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INTERIM REMEDIAL ACTION REPORT

San Gabriel Valley Area 2 Superfund Site
(commonly known as the Baldwin Park Operable Unit)

San Gabriel Valley Water Company Plant B6 Subproject
Operable Unit 03

September 2004

To the best of our knowledge, after thorough investigation, we certify that the information contained in or accompanying this submission is true, accurate and complete. We are aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

IRA Report Prepared By:	**Respondents**	*Signature:* [signature] Stephen B. Johnson / Stetson Engineers, Inc. *Date:* 9/29/04

Approved By:	**EPA Region 9 Approving Official:**	*Signature:* [signature] Elizabeth Adams, Chief Site Cleanup Branch, Superfund Division *Date:* 9/30/2004

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San Gabriel Valley Area 2 Superfund Sites, Baldwin Park, California

EPA CERCLIS ID Number CAD 980818512

San Gabriel Valley Water Company B6 Subproject
Operable Unit 03

Section I - Introduction

The San Gabriel Valley Superfund Sites

The San Gabriel Valley Superfund sites include multiple areas of contaminated groundwater in the San Gabriel Basin aquifer, a primary source of drinking water for Southern California. The San Gabriel Valley Superfund sites include areas of soil and groundwater contamination underlying portions of the cities of Alhambra, Arcadia, Azusa, Baldwin Park, Industry, Irwindale, El Monte, La Puente, Monrovia, Rosemead, South El Monte, and West Covina, in eastern Los Angeles County. The area is largely suburban, with a mix of residential, commercial, and industrial development.

Groundwater contamination was first detected in the San Gabriel Valley in 1979. By 1984, 59 wells were found to be contaminated with volatile organic compounds (VOCs). As of August 2004, 196 of 275 potable wells have detectable levels of VOCs, perchlorate, N-nitrosodimethylamine (NDMA), or 1,4-dioxane. Despite the widespread areas of contamination, the San Gabriel Basin aquifer continues to provide approximately 90 percent of the domestic water supply for the Valley's more than one million residents.

The San Gabriel Valley Area 2 Superfund site is one of four San Gabriel Valley groundwater sites listed on the National Priorities List. The other three San Gabriel Valley Superfund sites are the San Gabriel Valley Area 1 site (which includes the Whittier Narrows, El Monte, and South El Monte Operable Units), the San Gabriel Valley Area 3 site (which addresses contamination in the Alhambra area), and the San Gabriel Valley Area 4 site (which includes the Puente Valley Operable Unit).

The San Gabriel Valley Area 2 Superfund site includes four operable units, which are collectively known as the Baldwin Park Operable Unit or BPOU. This remedial action report addresses one of the four operable units: the San Gabriel Valley Water Company B6 operable unit (designated by EPA as operable unit 03 of the San Gabriel Valley Area 2 site).

The San Gabriel Valley Area 2 Superfund Site

Extent of Contamination

The San Gabriel Valley Area 2 Superfund Site addresses multiple, commingled plumes of groundwater contamination which have resulted in an area of contamination over a mile wide and eight miles long. The area of contamination extends to the southwest from the City of Azusa through portions of the cities of Irwindale, Baldwin Park, West Covina, and Industry. The depth to the groundwater varies from about 150 to 350 feet, and the groundwater contamination extends from the water table to more than 1,000 feet below ground surface. The most prevalent contaminants in the groundwater are trichloroethylene (TCE), perchloroethylene (PCE), carbon tetrachloride (CTC), perchlorate, and NDMA. TCE, PCE, and CTC are solvents used for degreasing and cleaning; perchlorate is a component of solid-fuel rockets; and NDMA is associated with liquid-fuel rockets. Other VOCs are also present, including the chemical 1,4-dioxane, which has been used as a stabilizer in chlorinated solvents. The peak contaminant concentration measured in groundwater at the site is 38,000 micrograms per liter (ug/l) PCE.

Remedial Investigation/Feasibility Study (RI/FS), Record of Decision, and Explanation of Significant Differences (ESD)

From 1990 to 1993, EPA completed a remedial investigation and feasibility study for the site. The investigation included the compilation and analysis of sampling results from existing water supply wells, temporary reactivation and sampling of inactive water supply wells, installation of a 1,500-foot deep monitoring well (by EPA), installation and sampling of more than two dozen shallow groundwater monitoring wells (by Potentially Responsible Parties [PRPs]), development of a groundwater flow model of the aquifer, and preliminary discussions with local water agencies over the role of local water agencies in the cleanup. In 1993, EPA issued its proposed cleanup plan.

EPA adopted a Record of Decision (ROD) for an interim remedy for the site in 1994 and updated the ROD in May 1999 with an Explanation of Significant Differences (ESD). The remedial objectives expressed in the ROD and ESD are to prevent future increases in, and begin to reduce, concentrations of groundwater contaminants in the Baldwin Park area by limiting further migration of contaminated groundwater into clean and less contaminated areas or depths that would benefit most from additional protection and by removing contamination from the aquifer. The ROD specifies extraction of contaminated groundwater at the downgradient end of two broad subareas of contamination, at locations and rates sufficient to hydraulically-contain contaminated groundwater moving through each subarea during all anticipated groundwater flow conditions. A secondary objective is to provide data necessary to determine final clean up standards for the aquifer.

Identification of Potentially Responsible Parties (PRPs)

The majority of the PRPs at the site were identified between 1990 and 1997. The PRPs were identified after a multi-year cooperative effort between EPA and the California Regional Water Quality Control Board, Los Angeles Region (RWQCB), which included inspections of more than 1,400 commercial and industrial businesses in the area and testing of soil or groundwater where contamination was observed or suspected. PRPs were identified using test results, historical Federal, State and local records, responses to information requests, and other information.

EPA Enforcement Efforts and EPA-PRP-Water Agency Negotiations

A PRP group performed initial planning and pre-design work from approximately 1995 to early 1997. During this period, negotiations continued with several regional and local water agencies over implementation of the cleanup plan. In 1998, the negotiations began to focus on a plan proposed by the Main San Gabriel Basin Watermaster (Watermaster, a court-appointed entity responsible for administering the water rights agreement in the San Gabriel Basin). The Watermaster Plan proposed that the treated groundwater be used locally, and that local agencies play a major role in designing, building, and operating the cleanup facilities. The Watermaster Plan was developed in response to the impacts of perchlorate and NDMA, which had forced the closure of additional public water supply wells in the area, leading to renewed local interest in using the treated groundwater produced by the cleanup to meet potable water demands.

In mid-1999, as PRP-water agency negotiations continued, EPA resumed Consent Decree negotiations with the PRPs. In September 1999, EPA received a "Good Faith Offer" from several of the PRPs to design, build, and operate the cleanup facilities. EPA-PRP negotiations continued into early 2000 in an effort to translate the September 1999 offer into a binding commitment. By June 2000, however, negotiations had not produced agreements between EPA and the PRPs, or between the PRPs and the Watermaster. EPA concluded that negotiations alone were unlikely to produce an agreement and, on June 30, 2000, issued a Unilateral Administrative Order ("Order") directing the 19 PRPs to complete the remedial design and make arrangements for the construction and operation of the groundwater extraction wells, treatment systems, and related cleanup facilities.

The PRPs complied with EPA's Order, but the design work required by the Order was slowed by uncertainty over local involvement in the cleanup. Still unresolved in 2000 was the ultimate use of the treated groundwater, the selection of the perchlorate treatment technology, treatment facility locations, the extent to which existing water supply wells would be used as groundwater extraction locations, and the extent to which local water agencies would be involved in design, construction, and operation of the facilities.

In Fall 2000, negotiations between the PRPs and water agencies resumed, and in January 2001 a 25-page preliminary agreement was reached between six water agencies and eight of the PRPs. The agreement, known as the Memorandum of Understanding (MOU), calls for the PRPs to fund most of the cost of designing, building, and operating the groundwater extraction and treatment facilities called for in EPA's cleanup plan and for the water agencies to construct, own, and operate the facilities.

In March 2002, after lengthy negotiations, the PRPs and water agencies successfully translated the MOU into a binding agreement. Eight PRPs and seven water agencies signed the 300-page "BPOU Project Agreement," which was approved by the Los Angeles County Superior Court in May 2002. The agreement commits the PRPs to fund the design, construction, and operation of the groundwater extraction, treatment, and conveyance facilities needed to satisfy EPA's cleanup goals and meet local water supply needs. The water agencies and their contractors are completing most of the design and construction work, with EPA and PRP oversight. The PRP-water agency agreement not only addresses funding and work responsibilities, but provides criteria for selection of water treatment technologies, establishes a cost consultant and risk manager, describes contracting requirements, requires payment of management and performance fees, requires efforts to obtain public funds, includes audit and insurance requirements, requires the PRPs to repay the water agencies for the costs of many of the wellhead treatment systems installed over the last decade, resolves certain lawsuits, and provides dispute resolution procedures.

The Site Remedy

The remedy for the site is being constructed as four separate groundwater pump and treat systems, each ranging in capacity from 2,500 gallons per minute (gpm) to 7,800 gpm. Each system is designated as a separate operable unit of the San Gabriel Valley Area 2 Site. The extraction rates and locations were developed during the remedial design process using a numeric model of groundwater flow and particle movement in the aquifer. EPA determined that, as a long-term average, a total of 22,000 gpm of contaminated groundwater must be extracted at eight locations. Total treatment capacity will exceed 25,000 gpm, or 36 million gallons per day (MGD), of contaminated groundwater. The work has been "phased" to allow construction to begin on the initial subprojects as design work is completed on the later subprojects. Each subproject has or will have one or more groundwater extraction wells and a series of treatment processes including air stripping or liquid phase granular activated carbon, ion exchange, and ultraviolet light (with hydrogen peroxide). The second of the four subprojects, the subject of this Remedial Action Report, is the San Gabriel Valley Water Company B6 subproject. The other three subprojects are the La Puente Valley County Water District, the Valley County Water District subproject, and the San Gabriel Valley Water Company B5 subproject.

Section II – Operable Unit Background

The subject of this Interim Remedial Action (IRA) Report is the San Gabriel Valley Water Company B6 subproject, operable unit 03 of the San Gabriel Valley Area 2 site. The subproject, located at 14104 Corak Street in Baldwin Park, CA, is owned and operated by San Gabriel Valley Water Company (SGVWC), a private water company regulated by the California Public Utilities Commission, which serves approximately 160,000 people in the cities of Arcadia, Baldwin Park, El Monte, Industry, Irwindale, La Puente, Montebello, Monterey Park, Pico Rivera, Rosemead, San Gabriel, Santa Fe Springs, South El Monte, West Covina, Whittier and unincorporated areas of Los Angeles County.

The EPA's targeted average groundwater extraction rate for the subproject is 6,750 gpm. Extraction rates can vary daily or weekly but are expected to average the targeted rate over time. It is anticipated that down time for maintenance and repair of the BPOU facilities will be approximately 10 percent. If down time is 10 percent, the average flow rate at the B6 Plant will be 7,000 gpm (which exceeds the EPA targeted flow rate). The EPA's targeted rates for the four subprojects are listed in Table 1.

Table 1. BPOU Target Extraction Rate and Planned Capacity

Subproject	Targeted Average Groundwater Extraction Rate	Planned Capacity
La Puente Valley County Water District subproject	2,250 gpm	2,500 gpm
San Gabriel Valley Water Company B6 subproject	6,750 gpm	7,800 gpm
Valley County Water District subproject	6,000 gpm	7,800 gpm

San Gabriel Valley Water Company B5 subproject.	7,000 gpm	7,800 gpm
TOTAL	22,000 gpm	25,900 gpm

SGVWC owns two potable wells at its Plant B6 located at 14104 Corak Street, at the confluence of the Big Dalton Wash and Walnut Creek. Since the early 1980's, wells at Plant B6 have been contaminated by CTC, TCE and other VOCs. CTC was detected at concentrations more than ten times the MCL at both wells. TCE was detected at concentrations up to sixteen times the MCL. Other VOCs detected above the MCLs at Plant B6 include PCE, 1,2-Dichloroethane (1,2-DCA) and cis-1,2-Dichloroethylene (c-1,2-DCE).

In 1994, before the decision was made to use the B6 Plant site for part of the EPA remedy, two 3,000 gpm air strippers were constructed to remove VOCs from two existing potable wells at the site (the B6C and B6D wells). One of the air strippers operated until 1997, when perchlorate was detected in Well B6C at concentration up to 75 ug/l, which exceeded the California Department of Health Services (DHS) established provisional AL for perchlorate of 18 ug/l. Because the VOC treatment facility did not remove perchlorate, SGVWC immediately removed Well B6C from service. In January 2002, the DHS lowered the AL for perchlorate to 4 ug/l. The AL was subsequently raised to 6 ug/l in March 2004.

The second air stripper operated until 1998, when NDMA was detected in Well B6D at concentrations up to 0.087 ug/l, which exceeded the DHS established AL for NDMA of 0.002 ug/l. Because the VOC treatment facility also did not remove NDMA, SGVWC immediately removed Well B6D from service. In March 2002 DHS raised the AL for NDMA to 0.010 ug/l.

As part of the EPA remedy, the two existing air strippers were replaced with four new air strippers. The two water supply wells will serve as backup wells to the four new wells constructed as part of the remedy.

In August 2000, SGVWC proposed to install a treatment facility to remove VOCs, perchlorate and NDMA from groundwater produced from its Wells B6C and B6D. The proposal was to construct and operate a treatment facility with a capacity of 6,500 gpm using air stripping technology to remove VOCs, ion exchange technology to remove perchlorate, and ultraviolet light/oxidation technology to remove NDMA.

As a result of subsequent meetings and discussions among EPA, Watermaster and PRPs for the BPOU, SGVWC's proposal was modified to increase the treatment plant capacity to 7,800 gpm and to include four new extraction wells to be drilled about 2,000 to 5,000 feet westerly of Plant B6. The new extraction wells were originally designated SA3-1A, SA3-1B, SA3-2A and SA3-2B. SGVWC has since changed the designation of the SA3-1 Wells to Wells B25A and B25B and the SA3-2 Wells to Wells B26A and B26B and are referenced as such throughout this report.

The B25 wells are located at the corner of Bess Avenue and Dalewood Street in the City of Baldwin Park, as shown on Plate 1. The B26 wells are located at 1517 Virginia Avenue in the City of Baldwin Park, also shown on Plate 1. One of the wells at each extraction site extracts water from the shallow aquifer and the other well extracts water from the deep aquifer. Well B25A was drilled to 800 feet (ft) below ground surface (bgs) and was perforated from 380 to 780 ft bgs, B25B was drilled to 1,030 ft bgs and was perforated from 850 to 1,010 ft bgs, B26A was drilled to 800 ft bgs and was perforated from 400 to 780 ft bgs, B26B was drilled to 1,030 ft bgs and was perforated from 850 to 1,010 ft bgs. The proposed pumping capacity for the B25 wells is 2,800 gpm each and for the B26 wells is 1,100 gpm each. In addition, two piezometer clusters, each with a shallow well and a deep well, were drilled at each well site in accordance with the approved BPOU Performance Standards Evaluation Plan. The eight piezometers are designated PZ3-1AS, PZ3-1AD, PZ3-1BS and PZ3-1BD for the B25 wells at Dalewood Street, and PZ3-2AS, PZ3-2AD, PZ3-2BS and PZ3-2BD for the B26 wells at Virginia Avenue, respectively.

A new set of four air-stripping towers manufactured by USFilter was installed at SGVWC Plant B6 to remove VOCs. The four air-stripping towers are operated in parallel configuration. Each air stripper is made of fiberglass, is 10 feet in diameter and has a packing depth of 21 feet. Each air stripper is designed to treat a flow of approximately 1,950 gpm. Each air-stripping tower has a dual-vessel off-gas adsorption unit containing vapor-phase granular activated carbon (GAC). The packing media is made up of Jeager No. 2 Tripacks. As the groundwater flows over the packing in the air-stripping towers, the VOCs are transferred from the water to the air flowing in a countercurrent direction. Each air blower is equipped with a 100 horsepower (hp) motor and provides a total air flow of about 16,000 cubic feet per minute (cfm). The design air to water ratio is 60:1. The VOCs in the air are removed by GAC in the off-gas adsorption units and the clean air is released to the atmosphere. The treated groundwater from each of the four air strippers flows by gravity into a common 70,000-gallon wet well and is then pumped from the wet well into the ISEP modules using five 100 hp vertical turbine pumps.

Two ion exchange systems, known as the ISEP units, manufactured by Calgon Carbon Corporation (Calgon), were installed at SGVWC Plant B6 to remove perchlorate. Each ISEP unit contains 30 resin-filled vessels (ion exchange columns) arranged in a carousel on a rotating frame, brine and rinse water systems, and a process control system. The ion exchange columns are rotated through a sequence of operations including adsorption, displacement, entrainment, rejection, regeneration, and rinse. These operations occur simultaneously as the carousel rotates. Perchlorate and other anions such as nitrate, sulfate, carbonate and bicarbonate are transferred from the water to the resin during the adsorption process. These anions are later removed from the resin during regeneration. A seven percent sodium chloride solution is delivered to the ion exchange columns during the regeneration phase. Chloride ions displace perchlorate and other anions adsorbed on the resin, producing a waste brine stream containing high concentrations of perchlorate, nitrate, sulfate, carbonate, bicarbonate and other anions. After the ISEP process, the water is delivered to an UV/oxidation system for further treatment.

An UV/oxidation treatment facility manufactured by Trojan Technologies Inc. (Trojan) was installed at SGVWC Plant B6 to remove NDMA and 1,4-dioxane from the contaminated groundwater. The technology, known as the UVTerra system, consists of four Reactors in parallel and a System Control Center (SCC). Each Reactor contains a total of 8 Rotational Units (RUs) and each RU contains four sections with 16 UV lamps in operation per section. Under normal conditions, only 6 of the 8 RUs in each Reactor will be in operation. Therefore, each Reactor has a total of 384 (6 x 4 x 16) low-pressure UV lamps in operation. Each RU can be removed by overhead crane and cleaned in an acid tank. NDMA is destroyed by direct photolysis when exposed to UV light. Destruction of 1,4-dioxane requires addition of hydrogen peroxide, which forms hydroxyl radicals in water. Under the influence of UV light, the hydroxyl radicals oxidize 1,4-dioxane.

As the air stripper removes VOCs, carbon dioxide is also removed from the water. As a result, pH of the water after air stripping process increases, which also increases the calcium carbonate precipitation potential. In an effort to prevent calcium carbonate precipitation that can negatively affect the performance of ISEP in removing perchlorate, an acid injection system was installed at SGVWC Plant B6. Two connecting tanks, one with a capacity of 3,100 gallons and the other with a capacity of 2,100 gallons are used to store hydrochloric acid. The dosage of the acid addition will be discussed in Section IX. In addition, treated water pH decreases after the ISEP process because as the ISEP removes perchlorate, sulfate and nitrate, it also removes carbonate and bicarbonate. Treated water with lower pH may be more corrosive. To prevent this problem, sodium hydroxide will be injected to the treated water after the UV process to raise the pH in the treated water to non-corrosive levels. The dosage of the sodium hydroxide injection will be based on the results of the start-up testing at SGVWC Plant B6.

VOCs, perchlorate, NDMA and 1,4-dioxane treatment equipment were designed by equipment vendors based on maximum expected influent concentrations and non-detect effluent concentrations. The overall plant layout and design of piping, electrical, and instrumentation was designed and coordinated by Stetson Engineers Inc. (Stetson) and Alexander Engineers, Inc. (AEI) in accordance with the Uniform Building Code. Design review was performed by SGVWC, the Cooperating Respondents (CRs), and EPA.

Construction was completed in the spring of 2004 and SGVWC is currently conducting a series of start up tests to obtain an amended permit from DHS for the operation of the B6 Treatment Facility. The project was designed and built to be consistent with EPA's selected remedy. The SGVWC subproject consists of four new groundwater extraction wells, the above-mentioned treatment systems, and facilities to distribute the treated water for potable use. Table 2 summarizes construction details for the groundwater extraction wells, including two existing wells available for backup use. Table 3 lists the treatment system vendors and the criteria used to design the treatment facilities.

After treatment, water is conveyed to the existing 0.4 MG on-site reservoir then distributed to SGVWC's customers. Sodium hypochlorite is added to the treated water for disinfection before entering the reservoir. Brine produced as a byproduct of the ion exchange process is currently discharged to a dedicated brine line operated by the Los Angeles County Sanitation Districts (CSD). In accordance with the 2002 BPOU Project Agreement, the discharge shall cease by 2006 unless pretreatment is added. Plate 2 shows a plan view of the treatment plant site. Plate 3 is a diagram of the treatment process at SGVWC Plant B6.

