



*HF Lee Steam Station  
Coal Ash Impoundment Closure Plan  
Beneficiation Facility*

Public Hearing  
February 11, 2020



## *HF Lee Steam Station*

- Located in Wayne County
- Owned by Duke Energy Progress
- Three-unit, 382-megawatt coal-fired plant
  - Began operation in 1951
  - Retired September 2012
  - Demolished in 2017
- Began construction of gas-fired combined cycle plant in 2009
  - Began operation in December 2012
  - 920-megawatts
- Four coal ash basins
  - 297 acres
  - Currently contains 6.2 million tons of ash





TITLE COAL COMBUSTION RESIDUALS SURFACE  
IMPOUNDMENT CLOSURE PLAN DRAWINGS  
1982 BASIN  
HF LEE ENERGY COMPLEX

# *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 (did not cover H.F. Lee)
- 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*

- Four coal ash impoundments will be excavated - 6,225,000 tons of ash
- Excavated ash will be beneficially reused by the STAR<sup>®</sup> (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 2.2 million tons might require another handling process



## *Closure by Excavation Beneficially Reuse Ash*

### **Estimated Project Schedule**

- Began construction of STAR<sup>®</sup> Plant – 2018
- Dewatering of ash basins – ongoing
- Complete coal ash excavation – 4<sup>th</sup> Quarter of 2029
- Site Restoration – 4<sup>th</sup> 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:

[leecomments@ncdenr.gov](mailto:leecomments@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>

