

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

December 16, 1994

Mr. Robert Krivinskas
U.S. Department of the Navy
Northern Division - NAVFAC
10 Industrial Highway
Code 1811/RK - Mail Stop 82
Lester, PA 19113-2090

Re: Additional Comments on the Draft Detailed Analysis of Alternatives (DAA) for Calf Pasture Point (Site 07) at Naval Construction Battalion Center (NCBC), RI

Dear Mr. Krivinskas:

Pursuant to § 7.6 of the NCBC Federal Facility Agreement (FFA), please find attached the Environmental Protection Agency's (EPA) additional comments on the above referenced document, as promised in my letter dated November 7, 1994, (subject: Telephone Conversations, Wednesday November 2, 1994 and Friday November 4, 1994). These comments concern the ARAR tables and attached is a marked-up copy of the ARARs Tables for the Site 07 DAA. In addition to the revision of the ARARs Tables, please note that any changes in the Tables will need to be reflected in text and appendices.

The ARARs analysis regarding groundwater cleanup levels was based on the assumption that the brackishness determination is accurate and sufficient to sustain a finding that the groundwater is not a potential drinking water source. EPA requested further information regarding the determination of brackishness in its comment letter dated December 1, 1994. The ARARs analysis may change depending on the Navy's response to these comments.

The determination regarding RCRA as an ARAR is based on current information and may be subject to change depending on additional information requested in prior comments regarding the source, prior use, processes, etc. relating to the materials disposed of at the site, since there are no manifests. For example, 1,1,1 trichloroethane and 1,1,2-trichloroethane are listed under RCRA F-wastes but it is assumed that there is no information indicating these are spent solvents. If there is additional information regarding the source of the substances detected at the site, RCRA may be applicable.

There are also several comments which request more information regarding the proposed alternatives and treatment technologies. ARARs determinations will be finalized based on this additional

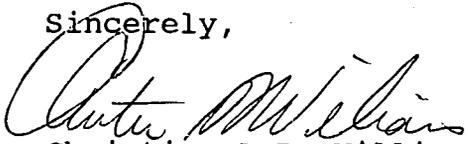


information.

There needs to be a final determination made as to whether the proposed alternatives could jeopardize the continued existence of the least tern (by disrupting its feeding ground), in order to determine the status of the federal Endangered Species Act as an ARAR. As the ecological risk assessment (ERA) is due to be revised by April 15, 1995, additional comments on this act may be forthcoming with the evaluation of the ERA.

The EPA expects the Navy to revise this document to address these comments. It would be helpful for the Navy to respond in writing to these comments and then for us to meet to discuss issues that are still unresolved. I look forward to meeting with you and the RIDEM to discuss these comments and the written responses, please contact me at (617) 573-5736 to set up a meeting for sometime in late January.

Sincerely,



Christine A.P. Williams
Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Richard Gottlieb, RIDEM
Lou Fayan, NCBC
Tim Prior, USF & WL
Mary Sanderson, EPA
Scot Gnewuch, ADL

TABLE 4-1
 FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-1 - NO ACTION
 ALTERNATIVE GW-2 - LIMITED ACTION
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

(Throughout)
 ACTION TO BE TAKEN TO ATTAIN ARARs

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
FEDERAL Ground Water--	Resource Conservation and Recovery Act, Subpart F (40 CFR 264.94) Ground Water Protection Standards, Alternate Concentration Limits	Relevant and Appropriate	Allows for the development of alternate concentration limits (ACLs) for facilities which treat, store or dispose of hazardous waste when the characteristics of the ground water (e.g., high salinity) limit the application of Maximum Contaminant Levels or health-based criteria. Exposure-based ACLs may be developed which take into consideration potential adverse effects on ground water quality and hydraulically-connected surface water quality.	Ground water alternate concentration limits, although currently undeveloped, may be relevant and appropriate to the development of site-specific remediation levels.
	Clean Water Act (40 CFR 121) Ambient Water Quality Criteria (AWQC)	To Be Considered	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms. These guidelines are used by states to set water quality standards for surface water.	AWQC, with modification, may be relevant and appropriate to the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands. <i>will be considered in developing cleanup levels</i> <i>Note: Depending on the results of the ecological risk assessment, it may be necessary to develop more protective cleanup levels.</i>
STATE Ground Water	RI Water Pollution Control Law (RIGL 46-12 et seq.) RI Water Quality Standards and Ambient Water Quality Guidelines	To Be Considered	Establishes water use classification and water quality criteria <i>water quality standards</i> for all waters of the state. Also establishes acute and chronic water quality criteria <i>ambient water quality criteria</i> for the protection of aquatic life. <i>which are used to develop water quality criteria.</i>	Ambient water quality guidelines are to be considered in the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands. <i>criteria will be considered in the development of PRGs for ground water</i> <i>and contact recreation</i>
			Promulgated to restore, preserve and enhance the quality of the waters of the state and protect the waters from pollutants.	<i>batting, shellfish harvesting, fish, wildlife habitat, direct human consumption (currently banned)</i>

TABLE 4-2
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-2 - LIMITED ACTION
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
STATE Monitoring	✓ Rules and Regulations for Ground Water Quality, RIDEM 9/93 including Sections 5.06, 13.02 and 12.03, Appendix I	Applicable	For GB classified ground water, there are no numerical limits but groundwater shall be Rules and regulations intended to protect and restore the quality of the State's ground water. Includes ground water program monitoring requirements and monitoring well construction and abandonment.	The substantive requirements of Ground water monitoring programs will comply with these regulations, including construction of permanent monitoring wells and abandonment of permanent and non- permanent wells when improper abandonment will result in reasonable likelihood of groundwater pollution.

procedures governing

of a quality which does not
 threaten public health and/or
 the environment or violate or
 have a substantial likelihood
 to violate surrounding groundwater
 quality standards, or adversely
 impact or have a substantial
 likelihood to adversely impact
 current and future uses of
 facility and surrounding ground-
 water and surface water.

* This entry should be included
 with all alternatives that
 include groundwater
 monitoring.

