



# RVAAP Restoration Program Update

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June 5, 2024

# OHARNG Environmental Program Overview



- Work for the State of Ohio - The Adjutant General's Dept under the Directorate of Installation Management and Resources
- 2 Environmental Offices (Columbus and Ravenna (CJAG))- manage environmental aspects at over 60 facilities across the state (CJAG is the largest facility) - includes cultural and natural resources, compliance, cleanup, training, and project management to support the military mission
- OHARNG is dual federal/state mission - National Guard Bureau (NGB) supports our mission/programs by providing expertise and funding from Army

# Brief Facility History



- Former ammunition plant – Load/assemble/pack facility for munitions; Produced ammonium nitrate; Conducted demilitarization; Munitions storage; Research & Development
- Has been known as the Ravenna Ordnance Plant, Ravenna Arsenal, Ravenna Army Ammunition Plant, Ravenna Training and Logistics Site, Camp Ravenna... NOW CJAG
- Supported World War II, Vietnam War, Korean War
- Was government-owned, contractor operated; Was also managed by the Army and the Base Realignment and Closure (BRAC) Division
- Now operates as a military training site – federal property that is licensed to the OHARNG (end user of the facility)

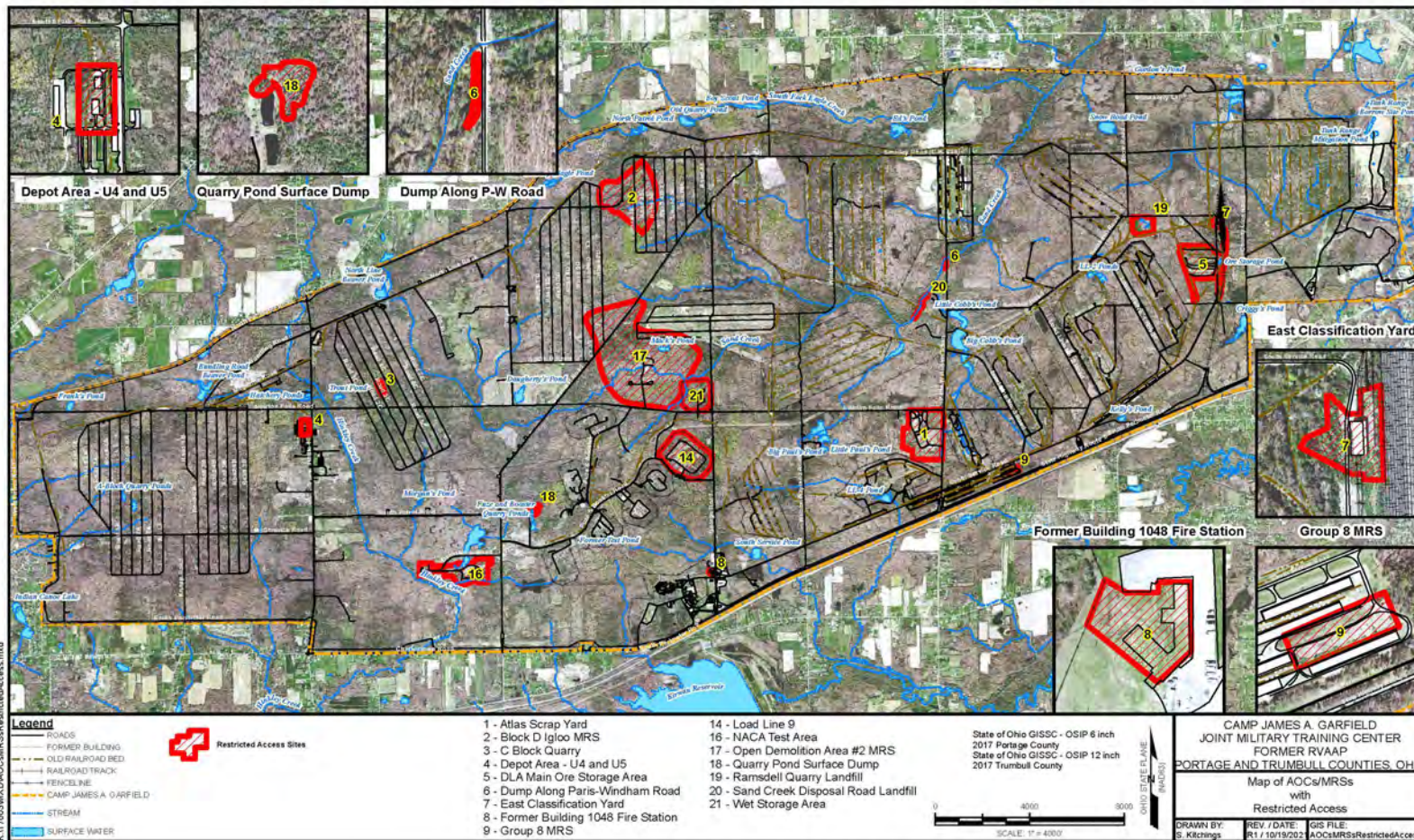
# Brief Summary of the Restoration Program



