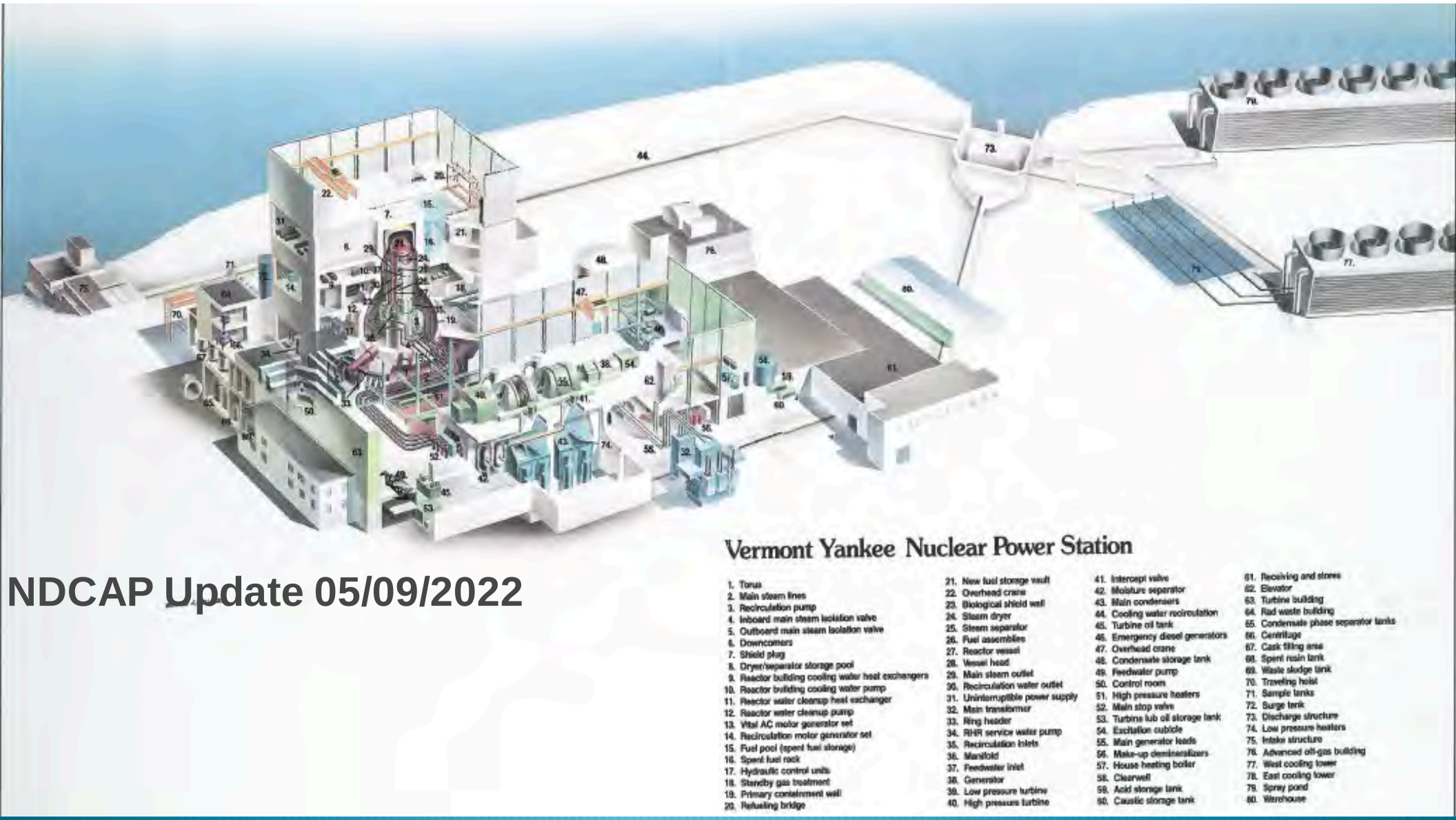
NorthStar VTY Decommissioning

NorthStar



NDCAP Update 05/09/2022

NorthStar Nuclear Decommissioning Company, LLC

Simple Priorities

NorthStar

SAFETY with all we do: Target Zero (Accidents)

Radiological, Environmental, Industrial, Nuclear

Do it Right. Do it Safe.

Performance Update

- SAFETY: Acceptable

Zero NorthStar OSHA Recordable Lost Time Accidents to date, with over 1,300,000+ person hours worked on site since sale on January 11th 2019.

