Testing of Private Wells for PFAS and 1,4-Dioxane

- SCDHS originally identified 97 properties downgradient of BNL that potentially had private water supply wells
  - SCDHS identified 14 additional properties; bringing the total to 111
    - In April 2019, BNL and Suffolk County established a Technical Services Agreement
      - BNL provides funding and analytical laboratory for PFAS analyses
      - SCDHS is responsible for sampling the wells and 1,4-dioxane analyses
    - Sampling started May 6, 2019

- In November 2019, SCDHS identified 50 additional properties
  - In December 2019, BNL and Suffolk County agreed to modify the Technical Services Agreement to account for the additional wells
    - Contract was finalized on January 24, 2020
    - Agreement extends to March 31, 2020
  - Letters were sent to property owners during the week of February 3, 2020
Status of the First 111 Properties

- 57 properties have been sampled (total **59 wells**)
- 25 properties have not been sampled:
  - Declined the offer (10)
  - Not responded (15)
- 21 properties found to be connected to public water
- 8 properties were vacant, unoccupied or have no domestic well
50 Additional Properties to Be Evaluated

Number of Additional Properties to be Evaluated in Each Area

- Yaphank Private Well Testing Areas: 0
- Public Water Hookup Area: +16
- Manorville Private Well Testing Areas:
  - +3
  - +31
Results for the 59 Private Supply Wells

PFOS/PFOA

- No detections of combined PFOS & PFOA greater than (>\>) 70 ng/L
- No PFOS or PFOA detected in 29 wells
- PFOA detected in 30 wells
  - 3 wells had PFOA >10 ng/L proposed standard
    - PFOA concentrations were 11 ng/L, 12 ng/L, and 23 ng/L
    - 17 of the 30 wells had trace (<2 ng/L) levels of PFOA
- PFOS detected in 6 wells. All were less than (<\<) 10 ng/L proposed standard
  - Maximum PFOS concentration was 6 ng/L

1,4-Dioxane

- No detections of 1,4-Dioxane >1 µg/L proposed standard
- 1,4-Dioxane detected in 8 wells (Results for 3 wells are pending)
  - Maximum concentration was 0.4 µg/L (detection limit is 0.1 µg/L)
NYSDEC PFAS and 1,4-Dioxane Characterization

• During June-July 2019, NYS installed 14 temporary wells to collect multiple samples from the shallow groundwater (0 to ~50 feet below the water table)
  • Brookhaven-Calabro Airport (6 wells installed)
  • Manorville FD HQ (3 wells)
  • Manorville FD Substation (3 wells)
  • Mastic FD Substation (2 wells)

*Note: Wells planned for Ridge FD Substation could not be successfully installed due to the local geology

• PFOS and PFOA were detected >10 ng/L at all four properties
  • Brookhaven-Calabro Airport: PFOS up to 4,340 ng/L; PFOA up to 638 ng/L
  • Mastic FD Substation: PFOS up to 501 ng/L; PFOA up to 19.1 ng/L
  • Manorville FD HQ: PFOS up to 61.4 ng/L; PFOA up to 54.1 ng/L
  • Manorville FD Substation: PFOS up to 25.6 ng/L; PFOA up to 39 ng/L

• 1,4-Dioxane detected >1 µg/L at Manorville Substation
  • Maximum concentration was 1.1 µg/L

• NYS provided the results to the property owners
NYSDEC & Private Wells With PFOS or PFOA >10 ng/L
Continued PFAS and 1,4-Dioxane Groundwater Characterization at BNL

**Phase 4:** Extensive sampling of on-site and off-site wells and off-site treatment systems

- BNL recently started a comprehensive “baseline” characterization of PFAS and 1,4-dioxane
  - Collecting samples from on-site and off-site monitoring wells and off-site treatment systems
    - ~350 on-site and off-site monitoring wells
    - 27 off-site extraction/treatment wells
    - Influent and effluent from 5 off-site groundwater treatment systems

**Phase 5:** Detailed characterization of the two BNL firehouse PFAS plumes

- Detailed source area characterization using temporary wells, followed by the installation of permanent wells for routine surveillance
- Will provide the data needed to design anticipated treatment systems for the two PFAS plumes
CERCLA Five-Year Review

• Five-year review required when contaminants remain
  - Last review issued 2016
• Evaluate implementation and performance of remedies and whether they continue to remain protective
• Survey questions will be emailed to CAC members week of February 17th
• March meeting will include a review of the Five-Year Review process and discussion on CAC input

Questions posed to CAC in 2015:

• What is your overall impression of BNL’s cleanup and do you feel well informed about the cleanup activities and progress?
• Are there any specific aspects of the cleanup that you feel should be of particular focus during the review? (e.g. ROD’s, cleanup goals, community input, etc.)
• Do you feel confident in BNL and DOE’s management of the long-term cleanup operations for the site?
• Do you have any comments, suggestions, or recommendations regarding BNL/DOE’s management and communications of the cleanup?