COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020 Fax (804) 527-5106
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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

STATE WATER CONTROL BOARD
ENFORCEMENT ACTION - ORDER BY CONSENT
ISSUED TO
ILUKA RESOURCES, INC.
FOR
BRINK MINE, GREENSVILLE, VIRGINIA AND CONCORD CONCENTRATOR, SUSSEX, VIRGINIA
Permit No. 06-1948 AND 03-0597

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-44.15, between the State Water Control Board and Iluka Resources, Inc., regarding Brink Mine, Greensville, Virginia and Concord Concentrator, Sussex, Virginia, for the purpose of resolving certain violations of State Water Control Law and the applicable permit and regulations.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and 62.1-44.7.

2. "Brink" means Brink Mine the property and facility located at 5945 Brink Road, Emporia, Virginia in Greensville County, Virginia, owned and operated by Iluka.

3. "Brink Permit" means individual permit No. 06-1948, issued by DEQ to Iluka on May 2, 2008, under Va. Code § 6 2.1-44.15:20 that authorizes activities otherwise unlawful under Va. Code § 62.1-44.5 or otherwise serves as the Commonwealth's certification under § 401 of the federal Clean Water Act (33 United States Code ("USC") § 1344.

4. "Concord" means Concord Concentrator, the property and facility located at 16474 Walker's Mill Road, Stony Creek, Virginia, Sussex County, Virginia owned and operated by Iluka.

5. "Concord Permit" means individual permit No. 03-0597, issued by DEQ to Iluka on August 24, 2004, under Va. Code § 62.1-44.15:20 that authorizes activities otherwise unlawful under Va. Code § 62.1-44.5 or otherwise serves as the Commonwealth's certification under § 401 of the federal Clean Water Act (33 United States Code ("USC") § 1344.

6. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.

7. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.

8. "Discharge" means, when used without qualification, a discharge of a pollutant, or any addition of a pollutant or combination of pollutants, to state waters or waters of the contiguous zone or ocean other than a discharge from a vessel or other floating craft when being used as a means of transportation.

9. "Dredging" means a form of excavation in which material is removed or relocated from beneath surface waters.

10. "E&S" means erosion and sedimentation.

11. "Excavate" or "excavation" means ditching, dredging, or mechanized removal of earth, soil, or rock.

12. "Fill" means replacing portions of surface water with upland, or changing the bottom elevation of surface water for any purpose, by placement of any pollutant or material including but not limited to rock, sand, earth, and man-made materials and debris. 9 VAC 25-210-10.

13. "Fill Material" means any pollutant which replaces portions of surface water with dry land or which changes the bottom elevation of a surface water for any purpose. 9 VAC 25-210-10.

14. "Iluka" means Iluka Resources, Inc., a corporation authorized to do business in Virginia and its affiliates, partners, and subsidiaries. Iluka is a "person" within the meaning of Va. Code § 62.1-44.3.

15. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.

16. "Order" means this document, also known as a "Consent Order" or "Order by Consent," a type of Special Order under the State Water Control Law.

17. "Permit" or "Virginia Water Protection Permit" means an individual or general permit issued under Va. Code § 62.1-44.15:20 that authorizes activities otherwise unlawful under Va. Code § 62.1-44.5 or otherwise serves as the Commonwealth's certification under § 401 of the federal Clean Water Act (33 United States Code ("USC") § 1344.

18. "Pollutant" means any substance, radioactive material, or heat which causes or contributes to, or may cause or contribute to pollution. 9 VAC 25-210-10.

19. "Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters: (i) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (ii) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (iii) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that (a) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners is sufficient to cause pollution; (b) the discharge of untreated sewage by any owner into state waters; and (c) contributing to the contravention of standards of water quality duly established by the board, are "pollution." Va. Code § 62.1-44.3; 9 VAC 25-210-10.

20. "PRO" means the Piedmont Regional Office of DEQ, located in Glen Allen, Virginia.

21. "Regulations" means the Virginia Water Protection Permit Program Regulations, 9 VAC 25-210 *et seq.*

22. "Significant alteration or degradation of existing wetland acreage or function" means human-induced activities that cause either a diminution of the areal extent of the existing wetland or cause a change in wetland community type resulting in the loss or more than minimal degradation of its existing ecological functions. 9 VAC 25-210-10.

23. "State Water Control Law" means Chapter 3.1(§ 62.1-44.2 *et seq.*) of Title 62.1 of the Va. Code. Article 2.2 (Va. Code §§ 62.1-44.15:20 through 62.1-44.15:23) of the State Water Control Law addresses the Virginia Water Resources and Wetlands Protection Program.

24. "State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands. Va. Code § 62.1-44.3 and 9 VAC 25-210-10.

25. "Surface water" means all state waters that are not ground waters as defined in Va. Code § 62.1-255.

26. "SWMP" means storm water management pond.

27. "USACE" means the United States Army Corps of Engineers.

28. "Va. Code" means the Code of Virginia (1950), as amended.

29. "VAC" means the Virginia Administrative Code.

30. "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. 9 VAC 25-210-10.

SECTION C: Findings of Fact and Conclusions of Law

Brink Mine:

1. Iluka owns and operates the Brink Mine facility in Greensville County, Virginia.

2. On May 2, 2008, DEQ issued Brink Permit to Iluka for wetland and stream impacts associated with surface mining operations at Brink. The Brink Permit expires on May 1, 2023.