Table 2. Construction Details – SGVWC Plant B6 Groundwater Extraction Wells

Well Names	Capacity	Depth	Screened Interval	Notes
B25A	2,800 gpm	800 feet deep	screened intervals from 380 to 780 feet	primary well
B25B	2,800 gpm	1,030 feet deep	screened intervals from 850 to 1,010 feet	primary well
B26A	1,100 gpm	800 feet deep	screened intervals from 400 to 780 feet	primary well
B26B	1,100 gpm	1,030 feet deep	screened intervals from 850 to 1,010 feet	primary well
B6C	3,000 gpm	526 feet deep	multiple screened intervals from 275 to 506 feet	backup well
B6D	3,000 gpm	1,078 feet deep	multiple screened intervals from 760 to 1,032 feet	backup well

Table 3. SGVWC Treatment Equipment - Design Criteria and Vendors					
Contaminants Treated	Technology	Vendor	Design Criteria		
			Influent Concentration	Effluent Concentration	Other
VOCs	Air Stripping	USFilter	5 ug/l 1,1,1-TCA 5 ug/l 1,1-DCA 15 ug/l 1,1-DCE 10 ug/l 1,2-DCA 5 ug/l 1,4-DCB 5 ug/l benzene 10 ug/l CTC 5 ug/l chloroform 20 ug/l cis-1,2-DCE 5 ug/l ethylbenzene 100 ug/l PCE 5 ug/l toluene 5 ug/l trans-1,2-DCE 150 ug/l TCE 5 ug/l xylene	< 0.5 ug/l for all VOCs	Air:water > 60:1 or as specified in DHS permit
	Vapor Phase Granular Activated Carbon (to treat offgas from the air strippers)	USFilter or other GAC supplier	NA	< 84 ppbv for total VOCs	160,000 lb GAC
Perchlorate	Ion Exchange ("ISEP" system)	Calgon Carbon Corporation	200 ug/l perchlorate	< 4.0 ug/l perchlorate	NA
NDMA and 1,4-dioxane	Ultraviolet light with peroxide	Trojan Technologies	0.9 ug/l NDMA 5 ug/l 1,4-dioxane	< 0.002 ug/l NDMA, < 3 ug/l 1,4-dioxane	NA

SECTION III -- CONSTRUCTION ACTIVITIES

Permitting

A negative declaration was filed to address California Environmental Quality Act (CEQA) issues. SGVWC has obtained required building and grading permits from the City of Baldwin Park. Prior to construction, encroachment permits were obtained from the City of Baldwin Park and the City of West Covina for installation of the brine pipeline. A permit was obtained for connection of the facility's brine line to the CSD industrial sewer line. In addition to the construction permits, a DHS water supply permit and a South Coast Air Quality Management

District (SCAQMD) permit were obtained for the operation of the treatment facility. A National Pollutant Discharge Elimination System (NPDES) permit was initially obtained for discharge of treated water during the startup and performance testing period. The water supply permit will require sampling and testing of raw water and treated water weekly.

The NPDES permit required testing and reporting once a month if any discharges occurred. During the DHS compliance testing between April and June 2004, chloride in the discharged water was found to exceed the NPDES discharge limit. Chloride is added to the treated water as a result of the ion exchange process. Although the concentration of chloride in the treated water meets the drinking water standard, it exceeded the NPDES discharge limit. After the exceedence occurred, the RWQCB rescinded the NPEDS permit on August 17, 2004. The discharges have since occurred under EPA authority.

In a letter dated September 16, 2004, EPA stated that discharges with elevated chloride levels can occur in limited circumstances even if they do not meet Applicable or Relevant and Appropriate Requirements (ARARs). EPA informed the CRs that no permit is required, in accordance with Section 121(e) of the Comprehensive Environmental Response Compensation and Liability Act and Section 300.400(e) of the National Contingency Plan, although all substantive requirements must be met.

In addition, during development of the new B25 and B26 extraction wells, untreated groundwater was discharged to Walnut Creek. Due to the high rates and volumes of discharge, EPA concluded that the only practicable option was to discharge the water without treatment after implementing measures to ensure that the water infiltrated back into contaminated portions of the aquifer. The discharges also occurred under EPA authority and without an NPDES permit, in accordance with conditions specified in a May 13, 2003 letter from EPA to the RWQCB (Los Angeles Region).

VOCs, Perchlorate, NDMA and 1,4-Dioxane Treatment Facility
Facilities to remove VOCs, perchlorate, NDMA and 1,4-dioxane have been constructed at SGVWC Plant B6. The project consists of the installation of new air stripping towers, ion exchange and UV/oxidation equipment, construction of new buildings to house the equipment, construction of a control/electrical room, construction of a waste brine pipeline to the CSD brine line, and modifications to the existing piping and pumps at SGVWC Plant B6 to integrate the new processes.

Site Preparation
Site preparation activities included over-excavation, re-compaction, and grading of soils under the treatment facilities. Excavation was performed where required for the buildings, wet wells, valve vaults, meter vaults, and pipe trenches.

Process Installation
The process equipment has been installed on reinforced concrete slabs. The ion exchange and UV/oxidation equipment are housed in two separate concrete block buildings constructed as part of the project. Connecting piping and wiring has also been constructed as part of the project.

Offsite Extraction Wells Construction
Two new wells have been drilled at the B25 site and two new wells have been drilled at the B26 site. In addition, two new pairs of piezometers have also been drilled at each well site. Pumps have been ordered for the new wells and should be installed by the end of 2004.

Raw Water Pipeline Construction
As part of this remedy, raw water pipelines have been constructed to deliver water from the new extraction wells at the B25 site and the B26 site to SGVWC Plant B6 Treatment Facility.

Treated Water Pipeline Construction
Also as part of this remedy, a treated water pipeline has been constructed in Francisquito Avenue to help distribute water from the SGVWC Plant B6 Treatment Facility to other portions of SGVWC's distribution system. In addition, a similar treated water pipeline is planned from Francisquito Avenue to Baldwin Park Boulevard and Temple Avenue to further distribute the treated water to SGVWC's distribution system.

SECTION IV -- CHRONOLOGY OF EVENTS

1980	VOCs were detected above the MCLs at Well B6C
1989	VOCs were detected above the MCLs at Well B6D
Mar 1994	EPA issued ROD for the BPOU
Jun 1994	Two air strippers started operation at Plant B6
Jun 1997	Well B6C was shutdown because of perchlorate detected above the AL
Jul 1998	Well B6D was shutdown because of NDMA detected above the AL
May 1999	EPA issued ESD for the BPOU to include perchlorate, NDMA and 1,4-dioxane as contaminants of concern
Aug 2001 to Feb 2003	Remedial design documents submitted to EPA
Mar 2002	BPOU Project Agreement signed
Apr 2002	SGVWC began to issue Request for Proposals for the VOC, perchlorate, NDMA and 1,4-dioxane treatment facilities
May 2002	RC Foster Corporation was awarded the construction contract and was given a notice to proceed
Mar 2003	EPA approval of remedial design
Apr 2004	Construction of the B6 treatment facilities was completed
Apr 2004	SGVWC began startup testing

(Dec 2004)	Anticipated date of offsite extraction wells pump installation
(Jan 2005)	Anticipated date of receiving permit from DHS to operate B6 treatment facilities
(Feb 2005)	Anticipated date of receiving permit from DHS to operate the new offsite extraction wells

SECTION V -- PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

The target average extraction rate at SGVWC Plant B6 for hydraulic containment is 6,750 gpm. SGVWC will operate all four new extraction wells continuously to meet the hydraulic containment requirement. SGVWC Wells B6C and B6D will act as backup wells to supply water to the treatment facilities. The maximum design flow through the treatment facilities is 7,800 gpm.

Raw water and treated water samples for VOCs, perchlorate, nitrate, NDMA and 1,4-dioxane will be sampled and analyzed according to the DHS permit requirements. Water quality analysis results will be submitted to EPA and DHS on a monthly basis or as otherwise required by DHS.

SCAQMD permit for the air stripper operation requires analysis of VOCs at the outlet of the carbon adsorption units on a daily basis during the first week of operation and monthly thereafter. The carbon is changed out when the concentration of total VOCs at the outlet of the first adsorber is equal to the influent concentration. In addition, the total VOCs in the exhaust gas shall never exceed 84 parts per billion, by volume (ppbv).

CSD requires quarterly and bi-monthly sampling and analysis of the waste brine generated by the ISEP at SGVWC Plant B6. Samples for VOCs, semi-VOCs, perchlorate, 1,4-dioxane, pH, sulfide, oil and grease, chloride, alkalinity, calcium, magnesium and volatile total toxic organics will be collected on a quarterly basis; and samples for suspended solids and chemical oxygen demand will be collected on a bi-weekly basis. The results are submitted to CSD on a quarterly basis.

All water and air quality samples are analyzed using EPA or DHS approved methods at a DHS certified laboratory. Appropriate quality assurance and quality control are applied to all the samples analyzed.

The construction work was inspected daily by Stetson for compliance with the plans and specifications. Material testing was performed for all concrete placed at the site. Inspections were also conducted by DHS during the startup and performance testing period in the spring and summer 2004.

During startup testing, samples of the raw water and treated water were taken regularly to assure the proper operation of the plant and to comply with discharge requirements from the RWQCB. The equipment contracts required that the installed equipment meet the design performance criteria. Testing at startup and throughout the warranty period for the equipment ensured that the constructed facilities met the design criteria.

Several plans and documents were prepared for the construction of the SGVWC Plant B6 Treatment Facility. The names, authors and the dates of the finalized and approved plans or documents are listed below.

"*Specifications and Contract Documents for Construction of Water Production Wells SA3-1S and SA3-1D and Piezometer Clusters PZ3-1A and PZ3-1B and Water Production Wells SA3-2S and SA3-2D and Piezometer Clusters PZ3-2A and PZ3-2B*", Stetson Engineers Inc., May 2003.

"*Specification and Contract Document for Construction of the Plant B6 Raw Water Pipeline*", San Gabriel Valley Water Company, June 17, 2003.

"*San Gabriel Valley Water Company Plant B6 Treatment Facility Project, Phase I, Phase II and Phase III*", Stetson Engineers Inc., December 14, 2001, May 31, 2002 and September 30, 2003.

"*Construction Quality Assurance Plan, San Gabriel Valley Water Company B6 Treatment Facility*", Stetson Engineers Inc., February 2003.

"*Sampling and Analysis Plan, Installation of Four Groundwater Production Wells and Four Dual-Completion Piezometer Clusters for the B6 Treatment Plant*", Stetson Engineers Inc., May 2004.

SECTION VI -- FINAL INSPECTION AND CERTIFICATIONS

The amended permit from DHS to operate SGVWC Plant B6 for drinking water will be granted after startup testing demonstrates the effectiveness of the new treatment facilities in removing all the contaminants to non-detectable levels. In addition, a public hearing will be held to accept public comments on using the treated water from Plant B6 as a source of drinking water supply.

The DHS compliance testing of the treatment facilities began in April 2004. During the test, water from Wells B6C and B6D were pumped through the treatment facilities and the treated water was discharged to Walnut Creek. SGVWC operated the B6 treatment facility over 9 non-consecutive days in April 2004, 9 non-consecutive days in May 2004, 12 non-consecutive days in June 2004, 8 non-consecutive days in July, 15 non-consecutive days in August, and 18 non-consecutive days in September. The total volume of water treated at the B6 treatment facility between April 1 and September 29, 2004 was approximately 216 MG. DHS compliance testing was completed on September 17, 2004.

Results of the compliance testing are discussed in Section IX. EPA conducted the final inspection of SGVWC Plant B6 on September 28, 2004.

SECTION VII -- OPERATION AND MAINTENANCE ACTIVITIES

The scheduled routine maintenance activities for SGVWC Plant B6 treatment facilities is shown on Table 4.

Table 4. Summary of Routine Maintenance

	Daily	Weekly	Monthly	Quarterly	Six Months	Annual	After 8760 Hours
ISEP Unit	Inspect brine pumps, bag filters, conductivity probes; response to warnings or alarms	Wash down turntables and vessels	Inspect gear reducer	Inspect pumps on brine skid; Lubricated rotating head bearing and idler gears	Clean shafts and vent plugs; Lubricate turntable bearings; Change oil in turntable drive; Inspect		
UVTerra	Check for lamp failure; respond to warnings or alarms		Complete items on maintenance checklist	Visually inspect lamp sleeves for fouling			Remove and replace lamps
Brine Compliance Vault			Calibrate pH probe and replace pH chart rolls			Calibrate equipment	
Air Stripper			Check and maintain blowers, filters, bearings, ductwork connections	Check percent carbon exhaustion		Inspect and clean the towers	
Booster Pumps			Inspect and Maintain				Lubricate bearings

SECTION VIII -- SUMMARY OF PROJECT COSTS

Capital Costs

In its 1999 ESD, EPA estimated capital cost at $ 22.9 million for a 5,500 gpm treatment facility at SGVWC Plant B6. Project capital costs were estimated in the 2002 BPOU Project Agreement to be approximately $28 million. A breakdown of this estimate is included in Appendix A. These costs were based on a flow of 7,800 gpm. As of October 30, 2003, the updated estimated capital cost at completion is $29.23 million. Actual capital costs for the B6 treatment facilities as of June 2004 totaled $23 million, but this total does not include all costs. Summaries of these costs are included in Appendix A and include engineering, project support, construction, process equipment, start up testing, and laboratory analysis.

Federal funding for the project was received through the U.S. Bureau of Reclamation in the amount of $3.3 million, as of August 20, 2004.

Operations and Maintenance Costs

In its 1999 ESD, EPA estimated the Operations and Maintenance (O&M) costs for operating a 5,500 gpm treatment facility at SGVWC Plant B6 to be 2.6 million per year. The O&M cost estimated in the 2002 BPOU Project Agreement was approximately $2.5 million per year. Based on this estimate and an average flow of 6,750 gpm, the cost to treat the water would be approximately $230 per acre-foot. The O&M costs were revised in May 2004 to be $2.16 million per year. Based on this estimate, the cost to treat the water would be approximately $200 per acre-foot. A breakdown of this estimate is included in Appendix A.

Because regular operation of the B6 Treatment Facility has not begun the actual O&M cost for B6 is not yet available.

SECTION IX -- OBSERVATIONS AND LESSONS LEARNED

During the DHS compliance testing conducted between April 1, 2004 and June 30, 2004 at the B6 Treatment Facility, all VOCs detected at the wells were treated to non-detectable levels. However, perchlorate, NDMA and 1,4-dioxane were intermittently detected in the treated water. The problems encountered during the compliance testing at B6 are discussed below. All treated water from Plant B6 was discharged into Walnut Creek Wash and not delivered to SGVWC's customers.

- In April 2004, NDMA was detected in the combined effluent of the treatment facility, although it was not detected at the effluent of each UV Reactor. It was found that the detectable NDMA in the treated water was caused by a piping cross-connection with untreated water from the wells mixing with treated water from Plant B6. The cross-connection was corrected and NDMA was not detected again in the combined effluent of the treatment facilities.

- In April 2004, Methyl Ethyl Ketone (MEK) was detected in the treated water, although it was not detected in the raw water at the wells. Currently there is no drinking water standard for MEK. It is believed that MEK leached into the treated water from the freshly glued pipes. The MEK concentration decreased after each testing and was not detected during the testing in June 2004.

- In April and June 2004, perchlorate was detected above the AL in the treated water after ISEP. Nitrate was also detected and was above the MCL once in the treated water after ISEP. It was found that the high perchlorate and nitrate concentrations in the treated water were caused by insufficient fresh brine flow. The fresh brine flow meter did not register the insufficient brine flow and the alarms were not in operation to shut off the treatment facility. Therefore, perchlorate and nitrate were only partially treated. Calgon has since fixed the brine flow meter to correct the problem. Perchlorate was detected again in samples collected on June 15, 2004. This was caused by failure of the conductivity probe that measures the mixture of 26 percent brine with soft water and only soft water flowed into ISEP. Calgon has also fixed this problem.

- In June 2004 NDMA was again detected in the treated water. It was found that a programming error had caused the UVTerra system to turn on and off erroneously. The frequent changes did not provide sufficient time for the UV lights to fully illuminate and resulted in inadequate treatment. The programming has since been refined and additional NDMA samples have been collected to verify the treatment efficiency.

- In April 2004, 1,4-dioxane was detected in the treated water after the UV treatment. It was determined that that there may have been air in the hydrogen peroxide injection line that caused a pump to air lock, resulting in temporary inadequate treatment. This condition has been remedied by bleeding air out of the system every time after extended periods of down time. As a result, 1,4-dioxane was not detected in the June 2004 testing.

- In an effort to prevent scaling in the air stripping towers and subsequently affect the performance of ISEP, hydrochloric acid was injected into the pipeline just upstream of the air stripper at a dosage of 8.4 mg/l. However, this practice did not achieve the desired pH value in the treated water. During the compliance testing, the pH in the water after the air strippers has been the same or ever higher than the pH in the water before the air strippers, due to the fact that air strippers also remove carbon dioxide from the water. McGuire Environmental Environmental Consultants, Inc. has given a preliminary recommendation to increase the dosage of the acid injection to 12 mg/l and change the injection point from upstream to downstream of the air strippers. In addition, a periodic acid wash of the air stripping tower will be performed, as necessary, to remove any calcium carbonate buildup. However, the final decision regarding acid addition has not been made at this time.

In addition to these observations and lessons learned, a meeting was held on July 14, 2004 with SGVWC, the Project Engineer (Stetson), the CRs, the contractor (RC Foster), and equipment vendors to discuss lessons learned. A memorandum summarizing this meeting is included in Appendix B.

Additional DHS compliance testing was conducted between September 13 and 17, 2004. DHS compliance testing was successfully completed on September 17, 2004. The water quality analysis results are included as Appendix C. As of September 27, 2004, the plant has been operating reliably and reducing all contaminants of concern to non-detectable levels. The primary extraction plan production wells at Plants B25 and B26 have not been equipped and will not be online until late 2004.

SECTION X -- CONTACT INFORMATION

The CRs and Water Entities (WEs) used the following contractor to construct the remedial action facilities:

Bob Foster
RC Foster Construction, Inc.
264 Corporate Terrace Circle
Corona, CA 92879

(909) 738-8211

The EPA used the following contractor for oversight of the remedial action:

CH_2M Hill
David Towell
5370 Kietzke Lane, Suite 200
Reno, NV 89511

(775) 329-7238

Contract Number: 68-W-98-225
Work Assignment Number:105-RXBF-09M5

The following company analyzed samples:

Montgomery Watson Laboratories
750 Royal Oaks Drive #100
Monrovia, CA 91016

(626) 568-6400

The Project Manager for the CRs and WEs is:

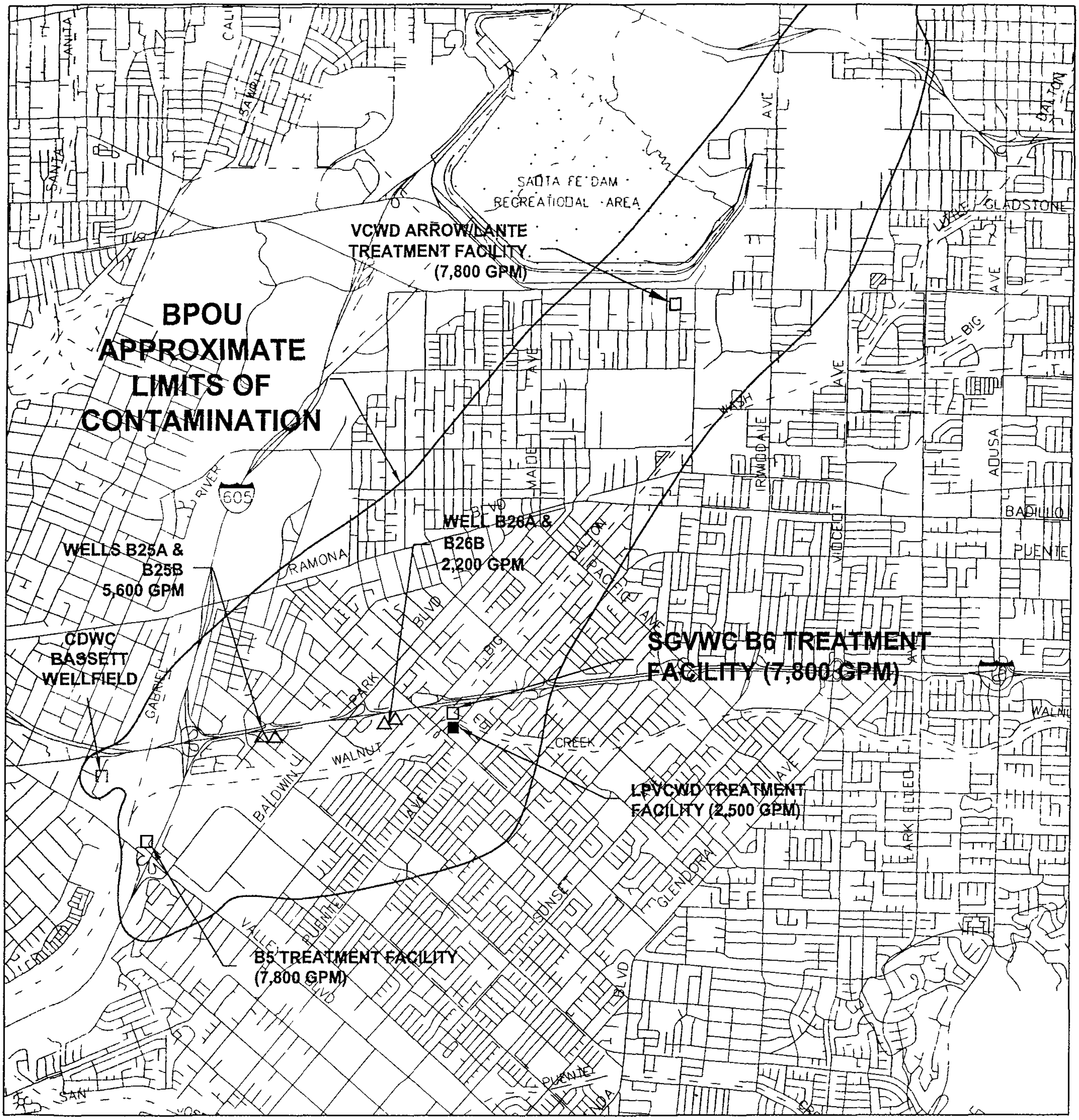
Steve Johnson
Stetson Engineers, Inc.
861 Village Oaks Drive, Suite 100
Covina, CA 91724

