NORTH AREA OF PHOENIX GOODYEAR AIRPORT SUPERFUND SITE

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NEW INVESTIGATIVE ACTIVITIES UNDERWAY

Since our last update in December 2002, we have been working on the following activities:

- Completing a Phase II groundwater investigation to better understand the distribution and movement of contamination in groundwater underneath and beyond the Unidynamics facility property boundary;
- Conducting a subsurface soil gas investigation to better understand the distribution and movement of soil gas contamination at and around the Unidynamics facility;
- Preparing to conduct air sampling to study potential indoor and outdoor air contamination at and near the Unidynamics facility;
- Beginning to operate a soil vapor extraction system with carbon treatment to address soil gas contamination; and
- Completing a study to see whether perchlorate-contaminated groundwater can be treated at the City of Goodyear's wastewater treatment plant.

RESULTS OF PHASE II GROUNDWATER INVESTIGATION

EPA is conducting the Phase II groundwater investigation to gain more information about potential source areas for specific contaminants at the Unidynamics facility and the hydrogeology at the facility. From February to May 2003, EPA installed 15 deep exploratory borings to a depth of 300 feet or more to better understand the subsurface geology and to investigate how TCE and perchlorate may be moving into the deeper aquifer. As previously reported, contaminants have moved down into the deeper water-bearing zones (deeper aquifer) to the north and have been detected in monitor well MW-20 on Van Buren Street. Contaminants have also moved to the southeast causing contamination of three nearby drinking water supply wells: City of Goodyear well COG-2 in May 2003, and two wells at Park Shadows Country Homes in 2002. These wells are either shut down or no longer used for drinking water (see Figure 1).

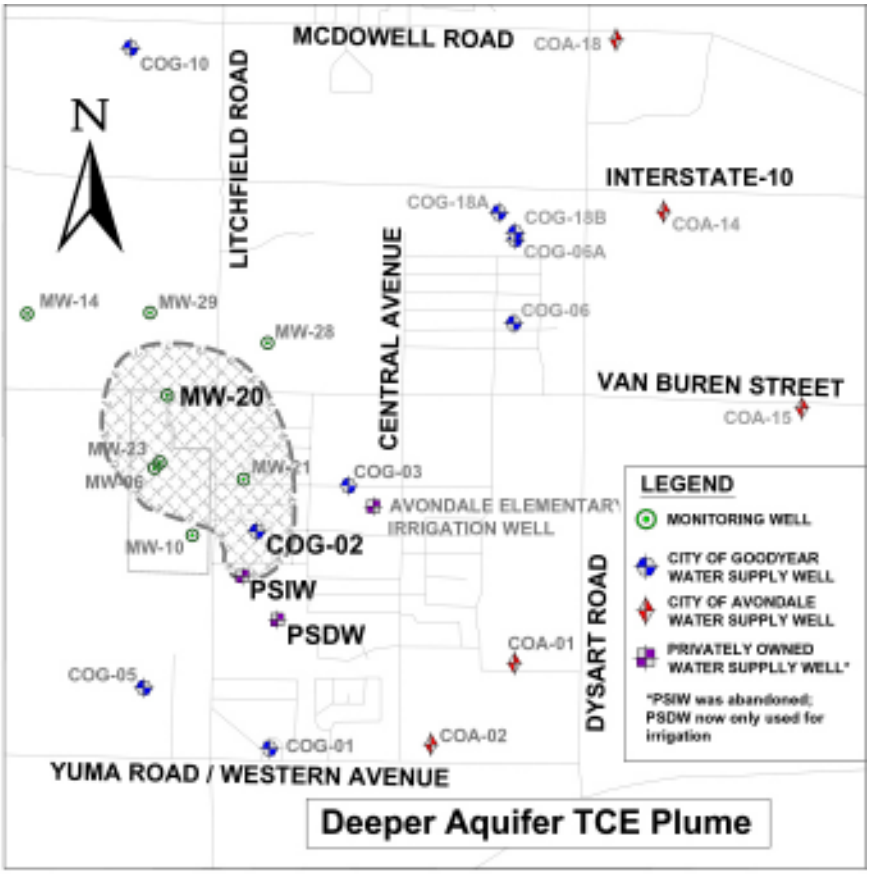

Figure 1: *Map of deeper aquifer TCE plume with MW-20, Park Shadows wells, City of Avondale and City of Goodyear supply wells*

The Phase II groundwater investigation so far indicates that the conceptual picture of the subsurface hydrogeology is more complex than has been previously understood. For instance, rather than a subsurface composed of simple specific geologic units (i.e., a subunit-A and subunit-C separated by a confining protective subunit-B), as shown in Figure 2, the subsurface appears to be composed of interspersed lenses and layers of clays, silts, and sands. While some of the tighter, less porous layers may have stopped the movement of contamination in the past, it now looks like the contamination, over the years, may have been able to find pathways down into the deeper aquifer where supply wells extract drinking water (see Figure 3). These findings will guide EPA in determining next steps for evaluating the existing pump and treat systems. Additional groundwater investigation will be needed to decide if the existing groundwater extraction system needs to be expanded or redesigned to stop contamination from migrating further into the deeper aquifer at the Site.

