

**THE STATE OF SOUTH CAROLINA
BEFORE THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

**IN RE: DUKE ENERGY PROGRESS, INC.
H.B. ROBINSON STEAM ELECTRIC PLANT
DARLINGTON COUNTY**

**CONSENT AGREEMENT
15 – 23 – HW**

This Consent Agreement is entered into between the South Carolina Department of Health and Environmental Control (SCDHEC or the Department) and Duke Energy Progress, Inc. (Duke Energy) with respect to the investigation and remediation of the inactive 1960 ash storage area at the H.B. Robinson Steam Electric Plant located at 3581 W. Entrance Road, Hartsville, South Carolina (Tax Map Number 018-00-02-001). The "Site" shall include the inactive 1960 ash storage area and all areas where ash, other coal combustion residuals, or their constituents, including contaminants, (collectively Coal Combustion Residuals or CCR or ash) may have potentially migrated from the 1960 ash storage area, collectively referred to as the "Site" as depicted on Exhibit A.

Duke Energy is entering into this Consent Agreement to assess and address any release or threat of release of Coal Combustion Residuals or other pollutants from the Site to the environment and to provide for the final disposition of the Site. Duke Energy will take all necessary steps in compliance with all environmental laws to prevent future releases from the Site. In the interest of resolving the matters herein without delay, Duke Energy agrees to the entry of this Consent Agreement without litigation and without the admission or adjudication of any issue of fact or law, except for purposes of enforcing this agreement. Duke Energy agrees that this Consent Agreement shall be deemed an admission of fact and law only as necessary for enforcement of this Consent Agreement by the Department or in subsequent actions relating to this Site by the Department.

FINDINGS OF FACT

Based on information known by the Department, the following findings of fact are asserted by the Department for purposes of this Consent Agreement:

1. Duke Energy Progress, Inc. owns and operates both:
 - a. The H.B. Robinson Steam Electric Plant (Robinson Plant) located approximately 4.5 miles north of Hartsville, Darlington County, South Carolina. Development of the Robinson Plant facility began in the late 1950s when Black Creek was impounded to create Lake Robinson. Shortly thereafter, the 177 MW coal-fired unit (Unit 1) began commercial operation in 1960. That unit was retired in October 2012. A 710 MW nuclear unit began operation at the site in 1971 and continues to operate. The Tax Map Identification is 018-00-02-001.
 - b. The Darlington Plant is located adjacent to the Robinson Plant in Darlington County, South Carolina. The Darlington Plant consists of 13 combustion turbine units and began operation in 1974. Coal has never been used as a fuel at the Darlington Plant. The Tax Map Identification is also 018-00-02-001.
2. The Robinson Plant coal ash management facilities include one ash basin (State Identification Number D3514) located northwest of the fossil and nuclear units; and a 1960 ash storage area located south of the permitted ash basin. The 1960 ash storage area was created in 1960, and received ash from Unit 1 until the permitted ash basin was constructed in the mid-1970s. The 1960 ash storage area covers a surficial area measuring approximately 25 acres with an estimated ash thickness ranging from 6 to 16 feet.
3. Preliminary Site assessment indicates that the preferred disposition of the CCR from the Site is in a South Carolina permitted Class 3 solid waste disposal facility located on the Darlington Plant site and/or the Robinson Site. However, if detailed closure planning

determines that beneficial reuse or disposal in an off-site waste disposal facility is a superior option, then Duke Energy may choose to pursue such options with the consent of the Department.

4. CCR located at the Site lies in an electric transmission corridor, and removal of the ash will require relocation of the transmission line, including its supporting structures. In order to relocate the transmission towers and structures in clean soil, the CCR must be removed in phases, with the first phase consisting of excavation, removal, and disposal of CCR in the area to which the transmission line will be relocated (the Sub-Site). The first phase will require confirmatory sampling to assure the CCR has been removed before erecting the transmission towers and supporting structures in this area. Any groundwater remediation needed for the Sub-Site shall be completed once CCR has been removed from the entire 1960 ash storage area.

