



North Indian Bend Wash Superfund Site

U.S. Environmental Protection Agency

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Region 9

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San Francisco, CA

Scottsdale, Arizona

April 2009

Update on Site Activities

This fact sheet is to update community members on activities that have taken place over the past several months at and near the North Indian Bend Wash (NIBW) Superfund site. The U.S. Environmental Protection Agency (EPA) has been working closely with the NIBW Participating Companies (PCs), the City of Scottsdale and the Arizona Department of Environmental Quality (ADEQ) to ensure that all operations associated with this site continue to be protective of human health and the environment. What follows is a summary of significant site activities. EPA welcomes your feedback on this fact sheet or anything connected to the NIBW site.

Miller Road Treatment Facility (MRTF)

Much has been done to re-evaluate operations at the MRTF following two accidental releases of trichloroethylene (TCE) to the Arizona American Water Company's (AAWC's) drinking water system in late 2007 and early 2008. These situations were reported in detail in February and May 2008 fact sheets and subsequent community meeting. Below is an update on the interim measures that were put in place following these incidents and options that have been considered as possible long-term measures.

MRTF Interim Measures

As reported to the community a year ago, water from NIBW extraction well PCX-1 (which has concentrations of TCE at approximately 70 parts per billion or ppb) is being treated at the MRTF and discharged to the Arizona Canal under an approved permit (see Figure 1). The treated water is not directly being used for drinking water. Under the Interim Operations Plan, operations that extract and treat the water from PCX-1 by removing the TCE through use of an "air stripper" have continued without incident. The treatment system has been and continues to be under manned supervision 24 hours a day, 7 days a week. Effluent samples (water coming out of the treatment system) were collected daily from April through October 2008 with a 24-hour laboratory turnaround time for reporting results. All laboratory results from the beginning of this MRTF startup have indicated TCE levels below the laboratory detection limit of 0.5 ppb. Since this

past November, the NIBW PCs have been sampling the treated effluent water three times per week with a 48-hour turnaround time for reporting results. The treatment of extraction well PCX-1 will continue to be physically separated from the Arizona American drinking water system and discharged to the Arizona Canal until all parties agree upon long-term measures for the MRTF.

MRTF Long-Term Measures

The extraction of water at PCX-1 and its treatment at the MRTF are part of the plan for keeping contaminated groundwater in the lower aquifer from moving northward into the AAWC wellfield. As part of this effort, EPA required the PCs to evaluate different options for handling the water from PCX-1 for the long term. Several options have been looked at including re-injecting the treated effluent from PCX-1 (an SRP well) and PV-15 (an AAWC well also treated for TCE at the MRTF but for levels already below drinking water standards) back into the lower aquifer. Another possible option would employ redundant or secondary treatment if the water will be used as drinking water in the future. Since July, EPA has participated in two all-hands meetings to discuss various options, but so far have not settled on a final plan. However, the parties are working cooperatively to develop a protective long-term plan as soon as possible. Whatever agreement is finally reached, it will be consistent with our main priorities: protecting the community, correcting past mistakes and deficiencies, restoring the aquifer and ensuring that the treated groundwater is put to beneficial use.

Enhanced Groundwater Monitoring

Since the MRTF was out of service from January to April 2008, it was important to monitor the groundwater to make sure the TCE plume in the lower aquifer was not migrating northward. A six-month program (February-July 2008) of enhanced groundwater monitoring was conducted by the PCs. This included more frequent and expanded testing of monitoring and extraction wells while the MRTF extraction wells were shut down and for a period after they were put back in service. These activities confirmed that the plume was fully contained during the 100-day shutdown.

Planned MRTF Rehabilitation

The MRTF will be undergoing a planned, non-routine preventative rehabilitation. The major work being done includes replacing the air stripper column packing materials, recoating the columns' internal walls, installing a new column cleaning system, upgrading a number of valves in the water and air piping/ducting manifolds, upgrading certain instruments and general facility maintenance such as roof and parking lot repairs. These activities are very similar to the successfully completed rehabilitation of the Scottsdale Central Groundwater Treatment Facility in 2007. The MRTF will continue to operate as per the Interim Operations Plan while rehabilitation activities take place from April to fall 2009.

Congressional Updates on the MRTF

Since May 2008, EPA has been providing regular updates on the MRTF to Congressman Harry Mitchell and his staff. From May through December 2008, this reporting occurred every month; beginning in 2009 the updates are being offered on a quarterly basis.