**TABLE 4-3
 FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE**

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
<u>FEDERAL</u>				
Ground Water--	Resource Conservation and Recovery Act, Subpart F (40 CFR 264.94) Ground Water Protection Standards, Alternate Concentration Limits	Relevant and Appropriate	Allows for the development of alternate concentration limits (ACLs) for facilities which treat, store or dispose of hazardous waste when the characteristics of the ground water (e.g., high salinity) limit the application of Maximum Contaminant Levels or health-based criteria. Exposure-based ACLs may be developed which take into consideration potential adverse effects on ground water quality and hydraulically-connected surface water quality.	Ground water alternate concentration limits, although currently undeveloped, may be relevant and appropriate to the development of site-specific remediation levels.
	Clean Water Act (40 CFR 121) Ambient Water Quality Criteria (AWQC)	To Be Considered	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms. These guidelines are used by states to set water quality standards for surface water.	AWQC, with modification, may be relevant and appropriate to the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands.
Surface Water --	Clean Water Act (40 CFR 121) Ambient Water Quality Criteria (AWQC)	Applicable Relevant and Appropriate	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms. These guidelines are used by states to set water quality standards for surface water.	Applicable to the discharge of treated ground water to surface water. will meet these standards. Effluent discharged to surface water will not degrade high quality surface waters or further degrade low quality surface waters.
	Clean Water Act 40 CFR 401.15 Effluent Discharge Limitations	Applicable	Regulates the discharge of contaminants from an industrial point source.	Applicable to the discharge of treated ground water to surface water.
Air--	Clean Air Act (40 CFR 50) National Ambient Air Quality Standards (NAAQS)	Applicable	Establishes maximum levels for pollutants and particulates within air quality control districts.	ARAR for the implementation of air stripping

see Table 4-1

move as modified to Action-Specific ARARs

should move to Action-Specific

(P. 10)

**TABLE 4-3
FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs
ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
AND DISCHARGE TO SURFACE WATER
SITE 07 - CALF PASTURE POINT
NCBC DAVISVILLE**

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
Air-- (cont.)	Clean Air Act (40 CFR 60) New Source Performance Standards (NSPS)	Applicable	Establishes emissions limitations for new sources.	ARAR for the implementation of air stripping.
	Clean Air Act (40 CFR 61) National Emissions Standard for Hazardous Air Pollutants	Applicable	Establishes emissions standards for hazardous air pollutants.	ARAR for the implementation of air stripping.
STATE Ground Water --	RI Water Pollution Control Law (RIGL 46-12 et seq.) RI Water Quality Standards and Ambient Water Quality Guidelines	To Be Considered	Establishes water use classification and water quality criteria for all waters of the state. Also establishes acute and chronic water quality criteria for the protection of aquatic life.	Ambient water quality guidelines are to be considered in the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands.
Surface Water --	RI Water Pollution Control Law (RIGL 46-12 et seq.) RI Water Quality Standards and Ambient Water Quality Guidelines	Applicable	Establishes water use classification and water quality criteria for all waters of the state. Also establishes acute and chronic water quality criteria for the protection of aquatic life. Establishes general requirements for discharge to waters of the state and requirement that discharges be in compliance with effluent standards and limitations.	Applicable to the discharge of treated ground water to surface water. will meet these standards Effluent discharged to surface water will not degrade high quality surface waters or further degrade low quality surface waters. These regulations do not permit low discharges into Class SA waters.
Air--	RI Clean Air Act (RIGL Title 28, Chapter 23) Air Pollution Control Regulation Standards	Applicable	Establishes maximum ambient levels for criteria pollutants.	ARAR for the implementation of air stripping.

s/b deleted
Action Specific ARARs (see Table 4-5)

See Table 4-1

more as modified to Action Specific ARARs

s/b under Action-Specific ARARs with specific discussion of each reg see Table 4-5

RI Water Quality Regulations -

Rules and Regulations for Ground Water Quality RI DEM 7193 Applicable [see descr Table 4-1]

The groundwater quality standards established in this will be applicable when more stringent than federal regulations. Monitoring well installation requirements are applicable for installation of monitoring wells.

insert under Action-Specific ARARs

**TABLE 4-4
FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs
ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
AND DISCHARGE TO SURFACE WATER
SITE 07 - CALF PASTURE POINT
NCBC DAVISVILLE**

ACTED TO BE TAKEN TO ATTEND ARARs

Should indicate media

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
FEDERAL Historic Places--	<p>Archaeological and Historic Preservation Act of 1974 (132 CFR 229 & 229.4, 43 CFR 7 & 7.4) 16 USC 5469a-1, ARPA prohibits excavation, removal, damage or alteration of archaeological resources.</p> <p>Protection of Archaeological and Historic Lands</p>	Applicable	<p>If activities in connection with any federal or federally approved project which may cause irreparable loss to significant scientific, prehistoric, or archaeological data, the agency must present the data or request DOE to do so.</p> <p>Restricts the use of land of known archaeological or historical significance.</p>	<p>Pursuant to a cultural resources survey, portions of the site have been identified as potentially archaeologically significant and ARAR for the construction of extraction and discharge systems since portions of Site 07 have been identified as potential archaeologically significant areas.</p> <p>An archaeological survey has been recommended. Alternatives will be implemented in accordance of these provisions if archaeological resources are found.</p>
Wetlands/Water Resources--	<p>Executive Order 11988 and 11990; Statement on Proceedings of Floodplain Management and Wetlands Protection (40 CFR 6, Appendix A)</p>	Applicable	<p>Requires action to avoid, whenever possible, the long- and short-term impacts associated with the destruction of wetlands and the occupancy and modifications of floodplains and wetlands whenever there is a practicable alternative which promotes the preservation and restoration of the natural and beneficial values of wetlands and floodplains.</p>	<p>Applicable if the construction or operation of extraction, treatment or discharge systems impacts wetland areas. If an alternative involves alteration of a wetland, it may not be selected unless a determination is made that no practicable alternative exists. If no practicable alternative exists, potential harm must be minimized and action taken to restore and preserve the natural and beneficial values of the wetland.</p>
Clean Water Act Section 404	<p>Section 404 (40 CFR 230.10) Requirements for Discharge of Dredge or Fill Material and Rivers and Harbors Act (Section 10) Prohibition of Filling a Navigable Water</p>	Applicable	<p>Prohibits the discharge of dredged or fill material to a water of the United States if there is a practicable alternative which poses less of an adverse impact on the aquatic ecosystem or if it causes significant degradation of the water. Rivers and Harbors Act prevents filling of a navigable water.</p>	<p>Since this alternative does not involve the discharge of dredged or fill material, it meets this ARAR.</p>
Fish and Wildlife Coordination Act of 1958	<p>Act of 1958 (16 U.S.C. 661) Protection of Wildlife Habitats</p>	Applicable	<p>Requires consultation with federal and state conservation agencies during planning and decision-making process which may impact water bodies, including wetlands, to develop measures to prevent, mitigate or compensate for losses of fish and wildlife will be given due consideration whenever a modification of a water body is proposed.</p>	<p>Since implementation of the remedial action could result in an impact to a water body or wetland, consultation with U.S. Fish and Wildlife Service, RIDEM, and other federal and state agencies involved in fish and wildlife matters will be conducted.</p>