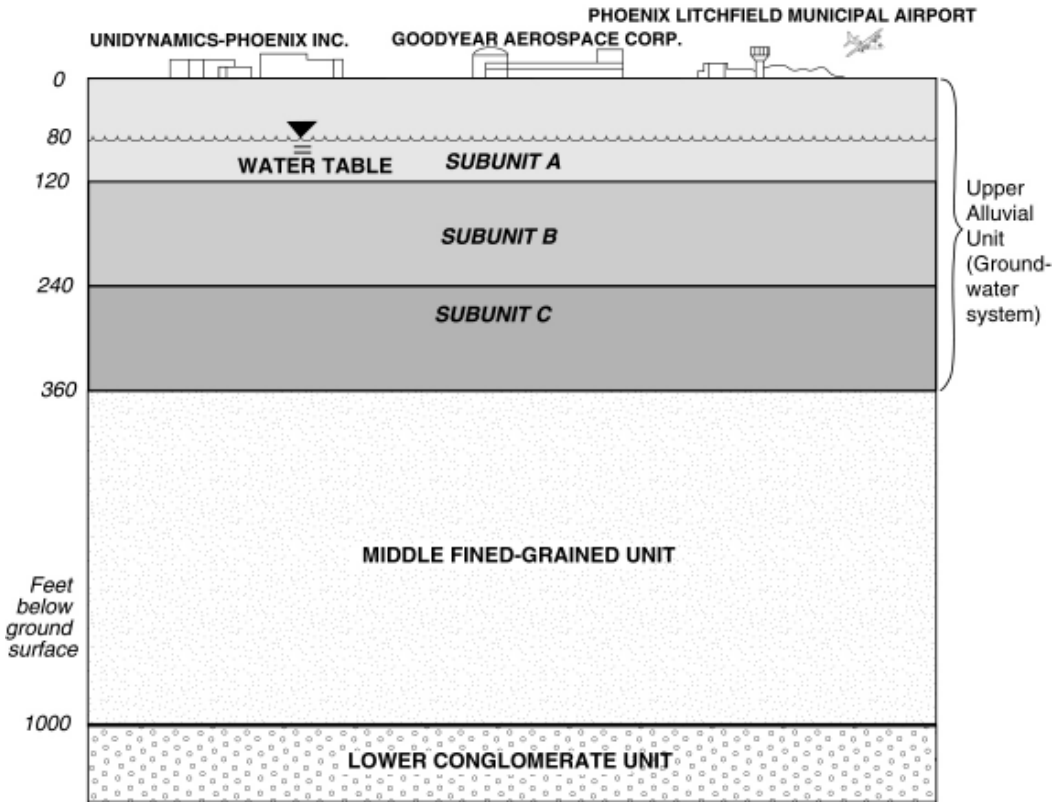

Figure 2: *Earlier conceptual hydrogeological cross section showing three subunits*

STATUS OF EXISTING GROUNDWATER CLEANUP SYSTEM

The Site's groundwater remedy as implemented currently pumps groundwater contaminated with trichloroethylene (TCE) from the upper shallow aquifer to two separate treatment facilities operated by Crane Co. The TCE is removed and the groundwater reinjected into the aquifer. Since groundwater has been migrating into the deeper aquifer, as an interim control action, Crane Co. is pumping contaminated groundwater from a monitor well, MW-20, on Van Buren Street. Also, since the shutdown of City of Goodyear well COG-2 in May, EPA has directed Crane Co. to restart pumping at that well and treat the water as it is pumped out to control further migration of contamination to the Site's southeast (see Figure 1). Further hydrogeological studies will be needed in 2003-2004 to determine whether additional extraction wells will be necessary to control and remove contaminants from the deeper aquifer.

