



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

June 25, 1997

Mark Evans, Remedial Project Manager
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

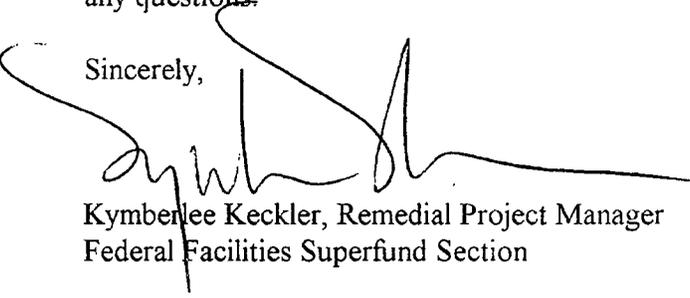
Re: Responses to EPA comments on the revised draft Feasibility Study for Area A
Downstream/OBDA

Dear Mr. Evans:

I am writing in response to your request for EPA to review the responses to EPA comments (*see* EPA's letters dated January 7, 1997 and March 6, 1997) on the revised draft Feasibility Study for Area A Downstream/OBDA, dated December 1996. Detailed comments on your responses EPA's comments are provided in Attachment A. I am also forwarding EPA's rewrite of your ARARs tables for the alternatives retained for detailed analysis (*see* Attachment B). EPA agrees that the soils and sediments in the Area A Downstream are not RCRA hazardous wastes.

I look forward to working with you toward selecting a final remedy for the Area A Downstream/OBDA. Please do not hesitate to contact me at (617) 573-5777 should you have any questions.

Sincerely,



Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachments

cc: Mark Lewis, CTDEP, Hartford, CT
Andy Stackpole, NSBNL, Groton, CT
David Peterson, USEPA, Boston, MA
Patti Lynne Tyler, USEPA, Lexington, MA
Jennifer Hayes, Gannett Fleming, Harrisburg, PA
Corey Rich, Brown & Root, Pittsburgh, PA



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 75% recycled fiber

ATTACHMENT A

I. Evaluation of Responses to January 7, 1997 EPA Letter

<u>Page</u>	<u>Comment</u>
Cover letter, p. i, last ¶ & p. ii, ¶1	Should the response that onsite treatment of inorganic contaminants is undesirable be modified, since it prevents the treated soil from being used for backfill? Now that the option of using treated soil to backfill the wetlands on the site has been withdrawn, would treated soil be suitable for fill for non-wetland sites on the base? If treated soil can be used for fill on non-wetland parts of the base then it would appear that additional combinations of soil treatments should be assessed.
Cover letter p. ii, ¶ 4	In EPA's comment is should be noted that the Clean Water Act, Section 404 is <i>applicable</i> not relevant and appropriate. Also please note that the Functions and Values Assessment Report for the FS should address all of the Functions and Values protected under Section 404 (<i>see</i> 40 C.F.R. Part 230, Guidelines for Specification of Disposal Sites for Dredged or Fill Material - also called the "Section 404(b)(1) Guidelines").
Cover letter p. iii, ¶4	The response notes that "the ponds and streams of the Area A downstream are man-made water bodies . . . which have evolved to their current semi-natural condition over a period of many years." Regardless of whether the wetlands originated from human activity, the alternatives must meet the standards of Section 404 of the Clean Water Act, the CT Inland Wetlands and Watercourses statute, and their implementing regulations. As stated in my March 6, 1997 letter, "Whichever alternative is selected, it must have the least environmental impact, while remaining practicable; it should not cause significant adverse impacts to aquatic environments; and if the remedy involves unavoidable adverse impacts, mitigation may be necessary." Additionally, for all of the alternatives, there needs to be a more detailed explanation of how the ecological environment of the wetland would be reestablished. As stated in this EPA comment, since the streams currently do not have a hard substrate, erosion protection including high velocity matting would assist in meeting the objective of restoring the streams to their original condition better than the placement of six inches of gravel.
Cover letter, p. iv, ¶1	With respect to the prevention of <i>Phragmites</i> invasion, it should be emphasized that the replaced wetlands will be restored to the native wetland plant communities that existed at the site before

disturbance. The restoration plan should include additional funding/resources to monitor and maintain the native revegetation of the Site. This may involve replanting of native plant material or the active management of the site over an extended period to ensure that *Phragmites* does not become established.

Cover letter, p. iv, ¶3

Compliance with the State soil remediation standards will affect the extent of contaminated soil required to be removed beyond the less conservative approach proposed.

Table 2-5, p. 2-11 (31)

The Lower Pond inorganic COC average concentrations should be presented in Table 2-5. Either the footnote or the text should specify that 661 ppm of lead was detected in sediment sample EC-SDS209 within Lower Pond. Also, the average lead concentration, along with other average concentrations, detected in Lower Pond should be presented in Table 2-5 so it can be compared to ER-L and ER-M values.

pp. 2-12 to 2-20, §2.2 (33)

The response states that the contaminated soil volume estimate will now be approximately half of what it was originally estimated. This volume still exceeds the estimated sediment volume. Perhaps the term "sediment" should be defined in the FS? How was it decided whether sampling locations were sediment samples or soil samples? Provide a scaled figure that shows sampling locations and delineated wetland boundaries. Such a figure could assist in sediment volume estimates and would also assist in the evaluation of adverse impacts to the wetlands.

Table 3-1, pp. 3-3
& 3-4 (36)

Please integrate the response into Table 3-1.

p. 3-11, §3.2.3, ¶2 (39)

The remedy for sediment replacement (regardless of whether riprap is used) must meet the standards of Section 404 of the Clean Water Act, the CT Inland Wetlands and Watercourses statute, and their implementing regulations. (See comment for Cover letter p. iii, ¶4.)

p. 3-23, §3.4, ¶2 (45)

Change the first new quote to: "In addition to the above standards, inorganic constituents, if any, must be removed to meet all applicable federal and state discharge standards."

p. 4-7, §4.2 (49)

Section 4.2 sets the stage for the analysis of each of the alternatives by specifying the factors that are relevant to each criterion. Page 4-7 specifies the factors for evaluating the reduction of toxicity, mobility, and volume through treatment. The degree to which the treatment is irreversible is not listed as a relevant factor on page

4-7. According to the NCP, the factors used to assess a reduction of toxicity, mobility, and volume through treatment must include, "...the degree to which the treatment is irreversible..." (see 40 C.F.R. §300.430(e)(9)(iii)(D)(4)). The response does not indicate that this factor will be listed. This criterion should also be included in the summary Table 5-1.

p. 4-10, §4.2.2 (51)

Pond volume reduction owing to placement of a soil cap should also be discussed in the wetland mitigation approach.