CONCLUSIONS OF LAW

The Department has the authority to implement and enforce laws and related regulations pursuant to the South Carolina Hazardous Waste Management Act, S.C. Code Ann. §44-56-10, et seq. (Rev. 2002 and Supp. 2014), the Pollution Control Act, S.C. Code Ann. §48-1-10 et seq. (Rev. 2008 and Supp. 2014) and the South Carolina Solid Waste Policy and Management Act, S.C. Code Ann. §44-96-10, et seq. (Rev. 2002 and Supp. 2014). These Acts authorize the Department to issue orders; assess civil penalties; conduct studies, investigations, and research to abate, control and prevent pollution; and to protect the health of persons or the environment.

NOW, THEREFORE IT IS AGREED, with the consent of Duke Energy and the Department, and pursuant to the South Carolina Hazardous Waste Management Act, the Pollution Control Act, and/or the Solid Waste Policy and Management Act, that Duke Energy shall:

1. Submit an application to construct the Class 3 solid waste disposal facility to the Department no later than April 1, 2016. If a Class 3 solid waste disposal facility cannot be permitted at the Darlington Electric Power Plant and/or the Robinson Plant within five (5) years of the effective date of this agreement, Duke Energy shall dispose of the CCR by another Department approved method.
2. Dispose of all CCR at the Site within a South Carolina permitted Class 3 solid waste disposal facility located at the Darlington Electric Power Plant and/or the Robinson Plant, and complete disposal within eight (8) years following the execution of this Consent Agreement.
3. Within ninety (90) days of receipt of a final and non-appealable permit to construct a Class 3 solid waste disposal facility, commence construction of said solid waste disposal facility and submit to the Department for review and approval, an Ash Removal Plan for the Site. The Ash Removal Plan shall include a time schedule for implementation of all major activities required by the Plan. The Ash Removal Plan must include, but is not limited to, characterization of the ash, provisions for the safe removal of the ash, and management of storm water during the project. The Ash Removal Plan shall also include an evaluation of any stability issues expected to be encountered during ash removal activities. The Ash Removal Plan shall address the impacts to the existing transmission lines and municipal sewer lines and the plans to relocate these utilities as part of the project. Any comments generated through the Department's review of the Ash Removal Plan must be addressed in writing by Duke Energy within fifteen (15) days of Duke Energy's receipt of said comments. Upon the Department's approval of the Ash Removal Plan and the time schedule for implementation thereof, the Ash Removal Plan and schedule shall be incorporated herein and become an enforceable part of this Consent Agreement. The implementation schedule must include the calendar date when all ash will be removed from the Site, not to exceed eight (8) years as outlined in item 2. above.

4. Submit, along with but under separate cover from the Ash Removal Plan, a Health and Safety Plan (HASP) consistent with Occupational Safety and Health Administration regulations. The HASP shall be submitted to the Department in the form of one (1) electronic copy (pdf. format). Duke Energy agrees the HASP is submitted to the Department for informational purposes only. The Department expressly denies any liability that may result from Duke Energy's implementation of the HASP. Begin implementation of the Ash Removal Plan described in paragraph 3. within fifteen (15) days of Duke Energy's receipt of the Department's written approval of the Ash Removal Plan and all required permits, whichever is later, provided Duke Energy submits timely applications for any necessary permits.
5. Upon completion of the work approved at the Site or Sub-Site in accordance with the Ash Removal Plan, submit an Ash Removal Report to the Department. The Ash Removal Report shall summarize the activities taken during implementation of the Ash Removal Plan and shall contain appropriate documentation that ash has been removed from the Site or Sub-Site and properly disposed of in accordance with the Ash Removal Plan.
6. Within thirty (30) days of approval of the Ash Removal Report(s), submit an Assessment Plan to the Department. The Assessment Plan shall include, but is not limited to, the following: a description of work needed for the delineation of the vertical and horizontal extent of any contamination, including an assessment of surface water, groundwater, and soil underlying the Site; a conceptual site model to ensure assessment of all potential risks to human health and the environment; and a schedule for implementation.
7. Upon completion of the activities outlined in the approved Assessment Plan, within sixty (60) days submit to the Department an Assessment Report summarizing the findings of the investigations performed pursuant to the Assessment Plan, including an evaluation of all risks to human health and the environment. The Department shall review the Assessment Report to determine completion of the field investigation and sufficiency of

the documentation. If the Department determines that additional field investigation is necessary, Duke Energy shall conduct additional field investigation to complete such task. Alternatively, if the Department determines the field investigation to be complete, but the conclusions in Duke Energy's Assessment Report are not approved, Duke Energy shall submit a Revision to the Assessment Report within thirty (30) days after receipt of the Department's disapproval. The Revision shall address the Department's comments.