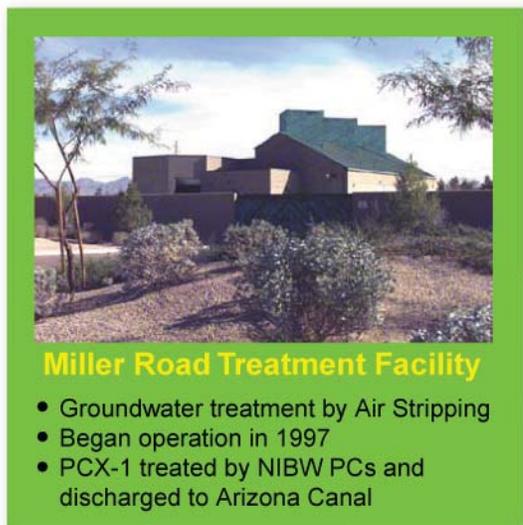
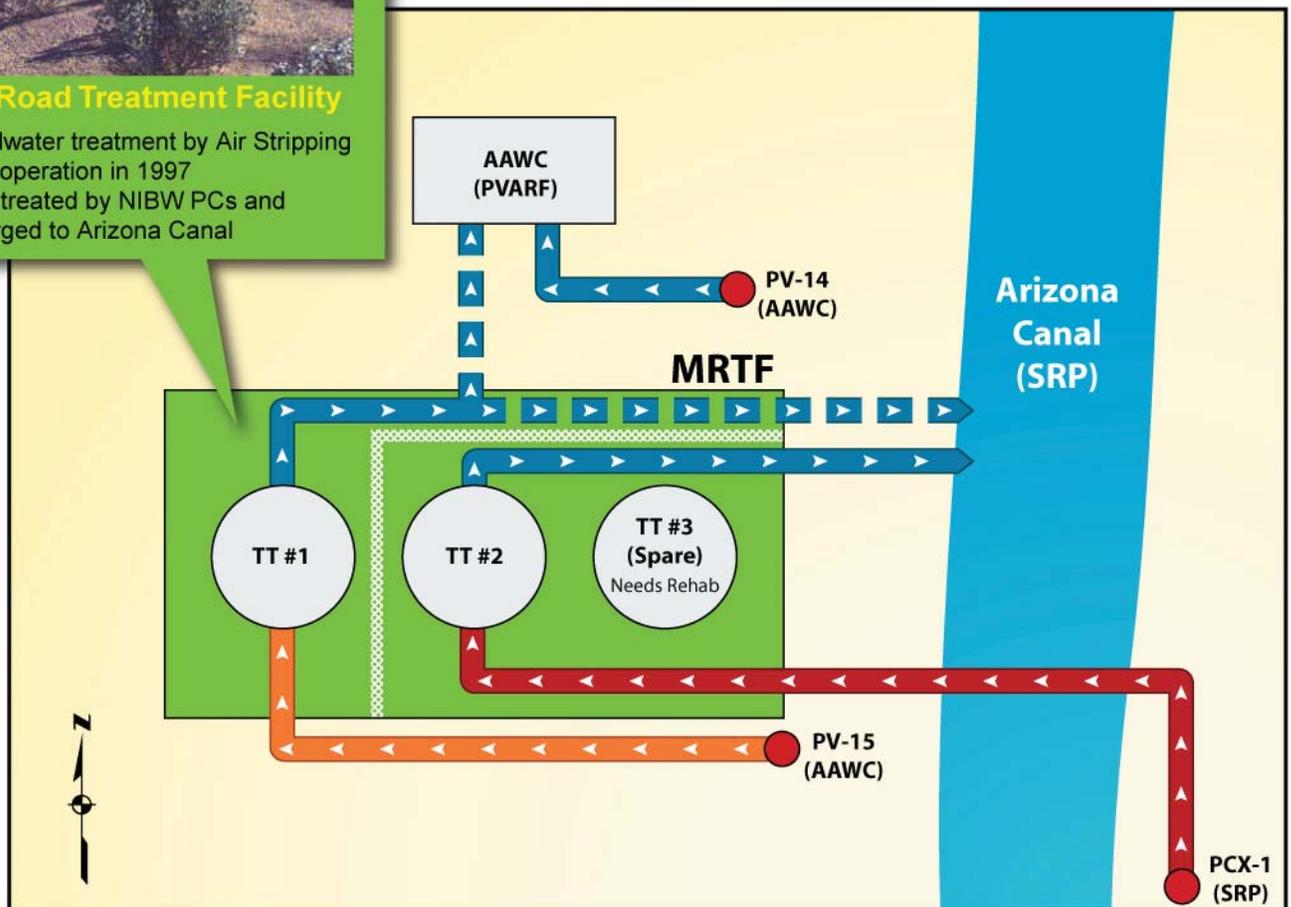


