Table A-1. Chemical-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Chemical-Specific ARARs			
Action/Media	**Requirements**	**Prerequisite**	**Citation(s)**
Protection of surface water	The concentration of toxic substances, either alone or in combination with other wastes, in surface waters shall not render waters injurious to aquatic life or wildlife, recreational activities, public health, or impair waters for any designated uses.	Fresh surface waters classified as Class C waters which are protected for secondary recreation, fishing, aquatic life including propagation and survival, and wildlife – **relevant and appropriate**	15A NCAC 02B.0208(a) Standards for Toxic substances
Protection of surface water	The concentration of toxic substances shall not result in chronic toxicity. Any levels in excess of the chronic value shall be considered to result in chronic toxicity. In the absence of direct measurements of chronic toxicity, the concentration of toxic substances shall not exceed the concentration specified by the fraction of the lowest LC50 value that predicts a no effect chronic level (as determined by the use of acceptable acute/chronic ratios). If an acceptable acute/chronic ratio is not available, then that toxic substance shall not exceed one-one hundredth (0.01) of the lowest LC50 or if it is affirmatively demonstrated that a toxic substance has a half-life of less than 96 hours the maximum concentration shall not exceed one-twentieth (0.05) of the lowest LC50.		15A NCAC 02B.0208(a)(1) Aquatic Life Standards
Protection of surface water	The concentration of toxic substances shall not exceed the level necessary to protect human health through exposure routes of fish (shellfish) tissue consumption, water consumption, or other route identified as appropriate for the water body. • Polychlorinated biphenyls (PCBs) : 0.064 ng/l	Fresh surface waters classified as Class C waters which are protected for secondary recreation and fishing – **relevant and appropriate**	15A NCAC 02B.0208(a)(2),(B)(xii) Human Health Standards
Protection of surface water	The waters shall be suitable for aquatic life propagation and maintenance of biological integrity, wildlife, secondary recreation, and agriculture. Sources of water pollution that preclude any of these uses on either a short-term or long-term basis shall be considered to be violating a water quality standard.	Fresh surface waters classified as Class C waters which are protected for aquatic life including propagation and survival, and wildlife – **relevant and appropriate**	15A NCAC 02B.0211(2) Fresh surface standards for Class C

Chemical-Specific ARARs			
Action/Media	**Requirements**	**Prerequisite**	**Citation(s)**
Protection of surface water	Numerical water quality standards (maximum permissible levels) for the protection of aquatic life: • Mercury: 0.012 ug/l • Polychlorinated biphenyls (total of all PCBs and congeners identified): 0.001 ug/l Mercury and selenium water quality standards shall be based upon measurement of the total recoverable metal.	Fresh surface waters classified as Class C waters which are protected for aquatic life including propagation and survival, and wildlife – **relevant and appropriate**	15A NCAC 02B.0211(11)(b)(vii) and 15A NCAC 02B.0211(16) Aquatic Life Water Quality Criteria

ARAR = applicable or relevant and appropriate requirement
CFR = *Code of Federal Regulation*

EPA = U.S. Environmental Protection Agency
NCAC = *North Carolina Administrative Code*

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Aquatic Resources and Wetlands			
Presence of Wetlands	Shall take action to minimize the destruction, loss or degradation of wetlands and to preserve and enhance beneficial values of wetlands.	Federal actions that involve potential impacts to, or take place within, wetlands – **TBC**	Executive Order 11990 Section 1(a) *Protection of Wetlands*
	Shall avoid undertaking construction located in wetlands unless: (1) there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.		Executive Order 11990, Section 2(a) *Protection of Wetlands*
Location encompassing aquatic ecosystem as defined in 40 CFR 230.3(c)	No discharge of dredged or fill material into an aquatic ecosystem is permitted if there is a practicable alternative that would have less adverse impact on the aquatic ecosystem or if will cause or contribute significant degradation of the waters of the US.	Action that involves the discharge of dredged or fill material into waters of the United States, including jurisdictional wetlands – **applicable**	40 CFR § 230.10(a) and (c) Clean Water Act Regulations – Section 404(b) Guidelines
	Except as provided in § 404(b)(2), no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps in accordance with Subpart H at 40 CFR 230.70 *et seq*. have been taken that will minimize potential adverse impacts of the discharge on the aquatic ecosystem		40 CFR § 230.10(d) Clean Water Act Regulations – Section 404(b) Guidelines
	Must comply with the substantive requirements of the NWP 38 General Conditions, as appropriate, any regional or case-specific conditions recommended by the Corps District Engineer, after consultation.	On-site CERCLA action conducted by Federal agency that involves the discharge of dredged or fill material into waters of the United States, including jurisdictional wetlands – **TBC**	Nation Wide Permit (38) Cleanup of Hazardous and Toxic Waste 33 CFR § 323.3(b)

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Presence of wetlands or other waters influenced by wetlands	The following activities for which Section 404 permits are not required pursuant to Section 404(f)(1) of the Clean Water Act and which are not recaptured into the permitting process pursuant to Section 404(f)(2) are deemed to be in compliance with wetland standards in 15A NCAC 2B .0231: • construction of temporary sediment control measures or best management practices as required by the NC Sediment and Erosion Control Program on a construction site, provided that the temporary sediment control measures or best management practices are restored to natural grade and stabilized within two months of completion of the project and native woody vegetation is reestablished during the next appropriate planting season and maintained;	Activities within wetlands, as defined by G.S. 143-212(6), that comply with the most current versions of the federal regulations to implement Section 404 (f) (US Environmental Protection Agency and US Army Corps of Engineers including 40 CFR 232.3) and the Sedimentation Pollution Control Act, G.S. 113A, Article 4 – **applicable**	15A NCAC 02B.0230(a)(5)
Presence of wetlands or other waters influenced by wetlands	The following standards shall be used to assure the maintenance or enhancement of the existing uses of wetlands identified in Paragraph (a) of this Rule: • Liquids, fill or other solids or dissolved gases may not be present in amounts which may cause adverse impacts on existing wetland uses; • Floating or submerged debris, oil, deleterious substances, or other material may not be present in amounts which may cause adverse impacts on existing wetland uses; • Materials producing color, odor, taste or unsightliness may not be present in amounts which may cause adverse impacts on existing wetland uses;	Activities within, wetlands as defined by G.S. 143-212(6) – **applicable**	15A NCAC 02B.0231(b)(1)-(3)

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Presence of wetlands or other waters influenced by wetlands *con't*	The following standards shall be used to assure the maintenance or enhancement of the existing uses of wetlands identified in Paragraph (a) of this Rule: • Concentrations or combinations of substances which are toxic or harmful to human, animal or plant life may not be present in amounts which individually or cumulatively may cause adverse impacts on existing wetland uses; • Hydrological conditions necessary to support the biological and physical characteristics naturally present in wetlands shall be protected to prevent adverse impacts on: (A) Water currents, erosion or sedimentation patterns; (B) Natural water temperature variations; (C) The chemical, nutrient and dissolved oxygen regime of the wetland; (D) The movement of aquatic fauna; (E) The pH of the wetland; and (F) Water levels or elevations. • The populations of wetland flora and fauna shall be maintained to protect biological integrity as defined at 15A NCAC 2B .0202.	Activities within, wetlands as defined by G.S. 143-212(6) – **applicable**	15A NCAC 02B.0231(b)(4)-(6)

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Determination that surface water uses are not removed or degraded	Determining that existing uses are not removed or degraded by a discharge to classified surface waters for an activity which: (1) has no practical alternative under the criteria outlined in Paragraph (f) of this Rule; (2) will minimize adverse impacts to the surface waters based on consideration of existing topography, vegetation, fish and wildlife resources, and hydrological conditions under the criteria outlined in Paragraph (g) of this Rule; (3) does not result in the degradation of groundwaters or surface waters; (4) does not result in cumulative impacts, based upon past or reasonably anticipated future impacts, that cause or will cause a violation of downstream water quality standards; (5) provides for protection of downstream water quality standards through the use of on-site stormwater control measures; and (6) provides for replacement of existing uses through mitigation as described at Subparagraphs (h)(1) of this Rule. *NOTE:* Determination will be made by EPA in consultation with NCDEQ and the USACE, as appropriate and documented in CERCLA Remedial Design or Remedial Action Work Plan.	Discharge to classified surface waters – **applicable**	15A NCAC 02H .0506(b)

Table A-2. Location-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Determination that wetlands uses are not removed or degraded	The Director shall issue a certification upon determining that sufficient existing uses are not removed or degraded by a discharge to Class WL wetlands as defined at 15A NCAC 2B .0101(c)(8), for an activity which: (1) has no practical alternative as described in Paragraph (f) of this Rule[1], or impacts less than three acres of Class WL wetlands; (2) will minimize adverse impacts to the wetland based on consideration of existing topography, vegetation, fish and wildlife resources, and hydrological conditions under the criteria outlined in Paragraph (g) of this Rule; or impacts less than one acre of wetland within 150 feet (including less than 1/3 acre of wetland within 50 feet), of the mean high water line or normal water level of any perennial or intermittent water body as shown by the most recently published version of the United State Geological Survey 1:24,000 (7.5 minute) scale topographical map or other site specific data; (3) does not result in the degradation of groundwaters or surface waters; (4) does not result in cumulative impacts, based upon past or reasonably anticipated future impacts, that cause or will cause a violation of downstream water quality standards; (5) provides protection for downstream water quality standards through the use of on-site stormwater control measures; and (6) provides for replacement of existing uses through wetland mitigation under U.S. Army Corps of Engineers requirements or as described in Subparagraph (h)(1)-(8) of this Rule. *NOTE:* Certification is an administrative requirement. Determination will be made by EPA in consultation with NCDEQ and the USACE, as appropriate and documented in CERCLA Remedial Design or Remedial Action Work Plan to the extent that the wetlands on the site or portions of the wetlands on the site are Class WL.	Discharge to Class WL wetlands, as defined at 15A NCAC 2B .0101(c)(8) – **applicable**	15A NCAC 02H .0506(c)