8. Within sixty (60) days of approval of all Assessment Reports, submit to the Department a Closure Plan which details the actions to be taken for the final disposition of the Site, and evaluates the need for additional remediation of soils, surface water and groundwater. If remedial actions are necessary, Duke Energy shall also submit to the Department for approval a Remedial Plan, which includes a proposed remedy, justification for the proposed remedy, the design of the proposed remedy and a schedule for implementation. The schedule of implementation must extend through full completion of the remedy. The Closure Plan and, if necessary, the Remedial Plan shall be based upon the results of the field investigation, ash removal activities and the following seven (7) criteria:
 - a. Overall protection of human health and the environment;
 - b. Compliance with applicable or relevant and appropriate standards;
 - c. Long-term effectiveness and permanence;
 - d. Reduction of toxicity, mobility or volume;
 - e. Short-term effectiveness;
 - f. Implementability; and
 - g. Costs.
9. Address any comments generated through the Department's review of the Closure Plan and any required Remedial Plan in writing within fifteen (15) days of Duke Energy's receipt of said comments. This fifteen (15) day deadline may be extended by mutual agreement of the parties if the comment resolution requires extensive revision, such as

reengineering. Upon Department approval of the Closure Plan, Remedial Plan and the implementation schedule, the Closure Plan, Remedial Plan, and implementation schedule shall be incorporated herein and become an enforceable part of this Consent Agreement.

10. Begin to implement the Closure Plan and the Remedial Plan within forty-five (45) days of the Department's approval of the Plans; and thereafter, take all necessary and reasonable steps to ensure timely completion of the Plans.
11. Submit to the Department a written monthly progress report within thirty (30) days of the execution of this Consent Agreement and by the last business day of every month thereafter until completion of the work required under this Consent Agreement. The progress reports shall include the following: (a) a description of the actions which Duke Energy has taken toward achieving compliance with this Consent Agreement during the previous month; (b) results of sampling and tests, in summary format received by Duke Energy during the reporting period; (c) description of all actions which are scheduled for the next month to achieve compliance with this Consent Agreement, and other information relating to the progress of the work as deemed necessary or requested by the Department; and (d) information regarding the percentage of work completed and any delays encountered or anticipated that may affect the approved schedule for implementation of the terms of this Consent Agreement, and a description of efforts made to mitigate delays or avoid anticipated delays.
12. Prepare all Plans and perform all activities under this Consent Agreement following appropriate DHEC and EPA guidelines. All Plans and associated reports, with the exception of the Monthly Reports required by paragraph 12 and the HASP required by paragraph 4. above, shall be prepared in accordance with industry standards and endorsed by a Professional Engineer (P.E.) and/or Professional Geologist (P.G.) duly-licensed in South Carolina. Unless otherwise requested, one (1) paper copy and one (1) electronic copy (pdf. format) of each document prepared under this Consent Agreement shall be

submitted to the Department's Project Manager. Unless otherwise directed in writing, all correspondence, work plans and reports should be submitted to the Department's Project Manager at the following address:

Tim Hornosky
South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201
hornostr@dhec.sc.gov

13. Reimburse the Department on a quarterly basis, for all past, present and future costs, direct and indirect, incurred by the Department pursuant to this Consent Agreement and as provided by law. Oversight Costs include, but are not limited to, the direct and indirect costs of negotiating the terms of this Consent Agreement, reviewing plans and reports, supervising corresponding work and activities, and costs associated with public participation. The Department shall provide documentation of its Oversight Costs in sufficient detail so as to show the personnel involved, amount of time spent on the project for each person, expenses, and other specific costs. Payments are due to the Department within thirty (30) days of the date of the Department's invoice; however, it is not a violation of this Consent Agreement if late payment is cured within thirty (30) additional days.
14. Meet with the Department's Project Manager at least quarterly to discuss progress toward schedule requirements and to anticipate any schedule delays.
15. Notify the Department in writing at least five (5) days before the scheduled deadline if any event occurs which causes or may cause a delay in meeting any of the above-scheduled dates for completion of any specified activity pursuant to this Consent Agreement. Duke Energy shall describe in detail the anticipated length of the delay, the precise cause or causes of delay, if ascertainable, the measures taken or to be taken to