(626) 967-6202

The Project Manager for the EPA is:

Wayne Praskins
U.S. EPA Region 9
75 Hawthorne Street (SFD-7-3)
San Francisco, CA 94105

(415) 972-3181



LEGEND

■ EXISTING TREATMENT FACILITY

□ PROPOSED TREATMENT FACILITY

△ PROPOSED EXTRACTION WELLS

0 2500' 5000'

STETSON ENGINEERS INC
861 VILLAGE OAKS DRIVE, SUITE 100
COVINA, CALIFORNIA 91724
TEL: (626) 967-6202
FAX: (626) 331-7065
2171 E Francisco Blvd., Suite K
San Rafael California 94901
2651 W Guadalupe Rd Suite A209
Mesa Arizona 85202

SAN GABRIEL VALLEY WATER COMPANY

BALDWIN PARK OPERABLE UNIT

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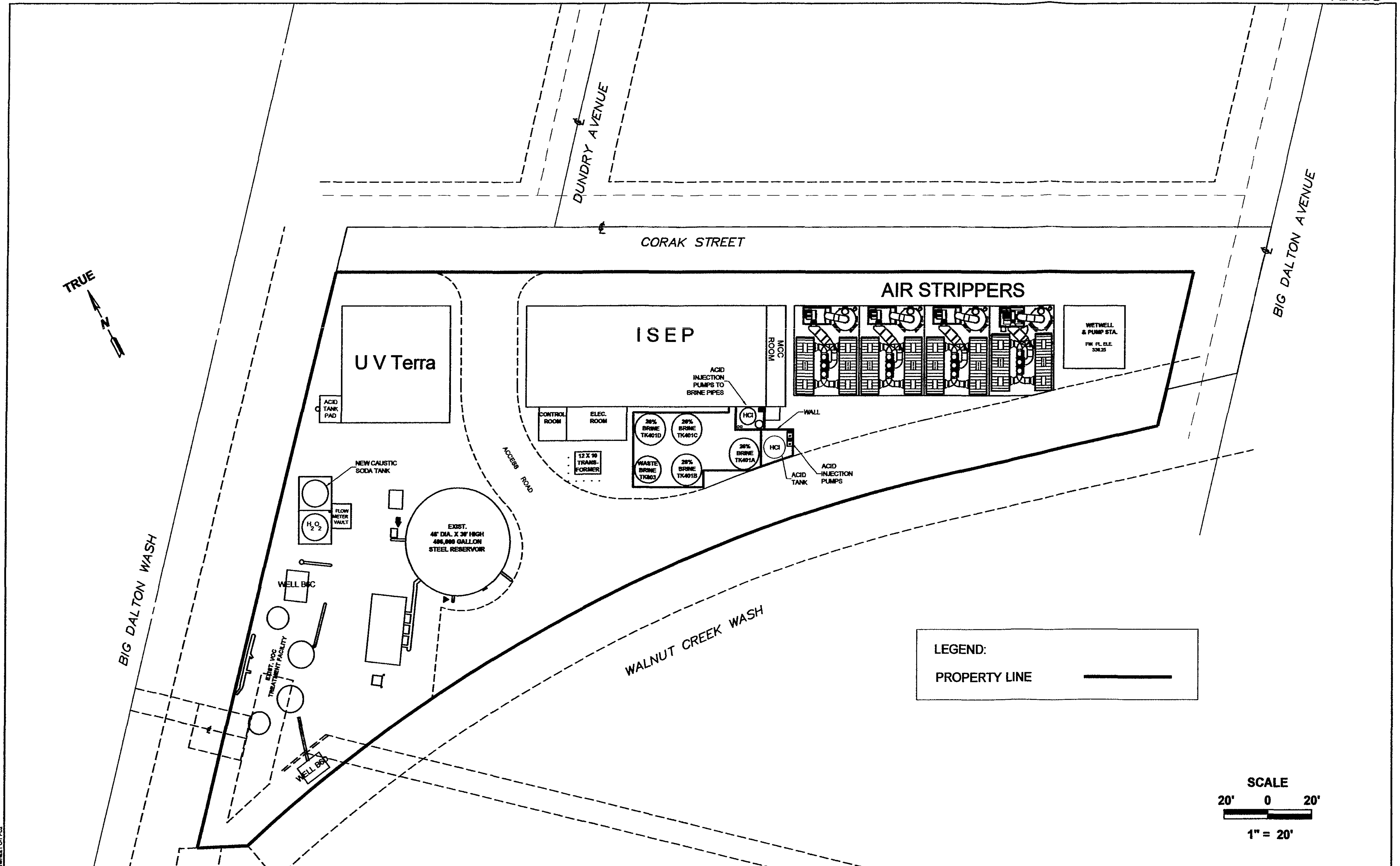
E:\JOBS\1205\1205-71\2002\INSURANCE\FIGURE_1.PC2



APPROVED :		REV.	DATE	BY	LIST OF REVISIONS	DESIGNED :
DATE						DRAWN :
APPROVED :						CHECKED :
DATE						

STETSON ENGINEERS INC.

861 VILLAGE OAKS DRIVE SUITE 100
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San Rafael California 94901

2651 W Guadalupe Rd., Suite A209
Mesa Arizona 85202

SUBMITTED :

JAMES T. GARDINER

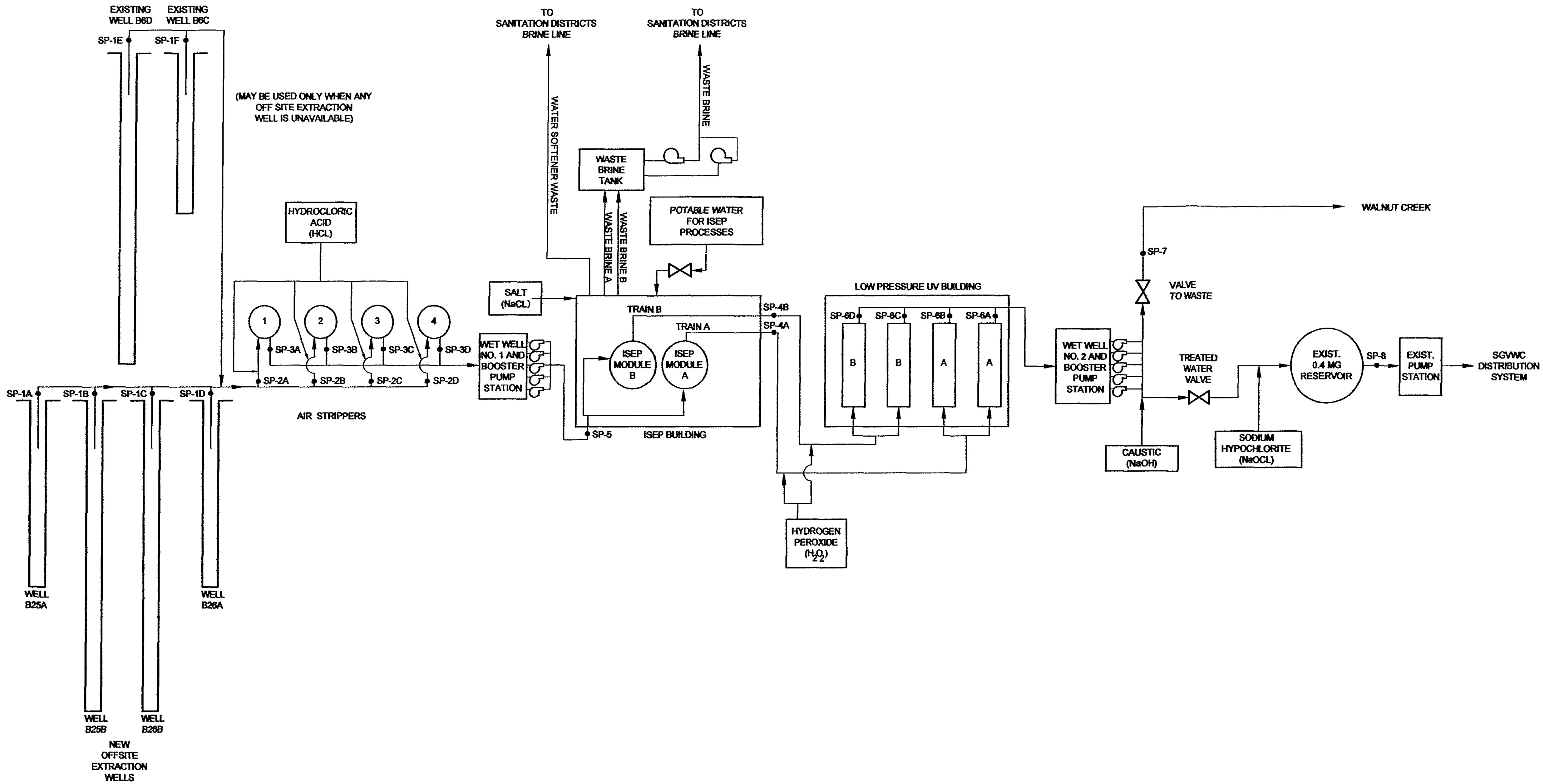
R.E. No. DATE

SAN GABRIEL VALLEY WATER COMPANY

PLANT B6 TREATMENT FACILITY PROJECT

PLOT PLAN

SCALE	SHEET
AS NOTED	C-1A
	OF SHEETS



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SAN GABRIEL VALLEY WATER COMPANY

PLANT B6 TREATMENT FACILITY
PROCESS DIAGRAM

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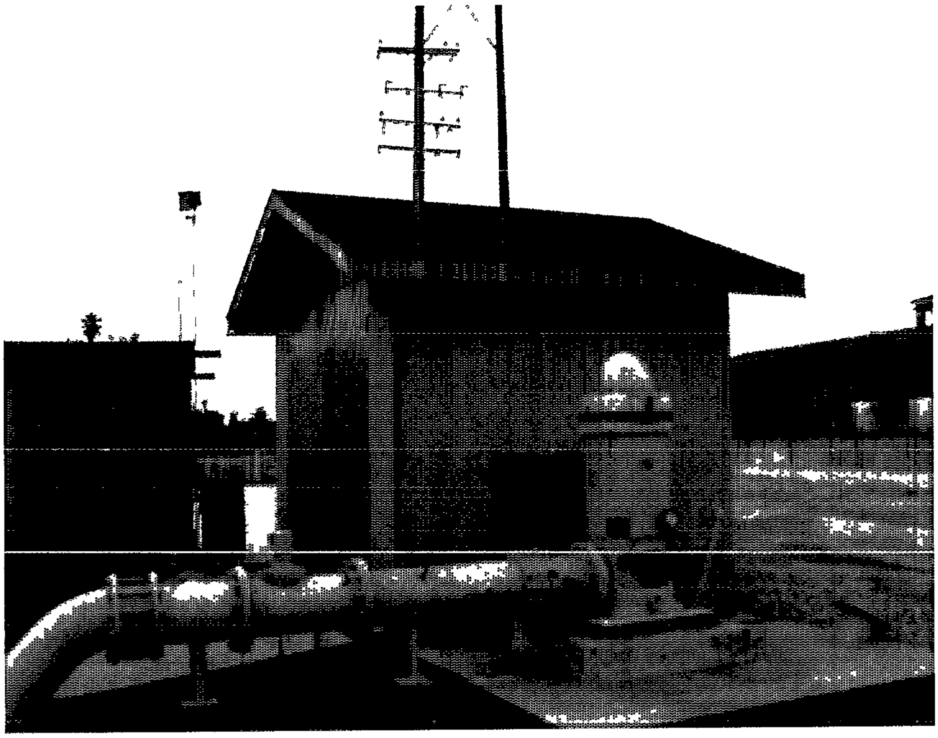

