

TABLE C-1
CHEMICAL-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|--|--------------------------|---|
| Federal Guidelines | | | |
| Surface Water | | | |
| Water Quality Standards 40 CFR 131.36 | The USEPA requires all states to establish surface water quality standards. For states that have not developed surface water quality standards, the USEPA provides criteria for priority pollutants. | Relevant and Appropriate | Since New York has developed surface water quality standards these standards will only be considered in the absence of state standards. |
| State Guidelines | | | |
| Surface Water | | | |
| NYSDEC Surface Water Standards 6 NYCRR Part 703, August, 1999 | These requirements set forth standards based on the classification of the water body. | Applicable | These standards are applicable to the development of cleanup levels. |
| Technical and Operations Guidance Series (TOGS)-1.1.1, April 2000, - Ambient Water Quality Standards and Guidance Values | Provides Water Quality standards not published in 6 NYCRR Part 703. | TBC | These standard should be considered for the development of cleanup levels. |
| Sediments | | | |
| Technical Guidance for Screening Contaminated Sediment July, 1994 | NYSDEC has developed sediment screening levels to identify contaminated sediments. | TBC | These screening levels have not been adopted as a regulation, however, they will be considered for any remedial activities at the site. |

TABLE C-2
LOCATION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|--|---|---------------------|--|
| Floodplain Management 40 CFR 6.302(b) Executive Order 11988 | Federal agencies proposing actions to be located in a floodplain must first evaluate the potential adverse effects those actions might have on the natural and beneficial values served by the floodplain. | Applicable | The areas adjacent to the Peconic River and its associated wetlands are within a floodplain. This regulation will apply. |
| Area Affecting Stream or River 40 CFR 6.302(g) Executive Order 11990 | This regulation requires that necessary actions be taken to protect fish and wildlife from impacts associated with modifying streams. | Applicable | After consultation with the U.S. Fish and Wildlife Service and appropriate State agency, actions necessary to protect fish and wildlife from impacts associated with modifying streams or areas affecting streams will be implemented. |
| Use and protection of Waters 6 NYCRR Part 608 | This regulation is the New York State Stream Protection Program. Sections significant to this project include Disturbance of Protected Streams, Dams and Impoundment Structures and Water Quality Certifications. | Applicable | The Peconic River is protected as a New York State Scenic and Recreational River. Temporary "Aquadam barriers will be used during the cleanup and removed at cleanup completion. Monitoring will be conducted to ascertain maintenance of water quality. |
| Protection of Wetlands 40 CFR 6.302(a) Executive Order 11990 | <p>Federal agencies are directed to avoid construction located in wetlands unless the agency head finds: (1) no practical alternative to such construction, and (2) the proposed action includes all practical measures to minimize harm to wetlands which might result from such use.</p> <p>Federal Agencies proposing actions that might adversely impact wetlands shall consider certain factors relevant to the proposal's effect on the survival and quality of the wetlands.</p> | Applicable | <p>There are 5 federally designated wetland locations on-site. The wetlands were mapped and found to be of three types: PF01C, PSS1E (or PSS1C), and PEM1E.</p> <p>While no recent disturbance to these wetlands was noted during on-site field surveys (LMS, 1995) aerial photographs reveal that streams and water courses through the wetlands have been channelized.</p> <p>Remediation may require the construction of dewatering facilities and the dredging and filling of wetland areas. Therefore, this regulation may apply.</p> |

TABLE C-2 (Continued)
LOCATION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|--|--------------|--|
| National, Wild, Scenic or Recreational Rivers 6 NYCRR 666 Article 15 Title 27 | Sets forth guidelines limiting development of and impact to designated rivers. | Applicable | <p>The Peconic River was designated by the State of New York in 1996 as a "Wild and Scenic River." Twelve kilometers of the approximately 22.4 kilometer river is now listed as "Scenic River, free of diversions or impoundments, limited access, primitive and largely undeveloped areas." (NYSDEC, 1988).</p> <p>Remediation may require discharge of treated water to surface water. Therefore, this regulation may apply.</p> |
| Federal Emergency Management Association (FEMA) | Maps floodplains and sets forth specific guidelines when performing activities in these areas. | Applicable | The areas adjacent to the Peconic River and its associated wetlands are within a floodplain. This regulation will apply. |