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Wetlands Mitigation	Replacement or mitigation of unavoidable losses of existing uses shall be reviewed in accordance with the guidelines provided in paragraphs (1) through (10) of this rule. *NOTE:* Permits are not required per CERCLA Section 121(e)(1); however consultation with other permitting agencies (such as the USACE) is necessary in order to demonstrate compliance with mitigation requirements.	Discharge to Class WL wetlands as defined at 15A NCAC 2B .0101(c)(8) – **applicable**	15A NCAC 02H .0506(h)
Discharges to Isolated Wetlands and Isolated Waters	The following are exempt from this Section and shall not be considered to remove existing uses of the isolated wetland or isolated surface waters: (1) Activities that are described in 15A NCAC 02B .0230 *ACTIVITIES DEEMED TO COMPLY WITH WETLANDS STANDARDS*; (2) Discharges to isolated, man-made ponds or isolated ditches except for those wetlands or waters constructed for compensatory mitigation or for on-site stormwater management; (3) Discharges of treated effluent into isolated wetlands and isolated classified surface waters resulting from activities which receive NPDES Permits or State Non-Discharge Permits; (4) Discharges for water dependent structures as defined in 15A NCAC 02B .0202(67); *NOTE:* Permits are not required per CERCLA Section 121(e)(1); however compliance with the substantive NPDES requirements for discharge is required by CERCLA Section 121(d).	Discharges[2] resulting from activities on isolated wetlands and isolated classified surface waters which require a determination by NCDEQ and the USACE – **applicable**	15A NCAC 02H .1300(d)

1 *Ref.* 15A NCAC 02H .0506(f) - A lack of practical alternatives may be shown by demonstrating that, considering the potential for a reduction in size, configuration or density of the proposed activity and all alternative designs the basic project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impact to surface waters or wetlands.

2 For the purpose of this Section, discharge shall be the deposition of dredged or fill material including but not limited to fill, earth, construction debris and soil.

Table A-2. *Location-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Mitigation on ephemeral channels	Mitigation provider shall provide a delineation of the watershed draining to the ephemeral channel. The entire area proposed for mitigation shall be within the contributing drainage area to the ephemeral channel. The ephemeral channel shall be directly connected to an intermittent or perennial stream and contiguous with the rest of the mitigation site protected under a perpetual conservation easement. The area of the mitigation site on ephemeral channels shall comprise no more than 25 percent of the total area of buffer mitigation. The proposal shall meet all applicable requirements of Paragraph (n) of this Rule for restoration or enhancement. The proposal shall meet all applicable requirements of Subparagraph (o)(4) or (o)(5) of this Rule for preservation.	Activities affecting riparian buffers for ephemeral channels[3] – **relevant and appropriate**	15A NCAC 02B .0295(o)(7) MITIGATION PROGRAM REQUIREMENTS FOR PROTECTION AND MAINTENANCE OF RIPARIAN BUFFERS
Restoration and enhancement on ditches	The width of the restored or enhanced area shall not be less than 30 feet and shall not exceed 50 feet for crediting purposes. The applicant or mitigation provider shall provide a delineation of the watershed draining to the ditch. The watershed draining to the ditch shall be at least four times larger than the restored or enhanced area along the ditch. The perpetual conservation easement shall include the ditch and the confluence of the ditch with the intermittent or perennial stream, and provide language that prohibits future maintenance of the ditch. The proposal shall meet all applicable requirements of Paragraph (n) of this Rule for restoration or enhancement.	Activities affecting riparian buffers for ditches[4] – **relevant and appropriate**	15A NCAC 02B .0295(o)(8)

3 An "ephemeral channel" is defined as a natural channel exhibiting discernible banks within a topographic crenulation (V-shaped contour lines) indicative of natural drainage on the 1:24,000 scale (7.5 minute) quadrangle topographic map prepared by the U.S. Geologic Survey

4 A "ditch" is defined as a man-made channel other than a modified natural stream that was constructed for drainage purposes.

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Restoration and enhancement on ditches	To be used for mitigation, a ditch shall meet all of the following criteria: (A) be directly connected with and draining towards an intermittent or perennial stream; (B) be contiguous with the rest of the mitigation site protected under a perpetual conservation easement; (C) stormwater runoff from overland flow shall drain towards the ditch; (D) be between one and three feet in depth; and (E) the entire length of the ditch shall have been in place prior to the effective date of the applicable buffer rule.	Activities affecting riparian buffers for ditches – **relevant and appropriate**	15A NCAC 02B .0295(o)(8)
Floodplains			
Presence of Floodplains designated as such on a map[5]	Shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains.	Federal actions that involve potential impacts to, or take place within, floodplains – **TBC**	Executive Order 11988 Section 1. *Floodplain Management*
	Shall consider alternatives to avoid, to the extent possible, adverse effects and incompatible development in the floodplain. Design or modify its action in order to minimize potential harm to or within the floodplain		Executive Order 11988 Section 2(a)(2) *Floodplain Management*
	Where possible, an agency shall use natural systems, ecosystem processes, and nature-based approaches when developing alternatives for consideration.		Executive Order 13690 Section 2(c)
Presence of floodplain designated as such on a map	The Agency shall design or modify its actions so as to minimize[6] harm to or within the floodplain.	Federal actions affecting or affected by Floodplain as defined in 44 CFR § 9.4 – **relevant and appropriate**	44 CFR § 9.11(b)(1) *Mitigation*

5 Under 44 CFR § 9.7 *Determination of proposed action's location*, Paragraph (c) Floodplain determination. One should consult the FEMA Flood Insurance Rate Map (FIRM), the Flood Boundary Floodway Map (FBFM) and the Flood Insurance Study (FIS) to determine if the Agency proposed action is within the base floodplain.
6 Minimize means to reduce to smallest amount or degree possible. See 44 CFR § 9.4 *Definitions*.

Table A-2. *Location-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
	The Agency shall restore and preserve natural and beneficial floodplain values.		44 CFR § 9.11(b)(3) *Mitigation*
	The Agency shall minimize: • Potential harm to lives and the investment at risk from base flood, or in the case of critical actions[7] from the 500-year flood; • Potential adverse impacts that action may have on floodplain values.		44 CFR § 9.11(c)(1) and (3) *Minimization provisions*
Wildlife, Threatened or Endangered Species			
Presence of Migratory birds listed in 50 CFR § 10.13	No person may take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such bird except as may be permitted under the terms of a valid permit issued pursuant to the provisions of this part and part 13 of this chapter, or as permitted by regulations in this part, or part 20 of this subchapter (the hunting regulations).	Action that have potential impacts on, or is likely to result in a 'take' (as defined in 50 CFR § 10.12) of migratory birds – **applicable**	*Migratory Bird Treaty Act*, 16 U.S.C. §703(a) 50 CFR § 21.11

7 See 44 CFR § 9.4 *Definitions, Critical action*. Critical actions include, but are not limited to, those which create or extend the useful life of structures or facilities such as those that produce, use or store highly volatile, flammable, explosive, toxic or water-reactive materials.

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Presence of federally Endangered and Threatened species listed in 50 CFR 17.11(h) – or critical habitat of such species listed in 50 CFR § 17.95	Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary of Interior, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. *NOTE:* Despite that consultation may be considered an administrative requirement, it should be performed to ensure activities are in compliance with substantive provisions of the Endangered Species Act and regulations.	Agency action that may jeopardize listed wildlife species, or destroy or adversely modify critical habitat – **applicable**	16 U.S.C. §1536 (a)(2) –or Section 7(a)(2) of *the Endangered Species Act of 1973*
Presence of Threatened and Endangered Wildlife listed in 50 CFR § 17.11(h)	Except as provided in the rule, it is unlawful to take threatened or endangered wildlife in the United States. *NOTE:* Under 50 CFR § 10.12 *Definitions* the term *Take* means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.	Action that may jeopardize American alligator, green turtle, and/or loggerhead turtle – **applicable**	50 CFR § 17.21(c) 50 CFR § 17.31(a) 50 CFR § 17.42(a)and (b)
Siting of TSCA Landfill			
Siting of a TSCA chemical waste landfill	The landfill shall be located in thick, relatively impermeable formations such as large area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters: • In place soil thickness, 4-ft or compacted soil liner thickness, 3-ft; • Permeability (cm sec), equal to or less than 1 × 10-7; • Percent soil passing No. 200 sieve > 30; • Liquid limit, > 30; and • Plasticity index > 15.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(b)(1)

Table A-2. *Location-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
Hydrologic conditions	The bottom of the landfill shall be above the historical high groundwater table as provided below. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection. The bottom of the landfill liner system or natural in-place soil barrier shall be at least 50 ft. from the historical high water table. *NOTE*: The 50ft. depth from the bottom liner to groundwater requirement is being waived under 40 CFR §761.75(c)(4) and the justification is provided in the ROD.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(b)(3)
Waiver of a TSCA chemical waste landfill technical requirement	An owner or operator of a chemical waste landfill may submit evidence to the Regional Administrator that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when one or more of the requirements of paragraph (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that one or more of the requirements of paragraph (b) of this section is not necessary to protect against such a risk and may waive the requirements in any approval for that landfill. Any finding and waiver under this paragraph will be stated in writing and included as part of the approval. *NOTE:* Waiver of any technical requirement shall be made as part of the CERCLA ROD process. The CERCLA remedy protectiveness standard applies in addition to the TSCA standard.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(c)(4)
Floodplain	Shall provide surface water diversion dikes around the perimeter of the landfill site with a minimum height equal to two feet above the 100-year floodwater elevation.	Construction of a TSCA chemical waste landfill (below the 100-year floodwater elevation) – **applicable**	40 CFR § 761.75(b)(4)(i)

