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Three Empire State Plaza, Albany, NY 12223-1350
www.dps.ny.gov

April 27, 2023

VIA EMAIL

Hon. Michelle L. Phillips
Secretary to the Commission
3 Empire State Plaza
Albany, NY 12223-1350

Re: Matter No. 21-01188 – In the Matter of the Indian Point Closure Task Force and Indian Point Decommissioning Oversight Board.

Dear Secretary Phillips:

Please accept for filing in the above-captioned matter, the April 27, 2023 presentation from Holtec Decommissioning International (HDI) to the Indian Point Decommissioning Oversight Board regarding decommissioning activity at Indian Point. Should you have any questions regarding this filing, please contact me. Thank you.

Respectfully submitted,

Tom Kaczmarek
Executive Director
Indian Point Closure Task Force
Indian Point Decommissioning Oversight Board

HOLTEC INTERNATIONAL

Decommissioning Oversight Board

Holtec Decommissioning International, LLC (HDI)

IPEC Decommissioning Update
April 27, 2023

Rich Burroni, Site Vice President
914-254-6705

Agenda

An update on our completed activities since our last meeting on February 2, 2023 is provided. The following slides will also detail projected activities thru June 15, 2023 when the next Decommissioning Oversight Board Meeting is scheduled to take place.

- Dry Fuel Project
  - ISFSI Pad
  - Unit 2 Spent Fuel Pool Defuel status
  - Unit 3 Spent Fuel Pool Building / HI-Lift status
- Discharge Discussion
  - Release Limits, Protocols, Agreements and Past History
  - Current Position
- Vessel Segmentation
  - Unit 2
  - Unit 3
- Building Demolition
  - Current Status
  - Short and Long Term Planning
- NRC Inspections and Activities
- NRC severity level 4 violations
- Industrial Safety Information

Dry Fuel Project

Dry Fuel Project

The Dry Fuel Project concludes with all fuel from both spent fuel pools transferred to the Independent Spent Fuel Storage Installation (ISFSI) pads and the protected area fence, nuisance fence and vehicle barrier system required to be installed. The Dry Fuel Project is projected to be complete prior to the end of the 4th quarter 2023.

Dry Fuel Project

Independent **S**pent **F**uel **S**torage **I**nstallation

ISFSI Pad

As previously noted, an additional ISFSI pad was constructed to accommodate all the Holtec HI-Storm 100S casks. 127 casks are needed to secure all the fuel from both the Unit 2 and Unit 3 Spent Fuel Pools. The original pad will hold 75 casks and the new pad will hold 52 casks. A Vehicle Barrier System is needed to envelope the ISFSI Pads.

Since the last Oversight Board Meeting:

- Vehicle Barrier System installation construction bid has been awarded. Installation of support structure is in progress.
- Condensate Storage Tank (CST) has been removed.

Projected Activities through June 15, 2023:

- Continue installation of support structure*
- Commence demolition of Energy Education Center Theatre*

*Photos noted in Demolition section

Dry Fuel Project – ISFSI Pad

Dry Fuel Project
Unit 2 Spent Fuel Pool Defuel Status

To Recap – 896 fuel assemblies need to be casked at Unit 2 requiring 28 casks.

- Unit 2 Spent Fuel Pool off-load was complete at the end of January. All 28 casks are currently located on the ISFSI Pad.

Since the last Oversight Board Meeting (Unit 2):

1) Surveyed Fuel Racks – Visual inspection verified previous fuel moves and verified where non-fuel waste cans were located.

Projected activities through June 15, 2023:

1) HI-Trac with nonfuel MPC loaded in preparation to transport to ISFSI area.
2) Transport HI-Storm cannister with non-fuel material to ISFSI Pad.
3) Complete the fabrication of Rack Lifting Device – expect May delivery
4) Start rack removal from pool – clean and transport to WCS in Andrews, Texas

Dry Fuel Project

Unit 2 Spent Fuel Pool Defuel Status

Fuel Rack Model
(previously used for
education purposes)

