

Groundwater Update

Brookhaven National Laboratory Community Advisory Council Meeting May 10, 2018

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U.S. DEPARTMENT OF
ENERGY

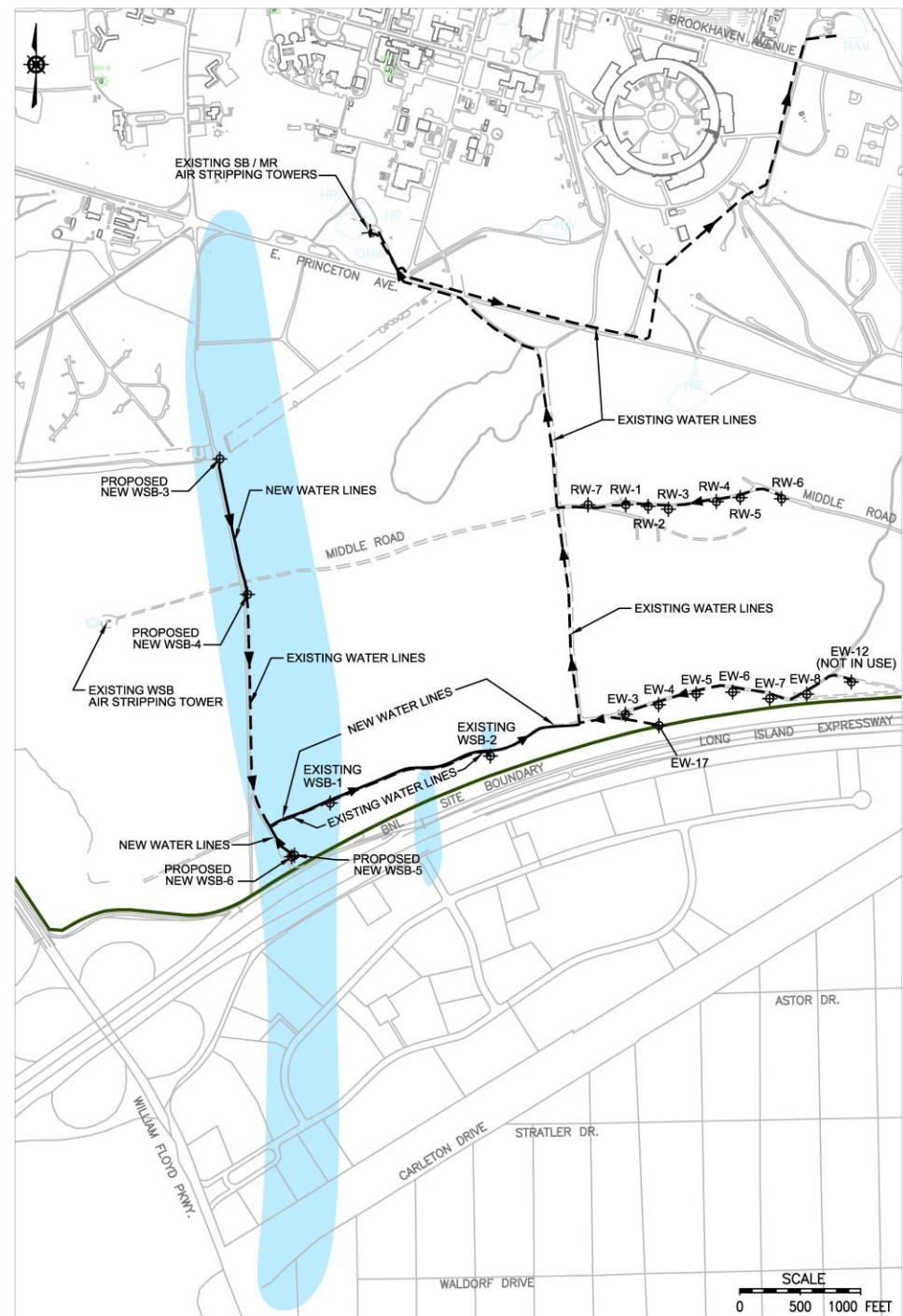
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Science

Agenda

- Western South Boundary (WSB) Treatment System Modification Status
- Update on Ethylene Dibromide (EDB) Characterization in North Street East Area
- Response to Suffolk County Dept. of Health Services (SCDHS) request for characterization of low level Perfluorinated Compounds (PFCs) detected in BNL Supply Wells
- Cleanup of remaining contaminated soil in former Building 811 area

