



EPA

APACHE POWDER SUPERFUND SITE



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • JUNE 2006

St. David, Arizona

Decision Made on Revising Cleanup of Southern Area

Northern Area Groundwater Remedy Being Reviewed

The U.S. Environmental Protection Agency (EPA), with concurrence by the Arizona Department of Environmental Quality (ADEQ), has revised the cleanup decision for the Southern Area shallow aquifer groundwater and remaining contaminated soils at the Apache Powder Superfund Site. EPA amended the Apache Powder Record of Decision (ROD) on September 30, 2005. EPA reached this decision after carefully considering comments made on the Proposed Plan at the July 19, 2005 public meeting in St. David and in writing during the public comment period of July 6 - August 4, 2005. EPA also considered additional comments and questions presented at a September 1, 2005 follow-up community meeting. Based on Site facts and evaluation of the public comments, EPA adopted its proposed decision on the groundwater and soils remedies in the Southern Area and some other modifications to cleanup standards and discharge performance standards.

EPA and its consultants are also conducting further analysis of several community comments and issues raised regarding the Northern Area. Additional field work is being conducted to more fully define the extent of contamination and the effectiveness of the existing Northern Area groundwater remedy. Because no perchlorate has been detected in the Northern Area and there is no evidence of hydraulic connection between the groundwater contamination in the Southern Area and Northern Area, EPA and ADEQ believe that it is in the best interest of the community and the environment to proceed with the proposed groundwater and soil remedies in the Southern Area while continuing our investigations in the Northern Area.

Changes to Previous Record of Decision (ROD)

Briefly, the revised remedy calls for monitored natural attenuation of the nitrate and perchlorate-contaminated groundwater in the Southern Area and containment of the contaminated soils in some on-site ponds with a native soil cap. These updated remedies are described fully in the September 30, 2005 ROD Amendment. The key changes and modifications to the previously selected remedy are:

- Change in remedy for the cleanup of Southern Area Groundwater from constructed wetlands to monitored natural attenuation and continue restricting the use of the groundwater beneath the Apache property. (Constructed wetlands will continue to treat groundwater from the Northern Area.);
- Change in remedy for contaminated soils in some former ponds on the Site from containment with a clay cap to containment with a native soil cap and restrict the use of the area;
- Expansion of EPA's cleanup standards by selecting a groundwater cleanup standard for perchlorate, a new contaminant of concern;
- Modification of EPA's soil cleanup standards by adopting ADEQ's risk assessment procedures; and
- Adoption of discharge standards for a secondary discharge location at the Northern Area wetlands to establish performance standards when this contingency discharge location is used.

Highlights of Public Comments and EPA's Response Public Comments

The community expressed several concerns about the cleanup of the Apache Powder Superfund Site in two principal ways: (1) verbal comments and questions presented at the July 19, 2005 public meeting in St. David, Arizona and a follow-up community meeting conducted on September 1, 2005 in St. David; (2) written comments submitted by mail to EPA Region 9, primarily in the form of a written petition, and a few comment forms and letters.

EPA acknowledges and appreciates the input of the local community. The written comments were all post-marked on or prior to August 4, 2005, the close of the comment period. Copies of all written comments and the petition are in the Administrative Record and are available at the Site repository in the Benson Library.

EPA responded in the ROD Responsiveness Summary (attached to the September 2005 ROD Amendment) to all written comments submitted during the public comment period. We encourage community members to read the Responsiveness Summary in the Benson Library for detailed answers to all comments.