Dry Fuel Project – Unit 3 Spent Fuel Pool Building Activities / HI-Lift

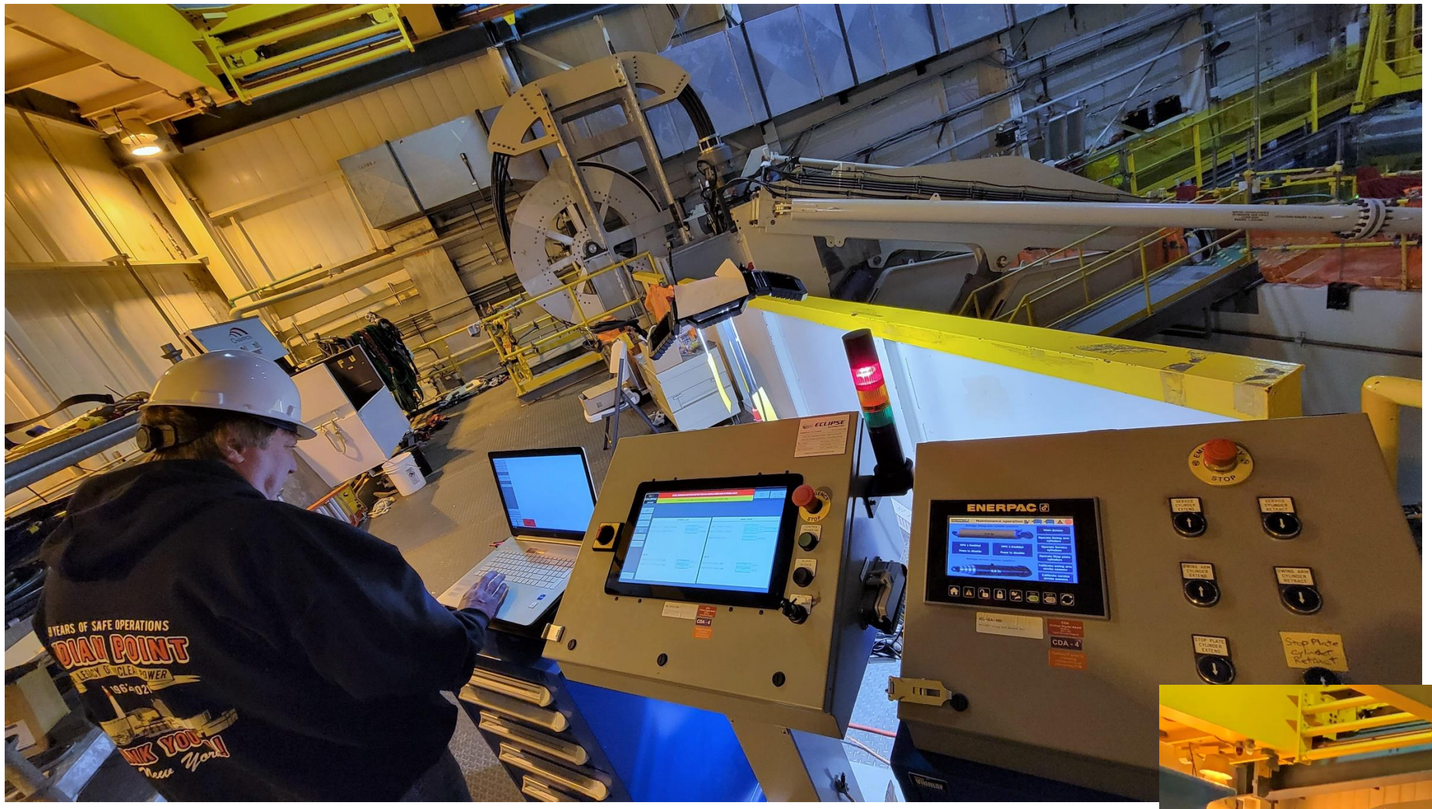
Since the last Oversight Board Meeting (Unit 3):

- Completed assembling HI-Lift
- Commenced Site Acceptance Testing – NRC observed (this week)
- Finalized Procedure Development on Operation of HI-Lift
- First fuel moves currently scheduled for May 23rd (1,312 assemblies, 41 casks required)

Projected activities through June 15, 2023:

- Fuel off-load scheduled through October

Fuel Storage Building – Unit 3



Control Station

HI-Lift in Maintenance Position

Fuel Storage Building – Unit 3

HI-Lift Off-Load position over Load Bay

HI-Lift On-Load position over pool

Discharge Discussion

Discharge Discussion

Release Limits and Protocols

- All nuclear power plants discharge treated effluent containing low levels of radiological effluent. These discharges are regulated by the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Environmental Protection Agency (EPA discharge limits).
- The ODCM requires that the Total Whole Body Dose from Liquid Effluents not exceed 3millirem per year. Our ALARA program, which is required by federal regulators, continues to ensure we release small fractions of the applicable limits. Typically around one percent.