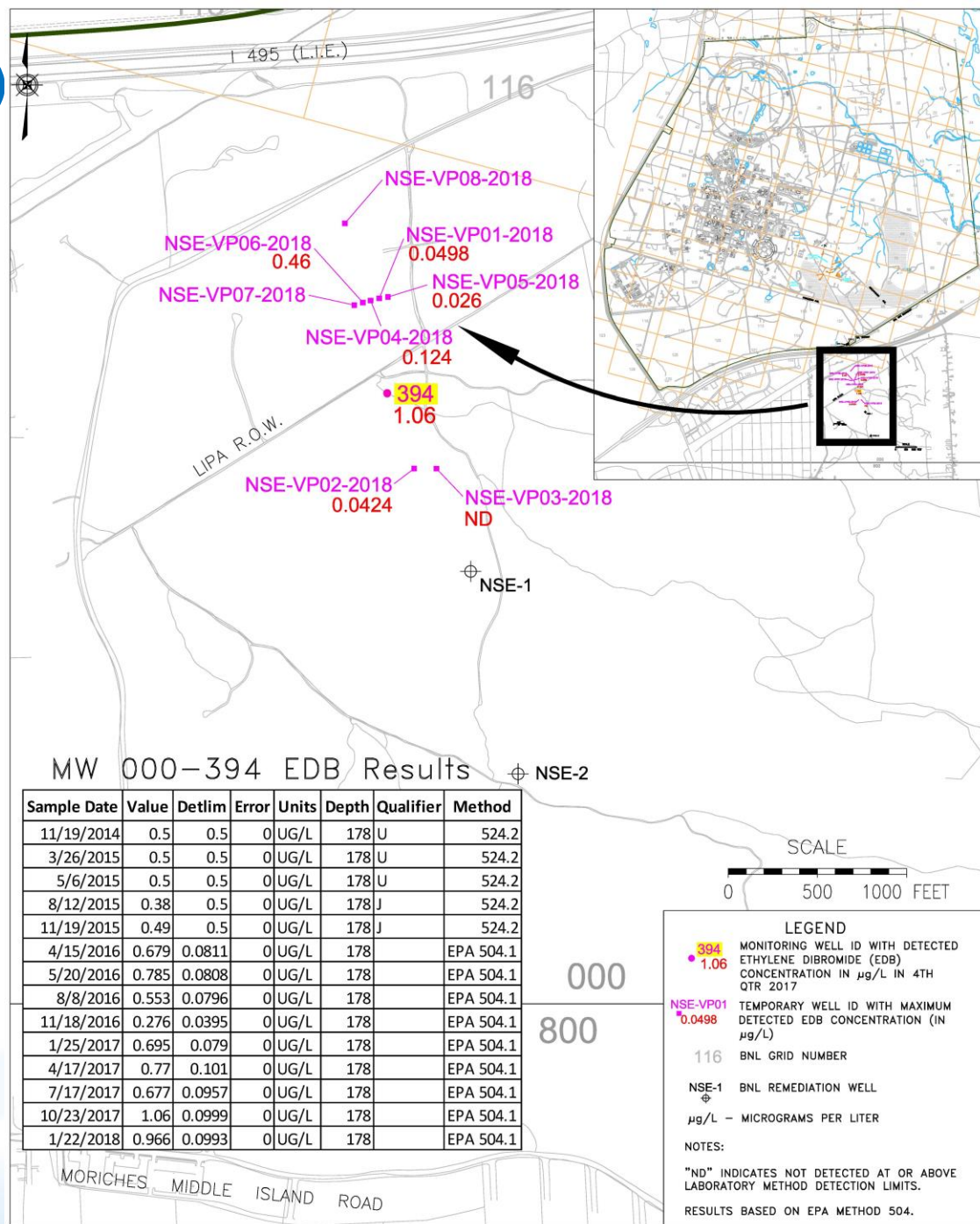
Western South Boundary Treatment System Modification Status

- Submit system modification design adding four extraction wells to regulators (late May)
- Begin construction (June)
- Complete construction/begin operation (September)
- Advantages of treating water at OU 3 Middle Road/S. Boundary Building
 - System is scheduled to run until 2026
 - Significant additional treatment capacity
 - Can decommission W. South Boundary Treatment System
 - Flexibility in treated water discharge location