Any change in the pond or other waterways must meet the standards of Section 404 of the Clean Water Act, the CT Inland Wetlands and Watercourses statute, and their implementing regulations.

p. 5-1, §§5.0 & 5.1 (56)

For Alternative 2 wetland restoration will be more difficult than in Alternatives 3 and 4 since it is proposed that twelve inches of fill be added on top of the existing grade. This will likely turn most of the wetlands into uplands. The remediation plan will need to specify how lost wetland functions and values will be replaced/restored to be in compliance with the standards of Section 404 of the Clean Water Act, the CT Inland Wetlands and Watercourses statute, and their implementing regulations.

p. 5-2, §5.2 (58)

It is EPA's understanding that the CT Soil Remediation Standards are chemical-specific ARARs applicable to soils located above the seasonal high water table.

p. 5-4, §5.6 (62)

Under applicable federal and state wetland standards, Alternative 2 may result in additional wetlands having to be created or restored to compensate for the filling of wetlands.

II. Evaluation of Responses to March 6, 1997 EPA Letter

Page

Comment

Cover letter, p. ii, ¶3

The response states that a new "Section 1.3.7: Summary of Wetlands Functions and Values Assessment" will be added and that this new section will be a copy of Section 7.0 of the Functions and Values Assessment. Simply copying Section 7.0 of the December 1996 Functions and Values Assessment will not satisfy the April 8, 1997 agreement because Section 7.0 does not provide an adequate summary of the wetland functions. Since the mitigation approach will address replacing area and replacing function, the FS Section 1.3.7 needs to clearly state wetland functions. This could be

accomplished by including a summary of the information contained in the "Wetland Function-Value Evaluation" forms presented in Appendix A of the December 1996 Functions and Values Assessment. The wetland mitigation approach should also be included in the FS. All proposed wetland alteration/restoration must meet the standards of Section 404 of the Clean Water Act, the CT Inland Wetlands and Watercourses statute, and their implementing regulations.

p. 1-54, §1.3.4

Eliminate the statement supporting waiver of GB mobility criteria. Areas above the seasonal high water table may have been contaminated, unless the seasonal high water table throughout the area is at the surface. Any flood event (greater than the seasonal high water level) could have dispersed contaminants to areas of the floodplain where the seasonal high water table is below the surface. The soil remediation standards are applicable to any contaminated soils located above the seasonal high water table (whether upland or wetland - to be a wetland soil the seasonal high water table does not have to be at the surface). (*See also* comment for page 2-12, §2.1.3.)

ATTACHMENT B

TABLE 4-1

ASSESSMENT OF CHEMICAL-SPECIFIC ARARs AND TBCs
FOR ALTERNATIVE 1 - NO ACTION
AREA A DOWNSTREAM/OBDA FFS
NSB-NLON GROTON, CONNECTICUT
PAGE 1 OF 1

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
-------------	----------	--------	-------------------------	-----------------------------------

FEDERAL

There are no federal chemical-specific ARARs.

STATE OF CONNECTICUT

There are no state chemical-specific ARARs.

TABLE 4-2

AREA A DOWNSTREAM/OBDA FFS
 CHEMICAL-SPECIFIC ARARs
 ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 2 OF 2

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Water Quality Criteria for DDT and Metabolites (EPA 440-80-038), 1980		TBC	Provides criteria for assessing toxicity of DDT and metabolites to aquatic organisms.	Use of a cover on soil/sediments with biotic barrier is expected to minimize exposure to potential receptors.
Technical Basis for Deriving Sediment Quality Criteria for Non-Ionic Organic Contaminants for Protection of Benthic Organisms by Using Equilibrium Partitioning (EPA-822-R-93-011), 1993		TBC	Guidance for estimating cleanup goals for sediment contamination.	Use of a cover on soil/sediments with biotic barrier is expected to minimize exposure to potential receptors.
National Oceanographic and Atmospheric Administration (NOAA) Incidence of Adverse Biological Effects within Ranges of Chemical Concentration in Marine and Estuarine Sediments (Long et. al., 1995)		TBC	Guidance on concentration ranges of contaminants in sediments that correspond to the likelihood of adverse effects to organisms.	Use of a cover on soil/sediments with biotic barrier is expected to minimize exposure to potential receptors.
Cancer Slope Factors (CSF) and Reference Dose (RfD)		TBC	These are guidance values used to evaluate the potential carcinogenic or non-carcinogenic hazard caused by exposure to contaminants.	Use of a cover on soil/sediments with biotic barrier is expected to minimize exposure to potential receptors.

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Water Quality Standards	CGS § 22a-426	Relevant and appropriate	WQS are health- and aquatic life-based criteria developed for certain constituents in surface and groundwater.	Use of the cap is expected to minimize suspension of sediment contaminants and thereby reduce the impact to surface water to minimal levels.