prevent or minimize the delay, and the timetable by which Duke Energy proposes that those measures will be implemented. The Department shall provide written notice to Duke Energy as soon as practicable that a specific extension of time has been granted or that no extension has been granted. An extension shall be granted for any scheduled activity delayed by an event of *force majeure* which shall mean any event arising from causes beyond the control of Duke Energy that causes a delay in or prevents the performance of any of the conditions under this Consent Agreement including, but not limited to: a) acts of God, fire, war, insurrection, civil disturbance, explosion; b) adverse weather conditions that could not be reasonably anticipated causing unusual delay in transportation and/or field work activities; c) restraint by court order or order of public authority; d) inability to obtain, after exercise of reasonable diligence and timely submittal of all required applications, any necessary authorizations, approvals, permits, or licenses due to action or inaction of any governmental agency or authority, or litigation staying or reversing permit issuance or other governmental agency approvals; and e) delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures, despite the exercise of reasonable diligence by Duke Energy. Events which are not *force majeure* include by example, but are not limited to, unanticipated or increased costs of performance, changed economic circumstances, normal precipitation events, or failure by Duke Energy to exercise due diligence in obtaining governmental permits or performing any other requirement of this Consent Agreement or any procedure necessary to provide performance pursuant to the provisions of this Consent Agreement. Any extension shall be granted at the sole discretion of the Department, incorporated by reference as an enforceable part of this Consent Agreement, and thereafter, be referred to as an attachment to the Consent Agreement.

16. Upon Duke Energy's successful completion of the terms of this Consent Agreement, submit to the Department a written Final Report. The Final Report shall contain all necessary documentation supporting Duke Energy's remediation of the Site and successful and complete compliance with this Consent Agreement. Once the Department has approved the Final Report, the Department will provide Duke Energy a written approval of completion that provides Covenant Not to Sue to Duke Energy for the response actions specifically covered in this Consent Agreement, approved by the Department and completed in accordance with the approved work plans and reports.
17. Notwithstanding any other provision of this Consent Agreement, including the Covenant Not to Sue, the Department reserves the right to require Duke Energy to perform any additional work at the Site or to reimburse the Department for additional work if Duke Energy declines to undertake such work, if: (i) conditions at the Site, previously unknown to the Department, are discovered after completion of the work approved by the Department pursuant to this Consent Agreement and warrant further assessment or remediation to address a release or threat of a release in order to protect human health or the environment, or (ii) information is received, in whole or in part, after completion of the work approved by the Department pursuant to this Consent Agreement, and these previously unknown conditions of this information indicate that the completed work is not protective of human health and the environment. In exigent circumstances, the Department reserves the right to perform the additional work and Duke Energy will reimburse the Department for the work.
18. In consideration for the Department's Covenant Not to Sue, Duke Energy agrees not to assert any claims or causes of action against the Department arising out of response activities undertaken at the Site, or to seek any other costs, damages or attorney's fees from the Department arising out of response activities undertaken at the Site except for those claims or causes of action resulting from the intentional or grossly negligent acts or

omissions of the Department. However, Duke Energy reserves all available defenses, not inconsistent with this Consent Agreement, to any claims or causes of action asserted against Duke Energy arising out of response activities undertaken at the Site by the Department.

19. Employees of the Department, their respective consultants and contractors will not be denied access during normal business hours or at any time work under this Consent Agreement is being performed or during any environmental emergency or imminent threat situation, as determined by the Department or as allowed by applicable law.

IT IS AGREED THAT this Consent Agreement shall be binding upon and inure to the benefit of Duke Energy and its officers, directors, agents, receivers, trustees, heirs, executors, administrators, successors, and assigns and to the benefit of the Department and any successor agency of the State of South Carolina that may have responsibility for and jurisdiction over the subject matter of this Consent Agreement. Duke Energy may not assign its rights or obligations under this Consent Agreement without the prior written consent of the Department.

