Best Practices to Set Up a Project for Safe and Efficient Decommissioning

Presented by

Luke Jefts

Anchor QEA

May 20, 2025

ANCHOR QEA

What is Decommissioning?

- From Department of Energy:
  - Takes place after deactivation and includes surveillance and maintenance, decontamination and/or dismantlement.
  - These actions are taken at the end of the life of a facility to retire it from service with adequate regard for the health and safety of workers and the public and for the protection of the environment.
  - The ultimate goal of decommissioning is unrestricted release or restricted use of the site.

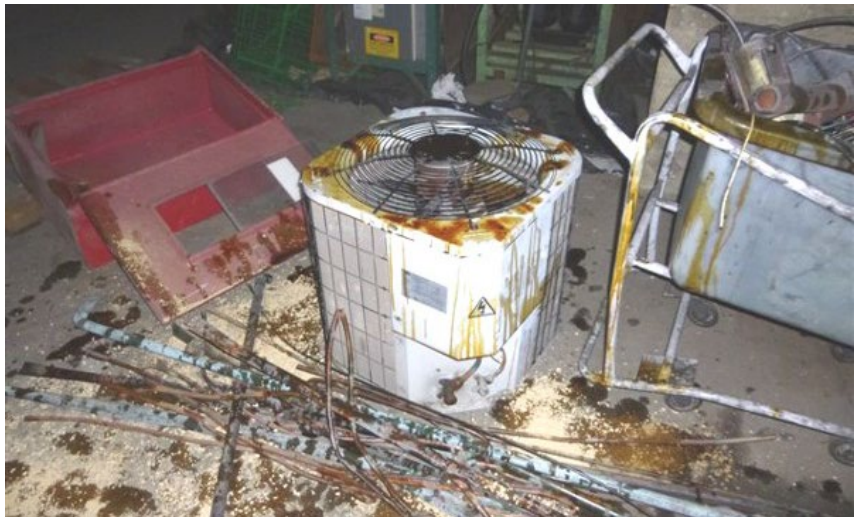
Lesson Learned – Plant is Ready for Demolition

- Former Coal-fired Power Plant
- Facility personnel tasked with prepping plant for demolition
- No written plan or documentation of decommissioning
- Demolition bid specifications by owner indicate plant is “ready for demolition”

ANCHOR QEA

Lesson Learned – Selling Equipment for Scrap

- Site in Bankruptcy
- Trustee's role is to maximize revenue
- Purchaser's goal to get scrap to market



ANCHOR QEA

Lesson Learned – Facility Transfer and Demolition

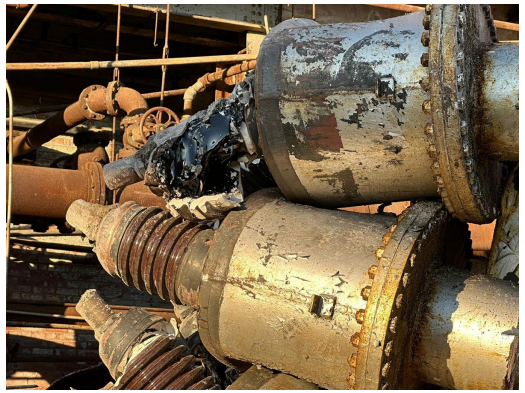
- Assets (power generation and manufacturing facility) sold to LLC
- Land sold to neighboring property owner
  - Intended use: Farming
- Limited pre-demolition assessment or decommissioning
  - Pre-demo asbestos survey
- Post demolition
  - Coal ash, PCBs (> 50 ppm), asbestos, PAHs, demolition debris found in subsurface soils
  - LLC dissolved
  - Lawsuits begin

Lithology	Lithology Description
	Black (10YR 2/1), dry, COAL ASH
	Brownish-yellow (10YR 6/6), dry, SANDY LOAM 3.0' bgs - Melted plastic