Archaeological Protection 16 USC 5469a-1

Part need to determine if there are Navy implementing regulations

Separate EO 11988 (see below)

Control or modify velocity measures to prevent, mitigate or compensate for losses of fish and wildlife

implemented

with the substantive requirements

control or modification

Appropriate

TABLE 4-4
 FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
Coastal Zones--	Coastal Zone Management Act (16 USC Section 1451 et seq.)	To be determined - Applicable	Requires activities affecting the coastal zone including lands thereunder and adjacent ^{shorelands} shoreline. to be conducted consistent with the approved State Coastal Zone Management Plan, to the maximum extent practicable.	If construction of the extraction, treatment or discharge systems impacts a coastal zone, a ^{The} determination will be made that all activities are conducted consistent to the maximum extent practicable with State Coastal Zone Management Plan. <i>Note: RIIFS is supposed to document compliance w/ CZMA.</i>
STATE Wetlands--	Freshwater Wetlands Act Rhode Island Wetlands Law (RIGL 2-1-18 et seq.); Rhode Island Department of Environmental Management Rules Governing the Enforcement of the Freshwater Wetlands Act - As Amended, Dec. 21, 1986. <i>(check to see if further amended)</i>	Applicable	Defines and establishes provisions for the protection of swamps, marshes and other freshwater wetlands in the state. Actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Applicable if the construction or operation of extraction, treatment or discharge systems impacts wetland areas. <i>Alternatives involving activities which affect wetlands will comply with the substantive provisions of this regulation, a RIDE defined treatment of ground water will be monitored to assure drainage of groundwater does not violate these provisions.</i>
Coastal Zone--	Rhode Island Coastal Resources Management Law, (RIGL, Title 46, Chapter 23) and Regulations <i>(include citation or title of regulations)</i>	Applicable	Creates Coastal Resources Management Council and sets standards and authorizes promulgation of regulations for management and protection of coastal resources. <i>Requires demonstration that development or operation in coastal area is consistent with the coastal resources management plan and will not significantly damage the environment of the coastal region.</i>	Since Calf Pasture Point is located in a coastal area, the Navy will coordinate with the Rhode Island Coastal Resources Management Council and will ensure that all actions are consistent, to the maximum extent practicable, with the Coastal Zone Management Plan. <i>Resources</i>

OVER →

(Under Federal) Executive Order 11988; Statement on Proceeding of Floodplain Management and Wetlands Protection [40 CFR Part 6, Appendix A]

Applicable

Requires federal agencies to avoid wherever possible the long and short term impacts associated with the occupancy and modifications of floodplains and avoid direct and indirect support of floodplains development wherever there is a practicable alternative.

If an alternative involves occupancy and modifications of the floodplains or development in the floodplain, it may not be selected unless a practicable alternative exists. If no practicable alternative exists, potential harm must be minimized and action taken to restore and preserve the natural and beneficial uses of the floodplains.

100-yr Floodplain

Resource Conservation and Recovery Act, 40 C.F.R. 5.264, 18(b)

Requires storage, treatment or disposal facilities to be designed, constructed, operated and maintained to avoid washout, unless certain conditions are met.

Relevant and Appropriate

Alternative involving treatment or storage will be implemented in accordance with the substantive requirements of this provision.

Endangered Species

Endangered Species Act of 1973, 16 USC 91531 et seq.

Requires consultation with DOI or NMFS to ensure action will not jeopardize the continued existence of endangered or threatened species or adversely modify or destroy their critical habitats. If a proposed action affects these species or habitats, it must be avoided or appropriate action taken to mitigate so the action does not affect the species or its critical habitat.

Applicable

DOI or NMFS will be consulted. If an alternative affects endangered or threatened species or their critical habitats, it will be avoided or action will be taken to mitigate its effects. (For example, if it is determined that least tern feeding grounds are impacted).

NOTE - if present and may be affected, need to do an EIS assessment as part of RIFFS process (eco risk assessment)

TABLE 4-5
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
FEDERAL Discharge	Clean Water Act (40 CFR 122-125) National Pollutant Discharge Elimination System (NPDES) Permit Requirements	Applicable	Permits contain applicable effluent standards (i.e., technology-based and/or water quality-based), monitoring requirements, and standards and special conditions for discharge.	Discharges of treated water to surface waters will meet these requirements. <i>(use NPDES regulations)</i>
On-site/ Off-site Treatment/ Disposal	Resource Conservation and Recovery Act (RCRA) (40 CFR 262) Generator Requirements for Manifesting Waste for Off-Site Disposal	Applicable	Standards for manifesting, marking and recording off-site hazardous waste shipments for treatment/disposal.	If treatment system by-product requires off-site disposal/treatment as a hazardous waste, generator requirements will be followed.
	RCRA (40 CFR/264) Subpart I, Use and Management of Containers	Applicable <i>Relevant & Appropriate</i>	Outlines use and management standards applicable to owners and operators of all hazardous waste facilities that store containers of hazardous waste. <i>or tanks</i>	If treatment system by-product requires storage of hazardous waste in containers, management procedures will comply with these requirements. <i>or tanks</i>
	RCRA (40 CFR 263) Transporter Requirements for Off-Site Disposal	Applicable	Standards for transporters of hazardous waste materials.	If treatment system by-product requires off-site disposal/treatment as a hazardous waste, transporter requirements will be followed.
	RCRA (40 CFR 268) Land Disposal Restrictions	Applicable	Identifies hazardous wastes that are restricted from land disposal and sets treatment standards for restricted wastes.	If treatment system by-product requires off-site disposal as a hazardous waste, land disposal restrictions will be followed.

If any treatment by-products will be dealt with other than off-site disposal, this should be noted

If excavated soil is determined to be a RCRA hazardous waste, what will be done with it (on-site treatment, off-site disposal, or on-site disposal?)

