U.S. DEPARTMENT OF ENERGY | Legacy Management

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TRAC: Use of Story Maps for Transitioning Sites to Long-Term Stewardship

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TRAC

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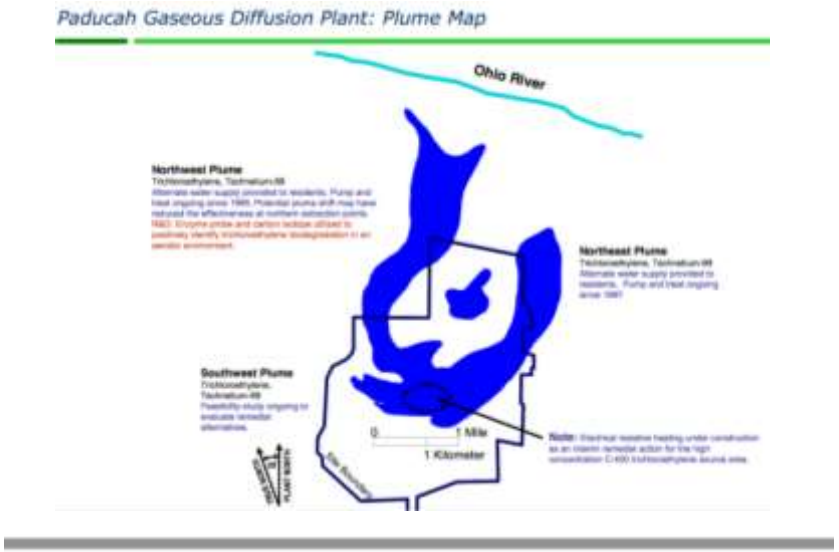
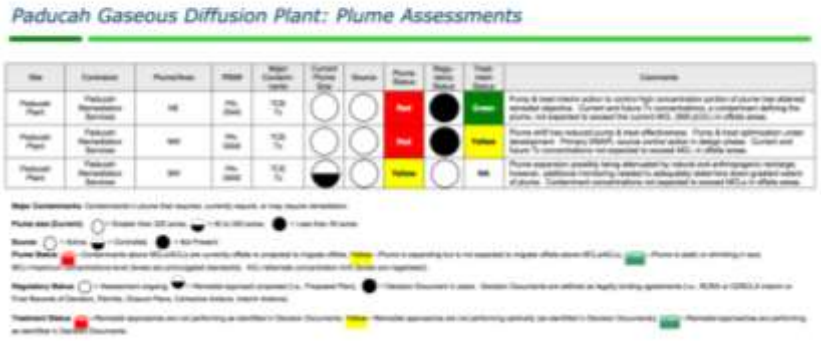
Tracking Restoration And Closure (TRAC)

- EM transitioning from paper report to online resource for groundwater plume reporting
- TRAC story maps describe
  - Groundwater plume footprint (above MCL)
  - Cleanup progress
  - Regulatory status