ANCHOR QEA

Lesson Learned – Project Awarded Before Understanding Environmental Conditions

- Former power plant scheduled for demolition
- 20-page RFP/Specification – PCB inspection report was “pending” at time of bid
  - RFP did not include addressing PCBs in facility other than related to transformers and capacitors
- PCB-contaminated residuals and equipment throughout facility
  - Extensive pre-demolition cleaning required to preserve scrap (vs. having scrap metal be managed as remediation waste)
  - Cleaning performed as T&M



ANCHOR QEA

Lesson Learned – Demolition Dust Liability

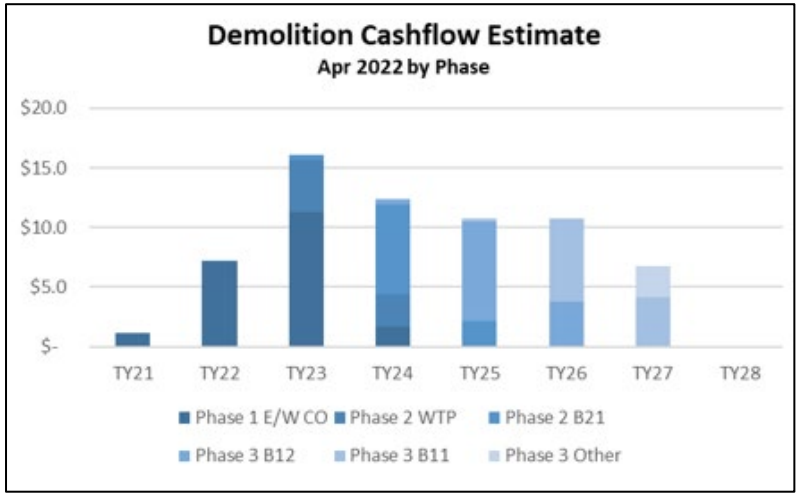
- Demolition of former electrical equipment manufacturing facility
  - No air monitoring during demolition
  - No pre-demolition washdown
- Adjacent (residential) landowner records dust releases during demolition
  - Claims their property is covered in dust
  - Soil samples from neighboring property tested for PCBs, low levels detected
  - Lawsuit follows against owner, engineer, demolition contractor

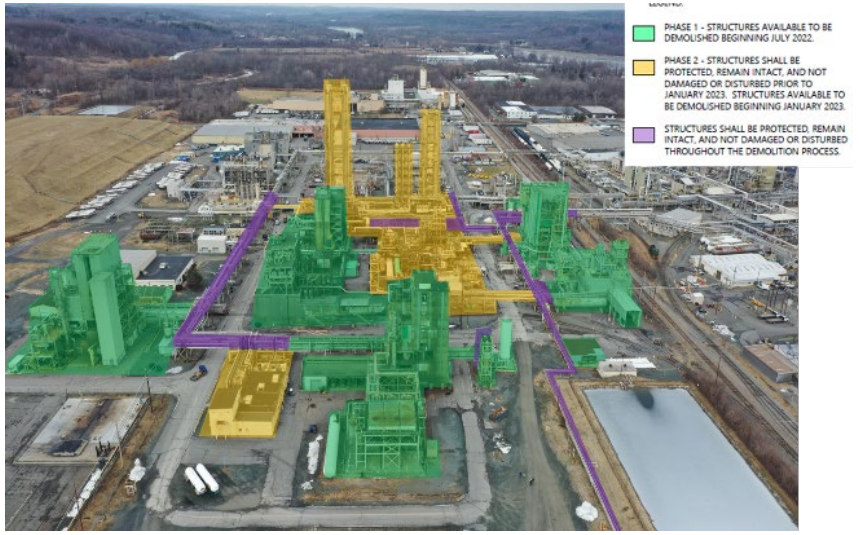
Where to Begin

- Vision/Objectives
- Build the Team
  - Roles, responsibility and ownership
- Communication
  - Who are stakeholders
- Plan
  - Environmental
  - Documentation
  - Procurement
  - Performance
  - Safety
- Implementation