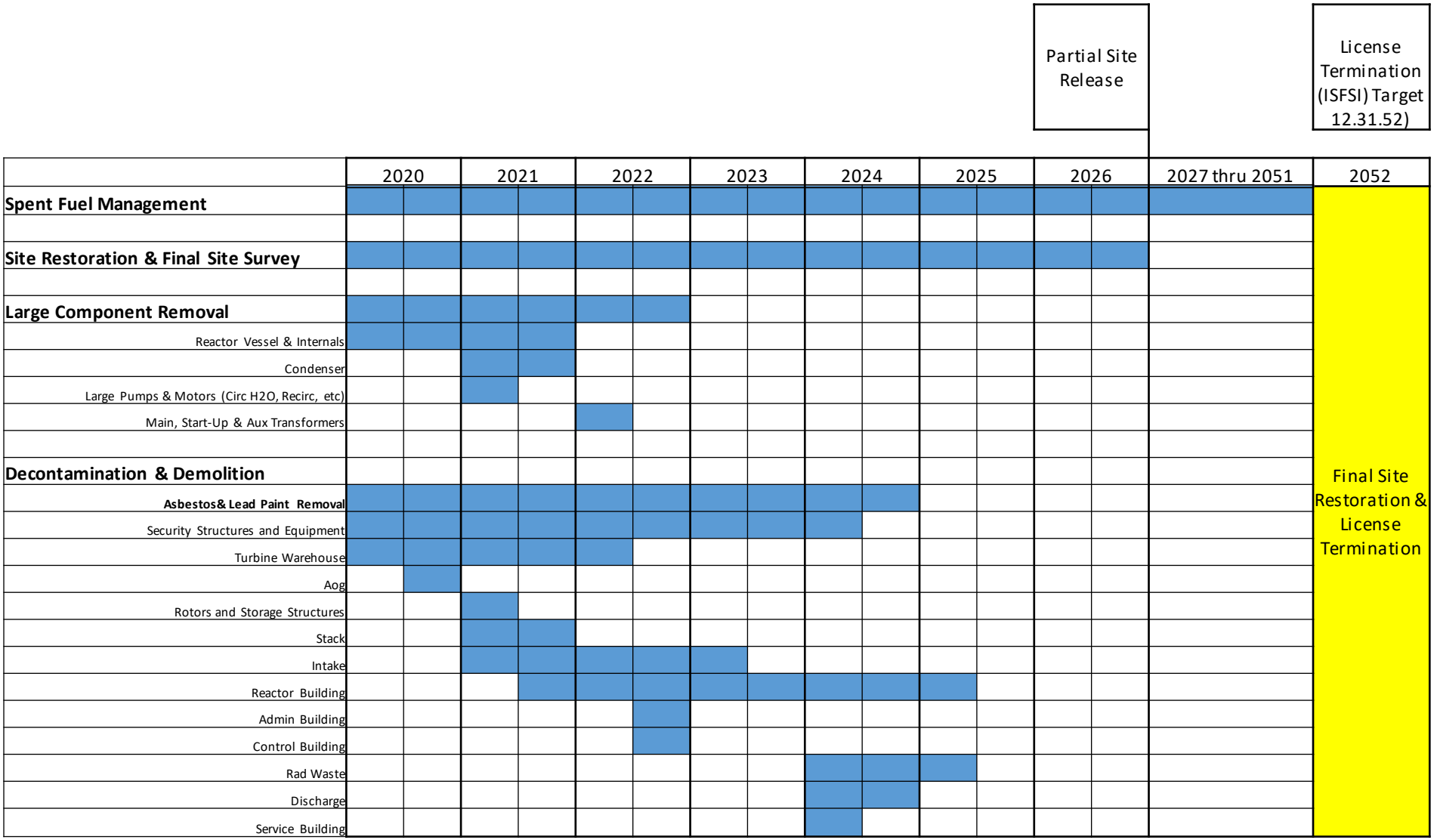
- REGULATORY: GOOD

NRC: Zero Cited and Non-Cited Violations for all of 2019, 2020, 2021, and 2022 to date.

- PRODUCTION: Acceptable

Overall project schedule on track. Reactor removal project nearing completion. Bulk Decom work and Site Characterization continues advancing ahead of initial projections.

