

Honeywell 34th Street Facility November 2008

This is a publication of the Arizona Department of Environmental Quality (ADEQ). The purpose of this fact sheet is to update the community regarding the Honeywell 34th Street Jet Fuel Cleanup Site located in the City of Phoenix in Maricopa County.

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SITE HISTORY & BACKGROUND

The Honeywell 34th Street facility is located within the Operable Unit (OU) 2 portion of the Motorola 52nd Street Superfund site. In addition to an ongoing groundwater clean up, the Honeywell facility is the site of an underground storage tank (UST) investigation and cleanup of jet fuel for which the Tank Programs Division at ADEQ has regulatory oversight under Arizona's Underground Storage Tank laws. The Environmental Protection Agency (EPA) added the Motorola 52nd Street site to the National Priorities List (Superfund register) in 1989 and delegated ADEQ authority as the lead oversight agency for the investigations of OU1 and OU2. ADEQ is also the lead oversight agency for the UST investigation and cleanup at the Honeywell 34th Street facility under Arizona law and began regulatory oversight in Sept. of 1999 when Honeywell reported the releases of petroleum products to the soil to ADEQ.

UST INVESTIGATION AND CLEANUP

In Sept. 1999, Honeywell reported to ADEQ releases of petroleum products from their UST systems. These releases penetrated vertically through the soil and reached the groundwater resulting in contaminated soil and groundwater, and jet fuel floating on the water table. Dozens of groundwater monitoring wells and soil borings were installed to investigate the full extent of the soil and groundwater contamination and the extent of the jet fuel floating on the water table. The investigation was documented in Site Characterization Reports submitted by Honeywell on Aug. 26, Oct. 9 and Dec. 20, 2002.

The full extent of the petroleum groundwater contamination and the floating jet fuel has been determined by ADEQ and Honeywell so that the size of the problem and cleanup needed is now known. On March 18, 2003 ADEQ

approved characterization of the full extent of the petroleum groundwater contamination and the floating jet fuel. The petroleum groundwater contamination and the floating jet fuel extend approximately 2,400 ft. south of the release points originating on the Honeywell owned facility and extending approximately 1,100 ft. beneath Sky Harbor International Airport. ADEQ approved the Site Characterization Report and required that Honeywell prepare and submit a Corrective Action Plan (CAP) in a letter dated March 18, 2003. To date, Honeywell has installed and monitors 39 monitoring wells located on the Honeywell facility and 27 monitoring wells located at the airport property. In addition to the 66 groundwater monitoring wells, approximately 138 multi-level vapor monitoring points have been installed to monitor soil vapor.

