Decommissioning in Generation and Energy Delivery Systems

MARYLAND-DISTRICT OF COLUMBIA UTILITIES ASSOCIATION

2016 Environmental Conference
Jim Roewer, USWAG
USWAG’s Decommissioning Focus

* Identify & Focus on Issues within USWAG’s Purview
* Evaluate USWAG’s role in Decommissioning
  * Generation Facility Closure/Decommissioning/Conversion
  * Transmission/Distribution Facility Closure
* Coordinated Effort Across Committees
  * Ash, Low Volume Waste, PCB, R&R (and DOT)
USWAG’s Decommissioning Focus

* Decommissioning Resource Page
* Decommissioning Workshops
  * June 2014 – Washington, DC
  * June 2015 – Detroit
  * September 2016 – Houston
USWAG Decommissioning Resources

Decommissioning Issues Resources

General Information
In 2013, the USWAG Steering Committee initiated an effort to identify and develop USWAG’s role in addressing decommissioning issues relating to solid/hazardous waste, toxic substances and related issues within the group’s purview. This resource page is designed to support members’ interests associated with decommissioning activities, including the compilation of existing USWAG products—issue papers, memoranda, resource material—relevant to decommissioning, workshop and symposia presentations and additional information.

August 2013 Decommissioning Focus Group Powerpoint
October 2013 Decommissioning Issues

Decommissioning Workshops
September 27 - 28, 2016 - Houston, Texas
June 15, 2015 - Detroit, MI - Workshop Presentations
June 5 - 6, 2014 Workshop Flyer

Workshop Presentations:
- Preparation for Power Plant Retirement/Reconfiguration; Terry Young, ARCADIS US, Inc.
- Beginning with the End in Mind: An Integrated Approach to the Planning and Implementation of Coal-Fired Plant Decommissioning and Ash Pond Closure; Matthew Johns, Christopher Hardin, CH2M HILL
- Building Material Surveys: Best Practices for Fitting Data Needs; Andy Lewis, Golder Associates
- Decommissioning and Demolition of the Benning Road Power Plant; Jim McNulty, Michael Williams, Pepco Energy Resources
- Site-Wide RCRA Closure at Former Coal-Fired Power Plant; Andy Walker, CB&I
- Successful Demolition of Historic Cape Canaveral Air Force Station Launch Facilities; Angie Jones, AMEC, Inc.
- Closure/Decommissioning Planning Process Overview with Case Studies & Lessons Learned at Six Retired Power Plants in Ohio; Earl Brown, Jr, Civil and Environmental Consultants, Inc.
- ISM Case Studies: Using Project Objectives to Select Laboratory Processing Options; Mark Bruce, TestAmerica Laboratories, Inc.
- Integrating Environmental Liability Management and Fiscal Requirements for Managing
USWAG Decommissioning Resources

- Workshop Presentations
- Ash Disposal Unit Case Studies
- Solid & Hazardous Waste Issues
  - Disposal of SCR Catalysts
  - Hazardous Waste Generator Guidance
  - Lead-Based Paint Abatement and Debris Regulations
  - Transportation of Hazardous Materials by Highway
  - Used Oil Management
Decommissioning Efforts
Decommissioning Efforts

- Project Planning
- Defining Project Goals
- Identification of Regulatory Concerns
  - Permitting
  - Recycling
  - Disposal
  - Safety
  - Emergency Response
Decommissioning Efforts

- Contingencies
  - Financial
  - Preparing for Murphy’s Law
- “Typical” Sites/Commonality of Issues
Decommissioning Efforts

- Defining & Managing Risks
  - Site Characterization
  - Hazardous Materials Assessment
- Potential Hazards
  - Physical
  - Chemical – Arsenic, Asbestos, Lead, PCBs
Future Workshop Topics

* Planning for Plant Closures
* End-Use Planning & Decision Making
* Value-added Management of Recovered Materials
* Lessons Learned: What Went Wrong & Contingency Planning
Future Workshop Topics

* Regulatory Compliance
  * Permit Modifications
  * Changes of Generator Status
  * Staying in Compliance Throughout Closure
* Final Approval & Sign-off
Substation Decommissioning Document
USWAG Substation Decommissioning Document

- Resource for USWAG members undertaking or contemplating decommissioning of a substation
- Primary focus on compliance with federal PCB regulations under TSCA
USWAG Substation Decommissioning Document

- Preliminary Planning
- Assessment
- Site Cleanup
- PCB Spill Cleanup Options
- Storage and Disposal of Equipment & Materials
- Property Transfer Issues
Regulatory and Practical Issues Related to Assessment and Disposal

- Determining the PCB Concentration for Disposal Purposes
- Applicability of the PCB Spill Cleanup Policy
- Managing As-Found < 50 ppm PCB Remediation Waste
- Regulatory Status Determination – PCB Remediation Waste vs. PCB Bulk Product Wastes
- Discovery of PCBs in Non-Liquid Materials
Assessment

* Technical and Operational Considerations
* Assessment and Analysis of Equipment, Materials and Wastes
* Looking to Members for Input
# Site Cleanup

## Summary of PCB Cleanup Options

<table>
<thead>
<tr>
<th>Cleanup Option</th>
<th>Notification Required?</th>
<th>EPA Approval?</th>
<th>Immediate Cleanup Possible?</th>
<th>Site Sampling?</th>
<th>Cleanup Levels</th>
<th>Disposal Options</th>
<th>Dispose of Based on As-Found Concentration?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB Spill Cleanup Policy (40 C.F.R. § 761.120-135)</td>
<td>Sometimes¹</td>
<td>No</td>
<td>Yes</td>
<td>High concentration – Required</td>
<td>Specified in regulations</td>
<td>Subpart D applies</td>
<td>No³</td>
</tr>
<tr>
<td>Self-implementing cleanup (40 C.F.R. § 761.61(a))</td>
<td>Yes (at least 30 days prior to commencement of cleanup)</td>
<td>Yes⁴</td>
<td>No</td>
<td>Required – Comprehensive</td>
<td>Specified in regulations</td>
<td>Specified in regulations</td>
<td>Yes</td>
</tr>
<tr>
<td>Performance-based disposal (40 C.F.R. § 761.61(b))</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No⁵</td>
<td>None⁶</td>
<td>Specified in regulations</td>
<td>No⁷</td>
</tr>
<tr>
<td>Risk-based disposal approval (40 C.F.R. § 761.61(c))</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Flexible⁸</td>
<td>Flexible⁹</td>
<td>Flexible¹⁰</td>
<td>Per approval</td>
</tr>
</tbody>
</table>
Site Cleanup

- PCB Spill Cleanup Options (761.61)
- USWAG Risk-Based Remediation Wastes Disposal Approval
- EPA’s Site Revitalization Guidance
- Decontamination Requirements
- Management of Contaminated Solid Surfaces
Storage & Disposal

- Electrical Equipment: Storage for Reuse
- Storage for Disposal
- Disposal Options for PCB Wastes (Liquids and Equipment)
- Decontamination Requirements for Tools and Equipment
- Additional Considerations
Property Transfer Issues

* Real Property
  * Sale of PCB-Contaminated Land and Facilities
  * Disposition of Equipment and Other Assets
Questions?