Project Schedule – Overview (Re-Cap)



Reactor Vessel Segmentation Update

Reactor Head DONE
Steam Dryer DONE
Steam Separator DONE
Shroud Head DONE
Feedwater Sparger DONE
Top Guide (Upper Grid) DONE
Guide Tubes DONE
Core Plate DONE
Shroud Cylinder DONE
Jet Pump Assemblies DONE
Garnet collection DONE
Vessel drain-down DONE
Bottom Dome Grouted DONE
Nozzle Cutting IN PROGRESS
RV Segmentation IN PROGRESS

Next Steps

Preparations commenced for:

1. Reactor Vessel segmentation and downsizing of “rings”.

2. Packaging and shipment.

Refuel Floor Support Activities

De-mobilizing medial filtration skid and shield cask to make space

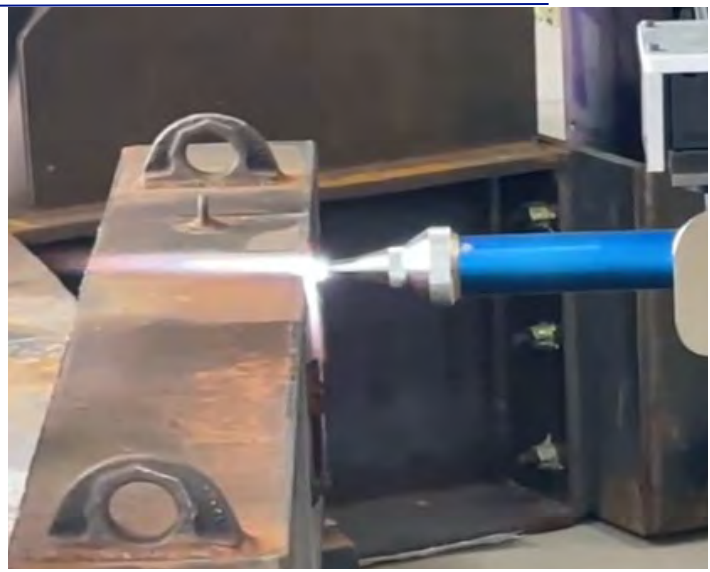
Setting up custom box in Dryer Separator Pit