3. On September 3, 2012, a representative of Iluka observed a ruptured process line on the discharge side of Booster Pump 1907.

4. On September 4, 2012, Iluka reported the ruptured line which resulted in an unpermitted discharge of approximately 1,400 gallons of process water which contained sixty percent solids. The process water flowed into and then beyond three in-series sediment traps, into an unnamed tributary of Fountain's Creek and adjacent wetlands. Iluka followed up with a written report on September 7, 2012.

5. On September 18, 2012, DEQ staff conducted an inspection and confirmed the estimated discharge, of 1,400 gallons, which impacted 500 linear feet of an unnamed tributary of Fountain's Creek based upon the amount of deposited clay.

6. On September 30, 2012, a representative of Iluka observed a ruptured process line in the same location as the aforementioned September 3, 2012, incident.

7. On October 1, 2012, Iluka reported the September 30, 2012, incident which resulted in the unpermitted discharge of approximately 162,000 gallons of water which contained 40

percent solids. Of that volume, approximately 31,400 gallons of process water which contained six percent solids overflowed the site containment features and were discharged into an adjacent stream and wetland. Wetland impacts were to 1.19 acres and stream channel impacts were to 1290 linear feet of an unnamed tributary of Fountain's Creek. Iluka followed up with a written report on October 3, 2012.

8. Va. Code § 62.1-44.15:20(A) and 9 VAC 25-210-50(A) state that except in compliance with a VWP permit no person shall dredge, fill or discharge any pollutant into or adjacent to surface waters, excavate in wetlands, alter the physical, chemical, or biological properties of state waters and make them detrimental to the public health, animal or aquatic life or on or after October 1, 2001, conduct the following activities in a wetland: filling or dumping.

9. Part I.G.2 of VWP Permit No. 06-1948 (Brink Permit) states "The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site."

10. On November 13, 2012, DEQ issued NOV No. W2012-11-P-0003 for violation of Brink Permit Part I.G.2 and Va. Code § 62.1-44.15:20(A) and 9 VAC 25-210-50(A).

11. On December 4, 2012, DEQ staff met with representatives of Iluka to discuss the violations. Iluka had undertaken corrective measures, including seeding of the wetland, pipeline repairs, design changes, as well as implementing a corrective action plan which included, design changes to Brink pipelines, change in pipeline materials, and an extensive change to operations and maintenance procedures and protocols.

12. On January 16, 2013, a representative of Iluka observed a change in flow and pressure on the feed line. Upon further inspection the representative discovered a ruptured line on the feed line between the 1908 Booster Pump and the Brink Concentrator.

13. On January 17, 2013, Iluka reported the ruptured line which resulted in an unpermitted discharge of approximately 37,500 gallons of process water which contained less than 2 percent solids. The process water flowed into and then exited a sediment trap, into an unnamed tributary of Fountain's Creek and adjacent wetlands. Sediment, a pollutant, collected in 4 areas, each measuring 5 feet by 3 feet with a depth of less than 0.5 inches. Iluka followed up with a written report on January 21, 2013.

14. Va. Code § 62.1-44.15:20(A) and 9 VAC 25-210-50(A) state that except in compliance with a VWP permit no person shall dredge, fill or discharge any pollutant into or adjacent to surface waters, excavate in wetlands, alter the physical, chemical, or biological properties of state waters and make them detrimental to the public health, animal or aquatic life or on or after October 1, 2001, conduct the following activities in a wetland:

filling or dumping.

15. Part I.G.2 of VWP Permit No. 06-1948 (Brink Permit) states "The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site."

16. On February 12, 2013, DEQ issued NOV No. W2013-02-P-0004 for violation of Va. Code § 62.1-44.15:20(A) and 9 VAC 25-210-50(A).

17. On March 12, 2013, DEQ staff met with representatives of Iluka to discuss the violations. Iluka discussed its progress with the corrective action plan as well as updates to its corrective action plan as a result of information learned from the January 16, 2013, discharge.

18. Iluka does not have a Permit for the discharges described above.

19. The discharge of fill material to a wetland without a Permit is a violation of Va. Code § 62.1-44.15:20 and 9 VAC 25-210-50.

20. Based on the results of the site inspections, review of the permit file, and the December 4, 2012, and March 12, 2013, meetings, the Board concludes that Iluka has violated the Brink Permit, the State Water Control Law and the Regulations, as described above.

Concord Concentrator:

21. Iluka owns and operates the Concord Concentrator in Sussex County, Virginia.

22. On August 24, 2004, DEQ issued Concord Permit to Iluka for wetland and stream impacts associated with surface mining operations at Concord. The Concord Permit was extended on May 10, 2011, and expires on August 23, 2019.

23. On August 10, 2012, a representative of Iluka noticed a berm breach in a tailings pond which resulted in an unpermitted discharge to forested wetlands and the stream channel of Manlove Branch from the aforementioned tailings pond. A representative of Iluka reported the discharge to DEQ.

24. On August 13, 2012, Iluka submitted a written report detailing the unpermitted discharge.

25. On August 21, 2012, DEQ staff conducted an inspection and found that the unpermitted discharge occurred when tailings from pond No. 1135 migrated down the outside of the outfall pipe, which bisected the berm for volume control. Mine tailings wastewater flowed from the pond into a sediment trap. The capacity of the trap was exceeded

resulting in an unpermitted discharge of sediment, a pollutant, up to a foot deep, to 0.26 acre of forested wetlands and 780 linear feet of Manlove Branch.