Figure 1: MRTF Layout from April 25, 2008 - Present (Interim Operating Period)



Central Groundwater Treatment Facility (CGTF) Engineering Evaluation

While there are no known operational issues at the CGTF, EPA requested that the NIBW PCs proactively perform an independent engineering evaluation to ensure that the facility continues to operate safely. This evaluation was performed by the same independent engineering firm that handled the MRTF inspections in April 2008. Following a work plan approved by EPA and ADEQ, engineering evaluation activities began in August 2008. The findings from this evaluation indicate that the facility is in good condition and being operated by knowledgeable personnel who are implementing safeguards to ensure water quality. The CGTF Engineering Evaluation Report can be found online at the EPA NIBW website and in the Scottsdale Civic Center Library (see Information Repository below for details).

Annual NIBW Groundwater Treatment Facility Inspections

There are four groundwater treatment facilities as part of the NIBW remedy (see Figure 2). In November 2008 EPA oversaw through our contractor, Innovative Technical Solutions, Inc., the annual inspection at each site by the PCs. The results of these inspections are in the NIBW 2008 Annual Site Monitoring Report which is currently under review by EPA and ADEQ. The document will be available on EPA's NIBW website and at the Scottsdale Civic Center Library once it is final.

Ambient Air Sampling

EPA requested that the PCs perform quarterly ambient air sampling to ensure that air emissions treatments currently in place are protective of health for the long term. This sampling does not affect EPA's November 2007 decision that air emissions controls are required. Specific objectives for the ambient air monitoring are to:

1. Establish an ambient air "baseline" dataset, during non-rainy days, of contaminants of concern at all NIBW groundwater treatment facilities while air emissions controls are on and operating;
2. Provide a dataset of volatile organic compounds (VOCs) to help differentiate between on-site and potential off-site sources of VOC emissions by collecting and analyzing samples from relevant background locations;
3. Evaluate variations in the concentrations of NIBW contaminants of concern over time to give EPA information on how variable those concentrations may be due to seasonal changes such as air temperature and wind direction.

Three sampling events have been completed (June 2008, October 2008 and February 2009), and one more is scheduled for late spring 2009. When all the sampling has been completed, the information will be compiled and made available to the public. The data gathered in this sampling program will be helpful in the overall decision-making process and in assuring community protectiveness.

Information Repository

The Administrative Record and other documents related to the NIBW site can be found at:

Scottsdale Civic Center Library
3839 N. Drinkwater Blvd.
(480) 312-2320

Hours: Mon-Thurs 9 am to 9 pm
Fri & Sat 10 am to 6 pm
Sunday 1 pm to 5 pm

EPA Superfund Records Center
95 Hawthorne St., 4th floor
San Francisco, CA 94105
(415) 535-2000

