DERP 101

Fort Drum, New York Case Study
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Fort Drum, New York

BACKGROUND
- Located in Jefferson County in northern New York
- Encompasses 108,000 acres
- Home to one of most deployed units in Army
- Maintains 47 live-fire facilities and > 74,000 acres of training areas
- Serves ~35,000 military personnel, dependents, and civilians

INSTALLATION RESTORATION PROGRAM (IRP)
- Legacy contamination from:
  - Military operations
  - Maintenance activities
  - Expansion efforts
  - Releases of aqueous film forming foam (AFFF)
- Predominant contaminants:
  - Petroleum
  - Chlorinated solvents
  - Per- and polyfluoroalkyl substances (PFAS)
A Brief Remediation History

REMEDIATION HISTORY AND PROGRESS

• Early investigations in the mid-1980’s identified 72 Areas of Concern:
  – Petroleum fueling/storage locations
  – Sanitary landfills/waste dumps
  – Pesticide and hazardous waste storage points
  – Former fuel firefighting sites (identified later)

• Environmental clean-up regulated under:
  – Judicial Consent Decree
    • Established in 2010 for the Oasis Jet Fuel Spill Site
  – RCRA Consent Order
    • Established in 2014 for all Solid Waste Management Units and Areas of Concern
  – CERCLA
    • 2014 Consent Order mandates all newly discovered sites will be managed under CERCLA
    • Currently includes PFAS sites
A Brief Remediation History Cont.

REMEDIATION HISTORY AND PROGRESS CONT.

- **Cleanup collaboration and strategy**
  - DoD/USAEC/USACE/NYSDEC/Contractor joint-effort
  - Implemented various advanced/green technologies
  - Accelerated site cleanup with significant cost savings

- **Current status of cleanup sites**
  - **One** site in RA(O) phase
    - 3800 PCE Site in MNA
  - **Eight** sites in/nearing long term management (LTM) phase
    - Two landfills
    - Five petroleum spill sites (“Gasoline Alley”)
    - One petroleum spill site (“Oasis Site” at airfield)
  - **Twenty-seven** active PFAS sites (Remedial Investigation phase)
CLEAN-UP SUCCESS STORY EXAMPLES

1. **3800 PCE Site (State Superfund Site)**
   - Dissolved-phase PCE discovered in aquifer below existing petroleum contamination
   - Clean-up Strategy: In-Situ Chemical Oxidation (ISCO) treatment + MNA + LTM
   - In-situ remedy supported mission readiness with minimal operational disruptions
   - Prepared PRAP/ROD using NYSDEC templates, resulting in significant time savings
   - Single, optimized full-scale injection event saved $750,000
   - **Remediation Response Complete (RC)/Site in RA(O) for MNA**
   - Site Management Plan (SMP) and Land Use Controls (LUCs)

2. **Site 1795 Petroleum Leak**
   - One of several former petroleum storage/fueling sites along “Gasoline Alley”
   - UST/piping leakage from multiple sites contributed to > 66 acres and 414 million gallons of groundwater contamination
   - NYSDEC administratively separated parts A/B of Site when additional plume (Site 1795 C) was discovered
   - Allowed for **RC**, with SMP and LUCs, of 1795 A/B to meet contractual milestone ahead of 1795 C, which is now in **RC** as well
CLEAN-UP SUCCESS STORY EXAMPLES CONT.

3. **Oasis Jet Fuel Spill Site**
   - In 2006, 500,000-gallon jet-fuel spill to groundwater at Airfield’s Oasis refueling point
   - Since 2007, 159 Technical Review Board meetings, between Army and NYSDEC Region 6, held to discuss remediation and optimization strategies/progress
   - NYSDEC-approved shutdown of three remedial systems several years ahead of schedule
   - $7.2M in cost savings to date
   - All requirements in Judicial Consent Decree have been fulfilled by Army
   - **Response Complete in 2023** (with LTM)
DoD and State Partnership

PARTNERSHIP “SECRET TO SUCCESS”

• Transparency/open communication (early and often)
• Draft document reviews ahead of final submittals
• Utilize Joint Execution Plan (JEP) to ensure schedule availability for timely document reviews
• Annual program review meetings with NYSDEC Central Office
• Quarterly Technical Review Board meetings with NYSDEC Region 6
• Inclusion of NYS Department of Health on relevant issues (e.g. PFAS)
• Quarterly joint DoD/EPA/NYSDEC working group meetings
• Awareness of Restoration Activity Board solicitation of local stakeholders
• Joint attendance at public meetings
• Accommodate all requests for installation visits/tours by Regulators