26. Va. Code § 62.1-44.15:20(A) and 9 VAC 25-210-50(A) state that except in compliance with a VWP permit no person shall dredge, fill or discharge any pollutant into or adjacent to surface waters, excavate in wetlands, alter the physical, chemical, or biological properties of state waters and make them detrimental to the public health, animal or aquatic life or on or after October 1, 2001, conduct the following activities in a wetland: filling or dumping.

27. Part I.G.2 of VWP Permit No. 03-0597 (Concord Permit) states "The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site."

28. On November 13, 2012, DEQ issued NOV No. W2012-11-P-0002 for violation of Concord Permit Part I.G.2 and Va. Code § 62.1-44.15:20(A) and 9 VAC 25-210-50(A).

29. On December 4, 2012, DEQ staff met with representatives of Iluka to discuss the violations. Iluka had undertaken corrective measures, including removal of the sediment and seeding of the wetland, had installed hay bales, pipeline repairs, design changes, as well as implementing a corrective action plan which included, design changes to Concord pipelines, change in pipeline materials, and an extensive change to operations and maintenance procedures and protocols.

30. Iluka does not have a Permit for the discharges described above.

31. The discharge of fill material to a wetland without a Permit is a violation of Va. Code § 62.1-44.15:20 and 9 VAC 25-210-50.

32. Based on the results of the site inspections, review of the permit file, and the December 4, 2012, meeting, the Board concludes that Iluka has violated the Concord Permit, the State Water Control Law and the Regulations, as described above.

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.15, and upon consideration of Va. Code § 10.1-1186.2, the Board orders Iluka and Iluka agrees to:

1. To perform the actions described in Appendix A of this Order; and

2. To a civil charge of $83,083 in settlement of the violations cited in this Order, to be paid as follows:

a. Iluka shall pay $21,208 of the civil charge within 30 days of the effective date of this Order. Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," delivered to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

Iluka shall include its Federal Employer Identification Number (FEIN) with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF). If the Department has to refer collection of moneys due under this Order to the Department of Law, Iluka shall be liable for attorneys' fees of 30% of the amount outstanding.

b. Iluka shall satisfy $61,875 of the civil charge by satisfactorily completing the Supplemental Environmental Project (SEP) described in Appendix A of this Order.

c. The net project costs of the SEP to Iluka shall not be less than the amount set forth in Paragraph D.2.b. If it is, Iluka shall pay the remaining amount in accordance with Paragraph D.2.a of this Order, unless otherwise agreed to by the Department. "Net project cost" means the net present after-tax cost of the SEP, including tax savings, grants, and first-year cost reductions and other efficiencies realized by virtue of project implementation. If the proposed SEP is for a project for which the party will receive an identifiable tax savings (e.g., tax credits for pollution control or recycling equipment), grants, or first-year operation cost reductions or other efficiencies, the net project cost shall be reduced by those amounts. The costs of those portions of SEPs that are funded by state or federal low-interest loans, contracts, or grants shall be deducted.

d. By signing this Order Iluka certifies that it has not commenced performance of the SEP.

e. Iluka acknowledges that it is solely responsible for completing the SEP project. Any transfer of funds, tasks, or otherwise by Iluka to a third party, shall not relieve Iluka of its responsibility to complete the SEP as described in this Order.

f. In the event it publicizes the SEP or the SEP results, Iluka shall state in a prominent manner that the project is part of a settlement of an enforcement action.

g. The Department has the sole discretion to:

i. Authorize any alternate, equivalent SEP proposed by the Facility; and

ii. Determine whether the SEP, or alternate SEP, has been completed in a satisfactory manner.

h. Should the Department determine that Iluka has not completed the SEP, or alternate SEP, in a satisfactory manner, the Department shall so notify Iluka in writing. Within 30 days of being notified, Iluka shall pay the amount specified in Paragraph D.2.b, above, as provided in Paragraph D.2.a, above.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend this Order with the consent of Iluka for good cause shown by Iluka, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.

2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.

3. For purposes of this Order and subsequent actions with respect to this Order only, Iluka admits the jurisdictional allegations, findings of fact, and conclusions of law contained herein.

4. Iluka consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.

5. Iluka declares it has received fair and due process under the Administrative Process Act and the State Water Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.

6. Failure by Iluka to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.

7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.

8. Iluka shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war,

strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on its part. Iluka shall demonstrate that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. Iluka shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:

a. the reasons for the delay or noncompliance;

b. the projected duration of any such delay or noncompliance;

c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and

d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which the parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.

10. This Order shall become effective upon execution by both the Director or his designee and Iluka. Nevertheless, Iluka agrees to be bound by any compliance date which precedes the effective date of this Order.

11. This Order shall continue in effect until:

a. The Director or his designee terminates the Order after Iluka has completed all of the requirements of the Order;

b. Iluka petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or

c. The Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to Iluka.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve Iluka from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by Iluka and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.

13. Any documents to be submitted pursuant to this Order shall be submitted by Iluka or an authorized representative of Iluka.

14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.

15. By its signature below, Iluka voluntarily agrees to the issuance of this Order.

And it is so ORDERED this _____ day of _____, 2014.

_____
Michael P. Murphy, Regional Director
Department of Environmental Quality

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Iluka Resources, Inc. voluntarily agrees to the issuance of this Order.

Date: 4/2/2014 By: Shane Tilka, General Manager
(Person) (Title)
Iluka Resources, Inc.