- Restoration program exists to investigate and cleanup contamination from past use to support current and future military training
- Restoration program is a multi-agency effort (Ohio EPA, OHARNG, NGB, Army, USACE) that utilizes the CERCLA regulation to investigate and cleanup past contamination
- Investigation and cleanup of the facility began in 1989 – Currently, cleanup is about 80% complete
- Investigating and remediating soil, sediment, surface water and groundwater – 85 cleanup sites (60 sites = No Further Action; 8 sites = Long term management; 17 sites = under investigation/remedial action)



# Current AOCs/MRSs with Land Use Controls/Restrictions or Undergoing Investigation/Remedial Actions



Map of AOCs/MRSs with Restricted Access at Camp James A. Garfield



# Current Restoration Program Activities

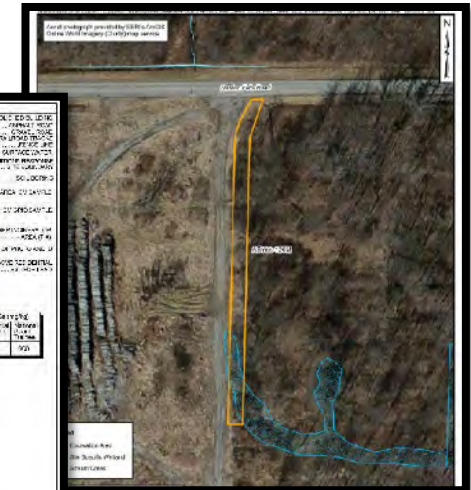
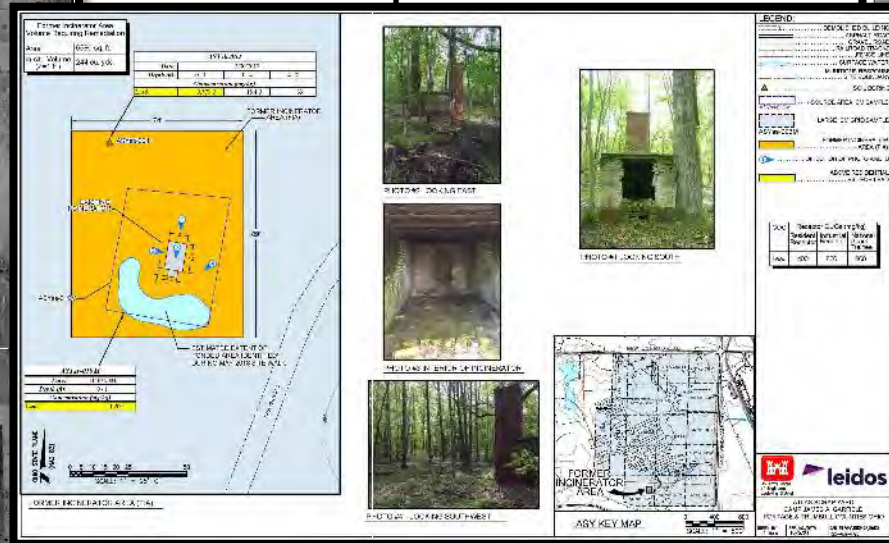


