



# BNL Environmental Compliance and Groundwater Protection Update

Community Advisory Council

Jason Remien, Manager, Environmental Protection Division

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 @BrookhavenLab

# Congratulations to the Barth Family



# Agenda

## Environmental Compliance Program

- Dashboard – Key Environmental Programs

## Groundwater Protection Program

- Dashboard – Key Long Term Stewardship Programs/Projects
- Suffolk County Water Authority (SCWA) William Floyd Well Field Update



# Environmental Compliance Update

# Environmental Compliance Programs/Processes Status



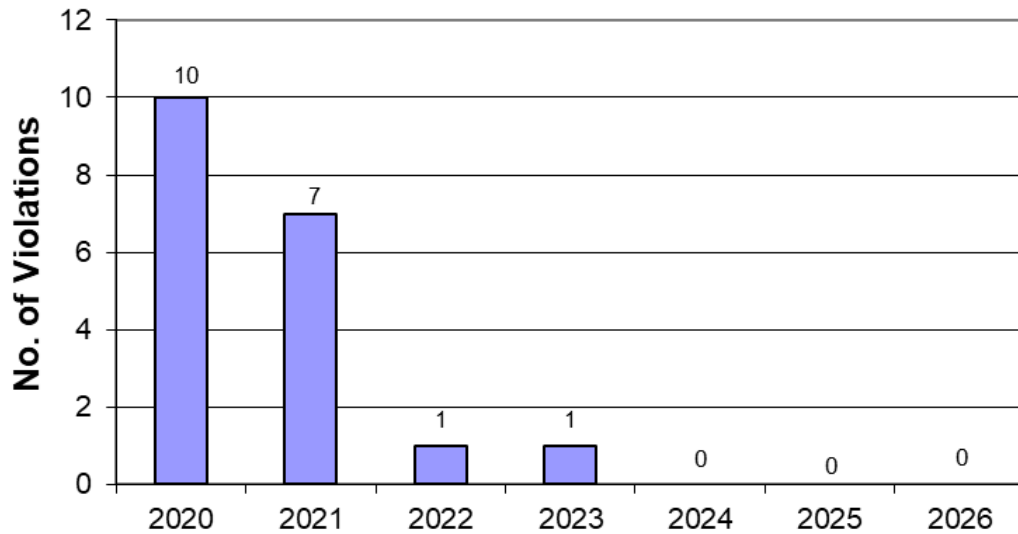
Environmental Program/Process	Performance/Trend	More information
Drinking Water (Safe Drinking Water Act)	—	<b>i</b>
Liquid Effluents (Clean Water Act)	—	<b>i</b>
Non-Rad Air Emissions (Clean Air Act)	—	<b>i</b>
Spill Response	—	<b>i</b>
Radiological Air Emissions	—	
Underground & Aboveground Tank Storage	—	
Waste Management	—	
Energy & Water Efficiency	—	
Environmental Permits	—	
National Environmental Policy Act	—	
Natural Resources	—	<b>i</b>
Cultural Resources	—	
Assessments/Regulatory Inspections	—	