- There are 7 municipalities that use the Hudson for drinking water (Town and City of Poughkeepsie, Town of Lloyd, Town of Esopus, Town and Village of Rhinebeck and Town of Hyde Park). Poughkeepsie is the southernmost municipality 30 miles north of IPEC. Five miles south of Poughkeepsie is a control station in Roseton. Collected samples at Roseton are analyzed by an independent lab which indicates that there is zero tritium above background.

- The collected samples at Roseton are also split with the state. NYS DOH lab does an analysis of the water to assess our laboratory accuracy relative to reported results.

- We collect effluent samples at the exit of our discharge canal to confirm limits are not exceeded. A split sample is also analyzed by the State DEC at this point.

Discharge Discussion

Agreements

- To allow the transfer of the site Operating License from Entergy to Holtec, NRC approval was needed in addition to a Joint Proposal document that detailed additional terms and conditions for Holtec. The Joint Proposal was signed by Entergy, Holtec, local politicians, state authorities , the Attorney General's Office of NY and Riverkeeper. The JP states the following;

    - "All signatories agree that the Joint Proposal is consistent with sound environmental, social and economic policies of the Commission and the State."
      It also states:
    - "Nothing in this agreement shall be interpreted as prohibiting or restricting Holtec from complying with any requirement or orders of the NRC, NYSDEC, any obligation under the Indian Point License or any other federal or state law or regulation."

Discharge Discussion

Current Position

- Approximately 1.3 to 1.5 million gallons remain from Spent Fuel Pools, Refueling Water Storage Tank (RWST), Reactor Cavity , Stem Generators, Waste Collection Tanks and Hold Up Tanks to process and discharge via our Liquid Waste Processing System.

- The largest amounts rest with the Spent Fuel Pools (310 thousand gallons each) and the Reactor Cavity in Unit 3 (360 thousand gallons) and the RWST (360 thousand gallons) at Unit 2. The RWST for Unit 2 will be transferred to the Reactor Cavity when segmentation activities commence.

- Each Batch Release is ~ 18,000 gallons. Each is sampled prior to release and a release permit is required prior to release.

- Batch Releases from the sources above will not occur all at once. (*Tentative dates)
    - Unit 2 Spent Fuel Pool: September 2023
    - Unit 3 Spent Fuel Pool: June 2024*
    - Unit 3 Reactor Cavity: April 2024*
    - Unit 2 Reactor Cavity: August 2025*

- The remaining volume to be processed and released is estimated to be no more than 5% of the total volume released from IPEC between 2010 and 2021. This is the most recent data, obviously this number is much further reduced if we go back to 1962 when Unit 1 went first into operation.

- Less than 400 Ci of tritium remains within the sources noted above. With the plant in operation, 1200 Ci/year were generated. At 1200 Ci /year, dose to the public was still approximately 1% of the NRC limits. The 400 Ci will be discharged over a period of years.

Discharge Discussion

Current Position

- From D. Lochbaum slides discussed at the 2/2/'23 meeting:
    - Discharge to the river poses the least public risk.

- There are a number of samples taken by qualified in house personnel and vendors that monitor our releases.
    - Life Sciences
    - Teledyne
    - Eckert's and Jaeger

- A meeting was held at IPEC with the NYS DOH, DEC, DPS and the Westchester County Executives Office Representatives on 4/20/23 to discuss improvements to the current split sampling techniques that would further enhance the ability of the State to provide an independent review of our releases. More to follow.
    - We have been voluntarily participating in split sampling agreements with the state for the past decade and offered some additional options for their consideration.

Past History – Unit 1 Spent Fuel Pool

- Unit 1 Spent Fuel Pool was discharged in 2008.
- Radionuclides included Cobalt – 60, Cesium – 137, Tritium, Strontium 90, Nickel – 63
- Radionuclides are essentially the same in Unit 2 and Unit 3 Spent Fuel Pools
- Total whole body dose from Liquid Effluents in 2008 from IPEC was much less than 1% of the allowable 3mr limit

Vessel Segmentation

Vessel Segmentation – Unit 2

To Recap – the segmentation of both vessels is considered our second critical path. As scheduled, Unit 2 work will follow Unit 3 work activities.

Since the last Oversight Board Meeting (Unit 2):

- Completed Unit 3 Reactor Head disassembly
- 8 Waste boxes were loaded and ready for shipment

Projected activities through June 15, 2023 (Unit 2):

- Prepping the inlet and outlet piping of the Steam Generators to support chemical cleaning.