Develop Vision/Plan

- Develop a clear plan and strategy
- Develop a realistic schedule and budget
- Get buy-in from the operations team
- Get buy-in from senior management
- Understanding the end state of the site
- "Develop a clear path and strategy—without it, one can get lost along the journey"





ANCHOR QEA

Build the Team

- Retain key critical operators/leaders
- Understand internal capabilities/resources
- Supplement with external resources
- Define roles, responsibilities, and ownership

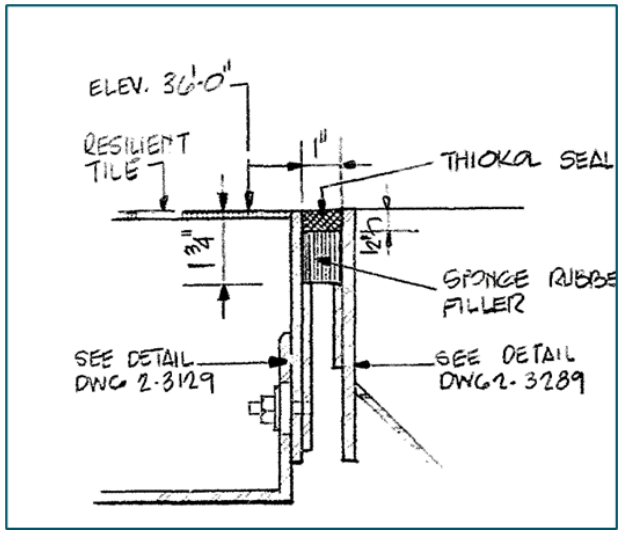
ANCHOR QEA

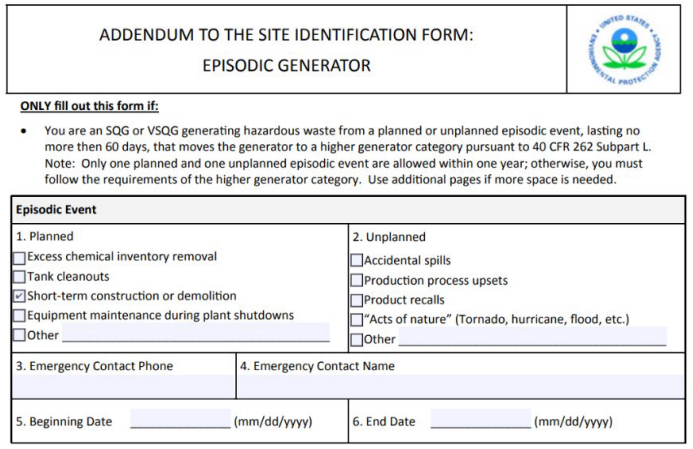
Communication

- Support, educate, and maintain openness
- Constant feedback
  - What is working? Where can we improve?
- Learn from your near misses and communicate
- Communicate early and often to existing site personnel

Understand Potential Environmental Concerns

- Review available information
  - Plant history
  - Permits, chemical usage, age/vintage, existing data, and construction drawings
  - Adjacent operations and properties
- Pre-decommissioning/demolition assessments
  - Helps develop decommissioning plan, cost, and schedule
  - Identify regulatory and cost drivers
  - Understand unique environmental concerns
  - Define pre-demolition work to be performed “in house”





