Hudson River
PCBs SUPERFUND SITE

HUDSON RIVER PCBs SUPERFUND SITE SUMMARY OF PUBLIC COMMENTS AND RESPONSES TO THE DRAFT FACILITY SITING REPORT – PUBLIC REVIEW COPY

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Prepared for:

United States Army
Corps of Engineers

United States Environmental
Protection Agency

Prepared by:

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Hudson River PCBs Superfund Site Summary of Public Comments and Responses to the Draft Facility Siting Report – Public Review Copy

December 2004

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 2

and

UNITED STATES ARMY CORPS OF ENGINEERS
KANSAS CITY DISTRICT

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1 Introduction

The U.S. Environmental Protection Agency (EPA) issued the Hudson River PCBs Superfund Site *Draft Facility Siting Report – Public Review Copy* (Draft Facility Siting Report) for public review on April 28, 2004. The Draft Facility Siting Report summarized the process of identifying locations within the facility siting study area that 1) were suitable for the design, construction, and operation of a sediment processing/transfer facility and 2) will facilitate the successful completion of the Hudson River cleanup. This siting process led to the identification of the Preliminary Candidate Sites; the selection of the Final Candidate Sites; the identification of the Suitable Sites; and the identification of those sites proposed as the Recommended Sites. Evaluation of the Recommended Sites led to the selection of the sites that will be used for the sediment processing/transfer facilities. Information regarding these Selected Sites is detailed in the site selection summary document and the *Facility Siting Report.*

The release of the Draft Facility Siting Report began the public review process, with a 60-day public comment period that began on April 28, 2004. After numerous requests from the public, EPA extended the end of the comment period from July 1, 2004 to July 30, 2004, increasing the total comment period to 90 days.

EPA has conducted the facility siting process in an open and transparent manner and has included the public in the process from the beginning of the project in December 2002. Public involvement activities related to the release of the Draft Facility Siting Report included the publication and distribution of numerous fact sheets, and numerous public forums were held throughout the Upper Hudson River area. Copies of the document were placed in local repositories, including the Hudson River Field Office, and were made available online at the EPA website (www.epa.gov/hudson). In addition, EPA answered questions related to facility siting by phone and in person at the Hudson River Field Office during the public comment period.

There was tremendous public response from the Upper Hudson River community during the public comment period. EPA received more than 2,350 comments in a variety of forms, including individual comment letters, form letters, form letters with additional comments, and petitions. EPA appreciates the time and energy that the public spent developing and submitting their comments and has carefully reviewed all written comments received during the comment period. Review of

the written comments from the public showed that many commenters shared similar concerns about the facility siting process. These have been summarized in this document as "master comments" and are presented with the associated "master responses." Because this document represents a summary of public comments and EPA responses do not cover every individual comment, EPA is also sending out responses by letter to members of the public who have provided comments to EPA in writing.

The *Facility Siting Report* and the site selection summary document are available online at EPA's Hudson River PCBs Superfund Site website (www.epa.gov/hudson), at the site information repositories, and by calling the Hudson River Field Office at 518-747-4389 or toll-free at 866-615-6490.

2 Master Comments and Master Responses

Thirty-two comment categories and 66 master comments and master responses are presented below. The master comments and associated responses cover a variety of topics, including those of most concern to the public such as community impacts, health impacts, quality of life impacts, and the site selection process. Each master comment and master response is presented under its associated topic category (e.g., agriculture, air quality, cultural resources). Topics are presented alphabetically and the master comments and responses under each topic have been numbered.

2.1 Agriculture

Agriculture Comment 1: *Several commenters expressed concern regarding the potential impact on surrounding agricultural operations from the operation of a dewatering facility, for example, that the project could contaminate local crops and dairy farms.*

Response: The project will be designed to eliminate or minimize these potential impacts such that the community and agricultural operations are protected during the project. The quality of life performance standards are designed to protect nearby crops, people, and other receptors from noise, light, and PCB air emissions, and engineering controls will be implemented at the facilities to control such potential impacts. Controls to eliminate these potential impacts are being evaluated during design. Combined with standard design controls to isolate and contain the materials during treatment and shipping, these factors provide confidence that the sediments can be handled and controlled in a manner that prevents their migration. As a result, EPA does not believe contamination of local crops and dairy farms will occur. (It should be noted that PCBs tend to strongly adhere to organic materials like the river sediments. However, EPA has determined that the contaminated sediments do not present an unacceptable exposure risk through contact. Rather, the primary pathway of concern is ingestion of fish that have bioaccumulated PCBs.)

Agriculture Comment 2: *A few commenters observed that a portion of the Energy Park site is being used for farming. They also noted that the Record of Deci-*

sion indicated that the project would not result in the conversion of agricultural land to non-agricultural purposes.

Response: The New York State Office of Real Property Services property classification code for the Energy Park site is vacant land located in industrial areas. The property is part of the Fort Edward Industrial Park. EPA used these codes as the primary source to determine land use. The owner of the property indicated to EPA that growing crops on the property began in 2002 and is a temporary use of a portion of the property until the site is further developed for industrial purposes in the future.

2.2 Air Quality

Air Comment 1: *Some commenters expressed concern that PCB emissions from the facility will damage their health. For example, some commenters were concerned about exposure to PCB air emissions along adjoining roadways and the potential impact on those who travel along those roads. Commenters also indicated that the quality of life performance standard for PCB emissions is not protective enough.*

Response: The quality of life performance standard for PCB air concentrations is protective of human health. The PCB standard of 0.11 micrograms/cubic meters for residential exposures has been established to be protective of young children (0 to 6 years) as well as adults (older than 18 years). The assumptions used in the exposure calculation include 350 days/year over the duration of the project. The exposure frequency actually is anticipated to be less, providing additional protection. EPA developed this value using toxicity data from EPA's Integrated Risk Information System (IRIS) database (www.epa.gov/iris/subst/0462.htm) for Aroclor 1016. The Integrated Risk Information System database provides EPA's consensus toxicity information on more than 500 chemicals, including PCBs. The concentration in air is below the non-cancer Hazard Index of 1, where adverse health effects are not anticipated to occur. The concentration is also within the acceptable risk range of one in 10,000 and one in 1,000,000 specified in the National Contingency Plan (NCP) under Superfund. [1]

As described above, the residential PCB air concentration standard was established assuming that a young child or adult would be breathing this concentration for 24 hours a day, 350 days per year, for 6 years. Since the exposure time for travelers on adjoining roadways is expected to be significantly less than the exposure time used to develop the standard, the associated cancer risk and non-cancer health hazards would be significantly lower.

In order to achieve the performance standards for air quality and to reduce potential off-site emissions of PCBs, engineering controls and mitigation measures may

[1] www.epa.gov/superfund/health/risk/index.htm

be implemented to control such emissions. Examples of these measures include conducting sediment processing within structures or erecting windscreens and covering material stockpiles or controlling the shape and placement of the piles. Continuous monitoring for air standard compliance, which will include monitoring PCB emissions, will be used to confirm that the public is being protected from PCB emissions from these operations. The Community Health and Safety Plan (CHASP) will address compliance with the air standard and will be made available for public review. The detailed requirements for monitoring will be contained in the Environmental Monitoring Plan and will be made available to the public. These plans will be completed during design and are expected to be complete in fall 2005. On-site monitoring of workers for worker protection will also be implemented as outlined in the Worker Health and Safety Plan.

Air Comment 2: *Commenters indicated that fumes and emissions from project vehicles would affect their health.*

Response: Potential emissions from project-related construction and operation equipment will be evaluated during design to determine if they would be expected to have a significant impact on air quality in the region. There are a variety of potential methods and approaches that could be used to reduce emissions from equipment and operations such as the use of alternative fuel (i.e., low- and ultra-low sulfur fuel), maintenance requirements, and the use of newer vehicles and equipment that meet the latest air emission standards.

During the evaluation of the air quality design, EPA will refer to the National Ambient Air Quality Standards (NAAQS) and will consult the NYS Air Guide-1 to evaluate the significance of estimated emissions of other compounds. The purpose of this evaluation is to ensure that the public will not be exposed to unacceptable concentrations of other compounds in air emissions from the project. However, based on previous analyses in the *Feasibility Study* (USEPA 2000) and the *Responsiveness Summary* (USEPA 2002), which reviewed the typical equipment that the project is likely to utilize, it is not expected that the NAAQS would be exceeded. Monitoring will be conducted to ensure that the project is protective of air quality.

Air Comment 3: *Commenters were concerned that they may not be informed of and protected from PCB emissions that could result from spills or incidents during operations.*

Response: The Community Health and Safety Plan will be developed to protect the community in the event of spills or incidents that could result in a release of PCBs to air. This plan will contain contingency plans for spills or incidents response as well as plans for monitoring and controls as required by the quality of life performance standards. EPA will coordinate such oversight with appropriate agencies such as the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health (NYSDOH), and the New

York State Canal Corporation (NYSCC). EPA will oversee compliance with the quality of life performance standards and will monitor the project closely to ensure that practicable and reasonable measures are taken to prevent impacts on the public. If the standards are exceeded, the project team may change or temporarily stop operations associated with the exceedance while measures are implemented to address the exceedance. Procedures for notification in the event of spills or incidents will be addressed in the Community Health and Safety Plan, which will be made available to the public for review.

In addition, a Worker Health and Safety Plan will be developed. This plan will identify operating procedures that workers will follow in the event of a spill at the facility.

2.3 Climatic

Climatic Comment 1: *Commenters expressed concern regarding locating a facility in the Mechanicville area, given historic tornadoes in the area. Some have described the area as a "tornado alley."*

Response: While some storms are prone to occur in various areas throughout the state (e.g., heavy snowfalls east of Lake Erie and Lake Ontario "lake effect" snow belts), the National Oceanic and Atmospheric Administration/National Weather Service (NOAA/NWS) has not documented a specific area prone to tornadoes or designated a "tornado alley" in New York State. The National Weather Service and experts at the University at Albany Department of Earth and Atmospheric Science (SUNY Albany) have indicated that severe tornadoes are rare in eastern New York.

The May 31, 1998 tornado that passed through Mechanicville was documented by the National Weather Service. However, there were also 31 other tornadoes across the entire northeastern United States on that day. The storm actually originated in the southwest corner of Saratoga County and moved east through Rensselaer County before dissipating in Bennington County, Vermont (a total path of approximately 30 miles). This severe storm did not originate in Mechanicville nor was it a localized Mechanicville event.

Since the beginning of official recordings of severe weather events by the National Weather Service in 1950, tornado sightings have occurred not only in Rensselaer County but also in all of the counties within the project area (Warren, Washington, Saratoga, Schenectady, and Albany counties). According to the SUNY Albany staff, although it has been documented that the distribution of severe weather is influenced by the Hudson River Valley, along with other features in eastern New York and western New England (e.g., the Adirondack, Berkshire, Catskill, and Green Mountains and the Housatonic and Mohawk River valleys), the probability of a repeat tornado in any one locality is extremely rare.