— No change  
 ↑ Improvement  
 ↓ Decline

*“All programs stable with no trends of concern”*

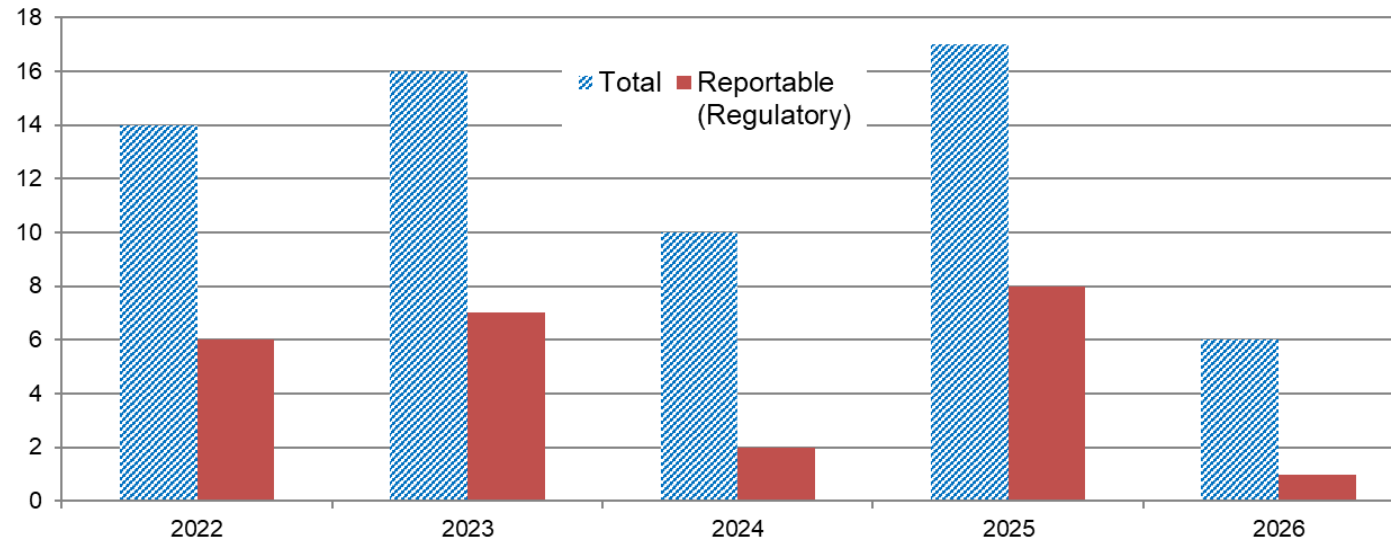
# Environmental Program Metrics

## SPDES Limit Violations (2020 - 2026)

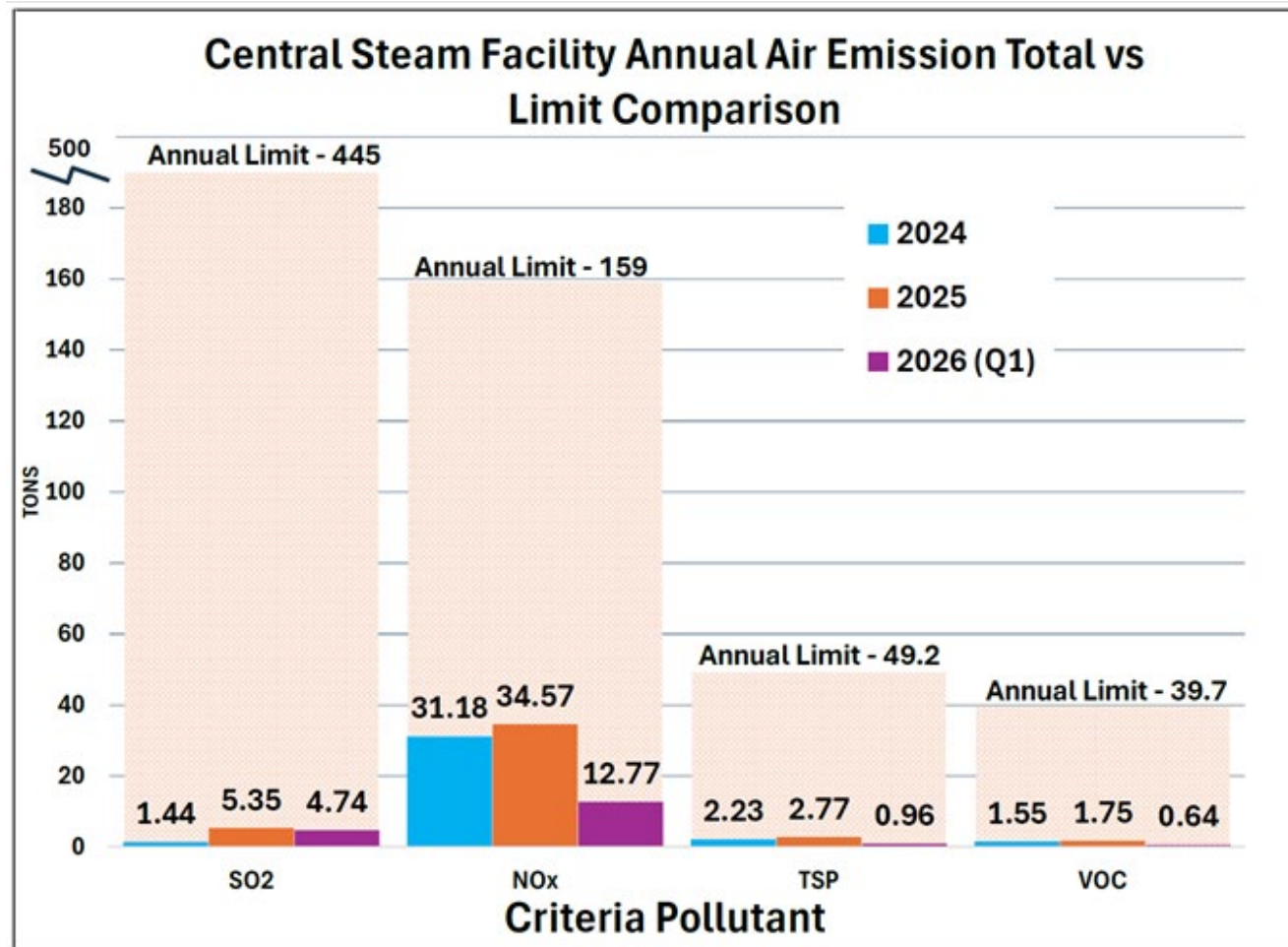


State Pollutant Discharge Elimination System (SPDES)

## Spills Trend (2022 - 2026)



# Environmental Program Metrics (cont.)



SO<sub>2</sub> – Sulfur dioxide

TSP – Total Suspended Particulates

NO<sub>x</sub> – Nitrogen Oxides

VOC – Volatile Organic Compounds

# Environmental Program Updates

## Safe Drinking Water Act

- Received approval from Suffolk County Department of Health Services to put the new water tower in service
- Plans are underway for the removal of the former water tower (May/June)

## Deer Management

- Second weekend completed – 84 deer taken
- Total for 2026 (to date) – 112
- Last weekend scheduled in April



# Groundwater Protection Update

# VOC Remediation System Status

No change since last month

System	Operations	Status	
OU I – South Boundary	1996 – 2019	Closed – Monitoring Ongoing	
OU III – Middle Road/South Boundary	1997 –	In Operation	
OU III – Industrial Park & Modification	1999 – 2025	Closed – Monitoring Ongoing	
<i>OU III – Carbon Tetrachloride</i>	<i>1999 – 2010</i>	<i>Closed – Goals Met</i>	
OU III – Building 96	2001 –	In Operation	Anticipate Petition for Shutdown in 2026-2027
OU III – Western South Boundary	2002 –	In Operation	
