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February 24, 2016

Mr. Mike Jasek
Project Manager, Lakefront Trail Improvement
F.H. Paschen
5515 N. East River Road
Chicago, IL 60656

RE: Radiological Survey Results – 13th Letter Report
Navy Pier Flyover / Lakefront Trail Improvement
AECOM Project No. 60318016

Dear Mr. Jasek:

Pursuant to requirements of the United States Environmental Protection Agency (USEPA) and conditions specified in permits issued by the City of Chicago Department of Public Health (CDPH), radiation monitoring is required to be performed for the above referenced project when construction activities will disturb fill soil that has not been previously screened for thorium. AECOM Technical Services, Inc. (AECOM) has been contracted to provide the required radiation surveillance and reporting.

The last progress report (dated October 2, 2015) provided notification that screening activities would be conducted intermittently given that excavation activities requiring monitoring are occurring infrequently (i.e., construction activities are focusing on above grade structures). Discussed below are the construction related excavation screening activities performed between October 1, 2015 and February 24, 2016.

Irrigation Line Installation

AECOM conducted radiological surveying for the soil excavation activities conducted to install an irrigation trench north of the Ogden Slip and East of Lake Shore Drive, southwest of the corner of East Illinois Street and North Streeter Drive, Chicago, Illinois. The surveying was completed on October 1 and 2, 2015. The attached sketch for the excavation provides the approximate location and outline of the area surveyed. The excavation was approximately 50-feet long, 2-feet wide, and 3 to 4-feet deep. Two additional smaller trenches, with similar widths and depths, branched out laterally from the first to address connection issues.

The gamma survey did not indicate that the fill soils were above the removal action level established by the USEPA for the Streeterville area of Chicago. The USEPA removal action level for Chicago's Streeterville area is 7.1 picocuries per gram (pCi/g) total radium (Ra-226 + Ra-228). Gamma radiation count measurements for the irrigation trench were made using Ludlum Model 2221 survey meter and an unshielded 2 x 2 inch NaI probe (Model 44-10). For the instrument used on October 1, 2015 the gamma count threshold indicative of the 7.1 pCi/g removal action level was 17,015 counts per minute (cpm) unshielded (S/N: 172039), and on October 2, 2015 the gamma count threshold was 18,279 cpm unshielded (S/N: 176944).

The field gamma measurements of the spoil and within the excavation during the excavation process did not exceed the instrument threshold previously stated. On October 1, 2015, the gamma survey readings of the spoils ranged from a minimum of 4,500 cpm to a maximum of 6,100 cpm unshielded. The gamma survey reading conducted on October 2, 2015, ranged from a minimum of 4,200 cpm to a maximum of 16,000 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA removal action level of 7.1 pCi/g total radium.

East Ohio Street Beach Foundation Excavation

Surveying was performed on the soil excavated west of (refer to the attached sketch) required to address a retaining wall foundation excavation. Excavation activities that required thorium screening were conducted on January 29 and February 2-3, 2016. The excavation included approximately a 100 foot long trench to a depth of 5 feet below ground surface (bgs).

The monitoring results did not indicate that the fill soils were above the removal action level established by the USEPA for the Streeterville area of Chicago (7.1 picocuries pCi/g) total radium. Gamma radiation count measurements for the foundation excavation were recorded using Ludlum Models 2221 survey meter (S/N: 176944) and an unshielded 2 x 2 inch NaI probe (Model 44-10). For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g removal action level was 18,278 counts per minute (cpm) unshielded.

The field gamma measurements within the excavation, and of the spoil, during the excavation process did not exceed the instrument threshold previously stated and ranged from a minimum of 4,600 cpm to a maximum of 10,200 cpm unshielded. The general subsurface stratigraphy was composed of 1-inch stone with fines and beach sand. Only the southern section of the trench exhibited urban fill. Based on field observations there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA removal action level of 7.1 pCi/g total radium. A copy of a field sketch documenting the area where work was performed is included as an attachment.

Please contact us with any questions you have regarding this letter or the reported results.

