PFAS Update

BNL Community Advisory Council
September 8, 2022

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Agenda

• Update on installation of groundwater treatment systems for the Current Firehouse/Building 170 and Former Firehouse PFAS plumes
• Next steps
Building 170 Foam Training Area

Current Firehouse 1986-Present

Former Firehouse (1947-1985)
Former Firehouse Plume Remediation

- Treatment system design
  - Three extraction wells
  - Capture goal of 100 ng/L for PFOS or PFOA
  - Treat ~225 gallons per minute (gpm) of contaminated groundwater using granular activated carbon (GAC) filters

- Monitoring
  - Installed 29 groundwater monitoring wells to evaluate cleanup progress
Current Firehouse/Building 170 Plume Remediation

- **Treatment system design**
  - Nine extraction wells
  - Capture goal of 100 ng/L for PFOS or PFOA
  - Treat ~500 gpm of contaminated groundwater using GAC filters

- **Monitoring**
  - Installed 66 monitoring wells to evaluate cleanup progress

Downgradient extent of plume segments will be evaluated during the RI/FS
Summary of Construction Activities

• Installed
  • 12 groundwater extraction wells
  • ~13,000 feet of underground piping to connect the extraction wells to treatment buildings, and the treatment system buildings to the recharge basins
  • ~5,000 feet of underground electrical wiring
  • ~14,000 feet of underground fiber optic cables for communications/system controls
  • 95 groundwater monitoring wells to monitor cleanup progress over time

• Repurposed two former groundwater treatment system buildings
  • Former Medical Research Reactor cooling water filter Building 492 was repurposed for Current Firehouse/Building 170 PFAS Treatment System
    • Installed two new GAC filters
    • Cleaned two inactive recharge basins
  • Former HFBR Pump and Recharge System GAC filters were repurposed for Former Firehouse PFAS Treatment System
    • Repaired and repainted two GAC filters
    • Constructed a new building for the filters
System Construction

Extraction Well Vault at Current Firehouse

Extraction Well Installation South of Former Firehouse Area

Underground Pipe Installation

Monitoring Well Installation
Granular Activated Carbon Filters

Installing GAC Filters at Current Firehouse/Building 170 Treatment System Building

Construction of Former Firehouse GAC Filter System Building
Filling Filters with New Granular Activated Carbon

Current Firehouse/Building
170 Treatment System
Preparing Basins for Recharging Treated Water

Recharge basin for the Current Firehouse/Building 170 Treatment System
Next Steps

• Complete “punch list” of remaining construction activities and startup testing
  • Complete installing electrical and communications wiring and system controls
  • Complete initial collection of groundwater samples from the 95 new monitoring wells
    • Samples have been collected from 85 of the new wells
  • Conduct treatment system startup testing (September-November)
    • Several extraction wells have been briefly turned on to verify proper operation
  • Working with NYSDEC to obtain (SPDES Equivalency) permits for the treatment system discharges

• Complete draft Remedial Investigation/Feasibility Study (RI/FS) Work Plan
  • Focus of the plan is to fill in the gaps in our understanding of the extent of PFAS and 1,4-dioxane (on-site and off-site)
  • Expect to complete draft Work Plan by early 2023
  • Submit draft Work Plan for regulatory agency review