Segmentation Preparation

Vessel Segmentation – Unit 3

Since the last Oversight Board Meeting (Unit 3):

- Completed segmentation of the upper reactor vessel internal guide tubes and support columns
- Commenced cutting the upper support plate – 16 segmented cuts required. 8 have been segmented to date.

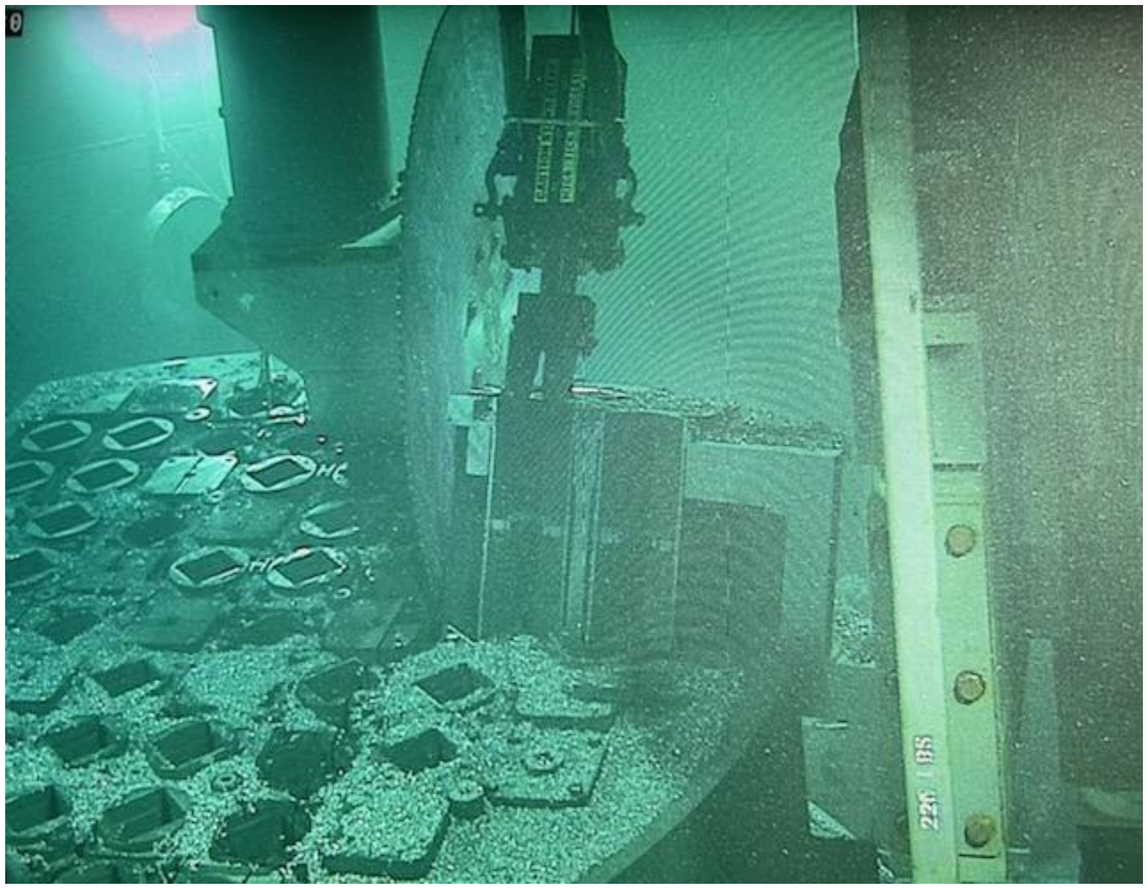
Projected activities through June 15, 2023 (Unit 3):