Climatic Comment 2: *Commenters would like to know how the community would be protected from the transport of PCB-contaminated material from the facility due to high winds during a storm event. Commenters also asked how much time it will take to shut down the facility if a tornado warning is posted and whether the facility disaster and evacuation plans would be issued to the public.*

Response: Once the facility location is selected, contingency plans needed in the event of various emergencies, including severe weather events, will be developed, as is typically done for industrial facilities. Contingency plans will be contained in the Community Health and Safety Plan and the Worker Health and Safety Plan. These plans will provide details regarding when a facility would be shut down in the event of severe weather. The Community Health and Safety Plan will be made available for public review.

2.4 Community Benefits

Community Benefits Comment 1: *Commenters asked a variety of questions that involved issues related to community benefits. Some commenters asked about the types of host community benefits that would be available to those communities where a sediment dewatering/transfer facility would be located. Others asked whether communities and individuals would be compensated for any negative impacts, reductions in quality of life, and/or economic losses resulting from the project (including to property owners and offsets to reductions in tax revenue).*

Response: EPA is not authorized under the Superfund law (i.e., the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA], as amended) to provide host-community benefits, as requested by the commenters. However, EPA has committed to working with the Hudson River PCBs Superfund Site communities that may be impacted by dredging activities to help identify opportunities outside of Superfund. This includes encouraging communities to develop reuse and revitalization plans for areas along the river, identifying and facilitating contact with agencies that may be able to provide technical assistance through grants, programs, or loans, and working with groups such as the Community Advisory Group (CAG) to identify other appropriate opportunities. EPA has also committed in the *Record of Decision* to restoring the sediment dewatering/processing facility sites in a manner that takes into account their anticipated future land use. While the outcome of this effort will depend in part on whether EPA leases or acquires a given facility, this process also has the potential to produce a tangible benefit to the community.

The *Responsiveness Summary* (Part 3 of the Record of Decision) includes a white paper report, *Socioeconomics*, available at www.epa.gov/hudson that addresses the potential for adverse impacts on property values created by the remediation program. The white paper notes that existing property values along the Upper Hudson River appear to have suffered some depreciation from the presence of PCB contamination in the river and that the cleanup is likely to substantially en-

hance these values over the longer term. Further, the limited locations targeted for dredging and the brief duration of dredging in those areas are unlikely to generate adverse impacts on the values of waterfront properties. Properties close to the processing sites may experience some temporary property value impacts, but these would be minimized by the careful siting and design of the facilities.

In addition, the white paper predicts that more than $262 million would be spent on direct expenditures associated with dredging in the Upper Hudson River region (Albany, Rensselaer, Washington, Saratoga, and Warren counties), which in turn is expected to produce an additional $314 million of "indirect" or "secondary" economic activity as labor and materials circulate in the local economy, thereby creating increased demand in other industries. This increased economic activity is expected to generate new jobs in various industries, including construction, business services, rail and marine transportation, and service industries such as banking, retail, food services, lodging, and recreation. It is also expected that industries such as tourism and recreational fishing will grow after the project is complete, providing further economic benefit to the local communities.

2.5 Community Health and Safety Plan (CHASP)

CHASP Comment 1: *Some commenters expressed concern that plans and procedures to protect the community have not been developed. Some commenters wanted to ensure that there would be sufficient training and equipment for emergency personnel.*

Response: The Community Health and Safety Plan will provide procedures for monitoring and controls required to protect the public during the project. The plan will be written in consultation with federal, state, and local emergency agencies. Discussions with local agencies will include training and equipment needs for emergency personnel. Specific design information necessary to complete the plan has not yet been determined. The plan will be developed after the dewatering facility locations are selected. EPA will continue to review the design as it progresses to confirm that it is protective of the public. The Community Health and Safety Plan will be made available for public review.

CHASP Comment 2: *Commenters have expressed concern that EPA will not be responsive to their concerns and complaints during the project.*

Response: A complaint-management program will be developed to address public concerns associated with the project, including quality of life-related issues and complaints. The complaint-management program will be contained in the Community Health and Safety Plan. The program will include specific information regarding phone access and how complaints will be handled, including procedures for notifying residents and local elected officials. Access by phone will be available to the public during operating hours. Project personnel will staff the phone line. The community will be invited to comment on the plan.

2.6 Community Impacts

Community Impacts Comment 1: *Several commenters were concerned that local businesses in the vicinity of a dewatering site may be negatively affected. They expressed concern that businesses may have to close, which may negatively affect the municipal tax base.*

Response: Economic impacts from the project were evaluated previously based on concerns from the public expressed during public comment on the December 2000 Proposed Plan and supporting information. Those comments and associated EPA responses are contained in the *Responsiveness Summary*, including the white paper *Socioeconomics* (available at www.epa.gov/hudson). In the *Responsiveness Summary*, EPA concluded that the project is expected to bring significant economic benefits to the project area. For example, facilities such as campgrounds and the associated commercial facilities, which rely on recreational dollars, should see increases in revenue with the increased tourist activity in the Hudson River Valley following the dredging. At present, the stigma of the Superfund designation in the Hudson River Valley is believed to currently affect recreationally based activities such as camping (USEPA 2002).

As indicated in the response to Community Benefits Comment 1, above, the economic analysis presented in the white paper, *Socioeconomics*, predicts that more than $262 million would be spent on direct expenditures associated with dredging in the Upper Hudson River region (Albany, Rensselaer, Washington, Saratoga and Warren counties), which in turn is expected to produce an additional $314 million of "indirect" or "secondary" economic activity as labor and materials circulate in the local economy, thereby creating increased demand in other industries. This increased economic activity is expected to generate new jobs in various industries, including construction, business services, rail and marine transportation, and service industries such as banking, retail, food services, lodging, and recreation. Industries such as tourism and recreational fishing are expected to grow after the project is complete, providing further economic benefits for the local communities.

Community Impacts Comment 2: *Several commenters questioned whether the site would be leased or purchased. Others questioned whether the property would remain on the tax rolls.*

Response: The decision to lease or purchase a site will be made after site selection. When dredging is completed, the property will be restored in a manner that takes into account the anticipated future land use. Leased property will be returned to the owner and any property EPA acquires will be turned over to the State of New York. It is anticipated that if a property were leased, it would remain on the tax rolls. If EPA purchases a property, it is not authorized to pay taxes.

2.7 Cultural Resources

Cultural Resources Comment 1: *Commenters questioned how cultural resources and cultural resource investigations factored into the site-selection process.*

Response: The facility-siting process includes developing criteria that can be used in the decision-making process as well as establishing a procedure for identifying, screening, and selecting potential locations. Numerous criteria have been used for facility siting in the course of identifying and selecting potential sites. These criteria include engineering and environmental considerations such as river, rail, and road access; availability of utilities; proximity to dredge areas; existing and historic land use; ease of purchasing/land ownership; the presence of wetlands, threatened or endangered species, and rare or unique ecological communities; and the presence of cultural resources.

Before initiating the site-selection process, EPA developed the *Survey of Terrestrial Archaeological and Architectural Resources (STAAR) Work Plan.* The purpose of the STAAR Work Plan was to integrate cultural resources as a relevant consideration in the facility-siting selection process and to establish compliance with existing federal and state laws and regulations that affect management and protection of archaeological and historical properties.

The STAAR Work Plan is designed to carry out a process of screening and evaluating candidate sites on the basis of a sequence of data collection steps. These data-gathering procedures are mandated by the requirements of Section 106 of the National Historic Preservation Act (NHPA). The specific regulations governing the conduct of cultural resource investigations in New York State are contained in the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994) formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP). These guidelines provide the appropriate sequence of cultural resource management procedures for identification and evaluation of historic properties, mitigation of adverse effects on these properties, and resource documentation and curation of archaeological collections and specify the appropriate content of archaeological reports.

Cultural resource investigations for the facility siting process included the examination of electronic data files documenting the distribution of cultural resources; supplemental site file examination at the New York Office of Parks, Recreation, and Historic Preservation; site-specific documentary background research at various county and municipal data repositories; and interviews with knowledgeable professional and avocational archaeologists and historians. Field data collection included archaeological reconnaissance and subsurface archaeological testing (Phase I survey). The purpose of this investigation was to inventory and define the spatial extent of archaeological sites and architectural resources within the areas of potential effect (APE). In certain cases eligibility for listing on the National

Register of Historic Places of discovered cultural resources was determined following Phase I investigations. Typically, however, the significance of cultural resources is evaluated during additional investigations. These investigations (Phase II) are designed to assess the integrity of subsurface deposits, the presence or absence of intact cultural features, the relative size of archaeological assemblages, vertical and horizontal stratigraphy, and other relevant types of data that pertain to the quality of the information that can be retrieved from sites. Phase II investigations also include the analysis of visual impacts of the proposed project on properties eligible for the National Register of Historic Places. Resources that are determined to be eligible require mitigation to eliminate or reduce impacts. Such mitigation can frequently be affected by modifying the project design to avoid affecting the cultural resource in question. In those cases where avoidance is not feasible, cultural resources are mitigated by data recovery (Phase III), which includes large-scale excavations and advanced types of data analysis.

Cultural Resources Comment 2: *Commenters expressed concerns that insufficient investigations have been conducted at the Bruno/Brickyard Associates/Alonzo site and that this site may contain important archaeological resources. Additionally, commenters pointed out that the Bruno/Brickyard/Alonzo site is close to a number of sites listed, or eligible for listing, on the National Register of Historic Places, including the Knickerbocker Mansion, the Old Champlain Canal and Lock #3, and the Mechanicville golf course. Commenters expressed concern that the presence of these resources in the vicinity of the site has not been taken into account as a limiting factor.*

Response: Consideration of potential impacts on cultural resources has been a component of the site-selection process. The cultural resource investigation included the examination of electronic data files documenting the distribution of cultural resources; a supplemental site file examination at the Office of Parks, Recreation, and Historic Preservation; site-specific documentary background research at various county and municipal data repositories; interviews with archaeologists and historians; a walkover reconnaissance; and subsurface archaeological testing. As a result of the Phase I investigation at the Bruno/Brickyard Associates/Alonzo site, archaeological sites were discovered and the project area's proximity to properties listed or eligible for listing on the National Register of Historic Places—the Knickerbocker mansion, the Champlain Canal and Lock #3, and the Mechanicville golf course properties—was noted. A Phase II investigation was performed and the evaluation of the potential visual effects of the proposed action on the significant historical properties is currently under way. The Phase II data analysis and report are being completed and will be reviewed and evaluated by EPA and the Office of Parks, Recreation, and Historic Preservation. This information will be available to the public when the review has been completed.

Cultural Resources Comment 3: *Commenters expressed the opinion that the cultural resources identified at the Georgia Pacific/NYS Canal Corporation site either are not significant enough to warrant the abandonment of the site or could be*

mitigated through avoidance. Commenters also expressed concern that EPA was able to make a determination regarding the sensitivity of on-site cultural resources and the suitability of the site for a sediment dewatering/transfer facility at a relatively early stage of investigation.

Response: A Phase I cultural resources investigation was completed at the Georgia Pacific/NYS Canal Corp site. This survey was carried out in accordance with the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994), formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation.

The cultural resources investigation included the examination of electronic data files documenting the distribution of cultural resources; a supplemental site file examination at the Office of Parks, Recreation, and Historic Places; site-specific documentary background research at various county and municipal data repositories; interviews with archaeologists and historians; a walkover reconnaissance; and subsurface archaeological testing.

