EXHIBIT 10

Master Comment 807

A number of commenters contend that dredging is required to preserve critical habitats. Some, however, expressed concern that dredging may result in habitat loss and displacement of wildlife. Some felt that remedial activities will result in impacts to aquatic and wildlife habitat of the Upper Hudson River, including removal of substrate for spawning and foraging habitat by fish; displacement of benthic organisms; reduction of food sources; loss of vegetation; loss of freshwater acreage; and disturbance of riparian and shoreline stability. It was suggested that the potential (even if temporary) loss of parts of the river ecosystem due to dredging should be evaluated for the mink and river otter.

Response to Master Comment 807

Concerns associated with dredging result from the physical disturbance involved in removing sediment and relate to increases in turbidity, nutrients, and contaminants in the short-term and loss of habitat in the long-term. To minimize short- and long-term impacts, a habitat restoration program will be implemented (Section 9.3). Prior to the start of remediation of the Upper Hudson River, habitats will be delineated and baseline habitat data will be collected. Replacement of submerged aquatic vegetation (SAV) will be one of the prime objectives of the revegetation plan. Replacement will depend on the actual extent of dredging and backfilling, the geomorphical response of the river in redistributing sediments, the habitat replacement goals formulated during the design phase, and navigational requirements. SAV replacement may not be desirable or feasible in certain situations (*e.g.*, to enable recreational use of the river or accommodate gravel substrate for fish spawning).

Riparian and shoreline stability will be maintained through determining the hydrology, sediment texture, and sediment stability of an area prior to initiating work. Biologically based state-of-the-art methods will be used to enhance the environment and accomplish engineering requirements. Parameters will be verified through monitoring, which will also be used to identify needed mid-course corrective actions, such as adjustments to the Site hydrology, replanting/reseeding, and routine maintenance. Monitoring for natural recovery will help to reduce the need for artificial reestablishment. Such an activity recognizes that the river has historically been and still is impacted by agricultural runoff and other land use practices resulting in increased siltation and enrichment, to the extent that the remedial activities may benefit the system in removing excess build-up of sediments and nuisance vegetation.

Benthic organisms will be disturbed during environmental dredging operations. However, recovery is expected to be quick because the majority of the benthic species present have life-history characteristics that make them resilient to disturbance (Response to Master Comment 253458, Section 9.1). These characteristics include high productivity and turnover rates, high dispersal ability, planktonic larvae, and most importantly a source of benthic invertebrate recovery (downstream drift, aerial dispersal, etc.). In a study of the recovery rates of macroinvertebrate communities following disturbance, Niemi *et al.* (1990) found that 90 percent of the cases reviewed indicated recovery times within one year.

Impacts of environmental dredging on fish vary to some degree with life stage. Potential short-term effects result from increases in turbidity, temporary loss of a benthic food source, and increases in contaminant concentrations. Early life stages are more sensitive than adults to increases in turbidity. Although turbidity is transient in nature, increases in turbidity can affect the survival of fish eggs that are attached to underwater surfaces. Adult fish would be mobile enough to avoid areas of environmental dredging activity and will leave an affected area while environmental dredging is being undertaken, thereby avoiding direct impacts. Recolonization of remediated areas by benthic invertebrates will lead to recolonization by fish and wildlife that feed on these organisms. Fish spawning habitat will be replaced with suitable substrata, and SAV used for foraging will be replaced.

There may be temporary loss of parts of the Hudson River habitat for wildlife receptors such as the mink and river otter during remediation. These receptors can move to other areas of their home range during environmental dredging activities and return once environmental dredging is completed. Due to the rate of advancement of the dredge (approximately 400 feet per day), the dredge will not be in any fixed location for an extended period of time, so any individual den would only be directly impacted by environmental dredging for a short period. Individual mink may use several denning areas within their home range (Birks and Linn, 1982) and are expected to move temporarily from dens close to remedial activities. As the home range of river otters is larger than that of mink, it is anticipated that otters will move to areas within their range, but away from remedial activities.

Mink are opportunistic piscivores/carnivores and during remediation may utilize a larger component than usual of terrestrial prey such as birds, reptiles, and insects in their diet. (Note: mink PCB exposure was modeled based on consumption of 50.5 percent river-related food sources). Although river otters have a larger component of fish in their diet, they are also opportunistic feeders (USEPA, 1993) and are likely to feed upon other prey such as birds and small mammals if fish are temporarily unavailable or difficult to capture.