TABLE 4-2

AREA A DOWNSTREAM/OBDA FFS
CHEMICAL-SPECIFIC ARARs
ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
NSB-NLON GROTON, CONNECTICUT
PAGE 3 OF 2

Soil Remediation Standards	RCSA § 22a-133k-1 thru 2	Applicable	Regulations specify remediation standards for polluted soils located above the seasonal high water table in areas with a state groundwater classification of GB.	The site is located in a GB groundwater zone, therefore, these regulations are only applicable to any polluted soils present which occur above the seasonal high water table. Soil contamination at the site appears to occur primarily below the seasonal high water table for the area and therefore is not regulated by these provisions. Any polluted soils present above the seasonal high water table will be capped in accordance with these standards.
----------------------------	-----------------------------	------------	--	--

TABLE 4-3

AREA A DOWNSTREAM/OBDA FFS
 CHEMICAL-SPECIFIC ARARs
 ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
 DEWATERING, AND OFF-SITE DISPOSAL
 NSB-NLON GROTON, CONNECTICUT
 PAGE 4 OF 2

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Water Quality Criteria for DDT and Metabolites (EPA 440-80-038), 1980		TBC	Provides criteria for assessing toxicity of DDT and metabolics to aquatic organisms.	DDTR contaminated sediments/soils are to be excavated removed, and replaced with uncontaminated material. Remaining sediments/soils will provide no source of contamination to surface waters and will pose no hazard to potential aquatic receptors.
Technical Basis for deriving Sediment Quality Criteria for Non-Ionic Organic Contaminants for Protection of Benthic organisms by Using Equilibrium Partitioning (EPA-822-R-93-011), 1993		TBC	Guidance for estimating cleanup goals for sediment contamination.	Contaminated sediments are to be excavated removed, and replaced with uncontaminated material. Remaining sediments will pose no hazard to potential receptors. Removal of contaminated sediments will achieve protection of receptors of concern.
National Oceanographic and Atmospheric Administration (NOAA) Incidence of Adverse Biological Effects within Ranges of Chemical Concentration in Marine and Estuarine Sediments (Long et. al., 1995)		TBC	Guidance on concentration ranges of contaminants in sediments that would rarely or more likely to have adverse effects. Findings comparable with fresh-water sediments.	Contaminated sediments are to be excavated, removed, and replaced with uncontaminated material. Remaining sediments will pose no hazard to potential receptors. Removal of contaminated sediments will achieve protection of receptors of concern.
Cancer Slope Factors (CSF).		TBC	These are guidance values used to evaluate the potential carcinogenic or non-carcinogenic hazard caused by exposure to contaminants.	Contaminated soils/sediments are to be excavated, removed, and replaced with uncontaminated material. Remaining soils/sediments will pose no hazard to potential receptors.

TABLE 4-3

AREA A DOWNSTREAM/OBDA FFS
 CHEMICAL-SPECIFIC ARARs
 ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
 DEWATERING, AND OFF-SITE DISPOSAL
 NSB-NLON GROTON, CONNECTICUT
 PAGE 5 OF 2

Reference Dose (RfD)		TBC	These are guidance values used to evaluate the potential carcinogenic or non-carcinogenic hazard caused by exposure to contaminants.	Contaminated soils/sediments are to be excavated, removed, and replaced with uncontaminated material. Remaining soils/sediments will pose no hazard to potential receptors.
----------------------	--	-----	--	---

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Soil Remediation Standards	RCSA § 22a-133k-1 thru 2	Applicable	Regulations specify remediation standards for polluted soils located above the seasonal high water table in areas with a state groundwater classification of GB.	The site is located in a GB groundwater zone, therefore, these regulations are only applicable to any polluted soils present which occur above the seasonal high water table. Soil contamination at the site appears to occur primarily below the seasonal high water table for the area and therefore is not regulated by these provisions. Any polluted soils present above the seasonal high water table will be removed in accordance with these standards.

TABLE 4-4
AREA A DOWNSTREAM/OBDA FFS
CHEMICAL-SPECIFIC ARARs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
NSB-NLON GROTON, CONNECTICUT
PAGE 6 OF 2

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Technical Basis for deriving Sediment Quality Criteria for Non-Ionic Organic Contaminants for Protection of Benthic organisms by Using Equilibrium Partitioning (EPA-822-R-93-011), 1993		TBC	Guidance for estimating cleanup goals for sediment contamination.	Contaminated sediments are to be excavated removed, treated by thermal desorption, and replaced with uncontaminated material. Remaining sediments will pose no hazard to potential receptors. Treatment and removal of contaminated sediments will achieve protection of receptors of concern.
National Oceanographic and Atmospheric Administration (NOAA) Incidence of Adverse Biological Effects within Ranges of Chemical Concentration in Marine and Estuarine Sediments (Long et. al., 1995)		TBC	Guidance on concentration ranges of contaminants in sediments that would rarely or more likely to have adverse effects. Findings comparable with fresh-water sediments.	Contaminated sediments are to be excavated, treated by thermal desorption, removed, and replaced with uncontaminated material. Remaining sediments will pose no hazard to potential receptors. Treatment and removal of contaminated sediments will achieve protection of receptors of concern.
Cancer Slope Factors (CSF).		TBC	These are guidance values used to evaluate the potential carcinogenic or non-carcinogenic hazard caused by exposure to contaminants.	Contaminated soils are to be excavated, treated by thermal desorption to achieve a DDTR concentration of 5 milligram/kilogram, and used as backfill elsewhere on the NSB-NLON. Excavated areas will be restored using uncontaminated material. Sediments are to be excavated, dewatered, treated by thermal desorption and removed from the site. Remaining soils/sediments will pose no hazard to potential receptors.

TABLE 4-4

**AREA A DOWNSTREAM/OBDA FFS
 CHEMICAL-SPECIFIC ARARs
 ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
 TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 7 OF 2**

Reference Dose (RfD)		TBC	These are guidance values used to evaluate the potential carcinogenic or non-carcinogenic hazard caused by exposure to contaminants.	Contaminated soils are to be excavated, treated by thermal desorption to achieve a DDTR concentration of 5 milligram/kilogram, and used as backfill elsewhere on the NSB-NLON. Excavated areas will be restored using uncontaminated material. Sediments are to be excavated, dewatered, treated by thermal desorption and removed from the site. Remaining soils/sediments will pose no hazard to potential receptors.
----------------------	--	-----	--	---

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Soil Remediation Standards	RCSA § 22a-133k-1 thru 2	Applicable	Regulations specify remediation standards for polluted soils located above the seasonal high water table in areas with a state groundwater classification of GB.	The site is located in a GB groundwater zone, therefore, these regulations are only applicable to any polluted soils present which occur above the seasonal high water table. Any polluted soils present above the seasonal high water table will be excavated, dewatered, treated by thermal desorption, and removed from the site, in accordance with these standards.

