11. Completion Requirements for the Remedial Action

11.1 General

This sections summarizes the various completion requirements specified in the June 23, 2003 Order. Based on NYSDEC's established substantial completion date of December 24, 2003 (Section 9.4), the completion requirements specified in Item II (D) of the Order states the following, "Within 45 days after completion of the construction activities identified in the Approved Remedial Design, Respondents shall submit to the Department (1) a detailed post-remedial operation and maintenance plan ('O&M Plan'); (2) 'as-built' drawings and a final engineering report (each including all changes made to the Approved Remedial Design during construction); and (3) a certification by a professional engineer that the Approved Remedial Design was implemented and all construction activities were completed in accordance with its terms. The O&M Plan, 'as-built' drawings, final engineering report, and certification shall be prepared, signed, and sealed by a profession engineer."

The completion requirements for as-built drawings and final engineering report (item 2 above) and a certification by a professional engineer (item 3 above) have been satisfied based on the information included in this RACR. The completion requirement for a detailed O&M Plan is included below.

11.2 Operation and Maintenance Plan

This section discusses the future O&M requirements for the site based on the completion of the remedial action construction activities. This section has been prepared to satisfy Item II (D) of the Order, which includes preparing a detailed post-remedial O&M Plan. Therefore, upon the NYSDEC's approval of this RACR, the O&M requirements identified in this section will be implemented by BOSAG.

Based on the extensive efforts during remedial action construction, the remedial action objectives that were established for the site (Section 1.1) have been completely satisfied based on the removal of the impacted soils, sediments, NAPL, and groundwater. A listing of the remedial action objectives and how they were satisfied during the remedial action construction activities is provided below:

- *Reduce constituent concentrations present in site soils to eliminate potential risks to human health and the environment and to reduce the potential for offsite migration.* Soil materials exceeding the remedial cleanup goals were removed from the site, and based on the analytical results of the verification samples (Sections 4.5 and 4.6), soil materials that remained at the site were below the remedial cleanup goals. In addition, grossly contaminated soil that was observed during the performance of excavation activities was removed in its entirety, beyond what had been anticipated in the AROD and FRD, to the satisfaction of the onsite NYSDEC representative.

- *Remove impacted sediments from the Robinson Street storm sewer system to eliminate the potential for constituent migration to the Little River.* As discussed in Section 5, sediment was removed from the Robinson Street storm sewer to eliminate the potential for constituent migration to the Little River, as documented in Appendix N.

- *Remove impacted groundwater and the oil layer to eliminate the potential for offsite migration of constituents of concern.* During the performance of remedial action construction activities, impacted

groundwater and NAPL were removed from the excavated areas and were treated using the onsite temporary water treatment system (Section 3.6.4). The treated effluent was sampled and analyzed to satisfy the City of North Tonawanda's discharge requirements, and was discharged to the sanitary sewer. In addition, as indicated previously, grossly contaminated soil containing NAPL was removed in its entirety, to the satisfaction of the onsite NYSDEC representative.

- *Reduce further migration of constituents, and potential fish and wildlife contact with impacted sediments.* As discussed in Section 6, sediment was removed from the Little River within the limits delineated in the FRD.

By completely satisfying the remedial action objectives, the future O&M activities at the site will not be as extensive as originally anticipated in Section 8 of the FRD. In its July 6, 2004 comment letter; however, the NYSDEC requested a limited groundwater monitoring program to confirm that the groundwater quality at the site is not significantly impacted by site-related constituents.

11.2.1 Site Inspections and Maintenance

Future O&M requirements that BOSAG proposes for the site involve routine inspections focused on confirming the following:

- Stormwater control structures for the site are functioning properly.
- The soil surface is stable and not subject to excess soil erosion/scour, settlement, or surface water.
- Site activities are consistent with the long-term institutional controls (Section 11.3).

Based on these inspections, corrective measures will be implemented if the stormwater control structures are not functioning properly or there is evidence of excess soil erosion/scour, settlement, or surface-water ponding. The inspections and corrective measures (if necessary) will be documented by BOSAG in a letter that will be submitted to the NYSDEC within 30 days of the completed inspection or corrective measure. BOSAG will also notify the NYSDEC of any perceived conflicts with the long-term institutional controls identified during the inspections.

Inspections will be conducted quarterly during the first year following final completion of the remedial action construction activities and semiannually during the second year. In years 3 through 5, inspections will be conducted annually. Unless conditions indicate that ongoing corrective measures were needed, these inspections would end after the fifth year.

No routine maintenance of the site is required. CSXT will arrange for mowing of the site on a twice-monthly basis in the summer and monthly in the fall to facilitate site inspections and to comply with City ordinances.

11.2.2 Groundwater Monitoring

As requested in the NYSDEC's July 6, 2004 comment letter, BOSAG will install four new monitoring wells at the general locations shown in Appendix EE. These wells will be used to evaluate the presence of NAPL in the shallow (perched) water zone above the clay layer. Final well locations will be surveyed following installation