Photo 1. SGVWC Well B6C

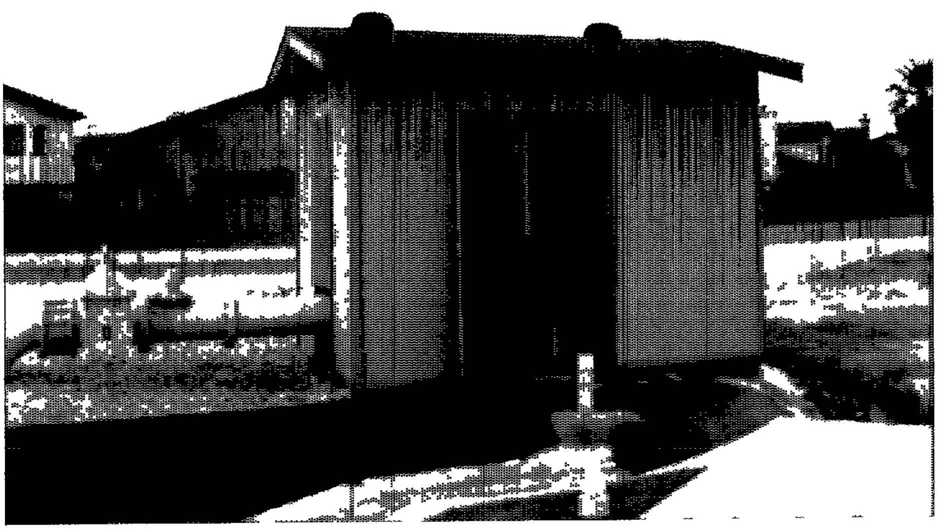

Photo 2. SGVWC Well B6D

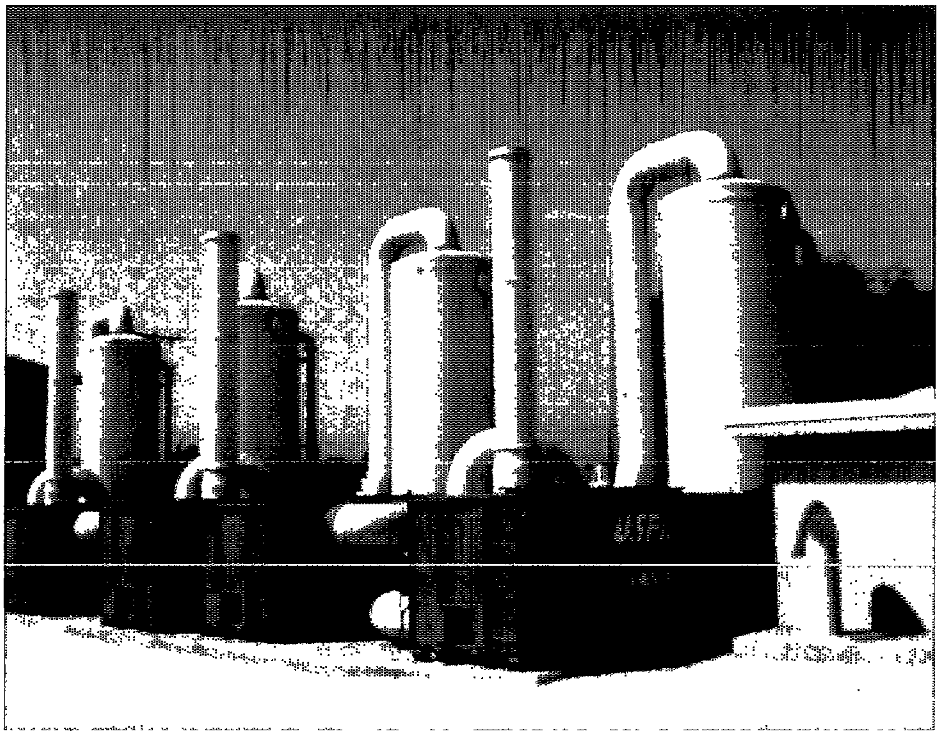

Photo 3. Air Stripping Towers with Off-gas Units

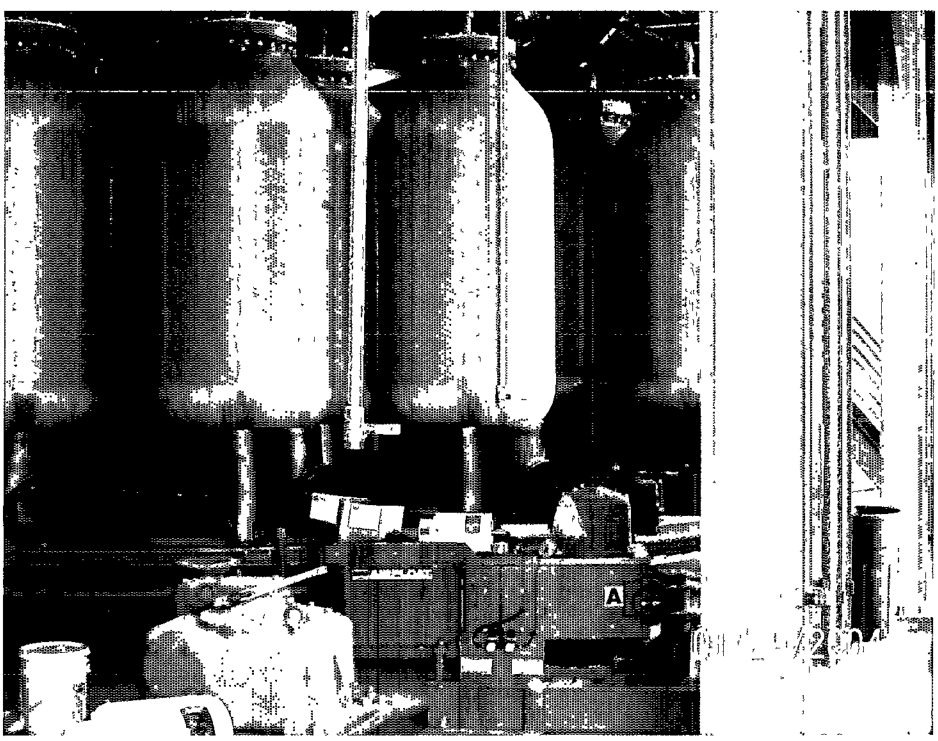

Photo 4. ISEP Unit

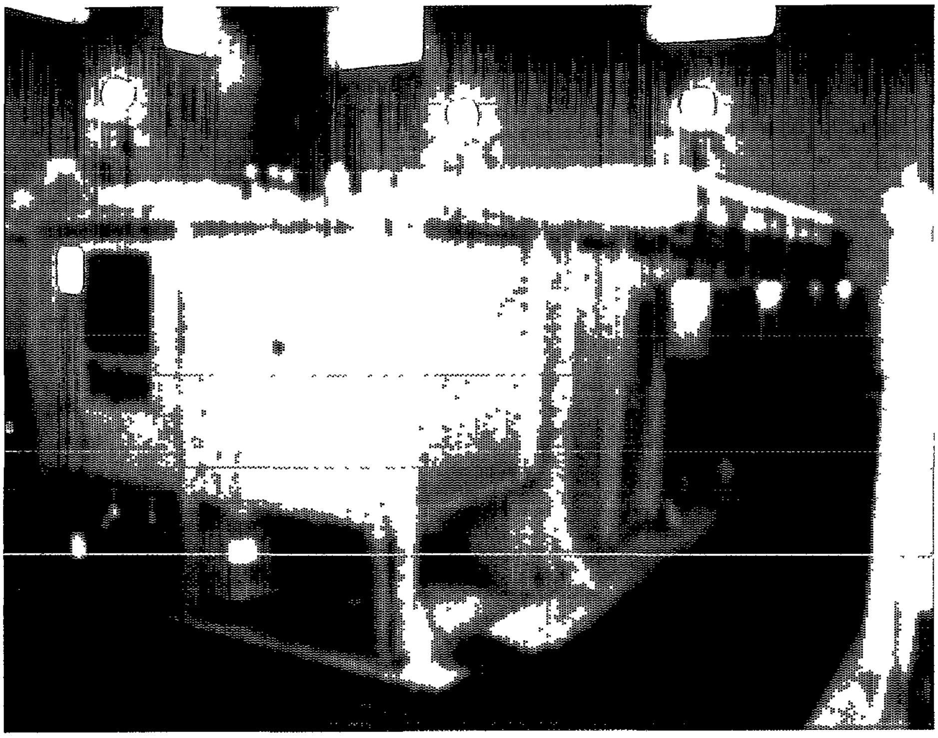

Photo 5. UVTerra Unit

Photo 6. Booster Pumps after UVTerra Unit

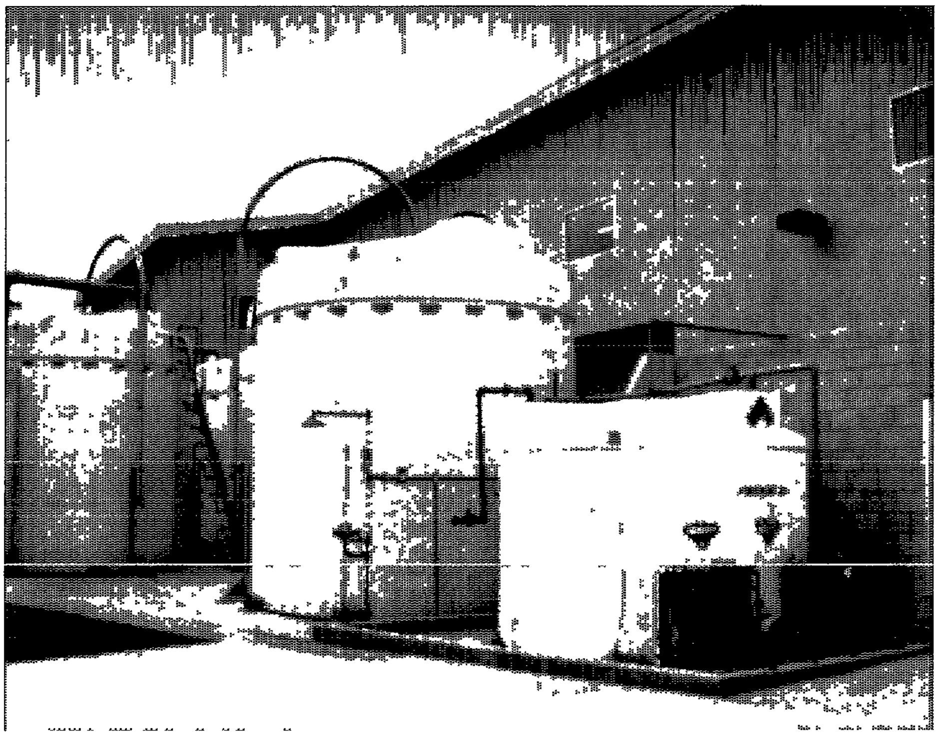

Photo 7. Fresh Brine and Hydrochloric Acid Tank

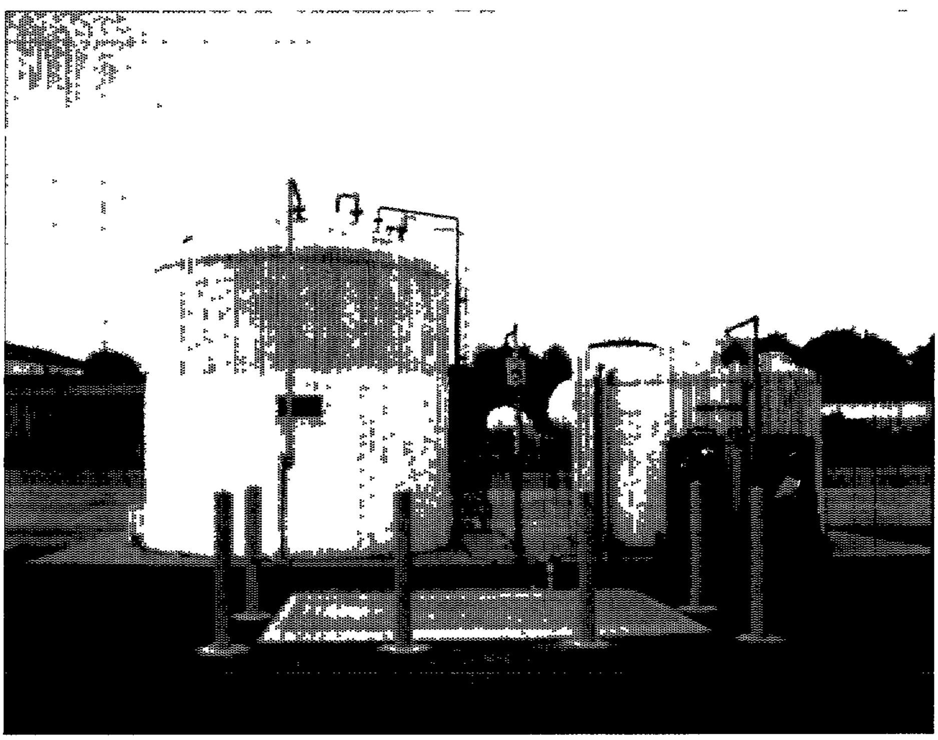

Photo 8. Sodium Hydroxide and Hydrogen Peroxide Tanks

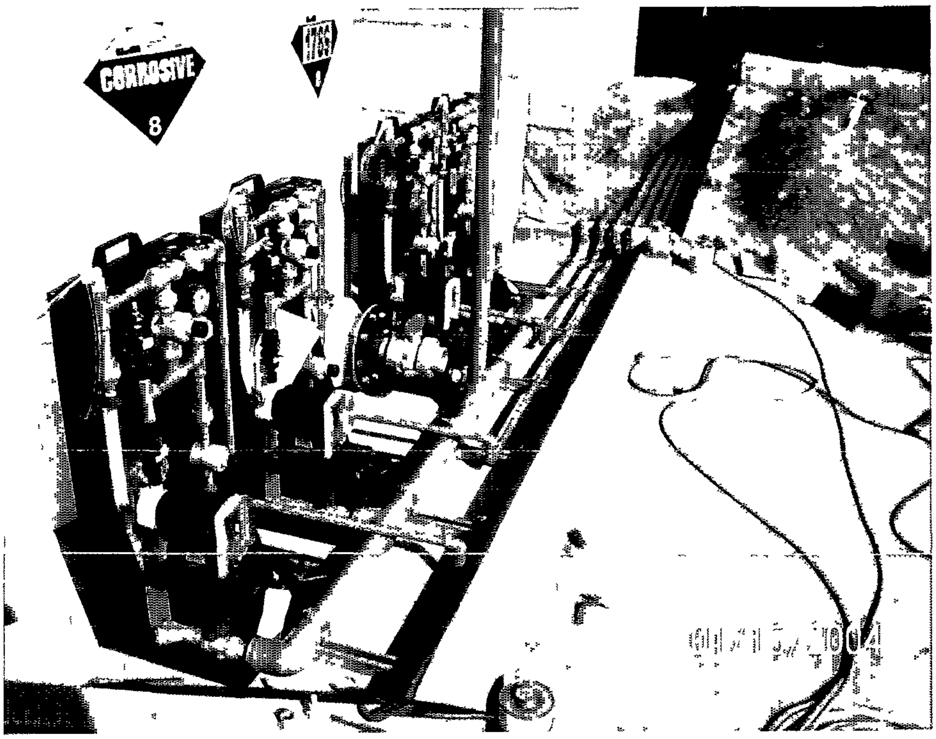

Photo 9. Acid Injection Pumps

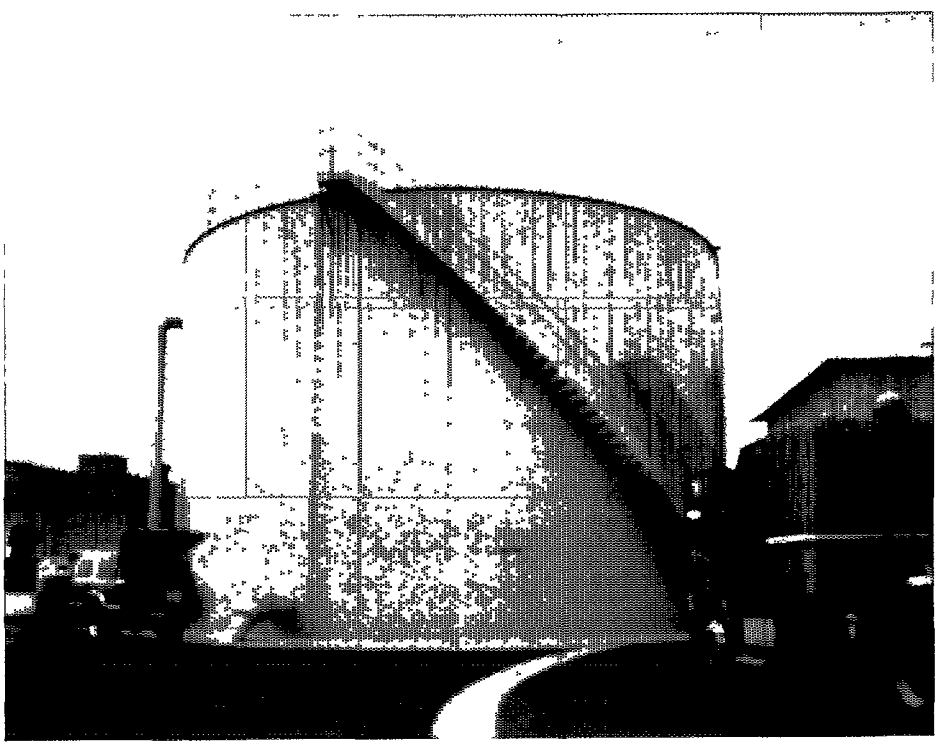

Photo 10. Existing Reservoir at Plant B6

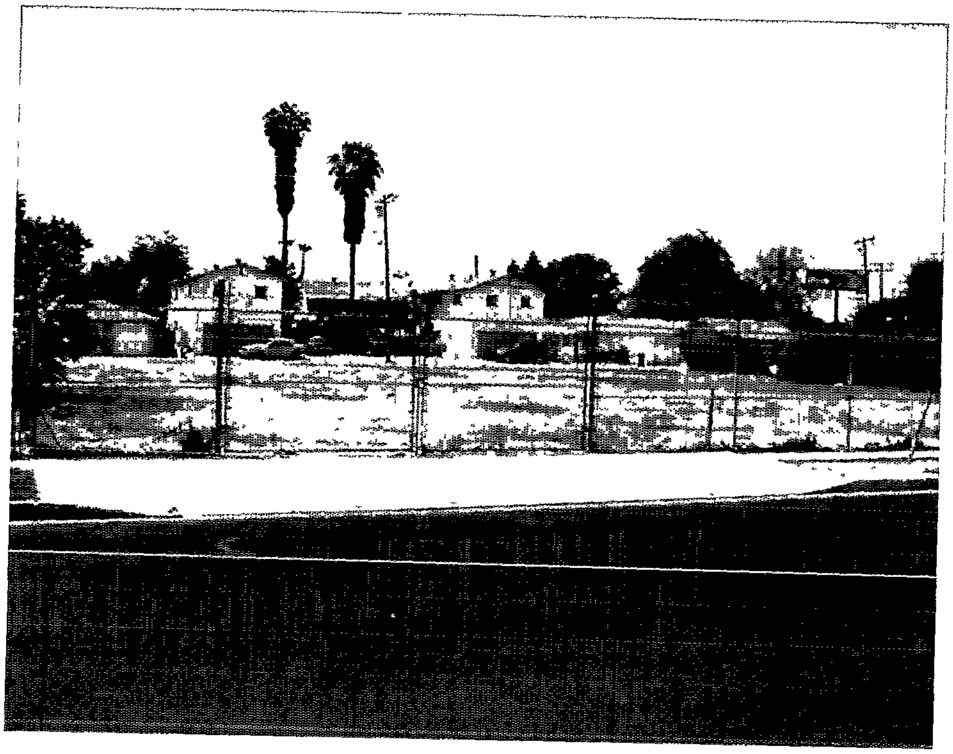

Photo 11 Plant B25 Wellsite at 13044 Bess Ave.

Photo 12. Plant B26 Wellsite at 1517 Virginia Ave.

APPENDIX A

SGVWC B6 TREATMENT FACILITY
CAPITAL COST ANALYSIS
PREPARED AUGUST 20, 2004

	BPOU WBS Codes		BPOU Project Agreement Cost Estimate (3/27/02) [1]	Actual Costs thru June-04 [2]	Revised Cost Estimate (Prepared 10/30/03) [3]
		SGVWC B6 Projects			
		SA3-1 & SA3-2 Well, Sitework and Well Water Pipeline (7,800 gpm)			
1	1 1 01	SA3-1 Wells and Sitework	$ 1,787,000	$ 273 783	$ 1,895,740
2	1 1 02	Raw Water Pipeline to SGVWC B6	$ 2,213,000	$ 1,955 936	$ 2,024,889
3	1 1 03	SA3-1 EPA Required Monitoring Wells &	$ 400,000	$ 267,303	$ 477,167
4	1 2 01	SA3-2 Well and Sitework	$ 1,540,000	$ 522,190	$ 1,598,740
5	1 2 02	Well Water Pipeline(To SGVWC B6)	$ 280,000	$ -	$ 280,000
6	1 2 03	SA3-2 EPA Required Monitoring Wells &	$ 100,000	$ 71,157	$ 177,167
7		**Construction Total**	**$ 6,320,000**	**$ 3,090,370**	**$ 6,453,703**
8	1 1 21 & 1 2 21	Engineering & Proj Coord (7 5%)	$ 474,000	$ 581,699	$ 310,000
9	1 1 22 & 1 2 22	Program Administration (LS)	$ 150,000	$ 5,111	$ 10,000
10	1 1 23 & 1 2 23	Permits (LS)	$ 75,000	$ 28 753	$ 10,000
11	1 1 24 & 1 2 24	Environmental Documents (LS)	$ 25,000	$ 1	$ 0
12	1 1 90 & 1 2 90	Contingency (5%)	$ 948,000	$ -	$ 322,685
13	1 1 25 & 1 2 25	Land Aquisition (LS)	$ 400,000	$ 416 366	$ 416,241
14		**Project Total - SA3-1 & SA3-2**	**$ 8,392,000**	**$ 4,122,299**	**$ 7,522,629**
		San Gabriel Valley Water Co B6 - Treatment for SA3-1 & SA3-2 (7,800 gpm)			
1	1 3 01 & 1 4 01	Sitework	$ 1,990,000	$ 5,881,919	$ 5,049,313
2	1 3 02 & 1 3 03	VOC Treatment (Air Str)[1/]	$ 1,920,000	$ 82 566	$ 2,022,442
3	1 3 04 & 1 3 05	ISEP Systems[5/]	$ 5 310,000	$ 5,225,355	$ 5,807,614
4	1 3 06 & 1 3 07	UV Systems (LPUV)[2/]	$ 2,680,000	$ 2,512 548	$ 2,839,930
5	1 3 08	Peroxide System	$ 170,000	$ 142,065	$ 142,065
6	?	Brine Destruction System (cancelation charge)	$ -	$ 747,404	$ -
7a	?	Brine Destruction (7,800 gpm/H2SO4)	$ -	$ -	$ -
7b		Treatment Train Independent Operations	$ 620,000	$ -	included w/
8	1 3 11	Brine Disposal Pipeline	$ 260,000	$ 309,493	$ 324,650
9	1 4 02	Treated Water Pipeline to Temple & BP Blvd	$ 887,500	$ -	$ 887,500
10	1 4 03	Treated Water Pipeline on Francisquito (Actual)	$ 1,141,140	$ 1,141,140	$ 1,141,140
11	1 4 04	Treated Water Pipeline to Willow & Itum	$ -	$ -	$ -
12	1 3 12	EPA Required Monitoring Wells & Piezometers	$ -	$ -	$ -
13		**Construction Total**	**$ 14,978,640**	**$ 16,042,489**	**$ 18,214,654**
14	1 3 21 & 1 4 21	Engineering & Proj Coord (7 5%)	$ 1,038,000	$ 1,622,375	$ 1,200,000
15	1 3 22 & 1 4 22	Program Administration (LS)	$ 150,000	$ 252 488	$ 130,000
16	1 3 23 & 1 4 23	Permits (LS)	$ 75,000	$ 184,794	$ 115,000
17	1 3 24	Brine Line Connection Fee	$ 9,750	$ -	$ 9,750
18	1 3 25 & 1 4 24	Environmental Documents (LS)	$ 25,000	$ 9,239	$ 13,000
19	1 3 90	Contingency (5%)	$ 2,076,000	$ -	$ 854,000
20	1 3 26 & 1 4 25	Land Acquistion	$ 1,000,000	$ 949,466	$ 949,404
21		**Project Subtotal - SGVWC**	**$ 19,352,390**	**$ 19,060,851**	**$ 21,485,808**
22		Watermaster & WQA Labor Costs	$ 11,950	$ 21,644	$ 21,644
23	1 5 01	Performance Fee	$ 198,000	$ -	$ 200,000
24		**Project Total - SGVWC**	**$ 19,562,340**	**$ 19,082,495**	**$ 21,707,452**
		Construction Total - SGVWC B6	**$ 21,298,640**	**$ 19,132,859**	**$ 24,668,357**
		Project Total - SGVWC B6	**$ 27,954,340**	**$ 23,204,794**	**$ 29,230,081**

SGVWC B6 TREATMENT FACILITY
OPERATION AND MAINTENANCE COST ESTIMATE

	O & M ITEMS	BPOU Project Agreement Cost Estimate (3/29/02)	Revised O&M Cost Estimate (5/25/04)
1	Power	$176,000	$151,133
2	Labor (w/fringe)	$190,000	$163,154
3	Carbon Purchase	$43,000	$36,924
4	Carbon Disposal	$0	$0
5	Transportation	$32,000	$27,479
6	Disinfection	$5,000	$4,294
7	Water Testing	$135,000	$115,926
8	Reports/Compliance	$15,000	$12,881
9	Permits/Renewals	$10,000	$8,587
10	Operations Monitoring	$12,000	$10,304
11	Brine Disposal	$33,000	$28,337
12	Matts/Supplies	$984,000	$844,968
13	Off-site Pipe Maint	$60,000	$51,522
14	Repair/Replacement	$246,000	$211,242
15	Contractor Labor	$105,000	$90,164
16	Direct Eng /Legal	$100,000	$85,871
17	Insurance	$19,000	$16,315
18	Taxes	$262,000	$224,981
19	MWD Purchase	$0	$0
	Subtotal	**$2,427,000**	**$2,084,082**
	Other Annual Costs		
a	O & M Mgmt Fee	$73,900	$76,885 56
b	EPA Monitoring	$0	$0
c	WM & Legal Admin	$0	$0
d	Cost Consultant	$0	$0
e	Risk Manager	$0	$0
f	Water Transfer Cost	–	$0
	Subtotal	**$73,900**	**$76,886**
	TOTAL	**$2,500,900**	**$2,160,968**

NOTES:

1 Power costs based on power rate of $0 07/kwh
2 Low-energy uv/ox at SGVWC B5, SGVWC B6, LPVCWD, VCWD
3 Direct brine discharge to LACSD at SGVWC B5, SGVWC B6, LPVCWD, VCWD
4 Materials account for increased salt consumption at SGVWC B5 SGVWC B6, LPVCWD and VCWD
5 Property tax for SGVWC B5, SGVWC B6, SGVWC B4, and CDWC may decrease, but left intact
6 O & M Management Fee prorated as follows
(BPOU Project 22,000 gpm = 2,500 + 6,000 +6,500 + 7,000 to $250,000)
(Other $1,750,000 = $1 million CDWC, $450k SWS, $300k B4 to $100,000)
7 Annual water transfer estimate based upon SGVWC to CDWC 5,000 AFY x 40/AF = $200,000/YR
8 Does not include escrow/trust costs
9 Does not include insurance costs

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9/20/2004 14 49

APPENDIX B

STETSON ENGINEERS INC

861 Village Oaks Drive, Suite 100 • Covina, California 91724 • (626) 967 6202
FAX (626) 331 7065 • email wc@stetsonengineers.com

Reply to Covina

MEMORANDUM

TO: BPOU Project Committee

FROM: John Cardoza
Stetson Engineers Inc.

SUBJECT: Meeting Notes
SGVWC B6 What We Have Learned Meeting
SGVWC B6 Treatment Facility

JOB NO: 1961-01

DATE: July 14, 2004

On May 11, 2004, the SGVWC B6 What We Have Learned Meeting was held at 1:30 p m at the offices of Watermaster. The following is a compilation of notes taken at the meeting

Attendees:

Tom Schiewe, SGVWC
Robert Young, SGVWC
Tom Mortenson, VCWD
John Catts, CR Consultant
Greg Murphy, Locus Technologies
Bob Foster, RC Foster
Bob Minella, RC Foster
Tom Bosak, Calgon
John Mickler, Calgon
Neil Brown, Trojan
JT Gardiner, Stetson
John Cardoza, Stetson

Notes:

1 Mr John Cardoza opened the meeting with introductions and discussed the purpose and goal of the meeting which is to review the SGVWC B6 Project and document what we have learned in order to apply this knowledge to on-going operations at the B6 Plant and remaining construction activities and operations at other BPOU treatment facilities (VCWD SA1 and SGVWC B5).

2. Everyone present agreed to step through the discussion by following the treatment train order and discussing items related to each component.

Acid Pumps for Air Strippers

3. Acid feed lines should be covered rather than exposed to sunlight.

4. May consider providing one large acid injection pump with a spare rather than four small single pumps (one for each air stripper). Acid could be injected directly into the 30-inch raw water line upstream of the air strippers.

5. The suction from the acid tanks was originally from the bottom and was changed to the top of the tanks. This is preferred in order to avoid draining the tank in the event that there is a break in the pipe downstream of the tank.

6. Acid pumps should be shaded. Could use something like nurseryman's netting in order not to have a permanent structure that is regulated by fire codes.

7. Acid pumps should be elevated 1 or 2 feet off the ground.

8. Acid feed lines should have some type of dual containment to protect against spills. Could be placed in a trough or in double walled pipe.

9. The suction line into the acid tanks appears to be too large. Is currently 2-inch. Consider using a 1-inch line.

Air Strippers

10. Consider placing the air strippers down stream of the ISEP and/or Low Pressure UV treatment modules in order to reduce the amount of acid injection and calcification in the system.

11. Enclosures on the blowers are too small and should be larger to allow for proper maintenance.

12. The effluent manifold from the air strippers should not drop down into the wet well but rather should be routed straight into the wet well at a higher elevation.

13. Provide slopes on all yard piping and make sure air relief valves are placed near local high points in order to avoid air pockets that decrease the flow capacity of the pipelines.

14. The Cla-Val valves work great.

15. The gas lines in the concrete foundation slab should have been shown on the plans.

16. Provide spare conduits for electrical wiring.

17. The manometer on the GAC stacks should be a type approved by the AQMD.

18. The flow rate (CFM) of the blowers at variable speeds should be shown on the Human-Machine-Interface (HMI) in the control room and available for the SCADA.

