

Francis Farm Landfill Update Restrictive Cover Implementation Haywood County, North Carolina

January 2022



Landfill History

- ▶ Francis Farm Landfill (FFLF)
Accepted Waste from 1973 to 1993 and was Closed in 1995
- ▶ County Required to Maintain
Closed Landfill (Post Closure Care)

What's Post Closure Care?

- ▶ Landfill Gas Monitoring at Compliance Boundary
- ▶ Groundwater & Surface Water Monitoring
- ▶ Facility Maintenance
 - ▶ Stormwater Management
 - ▶ Soil Cap (cover over waste)
 - ▶ Roads and Access
 - ▶ Sediment and Erosion Control

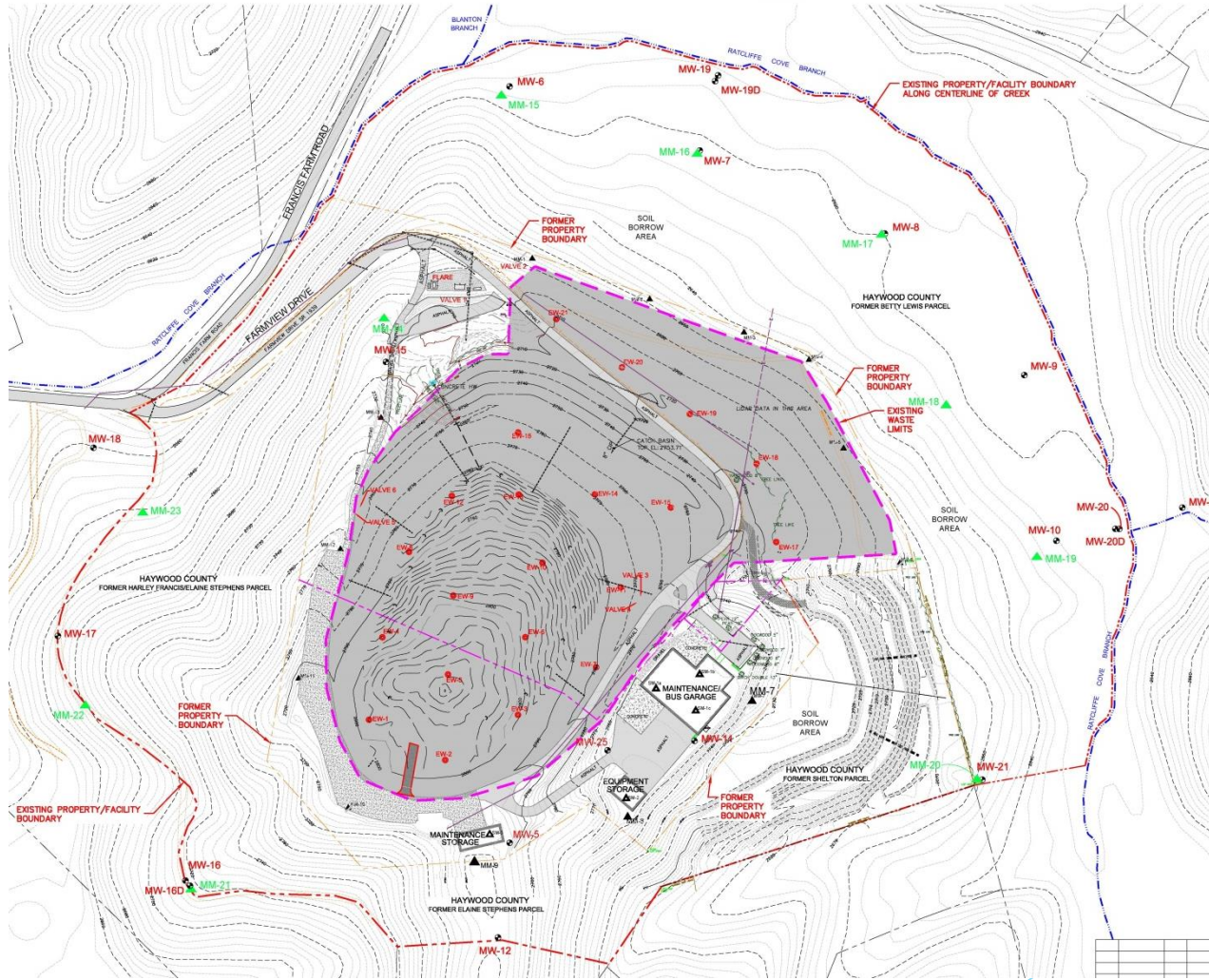
What were the Environmental Compliance Problems?

- ▶ Landfill Gas Concentrations Exceed Limits at Facility Boundary under NCDEQ Rules
- ▶ Groundwater Contaminants Exceed Limits in Groundwater Monitoring Wells under NCDEQ Rules

Landfill Gas Compliance Steps

- ▶ Expand Facility Boundary by Purchase of Properties Surrounding Landfill
- ▶ New Landfill Gas Monitoring Plan Approved
- ▶ New Landfill Gas Monitoring Wells Installed
- ▶ Landfill Gas Recovery System Installed and Operational
- ▶ Facility is in Compliance for Landfill Gas

Revised Facility Boundary



Groundwater Compliance Steps

- ▶ Assess Extent of Groundwater Impacts
- ▶ Identify Remedies in Assessment of Corrective Measures Report
- ▶ Public Meeting to Discuss the Report
- ▶ Select Remedies
- ▶ Prepare a Corrective Action Plan (CAP)
- ▶ Implement the Plan
- ▶ Assessment in Progress

