



May 23, 2016

Rick McCarthy  
James McHugh Construction Co.  
1737 S. Michigan Avenue  
Chicago, IL 60616

RE: Lakeshore East – Wanda Vista Field Drive Thorium Monitoring

Dear Mr. McCarthy:

Stan A. Huber Consultants, Inc. (SAHCI) was hired by your firm to provide radiation monitoring during utility location excavations and geotechnical borings at the Lakeshore East Development (Wanda Vista Field Drive Project) in Chicago, Illinois. The utility location monitoring was performed on April 20, 2016. The geotechnical boring monitoring was performed on May 2 – May 17, 2016.

#### Instrumentation

Surface gamma scans were performed during utility location excavations by Kyle Smith using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 126497) with attached 2"x2" NaI probe with 6" lead shield. The instrument was calibrated on October 15, 2015. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 6,018 counts per minute (cpm). The shielded background count rate for this instrument was found to be between 1600 and 1900 cpm.

Surface gamma scans were performed on geotechnical borings by Brian Schmidt using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 126496) with attached 2"x2" NaI probe (unshielded). The instrument was calibrated on October 15, 2015. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 19,290 counts per minute (cpm). The average unshielded background count rate for this instrument was found to be 6,762 cpm.

#### Soil Gamma Scans – Utility Location Excavations

Gamma surface scans (shielded) were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Data was collected by entering the excavation after each 18 inch lift and recording the highest count rate for the floors and walls to an excavation depth of 4 feet. Soil removed from depths of 4 feet to 9 feet was surveyed in stockpiles as it was removed from the excavation. Soil removed from the excavation was stockpiled onsite.

The maximum gamma count rate for each 18 inch lift was recorded on the attached Radiation Survey Form. The count rates in the excavations ranged from 1,900 cpm to

3,300 cpm. No count rates were found at any time that exceeded the threshold limit of 6,018 cpm.

#### Soil Gamma Scans – Geotechnical Borings

Gamma surface scans (unshielded) were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. A total of 8 borings that fell within the old slip area were monitored. Any spoils that were removed from the borings were screened as they came to the surface.

The maximum gamma count rate to a drilling depth of 10 feet was recorded on the attached Radiation Survey Form. No spoils were created from 10 feet deep to 30 feet deep due to use of a bentonite slurry after the initial 10 feet. The count rates in the excavations ranged from 4,600 cpm to 5,800 cpm. No count rates were found at any time that exceeded the threshold limit of 19,290 cpm.

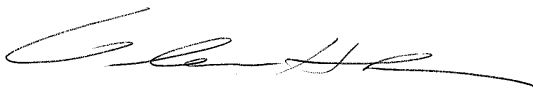
#### Additional Monitoring

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.

You will need to forward a copy of this report to the City of Chicago Department of Public Health (Attn: Rahmatunsia Begum) with the CDOT Permit Number in the subject line. Additionally, all thorium monitoring data should be retained for review by USEPA.