Reactor Internals removal complete

Final RWC Loaded and Prepared for Transport

Refuel Floor Support Activities

Reactor Vessel cutting machine set-up



Ring Arc Segmentation Tool (RAST) test cuts

Refuel Floor Support Activities

Ring Arc Segmentation Tool (RAST) structure assembled

Reactor Bellows removal

Rx Vessel cleaning prior to segmentation

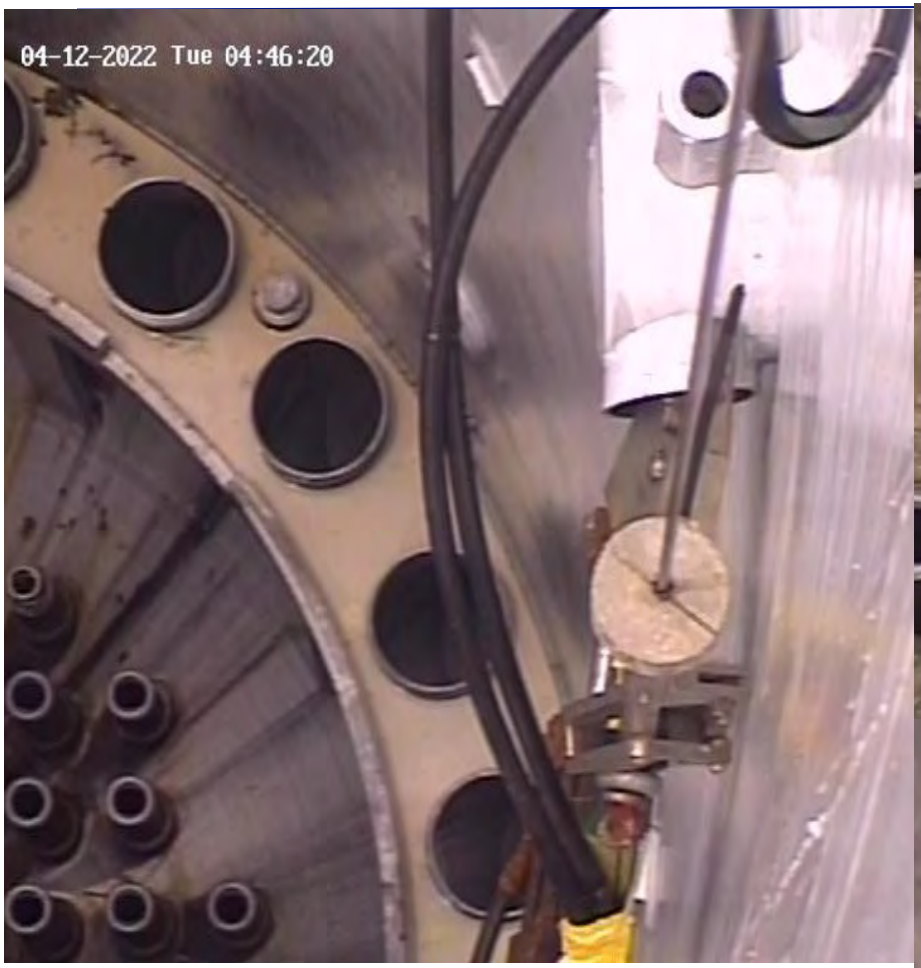
Bellows Segmentation Tooling Set-up

Rx Cavity
HEPA
Ventilation

Rx Bellows Removal

Rx Bellows removed and rigged to refuel floor for segmentation

Reactor Vessel Operations



Cutting last of vessel internal obstructions (feed sparger) in preps for grouting of Bottom Dome

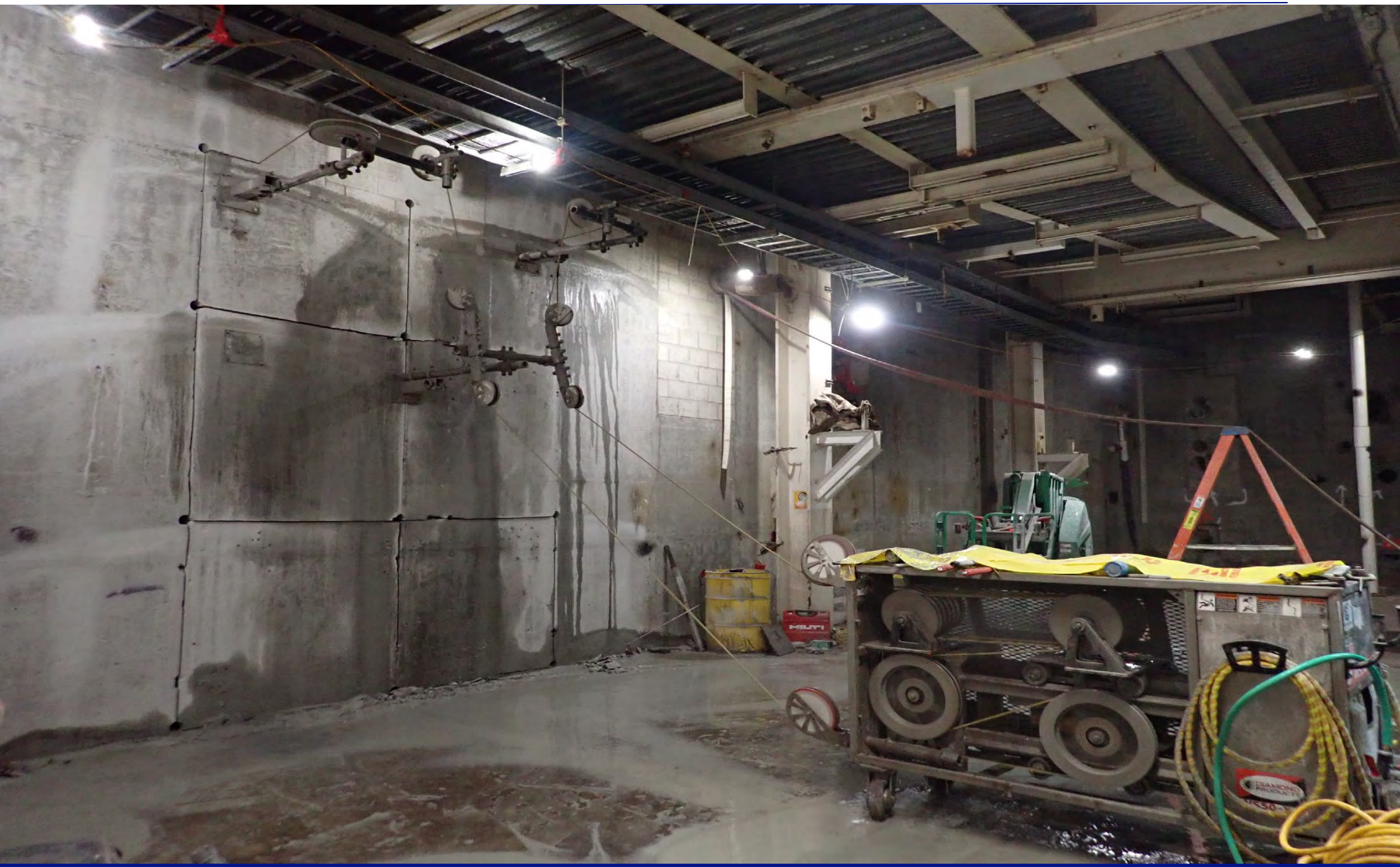
Pumping grout into RV Bottom Dome through a CRD Housing