Hours: Mon-Fri 8 am to 5 pm

EPA website: www.epa.gov/region09/northindianbendwash



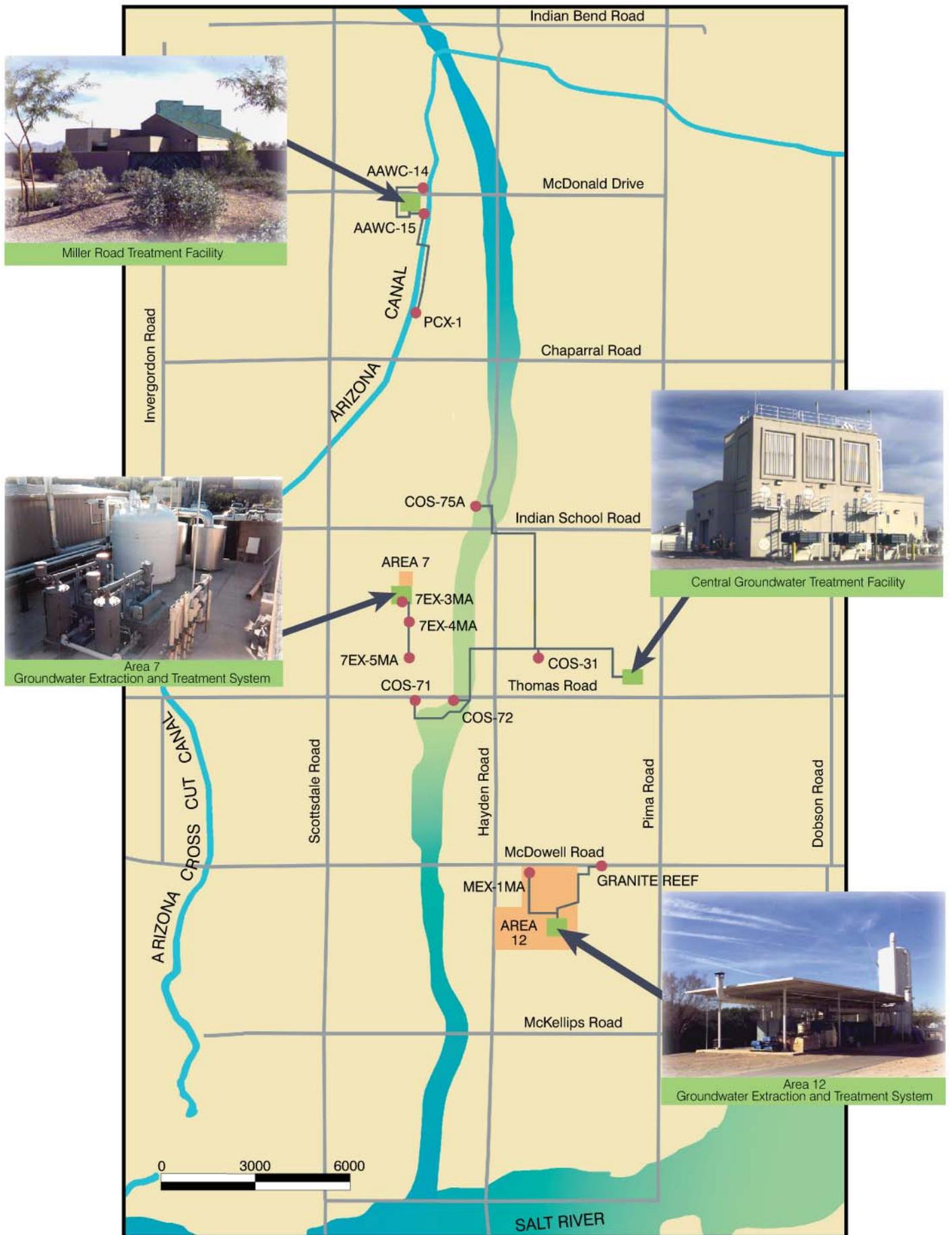


Figure 2: NIBW groundwater treatment facilities

Soil and Soil Vapor Sampling at Hohokam Elementary School

Community concern was expressed to EPA that soils around Hohokam Elementary School (located at 8451 E. Oak St.) may have been impacted by contamination from the NIBW site due to historical irrigation activities. While there was no evidence of exposure or potential exposure, EPA and the PCs decided to conduct soil and soil vapor sampling in order to be extra cautious because of the children there and the fact that they play on the playground. This activity has no connection to the Miller Road Treatment Facility or any of the other NIBW treatment facilities.

Sampling was performed by the NIBW PCs under field oversight by EPA and ADEQ. The regulatory agencies collected additional oversight samples. Eight sample locations were chosen based on the potential for direct contact with the soil (playgrounds, grassy areas, etc.). At each location a sample of surface soil was collected (0.5-1 ft. below ground surface) and a soil vapor sample (7 ft. below ground surface). The

NIBW contaminants of concern that were sampled for are TCE, perchloroethylene (PCE), dichloroethylene (DCE), tetrachloroethylene (TCA) and chloroform. The initial sampling occurred on July 31, 2008 with a follow-up sampling on October 10, 2008.

The results of the sampling showed no detections of any of the VOCs listed above in the soil samples. As for the soil vapor, there were very low levels of contaminants at some locations. However, all soil vapor contaminant concentrations were below the most protective health-based screening level. Low levels of contaminants 7 feet below the surface are not a concern for children on the playground or for vapor intrusion into indoor air. No further testing of the soils is planned. Both the NIBW PCs' Sampling Report and EPA's Oversight Report are available on the EPA website and at the Scottsdale Civic Center Library.

For More Information

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Update on Site Activities

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