SITE REGISTRY REPORT (FINAL)

WATER QUALITY ASSURANCE REVOLVING FUND REGISTRY SITE
Cooper Road and Commerce Avenue
Gilbert, Maricopa County, Arizona
April 2004

The Cooper Road and Commerce Avenue Water Quality Assurance Revolving Fund (WQARF) Registry site (the Site) consists of a contaminated groundwater plume located in the vicinity of the former Unichem International, Inc. (Unichem) facility at 619 W. Commerce Avenue, Gilbert, Arizona (the Facility). The Site is bounded to the north by Guadalupe Road, to the south by the Western Canal, to the east by the Facility's eastern property boundary, and to the west by Cooper Road.

Arizona Revised Statutes (A.R.S.) § 49-287.01 outline the process for completing Preliminary Investigations and listing sites on the WQARF Registry. Upon completion of the Site's Preliminary Investigation, an Eligibility & Evaluation (E&E) scoring document and a Site Registry Report (SRR) were drafted in October, 2003. In a November 5, 2003, ADEQ letter, copies of the drafts were provided to Simon New Mexico, Inc. initiating the statutory 15-day owner/operator comment period. Based on information received from Simon New Mexico, Inc., the SRR was redrafted in December, 2004. Copies of the drafts were then placed in the public file and the E&E score was published in the *Arizona Republic* on February 23, 2004, to initiate the statutory 30-day public comment period. The public comment period ended on March 24, 2004. Subsequently, all comments received were considered before finalizing the attached E&E scoring document and this final SRR.

Background

Groundwater flow at the Site is to the northwest. The depth to groundwater is approximately 118 feet below ground surface (bgs) at the Facility.

Unichem (fka United Chemical Corporation) purchased the Facility in 1977 from Nu Development Corporation, and constructed facilities for the production of copper sulphate from scrap metal. The copper sulphate production process used aqueous ammonia, lix blended with kerosene, and sulfuric acid to extract copper from the scrap metal. A diesel-fired boiler with heat exchangers was used to heat the process stream before the crystallization of copper sulphate. Tetrachloroethylene (PCE) was reportedly used as a refrigerant in the crystallization process. Unichem discontinued operations at the Facility prior to 1983. In 1984, Aztec Resources purchased the Facility and operated a gold extraction plant. Later that year, Unichem regained ownership of the Facility. In 1986, Unichem sold the property to a private entity. The western portion of the Facility was then sold to Hamilton Test Systems for use as a vehicle emissions testing station. The eastern portion of the Facility, where Unichem operated, was retained by the private party. In 1988, Unichem again acquired the eastern portion of the Facility through foreclosure. In 1994, Unichem was renamed Simon New Mexico, Inc. when acquired by Simon U.S. Holdings as a subsidiary. Simon U.S. Holdings is a subsidiary of Simon Group PLC. Simon New Mexico, Inc. subsequently sold all its assets, except the Facility, to Western Company. Currently, the Facility is used for storage of construction

materials by Skyline Builders.

The Facility is a former Resource Conservation Recovery Act (RCRA) site. In 1989, RCRA issued a notice of violation (NOV) to Unichem. The NOV required Unichem to prepare a site assessment plan and to investigate all potential contamination at the Facility. In 1990, Unichem conducted a preliminary subsurface soil investigation at the Facility which detected tetrachloroethylene (PCE) soil contamination to a depth of 85 feet below ground surface (bgs). In 1994, soil samples collected at the Facility were analyzed and determined to be contaminated with PCE at a maximum concentration of 4,200 milligrams per kilogram (mg/kg). The Soil Remediation Level for PCE is 170 mg/kg. Also during 1994, Simon New Mexico, Inc. completed three on-site monitoring wells (MW-101 through MW-103) at the Facility and drilled an exploratory borehole through the center of the Facility's on-site drywell. Groundwater samples collected from the Facility's on-site monitoring well network were analyzed and determined to have PCE contaminant concentrations ranging from 28 to 650 micrograms per liter (µg/L). The Aquifer Water Quality Standard (AWQS) for PCE is 5.0 µg/L. In 1995, groundwater samples collected from the Facility's on-site monitoring well network were analyzed and determined to have PCE contaminant concentrations ranging from 53 µg/L to 5,800 µg/L. In 1996, groundwater samples collected from the Facility's on-site monitoring well network were analyzed and determined to have PCE contaminant concentrations ranging from 310 µg/L to 6,600 µg/L. Quarterly groundwater monitoring ended in 1996 after negotiations of a RCRA consent order failed. In January, 2002, groundwater samples collected from the monitoring wells MW-102 and MW-103 were analyzed and determined to have a maximum PCE contaminant concentration of 1,300 µg/L. Monitoring well MW-101 was not sampled in January, 2003 due to damaged casing. Please refer to the attached groundwater table (Table 1) for the historic monitoring results.

In October, 2001, a groundwater sample collected from a Town of Gilbert monitoring well (G-9), located near Cooper Road, was analyzed and determined to have PCE contaminant concentrations. Subsequent groundwater sampling events in 2001 & 2002 have detected PCE contaminant concentrations ranging from 7.6 µg/L to 90 µg/L in monitoring well G-9.

In July, 2003, ADEQ completed two monitoring wells north of monitoring well G-9. Monitoring well MW-104S was completed to a total depth of 170 feet bgs and screen in a sand zone from 115 to 165 feet bgs. Monitoring well MW-104D was completed to a total depth of 750 feet bgs and screened in a sand zone from 580 to 610 feet bgs. Based on analytical results from groundwater samples collected during the Preliminary Investigation, PCE contaminant concentrations have not been detected in monitoring well MW-104D. In August, 2003, groundwater samples collected from monitoring well MW-104S were analyzed and determined to have a PCE contaminant concentration of 16 µg/L and a trichloroethylene (TCE) contaminant concentration of 6.0 µg/L. The AWQS for TCE is 5.0 µg/L. In September, 2003, groundwater samples collected from monitoring well MW-104S were analyzed and determined to have a PCE contaminant concentration of 5.8 µg/L. In December, 2003, groundwater samples collected from monitoring well MW-104S were analyzed and determined to have a PCE contaminant concentration of 17 µg/L. In March, 2004, groundwater samples collected from monitoring well MW-104S were analyzed and determined to have a PCE contaminant concentration of 10 µg/L.

There are no production wells within the boundaries of the Site. However, there is a Town of

Gilbert municipal well (#15) located in close proximity to the Site. This well has not shown PCE contamination. The Town of Gilbert obtains most of its drinking water supply from a blended system that uses mostly surface water and some groundwater. Monitoring wells appear to be the only wells impacted by Site's PCE groundwater contaminant plume.

The E&E score for the Site is 33 out of a possible 120. ADEQ has identified only one social or economic factor associated with the Site, potential future loss of groundwater resources.

Rationale for adding the Site to the WQARF Registry

- Groundwater is contaminated with PCE exceeding the AWQS.
- The Site is not under RCRA jurisdiction.
- Town of Gilbert municipal well #15 is located downgradient from the PCE contaminant plume.
- The E&E score for the Site is 33 out of a possible 120.

This SRR is based upon information available to date. Site boundaries depicted on the attached Site Boundary Map represent ADEQ's 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 geographic extent of known contamination as of the date of the SRR. The actual extent of contamination will be investigated and the geographic boundaries for the Site may change in the future as new information becomes available.

An updated SRR and associated Site Boundary Map will not be issued. As new information becomes available, it will be made available for public review through placement in the public file.