<i>OU III – Industrial Park East</i>	<i>2004 – 2014</i>	<i>Closed – Goals Met</i>	
OU III – North Street	2004 – 2020	Closed – Monitoring Ongoing	
OU III – North Street East – VOCs	2004 – 2020	Shutdown – Monitoring Ongoing	
OU III – North Street East – EDB	2020 – 2026	Shutdown – Monitoring Ongoing	
OU III – LIPA	2004 – 2025	Closed – Monitoring Ongoing	
OU III – Airport	2004 –	In Operation	
<i>OU III – Freon-11</i>	<i>2012 – 2019</i>	<i>Closed – Goals Met</i>	
<i>OU IV – ASVE</i>	<i>1997 – 2003</i>	<i>Closed – Goals Met</i>	
<i>OU V – MNA of VOCs</i>	<i>NA</i>	<i>Closed – Goals Met</i>	
OU VI – EDB	2004 –	In Operation	

## Legend

On track

Concerns on Attaining Goals

Closed – Goals Met

# Radiological Remediation Status

No change since last month

System	Operations	Status
Operable Unit (OU) I – Former Hazardous Waste Management Facility Strontium 90 (Sr-90)	NA	Monitoring Ongoing
OU III – Brookhaven Graphite Research Reactor/Waste Concentration Facility (BGRR/WCF) (Sr-90)	2005 –	In Operation
OU III – Chemical Holes (Sr-90)	2003 – 2018	Shutdown – Monitoring Ongoing
OU III – High Flux Beam Reactor (HFBR) Pump & Recharge (Tritium)	1997 – 2019	Closed – Monitoring Ongoing
OU IV – Building 650 Sump Outfall (Sr-90)	NA	Monitoring Ongoing
OU VIII – g-2 & Brookhaven Linac Isotope Producer (BLIP) (Tritium)	NA	Monitoring Ongoing

# PFAS Remediation System Status

System	Operations	Status
OU X – Current Firehouse/Building 170	2022 –	In Operation
OU X – Former Firehouse	2023 –	In Operation