Table A-2. Location-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Location-Specific ARARs and TBCs			
Location	**Requirements**	**Prerequisite**	**Citation(s)**
	Shall provide diversion structures capable of diverting all surface water runoff from a 24-hour, 25-year storm.	Construction of a TSCA chemical waste landfill (above the 100-year floodwater elevation) – **applicable**	40 CFR § 761.75(b)(4)(ii)
Topography	The landfill site shall be located in an area of low to moderate relief to minimize erosion and to help prevent landslides or slumping.		40 CFR § 761.75(b)(5)
Siting of a Disposal Site (i.e., solid waste landfill)	A site located in a floodplain shall not restrict the flow of the 100 -year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid wastes so as to pose a hazard to human life, wildlife, or land or water resources.	Construction of a disposal site (except a land clearing and debris landfill) located in North Carolina – **relevant and appropriate**	15A NCAC 13B .0503(1)(a)
	A disposal site shall meet the following buffer requirements: (i) A 50-foot minimum buffer between all property lines and disposal areas; (ii) A 500-foot minimum buffer between private dwellings and wells and disposal areas; and (iii) A 50-foot minimum buffer between streams and rivers and disposal areas.	Construction of a disposal site (except a land clearing and debris landfill) located in North Carolina – **relevant and appropriate**	15A NCAC 13B .0503(2)(f) *Buffer Requirements*

ARAR = applicable or relevant and appropriate requirement
CFR = *Code of Federal Regulations*
CWA = Clean Water Act of 1972
DOT = U.S. Department of Transportation
EPA = U.S. Environmental Protection Agency
NCAC = *North Carolina Administrative Code*
NCDEQ = North Carolina Department of Environmental Quality
N.C.G.S. = North Carolina General Statutes
NPDES = National Pollutant Discharge Elimination System
PCB = polychlorinated biphenyl
POTW = Publicly Owned treatment Works
TBC = to be considered
TSCA = Toxic Substances Control Act of 1976
USACE = U.S. Army Corps of Engineers
U.S.C. = *United States Code*

Table A-2. *Location-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
General Construction Standards – All land–disturbing activities (i.e., excavation, trenching, grading etc.)			
Managing storm water runoff from land-disturbing activities	Shall install erosion and sedimentation control devices and practices sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction.	Land-disturbing activity (as defined in N.C.G.S. Ch. 113A-53) of more than 1 acre of land – **applicable**	N.C.G.S. Ch.113A-157(3) *Mandatory standards for land-disturbing activity*
	Shall plant or otherwise provide permanent ground cover sufficient to restrain erosion after completion of construction.		N.C.G.S. Ch.113A-157(3)
	The land-disturbing activity shall be conducted in accordance with the approved erosion and sedimentation control plan. *NOTE:* Plan which meets the objectives of 15A NCAC 4B.0106 would be included in the CERCLA Remedial Design or Remedial Action Work Plan		N.C.G.S. Ch.113A-157(5)
	Shall take all reasonable measures to protect all public and private property from damage caused by such activities.	Land-disturbing activity (as defined in N.C.G.S. Ch. 113A-52) of more than 1 acre of land – **applicable**	15A NCAC 4B.0105
Managing storm water runoff from land-disturbing activities	Erosion and sedimentation control plan must address the following basic control objectives: (1) Identify areas subject to severe erosion, and off-site areas especially vulnerable to damage from erosion and sedimentation. (2) Limit the size of the area exposed at any one time. (3) Limit exposure to the shortest feasible time. (4) Control surface water run-off originating upgrade of exposed areas (5) Plan and conduct land-disturbing activity so as to prevent off-site sedimentation damage. (6) Include measures to control velocity of storm water runoff to the point of discharge.	Land-disturbing activity (as defined in N.C.G.S. Ch. 113A-52) of more than 1 acre of land – **applicable**	15A NCAC 4B.0106

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Managing storm water runoff from land-disturbing activities con't	Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to provide protection from the run-off of 10 year storm.	Land-disturbing activity (as defined in N.C.G.S. Ch. 113A-52) of more than 1 acre of land – **applicable**	15A NCAC 4B.0108
	Shall conduct activity so that the post-construction velocity of the 10 year storm run-off in the receiving watercourse to the discharge point does not exceed the parameters provided in this Rule.		15A NCAC 4B.0109
	Shall install and maintain all temporary and permanent erosion and sedimentation control measures.		15A NCAC 4B.0113
Erosion control near High Quality Water zones	Erosion and sedimentation control measures, structures, and devices within High Quality Water (HQW) zones shall be planned, designed and constructed to provide protection from the runoff of the 25 year storm.	Land-disturbing activity (as defined in N.C.G.S. Ch. 113A-52) of more than 1 acre of land in High Quality Water (HQW) zones – **applicable**	15A NCAC 4B.0124(b)
	Provisions for ground cover sufficient to restrain erosion must be provided for any portion of the land-disturbing activity with 15 working days or 60 calendar days following completion of the construction or development, which period is shorter.		15A NCAC 4B.0124(e)
	Implement good construction management techniques, best management practices for sediment and erosion controls, and storm water management measures in accordance with 15A NCAC 02H .1008 to ensure storm water discharges are in compliance.	Development activity (otherwise requiring a stormwater permit) within one mile of and draining to waters classified as High Quality Waters (HQW) – **relevant and appropriate**	15A NCAC 02H .1006, NC General Permit CNCG 0100000
Control of fugitive dust emissions	The owner/operator of a facility shall not cause fugitive dust emissions to cause or contribute to the substantive complaints or visible emissions.	Activities potentially generating fugitive dust as defined in 15A NCAC 02D .0540 (a)(2) – **relevant and appropriate**	15A NCAC 02D .0540
Discharge of Wastewater from De-watering of stockpiled soil and sediments			
General duty to mitigate for discharge	Take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of effluent standards which has a reasonable likelihood of adversely affecting human health or the environment.	Discharge of pollutants to surface waters of the State – **applicable**	40 CFR § 122.41(d)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Operation and maintenance of treatment system	Properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with the effluent standards. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.	Discharge of pollutants to surface waters of the State – **applicable**	40 CFR § 122.41(e)
Technology-based treatment requirements for wastewater discharge	To the extent that EPA promulgated effluent limitations are inapplicable, develop on a case-by-case Best Professional Judgment (BPJ) basis under Section 402(a)(1)(B) of the CWA, technology based effluent limitations by applying the factors listed in section 125.3(d) and shall consider: • The appropriate technology for this category or class of point sources, based upon all available information; and • Any unique factors relating to the discharger.	Discharge of pollutants to surface waters from other than a POTW – **applicable**	40 CFR § 125.3(c)(2) 15A NCAC 02B. 0406(e) *Effluent Limitations*
Water quality-based effluent limits for wastewater discharge	Must develop water quality based effluent limits that ensure that: • The level of water quality to be achieved by limits on point source(s) established under 40 CFR § 122.44(d)(1)(vii) is derived from, and complies with all applicable water quality standards; and • Effluent limits developed to protect narrative or numeric water quality criteria are consistent with the assumptions and any available waste load allocation for the discharge prepared by the State and approved by EPA pursuant to 40 *CFR* § 130.7.	Discharge of pollutants to surface waters that causes, or has reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criteria within a State water quality standard – **applicable**	40 CFR § 122.44(d)(1)(vii)

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Monitoring requirements for discharges	In addition to 40 CFR § 122.48 (a) and (b) and to assure compliance with effluent limitations requirements to monitor, one must monitor, as appropriate, according to the substantive requirements provided in 40 CFR § 122.44(i)(1)(i) through (iv). *NOTE:* Monitoring location and frequency will be conducted in accordance with CERCLA Remedial Action Work Plan.	Discharge of pollutants to surface waters – **applicable**	40 CFR § 122.44(i)(1) 15A NCAC 02B.0505 *Monitoring Requirements* 40 CFR § 122.44(i)(2)
	All effluent limitations, standards and prohibitions shall be established for each outfall or discharge point, except as provided under 40 CFR § 122.44(k).		
	All effluent limitations, standards and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: Maximum daily and average monthly discharge limitations for all discharges	Continuous discharge of pollutants to surface waters – **applicable**	
Disposal of PCB contaminated precipitation, condensation, and leachate	May be disposed in a chemical waste landfill which complies with 40 CFR § 761.75 if: • disposal does not violate 40 CFR § 268.32(a) or § 268.42(a)(1); • liquids do not exceed 500 ppm PCB and are not an ignitable waste as described in 40 CFR § 761.75(b)(8)(iii).	PCB liquids at concentrations ≥ 50 ppm and ≤ 500 ppm from incidental sources such as precipitation, condensation, leachate or load separation and associated with PCB Articles or non-liquid PCB wastes – **applicable**	40 CFR § 761.60(a)(3) 40 CFR § 761.60(a)(3)(i) and (ii)
Discharge of PCB contaminated water	For water discharged to a treatment works (as defined in 40 CFR § 503.9 (aa), or to navigable waters, meet standard of < 3 ppb PCBs; Or a PCB discharge limit included in a permit issued under section 307(b) or 402 of the Clean Water Act.	Water containing PCBs regulated for disposal – **applicable**	40 CFR § 761.79(b)(1)(ii) 40 CFR § 761.450(a)(3)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Decontamination standard for water containing PCBs	For unrestricted use, meet standard of less than or equal to 0.5 ug/L (ie. Approximately ≤ 0.5 ppb PCBs).	Water containing PCBs regulated for disposal – **applicable**	40 CFR § 761.79(b)(1)(iii)
Waste Characterization – Primary Wastes (contaminated media and debris) and Secondary Wastes (wastewaters, spent treatment media, etc.)			
Characterization of *solid waste* (all primary and secondary wastes) [e.g., excavated sediments and soil]	Must determine if solid waste is a hazardous waste using the following method: • Should first determine if waste is excluded from regulation under 40 CFR261.4; and • Must then determine if waste is listed as a hazardous waste under subpart D 40 CFR part 261.	Generation of solid waste as defined in 40 CFR261.2 – **applicable**	40 CFR § 262.11(a) and (b) 15A NCAC 13A .0106, .107
Characterization of *solid waste* (all primary and secondary wastes) [e.g., excavated sediments and soil]	Must determine whether the waste is (characteristic waste) identified in subpart C of 40 CFR part 261 by either: (1) Testing the waste according to the methods set forth in subpart C of 40 CFR part 261, or according to an equivalent method approved by the Administrator under 40 CFR §260.21; or (2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.		40 CFR § 262.11(c) 15A NCAC 13A .0106
	Must refer to Parts 261, 262, 264, 265, 266, 268, and 273 of Chapter 40 for possible exclusions or restrictions pertaining to management of the specific waste	Generation of solid waste which is determined to be hazardous – **applicable**	40 CFR § 262.11(d); 15A NCAC 13A .0106
Characterization of *hazardous waste* (all primary and secondary wastes) [e.g., excavated sediments and soil]	Must obtain a detailed chemical and physical analysis on a representative sample of the waste(s), which at a minimum contains all the information that must be known to treat, store, or dispose of the waste in accordance with pertinent sections of 40 CFR 264 and 268.	Generation of RCRA-hazardous waste for storage, treatment or disposal – **applicable**	40 CFR § 264.13(a)(1) 15A NCAC 13A .0109

