providing additional response actions, improving monitoring activities, optimizing the remedy, enhancing institutional controls and conducting additional studies and investigations.

Remedial Design and Pre-Design Studies

As described in some detail above, a number of additional investigations are necessary to reduce project uncertainty and maximize remedy effectiveness. These investigations collectively are referred to as "Pre-Design Studies" and will provide additional detailed information that is required to complete the Remedial Design. The Draft Monitoring Plan (provided in the Draft FS) described a number of hydrologic investigations which will be conducted prior to completing the final Remedial Design. The studies include, but are not limited to: grain size analysis; bathymetric surveys; velocity and flow determinations; and measurements of groundwater influence on the Sudbury River (i.e., the degree to which the river is fed in part by groundwater).[15] In addition, sediment stability may be evaluated (if warranted); this evaluation may cause EPA to modify the composition or design of the sand layer, either to aid in the sequestration of mercury or to encourage benthic re-colonization. If determined to be necessary, pre-design studies may also include further testing to delineate surface sediment concentrations in the 84-acre segment of Framingham Reservoir 2 slated to be capped.

The final Remedial Design of the selected remedial alternative outlined in this ROD will depend on the results of the various pre-design investigations outlined above.

3. Summary of the Estimated Remedy Costs

The total estimated cost of the selected remedy is approximately $8.5 million. A summary table of the major capital and annual operation, maintenance, and monitoring cost elements for each component of the selected remedy is shown in Table J-1. The discount rate used for calculating total present worth costs was 7%.

The information in these cost estimate summary tables are based on the best available information regarding the anticipated scope of the remedial alternative. Changes in the cost elements are likely to occur as a result of new information and data which may be obtained during the pre-design phase. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost.

4. Expected Outcomes of the Selected Remedy

The primary expected outcome of the selected remedy is that the river outside of Reach 8 will no

[15] EPA believes there is a very low likelihood that inputs from groundwater could cause recontamination of sediment. The predominant method by which mercury from the Nyanza facility contaminated the river was not through groundwater, but by overland flow and direct discharges from the brooks and creeks constituting OU3. Groundwater samples from 2009 from around historic source areas show low and non-detected results for mercury. However, in response to public comments and to assure the maximum effectiveness of the thin layer of sand, EPA proposes to conduct additional hydrological studies including measurements of groundwater flux and groundwater quality closer to the area to be capped.

EPA NEW ENGLAND
REGION 1

RECORD OF DECISION

NYANZA CHEMICAL WASTE DUMP SUPERFUND SITE, OPERABLE UNIT 4 (SUDBURY RIVER)

ASHLAND, FRAMINGHAM, SUDBURY, WAYLAND, LINCOLN AND CONCORD, MASSACHUSETTS

SEPTEMBER 2010