TABLE C-2 (Continued)
LOCATION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory

| State/Local Guidelines | Requirement | Type of ARAR | Potential Impacts |
|--|---|--------------|---|
| Protection of Wetlands 6 NYCRR Part 663 | Activities within 100 feet of a regulated wetland are regulated if they impinge upon or otherwise substantially effect the wetland. Impacts to a wetland must be avoided and then minimized. | Applicable | There are 5 federally designated wetlands on site of 3 types, all of which are considered Class 1 Wetlands by the NYSDEC. Remediation may require the construction of dewatering facilities and the dredging and filling of wetland areas. Therefore, this regulation may apply. |
| Freshwater Wetlands Mapping and Classification Regulations 6 NYCRR Part 664 | Wetlands are characterized according to benefits upon many factors, including: the vegetative cover, their ecological associations, their special features, their hydrological and pollution control features, and their distribution and location. | Applicable | The wetlands onsite are designated as Class I. |
| Endangered Species of Fish and Wildlife NYCRR Part 182 | Actions must be taken to avoid or minimize adverse impacts on rare, threatened or endangered species and. | Applicable | A endangered species, the tiger saolamander, and a threatened species, the banded sunfish, are present within the area of the Peconic River. Thus, the regulations may apply for any remedial actions conducted at the site. |

TABLE C-2 (Continued)
LOCATION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory

| | | | |
|--|---|------------|---|
| 6 NYCRR Part 193.3 Protective Native Plants | All threatened plants of this section are protected native plants pursuant to Section 9-1503 of the Environmental Conservation Law (Title 15). No one may knowingly pick, pluck, sever, remove or carry away (without consent of the owner thereof) any protected plant. | Applicable | Two plant species; spotted wintergreen and Lady's slipper, and 7 fern species; hayscented fern, shield fern, sensitive fern, cinnamon fern, Clayton's fern, royal fern, marsh fern and Virginia chain fern are protected in NY. Thus, the State regulations will be complied with. These regulations may apply for any remedial actions conducted at the site. |
| 6 NYCRR Part 608, Use and Protection of Waters | No person or local public corporation may: <ol style="list-style-type: none"> 1. change, modify or disturb any protected stream, its bed or banks, nor remove from its bed or banks sand, gravel or other material, without a permit issued pursuant to this Part 2. construct, reconstruct or repair any dam or impoundment structure; including any artificial obstruction, temporary or permanent, in or across a natural stream or watercourse; without a permit . | Applicable | Work on this project will be conducted under a Permit Equivalency Application will be filed with the New York State Department of Environmental Conservation . |