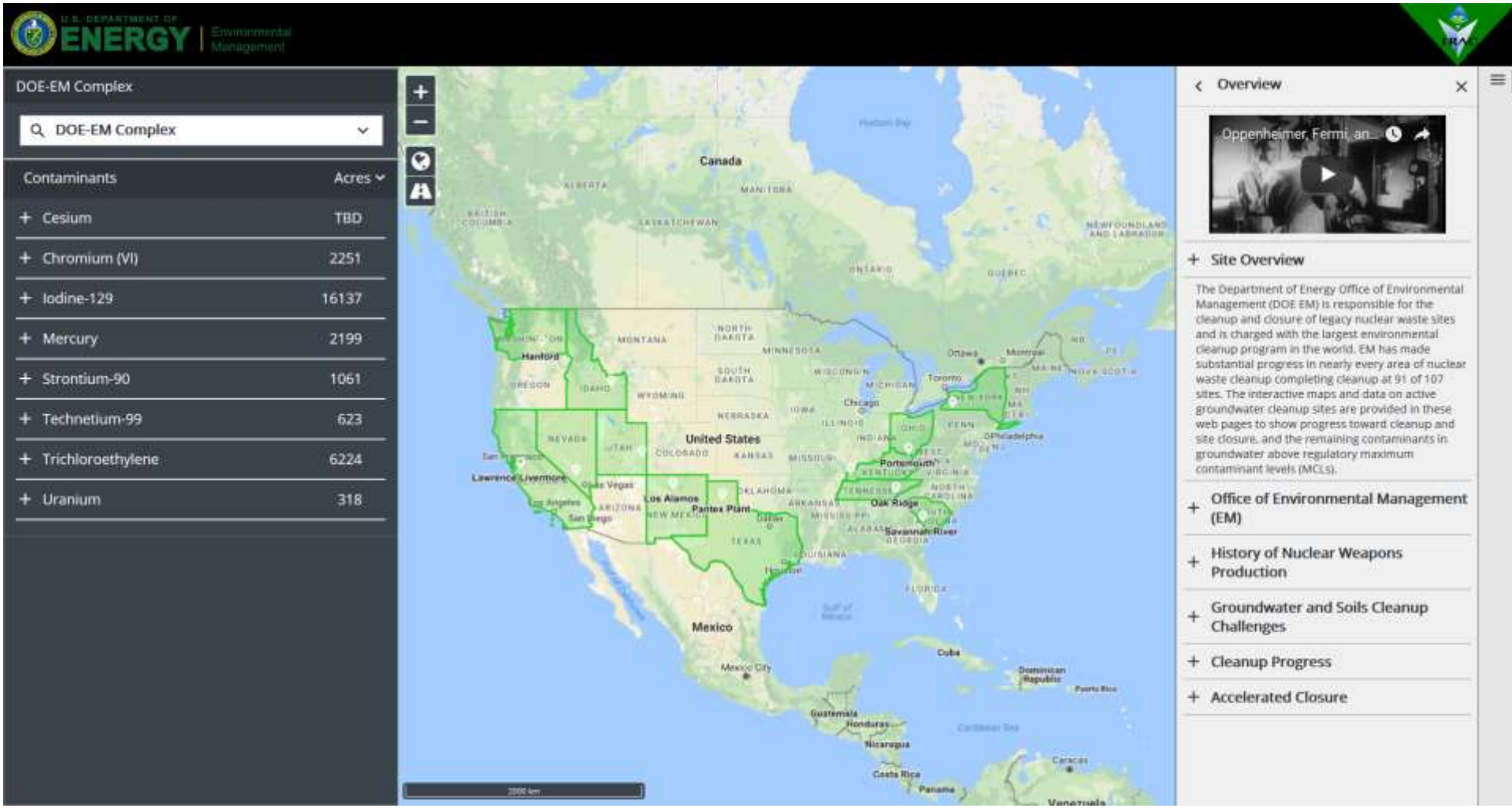




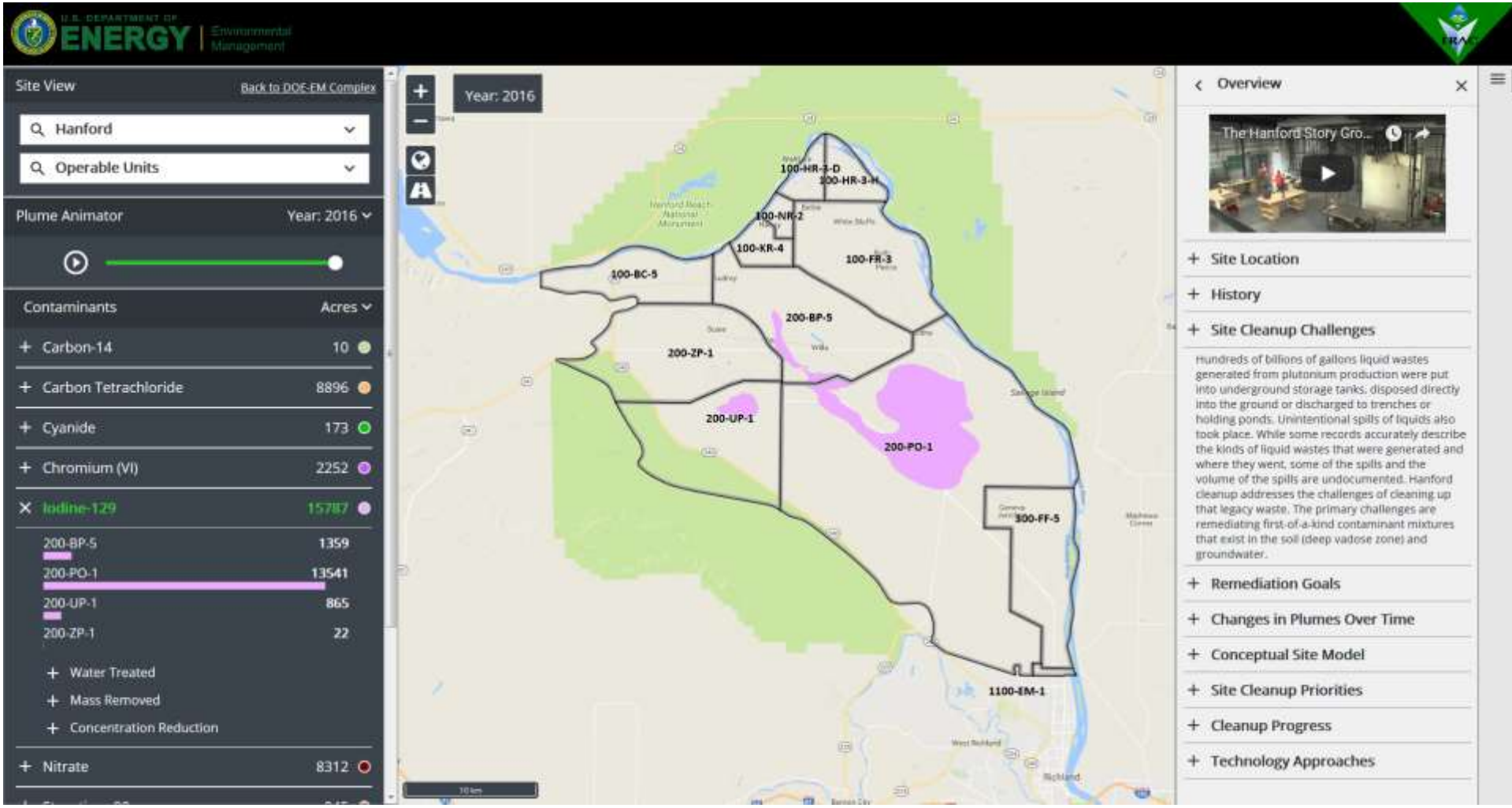
Goals

- Provide consistent information for each site
- Summarize information across all sites within the EM complex
- No data download access
- Capabilities
  - Maps that are easy to explore
  - Single or multiple contaminant views
  - Single or multiple management unit view
- Ease transition to Legacy Management