Table A-3. *Action-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Determinations for management of hazardous waste [e.g., excavated sediments and soil]	Must determine if the hazardous waste has to be treated before land disposed. This is done by determining if the waste meets the treatment standards in 40 CFR 268.40, 268.45, or 268.49 by testing in accordance with prescribed methods or use of generator knowledge of waste. This determination can be made concurrently with the hazardous waste determination required in 40 CFR § 262.11.	Generation of RCRA hazardous waste for storage, treatment or disposal – **applicable**	40 CFR § 268.7(a)(1) 15A NCAC 13A .0106
	Must comply with the special requirements of 40 CFR § 268.9 in addition to any applicable requirements in 40 CFR § 268.7.	Generation of waste or soil that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity for storage, treatment or disposal – **applicable**	40 CFR § 268.7(a)(1) 15A NCAC 13A .0112
	Must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under 40 CFR 268 *et seq.*. This determination may be made concurrently with the hazardous waste determination required in Sec. 262.11 of this chapter.	Generation of RCRA characteristic hazardous waste for storage, treatment or disposal – **applicable**	40 CFR § 268.9(a) 15A NCAC 13A .0112
	Must determine the underlying hazardous constituents [as defined in 40 CFR 268.2(i)] in the characteristic waste.	Generation of RCRA characteristic hazardous waste (and is not D001 non–wastewaters treated by CMBST, RORGS, or POLYM of Section 268.42 Table 1) for storage, treatment or disposal – **applicable**	40 CFR § 268.9(a) 15A NCAC 13A .0112
Management of PCB waste (e.g., contaminated PPE, equipment, wastewater)	Any person storing or disposing of PCB waste must do so in accordance with 40 CFR 761, Subpart D.	Generation of waste containing PCBs at concentrations ≥ 50 ppm – **applicable**	40 CFR § 761.50(a)
Characterization of PCB remediation waste	Any person cleaning up and disposing of PCBs shall do so based on the concentration at which the PCBs are found.	Generation of PCB remediation waste as defined in 40 CFR 761.3 – **applicable**	40 CFR § 761.61

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Waste Storage – Primary Wastes (contaminated media and debris) and Secondary Wastes (wastewaters, spent treatment media, etc.)			
Storage of solid waste	All solid waste shall be stored in such a manner as to prevent the creation of a nuisance, insanitary conditions, or a potential public health hazard.	Generation of solid waste which is determined *not* to be hazardous – **relevant and appropriate**	15A NCAC 13B .0104(f)
	Containers for the storage of solid waste shall be maintained in such a manner as to prevent the creation of a nuisance or insanitary conditions. Containers that are broken or that otherwise fail to meet this Rule shall be replaced with acceptable containers.		15A NCAC 13B .0104(e)
Temporary Storage of hazardous waste in containers [e.g., excavated sediments and soil]	A generator may accumulate hazardous waste at the facility provided that: • waste is placed in containers that comply with 40 CFR 265.171–173; and	Accumulation of RCRA hazardous waste on site as defined in 40 CFR §260.10 – **applicable**	40 CFR § 262.34(a); 15A NCAC 13A .0107 40 CFR §262.34(a)(1)(i);
	• the date upon which accumulation begins is clearly marked and visible for inspection on each container; • container is marked with the words "hazardous waste"; or		40 CFR § 262.34(a)(2) and (3) 15A NCAC 13A .0107
	• container may be marked with other words that identify the contents.	Accumulation of 55 gal. or less of RCRA hazardous waste or one quart of acutely hazardous waste listed in §261.33(e) at or near any point of generation – **applicable**	40 CFR § 262.34(c)(1) 15A NCAC 13A .0107
Use and management of hazardous waste in containers [e.g., excavated sediments and soil]	If container is not in good condition (e.g. severe rusting, structural defects) or if it begins to leak, must transfer waste into container in good condition.	Storage of RCRA hazardous waste in containers – **applicable**	40 CFR § 265.171 15A NCAC 13A .0109
	Use container made or lined with materials compatible with waste to be stored so that the ability of the container is not impaired.		40 CFR § 265.172 15A NCAC 13A .0109

Table A-3. *Action-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
	Containers must be closed during storage, except when necessary to add/remove waste. Container must not opened, handled and stored in a manner that may rupture the container or cause it to leak.	Storage of RCRA hazardous waste in containers – **applicable**	40 CFR § 265.173(a) and (b) 15A NCAC 13A .0109
Storage of hazardous waste in container area [e.g., excavate sediments and soil]	Area must have a containment system designed and operated in accordance with 40 CFR §264.175(b).	Storage of RCRA–hazardous waste in containers with *free liquids* – **applicable**	40 CFR §264.175(a) 15A NCAC 13A .0109
	Area must be sloped or otherwise designed and operated to drain liquid from precipitation, or Containers must be elevated or otherwise protected from contact with accumulated liquid.	Storage of RCRA–hazardous waste in containers that *do not contain free liquids* (other than F020, F021, F022, F023, F026 and F027) – **applicable**	40 CFR § 264.175(c)(1) and (2) 15A NCAC 13A .0109
Closure performance standard for RCRA container storage unit	Must close the facility (e.g., container storage unit) in a manner that: • Minimizes the need for further maintenance; • Controls minimizes or eliminates to the extent necessary to protect human health and the environment, post–closure escape of hazardous waste, hazardous constituents, leachate, contaminated run –off, or hazardous waste decomposition products to the ground or surface waters or the atmosphere; and • Complies with the closure requirements of subpart, but not limited to, the requirements of 40 CFR 264.178 for containers.	Storage of RCRA hazardous waste in containers – **applicable**	40 CFR § 264.111 15A NCAC 13A .0109

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Closure of RCRA container storage unit	At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soils containing or contaminated with hazardous waste and hazardous waste residues must be decontaminated or removed. [Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with40 CFR 261.3(d) of this chapter that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of parts 262 through 266 of this chapter].	Storage of RCRA hazardous waste in containers in a unit with a containment system – **applicable**	40 CFR § 264.178 15A NCAC 13A .0109
Temporary storage of PCB waste in a container(s)	Container(s) shall be marked as illustrated in 40 CFR 761.45(a).	Storage of PCBs and PCB Items at concentrations ≥ 50 ppm for disposal – **applicable**	40 CFR § 761.40(a)(1)
	Storage area must be properly marked as required by 40 CFR 761.40(a)(10).		40 CFR § 761.65(c)(3)
	Any leaking PCB Items and their contents shall be transferred immediately to a properly marked non-leaking container(s).		40 CFR § 761.65(c)(5)
	Container(s) shall be in accordance with requirements set forth in DOT HMR at 49 CFR 171-180.		40 CFR § 761.65(c)(6)