19. In the event that the wet well overflows, there should be drains in the booster station building to allow water to drain out of the building.

20. The booster station should be equipped with variable frequency drive (VFD) motors on the pumps in order to stabilize the water level fluctuations.

21. Drainage from air vacuum relief valves and other drains should be routed to a common area.

Air Stripper Off-Gas

22. The effluent air stacks need to be designed per the AQMD permit conditions and anchored properly.

23. The effluent air stacks were revised to include a design that allows rain water to drain out of the stacks.

24. Provide a channel in the pad to assist in realigning roll-off bins to the same point.

25. Place a "Stop" bar at the back of the pad of the GAC roll-off bins to provide a constant stop point for the roll-off bins.

26. Provide chocks at the wheels of the roll-off bins to prevent movement in an earthquake.

27. The redesigned rubber boots connecting the fiberglass ducting to the roll-off bins are great.

28. Provide 80 to 100 feet in front of the GAC roll-off bins to facilitate loading/unloading of roll-off bins during carbon change-out.

29. Load the GAC roll-off bins with different types of carbon to determine how different carbons perform with the GAC.

30. Make sure to match the voltage for the exhaust fans with the wiring provided.

Ion Exchange - ISEP

31. The air relief valves should be plumbed to a common header and routed to a drain and/or outside the building. This will avoid having water spilled on the plant floor.

32. There has been some difficulty controlling the brine solution. A mixing tank would help solve this difficulty.

33. The stair case leading to the platform above the ISEP is too steep.

34. Level indicators in some of the chemical tanks have malfunctioned. This may be due to high heat. Consider venting the tanks and/or shading the instruments and tanks.

35. The Process and Instrumentation Diagrams (P&IDs) need to be accurate. Vendors should take more time to review the asbuilt P&IDs.

36. Provide a backup HMI computer and software and data backups.

Low Pressure UV

37. All sample taps should be routed to drain to a common point (i.e. drain box).

38. The peroxide pump is oversized and should be shaded.

39. Provide insulation to cool the peroxide tubing.

40. The treatment vessels are required to remain full. A goose neck or a check valve should be provided in the piping to maintain the required water levels in the treatment vessels.

41. Provide a soft start on the overhead crane.

42. Provide a Cla-Val valve to control the flows into the vessels instead of the combination of a butterfly valve and flow meter. The Cla-Val valves provide excellent flow control.

Site Work

43. A full scope of work at the start of the project could help in the overall construction sequencing.

44. Provide a floor coating (e.g. vinyl ether) in all of the buildings to protect concrete.

45. Provide a dedicated 4-inch hose (for truck to salt tank) at the plant for salt delivers.

46. Provide gutters and downspouts on buildings to route water away from buildings.

47. A recirculation loop was added to allow the plant to be operated and tested without operating extraction wells.

48. The pad heights of the buildings should be set higher than the surrounding finish grade.

49. Provide drains in all buildings for hosing down floors, equipment, etc.

Integration and Start-up

50. Provide training to the plant operators on equipment and operation of the plant prior to DHS compliance testing.

51. Operator training should include but not be limited to review of all alarms, settings, "what to look for", and an overall plant integration manual.

52. Too much testing, sampling, and system optimization was conducted simultaneously. Tasks should be scheduled so that sufficient time is provided to properly conduct each task.

53. Equipment vendors should be on site during all testing.

54. Plant should be tested in auto for sufficient time to identify and correct "bugs" in the system prior to DHS compliance testing.

55. Remove pipe spool from recirculation loop during startup testing to avoid cross contamination leaks from the raw water to the treated water.

56. In order to receive more timely input from vendors, payment milestones could be tied to I/O information necessary for plant startup and testing.

57. Overall Project Manager should coordinate all issues with vendors and SGVWC.

58. Good that all PLCs are consistent.

59. Good that all VFD drives and electrical panels are consistent with other SGVWC equipment.

APPENDIX C

pH (units)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													6.8	
4/20/2004	8:30	8.1			8.3	8.3			7.4		7.4	7.4			7.85
4/20/2004	12:00	8			8.2				7.7		7.8	7.8			7.8
4/20/2004	16:00	8.1			8.2				8		7.9	8			8.1
4/20/2004	20:00	8.1			8.3				8		8	8.1			8.1
4/21/2004	0:00	8.1			8.3				8.1		8.1	8.1			8.1
4/21/2004	8:00	8.1			8.3				8.1		8.1	8.1			8.2
4/21/2004	16:00	8.1			8.2				7.9		7.9	7.9			8
4/22/2004	0:00	8.1			8.3				8		8	8.4			8
4/22/2004	8.00	8.1			8.3				8			8.3			
4/26/2004	12.00	8.1	8.1	8.1	8.3		8.3	8.3	7.8	7.7	7.8	7.8	7.6	7.6	7.8
4/26/2004	16:00	8.1	8.1	8.1	8.3		8.3	8.3	7.8	7.7	8	8	7.8	7.8	8
4/26/2004	20:00	8.2	8.2	8.2	8.2		8.3	8.2	8	7.9	7.9	7.9	7.8	7.9	7.9
4/27/2004	0:00	8.1	8.2	8.1	8.2		8.3	8.2	7.7	7.8	7.9	7.8	7.9	7.8	7.9
4/27/2004	8.00	8.1	8.1	8.2	8.3		8.3	8.3	7.8	7.8	7.9	7.9	7.8	7.8	7.9
4/27/2004	16.00	8.1	8.1	8	8.3		8.3	8.3	7.8	7.7	7.9	7.9	7.8	7.8	7.8
4/28/2004	0.00	8.1	8.1	8.1	8.3		8.3	8.3	8.1	7.9	8.1	8.1	7.9	7.9	8
4/28/2004	8.00	8.1	8.1	8.1	8.3		8.3	8.3	8.1	8	8.1	8.1	8	8	8.1
4/28/2004	16:00	8	8.1	8	8.3		8.2	8.3	8.1	8	8.1	8.2	8	8	8.1
4/29/2004	0:00	8.1	8.1	8.1	8.3		8.3	8.3	8.1	7.9	8.2	8.1	8	8	8.1
4/29/2004	8.00	8.1	8.1	8.1	8.2		8.3	8.3	8.1	8	8.1	8.1	8	8	8.1
4/29/2004	16.00	8	8.1	8	8.2		8.2	8.2	8.1	7.9	8	8.2	7.9	8	8.1
4/29/2004	17.00	8.1			8.3		8.3			8			8	8	8
4/29/2004	20:00	8.2			8.3		8.3			8.1			8.1	8.1	8.1
4/30/2004	0 00	8.1			8.3		8.3			8			8.1	8.1	8.1
4/30/2004	4.00	8.1			8.3		8.3			8.1			8.3	8.1	8.1
4/30/2004	8.00	8.1			8.3		8.3			8.1			8.1	8 1	8
6/14/2004	8:30	7.6	7.6	7.6					7	7					
6/14/2004	12:00								7.1	7					
6/14/2004	16:00								7	6.9					
6/15/2004	8.00	7.6	7.6	7.5					7	7.2					7.2
6/15/2004	12:00								7	7.3					
6/15/2004	16:00								6.9	7.3					
6/16/2004	8:00	7.6	7.6	7.6					7	6.9					7.1
6/16/2004	12:15	7.6							7						7.1
6/16/2004	16:00								7						
6/17/2004	8.00	7.6							7.1						7 2
6/17/2004	12:00								7						
6/17/2004	16:00								7						
6/18/2004	8 00	7 6							7						7.2
6/18/2004	12:00								7						
6/18/2004	16:00								7						7.2
9/13/2004	8:15	7.7	7.7	7.7					7.5	7.4					7.5
9/13/2004	12:00								7.4	7.4					
9/13/2004	16:00								7.5	7.4					
9/14/2004	8:00	7.7	7.7	7.7					7.4	7.4					7 6
9/14/2004	12 00								7.6	7.7					
9/14/2004	16:00								7.4	7.4					
9/15/2004	8.00	7.7	7.6	7.6					7.4	7.3					7.5
9/15/2004	12:15								7.7	7.4					7.5
9/15/2004	16.00								7.6						
9/16/2004	8.00	7.9							7.6						7.6
9/16/2004	12:00								7.6						
9/16/2004	16:00								7.3						
9/17/2004	8:00	7.6							7.2						7.4
9/17/2004	12:00								7.2						
9/17/2004	16:00								7.2						7.4

TDS (mg/L)

Date	Time	Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0 00													700	
4/20/2004	8 30	470			500	474			610						630
4/20/2004	12 00	470			486				590						560
4/20/2004	16 00	460			480				500						520
4/20/2004	20 00	450			470				510						500
4/21/2004	0 00	460			490				530						540
4/21/2004	8 00	440			470				530						550
4/21/2004	16 00	420			440				480						490
4/22/2004	0 00	420			430				470						470
4/22/2004	8 00	430			440				470						
4/26/2004	12 00	430	320	380	360		370	380	430	430					450
4/26/2004	16 00	450	320	400	420		400	410	490	490					530
4/26/2004	20 00	460	320	380	400		400	390	450	480					470
4/27/2004	0 00	460	300	390	400		400	390	490	570					500
4/27/2004	8 00	440	310	380	350		410	390	450	490					520
4/27/2004	16 00	440	300	360	380		370	380	490	500					520
4/28/2004	0 00	440	300	370	370		370	380	410	450					440
4/28/2004	8 00	440	300	360	380		380	380	470	510					500
4/28/2004	16 00	430	320	370	390		360	370	420	440					430
4/29/2004	0 00	430	300	370	370		370	380	420	480					460
4/29/2004	8 00	430	300	350	390		390	390	460	520					490
4/29/2004	16 00	400	290	340	350		350	350	360	380					380
4/29/2004	17 00	420			430		420			520					480
4/29/2004	20 00	410			420		410			460					460
4/30/2004	0 00	410			430		420			450					460
4/30/2004	4 00	420			430		420			450					460
4/30/2004	8 00	410			430		440			500					480
6/14/2004	8 30	440	300	360					490	540					550
6/14/2004	12 00								540	530					
6/14/2004	16 00								470	480					
6/15/2004	8 00	430	300	370					460	440					470
6/15/2004	12 00								440	380					
6/15/2004	16 00								490	400					
6/16/2004	8 00	430	300	370					460	460					470
6/16/2004	12 15	420							500	480					
6/16/2004	16 00								520						
6/17/2004	8 00	420							520						490
6/17/2004	12 00								500						
6/17/2004	16 00								520						
6/18/2004	8 00	440							540						580
6/18/2004	12 00								490						
6/18/2004	16 00								510						500
9/13/2004	8 15	440	310	380					440	430					450
9/13/2004	12 00								460	440					
9/13/2004	16 00								420	440					
9/14/2004	8 00	420	290	360					430	440					460
9/14/2004	12 00								460	460					
9/14/2004	16 00								440	440					
9/15/2004	8 00	430	300	360					420	440					430
9/15/2004	12 15	420							420						440
9/15/2004	16 00								530						
9/16/2004	8 00	440							780						640
9/16/2004	12 00								670						
9/16/2004	16 00								680						
9/17/2004	8 00	440							680						680
9/17/2004	12 00								610						
9/17/2004	16 00								690						680

[redacted]

Calcium (mg/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30	99			98	99			99						100
4/20/2004	12 00	97			99				98						97
4/20/2004	16 00	95			97				97						95
4/20/2004	20 00	95			95				98						97
4/21/2004	0 00	97			97				95						94
4/21/2004	8 00	96			96				94						95
4/21/2004	16 00	96			93				97						94
4/22/2004	0 00	97			94				92						95
4/22/2004	8 00	94			95				95						
4/26/2004	12 00	95	61	80	74		78	79	78	77					79
4/26/2004	16 00	93	61	77	78		78	77	77	77					76
4/26/2004	20 00	94	60	77	77		77	77	78	77					77
4/27/2004	0 00	94	60	77	77		78	76	78	77					77
4/27/2004	8 00	92	60	77	77		76	77	76	75					76
4/27/2004	16 00	92	60	77	77		78	78	75	77					78
4/28/2004	0 00	94	60	78	77		77	75	76	78					75
4/28/2004	8 00	94	60	78	76		78	76	75	76					74
4/28/2004	16 00	93	60	76	75		76	78	72	76					73
4/29/2004	0 00	93	59	76	75		77	75	70	75					74
4/29/2004	8 00	91	60	75	76		76	73	72	75					73
4/29/2004	16 00	95	61	79	79		78	78	72	76					75
4/29/2004	17 00	93			93		94			90					87
4/29/2004	20 00	93			93		94			89					90
4/30/2004	0 00	94			94		94			91					91
4/30/2004	4 00	93			93		94			91					91
4/30/2004	8 00	94			93		93			91					86
6/14/2004	8 30	93	60	75					77	77					81
6/14/2004	12 00								78	76					
6/14/2004	16 00								78	78					
6/15/2004	8 00	95	61	77					78	78					77
6/15/2004	12 00								77	77					
6/15/2004	16 00								76	77					
6/16/2004	8 00	94	60	77					77	77					77
6/16/2004	12 05	93							87						80
6/16/2004	16 00								93						
6/17/2004	8 00	92							93						92
6/17/2004	12 00								92						
6/17/2004	16 00								94						
6/18/2004	8 00	94							94						94
6/18/2004	12 00								96						
6/18/2004	16 00								96						94
9/13/2004	8 15	93	60	76					75	75					75
9/13/2004	12 00								74	75					
9/13/2004	16 00								75	75					
9/14/2004	8 00	93	59	75					75	75					75
9/14/2004	12 00								76	75					
9/14/2004	16 00								73	74					
9/15/2004	8 00	91	59	74					74	74					74
9/15/2004	12 15								91	74					74
9/15/2004	16 00								93						
9/16/2004	8 00	93							93						92
9/16/2004	12 00								93						
9/16/2004	16 00								91						
9/17/2004	8 00	91							91						90
9/17/2004	12 00								91						
9/17/2004	16 00								92						92

Chloride (mg/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													280	
4/20/2004	8:30	40			69	39			250						280
4/20/2004	12:00	43			62				200						220
4/20/2004	16:00	39			54				160						170
4/20/2004	20:00	38			54				140						160
4/21/2004	0:00	38			57				150						150
4/21/2004	8:00	34			50				140						150
4/21/2004	16:00	31			45				180						180
4/22/2004	0:00	29			44				160						160
4/22/2004	8:00	27			42				160						
4/26/2004	12:00	27	22	25	42		25	43	170	190					190
4/26/2004	16:00	26	21	24	44		41	41	120	170					150
4/26/2004	20:00	26	18	22	43		40	40	150	170					170
4/27/2004	0:00	27	17	22	41		39	39	170	180					170
4/27/2004	8:00	13	15	21	41		37	39	160	170					170
4/27/2004	16:00	26	15	21	40		38	38	160	170					170
4/28/2004	0:00	26	15	20	39		37	38	110	160					130
4/28/2004	8:00	26	14	20	40		37	37	100	150					130
4/28/2004	16:00	26	14	20	38		37	37	97	150					120
4/29/2004	0:00	25	14	19	38		36	36	98	140					120
4/29/2004	8:00	25	14	19	38		36	35	100	140					120
4/29/2004	16:00	25	14	19	37		36	36	98	140					120
4/29/2004	17:00	25			47		47			160					150
4/29/2004	20:00	25			47		46			140					150
4/30/2004	0:00	25			47		46			150					150
4/30/2004	4:00	25			47		46			130					120
4/30/2004	8:00	25			47		45			140					140
6/14/2004	8:30	25	14	19					160	170					170
6/14/2004	12:00								280	180					
6/14/2004	16:00								160	170					
6/15/2004	8:00	24	13	19					160	120					150
6/15/2004	12:00								160	90					
6/15/2004	16:00								160	160					
6/16/2004	8:00	24	13	19					160	110					160
6/16/2004	12:15	24							170						160
6/16/2004	16:00								180						
6/17/2004	8:00	24							170						170
6/17/2004	12:00								180						
6/17/2004	16:00								170						
6/18/2004	8:00	24							170						170
6/18/2004	12:00								180						
6/18/2004	16:00								180						180
9/13/2004	8:15	23	14	17					120	140					130
9/13/2004	12:00								130	140					
9/13/2004	16:00								140	140					
9/14/2004	8:00	23	13	17					130	140					140
9/14/2004	12:00								130	140					
9/14/2004	16:00								150	150					
9/15/2004	8:00	25	14	19					150	150					150
9/15/2004	12:15	25							140						140
9/15/2004	16:00								200						
9/16/2004	8:00	29							190						190
9/16/2004	12:00								180						
9/16/2004	16:00								180						
9/17/2004	8:00	28							170						180
9/17/2004	12:00								180						
9/17/2004	16:00								190						190

Alkalinity (mg/L in $CaCO_3$)

		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8:30	207			174	209			37						32
4/20/2004	12:00	205			182				96						87
4/20/2004	16:00	205			189				142						136
4/20/2004	20:00	204			182				147						148
4/21/2004	0:00	149			143				143						144
4/21/2004	8:00	203			183				139						128
4/21/2004	16:00	203			183				111						111
4/22/2004	0:00	172			184				127						129
4/22/2004	8.00	194			184				123						
4/26/2004	12:00	207	174		162		191	168	61.7	55.4					51.5
4/26/2004	16:00	205	175	189	165		169	168	120	55					93.6
4/26/2004	20:00	205	175	191	165		168	167	88	72.5					75.4
4/27/2004	0:00	204	176	190	165		168	168	70.5	63					69.1
4/27/2004	8.00	203	176	191	165		170	167	82.3	68					75.7
4/27/2004	16:00	203	175	190	165		167	167	81	64					72
4/28/2004	0:00	202	176	190	165		167	167	132	82					108
4/28/2004	8:00	203	176	189	165		167	167	133	86					109
4/28/2004	16.00	202	175	190	166		164	168	129	70					110
4/29/2004	0:00	203	176	190	165		168	169	125	85					107
4/29/2004	8.00	202	177	190	160		168	169	121	50					105
4/29/2004	16:00	201	176		166		167	168	121	77					102
4/29/2004	17:00	201			173		176			92.5					90.3
4/29/2004	20:00	201			174		174			113					109
4/30/2004	0:00	201			171		174			109					110
4/30/2004	4:00	202			173		174			134					131
4/30/2004	8:00	202			173		175			119					115
6/14/2004	8:30	194	167	184					75	63					71.5
6/14/2004	12:00								77	60					
6/14/2004	16:00								72.1	61.7					
6/15/2004	8:00	196	173	183					77.5	108					81.1
6/15/2004	12.00								79	146					
6/15/2004	16:00								72	77					
6/16/2004	8:00	191	167	179					80	73					78
6/16/2004	12:15	191							97						85
6/16/2004	16:00								94						
6/17/2004	8:00	188							104						105
6/17/2004	12.00								98						
6/17/2004	16:00								119						
6/18/2004	8:00	204							103						109
6/18/2004	12:00								106						
6/18/2004	16:00								99.4						100
9/13/2004	8:15	189	166	177					122	110					114
9/13/2004	12:00								112	108					
9/13/2004	16:00								111	107					
9/14/2004	8:00	190	169	177					114	105					108
9/14/2004	12:00								114	104					
9/14/2004	16:00								113	112					
9/15/2004	8:00	190	167	181					112	109					113
9/15/2004	12:15	194							117						114
9/15/2004	16.00								120						
9/16/2004	8.00	190							95						95
9/16/2004	12:00								103						
9/16/2004	16:00								98						
9/17/2004	8:00	197							100						98
9/17/2004	12:00								100						
9/17/2004	16:00								98						97

[redacted]

Bromide		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30	150							<5						<5
4/20/2004	12 00	140							<5						<5
4/20/2004	16 00	140							6 8						6 4
4/20/2004	20 00	140							40						27
4/21/2004	0 00	140							47						47
4/21/2004	8 00	140							66						61
4/21/2004	16 00	140							8 9						12
4/22/2004	0 00	140							10						13
4/22/2004	8 00	140							18						
4/26/2004	12 00			110					52	<5					27
4/26/2004	16 00			100					89	<5					46
4/26/2004	20 00			99					52	<5					11
4/27/2004	0 00			96					<5	<5					<5
4/27/2004	8 00			95					<5	<5	<5	<5	<5	<5	<5
4/27/2004	16 00			93					<5	<5	<5	<5	<5	<5	<5
4/28/2004	0 00			93					44	13	44	45	14	14	31
4/28/2004	8 00			92					49	23	48	48	25	25	41
4/28/2004	16 00			85					73	28	70	69	26	28	50
4/29/2004	0 00			86					73	44	74	74	45	46	58
4/29/2004	8 00			85					72	40	73	73	41	39	55
4/29/2004	16 00			89					82	43	87	84	43	43	62
4/29/2004	17 00	130								57					55
4/29/2004	20 00	140								75					71
4/30/2004	0 00	140								78					79
4/30/2004	4 00	140								98					99
4/30/2004	8 00	140								94					92