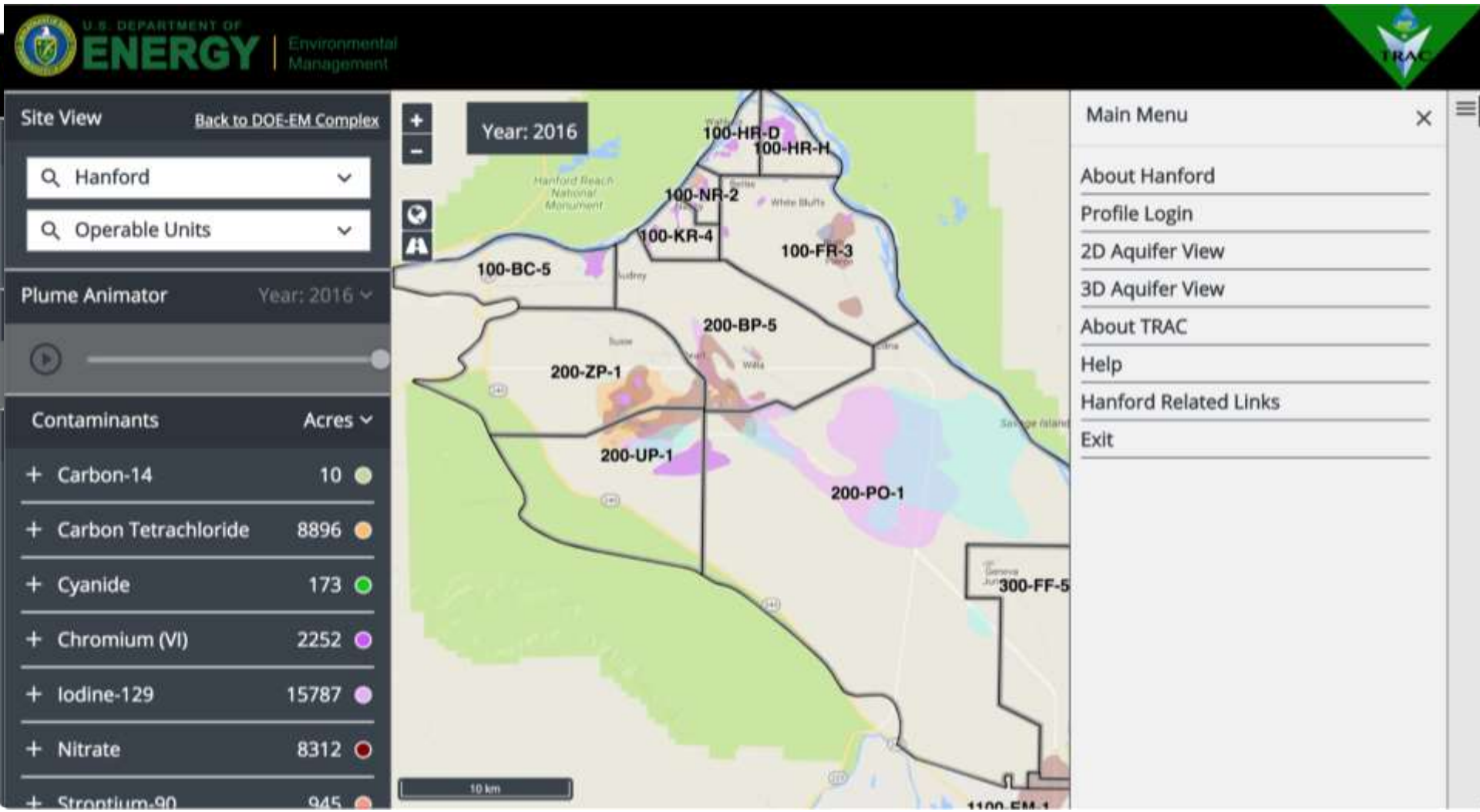
Summary Data View for All DOE-EM Sites



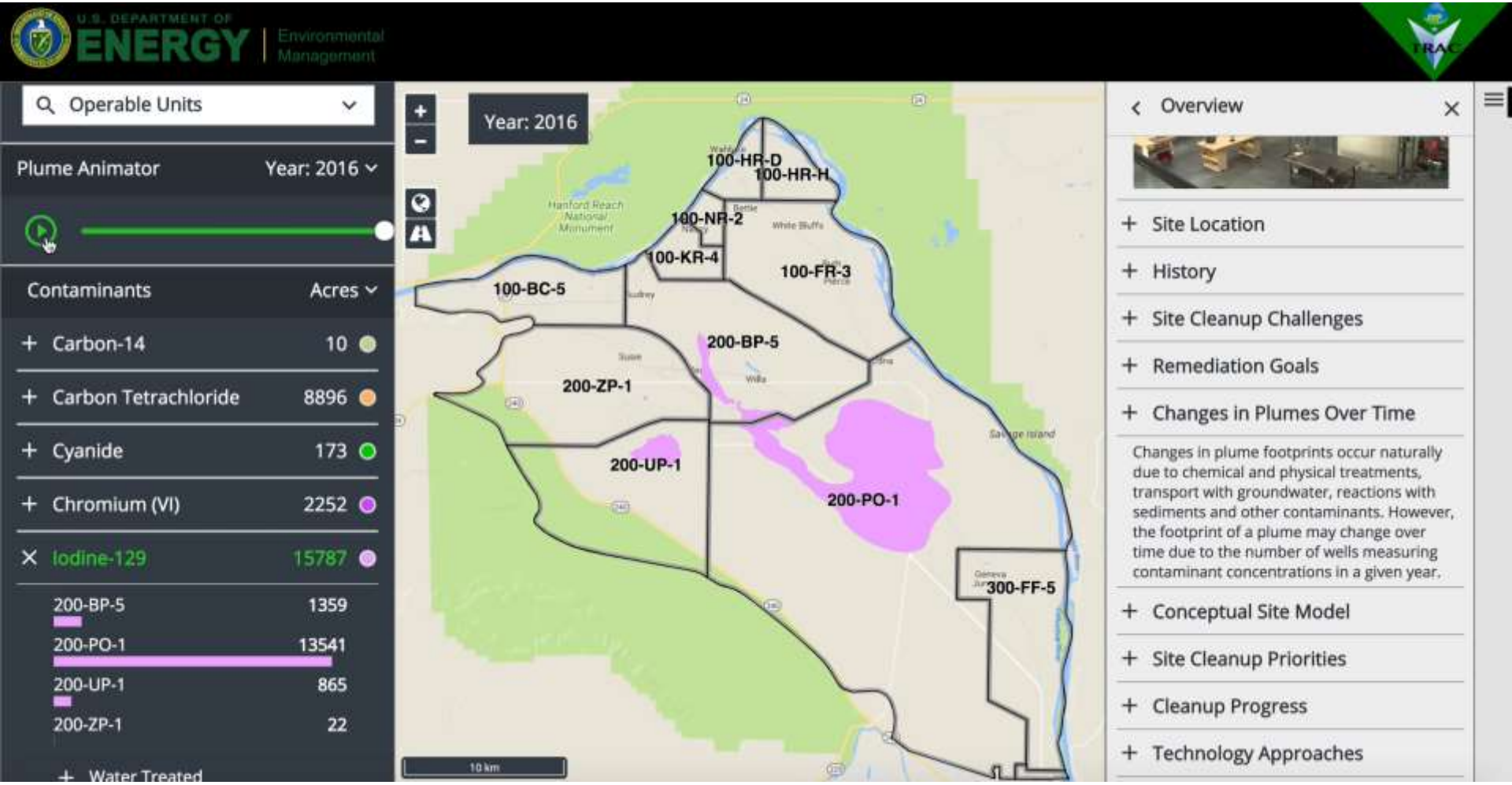