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Storage of liquid PCBs in stationary containers (e.g., leachate in storage tank)	Storage containers can be larger than the containers specified in paragraph (c)(6) of 40 CFR § 761.65 provided that: • The containers are designed, constructed, and operated in compliance OSHA standards, 29 CFR 1910.106 *Flammable and combustible liquids*. Before using these containers for storing PCBs, the design of the containers must be reviewed to determine the effect on the structural safety of the containers that will result from placing liquids with the specific gravity of PCBs into the containers. • Owner/operator shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in part 112 of this title. *NOTE*: Substantive requirements of an SPCC Plan will be contained in the CERCLA Remedial Action Work Plan.	Storage of liquid PCB in *stationary containers* other than those meeting DOT HMR performance standards at 49 CFR parts 171 through 180 – **applicable**	40 CFR § 761.65(c)(7)(i) and (ii)
Storage of PCB waste in a RCRA-regulated container storage area	Does not have to meet storage unit requirements in 40 CFR § 761.65(b)(1) provided unit: • is permitted by EPA under RCRA §3004, or • qualifies for interim status under RCRA §3005; or • is permitted by an authorized state under RCRA §3006 and, • PCB spills cleaned up in accordance with Subpart G of 40 CFR 761. *NOTE*: Storage unit meeting the requirements of the RCRA ARARs for container storage unit identified above would qualify as "interim status.	Storage of PCBs and PCB Items designated for disposal – **applicable**	40 CFR § 761.65(b)(2)(i)-(iv)
Clean closure of TSCA storage facility	A TSCA/RCRA storage facility closed under RCRA is exempt from the TSCA closure requirements of 40 CFR 761.65(e). *NOTE*: This exemption would apply to storage of PCB waste in a RCRA container storage unit that meets the RCRA container unit requirements identified as ARARs.	Closure of TSCA/RCRA storage facility – **applicable**	40 CFR § 761.65(e)(3)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Temporary storage of bulk PCB remediation waste (e.g., excavated soils) in a TSCA waste pile	Waste must be placed in a pile that: • is designed and operated to control dispersal by wind, where necessary, by means other than wetting; • does not generate leachate through decomposition or other reactions;	Storage of PCB remediation waste or PCB bulk product waste at cleanup site or site of generation for up to 180 days – **applicable**	40 CFR § 761.65(c)(9)(i) and (ii)
	The storage site must have a liner designed, constructed, and installed to prevent any migration of wastes off or through liner into adjacent subsurface soil, groundwater or surface water at any time during active life (including closure period) of the storage site.		40 CFR § 761.65(c)(9)(iii)(A)
Construction of TSCA storage pile liner	Liner must be: • constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure because of pressure gradients, physical contact with waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation; • placed on foundation or base capable of providing support to liner and resistance to pressure gradients above and below the liner to present failure because of settlement compression or uplift; • installed to cover all surrounding earth likely to be in contact with waste.	Storage of PCB remediation waste or PCB bulk product waste at cleanup site or site of generation for up to 180 days – **applicable**	40 CFR § 761.65(c)(9)(iii)(A)(*1*)-(3)
Construction of TSCA storage pile cover	The storage site must have a cover that: • meets the requirements of 40 CFR § 761.65(c)(9)(iii)(A); • is installed to cover all of the stored waste likely to be contacted by precipitation; and • is secured so as not to be functionally disabled by winds expected under normal seasonal meteorological conditions; and	Storage of PCB remediation waste or PCB bulk product waste at cleanup site or site of generation for up to 180 days – **applicable**	40 CFR § 761.65(c)(9)(iii)(B)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Construction of TSCA storage pile run-on control system	The storage site must have a run-on control system designed, constructed, operated and maintained such that it: • prevents flow on the stored waste during peak discharge from at least a 25-year storm; • collects and controls at least the water volume resulting from a 24-hour, 25-year storm. Collection and holding facilities (e.g., tanks or basins) must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.	Storage of PCB remediation waste or PCB bulk product waste at cleanup site or site of generation for up to 180 days – **applicable**	40 CFR § 761.65(c)(9)(iii)(C)(*1*) and (*2*)
Modification of TSCA waste pile requirements	Requirements of 40 CFR § 761.65(c)(9) may be modified under the risk-based disposal option of 40 CFR 761.61(c). *NOTE*: See ARAR entry below for requirements associated with use of 40 CFR § 761.61(c).		40 CFR § 761.65(c)(9)(iv)
Temporary on–site storage of remediation waste in RCRA staging pile (e.g., excavated soils)	Must be located within the contiguous property under the control of the owner/operator where the wastes are to be managed in the staging pile originated. For purposes of this section, storage includes mixing, sizing, blending or other similar physical operations so long as intended to prepare the wastes for subsequent management or treatment.	Accumulation of ***solid non–flowing hazardous remediation waste*** (or remediation waste otherwise subject to land disposal restrictions) as defined in 40 CFR 260.10 – **applicable**	40 CFR § 264.554(a)(1)
	Staging piles may be used to store hazardous remediation waste (or remediation waste otherwise subject to land disposal restrictions) based on approved standards and design criteria designated for that staging pile. *NOTE*: Design and standards of the staging pile should be included in CERCLA Remedial Design document approved or issued by EPA.		40 CFR § 264.554(b)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Performance criteria for RCRA staging pile	Staging pile must be designed to: • facilitate a reliable, effective and protective remedy; • must be designed to prevent or minimize releases of hazardous wastes and constituents into the environment, and minimize or adequately control cross–media transfer as necessary to protect human health and the environment (e.g. use of liners, covers, run–off/run–on controls).	Storage of remediation waste in a staging pile **–applicable**	40 CFR § 264.554(d)(1)(i) and (ii)
Design criteria for RCRA staging pile	In setting standards and design criteria must consider the following factors: • Length of time pile will be in operation; • Volumes of waste you intend to store in the pile; • Physical and chemical characteristics of the wastes to be stored in the unit; • Potential for releases from the unit; • Hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential releases; and • Potential for human and environmental exposure to potential releases from the unit.	Storage of remediation waste in a staging pile **– applicable**	40 CFR § 264.554(d)(2)(i) –(vi)
Operation of a RCRA staging pile	Must not place in the same staging pile unless you have complied with 40 CFR § 264.17(b).	Storage of "incompatible" remediation waste (as defined in 40 CFR 260.10) in staging pile – **applicable**	40 CFR § 264.554(f)(1)
	Must separate the incompatible waste or materials, or protect them from one another by using a dike, berm, wall or other device.	Staging pile of remediation waste stored nearby to incompatible wastes or materials in containers, other piles, open tanks or land disposal units – **applicable**.	40 CFR § 264.554(f)(2)
	Must not pile remediation waste on same base where incompatible wastes or materials were previously piled unless you have sufficiently decontaminated the base to comply with 40 CFR § 264.17(b).		40 CFR § 264.554(f)(3)

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Closure of RCRA staging pile of remediation waste	Must be closed within 180 days after the operating term by removing or decontaminating all remediation waste, contaminated containment system components, and structures and equipment contaminated with waste and leachate. Must decontaminate contaminated sub-soils in a manner that EPA determines will protect human and the environment.	Storage of remediation waste in staging pile in ***previously contaminated area*** – **applicable**	40 CFR § 264.554(j)(1) and (2)
	Must be closed within 180 days after the operating term according to 40 CFR § 264.258(a) and § 264.111 or §265.258(a) and § 265.111.	Storage of remediation waste in staging pile ***in uncontaminated area*** – **applicable**	40 CFR § 264.554(k)
Operational limits of a RCRA staging pile	Must not operate for more than 2 years, except when an operating term extension under 40 CFR § 264.554(i) is granted. *NOTE:* Must measure the 2-year limit (or other operating term specified) from first time remediation waste placed in staging pile	Storage of remediation waste in a staging pile – **applicable**	40 CFR §264.554(d)(1)(iii)
	Must not use staging pile longer than the length of time designated by EPA in appropriate decision document.		40 CFR §264.554(h)
Treatment/Disposal of Wastes – Primary (contaminated media and debris) and Secondary Wastes (wastewaters, spent treatment media, etc.)			
Disposal of solid waste [e.g., off-site permitted landfill]	Shall ensure that waste is disposed of at a site or facility which is permitted to receive the waste.	Generation of solid waste intended for off-site disposal – **relevant and appropriate**	15A NCAC 13B .0106(b)
Disposal of RCRA–hazardous waste in a land–based unit [e.g., off-site permitted landfill]	May be land disposed if it meets the requirements in the table "Treatment Standards for Hazardous Waste" at 40 CFR § 268.40 before land disposal.	Land disposal, as defined in 40 CFR268.2, of restricted RCRA waste – **applicable**	40 CFR § 268.40(a) 15A NCAC 13A .0112
	All underlying hazardous constituents [as defined in 40 CFR § 268.2(i)] must meet the Universal Treatment Standards, found in 40 CFR § 268.48 Table UTS prior to land disposal.	Land disposal of restricted RCRA characteristic wastes (D001 –D043) that are not managed in a wastewater treatment system that is regulated under the CWA, that is CWA equivalent, or that is injected into a Class I nonhazardous injection well – **applicable**	40 CFR §268.40(e) 15A NCAC 13A .0112

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Disposal of RCRA–hazardous waste in a land–based unit [e.g., off-site permitted landfill]	To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards of 40 CFR § 268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentration in the waste extract or waste, or the generator may use knowledge of the waste. If the waste contains constituents (including UHCs in the characteristic wastes) in excess of the applicable UTS levels in 40 CFR § 268.48, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.	Land disposal of RCRA toxicity characteristic wastes (D004 –D011) that are newly identified (i.e., wastes, soil, or debris identified by the TCLP but not the Extraction Procedure) – **applicable**	40 CFR § 268.34(f) 15A NCAC 13A .0112
Disposal of RCRA–*hazardous waste soil* in a land–based unit [e.g., off-site permitted landfill]	Must be treated according to the alternative treatment standards of 40 CFR § 268.49(c) or according to the UTSs [specified in 40 CFR § 268.48 Table UTS] applicable to the listed and/or characteristic waste contaminating the soil prior to land disposal.	Land disposal, as defined in 40 CFR § 268.2, of restricted hazardous *soils* – **applicable**	40 CFR § 268.49(b) 15A NCAC 13A .0112
Treatment of RCRA *hazardous waste soil*	Prior to land disposal, all "constituents subject to treatment" as defined in 40 CFR § 268.49(d) must be treated as follows:	Treatment of restricted hazardous waste soils – **applicable**	40 CFR § 268.49(c)(1)

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Treatment of RCRA *hazardous waste soil*	• **For non –metals** (except carbon disulfide, cyclohexanone, and methanol), treatment must achieve a 90 percent reduction in total constituent concentrations, except as provided in 40 CFR § 268.49(c)(1)(C) • **For metals** and carbon disulfide, cyclohexanone, and methanol), treatment must achieve a 90 percent reduction in total constituent concentrations as measured in leachate from the treated media (tested according to TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal technology is used), except as provided in 40 CFR § 268.49(c)(1)(C) • When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. [Universal Treatment Standards are identified in 40 CFR § 268.48 Table UTS] *NOTE*: Treatment required for soils considered hazardous waste is expected to be performed at an off-site RCRA permitted facility prior to disposal,	Treatment of restricted hazardous waste soils – **applicable**	40 CFR § 268.49(c)(1)(A)-(C)
Treatment of RCRA *hazardous waste soil*	In addition to the treatment requirement required by paragraph (c)(1) of this section, soils must be treated to eliminate these characteristics.	Soils that exhibit the characteristic of ignitability, corrosivity or reactivity intended for land disposal – **applicable**	40 CFR § 268.49(c)(2)
	Provides methods on how to demonstrate compliance with the alternative treatment standards for contaminated soils that will be land disposed.	On-site treatment of restricted hazardous waste soils following alternative soil treatment of 40 CFR § 268.49(c) – **To Be Considered**	*Guidance on Demonstrating Compliance with the LDR Alternative Soil Treatment Standards* [EPA 530 –R –02 –003, July 2002]