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

Location/ Project ID: WANDA FIELD BLDG. UTILITY LOCATE - CHICAGO, IL

Date: APRIL 20, 2016

Technician: KYLE SMITH

Inst Model: LUDLUM 2221

Serial No.: 126497

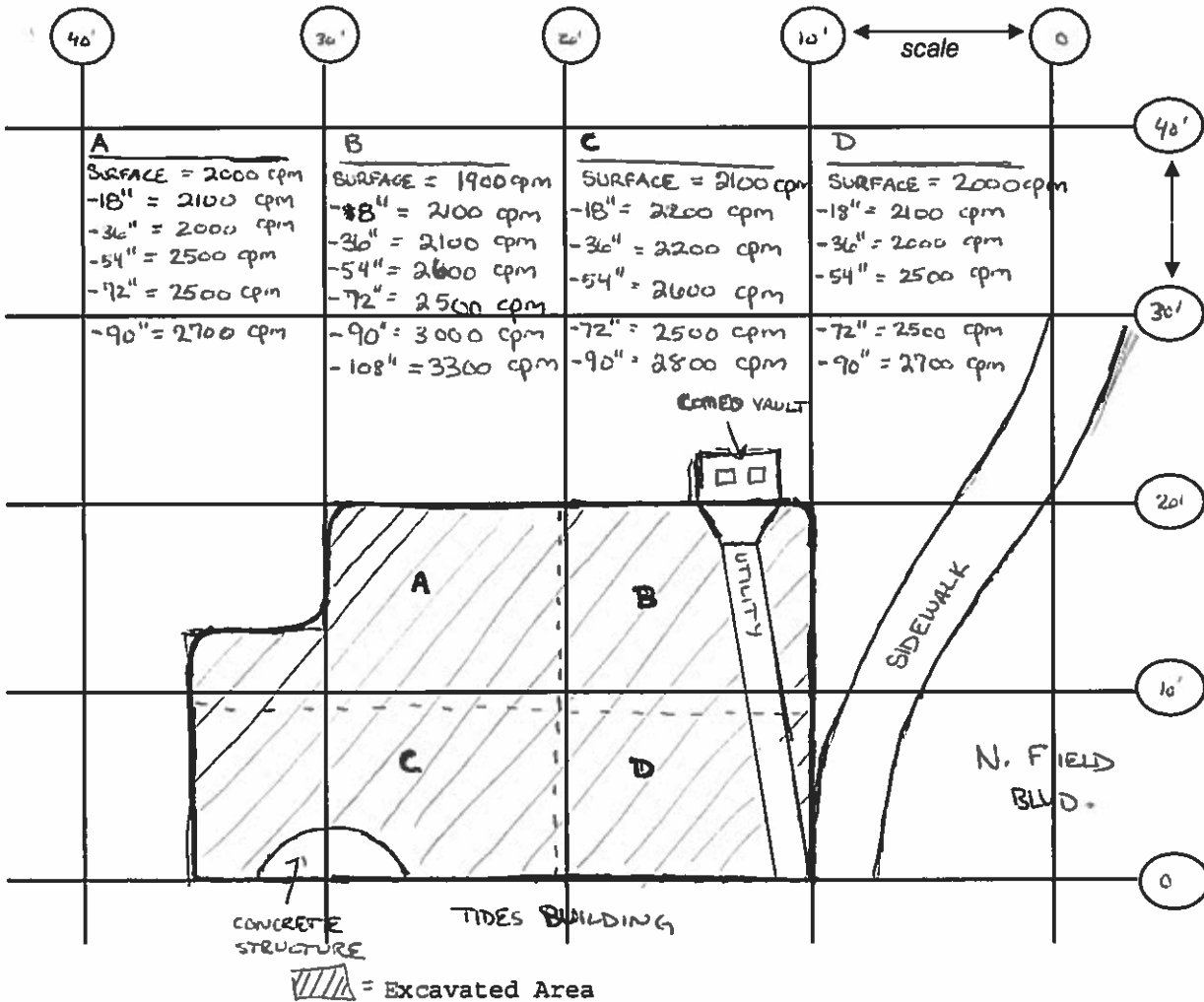
Probe Type: 1"x1" NaI / 2"x2" NaI  
Shielded / Not Shielded

Lift Elevation: SURFACE - -9'

Background 1600 - 1900 cpm

Action Level: 6,018 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.



## Radiation Survey Form

Location/ Project ID: WANDA DEVELOPMENT - WACHER DRIVE - CHICAGO, IL

Date: 5/2-17/2016

Technician: BRIAN SCHMIDT

Inst Model: Lucium-2221

Serial No.: 126496

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

Lift Elevation: 0-10'

Background ~~6762~~ 6762 cpm

Action Level: 19,290 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.



<u>BOUND ID</u>	<u>DATE</u>	<u>DEPTH</u>	<u>CPM</u>
PT-128	5/2/16	0-5 5-10	4600 5300
PT-136	5/3/16	0-5 5-10	4800 5000
PT-127	5/4/16	0-5 5-10	4700 5200
PT-136	5/5/16	0-5 5-10	4900 5800
PT-125	5/9/16	0-5 5-10	4700 4800
PT-124	5/10/16	0-5 5-10	4900 5100
PT-123	5/11/16	0-5 5-10	4700 4800
PT-119	5/17/16	0-5 5-10	4900 4800