Commonwealth of Virginia

City/County of Sussex

The foregoing document was signed and acknowledged before me this 2ND day of April, 2014, by Shane Tilka (Shane Tilka) who is General Manager of Iluka Resources, Inc. on behalf of the corporation.

Sheryl N. Jordan
Commonwealth of Virginia
Reg. No. 7506430
Commission Exp. 3/31/15
Notary Public

Sheryl Jordan (Sheryl Jordan)
Notary Public

7506430
Registration No.

My commission expires: 3/31/15

Notary seal:

APPENDIX A
ILUKA RESOURCES, INC.
SUPPLEMENTAL ENVIRONMENTAL PROJECT

In accordance with Va. Code § 10.1-1186.2, Iluka shall perform the Supplemental Environmental Project ("SEP") identified below in the manner specified in this Appendix. As used in this Order and Appendix, SEP means an environmentally beneficial project undertaken as partial settlement of a civil enforcement action and not otherwise required by law.

1. The SEP to be performed by Iluka is to assist the non-profit organization, The Nature Conservancy, Virginia Chapter ("TNC"), in improving water quality on conservation lands in the Nottoway River drainage by reducing erosion and stabilizing riparian zones. The proposed projects are located in the Big Woods State Forest, managed by the VA Department of Forestry ("DOF"); Piney Grove Preserve, managed by TNC; and Cherry Orchard Bog Natural Area Preserve, managed by the Virginia Department of Conservation & Recreation ("DCR"). All projects are designed to reduce sediment loss into waterways thereby improving water quality. This proposal includes three types of projects: 1) address failed or undersized culverts, 2) surface shaping and top dressing to reduce erosion from road surfaces, and 3) improve crossings over moist soils where low gradient cannot accommodate culverts.

   The project will reduce sedimentation and improve water quality of the Nottoway River, recognized by TNC as one of the most ecologically significant aquatic systems in eastern Virginia and designated by DCR as a State Scenic Waterway. Improved water quality will benefit mussel assemblages, fish and other aquatic life as well as water consumers in the Hampton Roads region. The City of Norfolk has a surface water intake on the Nottoway River just downstream of the proposed project tracts and relies on the river to help supply potable water to over 800,000 regional residents.

   Proposed road improvements will provide access for prescribed burning on all three project properties to the benefit of a number of rare species, including the federally endangered red-cockaded woodpecker. Prescribed burning will also increase herbaceous groundcover, which provides valuable erosion prevention and sediment runoff services.

   In addition to water quality improvements, these projects will provide continued access for public recreation and management for rare species without risk of road failures impeding those activities. The improvements will also help provide access for fire suppression in the event of an unplanned forest fire.

2. The SEP shall be completed by December 31, 2014, in accordance with the SEP submitted to DEQ by email on February 24, 2014, and finalized on March 11, 2014 (Appendix B).

3. Iluka shall submit progress reports on the SEP on a quarterly basis, due the 10th day of each quarter.

4. Iluka shall submit a written final report on the SEP, verifying that the SEP has been completed in accordance with the terms of this Order, and certified either by a Certified Public Accountant or by a responsible corporate officer or owner. Iluka shall submit the final report and certification to the Department within 30 days of the completion of the SEP.

5. If the SEP has not or cannot be completed as described in the Order, Iluka shall notify DEQ in writing within three business days of determining that the SEP has not or cannot be completed as required. Such notification shall include:
   a. an alternate SEP proposal, or
   b. payment of the amount specified in Paragraph D.2.b as described in Paragraph D.2.a.

6. Iluka hereby consents to reasonable access by DEQ or its staff to property or documents under the party's control, for verifying progress or completion of the SEP.

7. Iluka shall submit to the Department written verification of the final overall and net project cost of the SEP in the form of a certified statement itemizing costs, invoices and proof of payment, or similar documentation within 30 days of the project completion date. For the purposes of this submittal, net project costs can be either the actual, final net project costs or the projected net project costs if such projected net project costs statement is accompanied by a CPA certification or certification from Iluka's Chief Financial Officer concerning the projected tax savings, grants or first-year operation cost reductions or other efficiencies.

8. Documents to be submitted to the Department, other than the civil charge payment described in Section D of the Order, shall be sent to:

Gina Pisoni
Enforcement Specialist
VA DEQ – Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060
804-527-5156
804-527-5106 (fax)
Gina.Pisoni@deq.virginia.gov

APPENDIX B

Attachment 3 - Analysis of Proposed Supplemental Environmental Project

Va. Code § 10.1-1186.2

Source/Facility/Regulated Party

Iluka Resources Inc.
12472 St. John Church Road
Stony Creek, VA 23882

Contact: Kevin Rideout, Environmental Superintendent

Project Description

Water Quality Improvement Projects on Conservation Lands in the Nottoway River Watershed

Iluka Resources Inc. incurred a fine as part of a Consent Order from the Virginia Department of Environmental Quality (DEQ). The Consent Order was the combined result of 1) a tailings dam breach that resulted in a discharge of sediment discharge into an unnamed tributary to Manlove Branch a tributary to Harris Swamp which is a tributary to the Nottoway River (Concord Site), and 2) three incident at the Brink Site in the Meherrin River watershed (see Figure 6). The Nature Conservancy (TNC) proposes to apply the funds allocated toward this fine to projects designed to improve water quality on conservation lands in the Nottoway River drainage. The proposed projects are designed to improve inadequate and/or failing infrastructure that is resulting in, or has potential to result in sediment loss in the Nottoway watershed.