## • C Block Quarry

- Used as quarry in early 1940s
- Used for disposal of annealing process wastes (chromic acid) and asbestos waste
- A remedial action including a surficial soil removal for asbestos and implementation of land use controls will be conducted in 2024

## • Atlas Scrap Yard

- Original construction camp; Storage yard for bulk materials; Staging area for salvaged ammunition boxes
- A remedial action including a soil removal in 2 areas will be conducted in 2024



# Current Restoration Program Activities

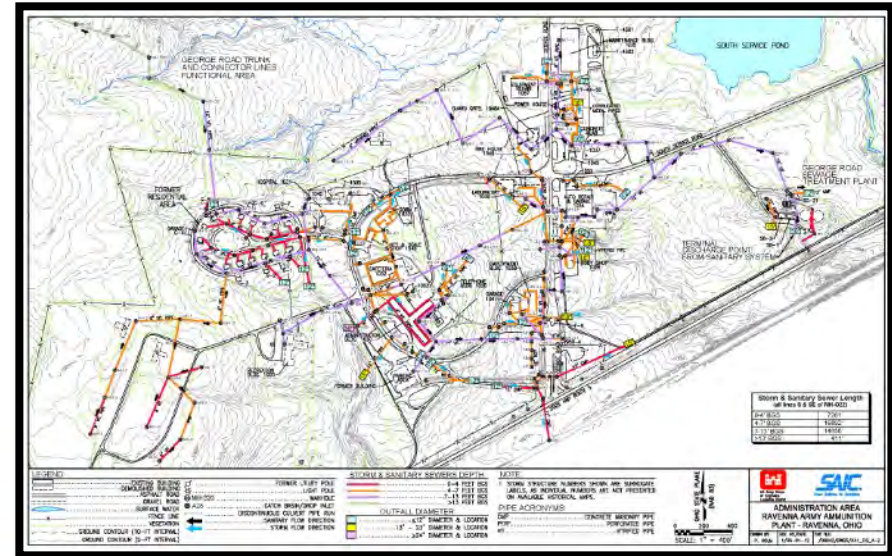


## • East Classification Yard

- Used as the main railyard; Round house building and main tracks remain
- A surface soil removal action surrounding the round house will be completed in 2024

## • Facility-wide Sewers

- Consists of sanitary and storm sewers used throughout the facility; Approximately 58,000 lf of sewer lines; 19 functional areas
- Currently in the remedial investigation (RI) phase





# Current Restoration Program Activities



- Group 8 Munitions Response Site
  - Group 8 was used for cold storage and material salvage operations; Area north of Building 849 was reportedly used for trash burning and staging
  - A remedial action including surface soil removal will be conducted in 2024



## Block D Igloo Munitions Response Site

- Block D was formerly used for the storage of finished munitions rounds in earth-covered magazines
- An explosion occurred at Igloo 7-D-15 in March 1943
- Potential to encounter munitions parts from the past explosion exists and a remedial action including munitions removal (if found) will be conducted in 2024