Rx Vessel Segmentation Ops

Drilling lifting holes with the 3C machine

(Close up of drill bit into Vessel wall)

Wall cuts thru Turbine Heater Bay to Reactor Building

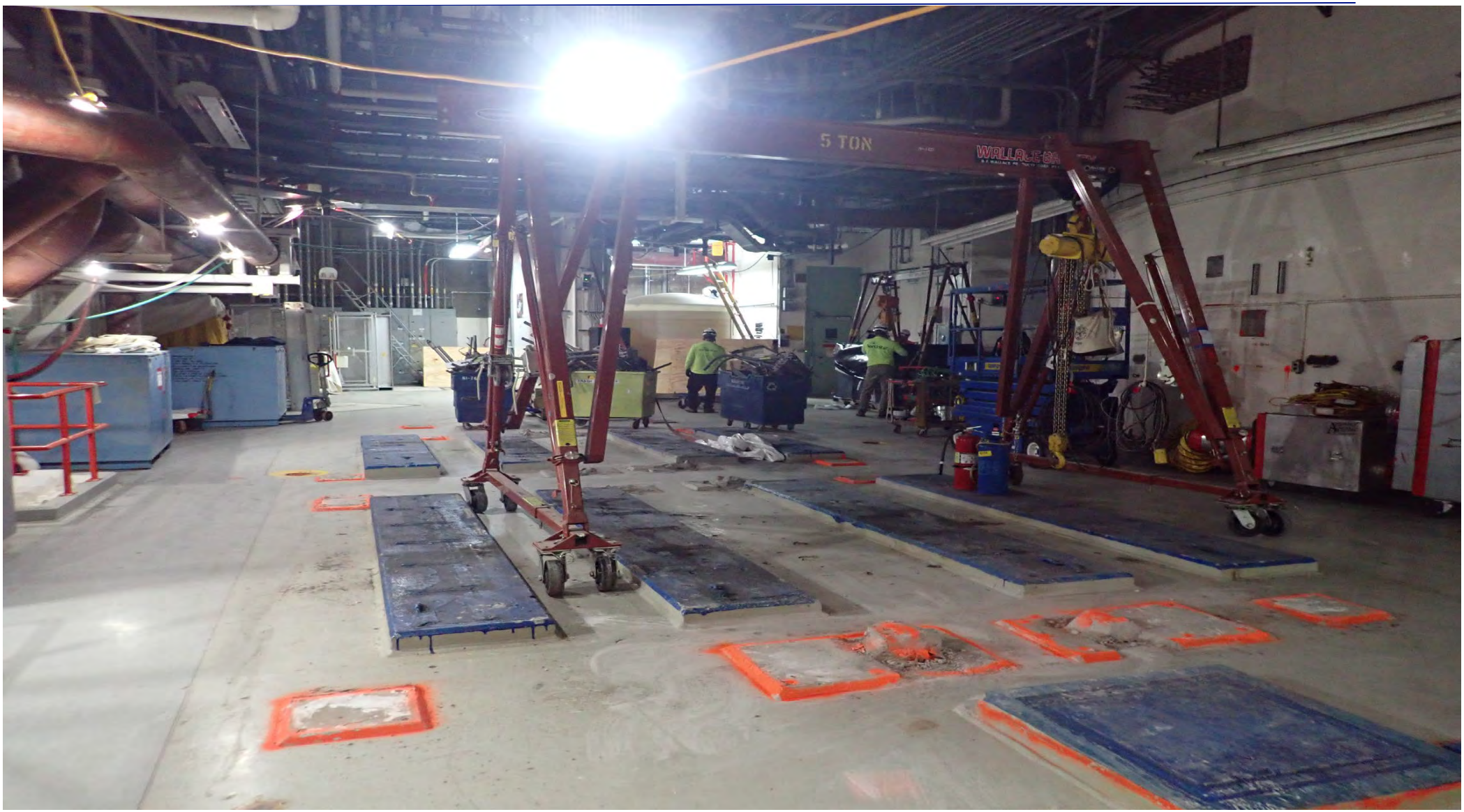


TORUS Basement (Rx Building side of Wall Cut)