Note: LORs would only be applicable if excavated soils or treatment by-products characterized as a hazardous waste were being placed on-site in a different area of contamination as defined in the regulations (and a restricted waste) (restrictions on storage in 40 C.F.R. 268.50 would also apply depending on these factors) *May this occur?*

TABLE 4-5
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
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 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
<u>On-site/</u> <u>Off-site</u> <u>Treatment/</u> <u>Disposal</u> (cont.)	Hazardous Materials Transportation Act (49 CFR 170, 171) Rules for Transportation of Hazardous Materials	Applicable	Procedures for packaging, labelling, manifesting, and off-site transport of hazardous materials.	If treatment system by-product is determined to be hazardous, transport procedures will be followed. (off-site)
<u>Venting/</u> <u>Discharges</u> <u>to Air</u>	Clean Air Act (40 CFR 50) National Ambient Air Quality Standards (NAAQS)- Particulates	Applicable	Establishes maximum concentrations for particulates and fugitive dust emissions.	Air stripper emissions will be treated if necessary to meet these regulations.
	Clean Air Act, Section 5 .171 through 178, 42 USC §§ 7471-7478 (Requirements for Non-Attainment Areas)	To be determined	RI has adopted State Implementation Plan (SIP) requirements approved and enforceable by EPA which meet the New Source Review (NSR) requirement of the CAA. These provisions require that new or modified major sources of VOCs defined as a source which has the potential to emit 50 tpy install equipment to meet Lowest Available Emissions Rate (LAER), which is set on a case-by-case basis and is either the most stringent emissions limitation contained in any SIP for that category or source or the most stringent emissions limitation which is achieved for the source. NSR requirements apply to non-attainment pollutants, which are VOCs and NO_x in RI.	Monitoring will be conducted to determine if the requirements of this standard are applicable or relevant and appropriate based on the emissions levels and on the need to be protective of human health and the environment. Air stripper emissions will be treated if necessary to meet these regulations.

10/30/10
LAL/K

TABLE 4-5
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
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Need more info. on potential use of activated carbon or off-gas incineration (catalytic oxidation) to treat emissions from air stripper in order to determine ARARs

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
Venting/ Discharges to Air (cont.)	Clean Air Act, Section 5 160 through 169A - Prevention of Significant Deterioration Provisions	To be determined	RI has adopted SIP requirements approved and enforceable by EPA which meet the Prevention of Significant Deterioration (PSD) requirements of the CAA. These provisions require that new or modified major sources of VOCs, defined as a source which has the potential to emit 25 tons/year, install equipment to meet Best Available Control Technology (BACT). PSD requirements apply to attainment pollutants, which are SO ₂ , CO, lead and particulates in Rhode Island.	Monitoring will be conducted to determine if the requirements of this standard are applicable or relevant and appropriate based on the emissions levels. Air stripper emissions will be treated if necessary to meet these regulations.
	Clean Air Act (40 CFR 61) National Emissions Standards for Hazardous Pollutants (NESHAPS)	<i>Part 61</i> Applicable Relevant and Appropriate	Establishes emissions limitations for certain hazardous air pollutants, and sets forth regulated sources of those pollutants.	Remedial actions shall attain NESHAP Air stripper emissions will be treated if necessary to meet these regulations.
	RCRA 40 CFR 264.1030 - 264.1036 Subpart AA - Air Emission Standards for Process Vents [Subparts BB, CC?]	Applicable Relevant and Appropriate, depending on concentration of emissions	Establishes standards for air emissions from process vents associated with distillation, fractionation, thin film evaporation, column extraction or air steam stripping operations that treat RCRA substances and have total organic concentrations of 10 ppm or greater.	chloride from the air stripping treatment process. Emissions shall be monitored for vinyl chloride. Limits for vinyl chloride. Air stripper emissions will be treated if necessary to meet these regulations.
	EPA Technical Guidance Document: Control of Air Emissions from Superfund Air Strippers at Superfund Ground Water Sites (OSWER Directive 9355.0-28)	To Be Considered	Guidance regarding the control of air emissions from air strippers used at Superfund sites for ground water treatment. Distinguishes between attainment and non-attainment areas for ozone.	Controls on These guidelines will be considered in the design of the air stripper and any associated emissions treatment units will be used as necessary to attain Federal and State ARARs, if criteria and guidance.

USEPA Region I Memo
 from Louis Gatto to
 Merrill Hohman
 July 10, 1989

TBC

Superfund air strippers in ozone non-attainment areas will generally merit controls on VOC emissions.

The remedial alternative including air stripping will include controls to reduce VOC emissions.

TABLE 4-5
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
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MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
STATE Discharge	RI Water Pollution Control Act <ul style="list-style-type: none"> RI Water Quality Regulations for Water Pollution Control (RIGL 46-12 et seq.) RI Water Quality Standards 	Applicable	Establishes general requirements and effluent limits for discharge to area waters of the State and requires that discharges be in compliance with effluent standards and limitations.	Discharges of treated water to area surface water will meet these requirements. standards. Effluent discharged to surface water will not degrade high quality surface waters or former degraded low quality surface waters. <i>See note.</i>
	Regulations for the RI Pollutant Discharge Elimination Systems (RIGL 46-12 et seq.)	Applicable	Permits contain applicable effluent standards (i.e., technology-based and/or water quality-based), monitoring requirements, and standards and special conditions for discharge.	On-site Discharges of treated water to area surface water will meet these requirements. of these <i>substantive provisions</i> that are more stringent than the NPDES Program.
On-site/ Off-site Disposal/ Treatment	RI Hazardous Waste Management Act of 1978 (RIGL 23-19.1 et seq.) <ul style="list-style-type: none"> Hazardous Waste Management Rules and Regulations 	Applicable <i>Relevant & Appropriate</i>	Rules and regulations for hazardous waste generation, transportation, treatment, storage, and disposal.	If treatment system by-product is determined to be hazardous, these rules will be followed.
	Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Site Remediation Regulations)	Applicable	Rules and regulations for the investigation and remediation of releases of hazardous materials.	Remedial systems will be designed and operated in accordance with these requirements.
	RI Hazardous Substance Community Right to Know Act (RIGL, Title 23, Chapter 24.4) Public Right-to-Know Requirements	Applicable	Establishes rules for the public's right-to-know concerning hazardous waste storage and transportation.	These rules will be followed if treatment system by-product requires management as a hazardous waste.
	RI Refuse Disposal Law Rules and Regulation for Solid Waste Management Facilities	Applicable	Rules and regulations for solid waste management facilities.	These rules will be followed if treatment system by-product requires management as a solid waste.