Groundwater Plume Map (August 2019)



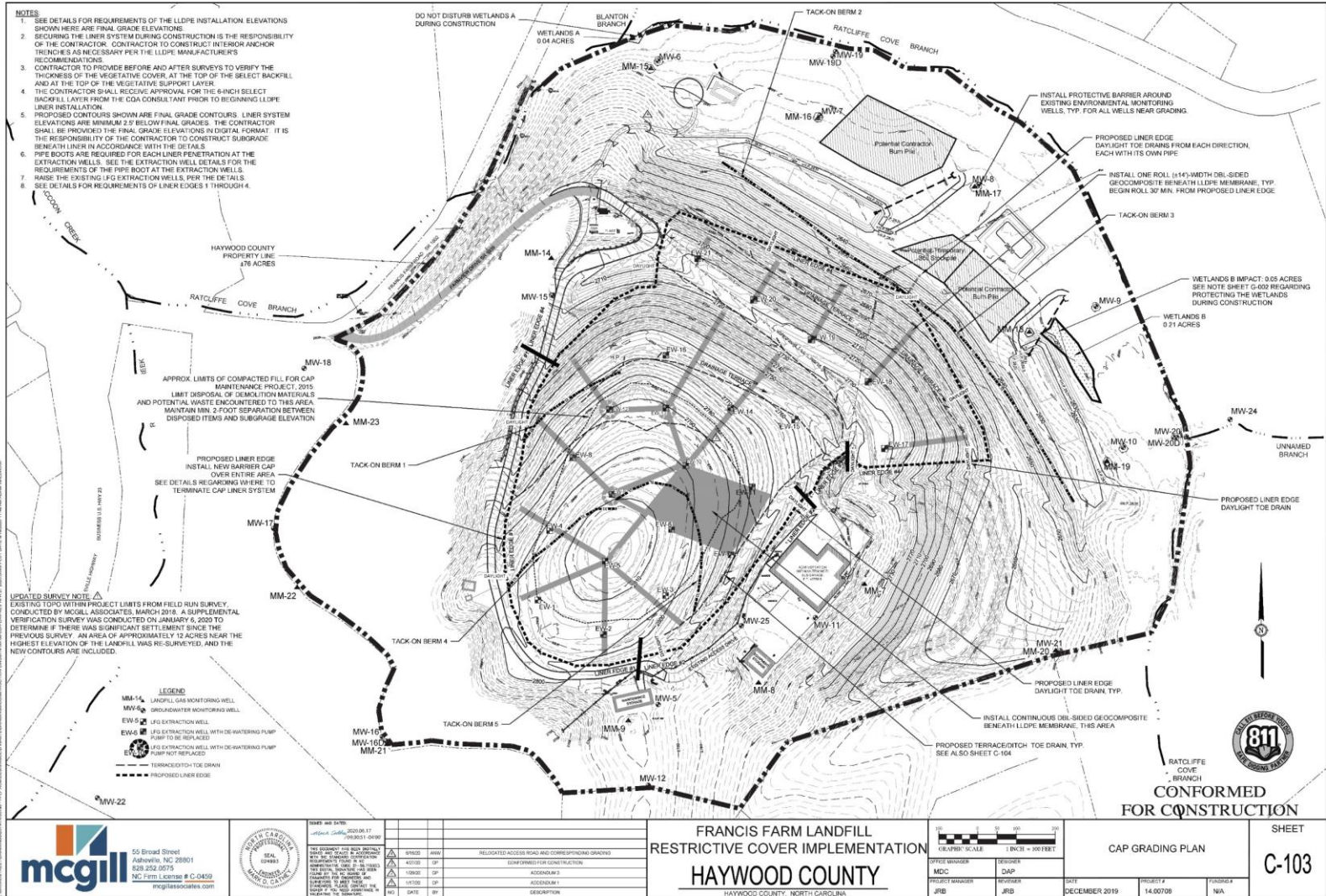
What “Remedies” were Approved?

- ▶ Control of Contaminant Sources
 - ▶ Landfill Gas Mitigation (System)
 - ▶ Leachate Mitigation (Restrictive Cover)
- ▶ Natural Attenuation of Groundwater
- ▶ Active Groundwater Remediation as a Contingency Only

What was included in the CAP?

- ▶ Restrictive Cover
- ▶ Stormwater Management
- ▶ Active Landfill Gas Recovery System Replacement
- ▶ Update Leachate Recovery System

Corrective Action Plan



Restrictive Cover Implementation

- ▶ T&K Construction Selected and Awarded a Contract in the amount of \$5.4 Million. Notice to Proceed in June 2020
- ▶ Construction Completed in August 2021 for a Final Contract Amount of \$5,353,607.
- ▶ One Year Warranty Period

Restrictive Cover Implementation



Restrictive Cover Implementation



Restrictive Cover Implementation



Restrictive Cover Implementation



Restrictive Cover Implementation



What has Been Completed?

- ▶ Facility Boundary Expanded
- ▶ Landfill Gas Recovery System Installed and Operational
- ▶ Leachate Recovery System Installed and Operational
- ▶ Restrictive Cover Installed

What's Next?

- ▶ Continue to Monitor Landfill Gas, Leachate, Groundwater & Surface Water
- ▶ Evaluate Effectiveness of the Corrective Action Plan Through Assessment Reports
- ▶ Next Corrective Action Evaluation Report April 2022
- ▶ Follow-up Report in 2024