Shaw Environmental, Inc.

4005 Port Chicago Highway
Concord, CA 94521
Phone: 925.288.9898
Fax: 925.288.0888

Shaw™ Shaw Environmental, Inc.

May 14, 2007
Project No.: 120854

Mr. Richard Stewart
California Department of Transportation
District 6, Fresno
2015 E. Shields Ave., Suite 100
Fresno, California 93726

Subject: Site Investigation Report for Groundwater Assessment, Caltrans Modesto Soil Stockpiles, State Route 99/132 Project, Stanislaus County, California.

Dear Mr. Stewart:

Shaw Environmental, Inc. is pleased to submit this Site Investigation Report for Groundwater Assessment, Caltrans Modesto Soil Stockpiles, State Route 99/132 Project, Stanislaus County, California. The report summarizes the results of two groundwater sampling events conducted during June and October 2006. This report is submitted in accordance with Contract No. 06A0752, Task Order No. 35.

If you have any questions, please contact me at (916) 565-4183 at your convenience.

Sincerely,

SHAW ENVIRONMENTAL, INC.

Tim Ault, P.G.,
Task Order Manager

SITE INVESTIGATION REPORT
GROUNDWATER ASSESSMENT

Caltrans Modesto Soil Stockpiles
State Route 99/132 Project
Stanislaus County, California

May 14, 2007

Prepared for:

California Department of Transportation
2015 E. Shields Ave., Suite 100
Fresno, California 93726

Prepared by:

Shaw Environmental, Inc.
1326 North Market Boulevard
Sacramento, California 95834

Task Order No.: 35
E.A. No. 10-403500
Contract No.: 06A0752

Project No.: 120854

SITE INVESTIGATION REPORT
GROUNDWATER ASSESSMENT

Caltrans Modesto Soil Stockpiles
State Route 99/132 Project
Stanislaus County, California

May 14, 2007

Prepared for:

California Department of Transportation
2015 E. Shields Ave., Suite 100
Fresno, California 93726

Prepared by:

Shaw™ Shaw Environmental, Inc.
1326 North Market Boulevard
Sacramento, California 95834

Task Order No.: 35
E.A. No. 10-403500
Contract No.: 06A0752

Project No.: 120854

SHAW ENVIRONMENTAL, INC.

Tim Ault, P.G.
Task Order Manager

PROFESSIONAL GEOLOGIST
TIMOTHY D. AULT
No. 7608
STATE OF CALIFORNIA

Table of Contents

List of Tables ii
List of Figures ii
List of Attachments ii

Executive Summary ES-1
1.0 Introduction 1-1
1.1 Site History and Hydrogeology 1-1
1.2 Project Objective 1-2
1.3 Project Description 1-3
2.0 Scope of Work 2-1
2.1 Planning and Permitting 2-1
2.2 Well Drilling and Installation 2-1
2.3 Well Development 2-2
2.4 Groundwater Sample Collection 2-3
2.5 Laboratory Analysis 2-4
2.6 Department of Water Resources Well Survey 2-5
3.0 Site Investigation Results 3-1
3.1 Metals 3-1
3.2 Nitrate, Sulfate, and Sulfide 3-3
3.3 General Chemistry 3-3
3.4 Polycyclic Aromatic Hydrocarbons 3-5
3.5 Department of Water Resources Well Survey 3-5
3.6 Hydrogeology 3-5
4.0 Summary and Conclusions 4-1
5.0 References 5-1

List of Tables

Table 1 FMC Corporation Site Background Concentrations
Table 2 Summary of Boring Locations, Well Construction and Water Levels
Table 3 Summary of Dissolved Heavy Metals Results
Table 4 Summary of Nitrate, Sulfate and Sulfide Results
Table 5 Summary of Polycyclic Aromatic Hydrocarbons (PAH) Results
Table 6 Summary of General Groundwater Chemistry Results

List of Figures

Figure 1 Site Location Map
Figure 2 Well Location Map
Figure 3 Cross-Section
Figure 4 Groundwater Elevations, First Sampling Event, June 2006
Figure 5 Groundwater Elevations, Second Sampling Event, October 2006