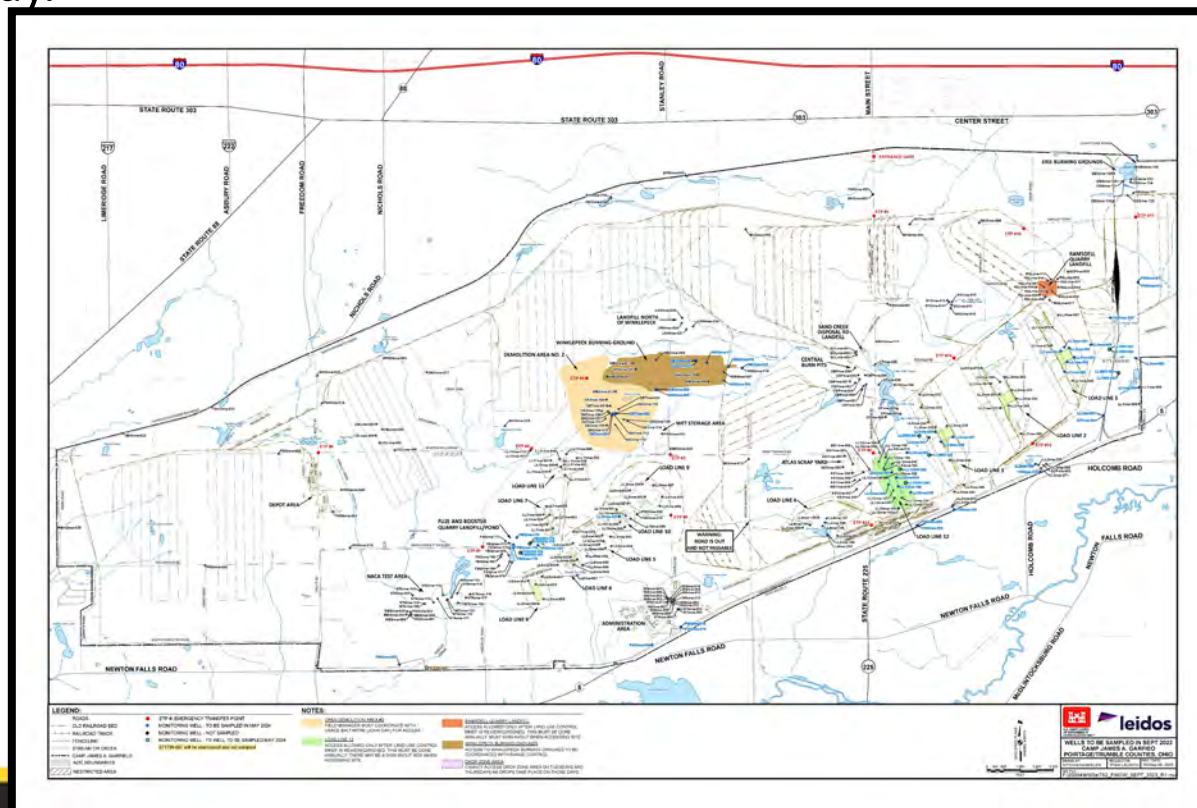




# Current Restoration Program Activities



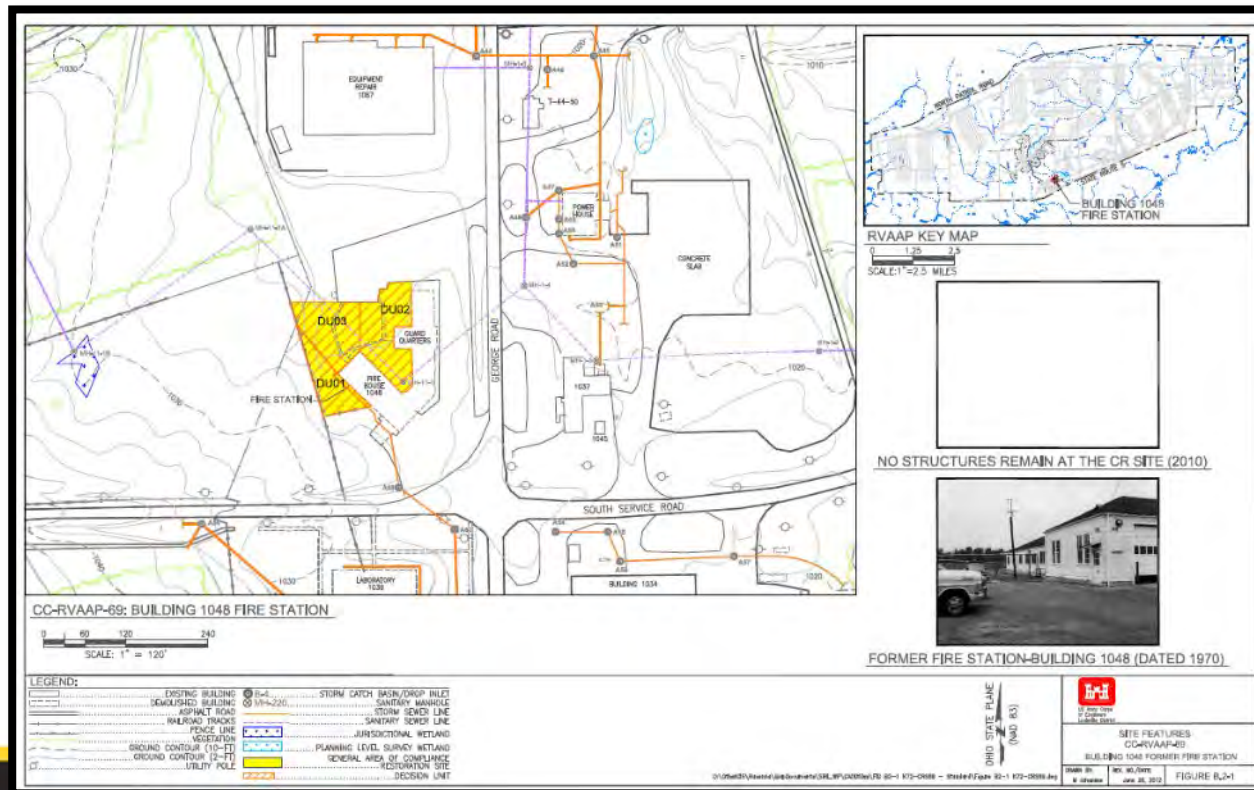
- Facility-wide Groundwater
  - Consists of 330 groundwater monitoring wells across the facility
  - Select wells are sampled 2 times per year and an annual well gauging/inspection event is performed
  - A remedial investigation (RI) was completed in 2022. A feasibility study (FS) is underway.



