

ATTACHMENT A-1

UPDATED SMU5 REMEDIAL STRATEGY

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This attachment provides updated recommendations (updated based on sampling conducted in June 2010) for appropriate remedial actions for the limited areas of SMU 5 where exceedances of the cleanup criteria have been identified. Data has been collected during five sampling events and sufficient information is available to identify remedial actions for these areas. The subsections below describe the sampling history and the recommendations for remedial action.

Sampling History

Data was initially collected from Remediation Area F (SMU 5) during the Remedial Investigation (RI) in 1992. Results from this investigation identified one exceedance of the Mean PEC Quotient of 1 (S66) and three exceedances of the mercury PEC of 2.2 mg/kg (S95, S108, and S111). These sampling stations are spread throughout the 485-acre area of SMU 5 and are not located in proximity to any known sources of mercury contamination. Based on the 1992 results, additional sampling was conducted as part of the Feasibility Study (FS) in 2004 (letter Work Plan dated August 5, 2004 and Data Summary Report submitted May 27, 2005) to support development of remedial alternatives, and during the Phase II Pre-Design Investigation (PDI) in 2006 (Phase II PDI Work Plan dated September 2006 and Data Summary Report dated August 2009) to define the extent of exceedances in these areas. Following review of the 1992 and 2004 data sets, it was determined that any previous exceedance in these areas would be resampled in 2006 to ensure a representative, current data set for remedial design. The 2006 sampling included resampling of station S-66 along with four new surrounding stations. No exceedances were identified and the average of the three results for the original location was below the PECQ criterion. Therefore, no remedial action is required at station S-66.

Additional sampling was conducted in December 2009 and June 2010, as part of the Phase V PDI and Phase VI PDI efforts, to assess contaminant depth and to confirm remedial boundaries at the three other stations. The sampling was conducted in accordance with PDI Work Plan Addendum 6, dated November 24, 2009. Sampling results are summarized below by sample location and presented on Table A1-1 and Figures A1-1 through A1-3.

- S-108 - Sample Station S-108 is located offshore of the Onondaga Lake Park and exceeded the mercury PEC (2.3 mg/kg) during the 1992 sampling event (Figure A1-1). This location was resampled in 2004 along with five surrounding locations. Several of the results were an order of magnitude higher than those detected during the 1992 sampling event. Additional data collection was conducted in 2006 at seven locations to assess significant differences between the 1992 and 2004 results. The 2006 results for all seven locations were below the mercury criteria. Additional sampling was again conducted (December 2009) to assess the significant differences

between the 1992/2006 results and the 2004 results. The 2009 results showed elevated mercury concentrations, somewhat consistent with the 2004 results, with the mercury PEC exceedance limited to the top 1 foot of sediment. The remedial area boundary has been delineated based on available data as shown on Figure A1-1.

- S-95 – Sample Station S-95 is located off the western shore of Onondaga Lake just north of the SMU 4/5 boundary (Figure A1-2). This location exceeded the mercury PEC (3.0 mg/kg) during the 1992 sampling event and was resampled with five surrounding locations in 2004. The original location again exceeded the mercury PEC (3.4 mg/kg) along with the S-95-C location (3.0 mg/kg). The original location was resampled again in 2006 along with the S-95-C exceedance from the 2004 sampling event. Both locations exceeded the mercury PEC during the 2006 sampling round (OL-VC-50001 and 50002). The 2009 results show the mercury PEC exceedance is limited to the top 1 foot of sediment. The remedial area boundary has been delineated as shown on Figure A1-2 based on available data.
- S-111 – Sample Station S-111 is located off the northwestern shore of Onondaga Lake adjacent to the dredge spoils area (Figure A1-3). The results from the 1992 sampling at this location indicated a concentration above the mercury PEC (3.0 mg/kg). This location was resampled in 2004 along with five additional stations surrounding the original location. The resampled location did not exceed the mercury PEC; however, two of the additional stations displayed concentrations above the criteria (S-111-D and S-111-G). Additional sampling was conducted at eight locations during in 2006 and two exceeded the mercury PEC (OL-VC-50004 and 50009). Additional sampling for this area was conducted in December 2009 to identify depth of contamination, as well as confirm the southern and eastern extent of the remedial boundary. All of the results were below the PEC for mercury, including locations with sample results that previously exceeded the PEC for mercury. As requested by the NYSDEC, the 2009 sample locations were re-sampled in 2010 at 0.5 ft. intervals down to 1 ft. (the 2009 sample intervals were sampled at 1 ft. intervals down to 3 ft.). The 2010 results were also all below the PEC for mercury. The average of the results for the locations previously with exceedances were below the mercury PEC criterion (i.e., 50004 = 1.83 mg/kg and 50009 = 0.86 mg/kg¹). Based on sampling results from location S-111, surface sediment concentrations are within the applicable criteria. Therefore, no remedial action is required in this area.

¹ Non-detect 2010 result was factored in at half the detection limit.

TABLES

FIGURES