PROTECTION OF DRINKING WATER SUPPLIES

When Site-related contamination was discovered in supply wells at levels above cleanup levels, these wells were removed from the drinking water supply system. To evaluate whether Site-related contamination is impacting any additional drinking water supply wells in the cities of Goodyear and Avondale, EPA sampled all of these wells from May to July 2003. This sampling evaluated both whether Site-related contaminants are reaching any of the supply wells and, if so, at what levels. Perchlorate has been detected in several of these wells at concentrations below EPA's Site-specific cleanup level of 4 parts per billion (ppb). EPA and Crane Co. continue to closely monitor these wells to ensure that these concentrations do not exceed EPA's cleanup levels. Crane Co. continues to sample key drinking water supply wells weekly or monthly, as directed by EPA, and groundwater monitor wells quarterly (see Figure 1).

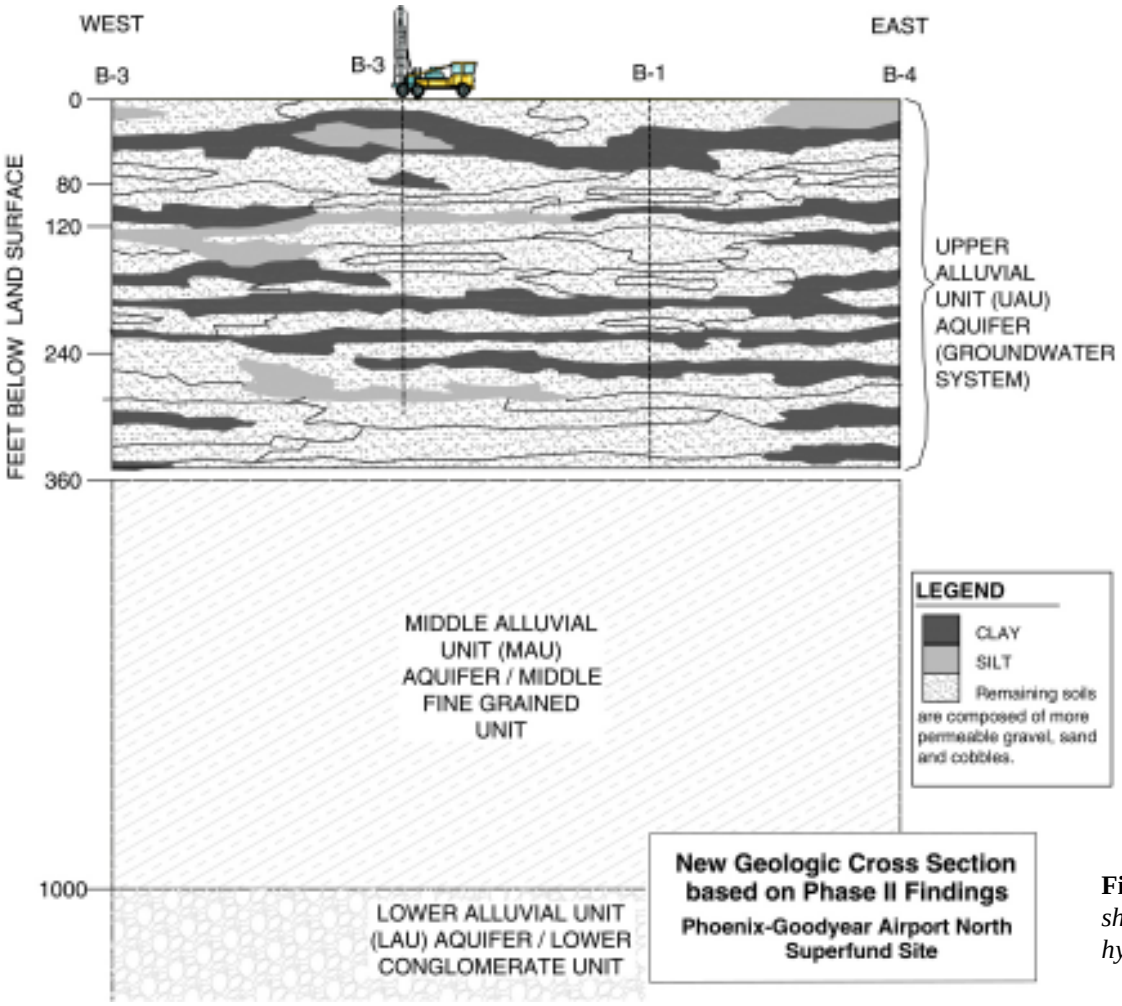

Figure 3: *New cross section showing complex subsurface hydrogeology*

SUBSURFACE SOIL GAS ACTIVITIES

EPA is conducting subsurface soil gas sampling at the Site to determine what levels of Site contaminants are present in gaseous form in the soils at and near the Unidynamics facility. To this end, EPA collected soil gas samples (June 2002 and March 2003) from six vapor monitor wells located on the Unidynamics facility adjacent to the Site's soil vapor extraction (SVE) system. Additional soil gas samples were collected during the Phase II Groundwater Investigation from one boring located in the parking lot behind the Goodyear City Hall. Some of these samples indicated that TCE-contaminated soil gas was present at high concentrations in certain locations.