# Current Restoration Program Activities



- Building 1048 – Former Fire Station
  - Previously used as a fire station and security guard headquarters; Building was demolished in 2008; Carbon tetrachloride fire extinguishers were reportedly sprayed onto the ground surface and carbon tetrachloride may have been stored in the former building.
  - A remedial investigation (RI) is currently underway.

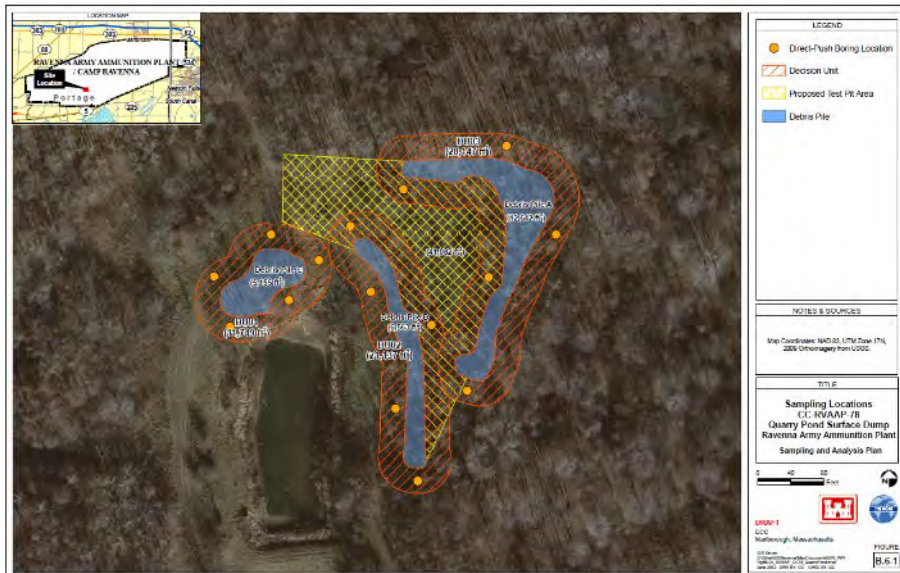




# Current Restoration Program Activities



- Quarry Pond Surface Dump
  - Former waste disposal area
  - A removal action to remove waste piles was completed in 2020; Additional asbestos waste was identified and additional characterization is required
  - A remedial investigation (RI) is underway.