Site Data View



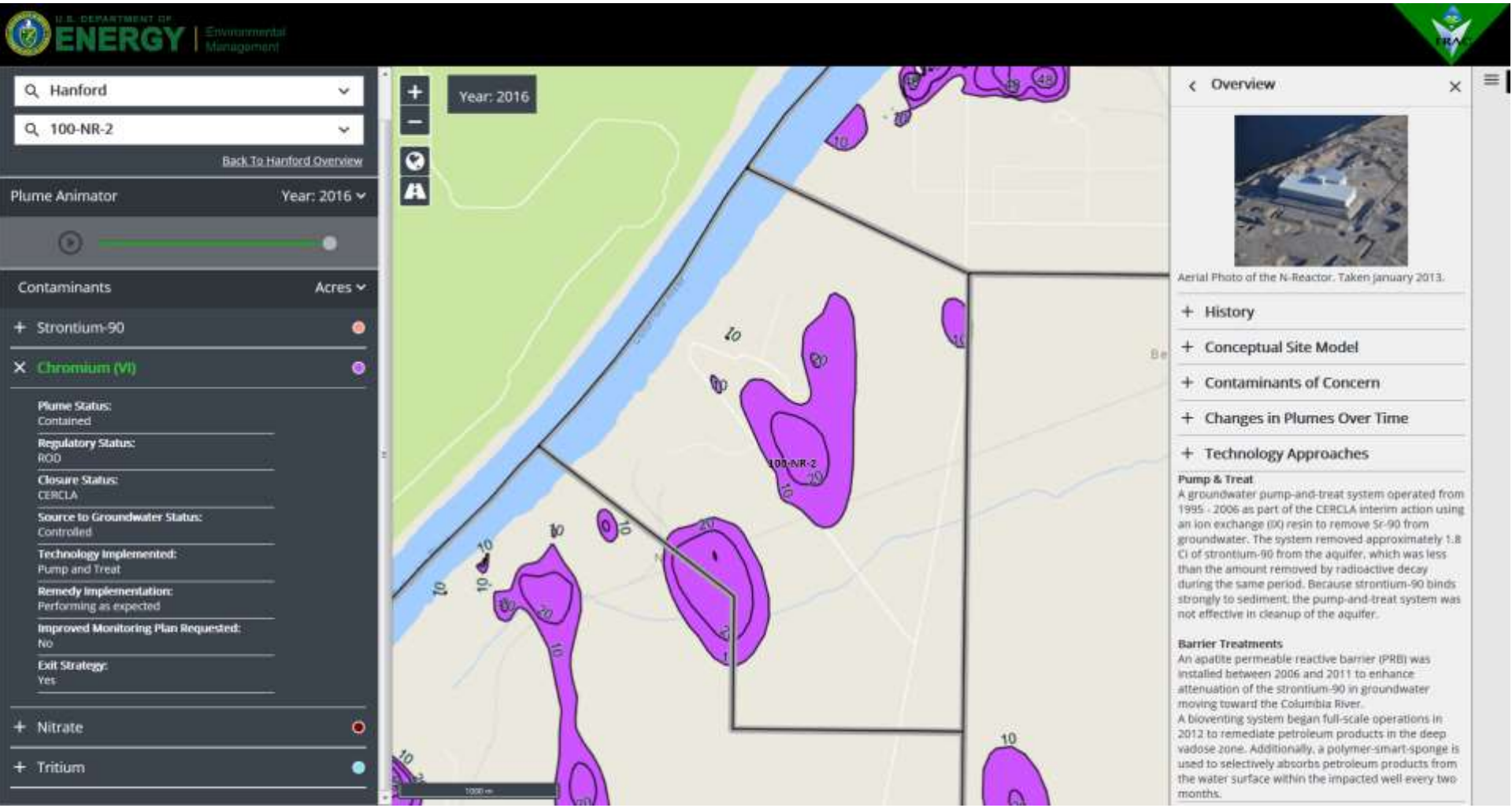
Aquifer Depth and Thickness



Plume Animator