**TABLE 4-5
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
FOR ALTERNATIVE 1 - NO ACTION
AREA A DOWNSTREAM/OBDA FFS
NSB-NLON GROTON, CONNECTICUT
PAGE 1 OF 1**

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Executive Order 11990 RE: Protection of Wetlands	Executive Order 11990, 40 CFR Part 6, Appendix A	Applicable	This Order requires Federal agencies to take action to avoid adversely impacting wetlands wherever possible, to minimize wetlands destruction and to preserve the values of wetlands, and to prescribe procedures to implement the policies and procedures of this Executive Order.	The potential for restoring and preserving wetlands so that their natural and beneficial values can be realized must be considered and incorporated into any plan or action wherever feasible. The No Action Alternative fails to address continuing contamination and degradation of the wetlands on the Site.
Executive Order 11988 RE: Floodplain Management	Executive Order 11988	Applicable	The Order requires Federal agencies to evaluate the potential effects of actions it may take within a designated 100-year floodplain of a waterway to avoid adversely impacting floodplains wherever possible.	The potential for restoring and preserving floodplains so that their natural and beneficial values can be realized must be considered and incorporated into any plan or action wherever feasible. The No Action Alternative fails to address continuing contamination and degradation of any 100 year floodplain areas which may occur on the Site.
Coastal Zone Management Act	16 USC Parts 1451 <i>et. seq.</i>	Applicable	Requires that any actions must be conducted in a manner consistent with state approved management programs.	Portions of the site are located in a coastal zone management area, therefore, applicable coastal zone management requirements need to be addressed.

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Coastal Management	CGS §§22a-92 and 94	Applicable	Federal facilities are required to file a coastal zone consistency determination under these rules, which includes the goal that development, preservation or use of land and water resources of a coastal area proceed without significantly disrupting the natural environment.	The No Action Alternative fails to address continuing contamination and degradation of coastal zone areas which occur on the Site.

TABLE 4-6

ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
 AREA A DOWNSTREAM/OBDA FFS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 1 OF 2

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Clean Water Act, Section 404	33 USC 1344; 40 CFR Part 230 and 33 CFR Parts 320-323	Applicable	This statute regulates the discharge of dredge and fill materials in wetlands and navigable waters. Such discharges are not allowed if practicable alternatives are available.	Remedial action includes discharge of approximately 12" of cover material over contaminated wetlands for placement of the cap. However, measures will be taken to minimize adverse effects and to replace or restore protected wetland functions and values.
Executive Order 11990 RE: Protection of Wetlands	Executive Order 11990, 40 CFR Part 6, Appendix A	Applicable	This Order requires Federal agencies to take action to avoid adversely impacting wetlands wherever possible, to minimize wetlands destruction and to preserve the values of wetlands, and to prescribe procedures to implement the policies and procedures of this Executive Order.	Remedial action includes discharge of approximately 12" of cover material over contaminated wetlands for placement of the cap. However, measures to minimize adverse effects and to replace or restore protected wetland functions and values will be considered and incorporated into any plan or action wherever feasible.
Executive Order 11988 RE: Floodplain Management	Executive Order 11988	Applicable	The Order requires Federal agencies to evaluate the potential effects of actions it may take within a designated 100-year floodplain of a waterway to avoid adversely impacting floodplains wherever possible.	Measures will be taken to minimize impacts to the 100-year floodplains of streams during placement and maintenance of the cap.
Fish and Wildlife Coordination Act	16 USC Part 661 <i>et. seq.</i> ; 40 CFR 122.49	Applicable	This statute requires consultation with appropriate agencies to protect fish and wildlife when federal actions result in control or structural modification of a natural stream or body of water.	Appropriate agencies would be consulted prior to implementation to find ways to minimize adverse effects to fish and wildlife from covering the contaminated wetlands.
Coastal Zone Management Act	16 USC Parts 1451 <i>et. seq.</i>	Applicable	Requires that any actions must be conducted in a manner consistent with state approved management programs.	Portions of the site are located in a coastal zone management area, therefore, applicable coastal zone management requirements need to be addressed.

TABLE 4-6

ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
 AREA A DOWNSTREAM/OBDA FFS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 2 OF 2

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Inland Wetlands and Watercourses	CGS § 22a-37 thru 45, RCSA § 22a-39-1 through 15	Applicable	These rules regulate all activities in wetlands and watercourses.	This alternative proposes to place an approximately 12" thick cover over existing contaminated wetlands and watercourses. The substantive requirements of the CT standards will be met to address the alteration of wetlands and watercourses.
Coastal Management	CGS §§22a-92 and 94	Applicable	Federal facilities are required to file a coastal zone consistency determination under these rules, which includes the goal that development, preservation or use of land and water resources of a coastal area proceed without significantly disrupting the natural environment.	This alternative proposes to cap contaminated sediments/soils within the coastal zone and to restore/replace lost functions and values of the areas. The substantive requirements of the CT standards will be met to address the alteration of the coastal zone.
CT Endangered Species Act	CGS § 26-303 thru 314	Applicable	Regulates activities affecting state-listed endangered or threatened species or their critical habitat.	Two state-threatened plants, Golden Alexanders and Seaside Crowfoot, have been sighted in the area. In addition, three state special concern species, Creeping Bush-clover, Crooked-stem Aster, and <i>Carex crawfordii</i> , have been documented in the NSB-NLON area. Covering of the contaminated area will be implemented so as to address potential negative impacts to the listed plant species or any of their critical habitat which might occur within the Site.