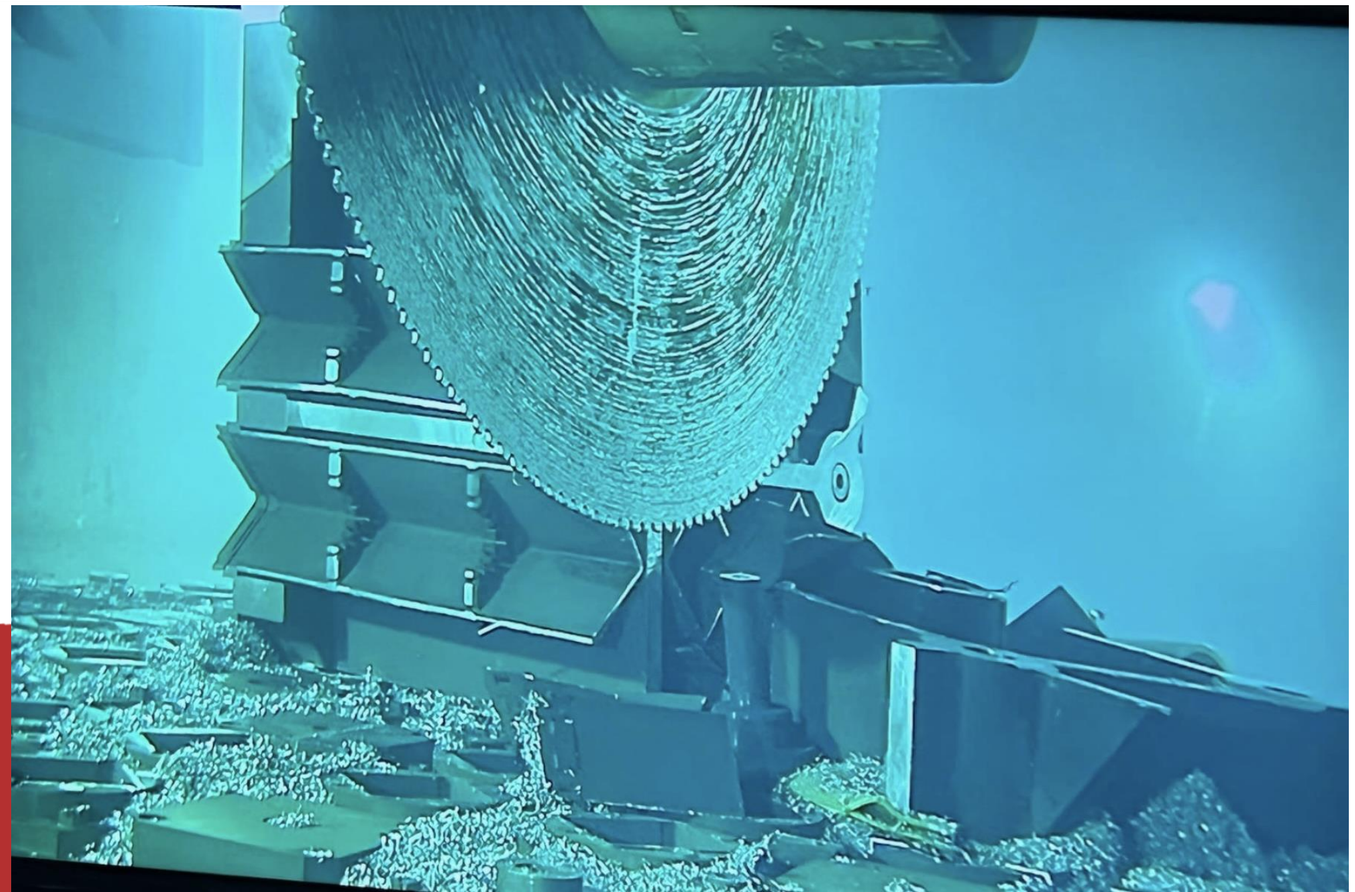
- Complete segmentation of the reactor vessel internal upper support plate
- Commence segmentation of the reactor vessel internal lower support plate

Unit 1 Update

- Remove a section of the Unit 1 Reactor Head to allow the acquisition of radiological data to support activation analysis

Vessel Segmentation – Unit 3





Building Demolition

Building Demolition

Since the last Oversight Board Meeting:

- Completed demolition activities on the Condensate Storage Tank
- Started demolition on the steam generator steam domes
- Working on retiring and removing internal oil tanks from both Units 2 & 3

Projected demolition activities through June 15, 2023:

- Complete the steam dome demolition
- Start demolition of the G.T. 2/3 yard
- Start demolition of the Energy Education Center concrete structure
- Continue work on retiring and removing internal oil tanks from both Units 2 & 3

Note: The NYS DEC, The Village of Buchanan Building Department and Holtec worked in concert to develop an MOU applied to demolition permits. The permit requires no dust migration beyond the site boundary during demolition activities. Demolition activities are required to cease and desist if dust generation threatens the site boundary perimeter.

