



AECOM
303 E. Wacker Drive, Suite 900
Chicago, Illinois 60601

312-938-0300 tel
312-938-1109 fax

May 1, 2014

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

RE: Bi-weekly Letter Report Update
Lakefront Trail Improvement, Chicago, IL
AECOM Project No. 60318016

Dear Mr. Martinez:

Pursuant to conditions specified in a permit issued by the City of Chicago, radiation monitoring was required to be performed at the above referenced site. AECOM Technical Services, Inc. (AECOM) provided the required radiation surveillance between April 10 and 18, 2014 for multiple excavation locations to clear potential obstructions in order to install H-Piles at the referenced site location (see attached Location Map). No intrusive work requiring gamma screening was conducted between April 19 and May 1, 2014.

Gamma radiation count measurements were made using Ludlum Model 2221 survey meter and an unshielded 2 x 2 inch NaI probe (Model 44-10). The U. S. Environmental Protection Agency (USEPA) cleanup value for Chicago's Streeterville area is 7.1 picocuries per gram (pCi/g) total radium (Ra-226 + Ra-228). Two different meters were used during the surveying that each have slightly different gamma reading thresholds equivalent to the USEPA cleanup value. Therefore, the field meters gamma counts equivalent to 7.1 pCi/g were 18,744 and counts per minute (cpm) unshielded. Monitoring between the days of April 10, 2014 and April 18, 2014 revealed no indication of soils above the specified clean-up threshold established by the USEPA for the Streeterville area of Chicago.

Bent 4

Surveying was performed for the potholing in two locations in the area of "Bent 4". On April 15, 2014 an approximate 5-foot by 5-foot excavation was performed to the depth of approximately 3-feet below ground surface. On April 17, 2014 an area approximately 20-foot by 20-foot excavation was performed to the depth of 8-feet below ground surface (bgs). For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 19,958 counts per minute (cpm) unshielded. The field gamma background for the area was measured at approximately 8,180 cpm unshielded. The field gamma measurements within the excavations and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 7,400 cpm to a maximum of 9,000 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium at the two Bent 4 locations.

Bent 5

On April 15, 2014 an approximate 5-foot by 5-foot excavation was performed to the depth of 3-feet bgs. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold range from a minimum of 7,000

cpm to a maximum of 8,600 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

Pier 1

Surveying was performed for the excavation of two locations in the area of "Pier 1" footer. On April 10, 2014 an approximate 2-foot by 4-foot excavation was performed to the depth of 6-feet bgs. On April 18, 2014 a 6-foot by 6-foot excavation was performed to the depth of approximately 2-feet bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 18,744 cpm unshielded. The field gamma background for the area was measured at approximately 5,291 cpm unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 6,000 cpm to a maximum of 9,500 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

Pier 2

Surveying was performed for the soil removed from an excavation located in the area of "Pier 2" footer. On April 18, 2014 an approximate 6-foot by 6-foot excavation was performed to the depth of approximately 2-feet bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 18,744 counts per minute (cpm) unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 6,000 cpm to a maximum of 10,000 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

Pier 3

Surveying was performed for the soil removed from an excavation located in the area of "Pier 3" footer. On April 18, 2014 an approximate 6-foot by 6-foot excavation was performed to the depth of 2-feet bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 18,744 counts per minute (cpm) unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 6,000 cpm to a maximum of 7,500 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

Pier 7

Surveying was performed for the soil removed from an excavation located in the area of "Pier 7" footer. On April 15, 2014 an approximate 5-foot by 5-foot excavation was performed to the depth of approximately 3-feet bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 19,958 counts per minute (cpm) unshielded. The field gamma background for the area was measured at approximately 7,047 cpm unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 7,000 cpm to a maximum of 9,400 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

East Abutment

Surveying was performed for the soil removed from an excavation located in the area of "East Abutment". On April 15, 2014 an approximate 5-foot by 5-foot excavation was performed to the depth of approximately 4-feet bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 19,958 counts per minute (cpm) unshielded. The field gamma background for the area

was measured at approximately 7,634 cpm unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 5,500 cpm to a maximum of 8,400 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