As a result of the Phase I investigation, archaeological sites were discovered on the property. The Georgia Pacific/NYS Canal Corp site contains a large industrial archaeological site dating to the late 19th to early 20th centuries. The site consists of more than 30 archaeological features, including the remains of former paper mills, a hydroelectric power plant, a sluiceway with two bridges, worker quarters, a docking facility, a parking lot, an old roadbed, and an inter-urban railway. This complex appears to be functionally related to the Northumberland Dam spanning the Hudson River. The workers quarters produced a wealth of archaeological artifacts, including pearlware, whiteware, porcelain, glass of various types, ornaments, children's toys, and kaolin clay pipes.

These remains are of historical value for reconstructing lifeways of employees of historic paper mills and for elucidating early hydroelectric technology. These archaeological resources potentially constitute a historic district eligible for listing in the National Register of Historic Places. While mitigation is possible, these sensitive locations occupy an area that would severely limit the useable acreage needed for a dewatering facility and a rail yard to meet the project requirements. In addition to the time and expense that would be necessary to mitigate the above-mentioned cultural resources, a number of potential limitations and additional design considerations were associated with the site, including rolling topography, unstable subsurface conditions that may require additional engineering/construction, and potential disruptions of traffic patterns.

Cultural Resources Comment 4: *Commenters suggested that the Energy Park/Longe/NYSCC site has a rich history and may contain archaeological resources.*

Response: A Phase I archaeological survey, including deep trench testing, has been conducted at Energy Park/Longe/NYS Canal Corp Site. This survey was carried out in accordance with the *Standards for Cultural Resources Investigations and the Curation of the Archaeological Collections in New York State* (1994), formulated by the New York Archaeological Council and approved by the New York State Office of Parks, Recreation, and Historic Preservation.

The cultural resources investigation included the examination of electronic data files documenting the distribution of cultural resources; a supplemental site file examination at the Office of Parks, Recreation, and Historic Preservation; site-specific documentary background research at various county and municipal data repositories; interviews with archaeologists and historians; a walkover reconnaissance; and subsurface archaeological testing (Phase I survey). No archaeological remains were discovered on the Energy Park/Longe/NYS Canal Corporation site in this survey. The architectural assessment is ongoing. Once that assessment has been completed, that information will be made available to the public.

2.8 Design

Design Comment 1: *Commenters expressed concern that the best and safest way to remove PCBs from the river and the design of dewatering stations may not be fully understood. Other commenters expressed concern that a project of this size, and one that presents unique engineering challenges, has not been completed before.*

Response: Proven dredging methods, pollution control technologies, and transportation methods used in other dredging projects, both large and small, will be implemented to complete the project.

Before issuing the *Record of Decision*, EPA performed a detailed evaluation of environmental dredging (including dewatering and off-site disposal of PCB-contaminated sediments) in order to clean up the Hudson River PCBs Superfund Site. EPA's evaluations are provided in the *Feasibility Study* and *Responsiveness Summary* (Part 3 of *the Record of Decision*), each of which is available at www.epa.gov/hudson/. In sum, environmental dredging is a reliable technology that has been used to clean up contaminated sediments at a number of other Superfund sites. Such dredging operations often employ dewatering processes such as those that will be considered for use at the Hudson River project.

Many projects involving far larger volumes of sediment have been completed to date. For example, navigational dredging of the New York, Delaware River, and Chesapeake Bay harbors involves the removal of millions of cubic yards of sediment each year. Maintenance of the Mississippi River also involves the removal of similar quantities of sediment. While these projects do not involve highly contaminated sediments such as those in the Hudson, they still require land-based disposal, involving truck or rail transport. While the design requirements for the

Hudson River PCBs Superfund Project may be challenging to the engineers and scientists involved, the technologies used are similar to ongoing projects such as at the New Bedford Harbor in Massachusetts and on the Fox River in Wisconsin. This project does not represent an extraordinarily larger effort compared with other ongoing and completed efforts. EPA will ensure that the designers have reviewed and considered viable control technologies and have selected the best methods to complete the project to satisfy the project performance standards.

Design Comment 2: *Commenters suggested that all facility operations involved in handling contaminated material be enclosed.*

Response: Staging and processing areas will be covered and/or contained as needed and to the extent practicable in order to help achieve the quality of life performance standards. Continuous monitoring for air standard compliance will be used to confirm that the public is being protected from emissions from these operations.

Design Comment 3: *Commenters have suggested that piping in the river to transport hydraulically dredged material be situated in a way to minimize impacts on their use of the river.*

Response: If hydraulic dredging is used for this project, the location of any in-river hydraulic sediment transfer pipe and associated pump stations will be determined in design. The designers will evaluate the best placement for this equipment based on engineering considerations (i.e., river depth, channel location, locations of structures along shoreline, etc.) as well as on limiting the potential impact, to the extent practicable, on users of the river.

Design Comment 4: *Some commenters were concerned that not enough details on facility design have been provided. Commenters were also concerned with facility hours of operation and the possibility of working 24 hours per day.*

Response: EPA's approach to facility siting has been to conduct detailed studies of potential locations for a sediment dewatering/transfer facility before developing final design. This has been done in order to gain important site-specific knowledge from the detailed studies on those sites and to gather input from the public. The public has assisted in identifying potentially sensitive resources and site characteristics that can then be considered early in the design process, which will result in the development of a more effective and efficient site layout. Facility design is currently in the intermediate design phase. Intermediate design will provide details such as facility layout and equipment to be used. Detailed design specifications for the project will be completed as part of final design and are therefore not yet available. EPA will continue to provide facility design details as they become available.

The hours of operation for this project have not yet been established. The *Record of Decision* states that 24-hour operations may be required to achieve project goals (including meeting the engineering performance standard for dredging productivity). Information regarding potential hours of operation for both the dewatering facilities and dredging activities is expected to be provided in the Phase 1 Intermediate Design Report and in the Phase 2 Intermediate Design Report. It is important to consider the trade-offs to restricting work hours: for example, reducing the number of hours available for dredging each day will increase the overall number of days that a dredge will need to operate in a particular area.

Design Comment 5: *Some commenters were concerned about the potential for and prevention of accidental spills of contaminated sediments in the river during the transport of dredged sediment by barges. Additional concerns focused on the issues of spill containment and cleanup.*

Response: Spill prevention and spill contingency planning will be included in the Community Health and Safety Plan. Spill scenarios in the plan will take into account both onshore and offshore spills and will clearly outline procedures to protect the public. It should be noted that dredging is being implemented to reduce the releases of PCBs that continue to occur.

Design Comment 6: *Some commenters questioned the site-selection process, stating that the Draft Facility Siting Report – Public Review Copy indicated that the Recommended Sites exhibited additional design considerations such as foundation-bearing soil conditions and characteristics and waterfront characteristics and that these issues would not be evaluated until the design phase.*

Response: Each of the facilities was assessed in a process that included the evaluation of several factors, including environmental conditions; geotechnical conditions; available utilities; archaeological resources; the presence of wetlands and floodplains; coastal management policies; and the kinds of habitat and the presence of threatened and endangered species. The Final Candidate Sites (FCSs) were chosen based on these evaluations. In some cases, there were additional factors such as soil conditions (contamination, stability, etc.) or waterfront characteristics (shallow conditions near shore) that will need further evaluation during design. These additional factors were not considered primary deciding factors related to suitability or variables that would lead to the restriction of use of the sites. It is expected that these additional considerations could be addressed during design. For example, the designers could specify that the shallow areas along the riverfront be dredged to allow barges access to the site.

Design Comment 7: *Some commenters questioned whether Recommended Sites not selected for the dewatering facility could still be used for the project (such as for transfer only).*

Response: It is anticipated that facility operation will be at one or two of the Recommended Sites. It is also possible that facility activities may vary between locations. For example, a site may be used for transfer only. EPA, with input from the designers, will determine which sites will be selected for the dewatering facility(ies). The operations that will be conducted at dewatering sites will be determined as the design progresses and is optimized.

Design Comment 8: *A commenter noted that the river has buried the contaminated sediment and that uncovering the sediments would do more harm.*

Response: EPA has determined that since the river is a dynamic system, sediments are being covered and uncovered by seasonal fluctuations in flow velocities, volumes, and water levels within the river. Additionally, PCB levels in fish remain above acceptable levels (creating an unacceptable health and environmental risk) and have been shown to be not significantly reduced over time. The project human health risk assessment evaluated the concentrations of PCBs in fish over the next 70 years and found that the levels exceeded EPA's risk levels. The risk assessment was externally peer-reviewed and the reviewers agreed with EPA's conclusions. The objective of this project is to remove PCB-contaminated sediment from the Upper Hudson River, thereby reducing the unacceptable risks to human health and the environment at the site. The cleanup will be designed to minimize the release of PCBs to the environment. For additional information see the *Record of Decision* and the *Responsiveness Summary* (USEPA 2002).

2.9 Employment

Employment Comment 1: *Commenters questioned whether local residents would be given priority for hire as employees to operate the facility and if appropriate training would be made available.*

Response: The General Electric Company is completing the design of the project. It is EPA's current expectation that General Electric will be responsible for carrying out the Hudson River remedy (with oversight by EPA and the New York State Department of Environmental Conservation), and EPA therefore does not currently plan to hire additional employees or contractors for that work or significant numbers of employees or additional contractors for the design-related tasks to be performed by EPA. At this time, EPA has not determined whether it will be necessary for EPA to hire additional contractors or employees to oversee General Electric's performance of the remedial action (should General Electric carry it out). General Electric would be responsible for hiring contractors and employees for the company's work on the project. EPA would encourage using local residents to help accomplish the project. However, the federal Superfund law does not give EPA the authority to require General Electric to hire local labor for its work on the project. EPA will provide training program information to communities.

2.10 Engineering Performance Standards

Engineering Performance Standards Comment 1: *Commenters were concerned that the amount and extent of dredging in the river would cause significant resuspension of contaminated sediments during the dredging activities and that the ecosystem would not be protected. If this were to occur, one commenter wondered what contingency plans were going to be in place. In particular, commenters were concerned with the location of the Town of Halfmoon and Waterford water intakes and indicated their belief that the drinking water supply would become contaminated if a spill of PCBs were to occur during the dredging activities. Other commenters were concerned about the total amount of dredging that will occur in the river and the amount of residual PCBs that would remain in the river after the dredging is completed.*

Response: Engineering performance standards are technical requirements to help ensure that the cleanup meets the project's objectives for protecting people's health and the environment. The engineering performance standards for Phase 1, which were issued by EPA in April 2004, comprised performance standards for resuspension during dredging, dredging residuals, and dredging productivity. The three standards will contain action levels, which are designed to protect human health and the environment, while maintaining the productivity of the dredging process. A Community Health and Safety Plan will be developed for the project and will be made available for public review. Contingency and spill prevention control plans will be contained in the plan. In addition, EPA will compare Phase 1 dredging operations to the engineering performance standards in order to evaluate necessary adjustments to dredging operations in Phase 2 or to the standards. The report that will evaluate Phase 1 dredging with respect to the engineering performance standards will be peer-reviewed.

The resuspension standard is designed to protect water intakes downriver of the dredging operations and to limit the downstream transport of PCB-contaminated dredged material during the project. A water quality sampling and testing program will be used to monitor the resuspension standard. Test results will be used to determine if the resuspension performance standard is being satisfied. Additionally, the data collected will be used to determine if additional measures or adjustments to measures are needed to ensure protection of public health and the environment.