To better understand the extent of the soil gas contamination, EPA is conducting an expanded soil gas investigation. This investigation entails collecting soil gas samples from approximately 40 temporary borings (most drilled to a depth of 30 feet, with a few drilled to 70 feet below ground surface) to help determine where subsurface soil gas from the Site has migrated. The proposed locations are shown in Figure 4 on page 4.

Due to the finding of significant levels of soil gas contamination in the subsurface to the north of the Unidynamics facility, Crane Co. will be collecting indoor and outdoor air quality samples at and near three buildings just north of the facility on Litchfield Road to ensure that there is no contamination coming from the soil into buildings. Based on the results of the subsurface soil gas investigation, EPA will determine whether expanded additional indoor air sampling is necessary. If any Site-related contaminants should be detected in these buildings, EPA will work to ensure that engineering measures are taken to prevent any potential exposure.

RESTARTING SVE SYSTEM WITH CARBON TREATMENT

In Fall 2003, EPA will begin extraction and treatment of contaminated soil gas at the Unidynamics facility with a soil vapor extraction (SVE) system using granulated activated carbon. The SVE system will treat the soil gas with carbon, which will remove the contaminants from the gas before it is released. This carbon is recycled when it reaches the end of

its useful life. EPA is taking this action to protect groundwater and prevent spreading of soil gas contamination.

RESULTS OF PERCHLORATE TREATABILITY STUDY

Since September 2002, perchlorate treatment tests have been underway at the City of Goodyear's wastewater treatment plant. To date, these tests have shown that the waste water treatment plant can treat perchlorate. Crane Co. is preparing a final report for EPA and Arizona Department Environmental Quality (ADEQ) review and approval by the end of August. The full-scale treatment of perchlorate at the City's plant is scheduled to begin in Fall 2003.

HOW LONG WILL THIS CLEANUP TAKE?

EPA is frequently asked why Superfund site cleanups take so long. For each site, the answer is different. But, generally, where a cleanup involves contaminated groundwater, removing contaminants often takes many decades. Additionally, at complex sites such as PGA-North where there is both soil gas and groundwater contamination, information is constantly guiding the direction of the cleanup. EPA is also working to ensure that there is no exposure to the contamination while the cleanup and additional investigation are conducted. EPA's goal continues to be protection of you and your environment.

Figure 4: *Location of soil vapor monitor wells, boring (B-4) near City Hall, nearby buildings, and new temporary exploratory soil gas borings*

At PGA-North, recent findings indicate that there is work that needs to be done to fully characterize the Site. Those investigations are currently underway to fully characterize both the groundwater and subsurface soils, including soil gas. The investigative phase is depicted as it fits into the overall project schedule in Figure 5 below. EPA continues to explore innovative technologies that may be useful to accelerate the cleanup process. But even with new technologies, the removal of contaminants once they have been released into the environment is a time-consuming process.

TECHNICAL ASSISTANCE GRANT PROGRAM

EPA values your input and wants to help you understand the technical information relating to the cleanup of Superfund sites in your community so that you can make informed decisions. Under the Superfund law, EPA may award a Technical Assistance Grant (TAG) of up to $50,000 per site. TAGs allow communities to hire independent experts to help you understand technical data and become more knowledgeable about the different technologies that are being used at the site. You can obtain more information about the TAG program by calling Viola Cooper, EPA's Community Involvement Coordinator (see contact information on last page).

COMMUNITY INVOLVEMENT AND OUTREACH

EPA and ADEQ will continue to update residents about the PGA North site through fact sheets, public meetings, and regularly scheduled community advisory group (CAG) meetings. Please feel free to call or write EPA or ADEQ using the contact information found on the back of this mailing. Also, if you have an interest in becoming a potential CAG member, please contact the Agency community involvement coordinator. The CAG meetings are open to the public and meet on a quarterly basis to collect information about site cleanup activities and serve as a focal point for the exchange of information among the local community. Meeting agendas and their corresponding minutes may be accessed through ADEQ's web site at: www.adeq.state.az.us/environ/sps/reg.html.