## Legend

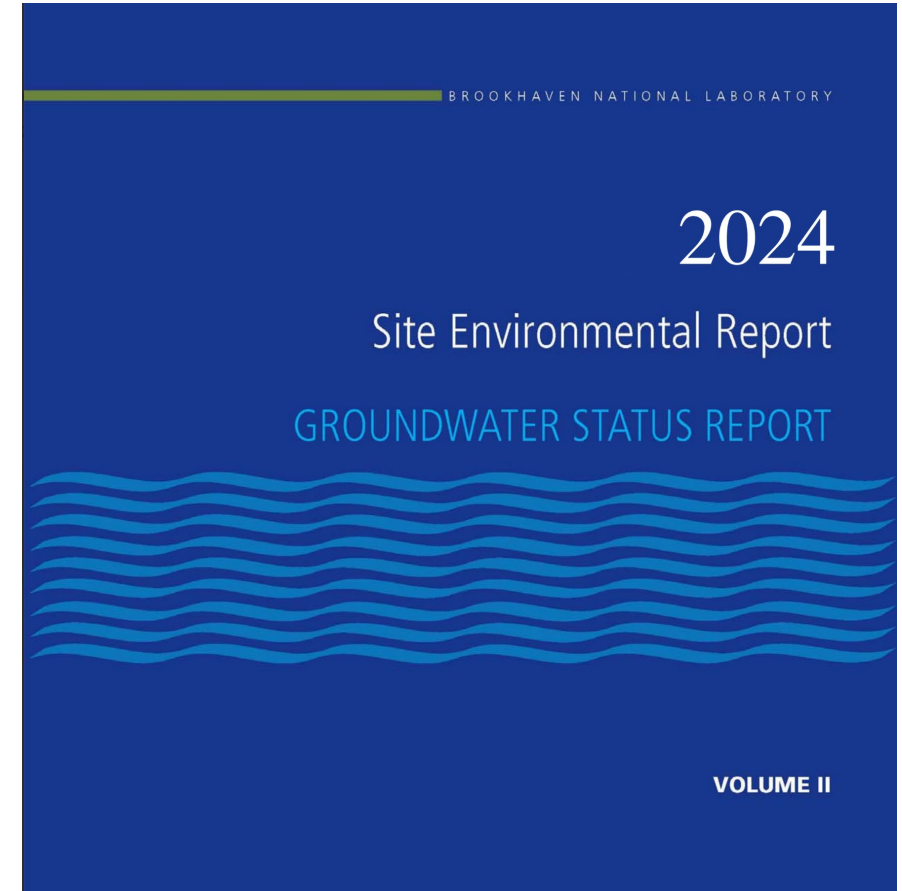
On track

Concerns on Attaining Goals

Closed – Goals Met

# Groundwater Updates

- 2025 Groundwater Status Report – Underway
- 2026 CERCLA Five-Year Review draft submittal to DOE on April 6<sup>th</sup>
- Design plans for Middle Road/South Boundary extraction wells are expected in April – May
- Initiating characterization efforts in support of the Current Firehouse/Building 170 extraction well design in late April
- Building 526 Demolition – preparation for demolition continues; environmental sampling completed on April 7<sup>th</sup>