TABLE 4-7

ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
 DEWATERING, AND OFF-SITE DISPOSAL
 AREA A DOWNSTREAM/OBDA FFS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 1 OF 2

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Clean Water Act, Section 404	33 USC 1344; 40 CFR Part 230 and 33 CFR Parts 320-323	Applicable	These rules regulate the discharge of dredge and fill materials in wetlands and navigable waters. Such discharges are not allowed if practicable alternatives are available.	Remedial action includes dredging of soil and sediment from the contaminated wetlands and replacement/restoration with uncontaminated material. Measures will be taken to minimize adverse effects and to replace or restore protected wetland functions and values.
Executive Order 11990 RE: Protection of Wetlands	Executive Order 11990, 40 CFR Part 6, Appendix A	Applicable	This Order requires Federal agencies to take action to avoid adversely impacting wetlands wherever possible, to minimize wetlands destruction and to preserve the values of wetlands, and to prescribe procedures to implement the policies and procedures of this Executive Order.	Remedial action includes dredging of soil and sediment from the contaminated wetlands and replacement/restoration with uncontaminated material. However, measures to minimize adverse effects and to replace or restore protected wetland functions and values will be considered and incorporated into any plan or action wherever feasible.
Executive Order 11988 RE: Floodplain Management	Executive Order 11988	Applicable	The Order requires Federal agencies to evaluate the potential effects of actions it may take within a designated 100-year floodplain of a waterway to avoid adversely impacting floodplains wherever possible.	Measures will be taken to minimize impacts to the 100-year floodplains of streams during excavation of contaminated soil/sediment and replacement of uncontaminated material.
Fish and Wildlife Coordination Act	16 USC Part 661 <i>et. seq.</i> , 40 CFR 122.49	Applicable	This order protects fish and wildlife when federal actions result in control or structural modification of a natural stream or body of water.	Appropriate agencies would be consulted prior to implementation to find ways to minimize adverse effects to fish and wildlife from excavating and restoring the contaminated wetlands and waterways.
Coastal Zone Management Act	16 USC Parts 1451 <i>et. seq.</i>	Applicable	Requires that any actions must be conducted in a manner consistent with state approved management programs.	Portions of the site are located in a coastal zone management area, therefore, applicable coastal zone management requirements need to be addressed.

TABLE 4-7

ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
 DEWATERING, AND OFF-SITE DISPOSAL
 AREA A DOWNSTREAM/OBDA FFS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 2 OF 2

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Inland Wetlands and Watercourses	CGS § 22a-37 thru 45, RCSA § 22a-39-1 through 15	Applicable	These rules regulate all activities in wetlands and watercourses.	This alternative proposes to dredge soil and sediment from the contaminated wetlands and watercourses and to restore the areas using uncontaminated material. The substantive requirements of the CT standards will be met to address the alteration of wetlands and watercourses.
Coastal Management	CGS §§22a-92 and 94	Applicable	Federal facilities are required to file a coastal zone consistency determination under these rules, which includes the goal that development, preservation or use of land and water resources of a coastal area proceed without significantly disrupting the natural environment.	This alternative proposes to dredge contaminated soil and sediment from areas within the coastal zone and to restore the areas using uncontaminated material. The substantive requirements of the CT standards will be met to address the alteration of the coastal zone.
CT Endangered Species Act	CGS § 26-303 thru 314	Applicable	Regulates activities affecting state-listed endangered or threatened species or their critical habitat.	Two state-threatened plants, Golden Alexanders and Seaside Crowfoot, have been sighted in the NSB-NLON area. In addition, three state special concern species, Creeping Bush-clover, Crooked-stem Aster, and <i>Carex crawfordii</i> , have been documented in the NSB-NLON area. Excavation and restoration of the contaminated area will be implemented so as to address potential negative impacts to the listed plant species or any of their critical habitat which might occur within the Site.

TABLE 4-8

**ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
AREA A DOWNSTREAM/OBDA FFS
NSB-NLON GROTON, CONNECTICUT
PAGE 1 OF 2**

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Clean Water Act, Section 404	33 USC 1344; 40 CFR Part 230 and 33 CFR Parts 320-323	Applicable	These rules regulate the discharge of dredge and fill materials in wetlands and navigable waters. Such discharges are not allowed if practicable alternatives are available.	Remedial action includes dredging of soil and sediment from the contaminated wetlands, treatment of the material through thermal desorption, removal, and replacement/restoration with uncontaminated material. Measures will be taken to minimize adverse effects and to replace or restore protected wetland functions and values.
Executive Order 11990 RE: Protection of Wetlands	Executive Order 11990, 40 CFR Part 6, Appendix A	Applicable	This Order requires Federal agencies to take action to avoid adversely impacting wetlands wherever possible, to minimize wetlands destruction and to preserve the values of wetlands, and to prescribe procedures to implement the policies and procedures of this Executive Order.	Remedial action includes dredging of soil and sediment from the contaminated wetlands, treatment of the material through thermal desorption, removal, and replacement/restoration with uncontaminated material. Measures to minimize adverse effects and to replace or restore protected wetland functions and values will be considered and incorporated into any plan or action wherever feasible.
Executive Order 11988 RE: Floodplain Management	Executive Order 11988	Applicable	The Order requires Federal agencies to evaluate the potential effects of actions it may take within a designated 100-year floodplain of a waterway to avoid adversely impacting floodplains wherever possible.	Measures will be taken to minimize impacts to the 100-year floodplains of streams during excavation of contaminated soil/sediment and replacement/restoration with uncontaminated material.
Fish and Wildlife Coordination Act	16 USC Part 661 <i>et. seq.</i> , 40 CFR 122.49	Applicable	This order protects fish and wildlife when federal actions result in control or structural modification of a natural stream or body of water.	Appropriate agencies would be consulted prior to implementation to find ways to minimize adverse effects to fish and wildlife from excavating and restoring the contaminated wetlands and waterways.
Coastal Zone Management Act	16 USC Parts 1451 <i>et. seq.</i>	Applicable	Requires that any actions must be conducted in a manner consistent with state approved management programs.	Portions of the site are located in a coastal zone management area, therefore, applicable coastal zone management requirements need to be addressed.