Note: see restriction on discharge to SA water

need to break down into sections and compile

TABLE 4-5
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
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MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
Venting/ Discharge to Air	RI Clean Air Act (RIGL, Title 23, Chapter 23) General Air Quality and Air Emissions Requirements	Applicable	Sets emissions limitations for particulates and visible air contaminants.	Air stripper emissions will be treated if necessary to meet these regulations.
	RI Clean Air Act (RIGL, Title 23, Chapter 23) General Air Quality and Air Emissions Requirements <ul style="list-style-type: none"> • RI Air Pollution Control Regulations, RI Dept. of Health, Div. of Air Pollution Control, effective 8/2/67, most recently amended 5/20/91 			
	- Regulation No. 1 - Visible Emissions	Applicable	No air contaminant emissions will be allowed for more than 3 minutes in any one hour which are greater than or equal to 20% opacity.	Air stripper emissions will be ^{meet emission levels} treated if necessary to meet these regulations.
	- Regulation No. 5 - Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	On-site remedial actions will use good industrial practices to prevent particulate matter from becoming airborne.
- Regulation No. 7 - Emissions Detrimental to Person or Property	Applicable	Prohibits emissions of contaminants which may be injurious to human, plant or animal life or cause damage to property or which UN reasonably interferes with the enjoyment of life and property.	All emissions will meet this requirement or gas treatment will be required.	

TABLE 4-5
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-3 - EXTRACTION, AIR STRIPPING, CHEMICAL PRECIPITATION,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
Venting/ Discharge to Air (cont.)	RI Clean Air Act (cont.) • RI Air Pollution Control Regulations, (cont.)			
	- Regulation No. 9 - Approval to Construct, Install, Modify or Operate	Applicable, depending on emissions limits	Establishes guidelines for the construction, installation, modification or operation of potential air emission units. Establishes permissible emission rates for some contaminants.	Construction, installation, modification or operation of air stripper unit will meet these requirements. <i>Substantiation of these</i>
	- Regulation No. 15 - Control of Organic Solvent Emissions	Applicable	Limits the amount of organic solvents emitted to the atmosphere.	<i>of organic solvents will be controlled</i> If emissions exceed limits in this regulation, emission controls will be designed and implemented to meet these requirements.
	- Regulation No. 17 - Odors	Applicable	Prohibits the release of objectionable odors across property lines.	No remedial action or air emissions will emit objectionable odors beyond the facility boundary, as practicable.
	- Regulation No. 22 - Air Toxics	Applicable	Prohibits the emission of specified contaminants at rates which would result in ground level concentrations greater than acceptable ambient levels or acceptable ambient levels with LAER, as set in the regulation.	If air emissions contain regulated substances, air emissions control equipment will be used as necessary to meet these standards.

RI Policy on Permitting Air Strippers

TBC

Establish permitting requirements for air stripper installation.

to be considered when planning and designing air strippers

Note: If use carbon adsorption and steam to regenerate the carbon beds → Reg No. 13 may be ARAR. Need more info on the potential use of carbon adsorption.

TABLE 4-6
 FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
FEDERAL	Ground Water--			
<i>See Tables 4-1 4-3</i>	Resource Conservation and Recovery Act, Subpart F (40 CFR 264.94) Ground Water Protection Standards, Alternate Concentration Limits	Relevant and Appropriate	Allows for the development of alternate concentration limits (ACLs) for facilities which treat, store or dispose of hazardous waste when the characteristics of the ground water (e.g., high salinity) limit the application of Maximum Contaminant Levels or health-based criteria. Exposure-based ACLs may be developed which take into consideration potential adverse effects on ground water quality and hydraulically-connected surface water quality.	Ground water alternate concentration limits, although currently undeveloped, may be relevant and appropriate to the development of site-specific remediation levels.
	Clean Water Act (40 CFR 121) Ambient Water Quality Criteria (AWQC)	To Be Considered	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms. These guidelines are used by states to set water quality standards for surface water.	AWQC, with modification, may be relevant and appropriate to the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands.
Surface Water --	Clean Water Act (40 CFR 121) Ambient Water Quality Criteria (AWQC)	Applicable	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms. These guidelines are used by states to set water quality standards for surface water.	Applicable to the discharge of treated ground water to surface water.
	Clean Water Act 40 CFR 401.15 Effluent Discharge Limitations	Applicable	Regulates the discharge of contaminants from an industrial point source.	Applicable to the discharge of treated ground water to surface water.
Air--	Clean Air Act (40 CFR 50) National Ambient Air Quality Standards (NAAQS)	Applicable	Establishes maximum levels for pollutants and particulates within air quality control districts.	ARAR for the any potential emissions associated with the pervaporation process.

TABLE 4-6
 FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

See tables 4-1 and 4-3

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
Air-- (cont.)	Clean Air Act (40 CFR 60) New Source Performance Standards (NSPS)	Applicable	Establishes emissions limitations for new sources.	ARAR for the any potential emissions associated with the pervaporation process.
	Clean Air Act (40 CFR 61) National Emissions Standard for Hazardous Air Pollutants	Applicable	Establishes emissions standards for hazardous air pollutants.	ARAR for the any potential emissions associated with the pervaporation process.
<u>STATE</u>				
Ground Water --	RI Water Pollution Control Law (RIGL 46-12 et seq.) RI Water Quality Standards and Ambient Water Quality Guidelines	To Be Considered	Establishes water use classification and water quality criteria for all waters of the state. Also establishes acute and chronic water quality criteria for the protection of aquatic life.	Ambient water quality guidelines are to be considered in the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands.
Surface Water --	RI Water Pollution Control Law (RIGL 46-12 et seq.) RI Water Quality Standards and Ambient Water Quality Guidelines	Applicable	Establishes water use classification and water quality criteria for all waters of the state. Also establishes acute and chronic water quality criteria for the protection of aquatic life.	Applicable to the discharge of treated ground water to surface water.
Air--	RI Clean Air Act (RIGL Title 23, Chapter 23) Air Pollution Control Regulation Standards	Applicable	Establishes maximum ambient levels for criteria pollutants.	ARAR for the any potential emissions associated with the pervaporation process.