Reactor Building Equipment Demo

Piping and Equipment (HCUs before and after) removal in Reactor Building on the 252’ (Ground Floor Level)

Reactor Building Equipment Demo

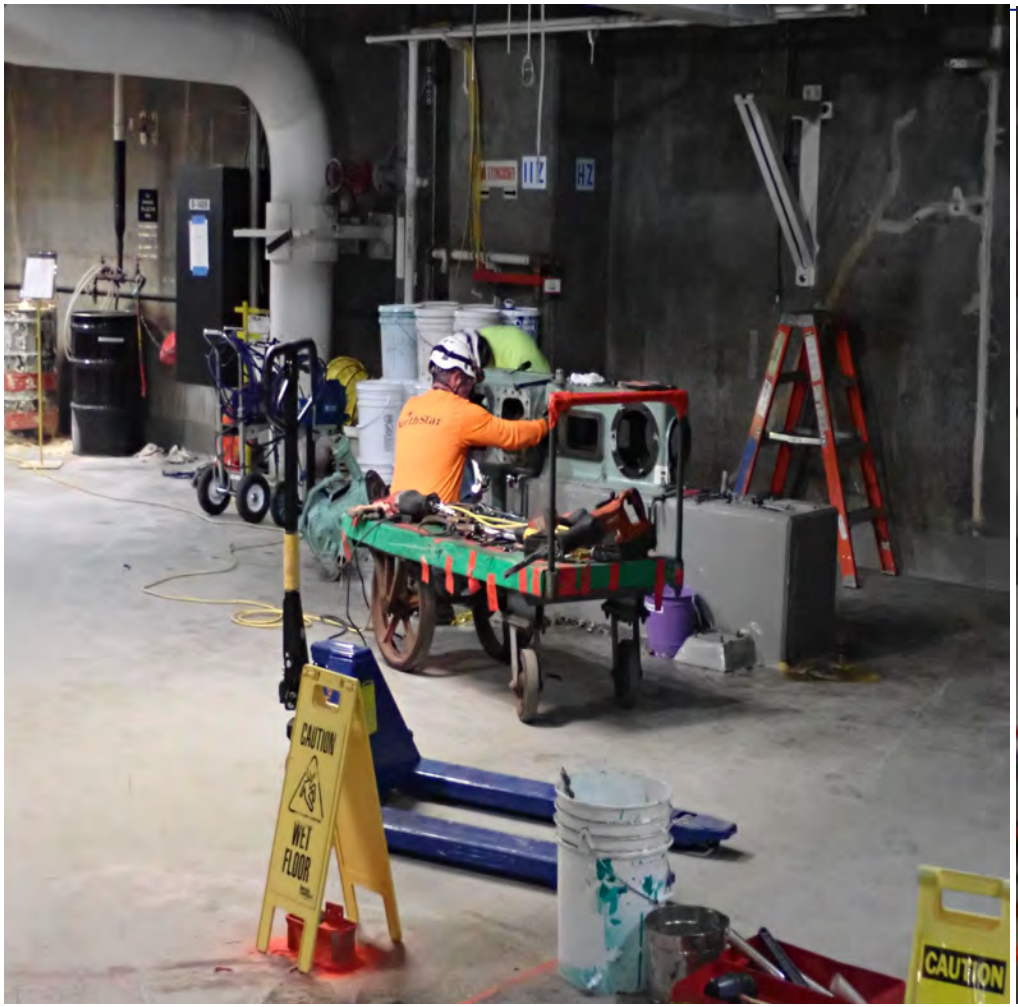


Piping and Equipment removal in Reactor Building on the 252’ (Ground Floor Level)

Reactor Building Equipment Demo

Removing Piping and Equipment from 280’ level
(1st Floor Reactor Building)