List of Attachments

Attachment A Drilling Permit
Attachment B Boring Logs
Attachment C Laboratory Analytical Reports and Chain-of-Custody Forms (in PDF format on attached CD)
Attachment D Department of Water Resources Well Survey (in PDF format on attached CD)
Attachment E General Water Quality Stiff Diagrams October 2006 Samples

Executive Summary

This report presents the results of a groundwater assessment performed by Shaw Environmental, Inc. (Shaw) in the vicinity of three soil stockpiles located at the intersection of State Route (SR) 99 and Kansas Avenue in Modesto, California. The stockpiles were generated during construction of SR 99 through Modesto around 1961 when Caltrans excavated property purchased from FMC, Inc. that contained a waste pond. The assessment is based primarily on the results of two groundwater sampling events conducted in June and October of 2006. Information from Caltrans, the FMC site, and the Department of Water Resources (DWR) was also reviewed.

A Preliminary Site Investigation (PSI) in 2004 found that samples from two of the stockpiles contained elevated concentrations of barium. In their review of the PSI report, the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) recommended that Caltrans evaluate groundwater quality beneath the stockpiles and complete a Preliminary Endangerment Assessment. This groundwater assessment was conducted in response to the DTSC recommendation. The work was conducted at the request and authorization of Mr. Richard Stewart of Caltrans under Contract No. 06A0752.

During the groundwater assessment, eight monitoring wells were installed adjacent to the three soil stockpiles on the Caltrans Modesto Site (Site). The wells were installed to a depth of 5 feet below first-encountered groundwater using a hollow-stem auger drilling rig. Monitoring wells were constructed of 2-inch schedule 40 polyvinyl chloride casing, in accordance with procedures and construction parameters provided in the Work Plan. The wells were subsequently developed as outlined in the Work Plan. The geologic and hydrologic characteristics of the Site were interpreted from information derived during the well installations, subsequent monitoring events, and FMC site assessments.

Two post-installation groundwater-sampling events were conducted: one in June and a second in October of 2006. Samples were collected from all eight wells during each sampling event. Samples collected in June 2006 were submitted for analysis of dissolved metals, nitrate, sulfate, sulfide, and polycyclic aromatic hydrocarbons (PAHs). General groundwater chemistry analytes (calcium, magnesium, potassium, and sodium; anions; alkalinity; and total dissolved solids) were added to the analytical suite during the October 2006 event. Findings from the investigation include the following:

- Site lithology is dominated by silty soils with laterally discontinuous lenses of interbedded sands, silty sands, and clays. Groundwater was encountered at a depth of approximately 35 feet below ground surface (approximately 50 feet above mean sea level), under semi-confined conditions.

- Groundwater flows to the southeast with a gradient of approximately 0.001 foot/foot.
- Antimony, beryllium, cadmium, mercury, and thallium were not detected above their respective reporting limits in any groundwater samples.
- Of the 13 metals detected in samples collected from one or more wells during the two sampling events, no metal exceeded its primary Maximum Contaminant Level (MCL) and only manganese exceeded the secondary consumer acceptance limit MCL.
- Barium was detected in all groundwater samples from the June and October 2006 events. None of the concentrations exceeded the barium MCL. Seven of the June and five of the October (2006) samples exceeded the barium the adjacent FMC Corporation (FMC) site groundwater background value. Samples collected from well MW-5 produced the maximum concentrations during both sampling events.
- The chromium concentration exceeded the FMC background value in all samples collected during both sampling events. Chromium did not exceed MCL criteria.
- The concentration of nitrate was below the primary MCL in all samples during both events, but the samples from well MW-6 exceeded the FMC background value during both events.
- The concentration of sulfate in samples collected from all wells was below the secondary recommended MCL but above the FMC background value in samples collected from one well. No primary MCL is established for sulfate.
- Total dissolved solids concentrations in samples exceeded the secondary recommended MCL but did not exceed the secondary upper limit MCL.
- There were no detections of PAHs in any groundwater samples.
- Sulfide was not detected in any of the samples collected from Site monitoring wells.
- Samples collected from monitoring wells MW-5 and MW-6 had the largest number of detections and highest concentrations of metals, nitrate, sulfate, and general groundwater chemistry constituents.
- General groundwater chemistry suggest~~s~~ that two distinct groundwater types are present at the Site. The two water types differ with respect to increased sodium and alkalinity in MW-5 and MW-6 as compared to the other wells. The variation suggests that groundwater intercepted by these wells originates from a different source.

