

PSEG Keys Energy Independent Environmental Monitoring Program



Overview

- Company Background
- Project Background
- Program Drivers
- Managing Construction Compliance
- Program Implementation
- Benefits
- Conclusions





Keys Energy Center LLC

Consisting of:

15 Fossil Generation Facilities
3 Nuclear Generation Units
3 Natural Gas Plants Currently
in Construction (MD, NJ, and
CT)

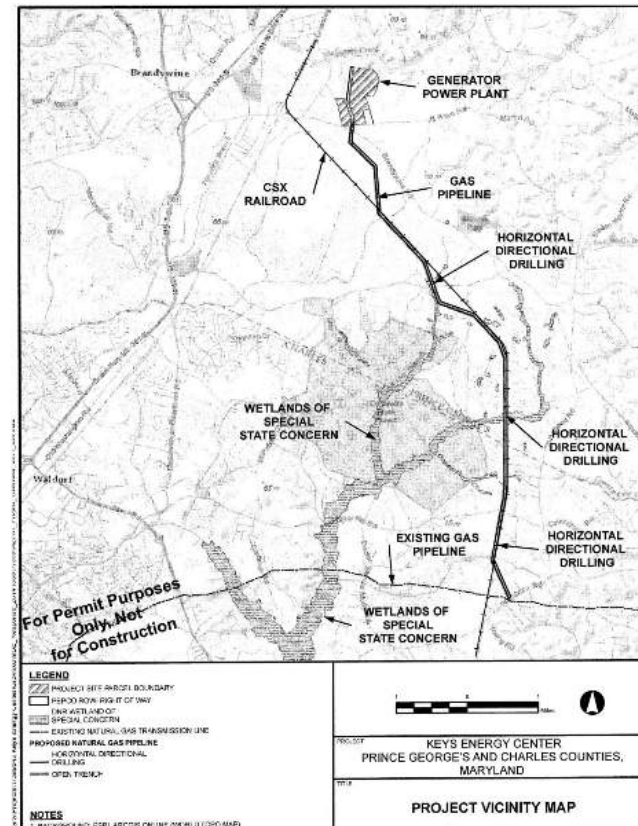


- Engineering, Planning and Environmental
- Established in 1946
- Over 500 personnel
- 20 Offices



Project Background

- The PSEG Keys Energy Center (Project) is a combined cycle plant that will bring 755 megawatts of highly efficient generating capacity to the state of Maryland supporting system flexibility and reliability
- 7.9 miles of 20" natural gas pipeline through sensitive environmental features
- 1.93 miles protected by timber mats during construction



Program Drivers

Regulatory Drivers



- Maryland Department of the Environment Nontidal Wetlands and Waterways Permit, *"Employment of an Independent Environmental Monitor who will provide full time over-sight of construction, through final stabilization."*

Business Drivers



- Environmental Stewardship
- It's the RIGHT thing to DO!

Project Drivers

Natural Resource Impacts

- 9.32 acres of forested non-tidal wetlands converted to emergent nontidal wetlands
- 0.41 acres of scrub-shrub wetland converted to emergent nontidal wetland
- 3 HDD's (1 at Wolf Den Branch, 1 at Zekiah Swamp Run, 1 at Wetland KS-WV)
- Multiple open cut stream crossings in Tier II Watersheds

Time of Year Restrictions

- 12/15/2015 - 06/15/2016 - Bald eagle nesting season
- 02/15/2015 - 06/15/2016 - In-stream work restriction (applied to HDD as well)
- 04/15/2016 - 08/31/2016 - Northern Long Eared Bat (NLEB) tree clearing restriction

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Managing Construction Compliance

Independent Environmental Monitor



Defining the Independent Environmental Monitor

- Independent - no affiliation with the project designer or contractor
- Environmental - clear understanding of environmental commitments, permit conditions and the design plans relevant to environmental requirements.
- Monitor - verifies that design and construction is in compliance with the project's authorizations

The Independent Environmental Monitor serves as the "eyes and ears" of the regulatory agencies during all phases of construction.

A Day in the Life of an IEM

Permit & Construction Document Review

- Pre-construction plan review
- Ongoing plan review during construction
- Focus is on avoidance and minimization of resource impacts
- Ensure adequate E&S controls
- Sequence of construction
- Limits of disturbance
- Overall constructability



Coordination with Project Team

- Member of Construction Management Team
- Attend construction project meetings
- Document construction compliance
- Provide updates at team meetings throughout construction
- Make recommendations to avoid compliance issues
- Make recommendations to further avoid and minimize impacts



Typical Environmental Issues



- Truck Washing
- Wetlands / Wetland Buffer
- Tree Clearing and Grubbing
- Stream Crossings
- Swamp Slopes
- Forest/Tree Preservation
- Permitted Impacts
- Seasonal Construction
- E&S Controls
- Cultural Resources
- Floodplain
- Limits of Disturbance
- Graded Areas
- Time of Year Restrictions
- Threatened Species

What an IEM does not do!