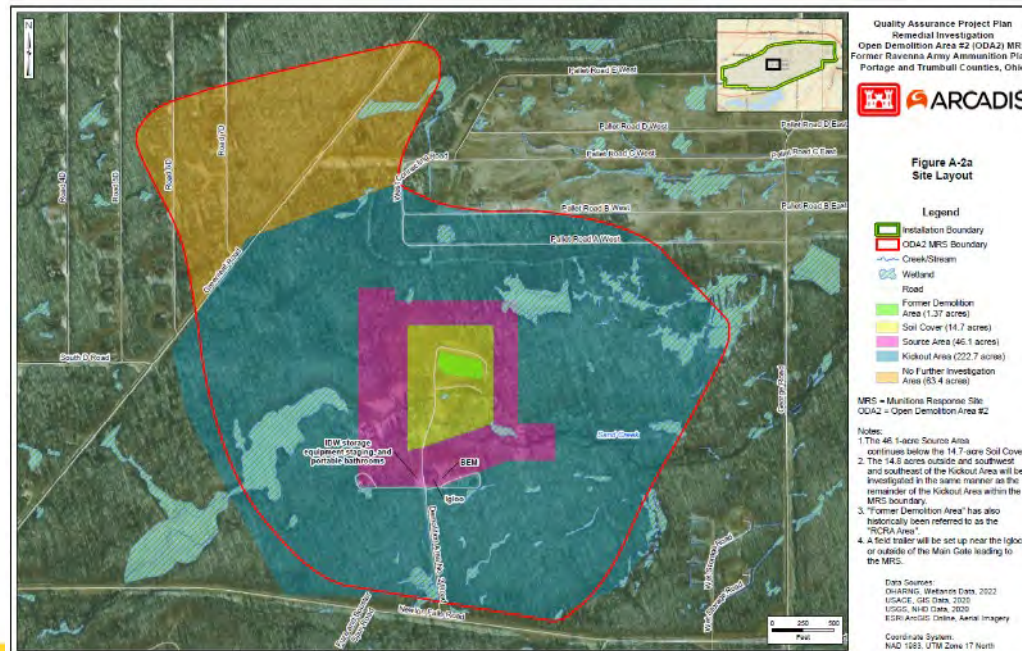


- DLA Ore Storage Sites
  - Multiple leased areas across the facility were utilized to store strategic materials and ores such as brass and copper ingots, asbestos, ferrochrome, magnesium, cobalt on the ground surface and in aboveground storage tanks
  - A remedial investigation (RI) is underway.

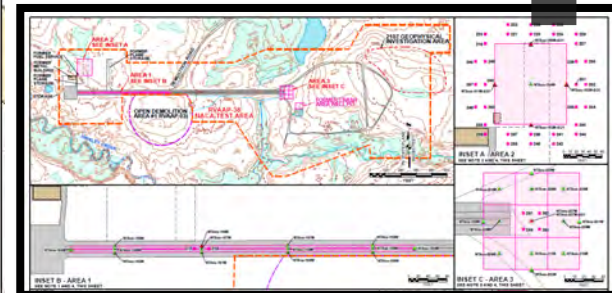
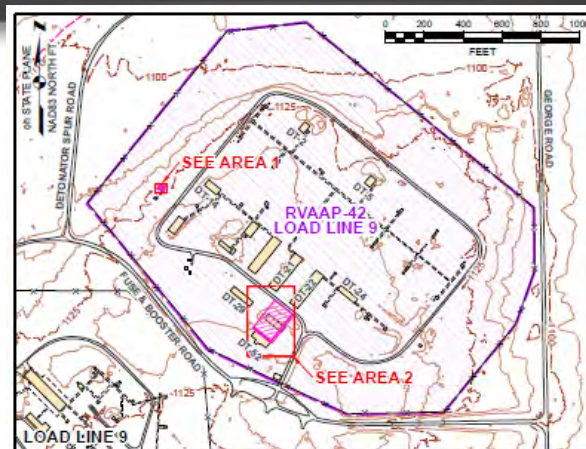
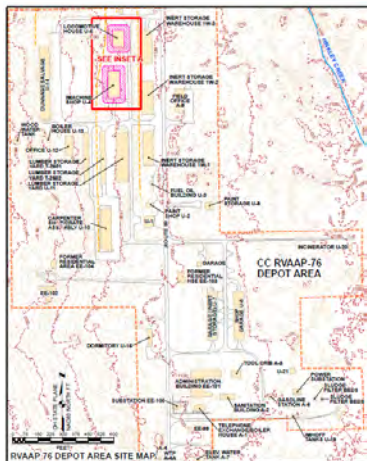