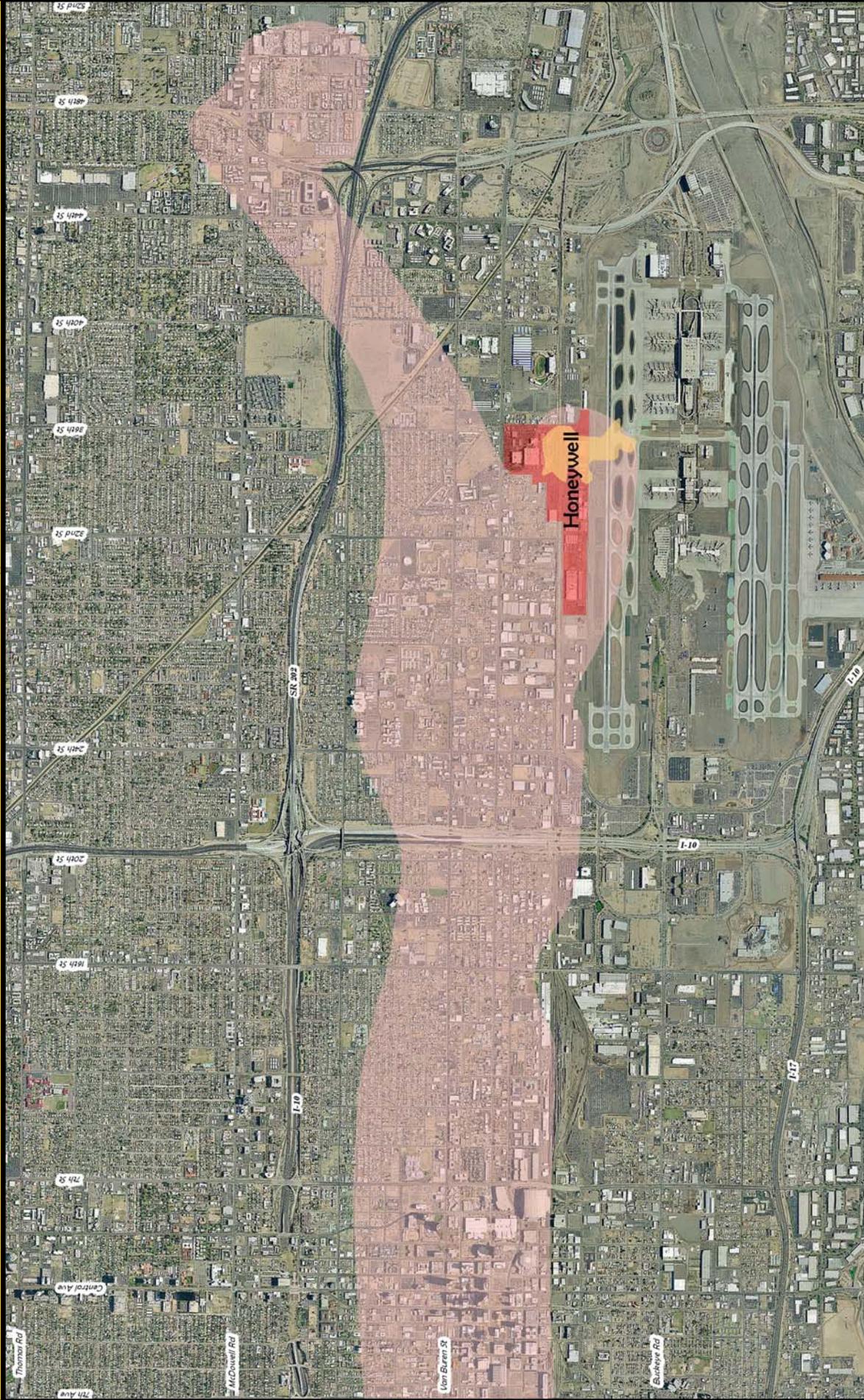
See Maps on next 2 pages.

An extensive public process was conducted prior to approval of the CAP, the Bio-enhanced Soil Vapor Extraction System also known as BSVE and associated air quality permit. Approximately 21 meetings held by the Community Advisory Group, Technical Assistance Group, ADEQ and Maricopa County discussed the UST CAP or the BSVE permit between Feb. 2002 and Aug. 2007. A list of the meetings held is reprinted at the end of this Site Update.

In June 1999, free product recovery was initiated by the use of skimming pumps in a number of the groundwater monitoring wells. To date, 7,270 gallons of jet fuel have been recovered. In Oct. 2005, ADEQ approved Honeywell's CAP to remediate fuel floating on groundwater and soil contamination resulting from releases of fuel from their 34th Street USTs. Prior to approval, the CAP was subject to a 30-day public notice period. Additionally, a public meeting was held to solicit comments on June 29, 2005. The CAP requires pumping of fuel floating on the groundwater and installation of a BSVE to remediate the soil and fuel floating on the groundwater. The CAP approval withheld approval of the proposed monitored natural attenuation to remediate the contaminated groundwater or any jet fuel submerged beneath the water table but stated that natural attenuation would be considered in conjunction with the OU2 final remedy decision. A feasibility study work plan for this final remedy is planned for submission to ADEQ late this year.

Given the chemicals of concern and site geology, the Bio-enhanced Soil Vapor Extraction System and free-product skimming system is the best available technology to safely