- Make or approve design changes
- Inspect and approve non-environmental work (concrete testing, structures, infrastructure, etc.)
- Direct the contractor
- Approve contractor materials, quantities, etc.

Monitoring and Tracking Environmental Compliance (MTEC)

- ### Documentation
- Photos
 - Real Time
 - Demonstrates
 - compliance
 - Relates to other data



Photographs



Approved Plans



Reporting



Compliance Issues



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|------------------------------|----------------------|-----------------------------|
| • Truck Washing | • Permitted Impacts | • Cultural Resources |
| • Wetlands / Wetland Buffers | • Stream Crossings | • Floodplains |
| • Tree Clearing and Grubbing | • E&S Controls | • Limits of Disturbance |
| • Steep Slopes | • Mat Placement | • Critical Areas |
| • Forests/Tree Preservation | • Threatened Species | • Time of Year Restrictions |

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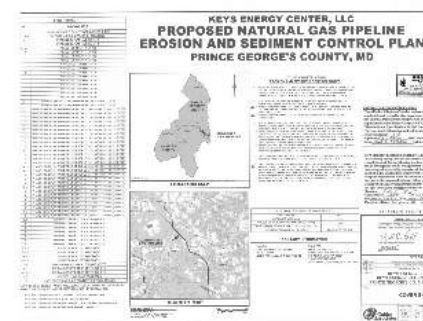
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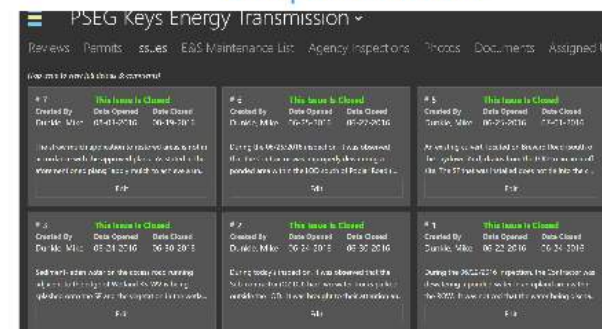
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Reporting



Compliance Issues



Environmental Compliance Training

- Development of Environmental Compliance Training (Owner Staff, Contractors, Etc.)



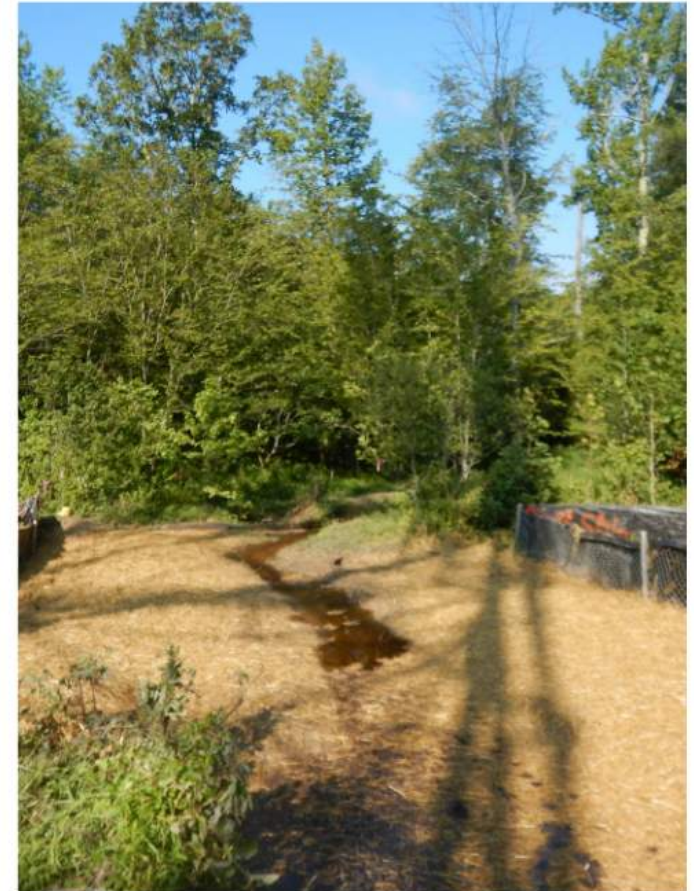
Program Implementation

- Coordination with Agency Inspections (WSSC, DPIE, MDE)
- Reporting to MDE and Corps on HDD Inadvertent Release in uplands
- Reporting to MDE on E&SC discharge into wetland during trenching operations
- Daily report notifications to regulating agencies and invested parties
- No Agency Notice of Violations or Non-Compliances issued prior to or during construction



Benefits

- Builds solid relationships between regulatory agencies and company
- Builds relationships between construction management, engineering, and monitors
- Reduction of risks of non-compliance, fines, delays,
- Focuses on permit requirements and permit conditions
- Defines roles and responsibilities
- Documentation
- Daily focus on environmental concerns



Conclusions

- Reduces Risk of Non-compliances
- Standardizes Expectations
- Documents Compliance
- Strengthens Regulatory Relationships

Thank You

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