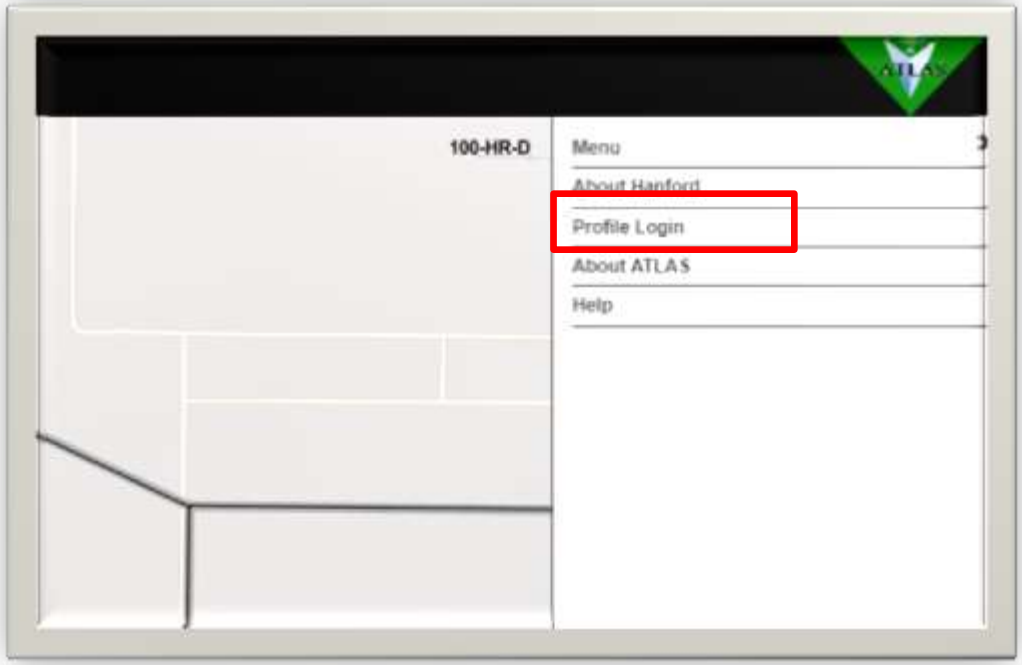


Management Unit View

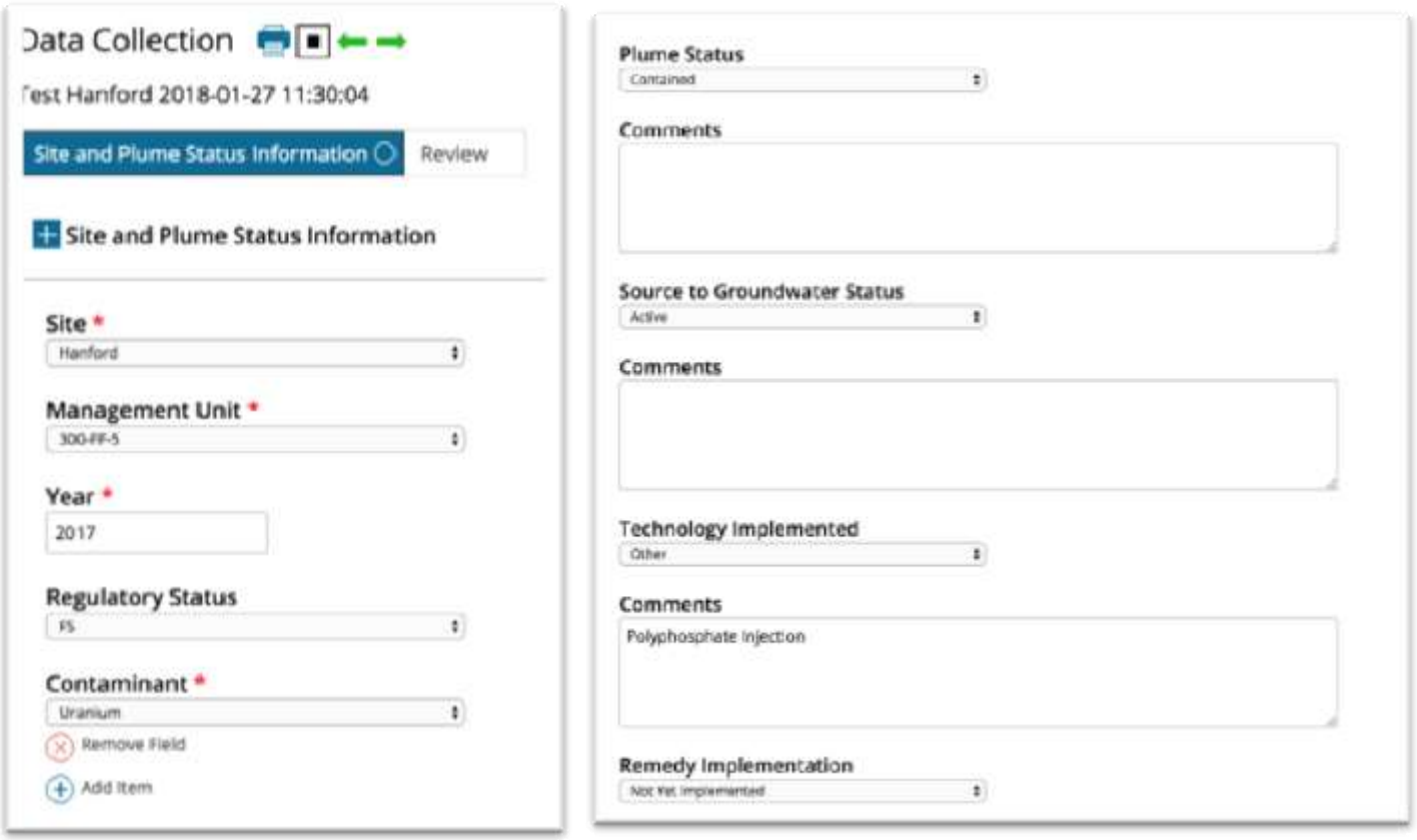


User Login and Profile Management

- Identity management platform
  - Site managers
  - DOE managers
  - Stakeholders and regulators



