



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

Project #: 0103-22-0164

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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
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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

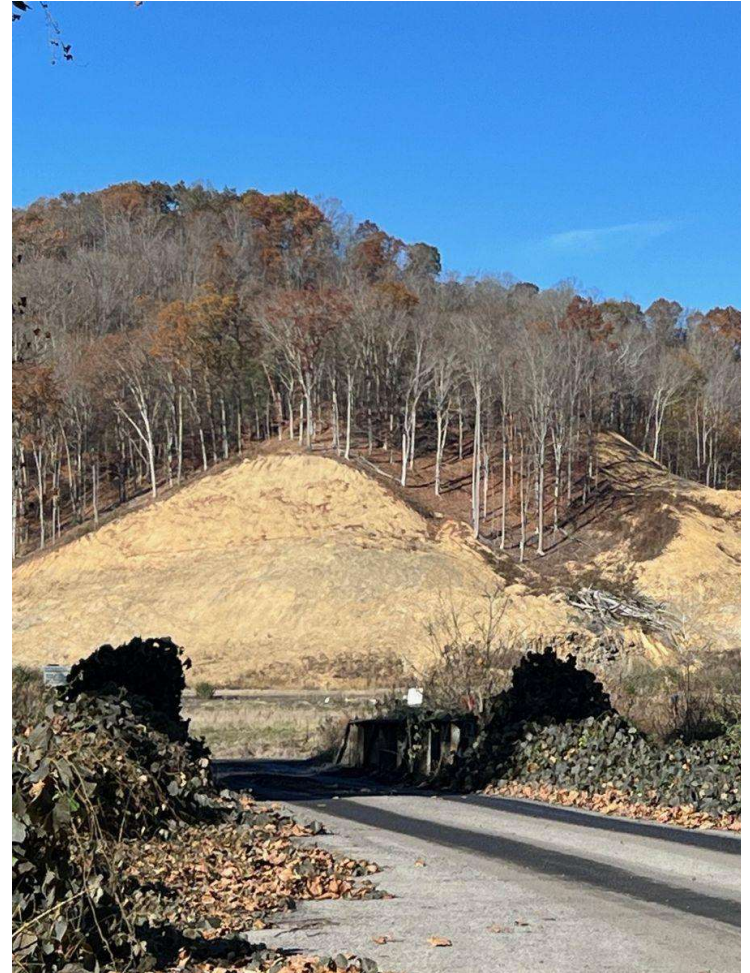
RECOMMENDATIONS

- 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