TABLE 4-7
 FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

*See
Table
4-4*

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
<p>FEDERAL Historic Places--</p>	<p>Archaeological and Historic Preservation Act of 1974 (132 CFR 229 & 229.4, 43 CFR 7 & 7.4) Protection of Archaeological and Historic Lands</p>	<p>Applicable</p>	<p>Restricts the use of land of known archaeological or historical significance.</p>	<p>ARAR for the construction of extraction, treatment and discharge systems since portions of Site 07 have been identified as potential archaeologically significant areas.</p>
<p>Wetlands/Water Resources--</p>	<p>Executive Order 11988 and 11990; Statement on Proceedings of Floodplain Management and Wetlands Protection (40 CFR 6, Appendix A)</p>	<p>Applicable</p>	<p>Requires action to avoid whenever possible the long- and short-term impacts associated with the destruction of wetlands and the occupancy and modifications of floodplains and wetlands whenever there is a practicable alternative which promotes the preservation and restoration of the natural and beneficial values of wetlands and floodplains.</p>	<p>Applicable if the construction or operation of extraction, treatment or discharge systems impacts wetland areas.</p>
	<p>Clean Water Act Section 404 (40 CFR 230.10) Requirements for Discharge of Dredge or Fill Material and Rivers and Harbors Act (Section 10) Prohibition of Filling a Navigable Water</p>	<p>Applicable</p>	<p>Prohibits the discharge of dredged or fill material to a water of the United States if there is a practicable alternative which poses less of an adverse impact on the aquatic ecosystem or if it causes significant degradation of the water. Rivers and Harbors Act prevents filling of a navigable water.</p>	<p>Since this alternative does not involve the discharge of dredged or fill material, it meets this ARAR.</p>
	<p>Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661) Protection of Wildlife Habitats</p>	<p>Applicable</p>	<p>Requires consultation with federal and state conservation agencies during planning and decision-making process which may impact water bodies, including wetlands. Measures to prevent, mitigate or compensate for losses of fish and wildlife will be given due consideration whenever a modification of a water body is proposed.</p>	<p>Since implementation of the remedial action could result in an impact to a water body or wetland, consultation with U.S. Fish and Wildlife Service, RIDEM, and other federal and state agencies involved in fish and wildlife matters will be conducted.</p>

TABLE 4-7
 FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

*See
Table 4-4*

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
Coastal Zones--	Coastal Zone Management Act (16 USC Section 1451 et seq.)	To be determined	Regulates activities affecting the coastal zone including lands thereunder and adjacent shoreline.	If construction of the extraction, treatment or discharge systems impacts a coastal zone, a determination will be made that all activities are consistent to the maximum extent practicable with State Coastal Zone Management Plan.
STATE Wetlands--	Rhode Island Wetlands Laws (RIGL 2-1-18 et seq.); Rhode Island Department of Environmental Management Rules Governing the Enforcement of the Freshwater Wetlands Act - As Amended, Dec. 21, 1986.	Applicable	Defines and establishes provisions for the protection of swamps, marshes and other freshwater wetlands in the state. Actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Applicable if the construction or operation of extraction, treatment or discharge systems impacts wetland areas.
Coastal Zone--	Rhode Island Coastal Resources Management Law, (RIGL, Title 46, Chapter 23) and Regulations	Applicable	Creates Coastal Resources Management Council and sets standards and authorizes promulgation of regulations for management and protection of coastal resources.	Since Calf Pasture Point is located in a coastal area, the Navy will coordinate with the Rhode Island Coastal Resources Management Council and will ensure that all actions are consistent, to the maximum extent practicable, with the Coastal Zone Management Plan.

TABLE 4-8
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

See Table 4-5

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
<u>FEDERAL Discharge</u>	Clean Water Act (40 CFR 122-125) National Pollutant Discharge Elimination System (NPDES) Permit Requirements	Applicable	Permits contain applicable effluent standards (i.e., technology-based and/or water quality-based), monitoring requirements, and standards and special conditions for discharge.	Discharges of treated water to surface waters will meet these requirements.
<u>On-site/ Off-site Treatment/ Disposal</u>	Resource Conservation and Recovery Act (RCRA) (40 CFR 262) Generator Requirements for Manifesting Waste for Off-Site Disposal	Applicable	Standards for manifesting, marking and recording off-site hazardous waste shipments for treatment/disposal.	If treatment system by-products require off-site disposal/treatment as a hazardous waste, generator requirements will be followed.
	RCRA (40 CFR 264) Subpart I Use and Management of Containers	Applicable	Outlines use and management standards applicable to owners and operators of all hazardous waste facilities that store containers of hazardous waste.	If treatment system by-products require storage of hazardous waste in containers, management procedures will comply with these requirements.
	RCRA (40 CFR 263) Transporter Requirements for Off-Site Disposal	Applicable	Standards for transporters of hazardous waste materials.	If treatment system by-products require off-site disposal/treatment as a hazardous waste, transporter requirements will be followed.
	RCRA (40 CFR 268) Land Disposal Restrictions	Applicable	Identifies hazardous wastes that are restricted from land disposal and sets treatment standards for restricted wastes.	If treatment system by-product requires off-site disposal as a hazardous waste, land disposal restrictions will be followed.

*If any treatment by-products or filters will be dealt with other than in off site disposal, this should be noted and appropriate ARARs included.
 (See Table 4-5)*

TABLE 4-8
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

See Table 4-5

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
<u>On-site/</u> <u>Off-site</u> <u>Treatment/</u> <u>Disposal</u> (cont.)	Hazardous Materials Transportation Act (49 CFR 170, 171) Rules for Transportation of Hazardous Materials	Applicable	Procedures for packaging, labelling, manifesting, and off-site transport of hazardous materials.	If treatment system by-product is determined to be hazardous, transport procedures will be followed.
<u>Venting/</u> <u>Discharges</u> <u>to Air</u>	Clean Air Act (40 CFR 50) National Ambient Air Quality Standards (NAAQS)- Particulates	Applicable	Establishes maximum concentrations for particulates and fugitive dust emissions.	Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations.
	Clean Air Act, Section 5 171 through 178, 42 USC §§ 7471-7478 (Requirements for Non-Attainment Areas)	To be determined	RI has adopted State Implementation Plan (SIP) requirements approved and enforceable by EPA which meet the New Source Review (NSR) requirement of the CAA. These provisions require that new or modified major sources of VOCs defined as a source which has the potential to emit 50 tpy install equipment to meet Lowest Available Emissions Rate (LAER), which is set on a case-by-case basis and is either the most stringent emissions limitation contained in any SIP for that category or source or the most stringent emissions limitation which is achieved for the source. NSR requirements apply to non-attainment pollutants, which are VOCs and NO _x in RI.	Monitoring will be conducted to determine if the requirements of this standard are applicable or relevant and appropriate based on the emissions levels and on the need to be protective of human health and the environment. Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations.