TABLE 4-8

**ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
AREA A DOWNSTREAM/OBDA FFS
NSB-NLON GROTON, CONNECTICUT
PAGE 2 OF 2**

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Inland Wetlands and Watercourses	CGS § 22a-37 thru 45, RCSA § 22a-39-1 through 15	Applicable	These rules regulate all activities in wetlands and watercourses.	This alternative proposes to dredge soil and sediment from the contaminated wetlands and watercourses, treat the material through thermal desorption, remove it, and to restore the areas using uncontaminated material. The substantive requirements of the CT standards will be met to address the alteration of wetlands and watercourses.
Coastal Management	CGS §§22a-92 and 94	Applicable	Federal facilities are required to file a coastal zone consistency determination under these rules, which includes the goal that development, preservation or use of land and water resources of a coastal area proceed without significantly disrupting the natural environment.	This alternative proposes to dredge contaminated soil and sediment from areas within the coastal zone, treat the material through thermal desorption, remove it, and to restore the areas using uncontaminated material. The substantive requirements of the CT standards will be met to address the alteration of the coastal zone.
CT Endangered Species Act	CGS § 26-303 thru 314	Applicable	Regulates activities affecting state-listed endangered or threatened species or their critical habitat.	Two state-threatened plants, Golden Alexanders and Seaside Crowfoot, have been sighted in the NSB-NLON area. In addition, three state special concern species, Creeping Bush-clover, Crooked-stem Aster, and <i>Carex crawfordii</i> , have been documented in the NSB-NLON area. Excavation and restoration of the contaminated area will be implemented so as to address potential negative impacts to the listed plant species or any of their critical habitat which might occur within the Site.

TABLE 4-9

**ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs
FOR ALTERNATIVE 1 - NO ACTION
AREA A DOWNSTREAM/OBDA FFS
NSB-NLON GROTON, CONNECTICUT
PAGE 1 OF 1**

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
-------------	----------	--------	-------------------------	-----------------------------------

FEDERAL

There are no federal action-specific ARARs.

STATE OF CONNECTICUT

There are no state action-specific ARARs.

TABLE 4-10

**AREA A DOWNSTREAM/OBDA FFS
ACTION-SPECIFIC ARARs
ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
NSB-NLON GROTON, CONNECTICUT
PAGE 19 OF 3**

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Clean Water Act, Section 402; National Pollution Discharge Elimination System (NPDES)	33 USC 1342; 40 CFR 122 through 125	Applicable	These standards govern the discharge of water into surface waters.	Surface water removed prior to installation of cap would be treated by filtration and GAC adsorption to meet discharge criteria according to substantive requirements of NPDES.

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Water Pollution Control	RCSA § 22a-430-1 through 8	Applicable	These rules regulate water discharge to surface water.	Surface water removed prior to installation of the cap will be treated by filtration and adsorption in compliance with these regulations.
Water Quality Standards	CGS 22a-426	Applicable	Connecticut's Water Quality Standards establish specific numeric criteria, designated uses, and anti-degradation policies for groundwater and surface water.	Surface water removed prior to installation of the cap will be treated by filtration and adsorption in a manner which is consistent with the antidegradation policy in the Water Quality Standards.

TABLE 4-10

AREA A DOWNSTREAM/OBDA FFS
 ACTION-SPECIFIC ARARs
 ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 20 OF 3

<p>Hazardous Waste Management: Generator and Handler Requirements, Listing and Identification</p>	<p>RCSA § 22a-449(c) 100-101</p>	<p>Applicable</p>	<p>CT is delegated to administrate the federal RCRA statute through its state regulations. These sections establish standards for listing and identification of hazardous waste. The standards of 40 CFR 260-261 are incorporated by reference.</p>	<p>Contaminated soils/sediments to be capped will be tested to show that levels of regulated constituents do not exceed TCLP limits. Any areas exceeding TCLP limits will be capped according to hazardous waste standards. Also, wastes produced from surface water treatment would be tested to show that levels of regulated constituents (lead, mercury, heptachlor, etc.) do not exceed TCLP limits.</p>
<p>Hazardous Waste Management:: Generator Standards</p>	<p>RCSA § 22a-449(c)-102</p>	<p>Applicable</p>	<p>This section establishes standards for various Generator Standards classes of generators. The standards of 40 CFR 262 are incorporated by reference.</p>	<p>Surface water treatment residues (spent filtration media and activated carbon) may contain high concentrations of certain regulated constituents such as lead, mercury, heptachlor, etc. Although the residues are not expected to fail hazardous characteristics, substantive requirements of these regulations will be met.</p>

TABLE 4-10

AREA A DOWNSTREAM/OBDA FFS
 ACTION-SPECIFIC ARARs
 ALTERNATIVE 2 - CAPPING WITH INSTITUTIONAL CONTROLS
 NSB-NLON GROTON, CONNECTICUT
 PAGE 21 OF 3

Hazardous Waste Management: TSDF Standards	RCSA § 22a-449 (c) 104	Applicable	This section establishes standards for closure post closure of hazardous waste disposal facilities. The standards of 40 CFR 264 are incorporated by reference.	Any areas of contaminated soils/sediments exceeding TCLP limits will be capped according to these hazardous waste closure/post-closure standards.
Air Pollution Control	RCSA § 22a-174 1- 20	Applicable	These regulations require permits to construct and to operate specified types of emission sources and contain emission standards that must be met prior to issuance of a permit.	Emission standards for fugitive dust from cover operations will be met with dust control measures. Pollutant abatement controls may be required. Specific standards pertain to fugitive dust (18b).
Water Diversion Policy Act	RCSA § 22a-377(b)	Relevant and appropriate	These rules regulate a wide variety of water diversions.	Diversions as part of site remediation is exempt from state diversion regulations as long as 1) best management practices are employed to minimize erosion and sedimentation, to provide for necessary downstream flow in surface waters affected by the diversion, and to avoid adverse impacts to adjacent wells and to fish and wildlife, including to their spawning and nesting seasons; or 2) if such activity, structure, or facility may alter the habitat of any rare, endangered or threatened species listed or identified by any federal or state governmental agency, if present only.
Connecticut Guidelines for Soil Erosion and Sediment Control	CT Council on Soil and Water Conservation	TBC	Technical and administrative guidance for development, adoption and implementation of erosion and sediment control program.	Guidelines will be followed to protect wetland and aquatic resources.

