

## Main Street and Kofa Avenue Site

### Boundaries:

The Main Street and Kofa Avenue Site (Site) is located at 965 W. Main Street in the town of QuartzSite, Arizona. The 15-acre Site, once the location of Ted's Truck Stop, had two large refueling areas and a total of eight storage tanks on the Site. The truck stop is no longer in operation.

The plume boundaries depicted on the [Site map](#) represent the Arizona Department of Environmental Quality's (ADEQ) interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume may change in the future as new information becomes available.

### Site Status Update:

The concentrations of influent vapors to the [soil vapor extraction](#) (SVE) system continue to decline. During 2010, the SVE system removed approximately 8,310 pounds of total [petroleum hydrocarbons](#) (TPH) 24 pounds of [benzene](#), and 85 pounds of [methyl tert-butyl ether](#) (MTBE).

During 2010, the groundwater extraction (GWE) system processed approximately 2,279,000 gallons of water and removed 59 pounds of TPH, 0.02 pounds of benzene, and 11 pounds of MTBE.

Since beginning operations in late 2007, the SVE system has removed a total of approximately 93,500 pounds of TPH, 1,255 pounds of benzene, and 3,410 pounds of MTBE. During this same time the GWE system has processed 7,787,271 gallons of water and removed 335 pounds of TPH, 2.1 pounds of benzene, and 151 pounds of MTBE. No free product was recovered during the year.

Quarterly groundwater monitoring resumed in 2010. Groundwater samples collected at the Site indicate benzene is still present above the [Aquifer Water Quality Standards](#) (AWQS) of 5.0 micrograms per liter ( $\mu\text{g/l}$ ). The AWQS for MTBE has not been established. MTBE is also present at concentrations above the guidance level from ADEQ's Underground Storage Tank (UST) program of 20  $\mu\text{g/l}$ .

### Community Involvement Activities:

A [community involvement group](#) (CIG) has been formed for this Site and meets twice a year. The CIG is made up of community members who are interested in the remediation activities at the Site. Details of meeting [agendas](#) and minutes for 2009 can be viewed at the ADEQ Web Site. ADEQ distributes fact sheets and public notices to the nearby community when significant events occur. A dedication ceremony and tour was conducted of the completed remediation system on March 7, 2008 for the public.

## Site History:

**1975-1998:** Between about 1975 and 1998, the Ted's Truck Stop facility included two large refueling areas (eastern and western dispenser areas), two tire services areas (tire barn and tire shop), 10 above ground storage tanks (ASTs), and two underground storage tanks (USTs). In addition, a restaurant, two mobile homes, and two modular office buildings were located at the Site. Intermittently between 1975 and 1998, the ASTs were used to store [gasoline](#), [diesel fuel](#), and [used oil](#). The ASTs ranged in capacity from about 1,000 gallons to 250,000 gallons. The 12,000-gallon USTs were in service between 1978 and 1998 and contained gasoline and diesel fuel. Both USTs have been removed.

**2000:** ADEQ was notified that water from a private well near the Site had a gasoline odor, and about 20 private wells in the area were sampled. When elevated levels of benzene were found in the private wells above the AWQS of 5 µg/l, wells were drilled on the Site and groundwater sampling was performed.

**2004-2006:** ADEQ began a groundwater monitoring preliminary investigation at the Site. As part of this ongoing investigation ADEQ installed 17 groundwater wells and collected several soil samples at the Site. Results indicated that both soil and groundwater had been impacted from releases of gasoline and diesel fuel.

Those tests discovered widespread petroleum hydrocarbon contamination in the groundwater across the entire Site. In addition to elevated levels of benzene and MTBE, free product consisting of diesel and gasoline were detected in four wells on Site. Further groundwater monitoring also showed that benzene and MTBE had migrated off the property, and the groundwater contamination extended about one-fourth mile off the Site to the north and northeast.

**2007:** ADEQ began construction of the soil and groundwater remediation system in September, and it was turned on in December. The remediation system consisted of five SVE wells, 19 [air sparging](#) wells, and 20 dual-phase extraction wells. The remediation system utilizes SVE, groundwater pump and treat, and ozone sparging technologies.