The groundwater assessment has produced a characterization of the Site hydrogeology and water quality. Although some of the constituents detected exceeded FMC background concentrations, the exact source of the elevated concentrations and differing water types is presently unknown. The installation of another well within Caltrans' right of way northwest of MW-6 adjacent to the SR 99 northbound onramp from Kansas Ave. may provide additional water quality data useful to further assess Site hydrogeology.

1.0 Introduction

This report presents the results of the groundwater assessment performed by Shaw Environmental, Inc. (Shaw) in the vicinity of three soil stockpiles located at the intersection of State Route (SR) 99 and Kansas Avenue in Modesto, California (Figure 1). The assessment evaluates the potential effects of the three soil stockpiles on Site groundwater quality immediately adjacent to, and downgradient from, the three stockpiles.

1.1 Site History and Hydrogeology

The stockpiles were generated during construction of SR 99 through Modesto around 1961 when the California State Department of Transportation (Caltrans) excavated property purchased from FMC, Inc. that contained an evaporation pond. The construction of a highway interchange is proposed on the Caltrans Modesto Site (Site).

During the 1930s, Barium Products Ltd. occupied property at 1200 Barium Road (now Graphics Drive) in Modesto, just east of SR 99 between Woodland and Kansas Avenues. Barium Products Ltd. was a chemical manufacturing company processing a variety of ores and minerals, including barite (barium sulfate) and celestite (strontium sulfate). Materials produced included barium and strontium compounds; these were used in greases, lubricating oil, and pigment blanks. Sodium sulfide generated as a byproduct of barite processing was sold as a caustic and also used as a reagent in the mining industry.

Barium Products Ltd. was purchased by Westvaco Chlorine Products Corporation in 1943. In 1948, Westvaco merged with Food Machinery and Chemical Corporation (FMC). From the 1950s to the late 1970s, a liquid residue from the processing operations was discharged to unlined evaporation ponds along the western portion of the FMC site.

In 1961, a 4.3-acre parcel at the southwest corner of the FMC site was purchased by the State for right-of-way needed to construct SR 99. Aerial photographs from 1957 indicate that a portion of the southernmost holding pond on the FMC property was within the area purchased for right-of-way. Soil in and around the impoundments was excavated during construction and, according to provisions of the construction contract, stockpiled within the current Caltrans right-of-way at the location of the future SR 99/132 interchange project. Three distinct stockpiles are present at the Site (as shown on Figure 2):

- Stockpile 1, located south of Kansas Avenue and west of North Emerald Avenue
- Stockpile 2, south of Kansas Avenue, between North Emerald Avenue and SR 99
- Stockpile 3, south of Kansas Avenue and east of SR 99

The GeoTrans January 2004 report, "*Comprehensive Remedial Investigation Report, FMC Corporation, 1200 Graphics Drive, Modesto, Stanislaus County, California"* (GeoTrans, 2004) describes the initial investigation conducted to characterize the adjacent FMC site .

Site Hydrogeology

The hydrogeology of the FMC site has been characterized by numerous studies beginning in the early 1980s. The GeoTrans January 2005 report, "*Addendum to the Comprehensive Remedial Investigation Report, FMC Corporation, 1200 Graphics Drive, Modesto, Stanislaus County, California"* (GeoTrans, 2005), provides a description of the FMC site hydrogeology. This description is as follows;

> *"The site is underlain by laterally discontinuous and unconsolidated sand and silty sand associated with the Modesto and Riverbank Formations. First encountered groundwater is approximately 30 feet below ground surface (bgs) under unconfined to semi-confined conditions. A deeper aquifer is present at a depth of 165 feet bgs and separated from the upper zone by a blue clay aquitard. The upper water bearing unit has been divided into two zones: a shallow zone from first encountered groundwater to 120 feet bgs and a deeper zone from 140 feet bgs to the top of the aquitard. Groundwater flow within the upper zone is toward the southeast under a gradient of 0.002 ft/ft."*