TABLE 4-11

AREA A DOWNSTREAM/OBDA FFS
 ACTION-SPECIFIC ARARs
 ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
 DEWATERING, AND OFF-SITE DISPOSAL
 NSB-NLON GROTON, CONNECTICUT
 PGE 22 OF 3

FEDERAL

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Clean Water Act, Section 304, National Pollution Discharge Elimination System (NPDES)	33 USC 1314; 40 CFR 122 through 125	Applicable	These standards govern the discharge of water into surface waters.	Surface water removed prior to dredging, along with water from the sediment/soil dewatering process, will be treated by filtration and adsorption to meet discharge criteria according to substantive requirements of NPDES.

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Water Pollution Control	RCSA § 22a-430-1 through 8	Applicable	These rules regulate water discharge to surface water.	Surface water removed prior to dredging, along with water from the sediment/soil dewatering process, will be treated by filtration and adsorption in compliance with these regulations.
Water Quality Standards	CGS 22a-426	Applicable	Connecticut's Water Quality Standards establish specific numeric criteria, designated uses, and anti-degradation policies for groundwater and surface water.	Surface water removed prior to dredging, along with water from the sediment/soil dewatering process, will be treated by filtration and adsorption in a manner which is consistent with the antidegradation policy in the Water Quality Standards.

TABLE 4-11

**AREA A DOWNSTREAM/OBDA FFS
ACTION-SPECIFIC ARARs
ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
DEWATERING, AND OFF-SITE DISPOSAL
NSB-NLON GROTON, CONNECTICUT
PGE 23 OF 3**

<p>Hazardous Waste Management: Generator and Handler Requirements, Listing and Identification</p>	<p>RCSA § 22a-449(c) 100-101</p>	<p>Applicable</p>	<p>CT is delegated to administrate the federal RCRA statute through its state regulations. These sections establish standards for listing and identification of hazardous waste. The standards of 40 CFR 260-261 are incorporated by reference.</p>	<p>Hazardous waste determinations will be performed on all contaminated soils/sediments excavated to determine that that levels of regulated constituents do not exceed applicable limits. Any contaminated soils/sediments which exceed applicable limits will be managed in accordance with requirements of these regulations, if necessary.</p> <p>Also, wastes produced from surface water and dewatering treatment will be tested to determine whether levels of certain regulated constituents (lead, mercury, heptachlor, etc.) exceed TCLP limits.</p>
<p>Hazardous Waste Management: Generator Standards</p>	<p>RCSA § 22a-449(c)-102</p>	<p>Applicable</p>	<p>This section establishes standards for various classes of generators. The standards of 40 CFR 262 are incorporated by reference.</p>	<p>Surface water treatment residues (spent filtration media and activated carbon) may contain high concentrations of certain regulated constituents such as lead, mercury, heptachlor, etc. Although the residues are not expected to fail hazardous characteristics, substantive requirements of these regulations will be met.</p>
<p>Hazardous Waste Management: TSDF Standards</p>	<p>RCSA § 22a-449 (c) 104</p>	<p>Applicable</p>	<p>This section establishes standards for treatment, storage, and disposal facilities. The standards of 40 CFR 264 are incorporated by reference.</p>	<p>Any hazardous waste which is treated or temporarily stored of on this site as part of the remedy will be managed in accordance with the requirements of this section.</p>
<p>Air Pollution Control</p>	<p>RCSA § 22a-174 1-20</p>	<p>Applicable</p>	<p>These regulations require permits to construct and to operate specified types of emission sources and contain emission standards that must be met prior to issuance of a permit. Pollutant abatement controls may be required. Specific standards pertain to fugitive dust (18b), and control of odors (23) .</p>	<p>Emission standards for fugitive dust from excavation and restoration operations will be met with dust control measures. Odors/emissions from the dewatering piles will be managed to comply with these standards.</p>

TABLE 4-11

AREA A DOWNSTREAM/OBDA FFS
 ACTION-SPECIFIC ARARs
 ALTERNATIVE 3 - EXCAVATION/DREDGING OF SOILS/SEDIMENTS,
 DEWATERING, AND OFF-SITE DISPOSAL
 NSB-NLON GROTON, CONNECTICUT
 PGE 24 OF 3

Water Diversion Policy Act	RCSA § 22a-377(b)	Relevant and appropriate	These rules regulate a wide variety of water diversions.	Diversions as part of site remediation is exempt from state diversion regulations as long as 1) best management practices are employed to minimize erosion and sedimentation, to provide for necessary downstream flow in surface waters affected by the diversion, and to avoid adverse impacts to adjacent wells and to fish and wildlife, including to their spawning and nesting seasons; or 2) if such activity, structure, or facility may alter the habitat of any rare, endangered or threatened species listed or identified by any federal or state governmental agency, if present only.
Connecticut Guidelines for Soil Erosion and Sediment Control	CT Council on Soil and Water Conservation	TBC	Technical and administrative guidance for development, adoption and implementation of erosion and sediment control program.	Guidelines will be followed to protect wetland and aquatic resources.

TABLE 4-12

**AREA A DOWNSTREAM/OBDA FFS
ACTION-SPECIFIC ARARs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
NSB-NLON GROTON, CONNECTICUT
PGE 25 OF 4**

FEDERAL

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Clean Water Act, Section 402, National Pollution Discharge Elimination System (NPDES)	33 USC 1342; 40 CFR 122 through 125	Applicable	These standards govern the discharge of water into surface waters.	Surface water removed prior to dredging, along with water from the sediment/soil dewatering process, will be treated by filtration and adsorption to meet discharge criteria according to substantive requirements of NPDES.
Clean Air Act, National Emission Standards for Hazardous Air Pollutants (NESHAPs)	42 USC 7401 <i>et seq.</i> , 40 CFR 61	Applicable	NESHAPs are a set of emissions standards for specific chemicals from specific production activities.	Emissions of hazardous air pollutants comply with these standards through off gas treatment from the thermal desorption facility.
Resource Conservation and Recovery Act, Treatment Standards for Hazardous Debris - Thermal Desorption	42 USC 6901 <i>et seq.</i> , 40 CFR 268.45	Applicable	Sets treatment standards for utilizing thermal desorption	Thermal desorption will be operated in compliance with treatment standards.
Air/Superfund National Technical Guidance	EPA Guidance: EPA/450/1-89/001- EPA/450/1-89/004	To be considered	This guidance describes methodologies for predicting risks due to air release at a Superfund site.	These guidance documents will be considered when risks due to air releases from fugitive dust and thermal desorption are being evaluated.