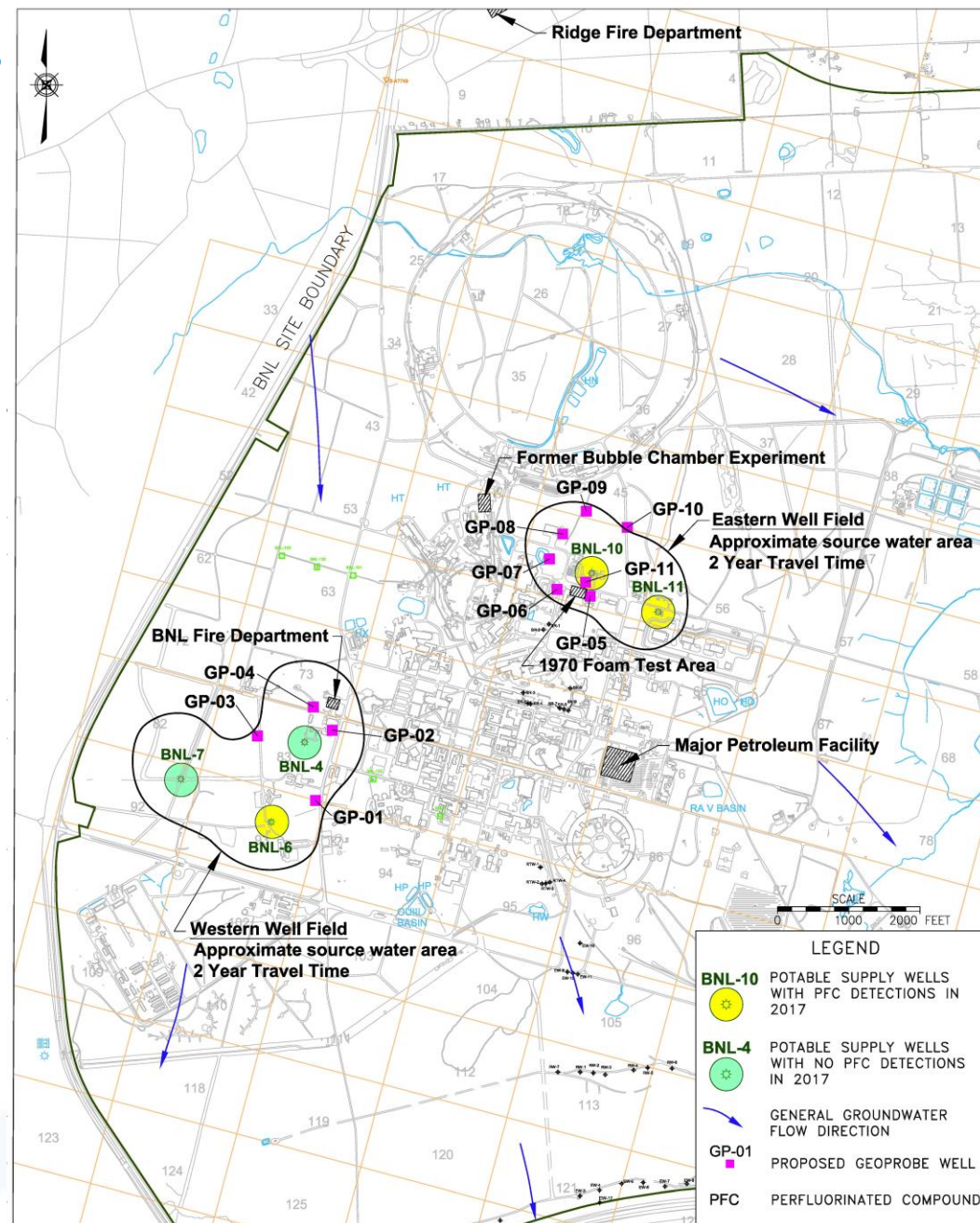
North Street East – Ethylene Dibromide (EDB) Update

- Following January CAC update, EDB concentration in well 000-394 remains above 1 µg/L. The drinking water standard is 0.05 µg/L
- Installed seven new temporary vertical profile wells to date (three initially planned)
 - EDB concentrations up to 0.46 µg/L
- Continuing to characterize extent of EDB in this area