Bromate (ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8:30	<5							<5						<5
4/20/2004	12:00	<5							<5						<5
4/20/2004	16:00	<5							<5						<5
4/20/2004	20:00	<5							<5						<5
4/21/2004	0:00	<5							<5						<5
4/21/2004	8:00	<5							<5						<5
4/21/2004	16:00	<5							<5						<5
4/22/2004	0:00	<5							<5						<5
4/22/2004	8:00	<5							<5						
4/26/2004	12:00			<5					<5	<5					<5
4/26/2004	16:00			<5					<5	<5					<5
4/26/2004	20:00			<5					<5	<5					<5
4/27/2004	0:00			<5					<5	<5					<5
4/27/2004	8:00			<5					<5	<5	<5	<5	<5	<5	<5
4/27/2004	16:00			<5					<5	<5	<5	<5	<5	<5	<5
4/28/2004	0:00			<5					<5	<5	<5	<5	<5	<5	<5
4/28/2004	8:00			<5					<5	<5	<5	<5	<5	<5	<5
4/28/2004	16:00			<5					<5	<5	<5	<5	<5	<5	<5
4/29/2004	0:00			<5					<5	<5	<5	<5	<5	<5	<5
4/29/2004	8:00			<5					<5	<5	<5	<5	<5	<5	<5
4/29/2004	16:00			<5					<5	<5	<5	<5	<5	<5	<5
4/29/2004	17:00	<5								<5					<5
4/29/2004	20:00	<5								<5					<5
4/30/2004	0:00	<5								<5					<5
4/30/2004	4:00	<5								<5					<5
4/30/2004	8:00	<5								<5					<5

Arsenic (ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8:30				2.5	2.7			<1						<1
4/20/2004	12:00				2.5				<1						<1
4/20/2004	16:00				2.6				<1						<1
4/20/2004	20:00				2.7				<1						<1
4/21/2004	0:00				2.6				<1						<1
4/21/2004	8:00				2.7				<1						<1
4/21/2004	16:00				2.3				<1						<1
4/22/2004	0:00				2.3				<1						<1
4/22/2004	8:00				2.5				<1						
4/26/2004	12:00				2.4		2.4	2.3	<1	<1					<1
4/26/2004	16:00				2.1		2.1	2.1	<1	<1					<1
4/26/2004	20:00				2.1		2	2.1	<1	<1					<1
4/27/2004	0:00				2.2		2	2.1	<1	<1					<1
4/27/2004	8:00				2.3		2.2	2.2	<1	<1					<1
4/27/2004	16:00				2.5		2.4	2.4	<1	<1					<1
4/28/2004	0:00				2.4		2.5	2.5	<1	<1					<1
4/28/2004	8:00				2.4		2.5	2.4	<1	<1					<1
4/28/2004	16:00				2.3		2.3	2.2	<1	<1					<1
4/29/2004	0:00				2.2		2.3	2.2	<1	<1					<1
4/29/2004	8:00				2.3		2.3	2.3	<1	<1					<1
4/29/2004	16:00				2.4		2.5	2.4	<1	<1					<1
4/29/2004	17:00				2.7		2.8			<1					<1
4/29/2004	20:00				2.6		2.7			<1					<1
4/30/2004	0:00				2.7		2.6			<1					<1
4/30/2004	4:00				2.8		2.7			<1					<1
4/30/2004	8:00				2.7		2.7			<1					<1

Sulfate (mg/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													<6	
4/9/2004	14:30	45													
4/20/2004	8:30	50			51	51			<4						<4
4/20/2004	12:00	51			50				<4						<4
4/20/2004	16:00	49			49				<4						<4
4/20/2004	20:00	48			49				<4						<4
4/21/2004	0:00	50			48				<4						<4
4/21/2004	8:00	49			49				<4						<4
4/21/2004	16:00	49			48				<4						<4
4/22/2004	0:00	48			49				<4						<4
4/22/2004	8:00	48			48				<4						
4/26/2004	12:00	50	32	41	37		42	41	<4	<4					<4
4/26/2004	16:00	50	30	41	41		40	41	<4	<4					<4
4/26/2004	20:00	50	31	41	41		41	41	<4	<4					<4
4/27/2004	0:00	50	31	41	40		41	41	<4	<4					<4
4/27/2004	8:00	25	30	40	40		40	40	<4	<4					<4
4/27/2004	16:00	50	31	41	40		40	40	<4	<4					<4
4/28/2004	0:00	50	30	40	40		40	40	<4	<4					<4
4/28/2004	8:00	50	31	40	40		40	40	<4	<4					<4
4/28/2004	16:00	50	30	41	40		40	40	<4	<4					30
4/29/2004	0:00	48	30	39	40		39	40	<4	<4					<4
4/29/2004	8:00	48	30	39	40		39	40	<4	<4					<4
4/29/2004	16:00	49	30	39	40		39	40	<4	<4					<4
4/29/2004	17:00	48			49		50			<4					<4
4/29/2004	20:00	48			49		49			<4					<4
4/30/2004	0:00	49			49		49			<4					<4
4/30/2004	4:00	48			49		49			<4					<4
4/30/2004	8:00	49			49		49			<4					<4
6/14/2004	8:30	47	30	37					<4	<4					<4
6/14/2004	12:00								<2	<4					
6/14/2004	16:00								<4	<4					
6/15/2004	8:00	47	29	38					<4	<4					<4
6/15/2004	12:00								<4	<4					
6/15/2004	16:00								<4	<4					
6/16/2004	8:00	47	29	38					<4	<4					<4
6/16/2004	12:15	46							<4						<4
6/16/2004	16:00								<4						
6/17/2004	8:00	46							<4						<4
6/17/2004	12:00								<4						
6/17/2004	16:00								<4						
6/18/2004	8:00	46							<4						<4
6/18/2004	12:00								<4						
6/18/2004	16:00								<4						<4
9/13/2004	8:15	45	29	36					<4	<4					<4
9/13/2004	12:00								<4	<4					
9/13/2004	16:00								<4	<4					
9/14/2004	8:00	45	29	36					<4	<4					<4
9/14/2004	12:00								<4	<4					
9/14/2004	16:00								<4	<4					
9/15/2004	8:00	49	31	40					<4	<4					<4
9/15/2004	12:15	49							<4						<4
9/15/2004	16:00								<4						
9/16/2004	8:00	52							<4						<4
9/16/2004	12:00								<4						
9/16/2004	16:00								<4						
9/17/2004	8:00	50							<4						<4
9/17/2004	12:00								<4						
9/17/2004	16:00								<4						<4

Nitrate (mg/L)

Date	Time	Well 6C	Well 6D	Combined Influent	Air Stripper A	Air Stripper B	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004		60													
4/20/2004	8:30	68.2							1.28						1.5
4/20/2004	12:00	69.1							1.28						1.28
4/20/2004	16:00	66							11.4						7.9
4/20/2004	20:00	66							33.4						28.6
4/21/2004	0:00	66							33						33
4/21/2004	8:00	66							38.7						37.8
4/21/2004	16:00	66							11.4						11.4
4/22/2004	0:00	61.6							11.4						14.1
4/22/2004	8:00	61.6							18.5						
4/26/2004	12:00	66	21.6	44					25.5	1.94					12.8
4/26/2004	16:00	64.2	19.2	42.4					38.1	1.06					19.1
4/26/2004	20:00	64.2	18	41.8					17.6	<0.88					4.6
4/27/2004	0:00	64.2	17.6	41.4					1.45	<0.88					1.58
4/27/2004	8:00	63.6	16.8	40.6					0.88	<0.88					<0.88
4/27/2004	16:00	61.6	15	40.5					1.28	<0.88					<0.88
4/28/2004	0:00	61.6	16.3	40					24.2	4.4					15
4/28/2004	8:00	61.6	16.3	40					26.4	13.2					20.2
4/28/2004	16:00	63	70.4	40					37	14					25
4/29/2004	0:00	61.6	15.7	39					35.2	22					28.6
4/29/2004	8:00	61.6	15.8	39.2					33.4	19.8					26.4
4/29/2004	16:00	61.6	15.8	39.3					35.6	18.5					26.8
4/29/2004	17:00	61.6								26.1					23.8
4/29/2004	20:00	61.6								35.6					33.9
4/30/2004	0:00	61.6								37					37
4/30/2004	4:00	61.6								**47.5**					**48.4**
4/30/2004	8:00	61.6								41					41.8
6/14/2004	8:30	61.6	16.7	39.2					<0.88	<0.88					<0.88
6/14/2004	12:00								0.4884	<0.88					
6/14/2004	16:00								<0.88	<0.88					
6/15/2004	8:00	61.6	15.8	38.7					<0.88	18.9					7.5
6/15/2004	12:00								<0.88	19.8					
6/15/2004	16:00								0.97	0.92					
6/16/2004	8:00	61.6	15.4	38.7					<0.88	21.6					1.01
6/16/2004	12:15	61.6							<0.88						<0.88
6/16/2004	16:00								<0.88						
6/17/2004	8:00	61.6							2.99						3.65
6/17/2004	12:00								1.32						
6/17/2004	16:00								1.1						
6/18/2004	8:00	61.6							1.94						2.29
6/18/2004	12:00								3.52						
6/18/2004	16:00								1.41						2.2
9/13/2004	8:15	70.4	15.0	38.7					9.7	4.8					7.0
9/13/2004	12:00								7.9	7.5					
9/13/2004	16:00								8.8	6.6					
9/14/2004	8:00	66.0	14.5	37.8					7.0	4.4					4.8
9/14/2004	12:00								6.2	2.9					
9/14/2004	16:00								7.0	4.8					
9/15/2004	8:00	74.8	15.4	41.4					8.4	6.2					7.5
9/15/2004	12:15	74.8							2.6						8.8
9/15/2004	16:00								5.7						
9/16/2004	8:00	70.4							<0.44						1.9
9/16/2004	12:00								2.4						
9/16/2004	16:00								4.8						
9/17/2004	8:00	66.0							4.8						3.8
9/17/2004	12:00								2.9						
9/17/2004	16:00								4.0						3.5

Perchlorate(ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	14:30	29													
4/20/2004	8:30	38							<2						<2
4/20/2004	11:00														<2
4/20/2004	12:00	38							<2						<2
4/20/2004	16:00	38							<2						<2
4/20/2004	20:00	40							<2						<2
4/21/2004	0:00	39							<2						<2
4/21/2004	8:00	39							<2						<2
4/21/2004	16:00	40							<2						<2
4/22/2004	0:00	40							<2						<2
4/22/2004	8:00	41							<2						
4/26/2004	12:00	40	54	48					3.8	<2					<2
4/26/2004	16:00	40	49	45					2.1	<2					<2
4/26/2004	20:00	40.3	45	43.3					<2	<2					<2
4/27/2004	0:00	39	43	42					<2	<2					<2
4/27/2004	8:00	41	43	42					<2	<2					<2
4/27/2004	14:45														<2
4/27/2004	16:00	42	43	43					2.7	<2					<2
4/28/2004	0:00	42	43	43					14	2.5					8.6
4/28/2004	8:00	42	43	42					14	2.7					8.9
4/28/2004	16:00	39	40	40					16	5.3					11
4/29/2004	0:00	40	40	40					17	6					12
4/29/2004	8:00	39	40	39					13	6.7					11
4/29/2004	16:00	40	41	40					18	8.7					13
4/29/2004	17:00	39								10					9.6
4/29/2004	20:00	38								12					12
4/30/2004	0:00	37								14					14
4/30/2004	4:00	37								16					16
4/30/2004	8:00	38								16					16
6/14/2004	8:30	42	50	47					<2.0	2.6					<2.0
6/14/2004	12:00								3.6	<2.0					
6/14/2004	16:00								<2.0	2					
6/15/2004	8:00	41	48	43					<2.0	14					6.1
6/15/2004	12:00								<2.0	13					
6/15/2004	16:00								<2.0	7.7					
6/16/2004	8:00	37	46	43					<2.0	3.7					2.4
6/16/2004	12:15	41							<2.0						<2.0
6/16/2004	16:00								<2.0						
6/17/2004	8:00	38							<2.0						<2.0
6/17/2004	12:00								<2.0						
6/17/2004	16:00								<2.0						
6/18/2004	8:00	41							<2.0						<2.0
6/18/2004	12:00								<2.0						
6/18/2004	16:00								<2.0						<2.0
9/13/2004	8:15	37	39	38					<2	<2					<2
9/13/2004	12:00								<2	<2					
9/13/2004	16:00								<2	<2					
9/14/2004	8:00	37	40	38					<2	<2					<2
9/14/2004	12:00								<2	<2					
9/14/2004	16:00								<2	<2					
9/15/2004	8:00	36	38	37					<2	<2					<2
9/15/2004	12:15	37							<2						<2
9/15/2004	16:00								<2						
9/16/2004	8:00	37							<2						<2
9/16/2004	12:00								<2						
9/16/2004	16:00								<2						
9/17/2004	8:00	34							<2						<2
9/17/2004	12:00								<2						
9/17/2004	16:00								<2						<2

Chloroform		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													<0.5	
4/9/2004	14:30	1.3													
4/20/2004	8:30	1.56			<0.5	<0.5									<0.5
4/20/2004	11:00														<0.5
4/20/2004	12:00	1.6			<0.5										
4/20/2004	16:00	1.54			<0.5										<0.5
4/20/2004	20:00	1.5			<0.5										<0.5
4/21/2004	0:00	1.59			<0.5										<0.5
4/21/2004	8:00	1.58			<0.5										<0.5
4/21/2004	16:00	1.51			<0.5										<0.5
4/22/2004	0:00	1.64			<0.5										<0.5
4/22/2004	8:00	1.52			<0.5										
4/26/2004	12:00	1.6	1.3	1.5											
4/26/2004	16:00	1.6	1.2	1.4	<0.5		<0.5	<0.5							
4/26/2004	20:00	1.6	1.1	1.5	<0.5		<0.5	<0.5							<0.5
4/27/2004	0:00	1.7	1.1	1.4	<0.5		<0.5	<0.5							
4/27/2004	8:00	1.6	1.1	1.4	<0.5		<0.5	<0.5							<0.5
4/27/2004	16:00	1.7	1.1	1.4	<0.5		<0.5	<0.5							<0.5
4/28/2004	0:00	1.6	1.1	1.4	<0.5		<0.5	<0.5							<0.5
4/28/2004	8:00	1.7	1.1	1.4	<0.5		<0.5	<0.5							
4/28/2004	16:00	1.7	1.1	1.4	<0.5		<0.5	<0.5							<0.5
4/29/2004	0:00	1.8	1.1	1.4	<0.5		<0.5	<0.5							<0.5
4/29/2004	8:00	1.7	1.1	1.3	<0.5		<0.5	<0.5							<0.5
4/29/2004	16:00	1.8	1.2	1.5	<0.5		<0.5	<0.5							<0.5
4/29/2004	17.00	1.8			<0.5		<0.5								<0.5
4/29/2004	20.00	1.6			<0.5		<0.5								<0.5
4/30/2004	0:00	1.7			<0.5		<0.5								<0.5
4/30/2004	4:00	1.7			<0.5		<0.5								<0.5
4/30/2004	8:00	1.8			<0.5		<0.5								<0.5
6/14/2004	8:30	1.7	1.3	1.6											<0.5
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00	1.6	1.2	1.4											<0.5
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00	1.7	1.2	1.5											<0.5
6/16/2004	12:15	1.7													<0.5
6/16/2004	16:00														
6/17/2004	8:00	1.8													<0.5
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00	1.6													<0.5
6/18/2004	12:00														
6/18/2004	16.00														<0.5
9/13/2004	8:15	1.8	1.3	1.6											<0.5
9/13/2004	12:00														
9/13/2004	16:00														
9/14/2004	8:00	2.0	1.3	1.6											<0.5
9/14/2004	12:00														
9/14/2004	16:00														
9/15/2004	8:00	2.0	1.2	1.4											<0.5
9/15/2004	12:15	2.0													<0.5
9/15/2004	16.00														
9/16/2004	8:00	1.6													<0.5
9/16/2004	12:00														
9/16/2004	16:00														
9/17/2004	8:00	1.8													<0.5
9/17/2004	12:00														
9/17/2004	16.00														<0.5

Bromoform

Date	Time	Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4
4/9/2004	0:00							
4/9/2004	14:30	1						
4/20/2004	8:30	<0.5			<0.5	<0.5		
4/20/2004	12:00	<0.5			<0.5			
4/20/2004	16:00	<0.5			<0.5			
4/20/2004	20:00	<0.5			<0.5			
4/21/2004	0:00	<0.5			<0.5			
4/21/2004	8.00	<0.5			<0.5			
4/21/2004	16.00	<0.5			<0.5			
4/22/2004	0:00	<0.5			<0.5			
4/22/2004	8:00	<0.5			<0.5			
4/26/2004	12:00							
4/26/2004	16:00	<0.5	0.76	<0.5	<0.5		<0.5	<0.5
4/26/2004	20:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/27/2004	0:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/27/2004	8:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/27/2004	16:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/28/2004	0:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/28/2004	8:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/28/2004	16:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/29/2004	0:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/29/2004	8:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/29/2004	16:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
4/29/2004	17:00	<0.5			<0.5		<0.5	
4/29/2004	20:00	<0.5			<0.5		<0.5	
4/30/2004	0:00	<0.5			<0.5		<0.5	
4/30/2004	4:00	<0.5			<0.5		<0.5	
4/30/2004	8.00	<0.5			<0.5		<0.5	
6/14/2004	8:30	<0.5	<0.5	<0.5				
6/14/2004	12:00							
6/14/2004	16:00							
6/15/2004	8:00	<0.5	<0.5	<0.5				
6/15/2004	12:00							
6/15/2004	16:00							
6/16/2004	8.00	<0.5	<0.5	<0 5				
6/16/2004	12:15	<0.5						
6/16/2004	16:00							
6/17/2004	8:00	<0.5						
6/17/2004	12:00							
6/17/2004	16:00							
6/18/2004	8:00	<0.5						
6/18/2004	12:00							
6/18/2004	16:00							
9/13/2004	8:15	<0.5	<0.5	<0.5				
9/13/2004	12:00							
9/13/2004	16:00							
9/14/2004	8:00	<0 5	<0.5	<0.5				
9/14/2004	12:00							
9/14/2004	16:00							
9/15/2004	8.00	<0.5	<0.5	<0.5				
9/15/2004	12:15	<0.5						
9/15/2004	16:00							
9/16/2004	8.00	<0.5						
9/16/2004	12.00							
9/16/2004	16:00							
9/17/2004	8.00	<0.5						
9/17/2004	12 00							
9/17/2004	16 00							

Date	Time	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00						<0.5	
4/9/2004	14:30							
4/20/2004	8:30							<0.5
4/20/2004	12:00							
4/20/2004	16:00							<0.5
4/20/2004	20:00							<0.5
4/21/2004	0:00							<0.5
4/21/2004	8.00							<0.5
4/21/2004	16.00							<0.5
4/22/2004	0:00							<0.5
4/22/2004	8:00							
4/26/2004	12:00							
4/26/2004	16:00							
4/26/2004	20:00							<0.5
4/27/2004	0:00							
4/27/2004	8:00							<0.5
4/27/2004	16:00							<0.5
4/28/2004	0:00							<0.5
4/28/2004	8:00							
4/28/2004	16:00							<0.5
4/29/2004	0:00							<0.5
4/29/2004	8:00							<0.5
4/29/2004	16:00							<0.5
4/29/2004	17:00							<0.5
4/29/2004	20:00							<0.5
4/30/2004	0:00							<0.5
4/30/2004	4:00							<0.5
4/30/2004	8.00							<0.5
6/14/2004	8:30							<0 5
6/14/2004	12:00							
6/14/2004	16:00							
6/15/2004	8:00							<0.5
6/15/2004	12:00							
6/15/2004	16:00							
6/16/2004	8.00							<0.5
6/16/2004	12:15							<0.5
6/16/2004	16:00							
6/17/2004	8:00							<0.5
6/17/2004	12:00							
6/17/2004	16:00							
6/18/2004	8:00							<0.5
6/18/2004	12:00							
6/18/2004	16:00							<0.5
9/13/2004	8:15							<0.5
9/13/2004	12:00							
9/13/2004	16:00							
9/14/2004	8:00							<0.5
9/14/2004	12:00							
9/14/2004	16:00							
9/15/2004	8.00							<0.5
9/15/2004	12:15							<0.5
9/15/2004	16:00							
9/16/2004	8.00							<0.5
9/16/2004	12.00							
9/16/2004	16:00							
9/17/2004	8.00							<0.5
9/17/2004	12 00							
9/17/2004	16 00							<0.5

1,1-DCA		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													<0.5	
4/9/2004	14.30	<0.5													
4/20/2004	8:30	<0.5			<0.5	<0.5									<0.5
4/20/2004	11:00														<0.5
4/20/2004	12:00	<0.5			<0.5										
4/20/2004	16:00	<0.5			<0.5										<0.5
4/20/2004	20:00	<0.5			<0.5										<0.5
4/21/2004	0:00	<0.5			<0.5										<0.5
4/21/2004	8:00	<0.5			<0.5										<0.5
4/21/2004	16:00	<0.5			<0.5										<0.5
4/22/2004	0:00	<0.5			<0.5										<0.5
4/22/2004	8:00	<0.5			<0.5										
4/26/2004	12:00														
4/26/2004	16:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							
4/26/2004	20:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/27/2004	0:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							
4/27/2004	8:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/27/2004	14:45														<0.5
4/27/2004	16:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/28/2004	0.00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/28/2004	8.00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							
4/28/2004	16.00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/29/2004	0:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/29/2004	8.00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/29/2004	16:00	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5							<0.5
4/29/2004	17.00	<0.5			<0.5		<0.5								<0.5
4/29/2004	20.00	<0.5			<0.5		<0.5								<0.5
4/30/2004	0:00	<0.5			<0.5		<0.5								<0.5
4/30/2004	4:00	<0.5			<0.5		<0.5								<0.5
4/30/2004	8:00	<0.5			<0.5		<0.5								<0.5
6/14/2004	8.30	<0.5	<0.5	<0.5											<0.5
6/14/2004	12:00														
6/14/2004	16.00														
6/15/2004	8:00	<0.5	<0.5	<0.5											<0.5
6/15/2004	12.00														
6/15/2004	16.00														
6/16/2004	8:00	<0.5	<0.5	<0.5											<0.5
6/16/2004	12:15	<0.5													<0.5
6/16/2004	16:00														
6/17/2004	8:00	<0.5													<0.5
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00	<0.5													<0.5
6/18/2004	12.00														
6/18/2004	16:00														<0.5
9/13/2004	8:15	<0.5	<0.5	<0.5											<0.5
9/13/2004	12.00														
9/13/2004	16.00														
9/14/2004	8:00	<0.5	<0.5	<0.5											<0.5
9/14/2004	12:00														
9/14/2004	16:00														
9/15/2004	8:00	<0.5	<0.5	<0.5											<0.5
9/15/2004	12:15	<0.5													<0.5
9/15/2004	16:00														
9/16/2004	8 00	<0 5													<0.5
9/16/2004	12.00														
9/16/2004	16:00														
9/17/2004	8.00	<0.5													<0.5
9/17/2004	12:00														
9/17/2004	16:00														<0.5