STATE OF CONNECTICUT

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
-------------	----------	--------	-------------------------	-----------------------------------

TABLE 4-12

**AREA A DOWNSTREAM/OBDA FFS
ACTION-SPECIFIC ARARs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
NSB-NLON GROTON, CONNECTICUT
PGE 26 OF 4**

Water Pollution Control	RCSA § 22a-430-1 through 8	Applicable	These rules regulate water discharge to surface water.	Any discharges, including storm water, will meet the substantive requirements of this section. Surface water removed prior to dredging, along with water from the sediment/soil dewatering process, will be treated by filtration and adsorption in compliance with these regulations.
Water Quality Standards	CGS 22a-426	Applicable	Connecticut's Water Quality Standards establish specific numeric criteria, designated uses, and anti-degradation policies for groundwater and surface water.	Surface water removed prior to dredging, along with water from the sediment/soil dewatering process, will be treated by filtration and adsorption in a manner which is consistent with the antidegradation policy in the Water Quality Standards.
Hazardous Waste Management: Generator and Handler Requirements, Listing and Identification	RCSA § 22a-449 (c) 100-101	Applicable	CT is delegated to administrate the federal RCRA statute through its state regulations. These sections establish standards for listing and identification of hazardous waste. The standards of 40 CFR 260-261 are incorporated by reference.	Hazardous waste determinations will be performed on all contaminated soils/sediments excavated to determine that that levels of regulated constituents do not exceed applicable limits. Any contaminated soils/sediments which exceed applicable limits will be managed in accordance with requirements of these regulations, if necessary. Also, wastes produced from surface water and dewatering treatment will be tested to determine whether levels of certain regulated constituents (lead, mercury, heptachlor, etc.) exceed TCLP limits.
Hazardous Waste Management: Generator Standards	RCSA § 22a-449(c)-102	Applicable	This section establishes standards for various classes of generators. The standards of 40 CFR 262 are incorporated by reference.	Surface water and dewatering treatment residues (spent filtration media and activated carbon) and off gas treatment residues may contain high concentrations of certain regulated constituents such as lead, mercury, heptachlor, etc. Although the residues are not expected to fail hazardous characteristics, substantive requirements of these regulations will be met.

TABLE 4-12

**AREA A DOWNSTREAM/OBDA FFS
 ACTION-SPECIFIC ARARs
 ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
 TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
 NSB-NLON GROTON, CONNECTICUT
 PGE 27 OF 4**

Hazardous Waste Management: TSDf Standards	RCSA § 22a-449 (c) 104	Applicable	This section establishes standards for treatment, storage, and disposal facilities. The standards of 40 CFR 264 are incorporated by reference.	Any hazardous waste which is treated or temporarily stored of on this site as part of the remedy will be managed in accordance with the requirements of this section.
Hazardous Waste Management Facility Siting Regulations	CGS 22a-117-123; RCSA § 22a-116B-1 thru 11	Applicable	Requires certificate of public safety and necessity from the CT Siting Counsel prior to construction of any new hazardous waste disposal facility	The requirements are applicable to this alternative's on-site-treatment of wastes through thermal desorption. The substantive requirements of these regulations will be met.
Control of Noise Regulations	RCSA § 22a-69-1 through 7.4	Applicable	These regulations establish allowable noise levels. Noise levels from construction activities are exempt from these requirements.	Noise generated by any remedial actions other than construction will meet the standards of these regulations. Noise generated by the thermal desorption unit will have to meet the standards in these regulations. Noise from excavation activities is not expected to exceed these standards.

TABLE 4-12

**AREA A DOWNSTREAM/OBDA FFS
ACTION-SPECIFIC ARARs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
NSB-NLON GROTON, CONNECTICUT
PGE 28 OF 4**

Air Pollution Control	RCSA § 22a-174 1-20	Applicable	These regulations require permits to construct and to operate specified types of emission sources and contain emission standards that must be met prior to issuance of a permit. Pollutant abatement controls may be required. Specific standards include fugitive dust (18b), incineration (18c), emissions of sulfur compounds (19a), emissions of organic compounds (20f), control of odors (23), and allowable stack concentrations (29).	The thermal desorption unit, which produces an air discharge, will be operated to meet the substantive requirements of the regulations. Odors/emissions from the dewatering piles and fugitive dust produced during excavation, transportation and offsite disposal will be managed to comply with these substantive requirements.
Water Diversion Policy Act	RCSA § 22a-377(b)	Relevant and appropriate	These rules regulate a wide variety of water diversions.	Diversions as part of site remediation is exempt from state diversion regulations as long as 1) best management practices are employed to minimize erosion and sedimentation, to provide for necessary downstream flow in surface waters affected by the diversion, and to avoid adverse impacts to adjacent wells and to fish and wildlife, including to their spawning and nesting seasons; or 2) if such activity, structure, or facility may alter the habitat of any rare, endangered or threatened species listed or identified by any federal or state governmental agency, if present only.

TABLE 4-12

AREA A DOWNSTREAM/OBDA FFS
ACTION-SPECIFIC ARARs
ALTERNATIVE 4 - EXCAVATION/DREDGING, DEWATERING, ONSITE THERMAL
TREATMENT, ONSITE BACKFILLING OF TREATED SOILS, OFFSITE DISPOSAL OF SEDIMENTS
NSB-NLON GROTON, CONNECTICUT
PGE 29 OF 4

Connecticut Guidelines for Soil Erosion and Sediment Control	CT Council on Soil and Water Conservation	TBC	Technical and administrative guidance for development, adoption and implementation of erosion and sediment control program.	Guidelines will be followed to protect wetland and aquatic resources.
--	---	-----	---	---