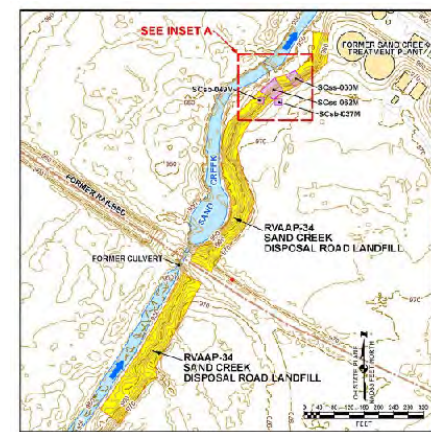
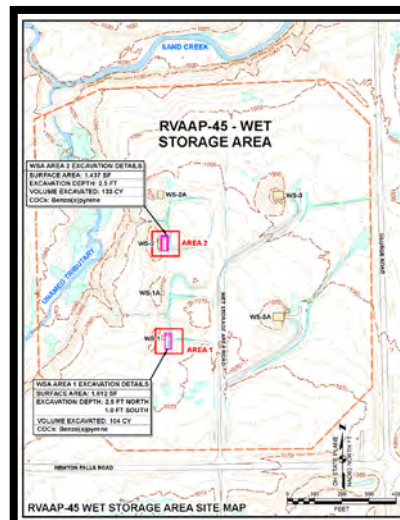
- Open Demolition Area 2 Munitions Response Site
  - Former open burn/open detonation area used to demolish and demilitarize munitions
  - Multiple removal actions to address munitions and explosives of concern (MEC) have been completed
  - A remedial investigation (RI) is currently underway



# Current Restoration Program Activities



- Load Line 9/NACA Test Area/Wet Storage Area/Depot Area/Sand Creek Dump
  - Remedial actions were conducted in 2022. Contaminated soils beyond the anticipated extent were identified.
  - Sampling to delineate additional extent of contamination in soil beyond the original remedial actions is required and will be conducted in 2024.



# Current Restoration Program Activities



- Long Term Management (LTM) – When a site reaches the end of the cleanup process and does not achieve unrestricted use, then LTM is required. LTM typically includes land use controls (LUCs)
  - LUCs = Restrictions on property to protect the receptor/user due to residual contamination left in place; Examples of LUCs = fencing, siebert stake, restricted access, no digging, annual inspections, LUC training
  - Also includes a 5-year review which reviews the protectiveness of the remedy during a 5-year or periodic review process
- Sites with restricted access
  - Paris Windham Dump – No training, restricted access
  - Ramsdell Quarry Landfill – No training, restricted access
- Sites cleaned up to Commercial/Industrial Use (which includes military training)
  - Load Lines 1-4 and 12 – no residential use
  - Winklepeck Burning Grounds – no residential use, groundwater use restriction, munitions construction support when doing ground disturbance
- Some sites still currently under investigation also have interim internal restrictions until investigation is complete
  - Restricted access; No training/disturbance