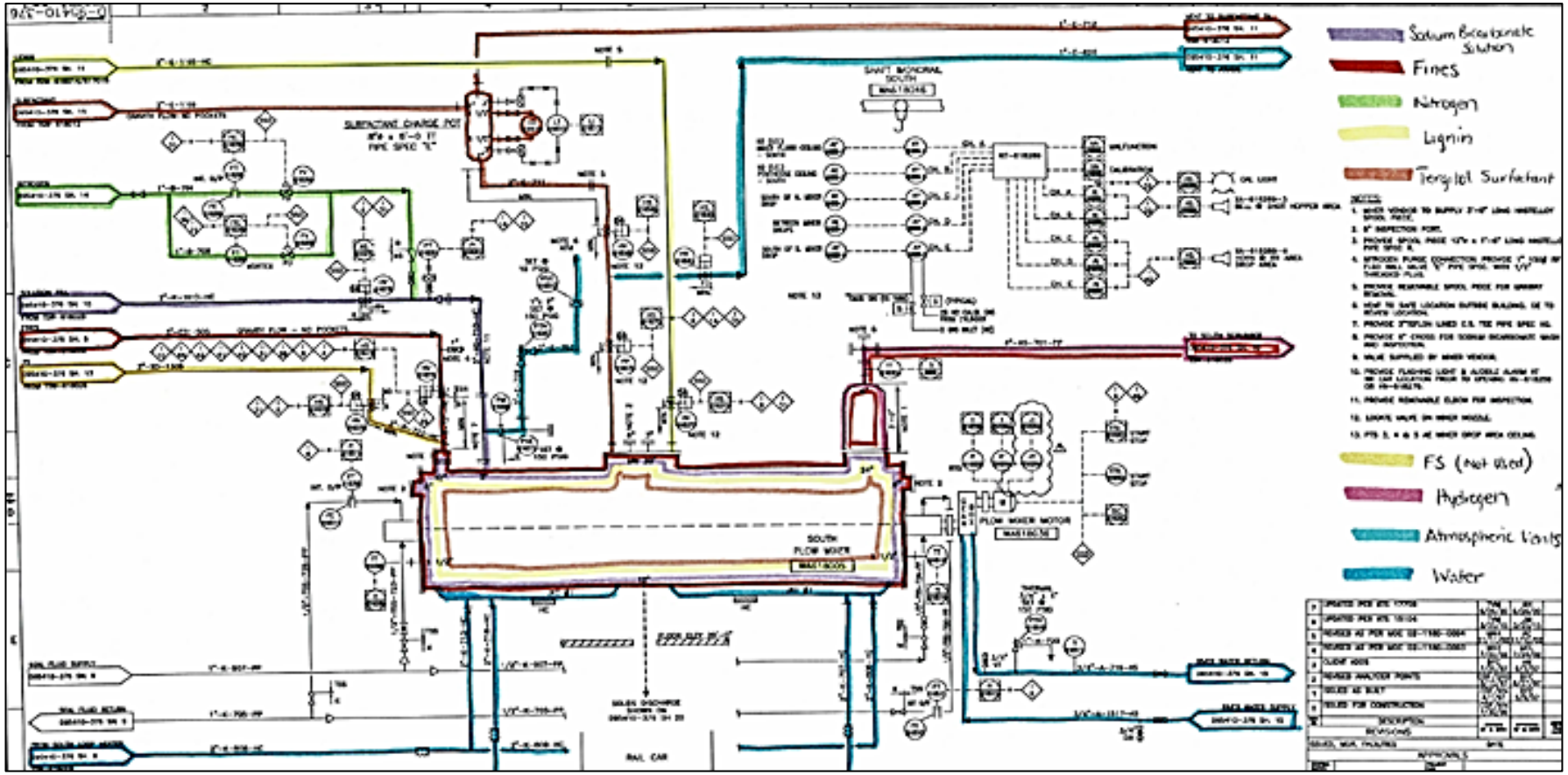
ADDENDUM TO THE SITE IDENTIFICATION FORM:
EPISODIC GENERATOR

ONLY fill out this form if:

- You are an SQG or VSQG generating hazardous waste from a planned or unplanned episodic event, lasting no more then 60 days, that moves the generator to a higher generator category pursuant to 40 CFR 262 Subpart L. Note: Only one planned and one unplanned episodic event are allowed within one year; otherwise, you must follow the requirements of the higher generator category. Use additional pages if more space is needed.