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Disposal of RCRA *hazardous waste debris* in a land–based unit [e.g., off-site permitted landfill]	Must be treated prior to land disposal as provided in 40 CFR § 268.45(a)(1)–(5) unless EPA determines under 40 CFR § 261.3(f)(2) that the debris no longer contaminated with hazardous waste or the debris is treated to the waste –specific treatment standard provided in 40 CFR 268.40 for the waste contaminating the debris. *NOTE*: Treatment required for hazardous waste debris is expected to be performed at an off-site RCRA permitted facility prior to disposal,	Land disposal, as defined in 40 CFR §268.2, of restricted RCRA–hazardous debris – **applicable**	40 CFR § 268.45(a)
Disposal of *treated hazardous debris* in a land–based unit [e.g., off-site permitted landfill]	Debris treated by one of the specified extraction or destruction technologies on Table 1 of 40 CFR § 268.45 and which no longer exhibits a characteristic is not a hazardous waste and need not be managed in RCRA Subtitle C facility Hazardous debris contaminated with listed waste that is treated by immobilization technology must be managed in a RCRA Subtitle C facility. *NOTE*: Treatment required for hazardous waste debris is expected to be performed at an off-site RCRA permitted facility prior to disposal,	Treated debris contaminated with RCRA listed or characteristic waste – **applicable**	40 CFR § 268.45(c)
Disposal of *hazardous debris treatment residues*	Except as provided in 40 CFR § 268.45(d)(2) and (d)(4), must be separated from debris by simple physical or mechanical means, and such residues are subject to the waste –specific treatment standards for the waste contaminating the debris	Residue from treatment of hazardous debris – **applicable**	40 CFR § 268.45(d)(1)
Disposal of RCRA characteristic wastewaters in an NPDES permitted WWTU	Are not prohibited, if the wastes are managed in a treatment system which subsequently discharges to waters of the U.S. pursuant to a permit issued under § 402 the CWA (i.e., NPDES permitted) unless the wastes are subject to a specified method of treatment other than DEACT in 40 *CFR* § 268.40, or are D003 reactive cyanide. *NOTE:* For purposes of this exclusion, a CERCLA on-site wastewater treatment unit that meets all of the identified CWA ARARs for point source discharges from such a system, is considered a wastewater treatment system that is NPDES permitted.	Land disposal of hazardous wastewaters that are hazardous only because they exhibit a hazardous characteristic and are not otherwise prohibited under 40 CFR Part 268 – **applicable**	40 CFR § 268.1(c)(4)(i)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Groundwater Monitoring Well Installation, Operation, and Abandonment			
Groundwater monitoring well(s) Groundwater Protection	No well shall be located, constructed, operated, or repaired in any manner that may adversely impact the quality of groundwater.	Installation of wells (including temporary wells, monitoring wells) other than for water supply – **applicable**	15A NCAC 02C .0108(a)
	Shall be located, designed, constructed, operated and abandoned with materials and by methods which are compatible with the chemical and physical properties of the contaminants involved, specific site conditions, and specific subsurface conditions.		15A NCAC 02C .0108(c)
Construction of groundwater monitoring well(s)	Monitoring well and recovery well boreholes shall meet the construction requirements set forth in the cited regulations related to: • Borehole depth and connectivity • Packing material, well screen and seals • Grout placement and contents • Well casing and covers • Wellhead protection	Installation of wells (including temporary wells, monitoring wells) and boreholes *other than for water supply* – **applicable**	15A NCAC 02C .0108(d) thru 15A NCAC 02C .0108(p) *Standards of Construction*
	Shall be constructed in such a manner as to preclude the vertical migration of contaminants within and along the borehole channel.	Installation of temporary wells and all other non-water supply wells – **applicable**	15A NCAC 02C .0108(s)
Monitoring well development	Shall be developed such that the level of turbidity or settleable solids does not preclude accurate chemical analyses of any fluid samples collected or adversely affect the operation of any pumps or pumping equipment.	Installation of wells (including temporary wells, monitoring wells) other than for water supply – **applicable**	15A NCAC 02C .0108(p)
Maintenance of groundwater monitoring well(s)	Every well shall be maintained by the owner in a condition whereby it will conserve and protect groundwater resources, and whereby it will not be a source or channel of contamination or pollution to the water supply or any aquifer.	Installation of wells (including temporary wells and monitoring wells) other than for water supply – **applicable**	15A NCAC 02C .0112(a)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Abandonment of groundwater monitoring well(s)	Shall be abandoned by filling the entire well up to land surface with grout, dry clay, or material excavated during drilling of the well and then compacted in place; and	Permanent abandonment of wells (including temporary wells, monitoring wells, and test borings) other than for water supply *less than 20 feet in depth* and which do not penetrate the water table – **applicable**	15A NCAC 02C .0113(d)(1)
	Shall be abandoned by completely filling with a bentonite or cement - type grout.	Permanent abandonment of wells (including temporary wells, monitoring wells, and test borings) other than for water supply *greater than 20 feet in depth* and which do not penetrate the water table -- **applicable**	15A NCAC 02C .0113(d)(2)
	All wells shall be permanently abandoned in which the casing has not been installed or from which the casing has been removed, prior to removing drilling equipment from the site.	Permanent abandonment of wells (including temporary wells) other than for water supply – **applicable**	15A NCAC 02C .0113(f)

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Capping Waste in Place – (Landfill Final Closure and Post-closure Care)			
Landfill closure performance standard (Areas F and G as well as the former RCRA surface impoundments closed as landfills)	Must close the unit in a manner that: • minimizes the need for further maintenance; and • controls, minimizes, or eliminates to the extent necessary to protect human health and the environment, post –closure escape of hazardous waste, hazardous constituents, leachate, contaminated run –off, or hazardous waste decomposition products to ground or surface waters or to the atmosphere; and • complies with the relevant closure and post –closure requirements of 40 CFR §264.310.	Closure of a RCRA hazardous waste management unit – **relevant and appropriate**	40 CFR § 264.111(a) – (c) 15A NCAC 13A .0109
Landfill cover design and construction (Areas F and G)	Must cover the landfill or cell with a final cover designed and constructed to: • provide long –term minimization of migration of liquids through the closed landfill; • function with minimum maintenance; • promote drainage and minimize erosion or abrasion of the cover; • accommodate settling and subsidence so that the cover's integrity is maintained; and • have a permeability less than or equal to the permeability of any bottom liner system or natural sub-soils present.	Closure of a RCRA hazardous waste management unit – **relevant and appropriate**	40 CFR § 264.310(a)(1)–(5) 15A NCAC 13A .0109

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Landfill cover design and construction (Areas F and G)	Describes a design for landfill covers that will meet the requirements of RCRA regulations. Multilayered system consisting, from the top down, of: • a top layer of at least 60 cm of soil, either vegetated or armored at the surface; • a granular or geo-synthetic drainage layer with a hydraulic transmissivity no less than 3 x 10"5 cm /sec; and • a two–component low permeability layer comprised of (1) a flexible membrane liner installed directly on (2) a compacted soil component with an hydraulic conductivity no greater than 1 x 10~7 cm/sec. Optional layers may be added, e.g., a biotic barrier layer or a gas vent layer, depending on the nature of the wastes being covered.	Construction of a RCRA hazardous waste landfill final cover – **TBC**	*EPA Technical Guidance Document: Final Covers on Hazardous Waste Landfills and Surface Impoundments,* EPA OSWER 530 – SW –89 –047, (July 1989)
Run–on/run–off control systems for landfill cover (Areas F and G)	Run–on control system must be capable of preventing flow onto the active portion of the landfill during peak discharge from a 25–year storm event.	Construction of a RCRA hazardous waste landfill cover – **relevant and appropriate**	40 CFR § 264.301(g) 15A NCAC 13A .0109
	Run–off management system must be able to collect and control the water volume from a runoff resulting from a 24–hour, 25–year storm event.		40 CFR § 264.301(h) 15A NCAC 13A .0109
Protection of closed RCRA hazardous waste landfill (Areas F and G as well as the former RCRA surface impoundments closed as landfills)	Post–closure use of property must never be allowed to disturb the integrity of the final cover, liners, or any other components of the containment system or the facility's monitoring system unless necessary to reduce a threat to human health or the environment.	Closure of a RCRA hazardous waste landfill – **relevant and appropriate**	40 CFR § 264.117(c) 15A NCAC 13A .0109