TABLE C-3
ACTION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|--|--------------|--|
| Dredge and Fill 33 CFR 320.2(f) | <p>In evaluating dredge or fill operations, the U.S. Corps of Engineers will follow EPA guidelines and requirements found under 40 CFR 230 that state:</p> <p>No discharge of dredge or fill material is allowed if:</p> <ul style="list-style-type: none"> ? There is a practical alternative with less of an impact, ? The discharge causes or contributes to violations of State Water Quality Standards, ? The discharge violates applicable toxic effluent standards or prohibitions, ? The discharge jeopardizes endangered or threatened species, and ? The discharge causes or contributes to significant degradation of waters of the United States. | Applicable | <p>These requirements are applicable if remedial activities are conducted in the Peconic River and the associated wetlands.</p> <p>Specific activities that may require a permit include: the diversion of the channel and dredging and filling.</p> |
| National Pollution Discharge Elimination System (NPDES) 40 CFR 122 | <p>Regulates the discharge of water into public surface waters. Among other things, major requirements are:</p> <ul style="list-style-type: none"> ? Use of best available technology economically achievable (BATEA) is required to control toxic and nonconventional pollutants. ? Use of best available technology (BAT) on conventional pollutants is required. | Applicable | Remediation may result in the discharge of treated water to surface water. Therefore, this regulation may apply. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|--|---|--------------------------|---|
| | Technology-based limitations may be determined on a case-by-case basis. | | |
| Discharge of Storm Water Runoff 40 CFR 122.26 | Storm water runoff from industrial activities must be monitored and controlled. | Applicable | Storm water runoff from site remediation and installation of a treatment system may result in runoff into the Peconic River, its tributaries and associated wetlands. Therefore, these regulations would apply. |
| Discharge of Treatment System Effluent 40 CFR 125.100 40 CFR 125.104 | <p><u>Best Management Practices</u> Requires the development and implementation of a BMP program to prevent the release of toxic or hazardous pollutants to waters of the U.S.</p> <p>The BMP program must:</p> <p>? Establish specific procedures for the control of toxic and hazardous pollutant spills and runoff; and</p> <p>? Include a prediction of direction, rate of flow, and total quantity of toxic and hazardous pollutants where experience indicates a reasonable potential for equipment failure.</p> | Relevant and Appropriate | The development of a BMP program is relevant and appropriate to prevent releases from spills or runoff during the implementation of remedial actions. |
| Discharge of Dredged Materials 40 CFR 230 | No dredged material shall be discharged into U.S. waters if there is a feasible alternative which might have less adverse impact on the aquatic ecosystem. | Relevant and Appropriate | Some remedial alternatives may result in the disturbance of wetlands. (Required for all industrial waste sites greater than 5 acres.) |
| Pretreatment Regulations for New and Existing Sources 40 CFR 403 | Establishes requirements for the discharge of non-domestic wastewater to POTWs. | Relevant and Appropriate | Treated water may be discharged to the on-site sewage treatment plant. Although this facility is not a publicly owned treatment works, the substantive requirements of this regulation may be relevant and appropriate. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|--|---------------------|--|
| DOT Hazardous Waste Transportation Requirements (49 CFR 171.3; 49 CFR 173.5) | Sets forth standards for off-site disposal of hazardous wastes. | Applicable | If site remediation results in the transport of hazardous materials off-site, this regulation may apply. |
| Discharge of Treatment System Effluent 40 CFR 125.30 | Sets forth criteria and standards for effluent limitations. | Applicable | Water may be discharged after treatment, therefore this regulation may apply. |
| Proposed Hazardous Waste Identification Rule (HWIR) 40 CFR 261 | This proposed rule sets forth requirements for determining if a waste is classified as hazardous. Specifically, it establishes constituent-specific exit levels for low-risk solid wastes that are designated as hazardous because they are listed, or have been mixed with, derived from, or contain listed hazardous waste. | TBC | This rule, if adopted, may be applicable to the management of excavated soil or groundwater, if it exhibits the characteristic of a hazardous waste. |
| Proposed Requirements for Management of Contaminated Media (HWIR-Media) 40 CFR 261 | This proposed rule sets forth new regulations for contaminated media, including contaminated soils, groundwater, and sediments that are managed during remedial actions. The proposed rule establishes modified LDR treatment requirements and modified permitting procedures for higher-risk contaminated media and gives EPA authority to remove certain lower-risk contaminated media from regulation as hazardous waste. | TBC | This rule, if adopted, may be applicable to the management of excavated soil or groundwater, if it exhibits the characteristic of a hazardous waste. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|---|--------------------------|--|
| Empty Containers 40 CFR 261.7 | <p>Containers that have held hazardous wastes are "empty" and exempt from further RCRA regulations if one or more of the following are met:</p> <p>? No more than 2.5 cm (1 inch) of residue remains on bottom of inner liner.</p> <p>? Less than 3% by weight of total capacity remains (less than 110 gallon container)</p> <p>? Less than 0.3% by weight of total capacity remains (greater than 110 gallon container)</p> | Relevant and Appropriate | During site remediation containers may be used to treat/store hazardous waste. This regulation may be applicable to the determination of whether these containers meet the RCRA definition of "empty". |
| Generators Who Transport Hazardous Waste for Off-Site Treatment, Storage, or Disposal 40 CFR 262.20 - 262.23 | Any generator who transports hazardous waste for off-site treatment, storage or disposal must prepare a manifest. | Applicable | If any waste is characterized as hazardous, this regulation may apply. |
| Standards Applicable to Transporters of Hazardous Waste 40 CFR 263 | Sets forth requirements for the transportation of hazardous waste. | Applicable | If any waste is characterized as hazardous, this regulation may apply. |
| Treatment, Storage, or Disposal Facility Standards 40 CFR 264 | Sets forth minimum standards for the operation of hazardous waste treatment, storage and disposal facilities. | Applicable | If any waste is characterized as hazardous, this regulation may apply. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|---|--------------------------|---|
| Corrective Action for SWMUs 40 CFR Subpart S 40 CFR 264.552 40 CFR 164.553 | Sets forth Standards for Corrective Action Management Units (CAMUs) and Temporary Units (TUs). | Relevant and Appropriate | <p>Corrective Action Management Units (CAMUs) might be designated at the site as areas where remediation wastes (solid, hazardous, or media and debris) might be placed during the process of remediation, but which might not constitute land disposal of the site.</p> <p>Temporary units (TUs) consisting of tanks and container storage units might be used to store and treat hazardous waste during the process of corrective action.</p> |
| Land Disposal Restrictions 40 CFR 268, Subpart D | <p>Generally prohibits the placement of restricted RCRA hazardous wastes in land-based units such as landfills, surface impoundments, waste piles and land facilities, unless one or more of the following are met:</p> <ul style="list-style-type: none"> ? Wastes have been treated in accordance with technology-based or concentration based standard; ? The site manager can demonstrate that another technology can achieve an equivalent measure of performance; and ? The site manager has demonstrated that the waste does not meet any of the criteria under which the waste was listed and other factors (including additional constituents) might not cause the waste to be hazardous. | Relevant and Appropriate | These regulations may apply to final waste disposal options. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Peconic River Feasibility Study Addendum
Brookhaven National Laboratory
Upton, New York