Motorola 52nd Street Superfund Site



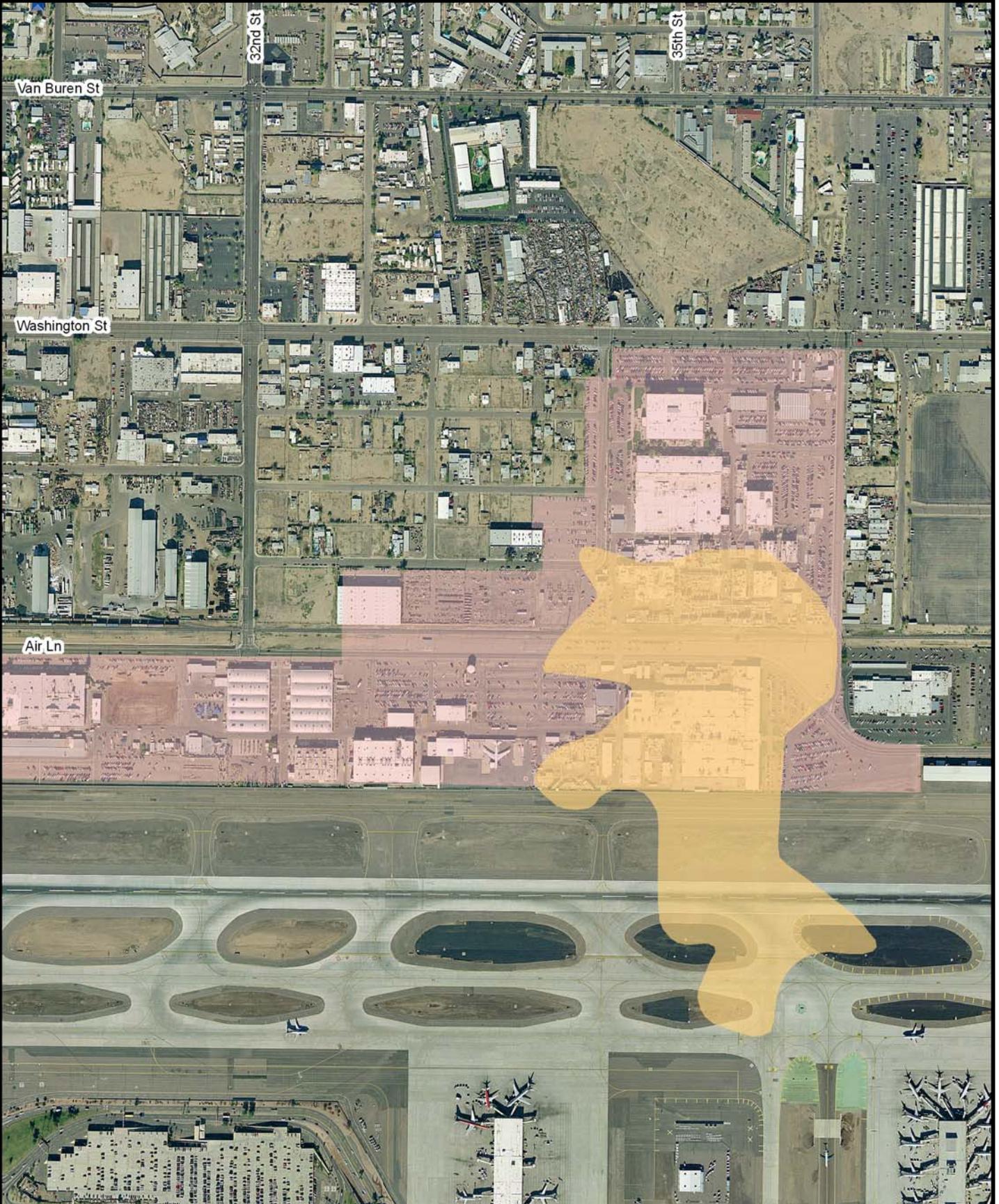
Legend

-  Historical Extent of Jet Fuel Floating on Water Table
-  Honeywell 34th St Facility
-  Motorola 52nd St, 2006 Contaminant Plume

0 0.5 1 Miles

Oct. 24, 2008

Honeywell 34th Street Facility - Jet Fuel Cleanup Site Map



0 0.1 0.2 Miles

October 24, 2008

Legend

-  Historical Extent of Jet Fuel Floating on Water Table
-  Honeywell 34th St Facility



and efficiently remediate the soil contamination and the jet fuel floating on the groundwater. Soil vapor extraction has been an effective technology used for decades at sites across the nation with similar geology and chemicals of concern. The BSVE system is currently being installed and is scheduled to start operation in Nov. 2008.

The vapor recovered by the Bio-enhanced Soil Vapor Extraction System system will be treated by a state-of-the-art treatment system at the surface and was permitted by the Maricopa County Air Quality Department. The Honeywell Title V Air Permit Revision was approved on Dec. 27, 2007 by the Maricopa County Air Quality Department. The system includes redundant air treatment technologies and monitoring to provide multiple safeguards ensuring that the treated air emitted will meet permit conditions and be protective of public health. The technologies include five separate treatment steps: thermal oxidation, quenching, scrubbing, carbon filtration and potassium permanganate filtration.

