



2014 YEAR in REVIEW

MAJOR MILESTONES REACHED IN 2014 FOR NASA GROUNDWATER CLEANUP AT JPL

This 2014 Year in Review helps NASA meet its ongoing objective to keep the public informed about the progress of groundwater cleanup efforts at and in the vicinity of NASA's Jet Propulsion Laboratory (JPL).

BACKGROUND

The groundwater chemicals being addressed are volatile organic compounds (VOCs) and the chemical compound perchlorate. The chemicals originated from long-discontinued liquid and solid waste disposal practices during the 1940s and 1950s when wastes from JPL drains and sinks were disposed of in brick-lined seepage pits – a waste management practice that was common at the time.

Two Milestones

NASA is cleaning up groundwater at the JPL site under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which governs site environmental investigations and the cleanup process itself. In a busy year for the project, NASA in 2014 passed two important CERCLA milestones - a Focused Feasibility Study and presentation of a Proposed Plan - and moved decisively toward a final cleanup remedy at the JPL site.

FOCUSED FEASIBILITY STUDY (FFS)

In mid-year, NASA completed a study concluding that “interim” remedies – three NASA-funded groundwater treatment systems – protect human health and the environment, are effective in the short-term and long-run, cost-effective, technically practicable, and comply with applicable or relevant and appropriate requirements. The FFS also designated a “Preferred Alternative” for an effective site cleanup remedy.

The “Preferred Alternative” that was identified by the FFS and that NASA proposes for final site cleanup is a combination of the three treatment systems, continuation of NASA's extensive system of groundwater monitoring, and the use of institutional controls (non-engineering measures that are administrative or legal in nature).

PROPOSED PLAN

With completion of the FFS, NASA in 2014 moved on to the next step in the CERCLA process, the presentation to the public and to the regulatory agencies that oversee the cleanup activities at JPL of a “Proposed Plan” for final cleanup. The Plan describes and analyzes in detail NASA's Preferred Alternative for final cleanup. An extended Public Comment Period on the Proposed Plan runs through January 30, 2015. The Plan may be viewed on the JPL Cleanup Website at: <http://go.nasa.gov/ZNW0v>.

A Public Meeting

on the plan was held in mid-November at the Altadena Senior Center. The meeting featured displays on the cleanup and the preferred alternative, a question-and-answer session with NASA managers and support staff, and an opportunity to offer public comments orally or in writing. After public review of the Proposed Plan, NASA will consider the comments received and issue a Record of Decision (ROD) detailing the “final remedy.” Before it becomes official, the ROD must be approved by the U.S. Environmental Protection Agency (U.S. EPA), the California Department of Toxic Substances Control (DTSC), and the Los Angeles Regional Water Quality Control Board (LARWQCB), the agencies overseeing NASA's cleanup.

Groundwater Chemical Removal Continued in 2014

In past years, NASA funded the construction – and is funding continued operation – of three groundwater treatment plants that serve in the CERCLA process as “interim remedies.”

The plants are located:

On JPL property at the “source area.” By the end of 2014, the system had removed more than 1,799 pounds of perchlorate and more than 43 pounds of VOCs from source area groundwater since startup in January 2005.

At two Lincoln Avenue Water Company (LAWC) drinking water wells in Altadena, at the outer edges of the affected area. By the end of 2014, 1,089 pounds of perchlorate and more than 237 pounds of VOCs had been removed from groundwater by the LAWLC treatment plant since startup in July 2004.

In the Arroyo Seco, near four Pasadena drinking water wells that draw from the aquifer known as the Monk Hill Basin. By year’s end 2014, The Monk Hill Treatment System (MHTS) had removed more than 930 pounds of perchlorate and more than 98 pounds of VOCs since startup in January 2011.

New RPMs

This past year, NASA welcomed a new group of regulators from each of the Federal and State agencies overseeing the cleanup. The regulatory agencies’ roles are spelled out in a Federal Facilities Agreement (FFA) with NASA. Remedial project managers meet with NASA managers to review remedial investigation and cleanup activities as well as plans for future work at the site.

The new RPMs are:

Yarissa Martinez, P.E.
for the US EPA.

William F. Jeffers, P.E.
for the California Department
of Toxic Substances Control, and

Jeff Brooks, P.G.
for the Los Angeles Regional
Water Quality Control Board.

Well Optimization, Infrastructure Enhancements Planning

In 2014, NASA saw opportunities to further enhance how the overall NASA-funded groundwater cleanup proceeds. “By upgrading some of the older wells and infrastructure, we would have greater efficiency in meeting our cleanup goals,” said Steve Slaten, NASA Cleanup Project Manager. Slaten is working with the Lincoln Avenue Water Company (LAWC) and Pasadena Water & Power (PWP) to develop a plan that includes three projects: installing a new well at LAWLC, installing a new well for PWP’s Monk Hill Treatment System (MHTS) and improving wastewater management for MHTS. Work is beginning in January 2015 on the new LAWLC well, to be followed in future years by the PWP work.

Community Involvement Plan Update Published

While NASA’s number one goal is to complete cleanup of the chemicals that originated from JPL through long-discontinued waste disposal practices, a secondary yet important goal is to keep the public completely informed and involved in cleanup activities. To that end, NASA published a 2014 Addendum to the 2006 Community Involvement Plan for the NASA Groundwater Cleanup Program at the Jet Propulsion Laboratory. This Addendum describes how NASA communicates with the public as we continue to move toward meeting our cleanup goal.

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