



UNDERSTANDING THE CERCLA PROCESS

BACKGROUND

Chemicals used at JPL in the 1940s and 1950s were disposed of in seepage pits - a common practice at that time - and have been found in soil and groundwater beneath JPL and in nearby groundwater. To ensure public safety, drinking water wells impacted by the chemicals - two at the Lincoln Avenue Water Company (LAWC) and four wells operated by the City of Pasadena - were shut down to treat water.

CERCLA STEPS

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund, defines the process for NASA's investigation and cleanup at JPL.

✓ Site Listed

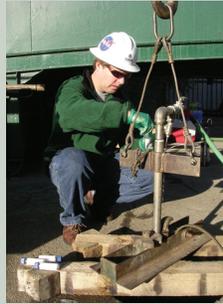
JPL was listed as a CERCLA site in 1992.

✓ Remedial Investigation (RI) and Feasibility Study (FS)

The RI characterized the full nature and extent of chemicals in soil and groundwater. Groundwater monitoring has been conducted quarterly since 1996.

- ✓ NASA identified objectives for cleanup, evaluated treatment technologies, and identified cleanup alternatives.
- ✓ NASA implemented interim remedies (treatment systems) for groundwater.
- ✓ NASA then completed a Focused Feasibility Study to evaluate the overall effectiveness of the interim remedies and whether additional cleanup measures would be required.

NASA has accumulated 30,000 groundwater samples. Computer modeling and aquifer testing were done to characterize groundwater conditions and flow.



WE ARE HERE

Proposed Plan for Final Groundwater Remedy

The Proposed Plan outlines NASA's Preferred Alternative for groundwater cleanup. A public meeting and comment period provides opportunities for community members to have input on NASA's Proposed Plan.



NASA has installed 26 wells with 82 discreet sampling locations (both on- and off-facility) and has conducted 72 quarterly groundwater sampling events since 1996.

NEXT STEPS

Record of Decision (ROD) for Groundwater Cleanup

NASA will review and consider public input received on the Proposed Plan and may modify its Preferred Alternative based on public comments before issuing a ROD (the decision on the final remedy) in 2015.

Design/Construction

The Preferred Alternative would continue use of treatment facilities that have already been designed and constructed as interim remedies.



NASA drilled more than 40 soil borings and installed 35 soil vapor wells with 200 discreet vapor sampling locations, resulting in a database of more than 1,500 soil and soil vapor samples.

Post-Construction Completion, System Operation and Long-term Monitoring

NASA would continue groundwater monitoring. An operations and maintenance plan would be implemented and institutional controls (e.g., non-engineering measures that are administrative or legal in nature) would be put in place to ensure safe use of groundwater near the JPL facility. System performance will be evaluated every five years. The next review is slated for 2017.

NPL Delisting

When JPL site cleanup has been achieved, the site will be removed from the National Priorities Listing (estimated 2029).



NASA conducted pilot testing of several technologies, installed a demonstration treatment plant, and implemented three groundwater treatment systems as interim remedies.