Because in some portions of the fuel release, the groundwater is also impacted by chemicals of concern of the 52nd Street Superfund Site, primarily chlorinated solvents, the technology to address the petroleum and solvent contaminated groundwater will be evaluated during the feasibility study for the Honeywell facility and OU2. The final groundwater remedy (cleanup) will address all the chemicals of concern for both the Superfund site and the UST releases.

MOTOROLA 52ND STREET SUPERFUND CLEANUP ACTIVITIES

Superfund Cleanup Progress

Significant progress has been made at the Motorola 52nd Street Superfund site.

OPERABLE UNIT 1 UPDATE

- As of Jan. 2008, the OUI groundwater treatment system (located at 5005 E. McDowell Road) has treated approximately 2.8 billion gallons of groundwater and 19,285 pounds of contaminants have been removed since July 1992.
- In July 2008, Freescale (a successor to Motorola) submitted a final Bedrock Extraction Pilot Test Workplan. This work plan set forth the requirements for a pilot study to collect additional bedrock permeability information and to evaluate bedrock groundwater extraction and its potential to remove mass and enhance the extent of vertical capture in the bedrock aquifer. The plan includes the installation of one bedrock extraction well and two bedrock monitoring wells, along with geophysical logging of the boreholes, short-term bedrock extraction well pumping tests, and extended extraction testing and water level and water quality monitoring.
- As of Sept. 30, 2008, the OU2 groundwater treatment system treated over 7.6 billion gallons of groundwater

and removed over 10,567 pounds of contamination since the system began operation in Dec. 2001.

OPERABLE UNIT 1 PAST ACTIVITY

- From Oct. 1984 to June 1987, Motorola completed a remedial investigation/feasibility study (RI/FS). The RI Report summarized the results of source characterization and site investigation. Twenty eight potential sources were identified and investigated. The FS Report established remedial objectives (ROs), identified alternative approaches, and evaluated alternative remedies.
- In June 1988, Motorola submitted a Draft Remedial Action Plan (RAP) to ADEQ that proposed a remedial alternative. In Sept. 1988, ADEQ and EPA issued official approval to implement the recommendations in the RAP in a Record of Decision (ROD) as an interim remedy. The OUI interim remedy selected consists of the following components:
 - On-site extraction and treatment of groundwater from the Courtyard and 50th St. area,
 - On-site extraction and treatment of vapor phase organic contaminants from soils from the Courtyard, Acid Treatment Plant, and Southwest Parking Lot areas,
 - Off-site extraction of groundwater designed to contain contaminant migration at the Old Crosscut Canal,
 - On-site treatment of groundwater extracted from off-site wells, and
 - Use of all treated groundwater at the Motorola 52nd Street facility.
- In June 1989, Motorola and ADEQ entered into a Consent Order, lodged with the Arizona Superior Court, requiring Motorola to design and implement interim groundwater and soil remedies in the OUI area.
- In Sept. and Dec. 2005, Freescale submitted a Groundwater Remedial Alternatives Analysis evaluating other remedial alternatives and potential optimizations to the groundwater treatment system.

OPERABLE UNIT 2 UPDATE

- ADEQ has negotiated a judicial Consent Decree for oversight of the operation and maintenance (O & M) of the OU2 groundwater treatment system.
- Over 7.5 billion gallons of water have been treated and put to beneficial use for irrigation purposes by the Salt River Project and over 10,000 pounds of VOCs have been removed from the groundwater.

OPERABLE UNIT 2 PAST ACTIVITY

- EPA/ADEQ issued a Record of Decision selecting a groundwater containment and treatment remedy in July 1994.

- In Nov. 1998, EPA issued an Administrative Order to Motorola and Honeywell to implement the remedial action.
- In September 1999, ADEQ and Honeywell entered into an Administrative Order on Consent requiring Honeywell to conduct a Focused Remedial Investigation of chlorinated solvent releases from the Honeywell 34th Street facility.
- In March 2000, pursuant to the 1998 Administrative Order issued by EPA, construction of the OU2 groundwater treatment system designed to clean up chlorinated solvent contamination in groundwater began.
- In September 2008, ADEQ approved Honeywell's final Focused Remedial Investigation and Addendum of chlorinated solvent releases from the Honeywell 34th Street facility. Work on the Focused Feasibility Study is planned to begin by the end of 2008.
- The OU2 groundwater treatment system became fully operational in 2001.
- The groundwater treatment system is designed to treat approximately 5,000 gallons per minute.
- The treated groundwater is discharged to the Salt River Project Grand Canal for irrigation use.
- EPA issued a revised Administrative Order in 2003 for Honeywell and Freescale to conduct O & M of the OU2 groundwater treatment system.