The Natural Resource Trustees, *i.e.*, NYSDEC, NOAA, and USFW, and various environmental organizations have expressed support for active sediment remediation, as it will improve the environmental quality of the river and reduce injury to environmental resources (Response to Master Comment 801, Chapter 3). In fact, the federal Trustees have indicated support for an even more extensive dredging program (*i.e.*, the REM-0/0/3 alternative). The Trustees have stated that important habitat areas for Trust resources, such as near shore areas, quiescent areas and those containing vegetative beds, which are prime habitat for juvenile fish, should be remediated. Further, the Trustees believe that as currently proposed, the selected remedy would leave unacceptable residual injury to river ecosystems in the form of PCBs left behind, and have urged EPA to select a remedy that to the maximum extent practicable improves the environmental quality of the Hudson River by removing as much of the resident PCBs as possible. Given what is now known regarding recovery of riverine ecosystems following dredging, advances in dredging technology, and EPA's proposed habitat replacement programs, the Trustees do not believe that a more aggressive dredging program such as the REM-0/0/3 alternative would be environmentally damaging.

Master Comment 531

Some commenters stated that EPA has not considered the source and availability of plant material and transplanting requirements, and worry that the large number of plants required for restoration may not be readily available. Others say that the proposed plan also lacks information on sequencing and prioritization.

Response to Master Comment 531

Natural seeding/relocation of SAV will be the central component of SAV replacement. Only if the monitored rates of natural seeding/recolonization do not satisfy the evaluation criteria will extensive SAV propagation and planting be initiated. Natural seeding/recolonization of SAV will be a central component of the SAV replacement. SAV reproduce sexually through flower and seed production.

Acre-for-acre replacement of SAV beds may not be desirable or feasible. This will depend on the actual extent of dredging and backfilling; the geomorphological response of the river in redistributing sediments; and the habitat replacement goals formulated during remedial design, particularly in terms of competing uses of the river (*e.g.*, recreational use and navigation, and fish spawning by species requiring unvegetated gravel substrate). If it is determined that acre-for-acre replacement is either not desirable or not feasible, the number of plants required could be reduced substantially.

A final list of SAV and wetland vegetation species to be planted will be detailed in the remedial design phase. This list, along with all other aspects of the habitat replacement program, will be formulated in consultation with the federal Trustees and NYSDEC. The list of species will be modified at times during the implementation of the habitat replacement program based on accumulation of experience with the conditions on the Upper Hudson River and the findings of other habitat replacement projects. Likewise, planting requirements and the sources and availability of plant materials will be detailed initially in the design phase, but as knowledge is gained, these, too, will be modified during program implementation. SAV will be reestablished in locations where the post-remediation physical conditions, specifically sediment substrate, water quality, water circulation and mixing, and light regimes (Batiuk, *et al.*, 2000; Cerco and Moore, 2000; Korschgen and Green, 1988; Sager, *et al.*, 1998; Sheriden, *et al.*, 1998; Smart and Dick, 1999), would support the community and where its presence would not conflict with other objectives.

It is expected that the source of plant materials will include wild collection, purchase from existing nurseries, and transplanting from nurseries established specifically for the program. (Several nurseries in the region currently supply plant material for restoration projects and will be candidates for supplying this project.)

Prioritization, sequencing, and scheduling will be addressed during remedial design. Scheduling of habitat replacement actions can be accomplished only after the dynamic model has been formulated and in concert with scheduling of the remediation actions, both of which will be addressed during the remedial design phase as well. The integration of the habitat replacement program schedule with the schedule for the remediation activities will be important to the success of the program, particularly in terms of preventing the loss of unprotected backfill, fully utilizing opportunities to establish restoration plantings, precluding damage to restoration plantings through sediment re-suspension, and control of invasive vegetation.

References

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Master Comment 533

Several comments were received relative to restoration of SAV: 1) Natural seeding/recolonization of SAV should be used. 2) Restoration of desirable SAV lost because of dredging activities should factor in optimal light attenuation, nutrient levels, flows, and sediment type for their survival and growth. 3) Planting of SAV is not recommended unless pilot studies demonstrate success and at a much faster rate of restoration compared to natural reseeding/recolonization. 4) Relying on natural recolonization processes should also decrease costs of habitat replacement.

Response to Master Comment 533

Natural seeding/recolonization of SAV will be a central component of the SAV replacement. SAV reproduce sexually through flower and seed production. Redhead grass or clasping leaved pondweed (*Potamogeton perfoliatus*) reproduces primarily by seed, and the seeds are dispersed readily by currents to new locations. Wild celery (*Vallisneria americana*) produce fruit capsules,