



# RUSSELL COUNTY

137 Highland Drive, Suite A  
PO Box 1208  
Lebanon, Virginia 24266

## *LANDFILL DEVELOPMENT FEASIBILITY (MOSS III LANDFILL)*



Charleston • Morgantown • Winchester, VA

### **PRESENTER:**

David K. Paylor  
Vice President of Environmental



# RUSSELL COUNTY ENGAGED POTESTA

- Identify Health/Safety Issues (regarding citizens)
- Evaluate the Feasibility of the Site as a Landfill
- Address Unique Site Features
- Address Environmental Concerns
- Meet/Exceed State Regulations

# SITE EVALUATION

## **REVIEWED FATAL FLAW SCREENING REPORT**

- Further Evaluation Proposed
  - Stability of slopes/types of materials/dams
  - Verification of limits of underground mining
  - Geologic faults/seismic activity

## **SITE VISIT**

- Bowl-shaped depression
- Existing coal refuse
- Adjacent dams

# SITE EVALUATION

## **LETTER REPORT WITH RECOMMENDATIONS**

- No issues identified that make the site “unpermittable”
- Detailed evaluation/proper technical design are critical to addressing issues identified for further assessment

## **RECOMMENDATIONS**

- Landfill liaison
- Leachate collection/detection layers
  - Gravity flow to outside landfill
- Adequate leachate treatment plan
- Remove ponded water

# SITE EVALUATION

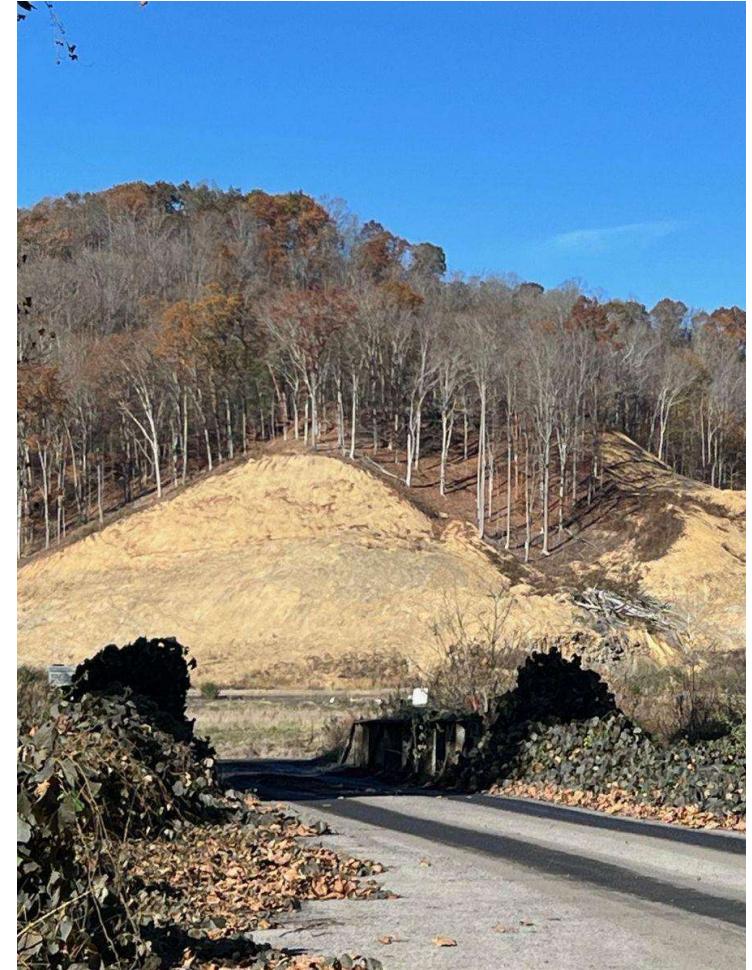
## **RECOMMENDATIONS**

- Remove unsuitable material
  - Coal fine/soft soils
  - Acceptable firm foundation
- Evaluate the suitability of coarse coal refuse
- Detailed Stability Analyses
  - Natural soils
  - Coarse coal refuse
  - Existing coal refuse dam embankments
  - Proposed liner system
  - Landfill waste

# SITE EVALUATION

## RECOMMENDATIONS

- Mine Safety & Health Administration (MSHA)
  - Approval for fills impacting Dams 1 and 2
- Evaluation of Underground Mining
  - Horizontal/vertical location
  - Height of mine void
  - Angle of draw



# ADDITIONAL REQUIREMENTS

- Design/implement mine stabilization program
  - e.g., full roof contact grouting
- Slope stability for all components
  - Prepared subgrade
  - Coal refuse
  - Landfill liner system
  - Slopes/embankments of coal refuse fills/impoundments
  - Natural ground slopes (under/adjacent to landfill)
  - Temporary/final slopes of landfill (waste placement, cover material)
  - Material strength parameters based on sampling/laboratory analyses

# ADDITIONAL REQUIREMENTS

- Develop dewatering plan
- Evaluate bearing capacity, settlement/consolidation of subgrade, etc.
- Leachate storage
- Liner material able to elongate due to stress/strain from mine subsidence
- Meet/exceed Virginia Department of Environmental Quality Regulations

# SUMMARY

- Meet/exceed Virginia Department of Environmental Quality Regulations
- No fatal flaws identified to date
- Detailed evaluation/proper technical design are critical to addressing issues identified for further assessment