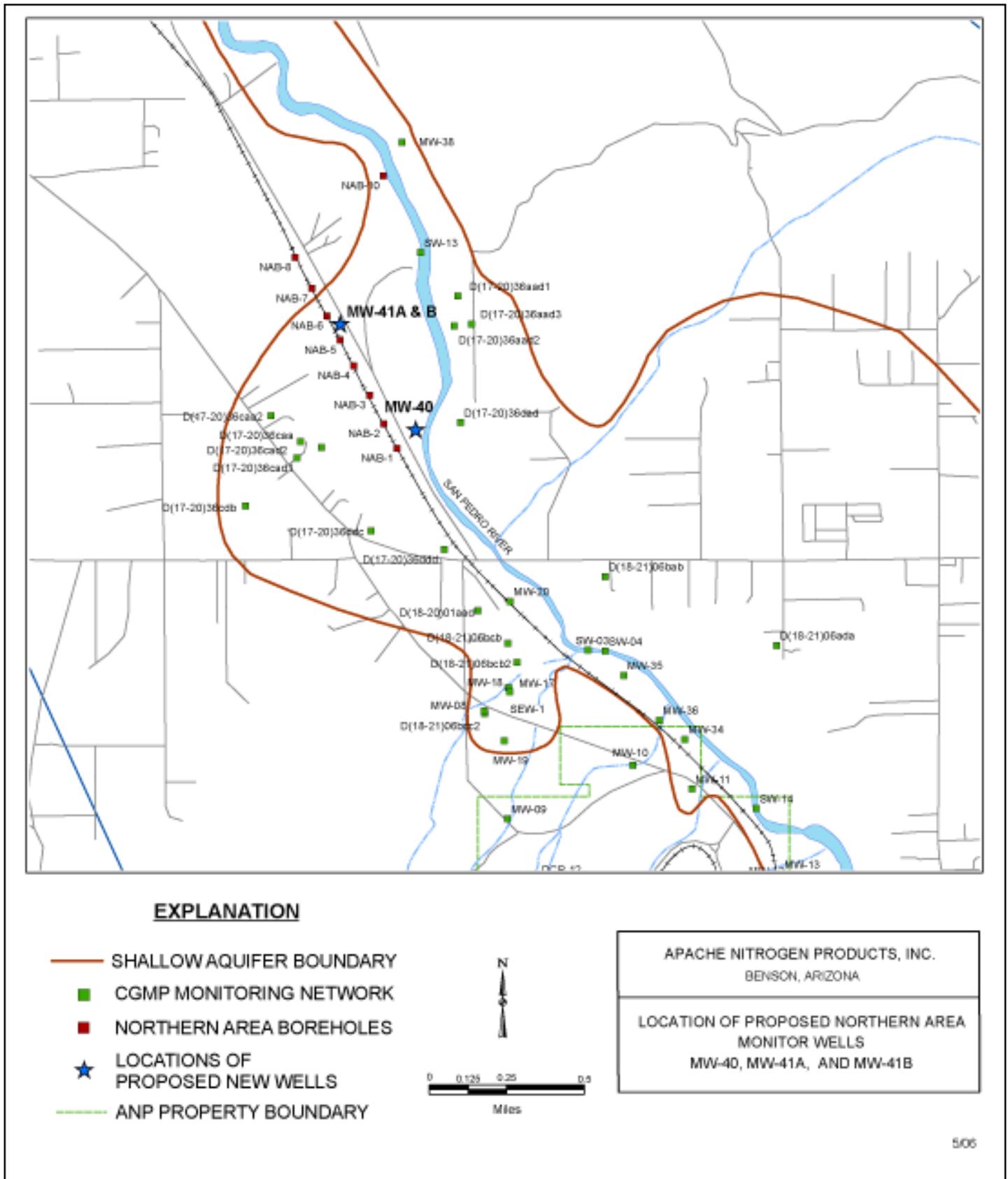
No specific public comments were submitted regarding the proposed "Soils" remedy change (to contain the contaminated soils in the ponds with native soils instead of clay), or the proposed "Southern Area Groundwater" remedy change (to use monitored natural attenuation instead of constructed wetlands) to clean up the nitrate and perchlorate-contaminated groundwater. Additionally, no comments were submitted regarding the other proposed modifications to cleanup standards and discharge requirements.

The primary comments received on the Proposed Plan focused on concerns related to the Northern Area remedy. These included the possibility that pumping from the shallow aquifer extraction well may be impacting the deep aquifer (artesian) water supply, and that there are potential threats to the Northern Area from possible migration of contamination from the Southern Area. These concerns were summarized in a petition submitted by two stakeholders and signed by a total of 35 community members from St. David, Arizona and other nearby communities.

In evaluating the petition and the few other comments received, combined with input from follow-up community meetings, EPA's conclusions were that community concerns focused on the Northern Area which is still under investigation, not on EPA's proposed remedy changes for the Southern Area Groundwater and Soils outlined in the July 2005 Proposed Plan. Therefore, rather than hold up decision-making on areas of the Site that needed revised remedies, EPA proceeded with making decisions for these areas. Simultaneously, EPA made a clear commitment in the ROD Amendment to continue to investigate and evaluate the Northern Area Groundwater remedy and to respond to community concerns.

Continuing Northern Area Investigative Activities

EPA takes seriously all the issues raised by the community and is continuing to investigate them as part of ongoing efforts to evaluate methods to improve the Northern Area remedy. At EPA's direction, ANP installed nine exploratory boreholes along a transect next to the railroad in the Northern Area in February 2006 and is in the process of completing the installation of four new monitor wells in three locations (one in the Southern Area and three in the Northern Area). In 2005, ANP installed two exploratory boreholes and completed one well (MW-38) north of the area where the Pomerene Canal meets the San Pedro River. Concurrently, ANP continued to analyze groundwater samples from existing wells in both the shallow and deep aquifers in the Northern Area for both nitrate and perchlorate. No perchlorate has been detected in the Northern Area. However, the results from this field work show that nitrate has migrated much further north. Nitrate concentrations of 18 parts per million (ppm) were detected in the shallow aquifer north of the Pomerene Canal in MW-38 (see Figure next page). Nitrate samples collected from boreholes installed near the Pomerene Canal detected nitrate just above 20 ppm (twice the federal and state drinking water standard of 10 ppm). Other findings from the exploratory boreholes helped redefine the boundary of the shallow aquifer because two boreholes were dry and only encountered St. David Clay. Based on these findings, EPA has directed ANP to begin another phase of investigation to more fully define the extent of nitrate contamination, further refine the boundaries of the shallow aquifer and better



Location of nine exploratory boreholes and new monitor well locations

understand nitrate migration in the Northern Area.