CST Demolition

CST Demolition

Steam Dome Demolition

Gas Turbine Demolition

EEC Concrete Structure Demolition

Building Demolition Short & Long Term Planning

Tentative Dates:

Unit 3 OSB – 2024
Unit 3 EDG Bldg. – 2024 (Bldg. Content and Underground Storage Tanks)
Unit 3 PCI Bldg. – 2024
Unit 3 Circ Pump Bldg. – 2024
Unit 3 Polisher Bldg. – 2024
Unit 3 Security Bldg. - 2024
Unit 1 Screen Well House - 2024

Major Buildings:
Unit 1
Turbine Building Demo - 2034
Fuel Storage Building – 2036
Unit 1 Containment Demo - 2032

Unit 2
Turbine Building Demo – 2034
Fuel Storage Building – 2030
Unit 2 Containment Demo – 2035

Unit 3
Turbine Building Demo -2034
Fuel Storage Building – 2029
Unit 3 Containment Demo – 2034

NRC Inspections and Activities

NRC Inspections and Activities

Submittal	IPEC Submittal Date	Requested / Anticipated NRC Review Complete
Exemption and LAR for Permanently Defueled Emergency Plan	12/2021	TBD
Exemption from onsite and offsite Liability and Property Damage Insurance requirements	03/2022	TBD
LAR for removal of Cyber Security Requirements	05/2022	TBD
LAR for U2 Admin TS change (remove staffing for ISFSI only condition)	08/2022	TBD
IP1/IP2/IP3 ISFSI only licensing submittals - ISFSI Only Eplan - ISFSI Only Tech Specs - ISFSI Only Security Plan	 11/2022 11/2022 01/2023	 11/2023 11/2023 TBD

- 3/20/23 – 3/21/23: NRC Inspection on ISFSI Dry Run (NRC exit with no violations or issues of concern)
- 4/17/23 – 4/21/23: NRC Onsite Inspection – Access Control (NRC with no violations or issues of concern)
- 4/24/23 – 4/27/23: NRC Onsite Inspection – GTCC
- 4/25/23: NRC Onsite Inspection – HI-Lift Site Acceptance Testing
- 5/15/23 – 5/18/23: NRC Onsite Inspection – PI&R

NRC Inspections

NRC Violation NCV 05000247/2022004-01, Failure to Conduct Adequate Radiation Surveys

- First noted in the Feb 2, 2023 DOB slide as “TBD” since the formal NRC Report was not issued until 3/13/’23 and we were in discussion with the NRC regarding the violation

- The violation pertains to a failure to adequately perform a radiation survey to evaluate radiological conditions associated with an overflow of the Unit 2 21 Waste Hold-Up Tank which was identified by a station operator on May 31, 2022, approximately 11 months ago.

- The function of the Unit 2 21 Waste Hold-Up Tank is to store radioactive waste as part of our waste treatment system.

- The overflow condition occurred as a result of a failed level transmitter associated with the tank. The effluent from the overflow condition traveled to the adjacent room. Plant operators soon thereafter secured the tank and transferred the waste to a holding tank in Unit 1.

- The room in which the tank is located is posted as a locked high rad area (> 1000 mr/hr) with very restricted access. A survey of the room is required prior to entry.

- Adjacent to the tank room is another room that contains a sump pump. The sump pump circulates effluent from the tank overflow, back to the 21 WHUT.

- The distance from the tank overflow point to the sump entry was ~ 10 feet and the 21 Waste Hold-Up Tank and the sump area had the same water on the floor as in the tank room proper. Station Health Physics personnel believed it was prudent from a personnel dose perspective to radiologically survey the area in the adjacent cell vs the cell in which the 21 WHUT is located. Our position was that the survey in the adjacent room properly characterized the radiological conditions in the 21 WHUT Tank Room

NRC Inspections

NRC Violation NCV 05000247/2022004-01, Failure to Conduct Adequate Radiation Surveys

So why survey?

- Site procedure EN-RP-113, “Response to Contaminated Leaks / Spills requires the site to perform surveys as necessary to determine the extent of residual radioactivity concentrating or migrating in inaccessible areas.

- The NRC did not agree with our assessment that the survey was appropriately characterized based on conditions in the adjacent pump room. The NRC maintains surveys should have been taken in the 21 WHUT room, not in the adjacent room.

- The NRC quotes 10CFR 20.1501(a) which requires in part that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in 10CFR20 and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of residual radioactivity and the potential hazards of the radiation levels and radioactivity detected.

- In addition, the NRC quotes in part 10CFR20.1406(c) which requires licensees, to the extent practical, to conduct operations to minimize the introduction of residual radioactivity into the site.