Perfluorinated Compounds (PFCs)

- Testing in 2017 detected PFCs in three of BNL's potable supply wells
 - EPA Health Advisory = 70 ng/L
 - Routine testing added to potable water monitoring program in 2018 (earlier results confirmed)
- Planned investigation
 - Several possible sources from 1970s and 1980s identified
 - Firefighting foams
 - Plan submitted to regulators
 - In May/June, temporary wells will be installed to determine distribution of PFCs in supply well source water areas

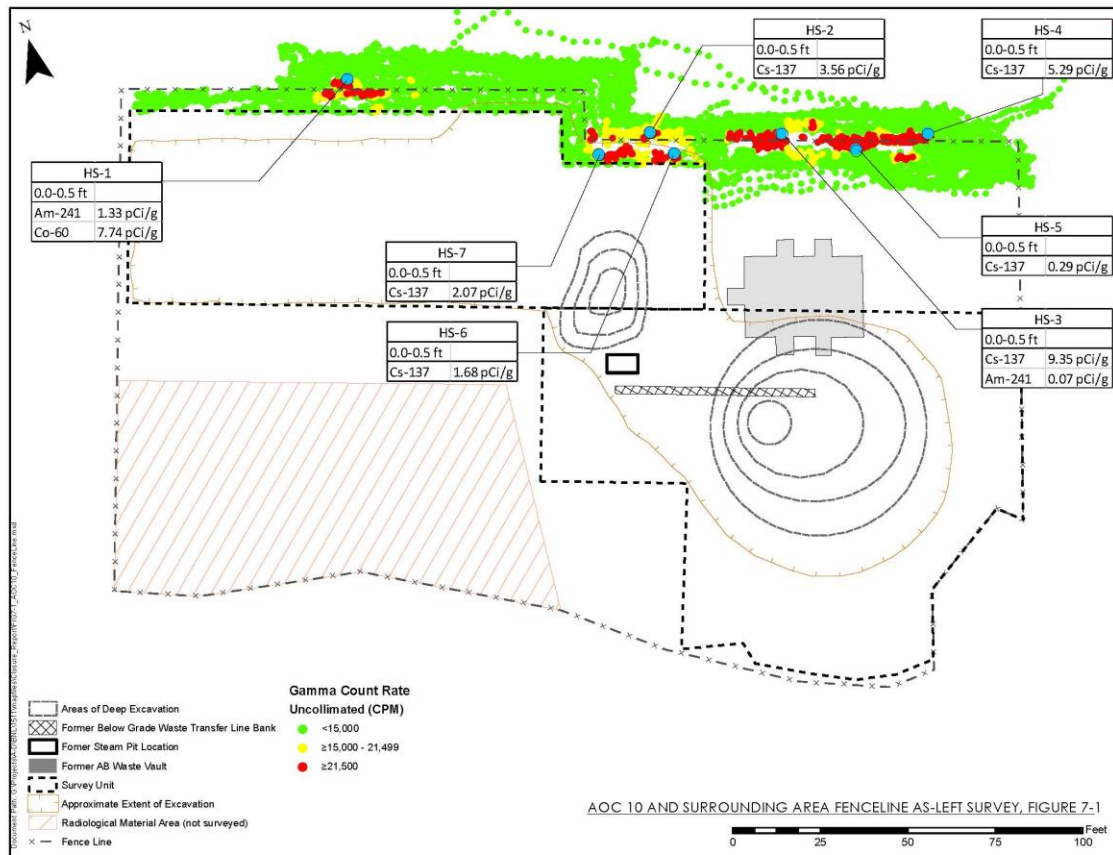


Former Waste Concentration Facility (Building 811) Remaining Soil Remediation

- Last briefed CAC in January 2017
- Demo and soil cleanup completed in 2016 to help reduce environmental liability risk to soil and groundwater
 - Cesium-137 primary contaminant in soil
 - Closeout Report submitted to regulators October 2016 documenting that the cleanup goals were met
- One area of surficial contamination to north of excavation remains (not in original scope). Area is radiologically posted, under institutional controls



Former Waste Concentration Facility (Building 811) Remaining Soil Remediation



- Planning underway to excavate remaining areas exceeding the residential cleanup goal of 23 pCi/g for Cs-137
- Excavation/disposal scheduled for this summer
- Planning for parking area/cap once cleanup complete

Questions?