**2008:** The treatment system initial startup occurred on December 22, 2007 and on [March 7, 2008](#), ADEQ officially dedicated the Main Street and Kofa Avenue Site [Remediation](#) System to clean up groundwater contamination in the QuartzSite area. This is the state's largest petroleum remediation system, and it marks the first time that ADEQ's [Water Quality Assurance Revolving Fund](#) (WQARF), and the [Underground Storage Tank](#) programs have worked together on a joint project. Soil and groundwater remediation is ongoing at the Site. Due to budget constraints, groundwater sampling was temporarily suspended at the Site until additional funding was available.

The SVE was started in thermal mode and was converted to catalytic mode in June. As of Dec. 18, 2008, 73,465 pounds of TPH, 1,143 pounds of benzene, and 3,122 pounds of MTBE had been removed by the SVE system. The GWE system processed 2,520,162 gallons of liquid and removed 151 pounds of TPH, 1.9 pounds of benzene, and 82 pounds of MTBE. The GWE

system has also removed 233 gallons of free product. Prior to the start of the remediation system 55 gallons of free product had been manually bailed from the Site.

**2009:** The influent vapors to the SVE decreased. The SVE system has removed (cumulatively) a total of 85,183 pounds of TPH, 1,229 pounds of benzene, and 3,322 pounds of MTBE as of December 23, 2009. The GWE system has processed (cumulatively) 5,508,613 gallons of liquid and removed 276 pounds of TPH, 2.1 pounds of benzene, and 140 pounds of MTBE. No free product was recovered during the year.

**2010:** Since beginning operations in late 2007, the SVE system has removed a total of approximately 93,500 pounds of TPH, 1,255 pounds of benzene, and 3,410 pounds of MTBE. During this same time the GWE system has processed 7,787,271 gallons of water and removed 335 pounds of TPH, 2.1 pounds of benzene, and 151 pounds of MTBE. No free product was recovered during the year.

Quarterly groundwater monitoring resumed in 2010. Groundwater samples collected at the Site indicate benzene is still present above the [Aquifer Water Quality Standards](#) (AWQS) of 5.0 micrograms per liter ( $\mu\text{g}/\text{l}$ ). The AWQS for MTBE has not been established. MTBE is also present at concentrations above the guidance level from ADEQ's Underground Storage Tank (UST) program of 20  $\mu\text{g}/\text{l}$ .

### **Contaminants:**

The soil beneath the Site is impacted with petroleum hydrocarbons. The groundwater is impacted with diesel fuel, gasoline, and waste oil. The primary chemicals of concern at the Site are benzene and MTBE. The AWQS for MTBE has not been established. Guidance from ADEQ's Underground Storage Tank program indicates that a remediation level of 20  $\mu\text{g}/\text{L}$  should be used when an existing drinking water receptor may potentially be affected by MTBE. Gasoline and diesel fuel were present as free product on top of the groundwater beneath the Site. Contaminants of concern at the Site may change as new data become available.

### **Public Health Impact:**

There are potential risks associated with exposure to gasoline and diesel fuels, principally from drinking contaminated groundwater. Cleanup activities are important to prevent further off-Site migration. Drinking water is provided by the [Town of QuartzSite water system](#) and must meet all state and federal drinking water standards. If you live within one-half mile of the Site and own a domestic well, you are encouraged to contact the Project Manager.

### **Site Hydrogeology:**

Subsurface soils at the Site consist of two main units. Interbedded layers of well-cemented gravel, sand, silt, and clay exist from approximately ground surface to 70 feet below ground surface (bgs). Below 70 feet the soils consist of silty clay to clay, with the estimated clay percentage ranging from 50 percent to nearly 100 percent.

The groundwater system in the vicinity of QuartzSite consists of a shallow and a deep aquifer. The shallow aquifer is encountered at approximately 46 feet bgs. The depth to the deep aquifer is approximately 200-600 feet bgs. The hydrologic gradient of the shallow aquifer is typically north to northeast.

**Contacts:**

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\*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.

**Information Repository:**

Interested parties can review select Site documents at the [QuartzSite Library](#) located at 465 N. Plymouth Ave. in QuartzSite, (928) 927-6593.

The complete official Site file can be reviewed at the ADEQ Main Office located at 1110 W. Washington Street, Phoenix, AZ. Please contact (602) 771-4380 or (800) 234-5677 to schedule an appointment with 24-hour notice to review these documents. Once all documents requested have been collected, you will be contacted for a review Monday through Friday from 8:30 a.m. to 4:30 p.m. at the ADEQ Records Management Center, 1110 W. Washington Street in Phoenix, AZ.