NRC Inspections

NRC Violation NCV 05000247/2022004-01, Failure to Conduct Adequate Radiation Surveys

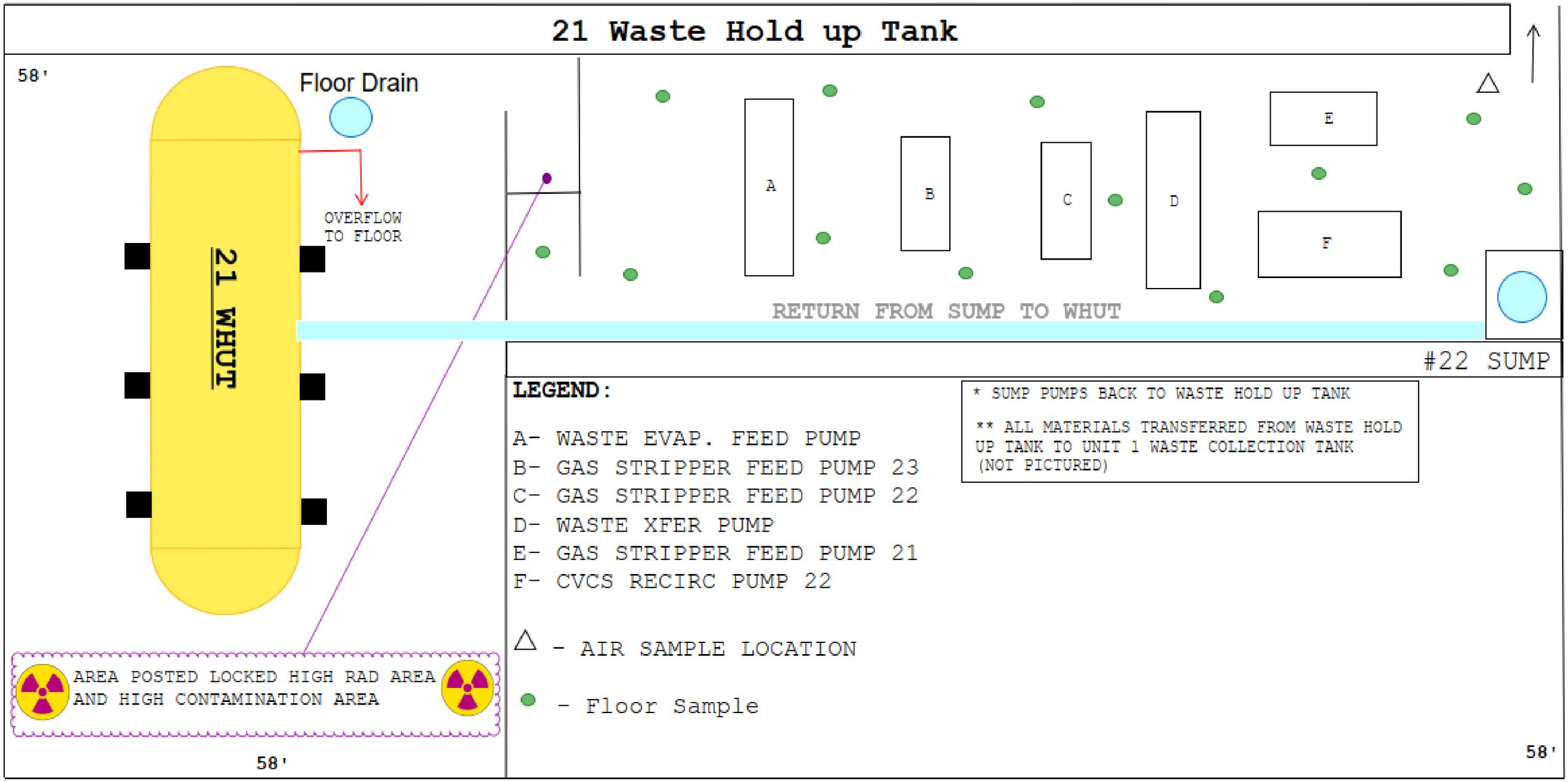
In Summary:

- The NRC issued a severity level IV non-cited violation noted to be of “relatively inappreciable potential safety consequence”.

- There was no release of radiation outside the facility, the effluent stayed within the confines of the spill area. Therefore, no release occurred to the environment. Verified through Monitoring Wells.

- The level switch has subsequently been repaired and the spill cleaned up.