1 1 DCE		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0 00													<0 5	
4/9/2004	14 30	<0 5													
4/20/2004	8 30	<0 5			<0 5	<0 5									<0 5
4/20/2004	11 00														<0 5
4/20/2004	12 00	<0 5			<0 5										
4/20/2004	16 00	<0 5			<0 5										<0 5
4/20/2004	20 00	<0 5			<0 5										<0 5
4/21/2004	0 00	<0 5			<0 5										<0 5
4/21/2004	8 00	<0 5			<0 5										<0 5
4/21/2004	16 00	<0 5			<0 5										<0 5
4/22/2004	0 00	<0 5			<0 5										<0 5
4/22/2004	8 00	<0 5			<0 5										
4/26/2004	12 00														
4/26/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							
4/26/2004	20 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/27/2004	0 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							
4/27/2004	8 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/27/2004	14 45														<0 5
4/27/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/28/2004	0 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/28/2004	8 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							
4/28/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	0 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	8 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	17 00	<0 5			<0 5		<0 5								<0 5
4/29/2004	20 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	0 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	4 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	8 00	<0 5			<0 5		<0 5								<0 5
6/14/2004	8 30	<0 5	<0 5	<0 5											<0 5
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00	<0 5	<0 5	<0 5											<0 5
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00	<0 5	<0 5	<0 5											<0 5
6/16/2004	12 15	<0 5													<0 5
6/16/2004	16 00														
6/17/2004	8 00	<0 5													<0 5
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00	<0 5													<0 5
6/18/2004	12 00														
6/18/2004	16 00														<0 5
9/13/2004	8 15	<0 5	<0 5	<0 5											<0 5
9/13/2004	12 00														
9/13/2004	16 00														
9/14/2004	8 00	<0 5	<0 5	<0 5											<0 5
9/14/2004	12 00														
9/14/2004	16 00														
9/15/2004	8 00	<0 5	<0 5	<0 5											<0 5
9/15/2004	12 15	<0 5													<0 5
9/15/2004	16 00														
9/16/2004	8 00	<0 5													<0 5
9/16/2004	12 00														
9/16/2004	16 00														
9/17/2004	8 00	<0 5													<0 5
9/17/2004	12 00														
9/17/2004	16 00														<0 5

Cis 1 2 DCE		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0 00													<0 5	
4/9/2004	14 30	<0 5													
4/20/2004	8 30	<0 5			<0 5	<0 5									<0 5
4/20/2004	12 00	<0 5			<0 5										
4/20/2004	16 00	<0 5			<0 5										<0 5
4/20/2004	20 00	<0 5			<0 5										<0 5
4/21/2004	0 00	<0 5			<0 5										<0 5
4/21/2004	8 00	<0 5			<0 5										<0 5
4/21/2004	16 00	<0 5			<0 5										<0 5
4/22/2004	0 00	<0 5			<0 5										<0 5
4/22/2004	8 00	<0 5			<0 5										
4/26/2004	12 00														
4/26/2004	16 00	<0 5	0 5	<0 5	<0 5		<0 5	<0 5							
4/26/2004	20 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/27/2004	0 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							
4/27/2004	8 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/27/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/28/2004	0 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/28/2004	8 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							
4/28/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	0 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	8 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	16 00	<0 5	<0 5	<0 5	<0 5		<0 5	<0 5							<0 5
4/29/2004	17 00	<0 5			<0 5		<0 5								<0 5
4/29/2004	20 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	0 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	4 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	8 00	<0 5			<0 5		<0 5								<0 5
6/14/2004	8 30	<0 5	0 6	<0 5											<0 5
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00	<0 5	0 5	<0 5											<0 5
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00	<0 5	0 5	<0 5											<0 5
6/16/2004	12 15	<0 5													<0 5
6/16/2004	16 00														
6/17/2004	8 00	<0 5													<0 5
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00	<0 5													<0 5
6/18/2004	12 00														
6/18/2004	16 00														<0 5
9/13/2004	8 15	<0 5	0 6	<0 5											<0 5
9/13/2004	12 00														
9/13/2004	16 00														
9/14/2004	8 00	<0 5	0 5	<0 5											<0 5
9/14/2004	12 00														
9/14/2004	16 00														
9/15/2004	8 00	<0 5	0 6	0 6											<0 5
9/15/2004	12 15	<0 5													<0 5
9/15/2004	16 00														
9/16/2004	8 00	<0 5													<0 5
9/16/2004	12 00														
9/16/2004	16 00														
9/17/2004	8 00	<0 5													<0 5
9/17/2004	12 00														
9/17/2004	16 00														<0 5

[redacted]

1,2-DCA

Date	Time	Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													<0.5	
4/9/2004	14:30	1.6													
4/20/2004	8:30	2.08			<0.5	<0.5									<0.5
4/20/2004	12:00	2.18			<0.5										
4/20/2004	16:00	2.03			<0.5										<0.5
4/20/2004	20:00	2.14			<0.5										<0.5
4/21/2004	0:00	2.07			<0.5										<0.5
4/21/2004	8:00	2 26			<0.5										<0.5
4/21/2004	16:00	2.1			<0.5										<0.5
4/22/2004	0:00	2.3			<0.5										<0.5
4/22/2004	8:00	2.12			<0.5										
4/26/2004	12:00	2.2	2	2.1											
4/26/2004	16:00	2.4	1.8	2.1	<0.5		<0.5	<0.5							
4/26/2004	20:00	2.3	1.7	2.1	<0.5		<0.5	<0.5							<0.5
4/27/2004	0:00	2.3	1.5	1.9	<0.5		<0.5	<0.5							
4/27/2004	8:00	2.4	1.5	2	<0.5		<0.5	<0.5							<0.5
4/27/2004	14:45														<0.5
4/27/2004	16:00	2.3	1.6	1.9	<0.5		<0 5	<0.5							<0.5
4/28/2004	0:00	2.5	1.5	2	<0.5		<0 5	<0.5							<0.5
4/28/2004	8:00	2.4	1.5	2	<0.5		<0.5	<0.5							
4/28/2004	16:00	2.4	1.5	2	<0.5		<0.5	<0.5							<0.5
4/29/2004	0:00	2.5	1.6	2.1	<0.5		<0 5	<0.5							<0.5
4/29/2004	8:00	2.4	1.6	2	<0.5		<0.5	<0.5							<0.5
4/29/2004	16:00	2.6	1.7	2.1	<0.5		<0.5	<0.5							<0.5
4/29/2004	17:00	2.51			<0.5		<0.5								<0.5
4/29/2004	20:00	2.4			<0.5		<0.5								<0.5
4/30/2004	0.00	2.5			<0.5		<0.5								<0.5
4/30/2004	4:00	2.4			<0.5		<0.5								<0.5
4/30/2004	8:00	2.5			<0.5		<0.5								<0.5
6/14/2004	8:30	2.4	1.9	2.2											<0.5
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00	2.3	1.7	2											<0.5
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00	2 4	1.7	2											<0.5
6/16/2004	12:15	2.3													<0.5
6/16/2004	16:00														
6/17/2004	8:00	2 5													<0.5
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00	2.5													<0.5
6/18/2004	12:00														
6/18/2004	16:00														<0.5
9/13/2004	8:15	2.4	1.8	2.0											<0.5
9/13/2004	12:00														
9/13/2004	16:00														
9/14/2004	8:00	2.6	1.8	2.1											<0 5
9/14/2004	12:00														
9/14/2004	16:00														
9/15/2004	8:00	2.6	1.9	2.2											<0.5
9/15/2004	12:15	2.6													<0.5
9/15/2004	16:00														
9/16/2004	8:00	2.2													<0.5
9/16/2004	12:00														
9/16/2004	16:00														
9/17/2004	8:00	2.5													<0.5
9/17/2004	12:00														
9/17/2004	16:00														<0.5

[redacted]

CTC		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0.00													<0.5	
4/9/2004	14:30	0.7													
4/20/2004	8.30	0.84			<0.5	<0.5									<0.5
4/20/2004	11.00														<0.5
4/20/2004	12:00	0.86			<0.5										
4/20/2004	16:00	0.81			<0.5										<0.5
4/20/2004	20.00	0.82			<0.5										<0.5
4/21/2004	0.00	0.82			<0.5										<0.5
4/21/2004	8.00	0.85			<0.5										<0.5
4/21/2004	16.00	0.8			<0.5										<0.5
4/22/2004	0:00	0.9			<0.5										<0.5
4/22/2004	8:00	0.82			<0.5										
4/26/2004	12:00	0.9	4 1	2.5											
4/26/2004	16:00	0.9	4.2	2.4	<0.5		<0.5	<0.5							
4/26/2004	20:00	0.9	4 4	2.7	<0.5		<0.5	<0.5							<0.5
4/27/2004	0:00	0.9	4.3	2.6	<0.5		<0.5	<0.5							
4/27/2004	8.00	0.85	4.5	2.7	<0.5		<0.5	<0.5							<0.5
4/27/2004	14:45														<0.5
4/27/2004	16:00	0.86	4.6	2.7	<0.5		<0.5	<0.5							<0.5
4/28/2004	0.00	0.86	4.6	2.9	<0.5		<0.5	<0.5							<0.5
4/28/2004	8:00	0.91	5	3	<0.5		<0.5	<0.5							
4/28/2004	16:00	1	5.1	3	<0.5		<0.5	<0.5							<0.5
4/29/2004	0.00	0.9	5.5	3.2	<0.5		<0.5	<0.5							<0.5
4/29/2004	8:00	0.9	5.3	2.8	<0.5		<0.5	<0.5							<0.5
4/29/2004	16:00	1	5.5	3.2	<0.5		<0.5	<0.5							<0.5
4/29/2004	17.00	0.85			<0.5		<0.5								<0.5
4/29/2004	20:00	0.8			<0.5		<0.5								<0.5
4/30/2004	0:00	0.8			<0.5		<0.5								<0.5
4/30/2004	4.00	0.8			<0.5		<0.5								<0.5
4/30/2004	8.00	0.8			<0.5		<0.5								<0.5
6/14/2004	8:30	0.9	5.3	3.1											<0.5
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00	1	6.1	3.5											<0.5
6/15/2004	12:00														
6/15/2004	16.00														
6/16/2004	8:00	1	6.3	3.7											<0.5
6/16/2004	12.15	1													<0.5
6/16/2004	16:00														
6/17/2004	8.00	1.1													<0.5
6/17/2004	12.00														
6/17/2004	16:00														
6/18/2004	8.00	1.1													<0.5
6/18/2004	12:00														
6/18/2004	16.00														<0.5
9/13/2004	8 15	1.0	7.2	4.1											<0.5
9/13/2004	12.00														
9/13/2004	16.00														
9/14/2004	8.00	1.1	7.1	4.4											<0.5
9/14/2004	12.00														
9/14/2004	16.00														
9/15/2004	8:00	1.1	7.3	4.4											<0.5
9/15/2004	12.15	1.2													<0.5
9/15/2004	16.00														
9/16/2004	8:00	0.9													<0.5
9/16/2004	12.00														
9/16/2004	16:00														
9/17/2004	8.00	1.0													<0.5
9/17/2004	12.00														
9/17/2004	16.00														<0.5

PCE		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													<0.5	
4/9/2004	14:30	1.4													
4/20/2004	8:30	1.32			<0.5	<0.5									<0.5
4/20/2004	11.00														<0.5
4/20/2004	12 00	1.31			<0.5										
4/20/2004	16:00	1.1			<0.5										<0.5
4/20/2004	20.00	1.14			<0.5										<0.5
4/21/2004	0.00	1.2			<0.5										<0.5
4/21/2004	8.00	1.13			<0.5										<0.5
4/21/2004	16.00	1.09			<0.5										<0.5
4/22/2004	0:00	1.2			<0.5										<0.5
4/22/2004	8 00	1.1			<0.5										
4/26/2004	12:00	1.3	2.3	1.8											
4/26/2004	16:00	1.4	2.1	1.8	<0.5		<0.5	<0.5							
4/26/2004	20:00	1.1	1.5	1.4	<0.5		<0.5	<0.5							<0.5
4/27/2004	0:00	1.2	1.4	1.3	<0.5		<0.5	<0.5							
4/27/2004	8:00	1.4	1.5	1.4	<0.5		<0.5	<0.5							<0.5
4/27/2004	14:45														<0.5
4/27/2004	16:00	1.3	1.5	1.4	<0.5		<0.5	<0.5							<0.5
4/28/2004	0:00	1.3	1.4	1.2	<0.5		<0.5	<0.5							<0.5
4/28/2004	8:00	1.2	1.2	1.2	<0.5		<0.5	<0.5							
4/28/2004	16.00	1.2	1.2	1.1	<0.5		<0.5	<0.5							<0.5
4/29/2004	0:00	1.2	1.2	1.2	<0.5		<0.5	<0.5							<0.5
4/29/2004	8:00	1.2	1.2	1.4	<0.5		<0.5	<0.5							<0.5
4/29/2004	16:00	1.2	1.2	1.2	<0.5		<0.5	<0.5							<0.5
4/29/2004	17:00	1.45			<0.5		<0.5								<0.5
4/29/2004	20:00	1.4			<0.5		<0.5								<0.5
4/30/2004	0.00	1.4			<0.5		<0.5								<0.5
4/30/2004	4:00	1.4			<0.5		<0.5								<0.5
4/30/2004	8:00	1.4			<0.5		<0.5								<0.5
6/14/2004	8.30	1.4	1.8	1.6											<0.5
6/14/2004	12.00														
6/14/2004	16:00														
6/15/2004	8.00	1.2	1.5	1.4											<0.5
6/15/2004	12.00														
6/15/2004	16:00														
6/16/2004	8.00	1.3	1.4	1.4											<0.5
6/16/2004	12.15	1.3													<0.5
6/16/2004	16.00														
6/17/2004	8.00	1.4													<0.5
6/17/2004	12.00														
6/17/2004	16:00														
6/18/2004	8.00	1.5													<0.5
6/18/2004	12.00														
6/18/2004	16.00														<0.5
9/13/2004	8:15	1.4	1.4	1.4											<0.5
9/13/2004	12:00														
9/13/2004	16:00														
9/14/2004	8.00	1.6	1.3	1.5											<0.5
9/14/2004	12.00														
9/14/2004	16.00														
9/15/2004	8:00	1.6	1 3	1.4											<0.5
9/15/2004	12:15	1.6													<0.5
9/15/2004	16:00														
9/16/2004	8:00	1.3													<0.5
9/16/2004	12:00														
9/16/2004	16:00														
9/17/2004	8.00	1.4													<0.5
9/17/2004	12.00														
9/17/2004	16:00														<0.5

TCE

Date	Time	Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0.00													<0.5	
4/9/2004	14.30	15													
4/20/2004	8.30	18			<0.5	<0.5									<0.5
4/20/2004	11 00														<0.5
4/20/2004	12.00	18			<0.5										
4/20/2004	16:00	16			<0.5										<0.5
4/20/2004	20:00	16.58			<0.5										<0.5
4/21/2004	0:00	17			<0.5										<0.5
4/21/2004	8:00	17			<0.5										<0.5
4/21/2004	16:00	16.89			<0.5										<0.5
4/22/2004	0:00	18			<0.5										<0.5
4/22/2004	8:00	17			<0.5										
4/26/2004	12:00	17	41	29											
4/26/2004	16 00	18	39	28	<0.5		<0.5	<0.5							
4/26/2004	20.00	17	35	27	<0.5		<0.5	<0.5							<0.5
4/27/2004	0:00	18	33	25	<0.5		<0.5	<0.5							
4/27/2004	8:00	19	36	27	<0.5		<0.5	<0.5							<0.5
4/27/2004	14 45														<0.5
4/27/2004	16:00	18	36	27	<0.5		<0.5	<0.5							<0.5
4/28/2004	0.00	18	35	27	<0.5		<0.5	<0.5							<0.5
4/28/2004	8:00	18	34	26	<0.5		<0.5	<0.5							
4/28/2004	16:00	19	35	27	<0.5		<0.5	<0.5							<0.5
4/29/2004	0:00	18	36	28	<0.5		<0.5	<0.5							<0.5
4/29/2004	8:00	19	36	27	<0.5		<0.5	<0.5							<0.5
4/29/2004	16:00	20	37	28	<0.5		<0.5	<0.5							<0.5
4/29/2004	17:00	19			<0.5		<0.5								<0.5
4/29/2004	20:00	18			<0.5		<0.5								<0.5
4/30/2004	0:00	19			<0.5		<0.5								<0.5
4/30/2004	4:00	20			<0.5		<0.5								<0.5
4/30/2004	8:00	20			<0.5		<0.5								<0.5
4/30/2004	8:30	19	43	31											<0.5
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00	19	42	30											<0.5
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00	20	43	31											<0.5
6/16/2004	12.15	20													<0.5
6/16/2004	16:00														
6/17/2004	8:00	20													<0.5
6/17/2004	12.00														
6/17/2004	16:00														
6/18/2004	8:00	21													<0.5
6/18/2004	12:00														
6/18/2004	16:00														<0.5
9/13/2004	8.15	20	44	32											<0.5
9/13/2004	12:00														
9/13/2004	16.00														
9/14/2004	8:00	22	43	33											<0.5
9/14/2004	12.00														
9/14/2004	16.00														
9/15/2004	8.00	21	36	28											<0.5
9/15/2004	12.15	21													<0.5
9/15/2004	16.00														
9/16/2004	8.00	18													<0.5
9/16/2004	12.00														
9/16/2004	16 00														
9/17/2004	8:00	17													<0.5
9/17/2004	12:00														
9/17/2004	16.00														<0.5

Dichlorodifluoromethane

Date	Time	Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0 00													<0 5	
4/9/2004	14 30	<0 5													
4/20/2004	8 30	<0 5			<0 5	<0 5									<0 5
4/20/2004	12 00	<0 5			<0 5										
4/20/2004	16 00	<0 5			<0 5										<0 5
4/20/2004	20 00	<0 5			<0 5										<0 5
4/21/2004	0 00	<0 5			<0 5										<0 5
4/21/2004	8 00	<0 5			<0 5										<0 5
4/21/2004	16 00	<0 5			<0 5										<0 5
4/22/2004	0 00	<0 5			<0 5										<0 5
4/22/2004	8 00	<0 5			<0 5										
4/26/2004	12 00		2 5	1 3											
4/26/2004	16 00	<0 5	2 1	1 1	<0 5		<0 5	<0 5							
4/26/2004	20 00	<0 5	1 6	1	<0 5		<0 5	<0 5							<0 5
4/27/2004	0 00	<0 5	1 4	0 8	<0 5		<0 5	<0 5							
4/27/2004	8 00	<0 5	1 6	0 85	<0 5		<0 5	<0 5							<0 5
4/27/2004	16 00	<0 5	1 4	0 8	<0 5		<0 5	<0 5							<0 5
4/28/2004	0 00		1 4	0 73	<0 5		<0 5	<0 5							<0 5
4/28/2004	8 00		1 3	0 7	<0 5		<0 5	<0 5							
4/28/2004	16 00	<0 5	1 2	0 67	<0 5		<0 5	<0 5							<0 5
4/29/2004	0 00	<0 5	1 3	0 7	<0 5		<0 5	<0 5							<0 5
4/29/2004	8 00	<0 5	1 2	0 72	<0 5		<0 5	<0 5							<0 5
4/29/2004	16 00	<0 5	1 2	0 8	<0 5		<0 5	<0 5							<0 5
4/29/2004	17 00	<0 5			<0 5		<0 5								<0 5
4/29/2004	20 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	0 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	4 00	<0 5			<0 5		<0 5								<0 5
4/30/2004	8 00	<0 5			<0 5		<0 5								<0 5
6/14/2004	8 30	<0 5	1 9	1											<0 5
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00	<0 5	1 4	0 8											<0 5
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00	<0 5	1 4	0 7											<0 5
6/16/2004	12 15	<0 5													<0 5
6/16/2004	16 00														
6/17/2004	8 00	<0 5													<0 5
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00	<0 5													<0 5
6/18/2004	12 00														
6/18/2004	16 00														<0 5
9/13/2004	8 15	<0 5	1 6	0 8											<0 5
9/13/2004	12 00														
9/13/2004	16 00														
9/14/2004	8 00	<0 5	1 4	0 8											<0 5
9/14/2004	12 00														
9/14/2004	16 00														
9/15/2004	8 00	<0 5	1 4	0 8											<0 5
9/15/2004	12 15	<0 5													<0 5
9/15/2004	16 00														
9/16/2004	8 00	<0 5													<0 5
9/16/2004	12 00														
9/16/2004	16 00														
9/17/2004	8 00	<0 5													<0 5
9/17/2004	12 00														
9/17/2004	16 00														<0 5