Regards,



Andrew Kozak
Staff Geologist

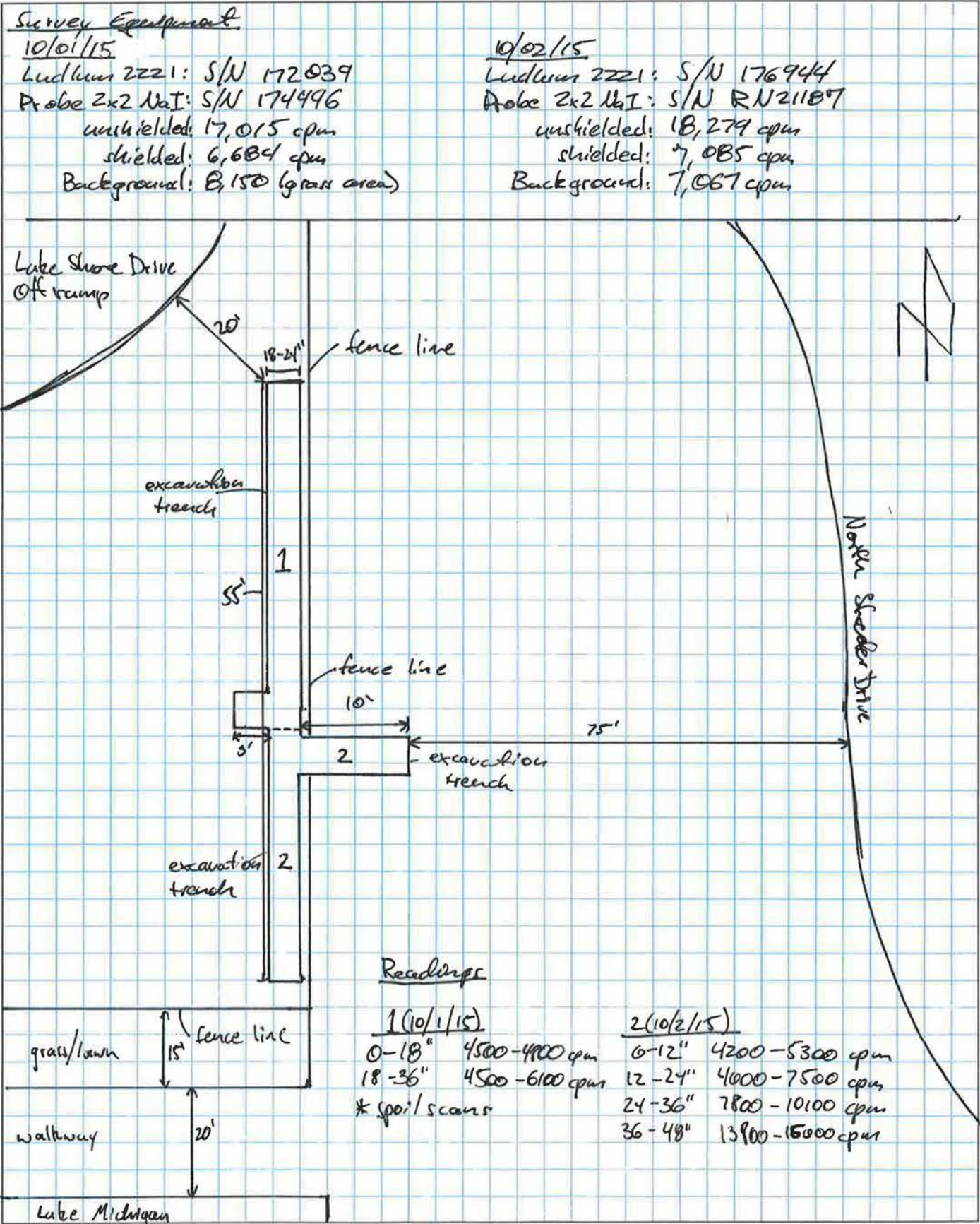


Steven C. Kornder, Ph.D.
Senior Project Geochemist

cc: Michael Herbert, F.H. Paschen

Attachments: Sketches

IRRIGATION TRENCH SKETCH



OHIO STREET BEACH FOUNDATION SKETCH

Survey Equipment

Ludlum 2221 S/N: 76949

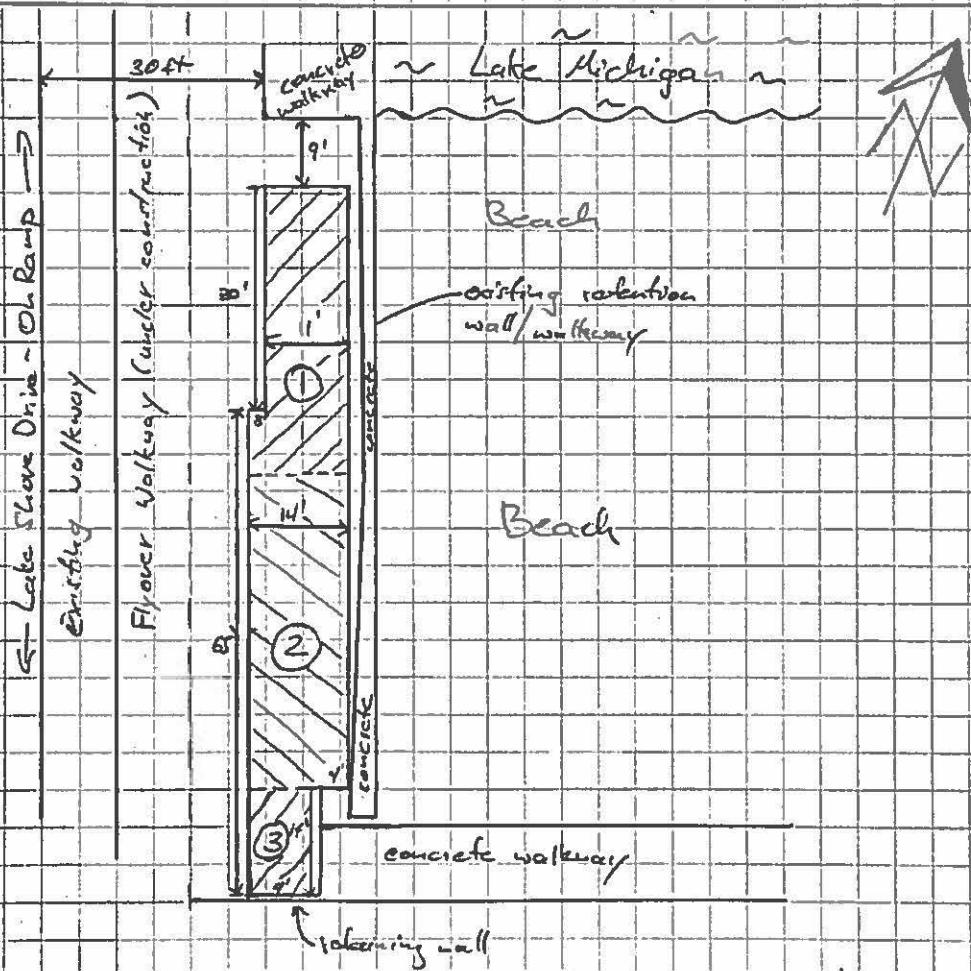
Probe 2x2 NaI S/N: RN21187

unshielded: 18,278

shielded: 6,123

background: 4500 - 4700

(low area near south stairs)



Readings

<u>Depth</u>	<u>CPM</u>	<u>Depth</u>	<u>CPM</u>
① 0-12" (concrete)		② 0-60" (spoil)	4,000 - 8,200
16" (floor scan)	4,600 - 6,700		
36" (door scan)	9,600 - 10,200	③ 0-60" (spoil)	5,400 - 7,600
48" (floor scan)	6,200 - 7,400		
60" (door scan)	6,200 - 6,500		