# Questions?

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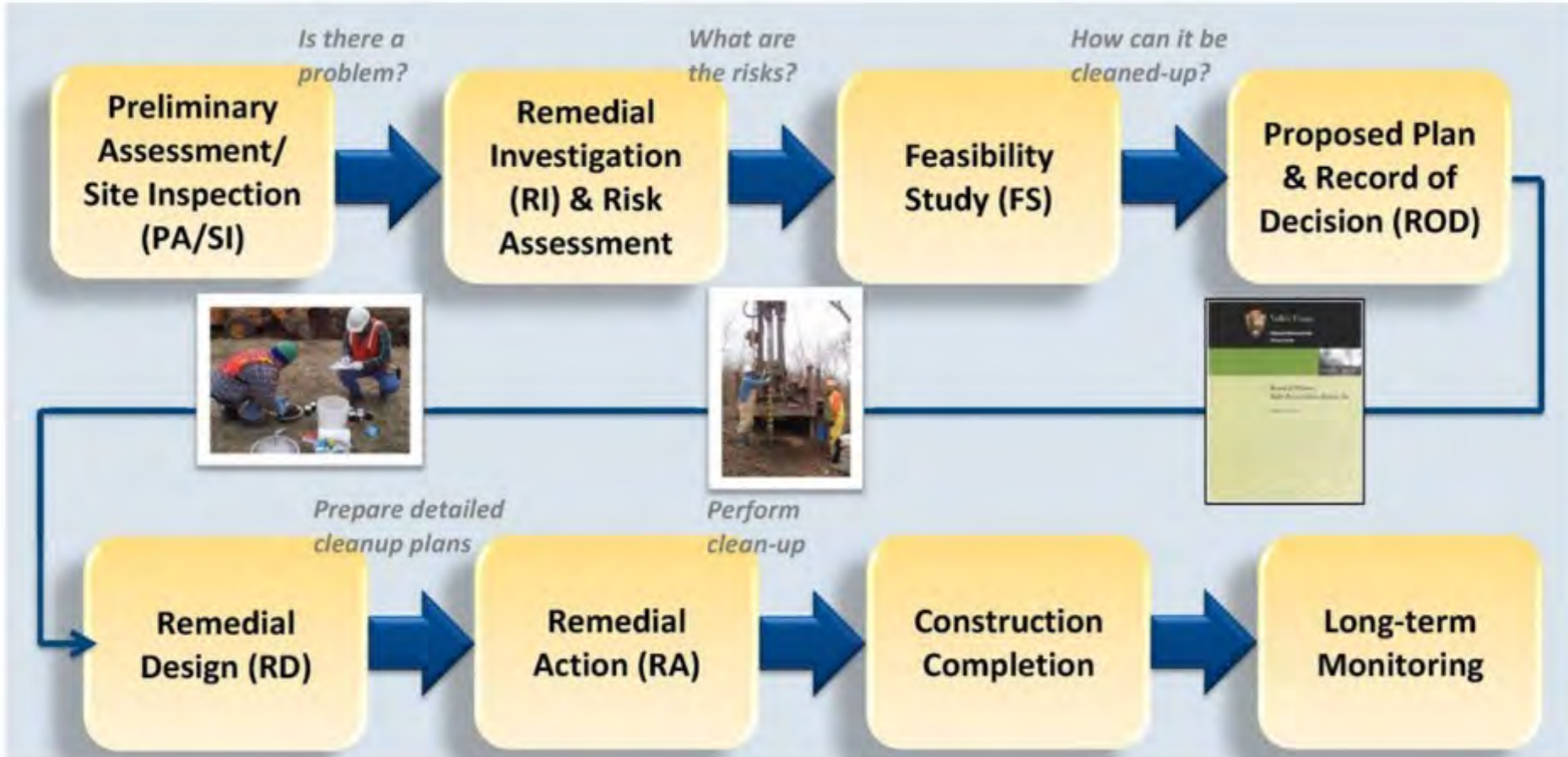
# Common Restoration Program Acronyms



- AOC – Area of Concern
- BRAC – Base Realignment and Closure Division (BRAC)
- CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
- CJAG – Camp James A. Garfield Joint Military Training Center
- DLA – Defense Logistics Agency
- FS – Feasibility Study
- LTM – Long Term Management
- LUC – Land Use Control
- MEC – Munitions and Explosives of Concern
- MRS – Munitions Response Site
- NACA – National Advisory Committee for Aeronautics
- NGB – National Guard Bureau
- OHARNG – Ohio Army National Guard
- Ohio EPA – Ohio Environmental Protection Agency
- RI – Remedial Investigation
- RVAAP – Ravenna Army Ammunition Plant
- USACE – United States Army Corps of Engineers



# Snapshot of the CERCLA Process



Source: <https://www.nps.gov/goga/getinvolved/cercla-steps.htm>