TABLE 4-8
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

Again, need more info. on potential use of carbon to control air emissions from pervaporation process in order to determine ARARs

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
Venting/ Discharges to Air (cont.)	Clean Air Act, Section 5 160 through 169A - Prevention of Significant Deterioration Provisions Clean Air Act (40 CFR 61) National Emissions Standards for Hazardous Pollutants (NESHAPS) RCRA 40 CFR 264.1030 - 264.1036 Subpart AA - Air Emission Standards for Process Vents	To be determined Applicable Applicable	RI has adopted SIP requirements approved and enforceable by EPA which meet the Prevention of Significant Deterioration (PSD) requirements of the CAA. These provisions require that new or modified major sources of VOCs, defined as a source which has the potential to emit 25 tons/year, install equipment to meet Best Available Control Technology (BACT). PSD requirements apply to attainment pollutants, which are SO ₂ , CO, lead and particulates in Rhode Island. Establishes emissions limitations for hazardous air pollutants, and sets forth regulated sources of those pollutants. Establishes standards for air emissions from process vents associated with distillation, fractionation, thin film evaporation, column extraction or air steam stripping operations that treat RCRA substances and have total organic concentrations of 10 ppm or greater.	Monitoring will be conducted to determine if the requirements of this standard are applicable or relevant and appropriate based on the emissions levels. Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations. Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations. Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations.

See Table 4-5

TABLE 4-8
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

See Table 4-5

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
<p><u>Venting/ Discharge to Air</u></p>	<p>RI Clean Air Act (RIGL, Title 23, Chapter 23) General Air Quality and Air Emissions Requirements</p> <p>RI Clean Air Act (RIGL, Title 23, Chapter 23) General Air Quality and Air Emissions Requirements</p> <ul style="list-style-type: none"> • RI Air Pollution Control Regulations, RI Dept. of Health, Div. of Air Pollution Control, effective 8/2/67, most recently amended 5/20/91 	<p>Applicable</p>	<p>Sets emissions limitations for particulates and visible air contaminants.</p>	<p>Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations.</p>
	<ul style="list-style-type: none"> - Regulation No. 1 - Visible Emissions 	<p>Applicable</p>	<p>No air contaminant emissions will be allowed for more than 3 minutes in any one hour which are greater than or equal to 20% opacity.</p>	<p>Emissions from the cross-flow pervaporation treatment system will be treated if necessary to meet these regulations.</p>
	<ul style="list-style-type: none"> - Regulation No. 5 - Fugitive Dust 	<p>Applicable</p>	<p>Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.</p>	<p>On-site remedial actions will use good industrial practices to prevent particulate matter from becoming airborne.</p>
	<ul style="list-style-type: none"> - Regulation No. 7 - Emissions Detrimental to Person or Property 	<p>Applicable</p>	<p>Prohibits emissions of contaminants which may be injurious to human, plant or animal life or cause damage to property or which reasonably interferes with the enjoyment of life and property.</p>	<p>All emissions will meet this requirement or gas treatment will be required.</p>

RCRA (40 CFR Part 264)
Subpart B
General Facility Standards

Relevant
&
Appropriate

Sets general facility requirements, including general waste analysis, security measures, inspections, and training requirements.

Design and operation of the treatment systems shall comply with the substantive provisions of these requirements.

RCRA (40 CFR Part 264)
Subpart C
Preparedness and Prevention

Relevant
&
Appropriate

Outlines requirements for safety equipment and spill control for hazardous waste facilities. Facilities must be designed, maintained, constructed and operated to minimize the possibility of an unplanned release that could threaten human health or the environment.

Safety and communication equipment and other requirements of this subpart will be incorporated into the treatment alternative.

RCRA (40 CFR Part 264)
Subpart D
Contingency Plan and Emergency Procedures

Relevant
&
Appropriate

Outlines requirements for emergency procedures to be used following explosions, fires, etc.

Alternatives will meet the substantive portion of these requirements to ensure adequate prevention and response capability.

TABLE 4-8
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

*See Table
4-5*

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
Venting/ Discharge to Air (cont.)	RI Clean Air Act (cont.) • RI Air Pollution Control Regulations, (cont.)			
	- Regulation No. 9 - Approval to Construct, Install, Modify or Operate	Applicable	Establishes guidelines for the construction, installation, modification or operation of potential air emission units. Establishes permissible emission rates for some	Construction, installation, modification or operation of pervaporation unit will meet these requirements.
	- Regulation No. 15 - Control of Organic Solvent Emissions	Applicable	Limits the amount of organic solvents emitted to the atmosphere.	If emissions exceed limits in this regulation, emission controls will be designed and implemented to meet these requirements.
	- Regulation No. 17 - Odors	Applicable	Prohibits the release of objectionable odors across property lines.	No remedial action or air emissions will emit objectionable odors beyond the facility boundary, as practicable.
	- Regulation No. 22 - Air Toxics	Applicable	Prohibits the emission of specified contaminants at rates which would result in ground level concentrations greater than acceptable ambient levels or acceptable ambient levels with LAER, as set in the regulation.	If air emissions contain regulated substances, air emissions control equipment will be used as necessary to meet these standards.

Note: need to explain potential use of carbon adsorption to treat air emissions in order to determine ARARs.

TABLE 4-8
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-4 - EXTRACTION, CROSS-FLOW PERVAPORATION, ELECTROCHEMICAL TREATMENT,
 AND DISCHARGE TO SURFACE WATER
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

See Table 4-5

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
<u>STATE Discharge</u>	RI Water Pollution Control Act • RI Water Quality Regulations for Water Pollution Control (RIGL 46-12 et seq.) RI Water Quality Standards	Applicable	Establishes general requirements and effluent limits for discharge to area waters.	Discharges of treated water to area surface water will meet these requirements.
	• Regulations for the RI Pollutant Discharge Elimination Systems (RIGL 46-12 et seq.)	Applicable	Permits contain applicable effluent standards (i.e., technology-based and/or water quality-based), monitoring requirements, and standards and special conditions for discharge.	Discharges of treated water to area surface water will meet these requirements.
<u>On-site/ Off-site Disposal/ Treatment</u>	RI Hazardous Waste Management Act of 1978 (RIGL 23-19.1 et seq.)	Applicable	Rules and regulations for hazardous waste generation, transportation, treatment, storage, and disposal.	If treatment system by-product is determined to be hazardous, these rules will be followed.
	• Hazardous Waste Management Rules and Regulations • Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Site Remediation Regulations)	Applicable	Rules and regulations for the investigation and remediation of releases of hazardous materials.	Remedial systems will be designed and operated in accordance with these requirements.
	RI Hazardous Substance Community Right to Know Act (RIGL, Title 23, Chapter 24.4) Public Right-to-Know Requirements	Applicable	Establishes rules for the public's right-to-know concerning hazardous waste storage and transportation.	These rules will be followed if treatment system by-product requires management as a hazardous waste.
	RI Refuse Disposal Law Rules and Regulation for Solid Waste Management Facilities	Applicable	Rules and regulations for solid waste management facilities.	These rules will be followed if treatment system by-product requires management as a solid waste.