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
General post–closure care for closed RCRA hazardous waste landfill (Areas F and G as well as the former RCRA surface impoundments closed as landfills)	Owner or operator must: • maintain the effectiveness and integrity of the final cover including making repairs to the cap as necessary to correct effects of settling, erosion, etc.; • maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of RCRA Subpart F of this part; • prevent run–on and run–off from eroding or otherwise damaging final cover; and • protect and maintain surveyed benchmarks used to locate waste cells. *NOTE:* Groundwater detection monitoring in accordance with 40 CFR 264.98 will be continued for the SWDS only. Monitoring requirements will be specified in a CERCLA Remedial Design or Remedial Action Work Plan.	Closure of a RCRA hazardous waste landfill – **relevant and appropriate**	40 CFR § 264.310(b)(1), (4), (5) and (6) 15A NCAC 13A .0109
Solid Waste Landfill cover design and construction (capping upland soil contamination)	Shall install a cap system that is designed to minimize infiltration and erosion. The cap system shall be designed and constructed to: (A) Have a permeability less than or equal to the permeability of any base liner system or the in-situ subsoils underlaying the landfill, or the permeability specified for the final cover in the effective permit, or a permeability no greater than 1 x 10-5 cm/sec, whichever is less; (B) Minimize infiltration through the closed MSWLF by the use of a low-permeability barrier that contains a minimum 18 inches of earthen material; and (C) Minimize erosion of the cap system and protect the low-permeability barrier from root penetration by use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.	Closure of a solid waste landfill (MSWLF) – **relevant and appropriate**	15A NCAC 13B .1627(c)(1)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Solid Waste Landfill cover design and construction (capping upland soil contamination)	The Division may approve an alternative cap system if the owner or operator can adequately demonstrate the following: (A) The alternative cap system will achieve an equivalent or greater reduction in infiltration as the low-permeability barrier specified in Subparagraph (1) of this Paragraph; and (B) The erosion layer will provide equivalent or improved protection as the erosion layer specified in Subparagraph (3) of this Paragraph. *NOTE:* In the event an alternative cover is sought, approval will be documented in a CERCLA decision document and NCDEQ concurrence obtained.	Closure of a solid waste landfill (MSWLF) – **relevant and appropriate**	15A NCAC 13B .1627(c)(2)
General post–closure care for closed Solid Waste Landfill	Maintaining the integrity and effectiveness of any cap system, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the cap system.	Closure of a solid waste landfill (MSWLF) – **relevant and appropriate**	15A NCAC 13B .1627(d)(1)(A)
Treatment/Disposal of PCB waste (including PCB remediation waste and leachate)			
Disposal of decontamination waste and residues	Such waste shall be disposed of at their existing PCB concentration unless otherwise specified in 40 CFR § 761.79(g)(1) – (6).	Decontamination waste and residues – **applicable**	40 CFR § 761.79(g)
	Are regulated for disposal as PCB remediation waste.	Distillation bottoms or residues and filter media – **applicable**	40 CFR § 761.79(g)(1)
	Are regulated for disposal at their original concentration.	PCBs physically separated from regulated waste during decontamination, other than distillation bottoms and filter media – **applicable**	40 CFR § 761.79(g)(2)
	Shall be disposed of in accordance with provisions for wastes from cleanup of PCB remediation waste at 40 CFR § 761.61(a)(5)(v).	Non-liquid cleaning materials and PPE at any concentration PCBs, including non-porous surfaces and other non-liquid materials (e.g., rags, gloves, booties) resulting from decontamination – **applicable**	40 CFR § 761.79(g)(6)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Disposal of PCB contaminated precipitation, condensation, and leachate	May be disposed in a chemical waste landfill which complies with 40 CFR § 761.75 if: • disposal does not violate 40 CFR § 268.32(a) or § 268.42(a)(1); • liquids do not exceed 500 ppm PCB and are not an ignitable waste as described in 40 CFR § 761.75(b)(8)(iii).	PCB liquids at concentrations ≥ 50 ppm and ≤ 500 ppm from incidental sources such as precipitation, condensation, leachate or load separation and associated with PCB Articles or non-liquid PCB wastes – **applicable**	40 CFR § 761.60(a)(3) 40 CFR § 761.60(a)(3)(i) and (ii)
Disposal of PCB contaminated porous surfaces (self-implementing option)	Shall be disposed on-site or off-site as bulk PCB remediation waste according to 40 CFR 761.61(a)(5)(i) or decontaminated for use according to 40 CFR 761.79(b)(4).	PCB remediation waste *porous surfaces* (as defined in 40 CFR 761.3) – **relevant and appropriate**	40 CFR § 761.61(a)(5)(iii)
Disposal liquid PCB remediation waste (self-implementing option)	Shall either: • decontaminate the waste to the levels specified in 40 CFR 761.79(b)(1) or (2); or • dispose of the waste in accordance with 40 CFR 761.61(b) or a risk-based approval under 40 CFR 761.61(c).	Liquid PCB remediation waste (as defined in 40 CFR 761.3) – **relevant and appropriate**	40 CFR § 761.61(a)(5)(iv) 40 CFR § 761.61(a)(5)(iv)(A) and (B)
Disposal of PCB contaminated non-porous surfaces on-site (self- implementing option)	Shall be cleaned on-site or off-site to levels in 40 CFR 761.61(a)(4)(ii) using: • decontamination procedures under 40 CFR 761.79; • technologies approved under 40 CFR 761.60(e); or • risk-based procedures/technologies under 40 CFR 761.61(c).	PCB remediation waste *non-porous surfaces* (as defined in 40 CFR 761.3) – **relevant and appropriate**	40 CFR § 761.61(a)(5)(ii)(A)(*1*)-(*3*)
Disposal of bulk PCB remediation waste off-site (self-implementing option)	May be sent off-site for decontamination or disposal provided the waste is either dewatered on-site or transported off-site in containers meeting the requirements of DOT HMR at 49 CFR parts 171-180.	Generation of bulk PCB remediation waste (as defined in 40 CFR 761.3) for disposal – **relevant and appropriate**	40 CFR § 761.61(a)(5)(i)(B)
	Shall be disposed of in accordance with the provisions for Cleanup wastes at 40 CFR 761.61(a)(5)(v)(A).	Bulk PCB remediation waste which has been de-watered and with a PCB concentration < 50 ppm – **relevant and appropriate**	40 CFR § 761.61(a)(5)(i)(B)(2)*(ii)*

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Disposal of bulk PCB remediation waste off-site (self-implementing option)	Shall be disposed of: • in a hazardous waste landfill permitted by EPA under §3004 of RCRA; • in a hazardous waste landfill permitted by a State authorized under §3006 of RCRA; or • in a PCB disposal facility approved under 40 CFR 761.60.	Bulk PCB remediation waste which has been de-watered and with a PCB concentration ≥ 50 ppm – **relevant and appropriate**	40 CFR § 761.61(a)(5)(i)(B)(2)*(iii)*
Performance-based disposal of PCB remediation waste	Shall dispose by one of the following methods: • in a high-temperature incinerator approved under 40 CFR 761.70(b); • by an alternate disposal method approved under 40 CFR 761.60(e); • in a chemical waste landfill approved under 40 CFR 761.75; • in a facility with a coordinated approval issued under 40 CFR 761.77; or • through decontamination in accordance with 40 CFR 761.79. *NOTE*: On-site TSCA chemical waste landfill that complies with the ARARs identified in this table in the signed ROD would be considered an approved landfill.	Disposal of non-liquid PCB remediation waste (as defined in 40 CFR 761.3) – **relevant and appropriate**	40 CFR § 761.61(b)(2) 40 CFR § 761.61(b)(2)(i) 40 CFR § 761.61(b)(2)(ii)
	Shall be disposed according to 40 CFR 761.60(a) or (e), or decontaminate in accordance with 40 CFR 761.79.	Disposal of liquid PCB remediation waste – **relevant and appropriate**	40 CFR § 761.61(b)(1)

Table A-3. *Action-Specific ARARs and TBCs*
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Risk-based disposal of PCB remediation waste	May sample, cleanup or dispose of PCB remediation waste in a manner other than prescribed in 40 CFR 761.61(a) or (b) or store remediation waste in a manner other than prescribed in 40 CFR § 761.65 if application approved in writing by EPA Regional Administrator and EPA finds that the method will not pose an unreasonable risk of injury to [sic] human health or the environment. Each application must include information described in 40 CFR § 761.61(a)(3). *NOTE*: Appropriate information required in an application can be provided in a CERCLA document (e.g. FS, PP, or ROD) that is approved or issued by EPA.	Disposal of PCB remediation waste – **relevant and appropriate**	40 CFR § 761.61(c)
Disposal of PCB cleanup wastes (e.g., PPE, rags, non-liquid cleaning materials) (self-implementing option)	Shall be disposed of either: • in a facility permitted, licensed or registered by a State to manage municipal solid waste under 40 CFR 258 or non-municipal, non-hazardous waste subject to 40 CFR 257.5 thru 257.30; or • in a RCRA Subtitle C landfill permitted by a State to accept PCB waste; or • in an approved PCB disposal facility; or • through decontamination under 40 CFR 761.79(b) or (c). *NOTE*: On-site TSCA chemical waste landfill that complies with the ARARs identified in this table in the signed ROD would be considered an approved PCB disposal facility.	Generation of non-liquid PCBs at any concentration during and from the cleanup of PCB remediation waste – **relevant and appropriate**	40 CFR § 761.61(a)(5)(v)(A)(*1*)-(*4*)
Disposal of PCB cleaning solvents, abrasives, and equipment (self-implementing option)	May be reused after decontamination in accordance with 40 CFR § 761.79; or For liquids, disposed in accordance with 40 CFR 761.60(a).	Generation of PCB wastes from the cleanup of PCB remediation waste – **relevant and appropriate**	40 CFR § 761.61(a)(5)(v)(B) 40 CFR § 761.60(b)(1)(i)(B)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
TSCA Chemical Waste Landfill Design and Operation			
Synthetic liner for a TSCA chemical waste landfill	Synthetic membrane liners shall be used when, in the judgment of the Regional Administrator, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in paragraph (b)(1) of this section. Whenever a synthetic liner is used at a landfill site, special precautions shall be taken to insure that its integrity is maintained and that it is chemically compatible with PCBs. Adequate soil underlining and cover shall be provided to prevent excessive stress on the liner and to prevent rupture of the liner. The liner must have a minimum thickness of 30 mils.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(b)(2)
Surface water and Groundwater monitoring for TSCA chemical landfill	For all sites receiving PCBs, the ground and surface water from the disposal site area shall be sampled prior to commencing operations under an approval provided in paragraph (c) of this section for use as baseline data.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75 (b)(6)(i)(A)
Surface water	Any surface watercourse designated by the Regional Administrator using the authority provided in paragraph(c)(3)(ii) of this section shall be sampled at least monthly when the landfill is being used for disposal operations.	Operation of TSCA chemical waste landfill monitoring program – **applicable**	40 CFR § 761.75(b)(6)(i)(B)
	Any surface watercourse designated by the Regional Administrator using the authority provided in paragraph (c)(3)(ii) of this section shall be sampled for a time period specified by the Regional Administrator on a frequency of no less than once every six months after final closure of the disposal area.		40 CFR § 761.75(b)(6)(i)(C)
Groundwater monitoring for TSCA chemical landfill	If underlying earth materials are homogenous, impermeable, and uniformly sloping in one direction, only three sampling points shall be necessary. These three points shall be equally spaced on a line through the center of the disposal area and extending from the area of highest water table elevation to the area of the lowest water table elevation.	Operation of TSCA chemical waste landfill groundwater monitoring program – **applicable**	40 CFR § 761.75(b)(6)(ii)(A)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Groundwater monitoring wells	All monitor wells shall be cased and the annular space between the monitor zone (zone of saturation) and the surface shall be completely backfilled with Portland cement or an equivalent material and plugged with Portland cement to effectively prevent percolation of surface water into the well bore. The well opening at the surface shall have a removable cap to provide access and to prevent entrance of rainfall or storm water runoff. The groundwater monitoring well shall be pumped before obtaining a sample for analysis to remove the volume of liquid initially contained in the well. The discharge shall be treated to meet applicable state or federal standards or recycled to the chemical waste landfill.		40 CFR § 761.75(b)(6)(ii)(B)
Water analysis requirements	As a minimum, all samples [groundwater and surface water] shall be analyzed for the following parameters: PCBs, pH, specific conductance, chlorinated organics and all data and records of the sampling and analysis shall be maintained as required in § 761.180(d)(1). Sampling methods and analytical procedures for these parameters shall comply with those specified in 40 *CFR* Part 136, as amended in 41 *Federal Register* 52779 on December 1, 1976.	Operation of TSCA chemical waste landfill groundwater monitoring program – **applicable**	40 CFR § 761.75 (b)(6)(iii)
Leachate collection system for TSCA landfill	A leachate collection monitoring system shall be installed above the chemical waste landfill. Leachate collection systems shall be monitored monthly for quantity and physicochemical characteristics of leachate produced. The leachate should be either treated to acceptable limits for discharge in accordance with a State or Federal permit or disposed of by another State or Federally approved method. Water analysis shall be conducted as provided in 40 *CFR* § 761.75(b)(6)(iii). Acceptable leachate monitoring/collection systems shall be any of the following designs, unless a waiver is obtained pursuant to paragraph (c)(4) of this section. *NOTE*: Leachate monitoring, including sampling and analysis will be conducted in accordance with parameters established in an EPA approved Long-term Monitoring Program document that incorporates the ARARs listed in this table.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(b)(7)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Simple leachate collection	This system consists of a gravity flow drainfield installed above the waste disposal unit liner. This design is recommended for use when semi-solid or leachable solid wastes are placed in a lined pit excavated into a relatively thick, unsaturated, homogenous layer of low permeability soil.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(b)(7)(i)
Compound leachate collection	A compound leachate collection system consists of a gravity flow drainfield installed above the waste disposal unit liner and above a secondary installed liner.		40 CFR § 761.75(b)(7)(ii)
TSCA chemical waste landfill operations	Shall be placed in manner that will prevent damage to containers or articles. Other wastes that are not chemically compatible with PCBs shall be segregated from the PCBs throughout the handling and disposal process.	Disposal of PCBs or PCB Items in chemical waste landfill – **applicable**	40 CFR § 761.75(b)(8)(i)
	An operation plan shall be developed and submitted to the Regional Administrator for approval as required in paragraph (c) of this section. This plan shall include detailed explanations of the procedures to be used for recordkeeping, surface water handling procedures, excavation and backfilling, waste segregation burial coordinates, vehicle and equipment movement, use of roadways, leachate collection systems, sampling and monitoring procedures, monitoring wells, environmental emergency contingency plans, and security measures to protect against vandalism and unauthorized waste placements. *NOTE*: Contents of the operation plan will be provided in a CERCLA Remedial Design and/or Remedial Action Work Plan.	Disposal of PCBs or PCB Items in chemical waste landfill – **applicable**	40 CFR § 761.75(b)(8)(ii)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
TSCA chemical waste landfill operations con't	Bulk liquids not exceeding 500ppm PCBs may be disposed of provided such waste is pretreated and/or stabilized (e.g., chemically fixed, evaporated, mixed with dry inert absorbent) to reduce its liquid content or increase its solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal. Container of liquid PCBs with a concentration between 50 and 500 ppm PCB may be disposed of if each container is surrounded by an amount of inert sorbent material capable of absorbing all of the liquid contents of the container.	Disposal of dispose of liquid wastes containing between 50 ppm and 500 ppm PCB in chemical waste landfill – **applicable**	40 CFR § 761.75(b)(8)(ii)
Support facilities	A 6 ft. woven mesh fence, wall, or similar device shall be placed around the site to prevent unauthorized persons and animals from entering.	Construction of a TSCA chemical waste landfill – **applicable**	40 CFR § 761.75(b)(9)(i)
	Roads shall be maintained to and within the site that are adequate to support the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.		40 CFR § 761.75(b)(9)(ii)
Wind dispersal control system	The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.		40 CFR § 761.75(b)(9)(iii)