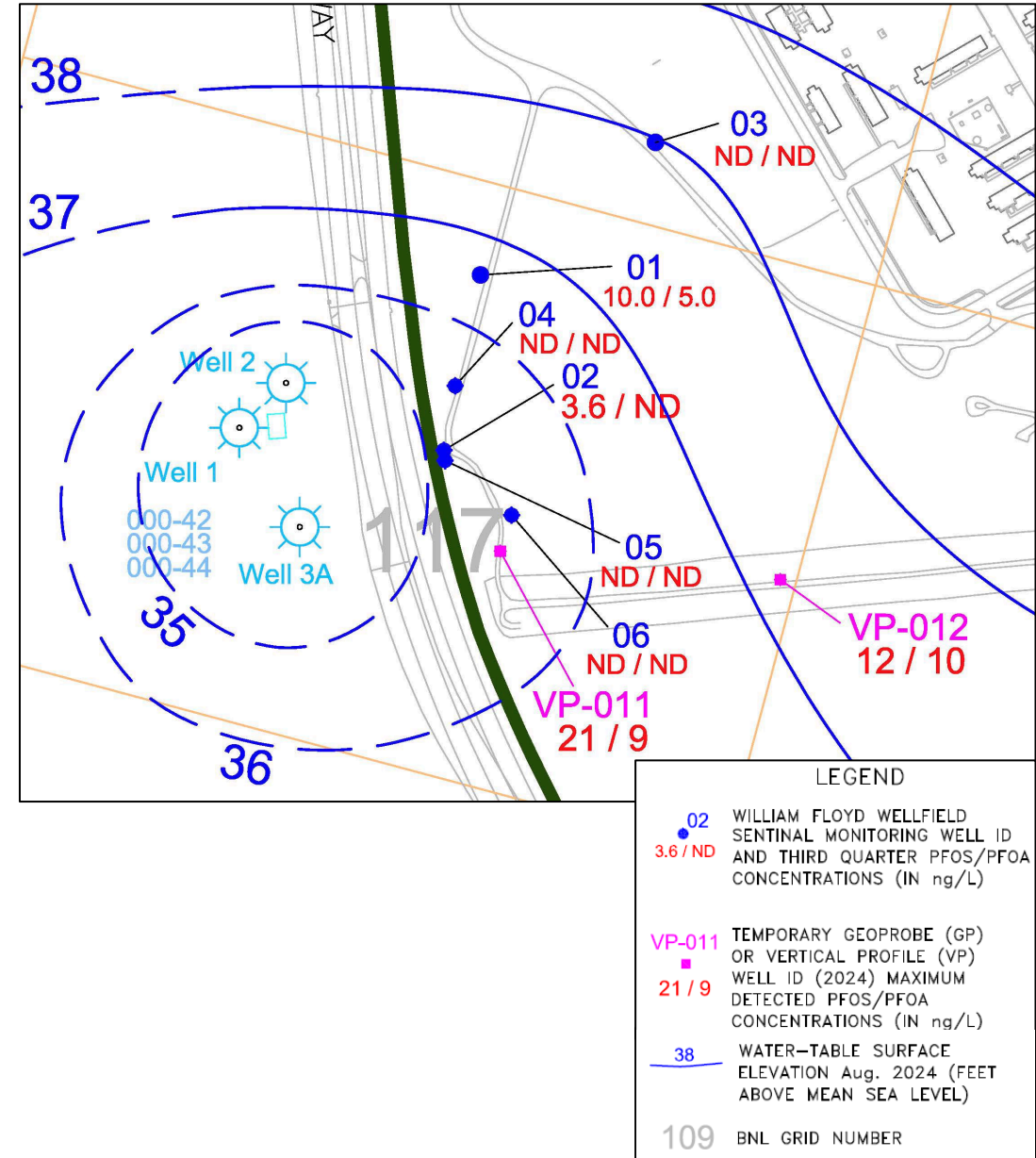
# SCWA William Floyd Well Field

- Suffolk County Water Authority (SCWA) operates the William Floyd Parkway Well Field located southwest of the BNL site.
  - There are three supply wells that draw water from the Upper Glacial aquifer (wells 1, 2 and 3A)



# SCWA William Floyd Well Field

- The source water contributing area for the William Floyd well field extends into the southwestern area of the BNL site
- BNL and Suffolk County Department of Health Services (SCDHS) established a joint "outpost" monitoring program (started in 1996):
  - Quarterly sampling of six BNL monitoring wells located along the BNL boundary adjacent to the William Floyd well field
  - Duplicate groundwater samples are analyzed by BNL and SCDHS labs for an extensive list of potential contaminants, including PFAS and 1,4-dioxane
- Sample results are shared with SCDHS and SCWA



# SCWA William Floyd Well Field

- SCDHS recently notified BNL that Supply Well #1 was taken out of service to ensure distributed water remained below the Federal Drinking Water Standard (DWS) of 4 parts per trillion (ppt)
  - Well #1 was blended with Well #2 to meet the Federal DWS
  - Increased levels of PFOS in Well #1 (11 ppt) would prevent achieving a blend less than the Federal DWS
- BNL met with SCWA and SCDHS on March 31<sup>st</sup>
  - Shutdown of the supply well does not have any impact on meeting demand
  - SCWA has and will continue to meet both State and Federal Drinking Water Standards
  - Agreed to continue to share data across agencies as it becomes available

THANK YOU!

**Questions/Feedback/Open Discussion**