The resuspension performance standard sets a maximum value of 500 parts per trillion (ppt) of PCBs in the river water, which is the same PCB concentration as the EPA drinking standard under the Safe Drinking Water Act. Action levels have been established that provide an early warning system for PCB resuspension. If exceeded, they require preventive actions and engineering improvements before the drinking water standard is exceeded. For example, the resuspension standard calls for the notification of public water suppliers when PCB concentrations at a downriver monitoring station are expected to or exceed an action level of 350 ppt

and a shutdown of dredging operations if the resuspension standard of 500 ppt is exceeded during two consecutive days of dredging. When action levels are exceeded, the resuspension standard calls for the implementation of engineering contingency measures. If necessary, these measures could include expanding the monitoring program, implementing operational or engineering improvements to reduce resuspension levels, or temporarily halting the dredging. The Community Health and Safety Plan will be developed to protect surrounding communities during the project. The Community Health and Safety Plan will be made available for public review.

The residuals engineering performance standard will be used to measure the amount of residual PCB concentrations after dredging. Sediment samples will be collected and analyzed for PCBs after dredging of each area is completed. The results will then be compared with cleanup goals and other criteria. (Approximately 1 mg/kg Tri+ PCBs prior to backfilling is the cleanup objective for the sediment.) The standard also includes statistical evaluation of the analytical test results. If PCB contamination is found at unacceptable levels, appropriate action, such as capping or re-dredging, may be required.

The remedy calls for the removal of sediments with the greatest PCB concentration and will greatly reduce the PCB inventory. The estimated percentage of total PCBs to be removed is approximately 65% of the total PCB contamination in the Upper Hudson River. Not all of the sediment can be removed due to the difficulty of sediment removal in certain areas. Access limitations, shallow underlying bedrock, and small isolated locations of contamination are some examples of the reasons that areas were excluded.

The dredging productivity standard is designed to maintain the pace of removing an estimated 2.65 million cubic yards of sediment to meet the six-year schedule for completing the dredging operation. It defines the amount of sediment to be dredged by the end of each dredging season (approximately 200,000 cubic yards in the first year of the project, approximately 490,000 cubic yards in the second, and the remaining approximately 2.4 million cubic yards over the dredging program). Although the remedy will not remove all PCB contamination from the Upper Hudson River, it will result in a significant reduction in PCB levels in fish and will thereby reduce the associated human health and environmental risks.

2.11 Existing Development Plans

Existing Development Plans Comment 1: *Several commenters feel that EPA should not select a site that has existing plans for development. They feel that selecting such a site where there are existing plans would restrict economic development that would bring, if realized, benefits to communities.*

Response: EPA has consistently expressed its desire not to interfere with existing or imminent development plans. EPA asked communities and property owners to

provide the facility siting team with information regarding existing or impending plans during the public forums that were held at the outset of the facility siting process. This occurred with the issuance of the *Facility Siting Concept Document* (December 2002) and again during public forums held in connection with the identification of Preliminary Candidate Sites (June 2003). EPA attended several meetings and had conversations with various communities and businesses regarding their plans for various properties. EPA requested documentation from potential developers that could verify and detail any potential future development on sites being considered for a dewatering facility. Where development plans were verified and shown to be imminent during the time frame of the project, sites for the dewatering facility were removed from consideration. If development plans could not be verified, sites were retained for further consideration in the facility siting process.

Some owners of the Recommended Sites provided future development information later in the facility siting process. However, the owners of the properties that make up the Recommended Sites have demonstrated a willingness to work with EPA on the properties' potential uses as a dewatering/transfer facility. EPA intends to work with potential developers and the communities to determine whether project-related improvements to the sites could be utilized as part of the anticipated future development. As noted before, it is EPA's intention that any leased facility will be returned to the property owner and any property EPA acquires will be turned over to the State of New York. Working together with the state and local community, the property will be restored in a manner that takes into account anticipated future land use.

2.12 Future Use

Future Use Comment 1: *Commenters were concerned that putting a facility at a recommended site may not be the best use of a site. They suggested other uses such as residences. Commenters were concerned about the future use of the dewatering site after the project is completed. Some were concerned that putting a dewatering facility on a site could result in future use of the site to dump contaminated materials. Additionally, some questioned whether the facility would be available for municipal use upon project completion. Others questioned whether everything (equipment, infrastructure, etc.) will be removed at the completion of the project and the site restored to its original condition.*

Response: The suitable sites currently under consideration are undeveloped industrial, commercial, or vacant land. The facilities will be temporary and wastes will not be disposed of on-site. Contaminated river sediments from the project will be processed and removed via rail or barge to a disposal facility outside the Hudson River Valley, as noted in the *Record of Decision* (USEPA 2002). Under the Community Health and Safety Plan and Worker Health and Safety Plan, contingency plans will be developed to minimize potential spills and address spills if they occur. At the end of the project, the site will meet all appropriate standards.

If the property is leased it will be returned to the property owner. If EPA acquires the property, it will be turned over to the State of New York. EPA will work with the state and local community so that the property will be restored in a manner that takes into account the anticipated future land use. These future use considerations could result in some infrastructure (for example, waterfront dock facilities) remaining on-site if desired by the community. Any future site use must be acceptable to the community and controlled through local and state permitting requirements.

2.13 Health/Environmental Risks

Health/Environmental Risks Comment 1: *Commenters stated that the facility would result in damage to human health. There were several comments concerned with potential impacts on sensitive individuals such as children and the elderly.*

Response: EPA is aware of community concerns regarding potential health impacts from facility operations. EPA has used risk assessment methodologies to develop health-protective values for chemicals in the air and surface water. The health-based air quality requirements in the quality of life performance standards were developed based on the chronic (greater than seven years) reference dose for Aroclor 1016. A reference dose is a level at which adverse non-cancer health effects are not anticipated. The reference dose is a level that is designed to be protective of sensitive individuals, including children. The reference dose and supporting documentation are available on EPA's Integrated Risk Information System database, which is available at www.epa.gov/iris. The Integrated Risk Information System is EPA's consensus database for toxicity information on numerous chemical compounds, including PCBs. The Integrated Risk Information System provides a current and comprehensive source of this data and reflects EPA's 1996 externally peer-reviewed reassessment of the cancer toxicity of PCBs and the chemical files for Aroclor 1016.

To develop the PCB air value, EPA considered both potential non-cancer health effects and cancer risk for the duration of the project. The resulting calculated cancer risks for both children and adults were shown to be within the risk range of one in 10,000 to one in 1,000,000 identified in EPA's Superfund regulations at 40 CFR § 300.430(e). For non-cancer health effects, EPA determined that the exposures would be lower than the reference dose. EPA's concentrations yield a Hazard Index of less than 1, which is protective of public health. The exposure assumptions evaluated residential exposures, including adults and children six years of age and younger and assuming exposures of 350 days per year for the period of the project.

Health/Environmental Risks Comment 2: *Commenters indicated that they do not eat the fish from the river (i.e., are therefore not exposed to PCBs) and are concerned that the project will create a situation where they will be exposed to*

PCBs through air emissions and contaminated drinking water. In other words, they are concerned that the project would increase their risk of exposure to PCBs.

Response: EPA agrees that it is important to consider the potential impacts of the project on air and water quality. The project will be designed and conducted to minimize potential impacts of PCBs on human health and the environment. EPA has placed the highest priority on protecting the health and safety of the community during the project. Standards have been developed for air emissions and water quality that are protective of human health and the environment. A Community Health and Safety Plan will be developed that will provide the details of how the community will be protected. The Community Health and Safety Plan will be made available for public review.

The objective of this project is to remove PCB-contaminated sediment from the Upper Hudson River, thereby reducing the unacceptable risks to human health and the environment in the Upper Hudson River. The exposure pathway of primary concern for this project is ingestion of fish that have bioaccumulated PCBs. Even though commenters indicated they do not eat the fish, a 1996 New York State Department of Health survey of anglers in the Upper and Lower Hudson found that despite a ban on fish consumption in the Upper Hudson and highly restrictive advisories in the Lower Hudson, about 18% of the Upper Hudson respondents had fish in their possession when interviewed and 11% had more than one fish, suggesting that some users of the river may eat the fish. Most of the fish were largemouth bass, smallmouth bass, and bluegill, species that are often eaten.

EPA recommends that all individuals follow the New York State Department of Health fish consumption advisories regarding the consumption of fish from the Hudson River. The advisory for the Upper Hudson (available at www.health.state.ny.us/nysdoh/fish/fisheng.pdf) is to "eat none."

The cleanup will be designed to minimize the release of PCBs to the environment as outlined in the *Quality of Life Performance Standards* document (Ecology and Environment, Inc. May 2004). Details regarding the implementation of the standard will be included in the planned Community Health and Safety Plan. Air and water will be monitored during the project to confirm compliance with the performance standards, which are protective of the public.

Health/Environmental Risks Comment 3: *Commenters stated the project would put their safety and health at risk. Additionally, commenters questioned who will be liable should health problems stem from the project.*

Response: EPA has placed the highest priority on protecting the health and safety of the community and the workers. Project activities will be designed to minimize the potential for impacts on the community, as outlined in the *Quality of Life Performance Standards* document and the planned Community Health and Safety Plan. The Project will be conducted in accordance with the quality of life per-

formance standards as well as applicable health and safety regulations. Since the project will be designed and completed in accordance with applicable health and safety requirements, it is expected that the potential for incidents resulting from the project will be minimized, if not eliminated. In the unlikely event that implementation of the remedy results in accidental or other unintended damages to someone's health or property, the question of liability and potential compensation for those damages is a complex one that will depend on a number of factors, such as whether EPA or General Electric is performing the remedy, the nature and extent of the damages, and the specific circumstances that led to such damages. It is useful to note that the project is designed to eliminate unacceptable risks to human health and the environment that are caused by the continuing release of PCBs into the food chain. As part of the remedial investigation, EPA evaluated risks through inhalation of volatized PCBs and recreational exposures such as wading into the river and eating PCB-contaminated fish. EPA's assessment determined that the risks from eating fish exceeded the acceptable risk range and is the basis of the remedial action. The risks from inhalation and recreational use of the river are within the acceptable risk range and therefore do not require remedial action.

Health/Environmental Risks Comment 4: *Commenters were concerned that seasonal flood waters (carrying sediment) would come on their property during the project and those sediments would require special handling for removal.*

Response: Contaminated sediment will be dredged when seasonal flooding is least likely to occur (i.e., late spring, summer, and early fall). Dredging cannot be conducted during spring floods, and work in the river will begin after spring runoff has sufficiently abated each year. Thus, it is not likely that there will be any additional PCB input to the floodplain as a direct result of sediment resuspension during dredging. In addition, dredging will remove PCBs from the system and thus actually reduce the potential for contamination of the floodplain.

In the event of a flood during dredging operations, appropriate contingencies would be implemented to minimize the potential for floodwaters to carry exposed contaminated sediments from the dredging downriver. These contingencies would include provisions to temporarily stop work in the event of high flow if conditions were unsafe and/or project requirements could not be met.