South Stairs

Surveying was performed for the soil removed from two excavations located in the area of "South Stairs". On April 15, 2014 an approximate 5-foot by 5-foot excavation was performed to the depth of approximately 3-feet bgs. On April 17, 2014 an approximate 8-foot by 15-foot excavation was performed to the depth of 12-feet bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 19,958 counts per minute (cpm) unshielded. The field gamma background for the area was measured at approximately 8,066 cpm unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold range from a minimum of 7,000 cpm to a maximum of 9,000 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

Retaining Wall C

Surveying was performed for the soil removed from an excavation located in the area of "Retaining Wall C". On April 16, 2014 an approximate 7-foot by 10-foot excavation was performed to the depth of approximately 3-feet below bgs. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 19,958 counts per minute (cpm) unshielded. The field gamma background for the area was measured at approximately 4,766 cpm unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 6,000 cpm to a maximum of 7,800 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

East Termination Wall

Surveying was performed for the soil removed from 2 trench excavations located at Area "East Termination Wall" (see sketch). On April 15, 2014 an approximate 3-foot by 5-foot excavation was performed to the depth of approximately 4-feet bgs. On April 16, 2014 an approximate 3-foot by 15-foot excavation was performed to the depth of approximately 6-feet. For the instrument used, the gamma count threshold indicative of the 7.1 pCi/g cleanup value is 19,958 counts per minute (cpm) unshielded. The field gamma background for the area was measured at approximately 4,757 cpm unshielded. The field gamma measurements within the excavation and the spoil materials generated during the excavation process did not exceed the respective instrument threshold previously stated and ranged from a minimum of 5,500 cpm to a maximum of 7,300 cpm unshielded. Thus, there was no indication of the presence of radiologically-contaminated material and/or an exceedance of the USEPA cleanup value of 7.1 pCi/g total radium.

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

Regards,



Brian R. Schmidt
Project Scientist II



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

cc: Chris Tryka, F.H. Paschen

Attachments: Location Map
Data Spreadsheet

LOCATION MAP

DATA SPREADSHEET

Radiological Soil Survey
Excavation ID Table
Lakefront Trail/Navy Pier Flyover Improvement
Chicago, IL

Excavation ID	Approx. Starting Elevation (CCD)	Date Screened	Actual Excavation Width (ft)	Actual Excavation Height (ft)	Actual Excavation Depth (ft)	Maximum Gamma Value (cpm)	Range of Majority of Gamma Readings (cpm)	Background Value (cpm)
Bent 4 Footer	+14.75	4/15/2014	5	5	3	9000	7400-8800	8180
Bent 4 Footer	+14.75	4/17/2014	20	20	8	9000	7400-8800	8180
Bent 5 Footer	+10.75	4/15/2014	5	5	3	8600	7000-8200	7749
Pier 1 Footer	+3.50	4/10/2014	2	4	6	9500	7500-9000	5291
Pier 1 Footer	+3.50	4/18/2014	6	6	2	8000	6000-8000	5291
Pier 2 Footer	+8.25	4/18/2014	6	6	2	10000	7500-10000	5291
Pier 3 Footer	+8.0	4/18/2014	6	6	2	7500	5000-7500	5291
Pier 4 Footer	+5.25							
Pier 6 Footer	+7.0							
Pier 7 Footer	+10.0	4/15/2014	5	5	3	9400	7000-9000	7047
East Abutment	+8.50	4/15/2014	5	5	4	8400	5500-7500	7634
North Abutment	+8.50							
South Stairs Center Footing	+12.0	4/15/2014	5	5	3	9000	7000-8500	8066
South Stairs Center Footing	+12.0	4/17/2014	8	15	12	9000	7000-8500	8066
North Stairs Eastern Footing	+14.22							
North Stairs Western Footing	+7.30							
Retaining Wall A	+6.59							
Retaining Wall C	+7.50	4/16/2014	7	10	3	7800	6000-7400	4766
East Termination Wall	+9.0	4/15/2014	3	5	4	7300	5500-7000	4757
East Termination Wall	+9.0	4/16/2014	3	15	6	7500	5800-7000	4757
Retaining Wall w/ Bicycle Railing	+3.4							
South Stairs Northern Footing	+13.0							
South Stairs Southern Footing	+10.68							

Notes:

* - All excavations surveyed with a Ludlum-2221 w/ 2x2 inch NaI Probe (unshielded)