Marinette Manufactured Gas Plant Site – Sediment Clean Up

Presented by:
Brian Bartoszek & Jenny Short

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Lower Menominee River Area of Concern Citizens Advisory Committee Meeting

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Integrys Regulated Operations
WPS In the Community
Manufactured Gas Plant (MGP) History

- Industrial facilities that produced gas from coal, oil and other feedstock
- Operated in the United States in the early 1800s through mid 1900s
  - Coal heated in airtight chamber
  - Decompose into gas, tar and coke
  - Gas purified before distribution
- Gas initially used for street lighting, then for cooking, then heating
MGP Byproducts

- Byproducts: coke, coal tar, ammonia, light oils, wood chips
- Coke was used in iron smelting and metallurgical industries
- Coal tar was used in wood preservatives, road finishes, dyes, drugs, fertilizers, roofing material, etc.
- Some were disposed on property and potentially impact soil, groundwater, and sediment
Marinette MGP History

- Constructed 1901-1910; operated through 1960
- Operated by Marinette Lighting Company and Menominee and Marinette Light and Traction Company
- City of Marinette purchased the property in 1962
- Structures were removed during the wastewater treatment plant expansion
- Former slough used as a logging slip and run filled in 1945 through 1960
Former Marinette MGP - Site Location
Former Marinette MGP
Upland Areas

Site investigations for soil and groundwater in progress

MGP-residuals were removed and disposed as part of the WWTP expansion in 1960 and sewer expansion in 2004

Additional investigations to be completed July-August 2012 to evaluate the potential risk and determine if cleanup is required
River Areas

- MGP residuals observed on the Menominee River in the vicinity of the mouth of the former slough
- Sediment sampling has been performed to assess the extent of MGP residuals, evaluate potential risks, and to support remedial design
Sediment Investigation
Contaminants of Concern for the MGP are primarily organic compounds known as polycyclic aromatic hydrocarbons (PAHs).

MGP residuals in the form of tar-like material were identified in the vicinity of the mouth of the former slough.

MGP residuals in the form of PAH concentrations above generic sediment screening values were also identified in this area.
Sediment Cleanup Options

- Monitored natural recovery, capping, dredging, or a combination

**Proposed Sediment Remediation Option**
- Remove sediment with NAPL
- Remove adjacent sediment with PAH concentrations above the generic screening levels
  - Place a sand cover over dredged areas

- USEPA selects the final sediment remediation option with public input gathered in a 30 day public notice
Example Sediment Cleanup
WPS Sheboygan Site
Sediment Cleanup Details (Proposed)

- Wet excavation with steel sheet pile wall known as a cofferdam will be installed from the edge of Nestegg Marine to Marinette Marine
- Contaminated material will be removed with backhoes, mixed on-site with additives to dewater the material and transported to a landfill
- On-site water treatment and discharge to river
- Perimeter air monitoring
Proposed Sediment Cleanup Area
Review and Decision Process

- Agreement established between USEPA and IBS for removal action - draft in progress
- Work Planning - in progress, summer 2012
- Approvals and project start targeted for fall 2012
Tentative Access Schedule

- The Boom Landing boat launch will be closed to the public throughout the duration of the project.
- The cleanup crews are anticipated to begin mobilizing in September.
- The project is planned to be complete in December.
- Restoration of the upland staging areas, if necessary, will be completed in May 2013.