Health/Environmental Risks Comment 5: *Commenters were concerned about the potentially harmful characteristics of PCBs.*

Response: EPA has determined that sufficient evidence exists to show that PCB mixtures are carcinogenic in animals and has classified PCBs as probable human carcinogens. PCB animal carcinogenicity studies are summarized in EPA's 1996 reassessment of the toxicity data on the potential carcinogenic potency of PCBs (USEPA 1996b) as well as in the EPA's Integrated Risk Information System, an electronic database that provides the Agency's consensus review of chemical-

specific toxicity data (USEPA 1999c). This information is available at www.epa.gov/iris under the PCB file and at www.epa.gov/ncea.

EPA has evaluated human epidemiological studies that included evaluation of the health effects of PCBs on children born to mothers who were exposed to PCBs as workers and from eating fish. In addition, EPA has evaluated a number of animal studies where animals were exposed to PCBs through ingestion. Studies of Rhesus monkeys exposed to PCBs in their diet indicate a reduced ability to fight infection and reduced birth weight in offspring exposed in utero. These evaluations are available on EPA's Integrated Risk Information System at www.epa.gov/iris.

The project will be designed and conducted to minimize potential impacts from PCBs on human health and the environment. EPA has placed the highest priority on protecting the health and safety of the community during the project.

2.14 Lighting

Lighting Comment 1: *Commenters were concerned that project-related lighting would affect their community. In particular, some commenters expressed concern that the project will be operated on a 24-hour basis, making the use of lighting more prevalent and intrusive.*

Response: EPA recognizes the community's concerns regarding lighting. The Record of Decision states that 24-hour operations may be required to achieve project goals. At this stage in the design it is difficult to determine the daily hours of operation. Information regarding potential hours of operation for both the sediment dewatering/transfer facilities and dredging activities is expected to be presented in the Intermediate Design Reports for Phase 1 and Phase 2. It is important to consider the trade-offs to restricting work hours: for example, reducing the number of hours available for dredging each day will increase the overall number of days that a dredge will need to operate in a particular area.

The quality of life performance standard for lighting was developed to minimize potential project-related lighting impacts. However, the project will require lighting to ensure the safety of the workers at the processing site and on the river, where lighting will also be required to comply with navigation rules and regulations. As outlined in the standard, the designers will have the flexibility needed to select and configure lighting equipment to allow for safe working areas while limiting the amount of lighting that may extend out and affect the community.

2.15 Navigation

Navigation Comment 1: *Commenters expressed concern that the project will cause backups and delays for boaters at locks (including potential interference at*

docks and moorings). Other concerns included the question of who will be responsible for additional repairs to the locks due to increased river traffic.

Response: As required in the quality of life performance standard for navigation, the New York State Canal Corporation will be involved in the review of design and implementation of river navigation plans. The project will be designed to minimize impacts on recreational navigation on the river as much as is reasonable and practicable.

Additional repairs to the locks resulting from an increase in river traffic from the project will be considered and coordinated with the New York State Canal Corporation, which has jurisdiction over the locks as well as other navigable portions of the project area. EPA has been coordinating with the New York State Canal Corporation throughout the planning, facility siting, and performance standards (engineering and quality of life) development phases of the project.

Navigation Comment 2: *Commenters questioned whether navigational dredging would be part of the project.*

Response: The remedy selected in the Record of Decision includes dredging the navigation channel, as necessary, to implement the remedy and to avoid hindering canal traffic during implementation.

2.16 Noise

Noise Comment 1: *Commenters raised several concerns related to noise from the project. For example, some were concerned about noise from rail operations at the facility and from nearby rail lines. They were also concerned about the potential for noise to occur on a 24-hour basis.*

Response: EPA included a performance standard for project-related noise in the development of the quality of life performance standards, available at www.epa.gov/hudson. Daytime and nighttime standards, as well as a control level for daytime, have been established to protect residential areas from excessive noise. The project will not be unnoticeable. However, the project will be designed and conducted to minimize project noise that is harmful or may cause unnecessary disturbance in the community. The noise standard is protective of hearing. In addition, during development of the noise standard, EPA considered issues relating to enjoyment of life and property, including potential interference with day-to-day activities and sleep disturbance.

A complaint-management program will be developed to address public concerns associated with the project, including quality of life-related issues and complaints associated with noise. The program will include specific information regarding access to project staff by phone and how complaints will be handled, including

procedures for notifying residents and local elected officials. Access by phone will be available to the public during operating hours.

Additional details regarding the implementation of the noise standard (for example, monitoring, mitigation, and complaint-response procedures) will be provided in the Community Health and Safety Plan, which will be made available for public review.

2.17 Odor

Odor Comment 1: *Commenters were concerned that project-related odor would affect their community.*

Response: The quality of life performance standard for odor was developed to minimize odor-related nuisances. Any air emissions that could be harmful to public health will be mitigated. Odor complaints will be addressed as required by the complaint program, which will be included in the Community Health and Safety Plan.

Hydrogen sulfide has been used as a measurement standard for the quality of life performance standard for odor. (Decaying organic material can produce hydrogen sulfide.) Other odor-related nuisances will be handled through the complaint program. It should be noted that the dredging projects at Fox River and New Bedford Harbor have not experienced odor-complaint issues.

2.18 Potential Contamination Issues

Site Contamination Comment 1: *Some commenters were concerned with the potential contamination of water supply wells in the vicinity of the dewatering facility.*

Response: Contaminated material on-site will be contained to prevent it from entering the subsurface and affecting groundwater. Monitoring wells will be installed around the perimeter of the facility and sampled at the start and completion of the project and as needed if unexpected spills occur. Contaminated water generated during the dewatering process will be treated on-site before discharge back to the river, in compliance with the substantive requirements of a state discharge permit. Studies have shown that the Hudson River is a point of groundwater discharge (i.e., groundwater flows into the river). Given that the typical flow direction is from groundwater to the river, it is not likely that any short-term increases of contaminants in the river water due to dredging would affect groundwater resources, nor are theoretical spills from riverside operations anticipated to be capable of affecting wells that are upgradient of the facility. Therefore, contamination of groundwater supplies is not expected. Despite this, this issue will be evaluated

and addressed to ensure proper handling and processing of contaminated sediments and water.

Site Contamination Comment 2: *Several commenters expressed concern regarding the fact that the dewatering facility may be placed on land that is currently not contaminated with PCBs. They are concerned that at the conclusion of the project the dewatering facility site will be contaminated and assert that the facility should be sited on land that already has some level of contamination. Conversely, others commented that some sites have existing contamination (such as industrial sites) and therefore should not be used for the dewatering facility.*

Response: EPA expects that the dewatering facilities will either be fully removed or that select components will be used in a manner requested by local officials or the property owner after completion of the project. Engineering controls will be constructed to contain the PCBs throughout processing and shipping. If contamination of facility property results from remedial activities, such contamination will be cleaned up as part of the facility closure process. If the facility is leased, the property will be cleaned and returned to the property owner. If EPA acquires the property, EPA will turn the property over to the State of New York. As stated in the *Record of Decision*, after conclusion of the project the site "will be restored in a manner that takes into account the anticipated future land use of the parcels, such as redevelopment for commercial or recreational use."

During the facility siting process, the presence of contamination at Final Candidate Sites (FCS) was evaluated through sampling. EPA considered sites both with and without existing contamination as potentially suitable. Although the concern regarding on-site contamination was not considered to be a single deciding factor of site suitability, in some cases EPA determined that existing contamination was a potential design limitation or an additional design consideration limiting useable area. The Old Moreau Dredge Spoils Area/NYSCC is an example of a site where contamination was considered a potential design limitation.

Site Contamination Issues 3: *Some commenters thought the dewatering facility would become a hazardous waste disposal site.*

Response: The dewatering facilities have four main functions: sediment transfer and staging, sediment dewatering, sediment stabilization in preparation for transport, and treatment of water removed from sediment. The stabilized sediments will be loaded on rail or barge for disposal at a licensed hazardous waste or solid waste landfill outside of the Hudson River Valley. Although PCB hazardous waste will be handled at the facilities, the facility itself will be a hazardous waste treatment site, not a hazardous waste disposal site. No waste will be disposed of on-site. Additionally, for transportation and disposal purposes, the majority of the dredged sediment is not expected be classified as hazardous waste because it will contain less than 50 parts per million (ppm) PCBs. Once the project is complete,

EPA will work together with the state and local communities and the property will be restored in a manner that takes into account anticipated future land use.

2.19 Property Values

Property Values Comment 1: *Several commenters stated that property values in the vicinity of the dewatering facility would decline. Some of those commenters asserted that they should be compensated in the event that property values decline and that municipal revenues should be supplemented because of loss to the tax base.*

Response: As indicated in the response to Community Benefits Comment 1, properties close to the processing sites may experience some temporary property-value impacts, but these would be minimized by the careful siting and design of the facilities. In addition, these effects would be short-term in nature, since the facility will be in operation only for approximately six years. Upon completion of the project, all project-related contaminated material will be removed. The use of the site once the project is completed will take into account the anticipated future land use of that location. Once the project has been completed, as noted in the white paper, *Socioeconomics*, in the *Responsiveness Summary* (www.epa.gov/hudson), it is expected that local communities will see positive economic benefits compared with existing conditions.

Economic and real estate studies have shown that impacts generally decline with increasing distance from a facility that is viewed as undesirable (e.g., a hazardous waste site), but this is also influenced by factors that can not be controlled such as other neighborhood variables, availability, access, condition of infrastructure, and other community services that may or may not be present (Nelson et al. 1992; USEPA 2002). Other studies have suggested that once remediation is completed, property value losses that have occurred are typically recouped following remediation (Dale et al. 1997; Ketkar 1992; Kohlhase 1991 as cited in USEPA 2002).

2.20 Public Involvement

Public Involvement Comment 1: *Commenters expressed several concerns, including more timely notification of meetings and increased involvement with project decisions. Project decisions mentioned by commenters included facility location. There was an additional request that a summary of comments and responses be prepared by EPA and made available to the public.*

Response: In the February 2002 *Record of Decision*, EPA committed to conducting the dewatering facility selection process in an open and transparent manner and has been available to hear public concerns and comments. Beginning in December 2002, then in June 2003, September 2003, and most recently in May, June, and July 2004, EPA hosted 14 public availability sessions throughout the

Upper Hudson River to present, discuss, and receive comments on the selection of the dewatering facilities. EPA also released for review and comment three major technical documents and twelve fact sheets summarizing the facility selection process. In addition to the release of technical documents and public meetings, EPA also made a commitment to be available to the public by opening and maintaining the Hudson River Field Office in Fort Edward, New York. While EPA has and will continue to take community concerns into consideration, the final selection of location(s) for the dewatering facility(ies) will be made by EPA.

This document provides master comments and master responses as they relate to the facility siting process. EPA is also responding directly to citizens who sent letters to the agency.

2.21 Quality of Life

Quality of Life Comment 1: *Commenters are concerned that project activities will significantly disrupt their quality of life. They also indicated that the project is not worth the interruption of the quality of life in their community and that not enough will be done by EPA to protect their quality of life.*

Response: The objective of this project is to remove PCB-contaminated sediment from the Upper Hudson River, thereby reducing the associated unacceptable risks to human health and the environment that currently exist on the Upper Hudson River. While any significant construction project will produce some degree of impacts, the design of the cleanup is intended to minimize the release of PCBs to the environment while operating with the least impact on the quality of life for residents in the area. The quality of life performance standards have been developed to minimize potential cleanup-related air quality, odor, lighting, noise, and navigation impacts on the community. EPA believes that the quality of life performance standards are reasonable, practicable, and can be met by the project teams.