EPA also has contracted with several outside technical experts to re-evaluate the Northern Area remedy, specifically the issues and concerns raised in the July 2005 petition. The purpose of this third-party review is to both respond to a community request that a fresh look be taken on the existing Northern Area Remedy and to evaluate potential options for accelerating the cleanup time. All the findings from these studies will be compiled and evaluated to determine if any further remedy modifications are needed. Meanwhile, in the near future EPA plans to provide a comprehensive summary of the many issues raised in the July 2005 petition and in subsequent communications with nearby well owners in a community fact sheet on the Northern Area. No remedy changes or other decisions will be made on the Northern Area until ANP completes on-going data collection and investigation efforts, EPA and ADEQ analyze the results and EPA obtains community input on potential remedy modifications.

Future Cleanup and Close-Out Activities at the Site

Although there are outstanding issues regarding the Northern Area remedy that EPA needs to resolve, substantial progress has been made at the Apache Powder Superfund Site over the last decade or more.

Nitrate Removed from Groundwater: Approximately 348,000 pounds of nitrate have been removed from the groundwater at the Site by use of the Northern Area wetlands treatment system during the period of October 1997 through March 2006. The wetlands system has been operating very effectively for the last two years. The goal is to treat the nitrate to below the drinking water standard of 10 parts per million (ppm).

Cleanup of Contaminated Soils: The contaminated soils areas in the Southern Area of the Site have been identified and most of these areas have been cleaned up, including the removal of almost 2,200 tons of contaminated soil. In addition, 262 drums of hazardous waste were removed. The few remaining contaminated evaporation ponds will be re-graded and capped in 2006.

Future Cleanup Activities: The use of Monitored Natural Attenuation for the Southern Area groundwater

contamination is both technically appropriate and cost-effective. Once the Northern Area groundwater investigative activities are finalized, any necessary adjustments or modifications to the Northern Area remedy can be made. At this point, the Site will then move into on-going operations and maintenance of the selected remedies. The implementation of all the Site remedies will be a major accomplishment for the ANP facility and a major benefit to the nearby community and environment that have been impacted by Site contamination.

Community Involvement and Information Repositories

EPA intends to hold community meetings and distribute fact sheets more frequently to keep everyone up-to-date on work going on at the Site, including the Northern Area. Site reports, in addition to EPA's September 2005 Amended Record of Decision and Responsiveness Summary on the Southern Area Groundwater and Soils Cleanup Areas, can be found at the Benson Library and EPA's Superfund Records Center in San Francisco. Most of these documents are also available at ADEQ's Tucson office.



Information Repositories

All documents related to this Proposed Plan and previous Site documents can be found at:

Benson Library

302 South Huachuca
Benson, Arizona 85602
(520) 586-9535

Mon & Thurs 10:00 am - 7:00 pm
Tues & Wed 10:00 am - 6:00 pm
Fri 10:00 am - 5:00 pm
Sat 10:00 am - 1:00 pm

Superfund Records Center

95 Hawthorne Street, Suite 403S
San Francisco, California 94105
(415) 536-2000

Mon-Fri 8:00 am - 5:00 pm



For More Information



If you have questions or concerns about the Apache Powder Superfund Site, please contact any of the people listed below:

Andria Benner

Remedial Project Manager
U.S. EPA
75 Hawthorne St. (SFD-8-2)
San Francisco, CA 94105
(415) 972-3189
benner.andria@epa.gov

Vicki Rosen

Community Involvement
Coordinator
U.S. EPA
75 Hawthorne St. (SFD-3)
San Francisco, CA 94105
(415) 972-3244
rosen.vicki@epa.gov

Bill Ellett

Supporting Project Manager
Arizona Department of
Environmental Quality
400 W. Congress St., Suite 433
Tucson, AZ 95701
(520) 628-6714
Ellett.William@azdeq.gov

EPA's toll-free number is (800) 231-3075 and ADEQ's toll-free number is (888) 271-9302.
Please leave a message and your call will be returned.

EPA's website: www.epa.gov/region09/waste/sfund

ADEQ's website: www.azdeq.gov/environ/waste/sps/index.html



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United States Environmental Protection Agency
Region 9
75 Hawthorne Street (SFD-3)
San Francisco, CA 94105
Attn: Vicki Rosen (Apache 6/06)

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