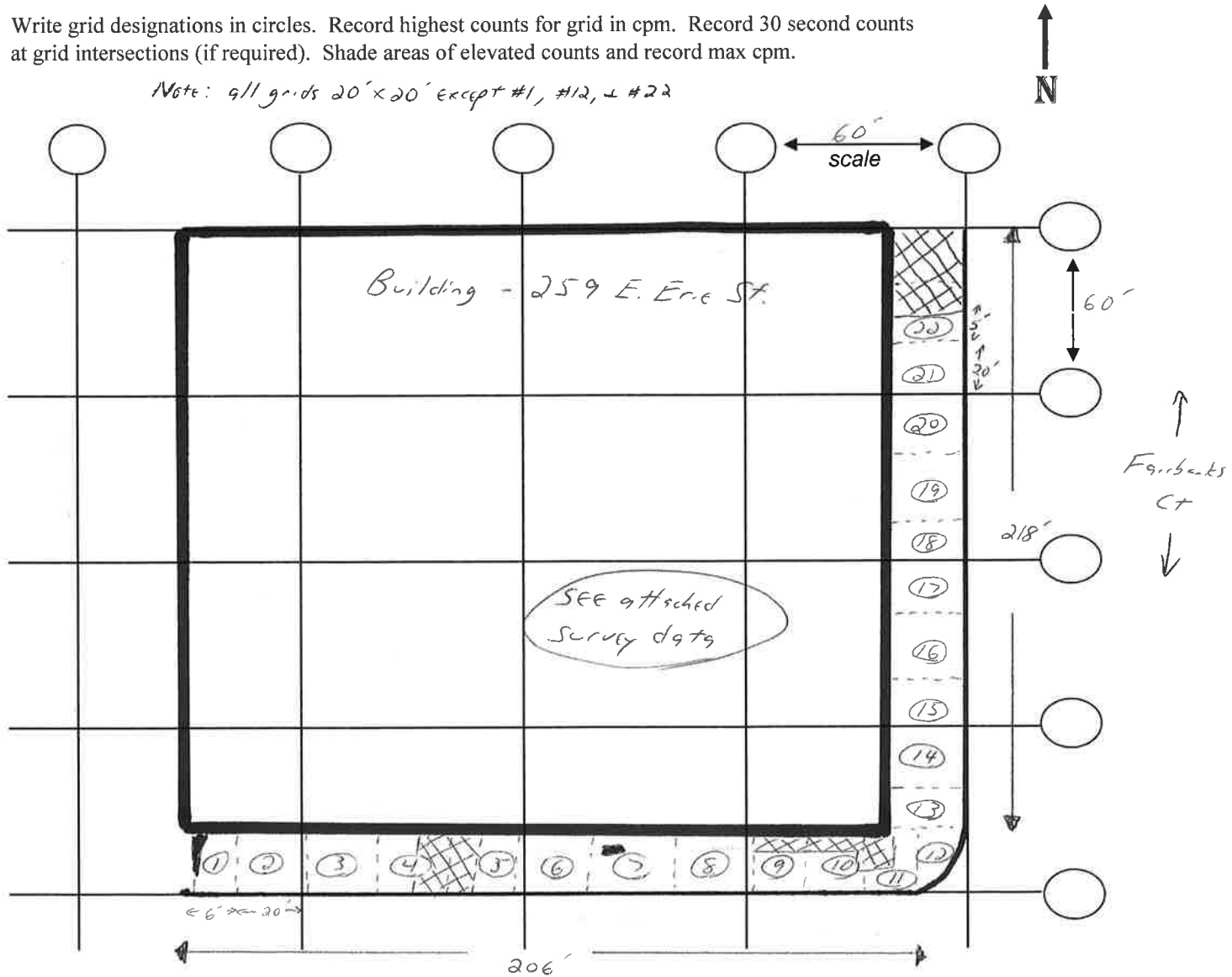
Lift Elevation: surface → -25'

Background 5.2 - 6.6 k cpm

Action Level: 17,574 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.

*Note: all grids 20' x 20' except #1, #12, & #22*



⊘ = Excavated area

● = Elevated Counts grid #1 & #

▨ = concrete / not excavated

← Ontario St →

## Radiation Survey Form - Count Rate Data

Project ID: GEI Consultants - 259 E. Erie Sidewalk  
 Date: 4/15/2014  
 HP Tech: Glenn Huber, CHP

Insutrument ID: Ludlum 2221 w/ 43-10 NaI  
 serial no. 134542

Bkg: 5200-6600 cpm  
 Action Level: 17,574 cpm unshielded  
 6,137 cpm w/ 6" lead shield

Survey Location	Count Rate Unshielded CPM	Additional Comments
1	13500	16800 cpm on wall. Max shielded count rate = 5500 cpm
2	12200	
3	6400	
4	6200	
5	6500	
6	6200	
7	16200	Max shielded count rate = 4700 cpm
8	6900	
9	6300	
10	6400	
11	9400	
12	8500	
13	7800	
14	11300	
15	10800	
16	9300	
17	7400	
18	6100	
19	6200	
20	5600	
21	5700	
22	5800	