Quality of Life Comment 2: *Commenters were concerned about vibration from rail, tug boats, and truck traffic.*

Response: The project will result in a temporary increase in rail, tugboat, and truck activity. Given the presence of active rail lines in the area, activity on the Champlain Canal, and the potential for additional truck traffic on existing roads, such activity in the project area has always been a possibility (considering there are major industrial facilities that use these modes of transportation). The potential impacts from these increased activities will be considered and evaluated as needed during project design so that they can be minimized to the extent practicable. Measures to minimize transportation impacts will be coordinated with the appropriate agencies. It should be noted that the project is required to utilize rail or barge to transport sediments out of the project area to minimize impacts from truck traffic on local roads.

2.22 Rail

Rail Comment 1: *Commenters were concerned that railcars full of sediment could spill/leak and contaminate the community during transport. They were also concerned that increased rail use will cause unsafe conditions at rail crossings, including interference with emergency vehicle routes.*

Response: EPA has placed the highest priority on protecting the health and safety of the community and workers. Project activities will be designed to maintain active, safe use of roads at rail crossings, including unimpeded use of those roads by emergency services.

Before leaving the site, the sediment will be dewatered and stabilized and placed in railcars or barges. In this state (dewatered and stabilized) the PCB-contaminated sediment would not present an immediate threat to human health and the environment in the unlikely event of a spill during transport. Sediments will be transported in accordance with existing waste transportation requirements.

2.23 Record of Decision (ROD)

ROD Comment 1: *Commenters have questioned the purpose of the project. In particular, commenters expressed concern that the dredging of the river to remove PCBs would disturb the river and make things worse. Commenters believed that it would be better to let nature take its course and not stir up the PCBs in the river sediments. Additional commenters questioned whether removing PCBs will improve the health of humans and the environment. Some also questioned the analyses that were used to make the decision to dredge the river.*

Response: The issues raised in this comment were carefully considered by EPA before issuing the *Record of Decision* and are addressed in detail in the *Record of Decision* and the *Responsiveness Summary* (available at www.epa.gov/hudson). In the *Record of Decision*, EPA determined that the remedy is necessary to address the unacceptably high risks to human health and the environment from PCBs at the site. The cleanup will be designed to minimize the release of PCBs to the environment, and the quality of life performance standards have been developed to minimize potential cleanup-related air quality, odor, lighting, noise, and navigation impacts on the community. The Administrative Order on Consent for Remedial Design and Cost Recovery requires the remedy's design to be consistent with and fully take account of the performance standards established by EPA.

The series of technical reports produced by EPA for the Reassessment Remedial Investigation was subjected to a rigorous, independent peer review process that generally validated the scientific approach used by EPA. Significant shortcomings identified by the peer review were subsequently addressed. (Commenters are

referred to the Reassessment Remedial Investigation documents, the *Feasibility Study*, and the *Record of Decision* [including the *Responsiveness Summary*] for detailed information concerning EPA's selection of the remedy for the site.) The Responsiveness Summary also includes a discussion of the Reassessment Remedial Investigation's peer review process.

ROD Comment 2: *Commenters have questioned whether the amount of material dredged will be sufficient to clean up the river (i.e., resulting in sufficiently reduced levels in fish). In particular, one commenter questioned whether dredging needed to be done in the Halfmoon area. Others were concerned about the formation of new hot spots in the future and the potential need for new future dewatering facilities to clean up the new hotspots.*

Response: In the Record of Decision, EPA determined that the selected remedy would significantly reduce the unacceptable risks to human health and the environment associated with PCB-contaminated sediments in the Upper Hudson River. The removal of approximately 2.65 million cubic yards of PCB-contaminated sediments (150,000 pounds of total PCBs) from the Upper Hudson River is expected to significantly reduce health risks associated with human consumption of fish.

The Record of Decision also indicates that dredging portions of the navigation channel and several locations upstream of Lock 2 might be necessary in the Halfmoon area. However, dredging areas will not be finalized until later in the remedial design. By enforcing the engineering performance standards for resuspension and residuals, the remedial action is not expected to create new hot spots or the need for additional dewatering facilities.

2.24 Recreational Areas

Recreational Areas Comment 1: *Commenters expressed concern regarding placing a facility near recreational areas. Some concerns included economic and quality of life impacts.*

Response: EPA acknowledges that there are recreational facilities in the vicinity of a number of the properties that met the Group 1 criteria (river, rail, and road access; available space; proximity to dredge areas; and utilities). It is often the case that sensitive resources such as recreational facilities are scattered throughout an area so that the community has easy access to such facilities. Additionally, since a commitment was made by EPA (based on requests from the public) not to use agricultural land for a facility, potentially suitable sites tend to be closer to populated areas where most industrial and commercial land is located. EPA understands that there are exceptions to these examples, but when evaluating a large number of sites for suitability it should be expected that suitable sites would be located near sensitive resources and more populated areas. EPA has indicated in the facility siting documents that they have considered the types, locations, and

numbers of such resources in the vicinities of potential dewatering sites. The Group 2 criteria (Additional Considerations) were developed as factors to consider that may influence the facility siting process when identifying and evaluating potential sites for one or more dewatering facilities.

A prominent benefit of the sites that have been recommended for use as sediment dewatering/transfer facilities is that they are large, encompassing between approximately 95 and 349 acres. Given the estimated area requirements for a sediment dewatering/transfer facility and rail yard (between approximately 38 and 63 acres), the sizeable acreage of these sites allows opportunities to establish a buffer between on-site operations and off-site resources, people, and nearby recreational amenities.

2.25 Residential Areas

Residential Areas Comment 1: *Some expressed concern that adequate distance (buffer) between the facility and populated areas is not available.*

Response: EPA has made every effort to avoid locating dewatering sites next to homes. A prominent benefit of the sites that have been recommended for use as sediment dewatering/transfer facilities is that they are large, encompassing between approximately 95 and 349 acres. Given the estimated area requirements for a sediment dewatering/transfer facility and rail yard (between approximately 38 and 63 acres), the sizeable acreage of these sites allows opportunities to establish a buffer between on-site operations and off-site resources, people, and nearby residential areas. EPA intends to minimize impacts to neighboring areas by designing and operating the dewatering facilities to comply with the quality of life performance standards for noise, light, air quality, odor, navigation, and other concerns. EPA is aware that the project will not go unnoticed, but as mentioned in the *Responsiveness Summary* to the *Record of Decision*, "while EPA recognizes that there may be some short-term impacts to the local communities during implementation of the remedy, the Agency believes that these impact(s) will be minor, temporary, and very localized."

2.26 Sensitive Resources

Sensitive Resources Comment 1: *Several commenters questioned why the EPA might select a site for the dewatering facility that is close to sensitive resources such as residences, playing fields, schools, libraries, and senior centers. Some of those commenters questioned how potential sites near sensitive resources could have been carried forward in the facility siting process.*

Response: Given the nature of settlement patterns within the Upper Hudson River Valley and EPA's commitment to avoid parcels classified as agricultural (which are typically of larger size), there are sensitive resources such as resi-

dences, playing fields, etc. within varying proximities of a majority of the properties that meet the Group 1 criteria. EPA has considered the types, locations, and numbers of such resources in the vicinities of potential dewatering sites. The Group 2 criteria (Additional Considerations, including cultural resources, wetlands, threatened and endangered species, etc.) were developed as factors to consider during the evaluation of potential sites and as those that may influence the facility siting process. Evaluation of sites involved determining which sites may be best suited for the design and operation of a facility relative to the Group 1 criteria and in consideration of sensitive resources. Considerations of sensitive resources involved avoiding (where practicable) and minimizing impacts through siting and design.

Given the estimated area requirements for a sediment dewatering/ transfer facility and rail yard (between approximately 38 and 63 acres), the sizeable acreage of the Recommended Sites allows opportunities to establish buffer zones between on-site operations and off-site resources, people, and nearby sensitive resources.

EPA anticipates that although there may be sensitive resources in the general vicinity of a dewatering site, effective mitigation measures can be undertaken to minimize potential negative impacts. The remedial design will take into account all aspects of facility construction and operation relative to meeting the needs of the project while maintaining the quality of life performance standards.

2.27 Site Selection Process

Site Selection Comment 1: *Commenters questioned why sites far away from the majority of dredging activities were selected.*

Response: The facility siting process was designed to identify locations within the study area that meet the requirements of a sediment dewatering/transfer facility. The facility siting study area (study area) was defined as being one-half mile inland from the banks of the Hudson River and extending from the Hudson Falls Dam to the Port of Albany area. All properties within the study area were evaluated. In the *Record of Decision,* EPA indicated the focus of the siting efforts would be on industrial and/or commercial properties. The search for properties that could meet the requirements of a sediment dewatering/transfer facility also included vacant land, public services, and Hudson and Black River Regulating District lands. EPA also committed in the *Record of Decision* to transporting the treated dredge sediments beyond the Hudson River valley by either rail or barge. In addition, facility siting criteria were established to assist the process of finding locations within the study area that would meet the basic requirements of a sediment dewatering/transfer facility. Basic engineering criteria, referred to as the Group 1 criteria, included river, rail, and road access; available area; proximity to dredge areas; and availability of utilities.

During the initial screening of available properties it became apparent that rail access and appropriate land uses were limiting factors throughout the study area, especially in the northern section of the study area. During the process of identifying Preliminary Candidate Sites an additional analysis of expanding rail access from 500 feet to one-quarter mile and one-half mile from potential facility locations was conducted. This was done in order to provide assurance that all potentially suitable sites (i.e., sites that may have met many of the other Group 1 criteria but did not have rail within 500 feet of a property) were identified in River Sections 1 and 2. Two additional sites were added to the Preliminary Candidate Site (PCS) list as a result of this analysis. As described in the *Hudson River PCBs Superfund Site Technical Memorandum: Identification of Preliminary Candidate Sites* (June 2003), 24 PCSs were identified through the process of screening the study area for appropriate land uses and the Group 1 criteria, five of which were located in River Sections 1 and 2.

Since proximity to the dredge areas is a Group 1 facility siting criterion, EPA balanced the relative closeness of those areas that were to be dredged with potential areas where a facility might be located. As indicated in the *Facility Siting Concept Document* (Concept Document), the proximity of a sediment dewatering/transfer facility to dredge areas will influence a number of logistical aspects of facility design and project implementation such as type of dredging process used, types of dewatering needed, and the dynamics of transporting dredged material to a facility and how it would relate to meeting the project's overall productivity standards. During the course of the siting process, after the development of the Concept Document through the identification of Final Candidate Sites, the Remedial Design Team began the preliminary stages of project design. Their initial investigations suggested that although proximity of a dewatering facility to dredge areas would influence a number of important design components (i.e., hydraulic versus mechanical dredging), the distance between dredge areas and facility locations was a factor that could be addressed in project design.

