



*Buck Steam Station
Coal Ash Impoundment Closure Plan
Beneficiation Facility*

Public Hearing
February 24, 2020



Buck Steam Station

- Located in Rowan County
- Owned by Duke Energy Progress
- Six-unit, 256-megawatt coal-fired plant
 - Began operation in 1926 as a two-unit plant and expanded to a six-unit plant
 - Retired October 2012
 - Demolition will be complete in 2020
- Began construction of gas-fired combined cycle plant in 2009
 - Began operation December 2011
 - 620-megawatts
- Three coal ash impoundments
 - 150 acres
 - Currently contains 6.6 million tons of ash





COMBINED CYCLE PLANT

ADDITIONAL PRIMARY DAM
ROWAN-068

CELL 1
ADDITIONAL PRIMARY
BASIN

CELL 2
PRIMARY BASIN

BASIN 1 TO BASIN 2 DAM
ROWAN-069

BASIN 2 TO BASIN 3 DAM
ROWAN-070

DIVIDER DIKE
ROWAN-071

CELL 3
SECONDARY BASIN

MAIN DAM
ROWAN-047

NPDES OUTFALL-002
(ABANDONED)

WASKIN RIVER

NPDES OUTFALL-007

WASKIN RIVER

N

STATE ROUTE 103

Coal Ash Management Act – House Bill 630 – July 2016

- Ash Beneficiation
 - By January 1, 2017 – Duke had to identify two facilities to beneficially reuse ash for cement production
 - By July 1, 2017 – Duke had to identify a third facility for beneficial reuse
 - Process at least 300,000 tons annually
 - Close basins by December 31, 2029
- Deemed HF Lee, Cape Fear and Weatherspoon intermediate-risk
- December 31, 2019 – Duke submitted Closure Plans for closure by excavation for Buck, Cape Fear, HF Lee and Weatherspoon
- December 31, 2019 – Duke, DEQ and several community environmental groups entered into a Settlement Agreement
- January 31, 2020 – Consent Order incorporating the terms of the Settlement Agreement filed with the Wake County Superior Court
- February 5, 2020 – Consent Order entered by Judge Paul Ridgeway



Closure by Excavation Beneficially Reuse Ash

- Three impoundments and one dry stack will be excavated - 6,675,889 tons of ash
- Excavated ash will be beneficially reused by the STAR[®] (Staged Turbulent Air Reactor) Technology process
 - Thermal process to reduce amount of unburnt carbon
 - Transforms ash into high-quality product for use in concrete industry
 - Full production designed to process 400,000 tons of ash per year
 - Ten years of production will reuse 4 million tons of ash
 - Remaining 2.68 million tons might require another handling process



Closure by Excavation Beneficially Reuse Ash

Estimated Project Schedule

- Began construction of STAR[®] Plant – 2018
- Dewatering of ash basins – ongoing
- Complete coal ash excavation – 4th Quarter of 2029
- Site Restoration – 4th Quarter of 2030





Example of a
STAR® Plant



Source: The SEFA group

Submit comments by mail to:

Louise Hughes
N.C. Department of Environmental Quality
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

Submit comments by email to:

rowancomments@ncdenr.gov - Include Closure Plan in the subject

The Closure Plan may be found at:

<https://deq.nc.gov/news/key-issues/coal-ash-excavation/2020-coal-ash-closure-plans-buck-cape-fear-hf-lee-and#h.f.-lee-coal-ash-closure-plan>