Episodic Event	
1. Planned ☐ Excess chemical inventory removal ☐ Tank cleanouts ☑ Short-term construction or demolition ☐ Equipment maintenance during plant shutdowns ☐ Other	2. Unplanned ☐ Accidental spills ☐ Production process upsets ☐ Product recalls ☐ “Acts of nature” (Tornado, hurricane, flood, etc.) ☐ Other
3. Emergency Contact Phone	4. Emergency Contact Name
5. Beginning Date _____ (mm/dd/yyyy)	6. End Date _____ (mm/dd/yyyy)

Decommissioning / Documentation



Decommissioning / Documentation

- Clear and consistent marking
- Visual breaks and openings

MCCs/breakers disconnected and de-energized

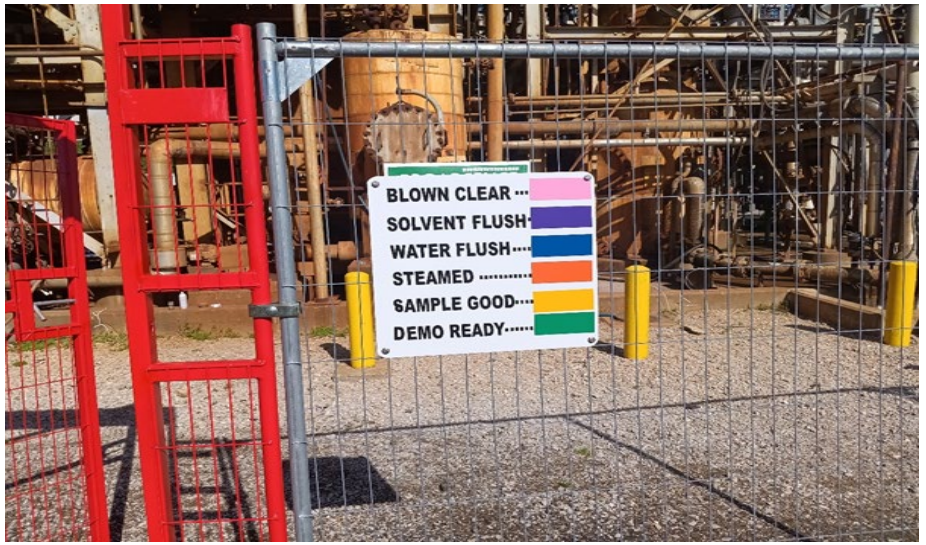
Utilities air gapped in pipe rack

Vessels emptied and opened to Atmosphere

ANCHOR QEA

Decommissioning / Documentation

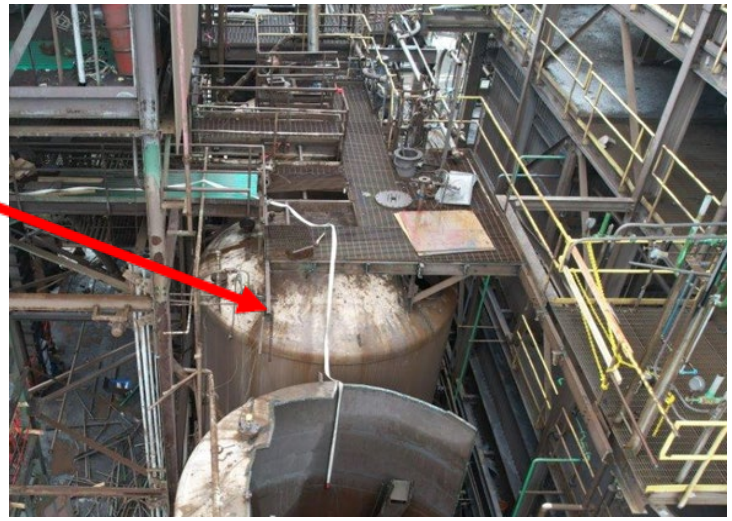
- Decommission and document with the assumption that any future work could occur years later without any current team members