1 2 3-TCP (ug/L)		Well 6C	Well 6D	Combined	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30	<0 005			<0 005	<0 005									<0 005
4/20/2004	12 00	<0 005			<0 005										
4/20/2004	16 00	<0 005			<0 005										<0 005
4/20/2004	20 00	<0 005			<0 005										<0 005
4/21/2004	0 00	<0 005			<0 005										<0 005
4/21/2004	8 00	<0 005			<0 005										<0 005
4/21/2004	16 00	<0 005			<0 005										<0 005
4/22/2004	0 00	<0 005			<0 005										<0 005
4/22/2004	8 00	<0 005			<0 005										
4/26/2004	12 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/26/2004	16 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/26/2004	20 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/27/2004	0 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/27/2004	8 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/27/2004	16 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/28/2004	0 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/28/2004	8 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/28/2004	16 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/29/2004	0 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/29/2004	8 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/29/2004	16 00	<0 005	<0 005	<0 005	<0 005		<0 005	<0 005							<0 005
4/29/2004	17 00	<0 005			<0 005		<0 005								<0 005
4/29/2004	20 00	<0 005			<0 005		<0 005								<0 005
4/30/2004	0 00	<0 005			<0 005		<0 005								<0 005
4/30/2004	4 00	<0 005			<0 005		<0 005								<0 005
4/30/2004	8 00	<0 005			<0 005		<0 005								<0 005

1 4 dioxane (ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0 00													<0 5	
4/9/2004	14 30	0 8													
4/20/2004	8 30	0 8									<0 5	<0 5			<0 5
4/20/2004	11 00														<0 5
4/20/2004	12 00	0 8									0 5	0 7			<0 5
4/20/2004	16 00	0 9									<0 5	<0 5			<0 5
4/20/2004	20 00	0 8									<0 5	<0 5			<0 5
4/21/2004	0 00	0 9									<0 5	<0 5			<0 5
4/21/2004	8 00	0 8									<0 5	<0 5			<0 5
4/21/2004	16 00	0 9									0 6	0 7			0 6
4/22/2004	0 00	0 9									<0 5	<0 5			<0 5
4/22/2004	8 00	0 9													
4/26/2004	12 00	0 8	0 9	0 9							<0 5	<0 5	<0 5	<0 5	<0 5
4/26/2004	16 00	1	0 9	0 9							<0 5	<0 5	<0 5	<0 5	<0 5
4/26/2004	20 00	0 9	0 8	0 8							<0 5	<0 5	0 7	<0 5	<0 5
4/27/2004	0 00	0 9	0 6	0 7							<0 5	<0 5	<0 5	<0 5	<0 5
4/27/2004	8 00														
4/27/2004	14 45														<0 5
4/27/2004	16 00	<0 5	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
4/28/2004	0 00	1	0 8	<0 5							<0 5	<0 5	<0 5	<0 5	<0 5
4/28/2004	8 00	0 9	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
4/28/2004	16 00	1	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
4/29/2004	0 00	1	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
4/29/2004	8 00	1	0 8	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
4/29/2004	16 00	0 85	0 75	0 74							<0 5	<0 5	<0 5	<0 5	<0 5
4/29/2004	17 00	0 86											<0 5	<0 5	<0 5
4/29/2004	20 00	1											<0 5	0 5	<0 5
4/30/2004	0 00	1											<0 5	<0 5	<0 5
4/30/2004	4 00	0 9											0 6	0 7	<0 5
4/30/2004	8 00	1											<0 5	<0 5	<0 5
6/14/2004	8 30	0 82	0 71	0 76							<0 5	<0 5	<0 5	<0 5	<0 5
6/14/2004	12 00										<0 5	<0 5	<0 5	<0 5	
6/14/2004	16 00										<0 5	<0 5	<0 5	<0 5	
6/15/2004	8 00	1	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
6/15/2004	12 00										<0 5	<0 5	<0 5	<0 5	
6/15/2004	16 00										<0 5	<0 5	<0 5	<0 5	
6/16/2004	8 00	0 8	0 8	0 8							<0 5	<0 5	0 6	<0 5	<0 5
6/16/2004	12 15	0 8									<0 5	<0 5			<0 5
6/16/2004	16 00										<0 5	<0 5			
6/17/2004	8 00	0 9									<0 5	<0 5			<0 5
6/17/2004	12 00										<0 5	<0 5			
6/17/2004	16 00										<0 5	<0 5			
6/18/2004	8 00	0 9									<0 5	<0 5			<0 5
6/18/2004	12 00										<0 5	<0 5			
6/18/2004	16 00										<0 5	<0 5			<0 5
9/13/2004	8 15	0 7	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
9/13/2004	12 00										<0 5	<0 5	<0 5	<0 5	
9/13/2004	16 00										<0 5	<0 5	<0 5	<0 5	
9/14/2004	8 00	0 8	0 7	0 8							<0 5	<0 5	<0 5	<0 5	<0 5
9/14/2004	12 00										<0 5	<0 5	<0 5	<0 5	
9/14/2004	16 00										<0 5	<0 5	<0 5	<0 5	
9/15/2004	8 00	0 6	0 6	0 6							<0 5	<0 5	<0 5	<0 5	<0 5
9/15/2004	12 15	0 7									<0 5	<0 5			<0 5
9/15/2004	16 00										<0 5	<0 5			
9/16/2004	8 00	0 8									<0 5	<0 5			<0 5
9/16/2004	12 00										<0 5	<0 5			
9/16/2004	16 00										<0 5	<0 5			
9/17/2004	8 00	0 7									<0 5	<0 5			<0 5
9/17/2004	12 00										<0 5	<0 5			
9/17/2004	16 00										<0 5	<0 5			<0 5

[redacted]

NDMA (ng/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Strippe	Air Strippe	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent	
4/9/2004	0.00													<2.0		
4/9/2004	14.30	340														
4/20/2004	8:30	590									<2.0	<2.0			<2.0	
4/20/2004	11:00														<2.0	
4/20/2004	12:00	660									<2.0	<2.0				**3.2**
4/20/2004	16:00	640									<2.0	<2.0				**19**
4/20/2004	20.00	630									<2.0	<2.0				**9.1**
4/21/2004	0:00	640									<2.0	<2.0				**8.9**
4/21/2004	8.00	670									<2.0	<2.0				**9.7**
4/21/2004	16:00	570									<2.0	<2.0				**5.8**
4/22/2004	0.00	690									<2.0	<2.0				**11**
4/22/2004	8.00	720														
4/26/2004	12:00	480	170	330							<2.0	<2.0	<2.0	<2.0	<2.0	
4/26/2004	16:00	450	140	340							<2.0	<2.0	<2.0	<2.0	<2.0	
4/26/2004	20:00	500	120	310							<2.0	<2.0	<2.0	<2.0	<2.0	
4/27/2004	0:00	470	120	300							<2.0	<2.0	<2.0	<2.0	<2 0	
4/27/2004	8:00	-														
4/27/2004	14:45														<2.0	
4/27/2004	16:00	510	100	280							<2.0	<2.0	<2.0	<2.0	<2.0	
4/28/2004	0:00	500	99	360							<2.0	<2.0	<2.0	<2.0	<2.0	
4/28/2004	8:00	490	95	300							<2.0	<2.0	<2.0	<2.0	<2.0	
4/28/2004	16:00	530	92	300							<2.0	<2.0	<2.0	<2.0	<2.0	
4/29/2004	0:00	540	87	300							<2.0	<2.0	<2.0	<2.0	<2.0	
4/29/2004	8:00	540	110	320					320	320	<2.0	<2.0	<2.0	<2.0	<2.0	
4/29/2004	16:00	510	100	330					340	330	<2.0	<2.0	<2.0	<2.0	<2.0	
4/29/2004	17:00	300											<2.0	<2.0	<2.0	
4/29/2004	20.00	820											<2.0	<2.0	<2.0	
4/30/2004	0:00	500											<2.0	<2.0	<2.0	
4/30/2004	4.00	520											<2.0	<2.0	<2.0	
4/30/2004	8:00	510											<2.0	<2.0	<2.0	
6/14/2004	8.30	480	130	300											<2.0	
6/14/2004	12.00															
6/14/2004	16:00															
6/15/2004	8:00	500	110	320											<2.0	
6/15/2004	12:00															
6/15/2004	16:00															
6/16/2004	8.00	440	102	311											<2.0	
6/16/2004	12:15	470													<2.0	
6/16/2004	16:00															
6/17/2004	8.00	470														**8.4**
6/17/2004	12:00															
6/17/2004	16:00															
6/18/2004	8:00	530														**11**
6/18/2004	16:00															
																6.6
9/13/2004	8:15	530	80	260											<2.0	
9/13/2004	12.00															
9/13/2004	16:00															
9/14/2004	8:00	633	85												<2.0	
9/14/2004	12:00															
9/14/2004	16:00															
9/15/2004	8:00	430	82	250							<2.0	<2.0	<2.0	<2.0	<2.0	
9/15/2004	12:15	430													<2.0	
9/15/2004	16:00															
9/16/2004	8:00	430													<2.0	
9/16/2004	12:00															
9/16/2004	16:00															
9/17/2004	8:00	440													<2.0	
9/17/2004	12:00															
9/17/2004	16:00														<2.0	

Atrazine (ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Strippe	Air Strippe	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30	0 1													<0 050
4/20/2004	12 00														
4/20/2004	16 00														
4/20/2004	20 00														
4/21/2004	0 00														
4/21/2004	8 00														
4/26/2004	12 00	0 12	<0 05	0 06											<0 050
4/26/2004	16 00														
4/26/2004	20 00														
4/27/2004	0 00														
4/27/2004	8 00														
4/27/2004	16 00														
4/28/2004	0 00														
4/28/2004	8 00														
4/28/2004	16 00														
4/29/2004	0 00														
4/29/2004	8 00														
4/29/2004	16 00														
4/29/2004	17 00	0 12													<0 050
4/29/2004	20 00														
4/30/2004	0 00														
4/30/2004	4 00														
4/30/2004	8 00														<0 050
6/14/2004	8 30	0 13	<0 050	0 08		0 08					<0 050	<0 050	<0 050	<0 050	<0 050
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00	0 14	<0 050	0 08	0 08						<0 050	<0 050	<0 050	<0 050	<0 050
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00	0 12	<0 005	0 08	0 08						<0 050	<0 050	<0 050	<0 050	<0 050
6/16/2004	12 15	0 13			0 12						<0 050	<0 050			<0 050
6/17/2004	8 00	0 12			0 14						<0 050	<0 050			<0 050
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00	0 14			0 13						<0 050	<0 050			<0 050
6/18/2004	16 00														<0 050

2-Butanone (MEK) ug/L		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004	0:00													<5.0	
4/9/2004	14:30	<5.0													
4/20/2004	8:30	<5.0			<5.0	<5.0									<5.0
4/20/2004	12:00	<5.0			<5.0										
4/20/2004	16:00	<5.0			<5.0										<5.0
4/20/2004	20:00	<5.0			<5.0										<5.0
4/21/2004	0:00	<5.0			<5.0										<5.0
4/21/2004	8:00	<5.0			<5.0										<5.0
4/21/2004	16:00	<5.0			<5.0										<5.0
4/22/2004	0:00	<5.0			<5.0										<5.0
4/22/2004	8:00	<5.0			<5.0										
4/26/2004	12:00														
4/26/2004	16:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							**527**
4/26/2004	20:00	<5.0	<5.0	<5 0	<5.0		<5.0	<5.0							<5.0
4/27/2004	0:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							**191**
4/27/2004	8:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							<5.0
4/27/2004	16:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							**15**
4/28/2004	0:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							**60**
4/28/2004	8:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							**6.9**
4/28/2004	16:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							<5.0
4/29/2004	0:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							**6.9**
4/29/2004	8:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							<5.0
4/29/2004	16:00	<5.0	<5.0	<5.0	<5.0		<5.0	<5.0							<5.0
4/29/2004	17:00	<5.0			<5.0		<5.0								<5.0
4/29/2004	20:00	<5.0			<5.0		<5.0								**6.6**
4/30/2004	0:00	<5.0			<5.0		<5.0								**20**
4/30/2004	4.00														
4/30/2004	8:00	<5.0			<5.0		<5.0								**13**
6/14/2004	8:30	<5.0	<5.0	<5.0											<5.0
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00	<5.0	<5.0	<5.0											<5.0
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00	<5.0	<5.0	<5.0											<5.0
6/16/2004	12:15	<5.0													<5.0
6/16/2004	16:00														
6/17/2004	8:00	<5.0													<5.0
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00	<5.0													<5.0
6/18/2004	12:00														
6/18/2004	16:00														<5.0
9/13/2004	8:15														
9/13/2004	12:00														
9/13/2004	16:00														
9/14/2004	8:00														
9/14/2004	12:00														
9/14/2004	16:00														
9/15/2004	8:00														
9/15/2004	12:15														
9/15/2004	16:00														
9/16/2004	8:00														
9/16/2004	12:00														
9/16/2004	16:00														
9/17/2004	8:00														
9/17/2004	12:00														
9/17/2004	16:00														

Acetaldehyde (ug/L)		Well 6C	Well 6D	Combined	Air Stripper	Air Stripper	Air Stripper	Air Stripper	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30														
4/20/2004	12 00														
4/20/2004	16 00														
4/20/2004	20 00														
4/21/2004	0 00														
4/21/2004	8 00														
4/26/2004	12 00														
4/26/2004	16 00														
4/26/2004	20 00														
4/27/2004	0 00														
4/27/2004	8 00														
4/27/2004	16 00														
4/28/2004	0 00														
4/28/2004	8 00														
4/28/2004	16 00														
4/29/2004	0 00														
4/29/2004	8 00			<1 0					<1 0	<1 0					<1 0
4/29/2004	16 00			<1 0					<1 0	<1 0					<1 0
4/29/2004	17 00														
4/29/2004	20 00														
4/30/2004	0 00														
4/30/2004	4 00	<1 0								<1 0					<1 0
4/30/2004	8 00	<1 0								<1 0					<1 0
6/14/2004	8 30														
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00														
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00														<1 0
6/16/2004	12 15														
6/16/2004	16 00														
6/17/2004	8 00														
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00														

Butanal (ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper	Air Stripper	Air Stripper	Air Stripper	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30														
4/20/2004	12 00														
4/20/2004	16 00														
4/20/2004	20 00														
4/21/2004	0 00														
4/21/2004	8 00														
4/26/2004	12 00														
4/26/2004	16 00														
4/26/2004	20 00														
4/27/2004	0 00														
4/27/2004	8 00														
4/27/2004	16 00														
4/28/2004	0 00														
4/28/2004	8 00														
4/28/2004	16 00														
4/29/2004	0 00														
4/29/2004	8 00			<1 0					<1 0	<1 0					<1 0
4/29/2004	16 00			<1 0					<1 0	<1 0					<1 0
4/29/2004	17 00														
4/29/2004	20 00														
4/30/2004	0 00														
4/30/2004	4 00	<1 0								<1 0					<1 0
4/30/2004	8 00	<1 0								<1 0					<1 0
6/14/2004	8 30														
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00														
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00														<1 0
6/16/2004	12 15														
6/16/2004	16 00														
6/17/2004	8 00														
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00														<1 0

Formaldehyde		Well 6C	Well 6D	Combined	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30														
4/20/2004	12 00														
4/20/2004	16 00														
4/20/2004	20 00														
4/21/2004	0 00														
4/21/2004	8 00														
4/26/2004	12 00														
4/26/2004	16 00														
4/26/2004	20 00														
4/27/2004	0 00														
4/27/2004	8 00														
4/27/2004	16 00														
4/28/2004	0 00														
4/28/2004	8 00														
4/28/2004	16 00			<5 0											
4/29/2004	0 00														
4/29/2004	8 00			<5 0					<5 0	<5 0					31
4/29/2004	16 00			<5 0					<5 0	29					<5 0
4/29/2004	17 00														
4/29/2004	20 00														
4/30/2004	0 00														
4/30/2004	4 00	<5 0								<5 0					34
4/30/2004	8 00	<5 0								<5 0					33
6/14/2004	8 30														
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00														
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00														24
6/16/2004	12 15														
6/16/2004	16 00														
6/17/2004	8 00														
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00														22 (M1)

Glyoxal (ug/L)		Well 6C	Well 6D	Combined	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8:30														
4/20/2004	12:00														
4/20/2004	16:00														
4/20/2004	20:00														
4/21/2004	0:00														
4/21/2004	8:00														
4/26/2004	12:00														
4/26/2004	16:00														
4/26/2004	20:00														
4/27/2004	0:00														
4/27/2004	8:00														
4/27/2004	16:00														
4/28/2004	0:00														
4/28/2004	8:00														
4/28/2004	16:00														
4/29/2004	0:00														
4/29/2004	8:00			<1.0					<1.0	<1.0					<1.0
4/29/2004	16:00			<1.0					<1.0	<1.0					<1.0
4/29/2004	17:00														
4/29/2004	20:00														
4/30/2004	0:00														
4/30/2004	4:00	<1.0								<1.0					1
4/30/2004	8:00	<1.0								<1.0					<1.0
6/14/2004	8:30														
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00														
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00														1
6/16/2004	12:15														
6/16/2004	16:00														
6/17/2004	8:00														
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00														2 (M2)

M-Glyoxal (ug/L)

Date	Time	Well 6C	Well 6D	Combined	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8:30														
4/20/2004	12:00														
4/20/2004	16:00														
4/20/2004	20:00														
4/21/2004	0:00														
4/21/2004	8:00														
4/26/2004	12:00														
4/26/2004	16:00														
4/26/2004	20:00														
4/27/2004	0:00														
4/27/2004	8:00														
4/27/2004	16:00														
4/28/2004	0:00														
4/28/2004	8:00														
4/28/2004	16:00														
4/29/2004	0:00														
4/29/2004	8:00			<1.0					<1.0	<1.0					1
4/29/2004	16:00			<1.0					<1.0	<1.0					<1.0
4/29/2004	17:00														
4/29/2004	20:00														
4/30/2004	0:00														
4/30/2004	4:00	<1.0								<1.0					1
4/30/2004	8:00	<1.0								<1.0					1
6/14/2004	8:30														
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00														
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00														1
6/16/2004	12:15														
6/16/2004	16:00														
6/17/2004	8:00														
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00														2 (M2)

Pentanal (ug/L)		Well 6C	Well 6D	Combined	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8 30														
4/20/2004	12 00														
4/20/2004	16 00														
4/20/2004	20 00														
4/21/2004	0 00														
4/21/2004	8 00														
4/26/2004	12 00														
4/26/2004	16 00														
4/26/2004	20 00														
4/27/2004	0 00														
4/27/2004	8 00														
4/27/2004	16 00														
4/28/2004	0 00														
4/28/2004	8 00														
4/28/2004	16 00														
4/29/2004	0 00														
4/29/2004	8 00			<1 0					<1 0	<1 0					<1 0
4/29/2004	16 00			<1 0					<1 0	<1 0					<1 0
4/29/2004	17 00														
4/29/2004	20 00														
4/30/2004	0 00														
4/30/2004	4 00	<1 0								<1 0					<1 0
4/30/2004	8 00	<1 0								<1 0					<1 0
6/14/2004	8 30														
6/14/2004	12 00														
6/14/2004	16 00														
6/15/2004	8 00														
6/15/2004	12 00														
6/15/2004	16 00														
6/16/2004	8 00														<1 0
6/16/2004	12 15														
6/16/2004	16 00														
6/17/2004	8 00														
6/17/2004	12 00														
6/17/2004	16 00														
6/18/2004	8 00														<1 0

Propanal (ug/L)		Well 6C	Well 6D	Combined Influent	Air Stripper 1	Air Stripper 2	Air Stripper 3	Air Stripper 4	ISEP A	ISEP B	UV A	UV B	UV C	UV D	Combined Effluent
4/9/2004															
4/20/2004	8:30														
4/20/2004	12:00														
4/20/2004	16:00														
4/20/2004	20:00														
4/21/2004	0:00														
4/21/2004	8:00														
4/26/2004	12:00														
4/26/2004	16:00														
4/26/2004	20:00														
4/27/2004	0:00														
4/27/2004	8:00														
4/27/2004	16:00														
4/28/2004	0:00														
4/28/2004	8:00														
4/28/2004	16:00														
4/29/2004	0:00														
4/29/2004	8:00			<1.0					<1.0	<1.0					<1.0
4/29/2004	16:00			<1.0					<1.0	<1.0					<1.0
4/29/2004	17:00														
4/29/2004	20:00														
4/30/2004	0:00														
4/30/2004	4:00	<1.0								<1.0					<1.0
4/30/2004	8:00	<1.0													<1.0
6/14/2004	8:30														
6/14/2004	12:00														
6/14/2004	16:00														
6/15/2004	8:00														
6/15/2004	12:00														
6/15/2004	16:00														
6/16/2004	8:00														<1.0
6/16/2004	12:15														
6/16/2004	16:00														
6/17/2004	8:00														
6/17/2004	12:00														
6/17/2004	16:00														
6/18/2004	8:00														<1.0