Reactor Building Equipment Demo



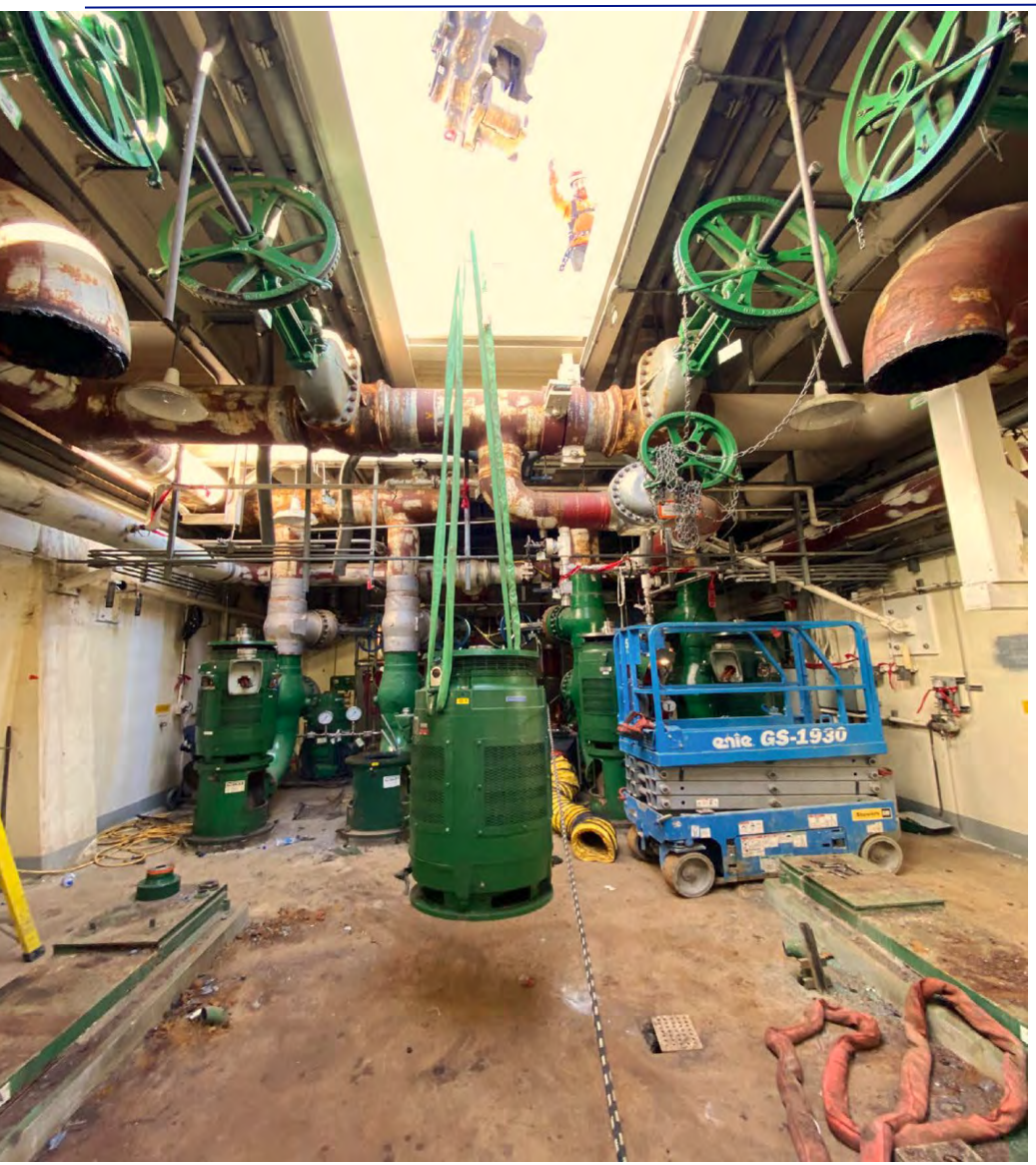
Containment Air Compressor and system piping removal on 303’ Elevation (2nd floor)

Control Rod Drive Pump(s) and piping removal on 232’ SW corner (-1 Floor)

Reactor Building Equipment Demo

Standby Liquid Control (SLC) Tank and System removal (during and after) on 318’ Elevation (3rd floor)