HONEYWELL ACTIONS in addition to the Superfund and UST Cleanups

Honeywell 34th Street Facility

In addition to the Superfund and UST cleanups summarized above, Honeywell performed the following remediation and investigation activities:

- Resolution of all violations alleged in the Notice of Violations (NOVs) issued by ADEQ.
- Performance of a comprehensive evaluation of the 34th Street wastewater treatment plant that treats liquid wastes prior to discharging to the City of Phoenix sewer system.
- The decommissioning and removal of an interceptor that had been discharging solvents to the City of Phoenix sewer system, and sampling to ensure that no residual contamination remained.
- Sampling of soil beneath the plating operations area to demonstrate that no soil contamination resulted from the un-permitted storage of hazardous waste.
- Supplemental survey of all subsurface structures potentially used to store liquids. The survey, which encompassed over 200 structures, was conducted to determine the contents of the structures, whether the structures and

their contents could potentially impact the environment, and whether they were being operated in compliance with environmental laws.

- Relocation of all underground fuel piping that was not properly protected from soil corrosion to above ground locations pursuant to an Administrative Order issued by ADEQ in 2006.

Honeywell Facility Audits

Honeywell retained an environmental consultant to conduct a comprehensive audit of all its facilities operating in Arizona. Audits were conducted at 14 facilities located across Arizona including Tucson, Glendale, Kingman, Tempe and North Phoenix. 233 findings of non-compliance and 27 findings of potential non-compliance were identified. The audit at the 34th Street facility resulted in 35 findings of non-compliance. All findings have been corrected by Honeywell.

Honeywell has also designed and implemented a comprehensive management system to monitor compliance with environmental regulations at all of its Arizona facilities.

HONEYWELL COST ESTIMATES FOR REMEDIAL ACTIONS

As described above, Honeywell has conducted extensive characterization and remediation associated with contamination at and emanating from the 34th Street facility. The Honeywell UST cleanup is not eligible for reimbursement from the State Assurance Fund (SAF) because the released was jet fuel. Jet fuel releases are not covered by the SAF. Honeywell's current and future expenditures include:

- Chlorinated solvent investigation and clean up associated with OU2 at the Motorola 52nd Street Site: **approximately \$33 million.**
- UST investigation and BSVE system installation: **approximately \$16 million.**
- Future costs associated with BSVE system and continued operation of the OU2 treatment system are **approximately \$15-20 million.**

MOTOROLA 52ND STREET (M52) SUPERFUND SITE

Community Involvement Public Meetings

* Denotes Jet Fuel Cleanup Discussed at these Meetings.