TABLE 4-9
 FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-5 - IN SITU TREATMENT (PERMEABLE REACTION WALL)
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

*See
 Tables 4-1
 and 4-3*

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
<u>FEDERAL</u> Ground Water--	Resource Conservation and Recovery Act, Subpart F (40 CFR 264.94) Ground Water Protection Standards, Alternate Concentration Limits	Relevant and Appropriate	Allows for the development of alternate concentration limits (ACLs) for facilities which treat, store or dispose of hazardous waste when the characteristics of the ground water (e.g., high salinity) limit the application of Maximum Contaminant Levels or health-based criteria. Exposure-based ACLs may be developed which take into consideration potential adverse effects on ground water quality and hydraulically-connected surface water quality.	Ground water alternate concentration limits, although currently undeveloped, may be relevant and appropriate to the development of site-specific remediation levels.
	Clean Water Act (40 CFR 121) Ambient Water Quality Criteria (AWQC)	To Be Considered	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms. These guidelines are used by states to set water quality standards for surface water.	AWQC, with modification, may be relevant and appropriate to the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands.
<u>STATE</u> Ground Water --	RI Water Pollution Control Law (RIGL 46-12 et seq.) RI Water Quality Standards and Ambient Water Quality Guidelines	To Be Considered	Establishes water use classification and water quality criteria for all waters of the state. Also establishes acute and chronic water quality criteria for the protection of aquatic life.	Ambient water quality guidelines are to be considered in the development of PRGs for ground water based on the potential discharge of ground water to surface water that is used for fishing or to freshwater wetlands.

TABLE 4-10
 FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-5 - IN SITU TREATMENT (PERMEABLE REACTION WALL)
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

*See
Table
4-4*

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
FEDERAL Historic Places--	Archaeological and Historic Preservation Act of 1974 (132 CFR 229 & 229.4, 43 CFR 7 & 7.4) Protection of Archaeological and Historic Lands	Applicable	Restricts the use of land of known archaeological or historical significance.	ARAR for the construction of the in situ reaction wall since portions of Site 07 have been identified as potential archaeologically significant areas.
Wetlands/Water Resources--	Executive Order 11988 and 11990; Statement on Proceedings of Floodplain Management and Wetlands Protection (40 CFR 6, Appendix A)	Applicable	Requires action to avoid whenever possible the long- and short-term impacts associated with the destruction of wetlands and the occupancy and modifications of floodplains and wetlands whenever there is a practicable alternative which promotes the preservation and restoration of the natural and beneficial values of wetlands and floodplains.	Applicable if the construction or operation of the permeable reaction wall impacts wetland areas.
	Clean Water Act Section 404 (40 CFR 230.10) Requirements for Discharge of Dredge or Fill Material and Rivers and Harbors Act (Section 10) Prohibition of Filling a Navigable Water	Applicable	Prohibits the discharge of dredged or fill material to a water of the United States if there is a practicable alternative which poses less of an adverse impact on the aquatic ecosystem or if it causes significant degradation of the water. Rivers and Harbors Act prevents filling of a navigable water.	Since this alternative does not involve the discharge of dredged or fill material, it meets this ARAR.
	Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661) Protection of Wildlife Habitats	Applicable	Requires consultation with federal and state conservation agencies during planning and decision-making process which may impact water bodies, including wetlands. Measures to prevent, mitigate or compensate for losses of fish and wildlife will be given due consideration whenever a modification of a water body is proposed.	Applicable if the construction or operation of the permeable reaction wall impacts wetland areas. Consultation with U.S. Fish and Wildlife Service, RIDEM, and other federal and state agencies involved in fish and wildlife matters will be conducted in such a case.

TABLE 4-10
 FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-5 - IN SITU TREATMENT (PERMEABLE REACTION WALL)
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

See Table 4-4

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	APPLICABILITY TO SITE CONDITIONS
Coastal Zones--	Coastal Zone Management Act (16 USC Section 1451 et seq.)	To be determined	Regulates activities affecting the coastal zone including lands thereunder and adjacent shoreline.	If construction of the permeable reaction wall impacts a coastal zone, a determination will be made that all activities are consistent to the maximum extent practicable with State Coastal Zone Management Plan.
<u>STATE</u> Wetlands--	Rhode Island Wetlands Laws (RIGL 2-1-18 et seq.); Rhode Island Department of Environmental Management Rules Governing the Enforcement of the Freshwater Wetlands Act - As Amended, Dec. 21, 1986.	Applicable	Defines and establishes provisions for the protection of swamps, marshes and other freshwater wetlands in the state. Actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Applicable if the construction or operation of the permeable reaction wall impacts wetland areas.
Coastal Zone--	Rhode Island Coastal Resources Management Law, (RIGL, Title 46, Chapter 23) and Regulations	Applicable	Creates Coastal Resources Management Council and sets standards and authorizes promulgation of regulations for management and protection of coastal resources.	Since Calf Pasture Point is located in a coastal area, the Navy will coordinate with the Rhode Island Coastal Resources Management Council and will ensure that all actions are consistent, to the maximum extent practicable, with the Coastal Zone Management Plan.

TABLE 4-11
 FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs
 ALTERNATIVE GW-5 - IN SITU TREATMENT (PERMEABLE REACTION WALL)
 SITE 07 - CALF PASTURE POINT
 NCBC DAVISVILLE

MEDIA	REQUIREMENT	STATUS	SYNOPSIS	ACTION TAKEN TO MEET ARAR
<u>STATE</u>	<p data-bbox="21 495 138 560"><u>In-situ Treatment</u></p> <p data-bbox="180 495 563 560">RI Hazardous Waste Management Act of 1978 (RIGL 23-19.1 et seq.)</p> <ul data-bbox="180 576 563 738" style="list-style-type: none"> Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Site Remediation Regulations) 	Applicable	Rules and regulations for the investigation and remediation of releases of hazardous materials.	Remedial systems will be designed and operated in accordance with these requirements.

need to break down into sections and consider

Isk whether CRs are relevant and appropriate here (i.e., potential land disposal of restricted hazardous wastes as part of excavation for slurry wall) If there are any treatment by-products which will be disposed of other than by off-site disposal, this should be noted.