NRC Inspections



NRC Inspections

NCV 05000247/2022004-02, Failure to perform Underground Fire Loop Flow Test

- Procedure 2-PT-3Y015A, “Underground Fire Loop Flow,” for IPEC Unit 2 was not completed by its extended due date.
- This is a trending test required by IPEC Site Procedure SAO-703; “Fire Protection Impairment Criteria and Surveillance” in accordance with National Fire Protection Association (NFPA) Standard 25, “Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems,” to assess fire loop condition for potential long-term degradation.
- Failure to perform the procedure in a timely manner per IPEC site procedural requirements was determined to be a violation of 10 CFR 50.48(f)(1).
- The procedure was started, however due to a material condition issue with a section of the loop piping, it was not completed.
- Contingencies were put into place such that Fire Protection functions were still maintained. A fire suppression water supply to all required plant areas remained available at all times pending repair of the affected piping segment.
- Since the surveillance procedure initially failed, the failure should have been documented in our corrective action program. Unfortunately, it was not – Human performance error.
- The material condition of the pipe was repaired, and the underground loop flow test was subsequently completed satisfactorily on 02/13/23 with no issues. The measured fire loop flow characteristics remained within acceptance criteria.

NRC Inspections

NCV 05000247/2022004-02, Failure to perform Underground Fire Loop Flow Test

NRC Position:

- NRC Enforcement Policy evaluated this issue as a Severity Level IV non cited violation (NCV) regarding the failure to implement procedures which has a low safety significance.

- Since the licensee placed the deficiency (this violation itself) into its corrective action program, the violation was of relatively inappreciable potential safety consequence, and because the violation was not willful or repetitive, it has been treated as an NCV.

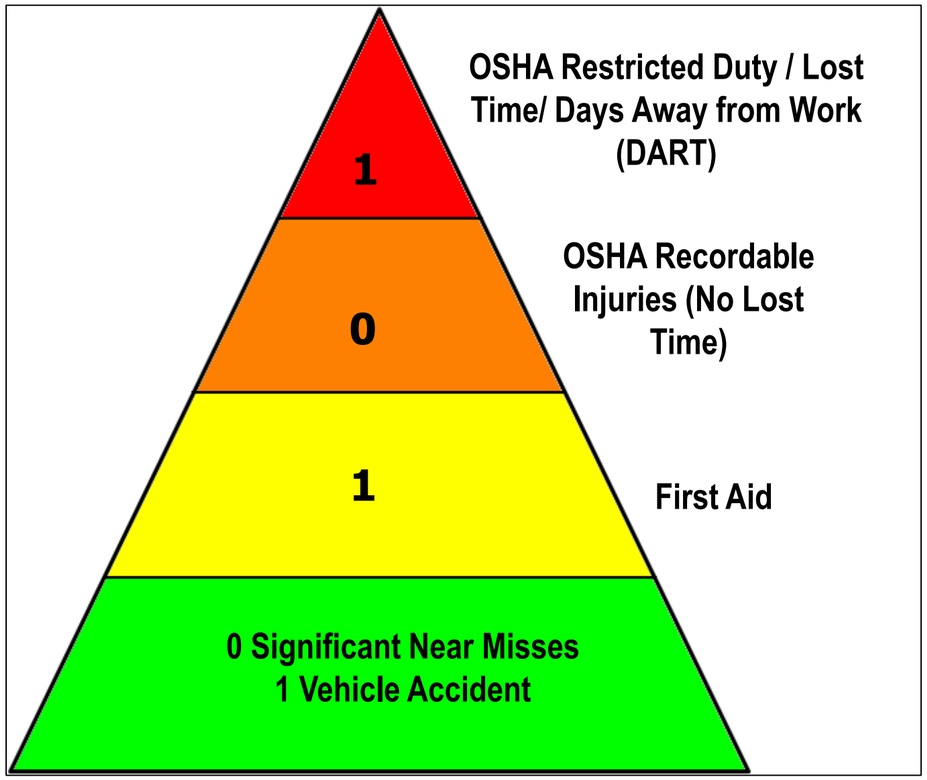
Safety

Safety

- 3/28/23 Supplemental worker's finger got pinched while securing a fuel cask in our vertical cask transporter (VCT) **Lost Time OSHA**

- 4/5/23 Supplemental worker damaged roll up door by striking it with a mobile lift **Vehicle Accident**

- 4/11/23 Supplemental employee had dust get into eye, flushed out and returned to work same day **First Aid**



2023

Dose IP2:

- **Year to Date: 23.296 R Actual / 52.789 R Goal**

Dose IP3:

- **Year to Date: 9.705 R Actual / 54.727 R Goal**

Personnel Contamination Event (PCE)

0 PCE's year to date

Thank You!

HOLTEC INTERNATIONAL

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HOLTEC DECOMMISSIONING INTERNATIONAL