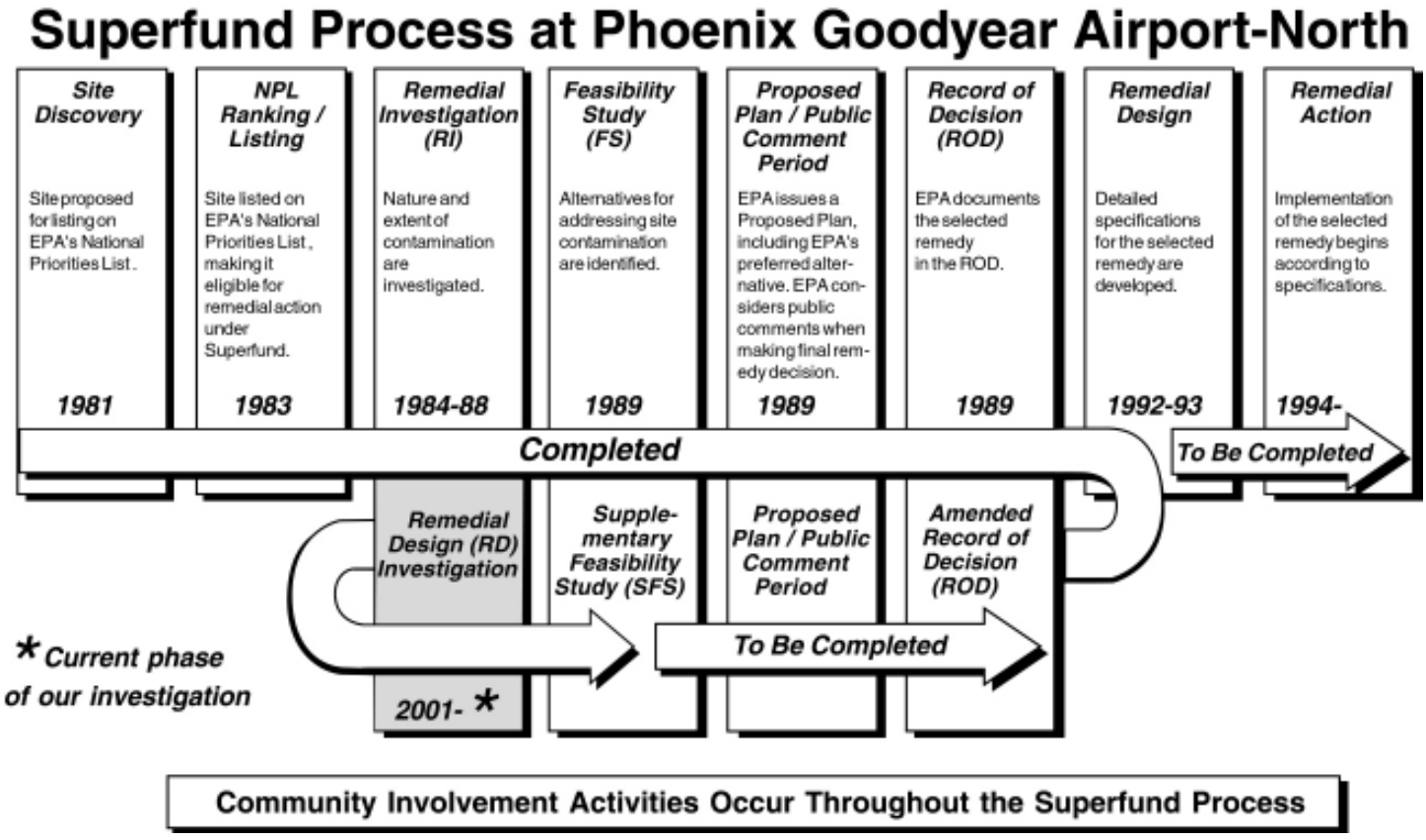

Figure 5: *The Superfund Process at Phoenix Goodyear Airport - North, with Investigative Phase highlighted*

FOR MORE INFORMATION

Interested parties can review site information at the information repository located at the Avondale Public Library, 328 West Western Avenue, Avondale, (623) 932-9415, or at the U.S. EPA Records Center, 95 Hawthorne Street, Suite 403S, San Francisco, California 94105, (415) 536-2000. You can also visit EPA's Web site at http://www.epa.gov/region09/waste.

If you would like to be included on the mailing list for the PGA North Superfund Site, you may send your name and address (please indicate PGA North) via an e-mail to cooper.viola@epa.gov, send a fax to Viola Cooper at (415) 947-3528, or call EPA's toll-free message line, (800) 231-3075, and leave your mailing information.

U.S. E P A

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