| Federal Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|--|---------------------|---|
| National Primary and Secondary Ambient Air Quality Standards (40 CFR Part 50) | Sets forth emission standards for sulfur oxides, particulate matter, nitrogen dioxide, and lead. | Applicable | Remediation and excavation of soil and the construction of on-site treatment facilities may result in the emission of contaminants into the air, therefore these regulations may apply. |
| NAAQS for Total Suspended Particulates 40 CFR 129.105, 750 | This regulation specifies maximum primary and secondary 24-hr concentrations for particulate matter. Fugitive dust emissions from site excavation activities must be maintained below 260 µg/m ³ (primary standard) | Applicable | If remedial actions impact air quality, then these regulations would apply. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Feasibility Study Report
Brookhaven National Laboratory
Upton, New York

| State/Local Guidelines | Requirement | Type of ARAR | Potential Impacts |
|--|---|--------------|--|
| NYSDEC Air Pollution Control Regulations (6 NYCRR Part 200 et. seq.) | The regulations are promulgated to ensure air quality protection. | Applicable | These regulations will be followed if any remedial actions impact air quality. |
| 6 NYCRR Part 211 | This regulation requires control of fugitive emissions from excavation and transport. | Applicable | These regulations may apply to excavating and transport activities. |
| State Pollution Discharge Elimination System Permit Program (SPDES) (6NYCRR Part 750) | <p>? Applicable Federally approved State water quality standards must be complied with. These standards may be in addition to or more stringent than other Federal standards.</p> <p>? The discharge must conform to applicable water quality requirements when the discharge affects a state other than the certifying state.</p> <p>? The discharge must be consistent with the requirements of a Water Quality Management Plan approved by EPA.</p> <p>? Discharge limitations must be established for all toxic pollutants that are or may be discharged at levels greater than that which can be achieved by technology-based standards.</p> | Applicable | Remediation may result in the discharge of treated water to surface water. Therefore, this regulation may apply. |
| Protection of Wetlands 6NYCRR Part 663 | Activities within 100 feet of a wetland are regulated if they impinge upon or substantially effect the wetland. | Applicable | A permit will be required for any remedial activities conducted within the wetlands. |

TABLE C-3 (Continued)
ACTION-SPECIFIC ARARS
Operable Unit V Feasibility Study Report
Brookhaven National Laboratory
Upton, New York

| State/Local Guidelines | Requirement | Type of ARAR | Potential Impacts |
|---|--|--------------------------|--|
| NYSDOH State Sanitary Code Public Water Systems Subpart 5-1 (1/6/93) | The MCLs must not be exceeded in the treatment processes, in the water quality to be discharged, or in the character of the watershed or aquifer which may affect the water quality; or the combination of the previous information. | Applicable | Remediation may result in the discharge of treated water to surface water. Therefore, this regulation may apply. |
| NYSDEC Hazardous Waste Management Regulations 6 NYCRR 370-374, Parts 370-1.1 | State hazardous waste management regulations which are similar to but may be more stringent than RCRA regulations cited above. | Applicable | This regulation may be applicable if excavated material is classified as a hazardous waste. |
| NYSDEC Solid Waste Management Facilities 6 NYCRR Part 360 | The designing, constructing, maintaining or operating any solid waste management facility is subject to specific operational requirements. | Relevant and Appropriate | May be applicable to the construction of onsite facilities. |
| Request for Discharge Criteria 6 NYCRR Part 8 | Sets forth the requirements for discharging water generated during remedial activities. | Applicable | May be applicable to the discharge of treated water to the Peconic River. |
| Beneficial Reuse 6 NYCRR Part 360-1.15 | A material that is determined to be a solid waste may be beneficially reused. | Applicable | May be applicable if material is disposed on-site. |