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Decontamination/Cleanup of PCB Waste			
Decontamination of PCB contaminated water	For discharge to a treatment works as defined in 40 CFR § 503.9 (aa), or discharge to navigable waters, meet standard of < 3 ppb PCBs; or For unrestricted use, meet standard of ≤ 0.5 ppb PCBs.	Water containing PCBs regulated for disposal – **applicable**	40 CFR § 761.79(b)(1)(ii) 40 CFR § 761.79(b)(1)(iii)
Decontamination of movable equipment contaminated by PCBs (self-implementing option)	May decontaminate by: • swabbing surfaces that have contacted PCBs with a solvent; • a double wash/rinse as defined in 40 CFR 761.360-378; or • another applicable decontamination procedure under 40 CFR § 761.79.	Movable equipment contaminated by PCBs and used in storage areas, tools and sampling equipment – **relevant and appropriate**	40 CFR § 761.79(c)(2)
Transportation of Wastes – Primary and Secondary			
Transportation of PCB wastes off-site	Must comply with the manifesting provisions at 40 CFR § 761.207 through § 761.218.	Relinquishment of control over PCB wastes by transporting, or offering for transport – **applicable**	40 CFR § 761.207(a)
Transportation of hazardous materials	Shall be subject to and must comply with all applicable provisions of the HMTA and DOT HMR at 49 CFR §§ 171-180.	Any person who, , transports "in commerce," or causes to be transported or shipped, a hazardous material, including each person performing pre-transportation functions under contract with any department, agency, or instrumentality of the executive, legislative, or judicial branch of the Federal government – **applicable**	49 CFR § 171.1(b) and (c)
Transportation of hazardous waste *off site*	Must comply with the generator requirements of 40 CFR Sect. 262.20–23 for manifesting, Sect. 262.30 for packaging, Sect. 262.31 for labeling, Sect. 262.32 for marking, Sect. 262.33 for placarding and Sect. 262.40, 262.41(a) for record keeping requirements and Sect. 262.12 to obtain EPA ID number.	Preparation and initiation of shipment of RCRA hazardous waste off-site – **applicable**	40 CFR § 262.10(h) 15A NCAC 13A .0108

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Transportation of hazardous waste *on–site*	The generator manifesting requirements of 40 CFR Sections 262.20–262.32(b) do not apply. Generator or transporter must comply with the requirements set forth in 40 CFR § 263.30 and § 263.31 in the event of a discharge of hazardous waste on a private or public right-of-way.	Transportation of hazardous wastes on a public or private right–of–way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way – **applicable**	40 CFR § 262.20(f) 15A NCAC 13A .0108
Management of samples (i.e., contaminated soils and wastewaters)	Are not subject to any requirements of 40 CFR Parts 261 through 268 or 270 when: • The sample is being transported to a laboratory for the purpose of testing; • The sample is being transported back to the sample collector after testing; and • The sample collector ships samples to a laboratory in compliance with U.S.DOT, U.S. Postal Service, or any other applicable shipping requirements, including packing the sample so that it does not leak, spill or vaporize from its packaging.	Generation of samples of hazardous waste for purpose of conducting testing to determine its characteristics or composition – **applicable**	40 CFR § 261.4(d)(1)(i) and (ii) 15A NCAC 13A .0108 40 CFR § 261.4(d)(2) 15A NCAC 13A .0108

Table A-3. Action-Specific ARARs and TBCs for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
Institutional Controls			
Post-closure notices (former RCRA surface impoundments closed as landfill)	Must record, in accordance with State law, a notation on the deed to the facility property, or on some other instrument which is normally examined during a title search, that will in perpetuity notify any potential purchaser of the property that: • Land has been used to manage hazardous wastes; • Its use is restricted under 40 *CFR* Part 264 Subpart G regulations; and The survey plat and record of the type, location, and quantity of hazardous wastes disposed within each cell or other hazardous waste disposal unit of the facility required by Sections 264.116 and 264.119(a) have been filed with the local zoning authority and with the EPA Regional Administrator.	Closure of a RCRA hazardous waste landfill – **applicable**	40 CFR § 264.119(b)(1)(i)-(iii) 15A NCAC 13A .0109
Notice of Contaminated Site	Prepare and certify by professional land surveyor a survey plat which identifies contaminated areas which shall be entitled "NOTICE OF CONTAMINATED SITE". Notice shall include a legal description of the site that would be sufficient as a description in an instrument of conveyance and meet the requirements of N.C.G.S. 47-30 for maps and plans.	Contaminated site subject to current or future use restrictions included in a remedial action plan as provided in N.C.G.S. 143B-279.9(a) – **TBC**	N.C.G.S. 143B-279.10(a)
	The Survey plat shall identify: • the location and dimensions of any disposal areas and areas of potential environmental concern with respect to permanently surveyed benchmarks; • the type location, and quantity of contamination known to exist on the site; and • any use restriction on the current or future use of the site.		N.C.G.S. 143B-279.10(a)(1)-(3)
Notice of Contaminated Site con't	Notice (survey plat) shall be filed in the register of deeds office in the county which the site is located in the grantor index under the name of the owner.		N.C.G.S. 143B-279.10(b) and (c)

Table A-3. Action-Specific ARARs and TBCs
for LCP Holtrachem Superfund Site Riegelwood, North Carolina

Action-Specific ARARs			
Action	**Requirements**	**Prerequisite**	**Citation(s)**
	The deed or other instrument of transfer shall contain in the description section, in no smaller type than used in the body of the deed or instrument, a statement that the property is a contaminated site and reference by book and page to the recordation of the Notice.	Contaminated site subject to current or future use restrictions as provided in N.C.G.S. 143B-279.9(a) that is to sold, leased, conveyed or transferred — **TBC**	N.C.G.S. 143B-279.10(e)

ARAR = applicable or relevant and appropriate requirement
CFR = *Code of Federal Regulations*
CWA = Clean Water Act of 1972
DOT = U.S. Department of Transportation
EPA = U.S. Environmental Protection Agency
HMR = Hazardous Materials Regulations
HMTA = Hazardous Materials Transportation Act
MSWF = Municipal solid waste landfill
NCAC = *North Carolina Administrative Code*
N.C.G.S. = North Carolina General Statutes
NPDES = National Pollutant Discharge Elimination System
PCB = polychlorinated biphenyl
POTW = Publicly Owned treatment Works
PPE = personal protective equipment
RCRA = Resource Conservation and Recovery Act of 1976
SWDS = Solid waste Disposal Site
TBC = to be considered
TSCA = Toxic Substances Control Act of 1976
U.S. = United States
UTS = Universal Treatment Standard
WWTU = waste water treatment unit
> = greater than
< = less than
≥ = greater than or equal to
≤ = less than or equal to

APPENDIX B
TRANSCRIPT FROM PROPOSED PLAN PUBLIC MEETING