Site Selection Comment 2: *Several commenters asserted that it was a mistake to eliminate the Georgia Pacific/NYSCC (Georgia Pacific) site. Many have requested that the Georgia Pacific site be reconsidered.*

Response: The Georgia Pacific site was identified as a Preliminary Candidate Site because the site exhibited many of the characteristics of the Group 1 facility siting criteria. These included river, road, and rail access; proximity to dredge areas; sufficient space; and some availability of utilities. In summary, the site was selected as a Final Candidate Site as a result of evaluating the Preliminary Candidate Sites. As was the case for all Final Candidate Sites, a number of field investigations were conducted on the site to define, in greater detail, existing resources, features, and conditions within (and in the near vicinity of) the site to determine the suitability for the design, construction, and operation of a sediment dewatering/transfer facility.

The site-specific field investigations led to the development of Group 3 criteria and the refinement of how the site compared with the siting facility criteria. The results of the field investigations indicated that there were a number of potential limitations and additional design considerations associated with the site, including the following:

- Hilly topography and the presence of a closed landfill on the eastern parcel of the site (east of County Route 113) significantly restricted useable acreage.

- Per investigations performed by the Remedial Design Team, the site is not suitable for the development of a rail yard that would meet the requirements of the project. Their preliminary design investigations indicated that the eastern parcels of the site did not meet the anticipated rail yard footprint and this was therefore considered a potential limitation of the site.

- The Remedial Design Team also indicated that given the present physical characteristics of the Batten Kill railroad and the estimated production schedules, the site is unsuitable for the movement of project materials by rail. See Site Selection Comment 5 for further discussion of the Batten Kill railroad.

- Phase IB cultural resource investigations conducted on-site suggested the presence of potentially significant archaeological features occurring within the western parcels of the site. See Cultural Resources Comment 3 for further discussion.

- The proximity of the Northumberland Dam would require specific safety measures to be implemented. The location of the navigation channel upstream of the dam along the eastern shoreline would also require additional safety measures relative to river vessel movement to and from the site.

- The presence of County Route 113 bisecting the site creates a greater degree of complexity for designing the movement of dewatered materials across the road while maintaining existing traffic circulation and safety.

Additional design considerations are presented in Sections 3.4.3.2 and 3.4.3.3 of the Facility Siting Report.

Given the aforementioned limitations and design considerations, the Georgia Pacific site was not selected as a Suitable Site.

Site Selection Comment 3: *Relative to the Energy Park Site, commenters expressed concern regarding contamination of the Champlain Canal, between the Hudson River and the Site, which could result from project operations.*

Response: The design of the project will be such that it minimizes the potential for spills and therefore contamination of the Champlain Canal. Spill prevention

and spill contingency planning will be included in the Community Health and Safety Plan. Spill scenarios in the plan will take into account both onshore and offshore spills and will clearly outline procedures to protect the public. This document will be written in consultation with local emergency agencies and will provide specific information regarding protection of the public. The plan has not been developed yet because the necessary detailed design information has not been determined. EPA will continue to review the design as it progresses to confirm that the design satisfies engineering and quality of life performance standards. EPA and the Remedial Design Team will hold public forums during the drafting of the Community Health and Safety Plan and the public will have opportunities to provide input.

Site Selection Comment 4: *Commenters indicated the report did not take into consideration critical issues related to the economic, archaeological, ecological, historic, and residential impacts of the area surrounding the Bruno/Brickyard Associates/Alonzo site. They suggested that further investigations must be conducted to determine the potential adverse impacts of the facility on the proposed site.*

Response: During the facility siting process, EPA conducted detailed field investigations to obtain site-specific information relating to the physical, geological, archaeological, ecological, and environmental condition/characteristics of each of the Final Candidate Sites. The results of these investigations were presented in the *Draft Facility Siting Report – Public Review Copy*. The report also indicated that some investigations were continuing (i.e., cultural resources, intermediate design). The results of these investigations and the design evaluations of each of the Recommended Sites will be evaluated and presented in the Facility Site Selection Summary report.

In addition, there are a number of responses to comments and white papers in the *Responsiveness Summary* (USEPA 2002) that discuss, among other things, the potential socioeconomic impacts of the remedy as well as how cultural and archaeological resources will be addressed during the design and implementation of the remedy. The *Responsiveness Summary* is available at www.epa.gov/hudson.

Site Selection Comment 5: *Commenters have requested that the Georgia Pacific site be reconsidered for a dewatering facility because they believe the Batten Kill railroad was not accurately represented in the Draft Facility Siting Report – Public Review Copy. Commenters provided statements indicating that the Batten Kill railroad provides adequate and reliable rail service. Others stated that siting a facility at the Georgia Pacific site would provide needed business for the railroad.*

Response: EPA notes that the Batten Kill railroad is a functioning railroad, as attested to by several satisfied customers of the railroad. However, during the course of the facility siting evaluation of the Final Candidate Sites and the pre-

liminary design evaluation of each of the Final Candidate Sites by the Remedial Design Team, it was noted that there were some project-specific potential limitations at the Georgia Pacific / New York State Canal Corporation (Georgia Pacific) site (see Site Selection Comment-Response 2) and some project-specific potential limitations associated with the Batten Kill rail line. As stated in the *Draft Facility Siting Report – Public Review Copy*, there are three project-related limitations to the site with regard to rail: there is inadequate space on the site to construct and operate a rail yard large enough to handle the volume of railcars in an efficient manner; the Batten Kill railroad may require significant rehabilitation in order to handle the loads associated with railcars filled with dewatered sediments; and the site is approximately 32 miles from a major rail carrier.

As stated in the *Draft Facility Siting Report – Public Review Copy* (see also Site Selection Comment 2), there are a number of site limitations associated with the Georgia Pacific site that constrain the use of the property as a sediment dewatering/transfer facility. Relative to rail, it was determined that the physical characteristics of the site could not accommodate an on-site rail yard. In the judgment of the Remedial Design Team rail consultant, the track configuration at this site could likely only support placement of single cars rather than blocks of trains. Off-site alternatives were also reviewed and it was determined that "the additional switching and handling of loaded and unloaded railcars at the processing site and disparate potential other locations on the Batten Kill railroad would be less efficient, more time consuming, and more disruptive to the community than at a candidate site that had sufficient property to contain both the processing facility and adjacent rail yard at the same location."

The rail consultant also indicated that "the majority of the Batten Kill rail line was constructed as lightweight 80- and 90-pound jointed rail that dates back to the late 1800s," which is "designed for railcars that weighed 80,000 pounds, compared to the railcars of 240,000 pounds or more that will be expected on the project." It was also noted that jointed rail construction is problematic in that "it requires slower speeds and has more parts than continuous welded rail; these parts are prone to crack and therefore [would likely require] replacement under the loads expected in the project." As a result of these issues, the rail consultant for the Remedial Design Team concluded that the use of the Batten Kill railroad for the project would require a substantial amount of work in order to ensure that the rail could reliably handle the daily transit of approximately 100 loaded and empty 100-ton railcars over the term of the project.

Finally, given that the Georgia Pacific site is located approximately 32 miles from a major rail carrier, the Remedial Design Team noted that "railroad movement from origin to destination would entail at least two, and more likely three railroads, a more inefficient, costly and complex movement than potential movements available at other final candidate sites."

EPA does not dispute the fact that the Batten Kill railroad reliably serves many commercial customers. However, EPA and the Remedial Design Team maintain that the location and layout of the site and the present physical characteristics of the Batten Kill railroad render this site unsuitable for the transport of dewatered sediments and other project materials by railroad, based on the production schedules of the project. The Georgia Pacific site did not compare favorably with the Suitable Sites in terms of the potential to design and implement railroad operations that would enable the goals for the project to be accomplished.

Site Selection Comment 6: *A commenter indicated that although the Draft Facility Siting Report – Public Review Copy provided information on the benefits, potential limitations, and additional design considerations of the Suitable Sites, the document did not necessarily provide evidence that the benefits of the Bruno/Brickyard Associates/Alonzo site outweighed the potential limitations. Some similar comments focused on the question of why the Bruno/Brickyard Associates/Alonzo site was selected.*

Response: The purpose of the facility siting process was to identify locations within the defined boundaries of the facility siting study area (Hudson Falls to Port of Albany area) that would be suitable for the design, construction, and operation of a sediment dewatering/transfer facility and that would facilitate the success of the Remedial Action. The siting process had been developed, and has been performed, to evaluate sites that appeared to have the greatest potential to satisfy the engineering requirements of the facility (i.e., river and rail access) while minimizing impacts on the local communities (i.e., siting on vacant, commercial, or industrial land). In order to communicate findings of the preliminary design analysis and the site-specific field investigations of the Final Candidate Sites, information was provided in the *Draft Facility Siting Report – Public Review Copy* on those aspects of each of the sites that appeared to be benefits, potential limitations, and additional design considerations.

Generally, the Bruno/Brickyard Associates/Alonzo site matches the Group 1 facility siting criteria (e.g., rail, river, and road access; available space; proximity to dredge areas; and access to some utilities). Specifically, the benefits of the Bruno/Brickyard Associates/Alonzo site include the availability of useable acreage (i.e., site features do not appear to pose irreconcilable constraints on design and operation of a facility on-site), suitability for the construction and operation of a rail yard, sufficient length of the waterfront for the construction and operation of project waterfront facilities, and materials at the site that potentially could be used for clean fill for construction purposes.

As a result of the review of each of the Suitable (and Final Candidate) Sites, potential limitations and additional design considerations were also identified. The potential limitations of the Bruno/Brickyard Associates/Alonzo site involved potential navigation issues, given the relative proximity of the site to Lock 3 on the downstream side and the height of the rail bridge on the upstream side. Addi-

tional design considerations (see Section 3.4.4.3, *Draft Facility Siting Report – Public Review Copy*) were also identified: environmental conditions, waterfront suitability (i.e., the shallow waterfront would likely require a significant amount of navigational dredging for the construction of waterfront facilities), dredge material transfer issues, the potential presence of threatened and endangered species, road access, utilities, geology and/or surface features, and floodplains. Additionally, as noted in the *Draft Facility Siting Report – Public Review Copy*, the cultural resources investigation continued on the Bruno/Brickyard Associates/Alonzo and Energy Park/Longe/NYSCC sites. The Phase IB and II data analyses and report will be reviewed and evaluated by EPA and the Office of Parks, Recreation, and Historic Preservation. This information will be available to the public when the review has been completed.

Prior to the detailed design evaluation that is to be conducted on each of the Recommended Sites and in comparison with the other Suitable Sites, the evaluation by the facility siting team, in coordination with the Remedial Design Team, indicated that the site's characteristics could potentially optimize the design of a sediment dewatering/transfer facility. Therefore, the Bruno/Brickyard Associates/Alonzo site was selected as a Recommended Site.

EPA and the Remedial Design Team are continuing the process of closely examining the Bruno/Brickyard Associates/Alonzo site. They will be determining if the potential navigation limitation and additional design considerations can be incorporated into the design of the facility and therefore not be considered significant constraints. These concerns, as well as others, will be evaluated and factored into the site selection process.