1. **Explain in detail how the project is environmentally beneficial and, if possible, provide a quantifiable measure of the benefit (*e.g.*, pounds of nutrient and/or emission reduction):**

The proposed projects are located in the Big Woods State Forest, managed by the VA Department of Forestry (DOF); Piney Grove Preserve, managed by TNC; and Cherry Orchard Bog Natural Area Preserve, managed by VA Department of Conservation & Recreation (DCR). All projects are designed to reduce sediment loss into waterways thereby improving water quality. This proposal includes three types of projects: 1) address failed or undersized culverts, 2) surface shaping and top dressing to reduce erosion from road surfaces, and 3) improved crossings over moist soils where low gradient cannot accommodate culverts.

The project will reduce sedimentation and improve water quality of the Nottoway River, recognized by The Nature Conservancy as one of the most ecologically significant aquatic systems in eastern Virginia and designated by VA Department of Conservation and Recreation as a State Scenic Waterway. Improved water quality will benefit mussel assemblages, fish and other aquatic life as well as water consumers in the Hampton Roads region. The City of Norfolk

has a surface water intake on the Nottoway River just downstream of the proposed project tracts and relies on the river to help supply potable water to over 800,000 regional residents.

Proposed road improvements will provide access for prescribed burning on all three project properties to the benefit of a number of rare species such as the rare plant species seymeria and Carolina peatmoss, and the state-rare fox squirrel as well as the federally endangered red-cockaded woodpecker. Prescribed burning will also increase herbaceous groundcover, which provides valuable erosion prevention and sediment runoff services.

In addition to water quality improvements, these projects will provide continued access for public recreation and management for rare species reducing risk of road failures impeding those activities. The improvements will also help provide access for fire suppression in the event of an unplanned forest fire.

Culvert replacement or installation

Proposed culvert installations address culverts that are either failing, absent, or undersized per BMP guidance. The locations proposed for culvert work have not yet been examined by the Department of Forestry Water Quality Engineer. Therefore, sizes may be later modified based on recommendations from the Water Quality Engineer.

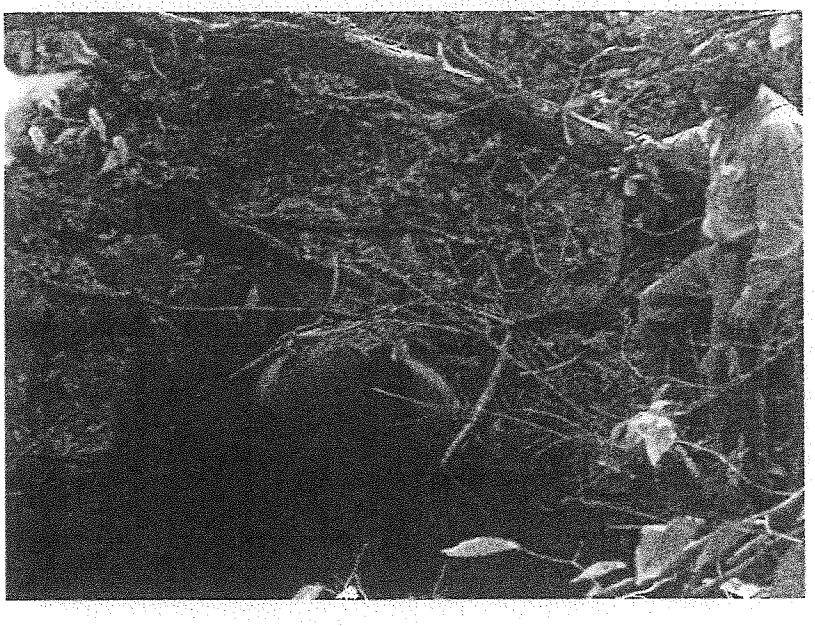


Figure 1. Example of a failed 48" culvert. When the bottom of culvert failed, the sides collapsed in restricting the entrance. (Big Woods State Forest)

Reshaping and top-dressing roads

This group includes reshaping road surfaces to promote drainage to the side of the road surface. It includes resurfacing with stone (less erodible) and also includes stabilization of eroding road banks. This may also include installation of turn outs to allow ditch flows to be slowed and filtered by forest litter before reaching stream drainages.

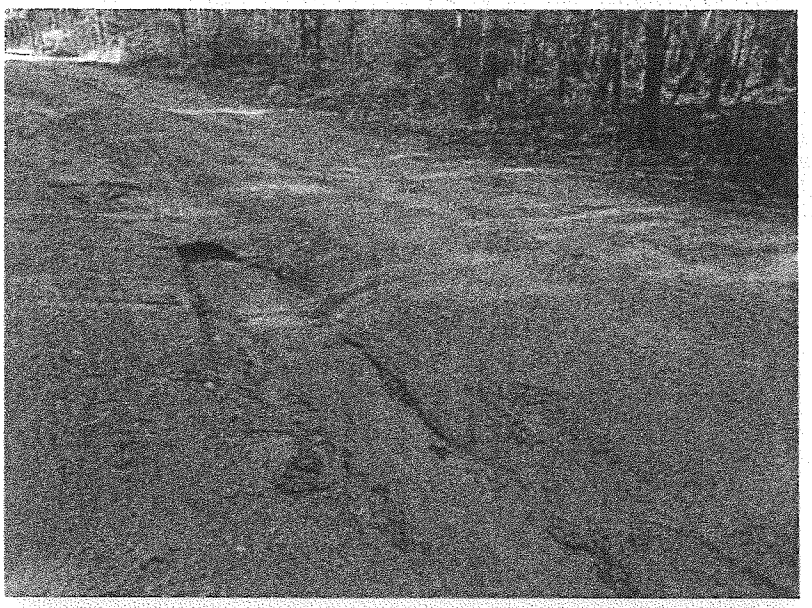


Figure 2. Example of road damage and sediment loss. Road needs re-shaping to promote lateral drainage and stone surfacing. (Big Woods State Forest)