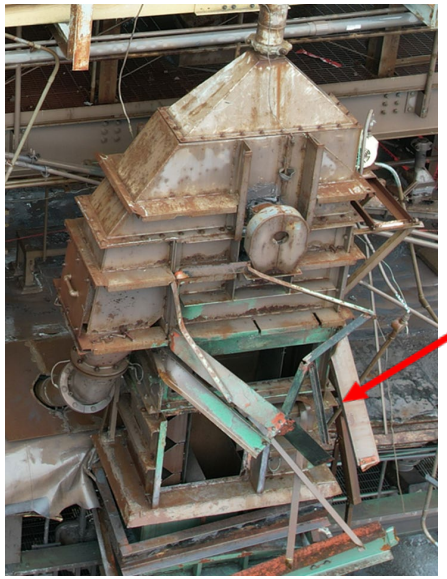


ANCHOR QEA

Lesson Learned – Communicating Decommissioned Conditions

Ignition





Release

Design, Bid, and Procurement

- Prequalify
- Clearly ID limits/extent of demolition
- Document existing conditions
- Performance-based specifications
- Apples-to-apples bid assumptions
- Environmental Control Requirements
- Contingency items
- Safety Criteria
- Contract terms and conditions

Contractor Selection

- Bid evaluations
  - Detailed specifications yield good proposals
  - Key project personnel
  - Cost Sensitivity analysis
  - Assumptions
- References
  - Check them
- Safety metrics and company history
- Interviews

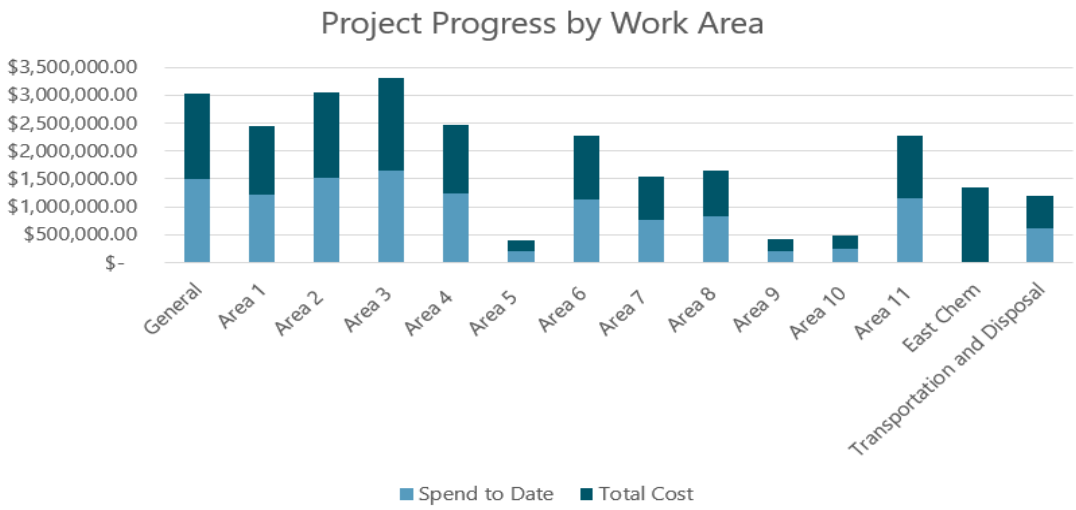
Safely Starting Decommissioning / Demolition

- Safety is key and drives everything
- Control access to your work area
- Pause/regroup as needed
- Daily safety meetings and safety reviews

ANCHOR QEA

Decommissioning / Demolition

- Progress tracking
- Full time oversight/safety/inspections as needed
- Site communication: road closures and review work with nearby operations
- Emergency response/operations
- Air monitoring
- Waste tracking
- Project documentation



Using Drone Technology

January 19, 2021

November 16, 2023

ANCHOR QEA

What questions do you have?