Site Data Upload



Customized Access

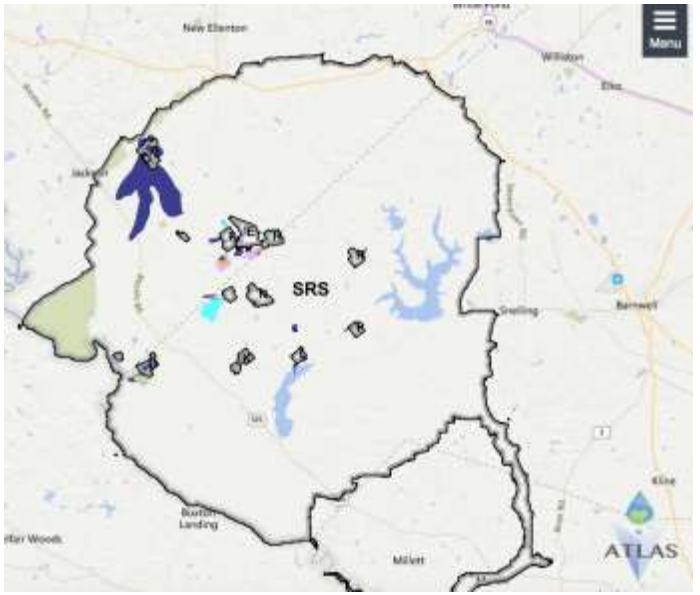
- DOE managers
  - Information on technology development
  - Short and long-term planning
  - Manage roles and permissions, and develop data management workflow and approval process
- Stakeholders and regulators
  - Links to site documentation
  - Decision status

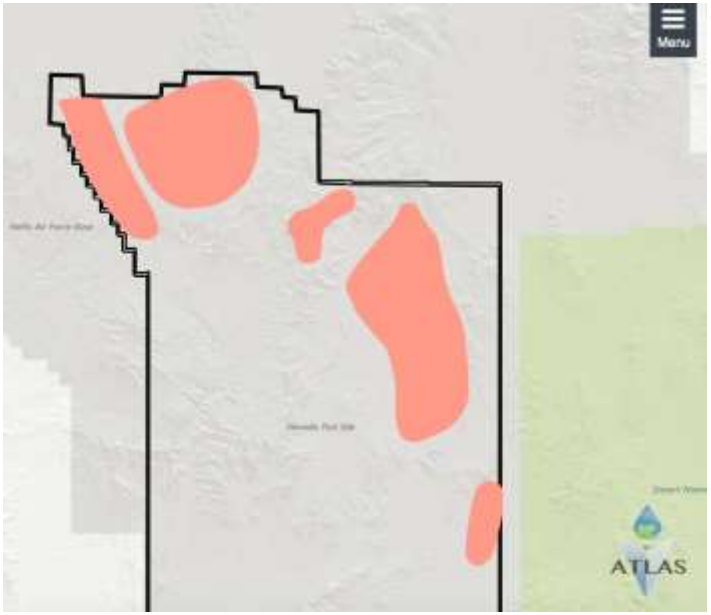
Technical Approach

- Client-side and Server-side partitioning of program logic
  - Client-side: libraries and code in the user's browser
  - Server-side: data ingestion, curation, and management that "serves" data to the application
- Modular, custom single-page application framework
  - OpenLayers for mapping (https://openlayers.org/)
  - React-Redux libraries (https://reactjs.org/ and https://redux.js.org/)
  - JavaScript libraries (https://www.javascript/)
  - GeoServer used for server-side spatial data
  - MS SQL, ASP.NET Web API used for non-spatial data

Integration of All DOE-EM Sites

- Build Hanford prototype first to minimize data requests from sites
- Solicit requests for plume maps from site offices
- Perform periodic reviews with site offices to solicit feedback





Minimal Maintenance Costs

- User provides data uploads, which requires little to no interaction for the site owner
- Server-side security updates
- Status changes automatically updated in TRAC

Summary

- Provides an online information resource for DOE-EM sites that supports EM programs and mission (e.g., TD, SBIR, MSIPP)
- Offers a consistent framework for presenting groundwater data and can promote sharing of technologies, successes, and lessons learned
- Facilitates effective communication with headquarters and DOE sites, as well as regulators and stakeholders
- Offers a potential integration point for transition sites from EM to LM once a site has reached closure