Figure 3. Example of a sloughing road bank in need of stabilization. (Big Woods State Forest)

Low gradient, moist soil crossings

Reinforced concrete mats will be placed over chronic mud holes and shallow drainage crossings in low-gradient areas that are primarily wet during winter conditions. The mats are salvaged as surplus inventory from livestock facilities. This approach provides stable vehicular crossings of intermittently wet swales and soft soils that minimizes sediment disturbance without impeding water flow. The approach, used in areas of low topographic relief, is low maintenance and avoids the need to build up the roadbed to cross a culvert.

Figure 4. Example of a successful moist soil crossing. (Piney Grove Preserve)

2. A SEP may only be a partial settlement: show what initial civil charge was computed, along with the appropriate SEP amount and final civil charge figure:

Civil Charge/Penalty without a SEP	$____83,083_____
Minimum Payment Amount with a SEP (see Section II(F))	$____20,770.75_____
Projected Net Project Costs (see No. 6, below)	$____61,875_____
SEP Mitigation Amount	$____61,875_____
Final Monetary Civil Charge/Penalty	$____21,208_____

3. Explain how the SEP is not otherwise required by law and is solely the result of the settlement of a violation.

This SEP proposed by Iluka Resources is solely the result of violations of state water quality regulations which resulted in a DEQ Consent Order and is not required to be performed by the party under any federal, state, or local statute, regulation, ordinance, order or permit condition. The Consent Order was the combined result of the breach of a tailings impoundment at the Iluka Concord Mine site in Sussex County and incidents at the Brink Mine in Greensville County.

4. Is there reasonable geographic nexus?

Yes, one of the violations associated with this SEP occurred in Sussex County and resulted in muddy water and sediment entering the wetlands adjacent to an unnamed tributary to Manlove Brook, a tributary to Harris Swamp and the Nottoway River. The proposed project lands are also located within the Nottoway River watershed HUC 03010201 and also in Sussex County, VA.

Projects, Estimated Costs, and Locations

Table 1 provides a summary of proposed projects and Figure 5 provides the project locations.

Table 1. Summary of Projects

Project Number	Site	Description	Cost (materials & labor)
1	Big Woods State Forest	Replace failed culvert - 15" x 40'	$1,500
2	Big Woods State Forest	Install culvert - 15" x 40'	$1,500
3	Big Woods State Forest	Reshape road, install gravel surface, 1,000 ft	$2,000
4	Big Woods State Forest	Replace failed culvert – (2) 48" x 40'	$8,500
5	Big Woods State Forest	Repair sloughing road bank, stone	$1,000
6	Big Woods State Forest	Reshape road, install gravel surface, 1,000 ft	$2,000
7	Big Woods State Forest	Rip rap over stream culvert	$1,000
8	Big Woods State Forest	Reshape road, install gravel surface, 1,000 ft	$2,000
9	Big Woods State Forest	Rip rap over stream culvert, add stone to stabilize emergency overwash and bank	$1,000
10	Big Woods State Forest	Reshape road, install gravel surface, 2,000 ft	$4,000
11	Piney Grove Preserve	Add additional culvert, gravel surface - 24" x 40'	$2,500
12	Piney Grove Preserve	Replace failed culvert - 15" x 40', shape and gravel	$2,500
13	Piney Grove Preserve	Install culvert - 15" x 40', shape and gravel	$2,500
14	Piney Grove Preserve	Install culvert – 15" x 20', reshape road, install gravel surface, 1,000 ft	$2,875
15	Piney Grove Preserve	Install concrete mat crossing, low gradient area	$1,500
16	Piney Grove Preserve	Install concrete mat crossing, low gradient area	$1,500
17	Piney Grove Preserve	Install culvert - 15" x 40', shape and gravel	$2,500
18	Piney Grove Preserve	Install concrete mat crossing, low gradient area	$1,500

19	Piney Grove Preserve	Install concrete mat crossing, low gradient area	$1,500
20	Cherry Orchard Bog NAP	Install concrete mat crossing, low gradient area	$3,000
		Total	$46,375