Intake Structure Demo Preps



Service Water Pump Motor removal

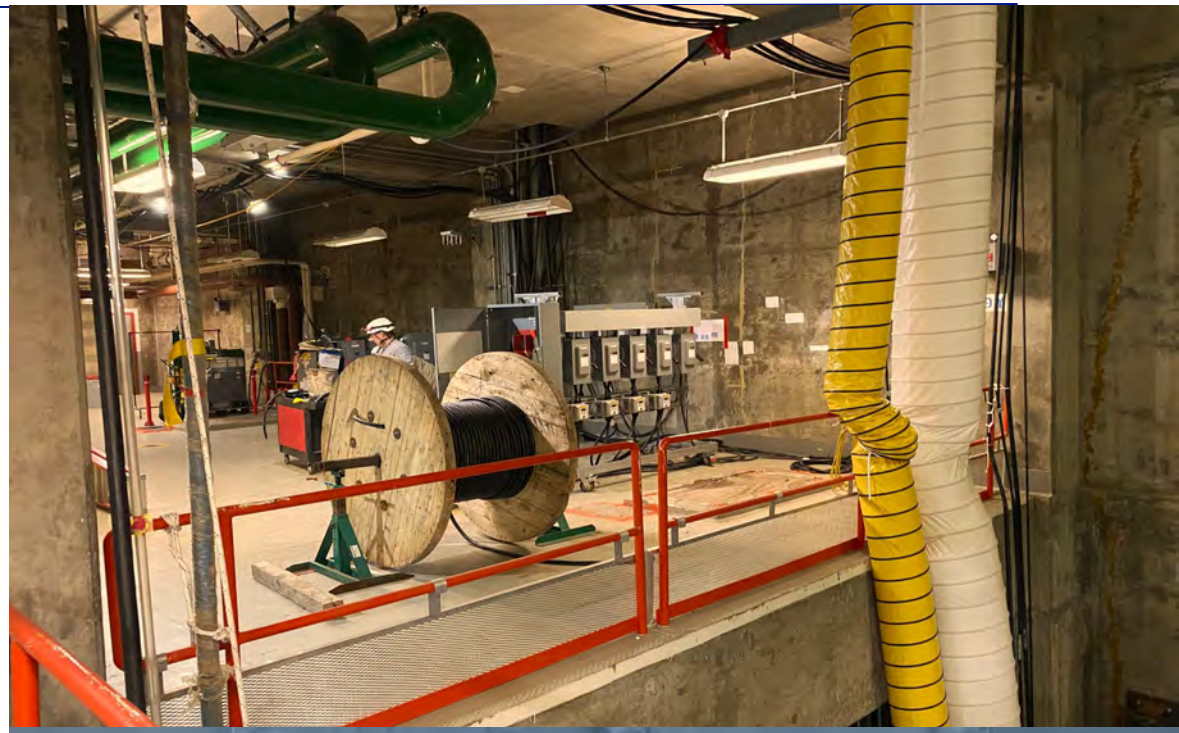
Circ Water Pump removal

Discharge Structure Demo Preps

Lifting out Circ Water Booster Pump Motors with Crane

Preparing Circ Water Booster Pumps for removal

Preparations for “Cold & Dark”



Waste Transport Operations

Shipping and Material Volumes

- Currently shipping about 3 rail cars per week to WCS, with 34 shipments in 2022 as of end of March. (Approximately 13 shipments per month.)

- Total Number of Shipments to Date: 418

- Total Volume 886,000 ft^3 (32,800 cyd)

- Total Weight 47,500,000 lbs (23,750 tons)

- Total Activity 35,500 curies

Non-Rad Site Characterization/Remediation

What Else Is Happening?

- Groundwater split sampling continues with Atlas in coordination with ANR. Last sample collection completed week of March 2022. Next sample round scheduled for June. (All sample data continues to correlate).
- Annual Groundwater Monitoring Report in progress, will be submitted to ANR by end of Q2.
- Post Demolition Survey & Sample Plan approved by ANR
  - Cooling Towers surveys completed (also in coordination with Atlas) and data submitted to ANR for review and approval.
- Completed excavating two approved remedial actions near the Cooling Towers and one by Shipping & Receiving Building.
  - AOC 3 - Soil Piles: Removal and confirmation samples of a soil pile impacted with hydrocarbons. Remediated to residential criteria. Report in progress and will be submitted to ANR.
  - AOC 7(a) - Shipping and Receiving Building: Shallow release of hydrocarbons to the ground. Report in progress and will be submitted to ANR.
  - AOC 8 - Transformers: Removal of soils associated with a former Transformers (hydrocarbons detected in soils above the VT SSVs). Report completed and approved by ANR.
- Continued collaboration with VT ANR & DEC via Bi-Weekly calls to maintain alignment. Site tour with State Agency Representatives conducted 05/5/22.

Questions?

Target Zero (Accidents) Do It Right. Do It Safe.