Documentation of Public Meetings/Open Houses

Remedial Action Plan Public Hearing, 7/11/88

Public Hearing Reporter's Transcript of Proceedings

Agenda, Presenters Notes and Overheads

Public Comments and Responsiveness Summary

Motorola Neighborhood Open House, 05/09/96

Community Awareness Public Meeting, 11/12/96

Neighborhood Open House, 12/13/97

Site-wide Public Meeting, 3/21/01

OUI Site Tour, 12/06/03
 OU2 Open Houses & Site Tours, 10/27/01
 ADEQ Presentations to Other Organizations'
 MAG Water Quality Advisory Committee, 04/12/01
 Sunbeam Neighborhood Association, 10/19/00
 Roosevelt Action Association, 04/18/01
 Sky Harbor Neighborhood Association,
 Community Advisory Group (CAG) Meetings
 CAG Meeting, 05/10/01 – Role of CAG, overview of site
 CAG Meeting, 06/07/01 – TAG discussion, Scope of CAG
 CAG Meeting, 07/19/01 – CAG structure, OUI history
 and description
 CAG Meeting, 09/20/01 – OU2 history, description &
 upcoming events
 CAG Meeting, 11/08/01 – OU3 study area activities
 *CAG Meeting, 02/06/02 – Jet Fuel issue first discussed
 with other HW issues (Keith Bower from HW)
 CAG Meeting, 05/01/02 – OUI 2nd 5-Year Review, OU2
 treatment system, HW Investigation, private well
 survey by ADHS
 CAG Meeting, 08/07/02 – OU3 activities and PRP search,
 update on HW activities
 CAG Meeting, 12/11/02 – OUI treatment system, OU2
 treatment system, OU3 well drilling, HW update
 *CAG Meeting, 03/13/03 – OU2 progress, OU3 drilling,
 HW Bioventing Pilot Study (Jim Hartley - Ch2M Hill)
 CAG Meeting, 06/25/03 – OUI update, vapor intrusion
 (ADHS)
 *CAG Meeting, 07/28/03 – OUI, OU2, OU3 updates,
 proposal to remove jet fuel
 *CAG Meeting, 10/22/03 – OUI Work Plan, Update on
 UST CAP – (Ian Bingham from UST)
 *CAG Meeting, 01/22/04 – West Sky Harbor fuel plume
 (COP), OUI & OU2 updates
 *CAG Meeting, 04/27/04 – COP Drinking Water System
 (COP), update on HW CAP (Joe Drosendahl from
 UST), OU2 & OU3 updates
 *CAG Meeting, 07/27/04 – Drought management (COP
 & SRP), HW draft RI report progress, HW revision of
 CAP (Joe Drosendahl from UST), OU2 and general
 updates
 *CAG Meeting, 09/29/04 – Heath risks, OU3 PRP activities,
 HW CAP update
 CAG Meeting, 12/08/04 – TAG recipient announced
 (EPA), site progress, OU2 & OU3 updates
 *CAG Meeting, 02/23/05 – OUI Vapor Intrusion
 (Freescale), HW Focused Draft RI Report & UST
 CAP approval (HW)
 *CAG Meeting, 03/09/05 – HW 34th Street CAP presen-
 tation and announcement of public comment period
 (HW), UST CAP Approved (Joe Drosendahl and
 Phil McNeely from UST)
 CAG Meeting, 04/27/05 – TAG announcements, OU3
 RI/FS Work Plan, OU3 PRP investigations, OU2
 treatment system upgrade

*CAG Meeting, 08/03/05 – HW 34th St. Draft RI Report
 Presentation (HW)
 CAG Meeting, 08/11/05 – ADEQ Comments of HW
 Draft RI Report
 CAG Meeting, 12/07/05 – TAG announcements, OUI,
 OU2, OU3 & HW activities progress reports
 CAG Meeting, 07/26/06 – TAG announcements, OUI &
 OU2 treatment systems updates
 CAG Meeting, 11/01/06 – OU3 facility investigations,
 TAG announcements
 CAG Meeting, 11/08/06 – OUI & OU2 Five-Year
 Reviews, Site Geology
 *CAG Meeting, 04/19/07 – Combined with TAG to vote
 on HW UST BSVE Air Permit letter to county
 *CAG Meeting, 08/23/07 – OUI, OU2 & OU3 status
 reports, HW BSVE update (Phil McNeely from UST),
 County hearing report on BSVE permit (M. Moore
 from LPNA), review of TAG purpose
 CAG Meeting, 11/06/07 – OUI, OU2 & OU3 status
 reports, TAG activities report (M. Moore from
 LPNA), CIP update

Site-wide Open House at Saguaro Branch Library, 09/10/08
 Technical Assistance Grant (TAG) Community Meetings
 Gateway Neighborhood
 Technical Meeting, 06/19/96
 Informational Meeting, 05/07/98
 Public Comment Meeting, 07/11/98

Lindon Park Neighborhood Association
 TAG Meeting, 10/29/05, history of site, current remedi-
 ation activities
 *TAG Meeting, 09/07/06, UST CAP (Phil McNeely attended)
 *TAG Meeting, 04/19/07, BSVE Title V Air Permit and jet fuel
 TAG Meeting, 04/24/07, Water Workshop
 *TAG Meeting, 12/06/07, Jet Fuel and Chlorinated VOCs
 TAG Meeting, 03/06/08, Water treatment options
 TAG Meeting, 04/29/08, Vapor Intrusion
 TAG Meeting, 06/18/08, Cancer producing contamination
 *Tanks Programs UST Public Meeting regarding Honeywell
 Public Comment on Jet Fuel Spill CAP, 06/29/05
 *City Council Meeting on HW BSVE Air Permit, 8/29/07

Maricopa County Air Quality Department Meetings
 *Community Forum, 09/07/06, Wilson Primary School
 *Sky Harbor Association, 01/09/07
 *Salvation Army Shelter Public Hearing, 05/31/07

ADEQ CONTACT

Sherri L. Zendri, ADEQ Project Manager,
 (520) 770-3126 or (888) 271-9302
 E-mail: slz@azdeq.gov

Hearing impaired persons may call ADEQ's TDD line at
 (602) 771-4829.