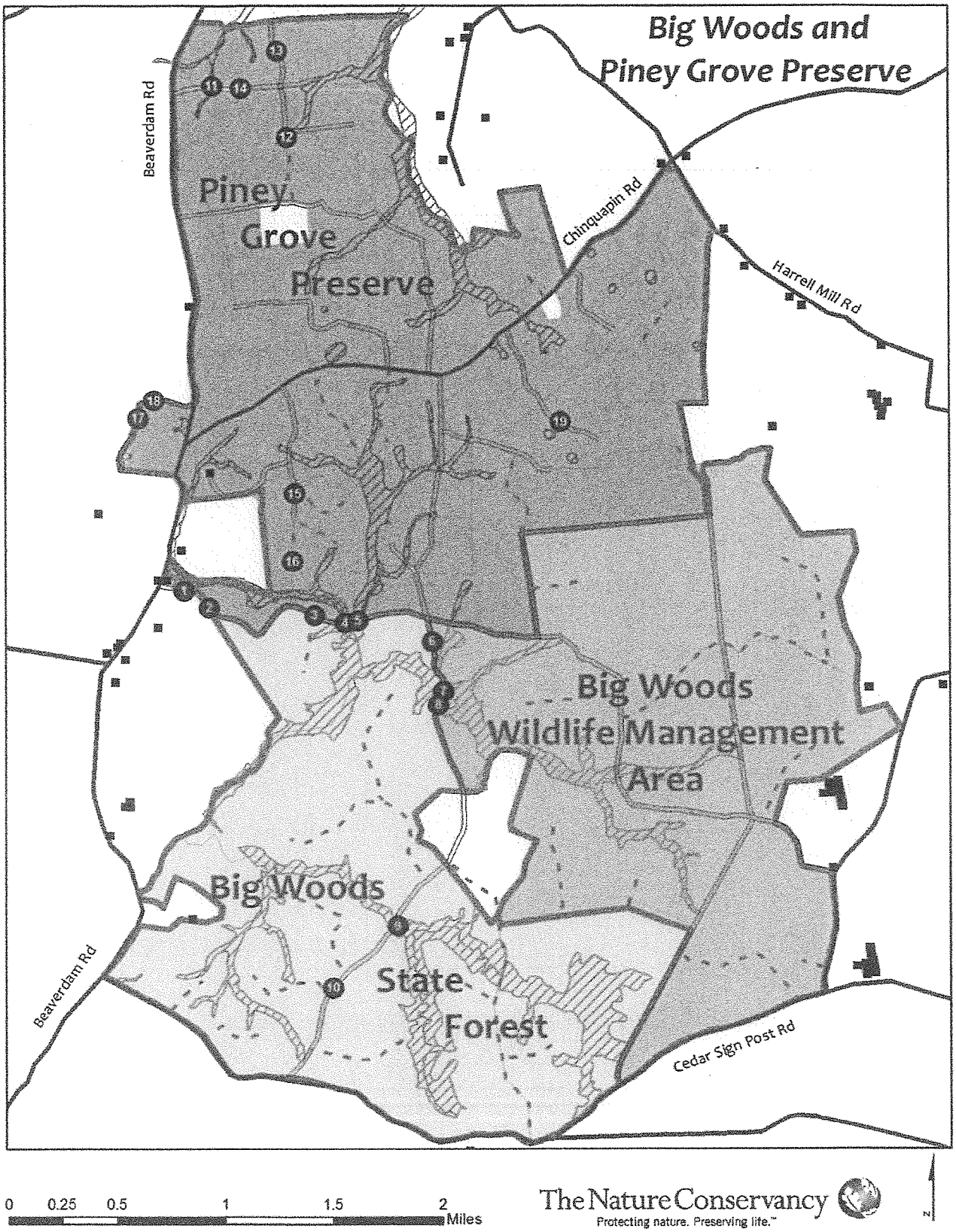
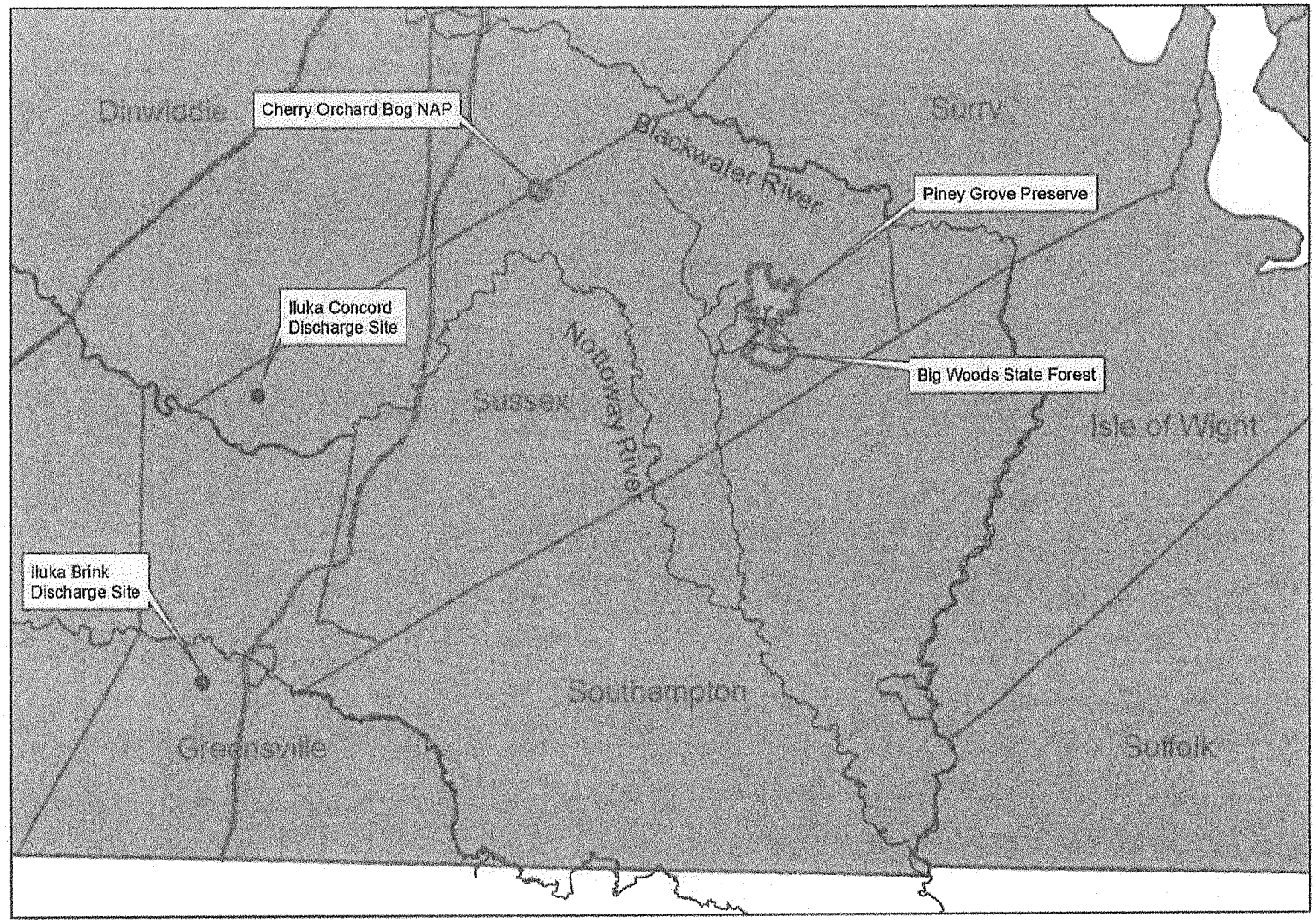