Site Selection Comment 7: *Commenters questioned why EPA would not site a facility that would create the least amount of impacts for a community, referring specifically to the compatibility of an industrial operation in a non-industrial area. Others suggested areas that were far away from people would be better suited for a facility and that there are plenty of non-residential areas from which to select.*

Response: The purpose of the facility siting process was to identify locations within the defined boundaries of the facility siting study area (Hudson Falls to Port of Albany area) that would be suitable for the design, construction, and operation of a sediment dewatering/transfer facility and that would facilitate the success of the Remedial Action. In the *Record of Decision* EPA indicated that the focus of their siting efforts would be on industrial and/or commercial properties. Therefore, parcels classified as residential or agricultural were screened out at the beginning of the facility siting process. The elimination of residential and agricultural properties, in combination with the need for rail access, greatly reduced the availability of properties within the study area that could be potentially considered for a facility. Consequently, the remaining properties for consideration tended to be located in areas that are characterized by varying degrees of development rather

than in locations entirely remote from people. Remote, non-residential areas within the study area tend to be predominantly agricultural. Despite their relative proximity to residential areas, the three sites that EPA designated as Recommended Sites all encompass large areas that will enable the creation of buffer areas to reduce impacts on nearby residences.

2.28 Traffic

Traffic Comment 1: *Commenters indicated that increased traffic on local roads due to the project would cause traffic delays. Access to some sites is limited to smaller streets, many of which are residential in nature.*

Response: Traffic and roadway conditions were considered as part of the facility siting evaluations. The designers will evaluate traffic in greater detail and complete the design to ensure that roadways (including those roadways that are near the site) and entrances are appropriate and to minimize the potential for community traffic impacts. EPA understands that there will be increased traffic associated with facility construction and operation, but it is expected (based on existing evaluations) that those increases will be manageable, will not unreasonably interfere with local traffic patterns, and will not create unsafe situations for the community.

Traffic Comment 2: *Commenters expressed concern that roads and bridges cannot handle increases in traffic and truck weight loads resulting from the construction and operation of a dewatering facility. There was further concern expressed that the increased traffic would deteriorate the roads, resulting in the need for road upgrades and repairs.*

Response: The designers will evaluate traffic in greater detail and complete the design to ensure that roadways and entrances are appropriate and to minimize the potential for community traffic impacts at the selected sites. Evaluation will also include consideration of size and loads of truck traffic. EPA understands that there will be increased traffic associated with facility construction and operation, but it is expected (based on existing evaluations) that those increases will be manageable, will not unreasonably interfere with local traffic patterns, and will not create unsafe situations for the community. Based on preliminary investigations, EPA understands that there may be height and width load limitations on some nearby roads and bridges. Road upgrade and repair associated with the project (if needed) will be coordinated with appropriate agencies such as the local, county, and state transportation agencies.

Traffic Comment 3: *Commenters were concerned that increased traffic on roadways adjacent to the dewatering facility will be dangerous to pedestrians and bicyclists. Children may walk along roadways in the area of potential access to the site.*

Response: Public health and safety is one of the major EPA concerns for this project. The project will be designed to consider safe use of roads adjacent to the facility. Additionally, to address public safety, a Community Health and Safety Plan will be drafted and implemented. This plan will be made available to the public for review.

2.29 Water Quality

Water Quality Comment 1: *Commenters were concerned that facility and dredging operations will damage water quality in the river, causing problems with recreational uses such as swimming and with the quality of water from river intakes used for drinking and irrigation.*

Response: The community will be protected from impacts on water quality through performance standards and regulatory requirements such as the engineering standard for dredging resuspension and the substantive requirements of discharge permits.

- **Engineering Performance Standards for Dredging Resuspension.** This standard sets limits on PCB concentrations in the water column during dredging. The maximum allowable PCB concentration is equivalent to the federal maximum contamination limit (MCL) for drinking water supplies of 500 ng/L (nanograms per liter or parts per trillion) total PCBs.

- **Substantive Requirements of Discharge Permits**. The discharges of treated water from the dewatering facility operations will comply with the effluent limits that would apply if the discharge were regulated under a state permit. (Although no federal, state, or local permits are required for on-site remedial activities, the substantive requirements of any applicable permits will be met.)

Exceedances of these requirements will require prompt response and may require the temporary suspension of the operation that is causing the exceedance in order to review the situation and establish the appropriate action. The Community Health and Safety Plan will include monitoring requirements designed to protect public water supplies during the cleanup. In addition, this plan will outline procedures for notifying the public regarding possible issues of water quality. It should be noted that PCBs are currently being continually released into the water column from the contaminated sediments. The remedy is expected to significantly reduce these ongoing releases.

2.30 Wetlands/Floodplains

Wetlands/Floodplains Comment 1: *Some commenters expressed concern over adverse impacts on wetlands and floodplains as a result of constructing a dewa-*

tering facility. Concern also was expressed about locating the facility in a 100-year floodplain and the impacts that would result during an extreme flood event.

Response: The construction of the dewatering facility may result in adverse impacts on wetlands in the immediate vicinity of the dewatering facilities. However, the project will result in a reduced mass of PCB-contaminated river sediment. Thus, the project will have a positive impact on wetlands and floodplains, especially during flood events when the potential for sediment resuspension is greatest. Long-term positive effects on the natural and beneficial value of wetlands will result from the project upon the removal of PCBs from the Hudson River ecosystem.

Wetlands were identified and delineated at each of the Final Candidate Sites. This information has been provided to the Remedial Design Team for their consideration as they develop and evaluate the intermediate design. The locations of wetlands will be used to develop minimization and avoidance measures to incorporate into the layout of the facility. If it is determined that there would be unavoidable wetland impacts resulting from the construction and operation of the sediment dewatering facilities, compensatory wetland mitigation will be implemented. The goal of any compensatory mitigation will be to fully compensate for (replace) wetland acreage and the functions and benefits lost as a result of the construction and operation of the sediment processing/transfer facilities.

A dewatering facility could involve the placement of fill in the floodplain for the creation of a new wharf to facilitate unloading and, potentially, loading of barges. In addition, portions of a facility could have the potential to be located in the 100-year floodplain. Dredging of sediments and construction of the wharf at the dewatering facility may result in temporary, localized disturbance in the floodplain. Design measures will ensure that floodplain capacity and function will be maintained.

The design of the wharf facility will take into account potential impacts on the floodplain and flood flows. Per Executive Order 11988, Floodplain Management (40 FR 6030), EPA will ensure that measures will be taken to minimize the impacts of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains.

If portions of the facility are located within the 100-year floodplain, the facility will be designed to accommodate flood flows and ensure that adverse impacts do not occur. In addition, the Upper Hudson River floodplain is actively regulated through a series of dams and locks. Therefore, it is not expected that the construction of a wharf and/or the dewatering facilities would have a significant impact on floodplain storage capacity or the 100-year floodplain.

2.31 Wildlife

Wildlife Comment 1: *Some commenters expressed concern that the construction and operation of a dewatering facility will adversely affect wildlife and wildlife habitat and destroy unique habitats and the environmental health of the area.*

Response: PCBs in the Upper Hudson River sediments present unacceptable risks to the environment. EPA's ecological risk assessment for the project identified population-level risks for piscivorous (fish-eating) birds and mammals as a result of the existing PCB-levels in fish, their primary prey. The Ecological Risk Assessment for the site indicated that EPA levels of concern for wildlife were exceeded. Certain fish species, including striped bass, are also at risk. The goal of the Hudson River project is to remove a substantial portion of the PCB-mass from Hudson River sediments, which will result in significant decreased concentrations of PCBs in fish tissue.

Wildlife may be displaced from a dewatering facility location. However, field surveys of the Suitable Sites indicated that there is suitable habitat for wildlife species adjacent to the proposed facility locations. During these field investigations, sites were also surveyed for sensitive or unique habitats. Potential impacts on wetlands are discussed in the response to Wetland/Floodplain Comment 1, above. No other unique or sensitive habitats were observed on any of the Suitable Sites. Other wildlife (e.g., white-tail deer, Canada geese, snow geese, and other waterfowl) may be displaced from the Bruno/Brickyard Associates/Alonzo site during construction and operation activities. However, suitable habitat for these species exists adjacent to the site and along the Upper Hudson River corridor (an area greater than 40 miles in length). Site planning and design will attempt to minimize impacts on wildlife habitats while still meeting the operational needs of the dewatering/transfer facility. Displacement of wildlife species from the site is not expected to result in adverse impacts on the populations of any of these species. EPA did conduct habitat field investigations on each of the Final Candidate Sites. No unique habitat types were found on any of those sites.

Minimization measures will be incorporated into the design phase, including facility siting/layout and design to minimize habitat fragmentation and direct or indirect impacts on sensitive habitats such as wetlands. The facility design could include incorporating vegetative corridors and screens and other site and project elements to avoid or minimize impacts on wildlife.

Wildlife Comment 2: *Some commenters expressed concern that threatened and endangered species such as the bald eagle and the shortnose sturgeon will be adversely impacted by the project and will avoid the area.*

Response: The EPA is developing a Biological Assessment to evaluate and manage the impact of the project on threatened and endangered wildlife in the region. EPA will continue to consult with appropriate federal and state agencies in deter-

mining whether any federally listed threatened and endangered species in the project area may warrant special consideration as the project is designed. Conservation measures will be developed in the Biological Assessment to ensure that population-level impacts do not occur to any federally listed threatened or endangered species.

2.32 Zoning

Zoning Comment 1: *Several commenters asserted that EPA did not satisfy its commitment to avoid residential and agricultural land and target commercial and industrial areas during the facility siting process, as specified in the Record of Decision. Some commenters noted that EPA did not use local zoning as a method for identifying land use during the screening of parcels and candidate sites.*

Response: As stated in the *Responsiveness Summary* to the *Record of Decision*, "ideally the facility(ies) will be located in industrial areas or in areas that are as remote as possible with regard to residences in order to minimize any nuisance inconveniences." Since local zoning is an issue of concern, further explanation of the process EPA used for determining land use is helpful.

First, zoning is a local system. EPA's study area covered a large number of towns spread over four counties (Washington, Saratoga, Rensselaer, and Albany). Zoning classifications are potentially different from one municipality to another. In addition, zoning is also typically a planning mechanism for future use rather than an indicator of current or historical land use.

Second, neither the *Record of Decision* nor EPA's *Facility Siting Concept Document* required or referenced local zoning. This approach is consistent with the legal requirements of Superfund. Although Superfund requires compliance with substantive provisions of state and federal environmental laws, local zoning does not fall into those categories. However, EPA does take local laws into consideration to the extent possible. Superfund has been established this way in part so that removal actions (such as this project) can be completed in a timely manner.

In order to incorporate consistency when viewing the entire facility siting study area (which includes portions of Washington, Saratoga, Rensselaer, and Albany counties) for screening land use types, the New York State Office of Real Property Services property code classifications were used in the early part of the facility siting process to screen out properties used for residential and agricultural purposes and other properties (i.e., churches, cemeteries, schools, parks). This left industrial, commercial, and some vacant properties for consideration in the review and comparison of parcel suitability with the Group 1 siting criteria (river, rail, and road access; available space; proximity to dredge areas; and availability of utilities). The New York State Office of Real Property Services classifications provided a universal (across the state) approach for identifying property use relative to how the property is assessed for tax purposes. The land use classifications

of the Recommended Sites are consistent with EPA's commitment to site the de-watering facility "in industrial areas, or in areas that are as remote as possible with regard to residences in order to minimize any nuisance inconveniences," as specified in the *Responsiveness Summary* (USEPA 2002).