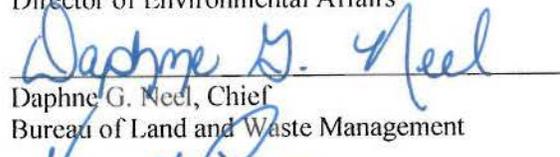
IT IS FURTHER AGREED that failure to meet any deadline or to perform the requirements of this Consent Agreement without an approved extension of time and failure to timely cure as noted below, may be deemed a violation of the Pollution Control Act, the South Carolina Hazardous Waste Management Act and/or the Solid Waste Management and Policy Act, as amended. Upon ascertaining any such violation, the Department shall notify Duke Energy in writing of any such deemed violation and that appropriate action may be initiated by the Department in the appropriate forum to obtain compliance with the provisions of this Consent Agreement and the aforesaid Acts. Duke Energy shall have thirty (30) days to cure any deemed violations of this Consent Agreement. Applicable penalties may begin to accrue after issuance of the Department's determination that the alleged violation has not been cured during that thirty (30) day period.

(Signature Page Follows)

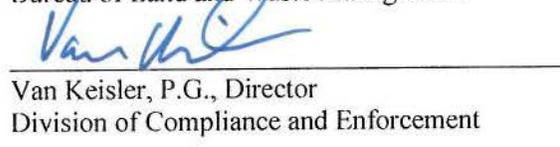
FOR THE SOUTH CAROLINA DEPARTMENT
OF HEALTH AND ENVIRONMENTAL CONTROL


Elizabeth A. Dieck
Director of Environmental Affairs

Date: 7/17/2015

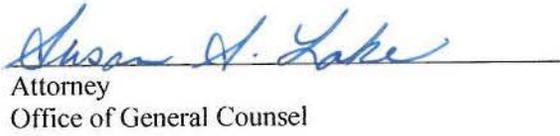

Daphne G. Neel, Chief
Bureau of Land and Waste Management

Date: 7/16/15


Van Keisler, P.G., Director
Division of Compliance and Enforcement

Date: 7-16-15

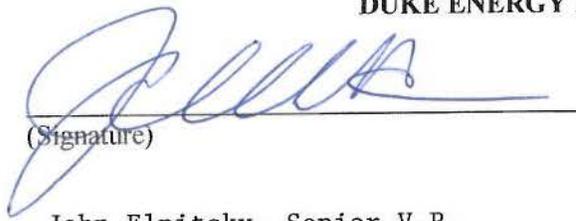
Reviewed By:


Susan A. Lake
Attorney
Office of General Counsel

Date: 7/16/15

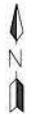
WE CONSENT:

DUKE ENERGY PROGRESS, INC.


(Signature)

Date: July 15, 2015

John Elnitsky, Senior V.P.
Please clearly print name and title



APPROX. LIMITS
1960 ASH STORAGE AREA

H.B. ROBINSON PLANT

LOCATION MAP



NOTES:

1. AERIAL PHOTOGRAPH SOURCE IS GOOGLE MAPS WITH PHOTOGRAMMETRY DATE OF 2013.
2. APPROXIMATE LIMITS SHOWN FOR THE ROBINSON 1960 ASH STORAGE AREA ARE BASED ON DELINEATION BY AMEC FOSTER WHEELER FROM FIELD INVESTIGATION PERFORMED IN 2014.

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								CLIENT: DUKE ENERGY 516 SOUTH CHURCH STREET CHARLOTTE, NC 28202				DATUM: PROJECTION: DRAWN BY: REVIEWED BY: SCALE: AS NOTED		PROJECT: EXHIBIT A DUKE ENERGY - H. B. ROBINSON PLANT		PROJECT NO: 1001171448	
								Amec Foster Wheeler Environment & Infrastructure, Inc. 401 S. HARRIS CREEK DRIVE, SUITE 100 DURHAM, NC 27709 TEL: (919) 381-2000 FAX: (919) 381-2007 LOCAL/NAJ/NO/IND/1-2014/06/02/017/0247		TITLE: 1960 ASH STORAGE AREA LOCATION MAP		DATE: 10/1/2014		DRAWING NO: EXHIBIT A			
REV.	D.	M.	Y.	ISSUE/REVISION DESCRIPTION	ENCL.	APPR.											