Figure 5. Project locations on Big Woods State Forest and Piney Grove Preserve.



Location Map of Proposed Water Quality Projects and Iluka Discharges

0 5 10 15 20 25 Miles

N

Figure 6. Location of Proposed Water Quality Projects and Iluka Discharges

5. **Check all the qualifying categories that may apply (at least one must be checked):**

- ☒ Public Health
- ☒ Pollution Prevention
- ☒ Pollution Reduction
- ☒ Environmental Restoration and Protection
- ☐ Environmental Compliance Promotion
- ☒ Emergency Planning and Preparedness

6. **Does the SEP require a significant amount of DEQ management, resource investment or evaluation such that DEQ is unable to provide active oversight?**

   No, SEP funds would be administered by The Nature Conservancy of Virginia. DEQ would not need to conduct any management activities. However, DEQ will provide monitoring and oversight of the SEP.

7. **Does the proposed SEP require a significant amount of DEQ time and resources for negotiation, administration, SEP oversight or other management activities in comparison to the value of the SEP?**

   No. The Nature Conservancy would oversee administration of the funds, contracts and implementation of management activities. DEQ would not need to conduct any management activities. However, DEQ will provide monitoring and oversight of the SEP.

8. **Does the Responsible Party have the ability or reliability to complete the proposed SEP and demonstrated an ability or willingness to comply with existing requirements?**

   Yes. The Nature Conservancy has on-site knowledge, capacity, and experience implementing comparable projects; and a willingness to comply with requirements to complete the proposed SEP.

9. **Each of the following factors must be considered. Respond to each:**

- **Net project costs.**

Direct costs	
Contractual expenses (see Table 1)	$46,375
Project supervision (TNC staff time and travel)	$4,000
Total direct costs	$50,375
TNC Indirect costs (22.83%)*	$11,500
TOTAL PROJECT COST	**$61,875**

* The Indirect Cost Rate is how TNC recovers its general and administrative expenses, such as Legal, Finance, Human Resources, and Technology and Information Systems. We calculate our rates in compliance with the requirements of 2 CFR 230 and have them audited by external auditors on an annual basis.

- **Benefits to the public or the Environment (should exceed VEERF value; include any community involvement)**
  The project will improve water quality of the Nottoway River, recognized by The Nature Conservancy as one of the most ecologically significant aquatic systems in eastern Virginia and designated by VA Department of Conservation & Recreation as a State Scenic Waterway. Improved water quality will benefit mussel assemblages, fish and other aquatic life as well as water consumers in the Hampton Roads region. The City of Norfolk has a surface water intake on the Nottoway River just downstream of the proposed project tracts and relies on the river to help supply potable water to over 800,000 regional residents. Proposed road improvements will enhance public access to the Big Woods State Forest and facilitate more prescribed burning on all three project properties to the benefit of a number of rare species including the federally endangered Red-cockaded woodpecker. Prescribed burning will increase herbaceous groundcover which provides valuable soil erosion and sediment runoff services.

- **Innovation.**
  Funding will facilitate prescribed burning by state agencies and The Nature Conservancy to conserve natural resources and further recovery efforts of various endangered species as well as globally-rare longleaf pine savannas. The use of recycled reinforced concrete mats will reduce sediment runoff and soil erosion.

- **Impact on minority or low-income population.**
  None.

- **Multimedia impact.**
  Proposed activities will benefit water quality in the project area. Improved road quality for fire suppression equipment to combat unplanned forest fires will aid in the improvement of air quality during fire season.

- **Pollution prevention.**
  Proposed activities will reduce erosion and sediment discharge in a tributary catchment of the Nottoway River, improving water quality.

☒ Division of Enforcement, Other RO, Program – Concurrence/Consultation

Recommended/Not Recommended

(DEQ Regional Staff)

SEP Approved/Disapproved
(Subject to Execution of the Order)

3-12-2014

(DEQ Regional Director)