The lithology at the Caltrans Site includes interbedded (laterally discontinuous) sands, silts, and clays. In the areas investigated, the vadose zone was dominated by silty soils. Groundwater beneath the stockpiles was encountered at a depth of approximately 35 feet bgs (elevation approximately 50 feet), under semi-confined conditions. Groundwater beneath the Site flows to the southeast under a gradient of approximately 0.001 foot/foot. The shallow aquifer conditions beneath the Caltrans Site and the FMC site appear similar and are likely representative of the local area.

Background groundwater metals and general chemistry concentrations were presented in the Parsons 2006 report, "*Revised Semi-Annual Groundwater Monitoring and Groundwater Remediation Report. FMC Corporation, 1200 Graphics Drive, Modesto, Stanislaus County, California*" (Parsons, 2006) and are presented on Table 1. Background concentrations established at the FMC site represent statistical values based on sampling from 1980 to 2005.

1.2 Project Objective

Based upon the analytical results of a Preliminary Site Assessment in 2004, which detected elevated concentrations of total and soluble barium in samples from the soil stockpiles, the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) directed Caltrans to assess groundwater beneath the Site for potential water quality impacts

(DTSC, 2005). Caltrans intends to use the stockpiles in construction of the State Route 132 expressway. Consequently, the objective of the assessment was to evaluate groundwater quality beneath the Site relative to constituents of concern (COCs) in the stockpiles, and to establish groundwater concentrations of COCs and selected other constituents for use in a human health risk assessment.

1.3 Project Description

The groundwater assessment involved the installation of eight groundwater monitoring wells. Representative samples of the first-encountered groundwater adjacent to the stockpiles were collected from the installed wells and analyzed for chemical constituents. Sample analysis included heavy metals, polycyclic aromatic hydrocarbons (PAHs), sulfate, nitrate, and sulfide and other general groundwater chemical analytes. Two groundwater sampling events were conducted for the groundwater assessment, one immediately after well installation in June 2006 and a second in October 2006.

The introduction of the groundwater assessment work plan (Shaw, 2006a) referred to the collection of surface water and ambient air data for use in the risk assessment. However, upon further consultation with Dr. Kimi Klein at DTSC, these media were found not to be applicable to the risk assessment.

This investigation was conducted at the request and authorization of Mr. Richard Stewart of Caltrans under Contract No. 06A0752, Task Order No. 35 (Caltrans, 2006). The work was performed in accordance with the "*Work Plan for Groundwater Assessment, Caltrans Modesto Soil Stockpiles, State Route 99/132 Project, Stanislaus County, California"* (Shaw, 2006a), and the procedures contained therein.

2.0 Scope of Work

The investigation scope of work was presented in Shaw's Work Plan dated January 26, 2006 (Shaw, 2006a), which was approved for implementation by Caltrans. The following scope of work was conducted:

- Permitting and Planning
- Drilling and Well Installation
- Well Development
- Groundwater Sampling
- Laboratory Analyses
- Department of Water Resources Well Survey
- Groundwater Monitoring Reports

These work elements are described in the following text.

2.1 Planning and Permitting

A pre-work site visit was conducted at the Site on September 21, 2005, and was attended by Mr. Tim Ault and Ms. Barbara Matz of Shaw and Mr. Richard Stewart of Caltrans. During the site visit, a field reconnaissance of the project area was conducted and the work scope was discussed.

The Work Plan (Shaw, 2006a) was submitted for review to the DTSC and was approved for implementation on February 8, 2006. A site-specific health and safety plan (HSP) (Shaw, 2006b) was also prepared for the Site in general accordance with 29 Code of Federal Regulations 1910.120 and Title 8, California Code of Regulations, Section 5192. The HSP included safety procedures for work to be performed at the Site, chemical hazard information, identification of site safety officers, and preferred medical emergency locations.

A subsurface drilling permit was required by Stanislaus County Environmental Health Department and was obtained prior to commencement of well installation. A copy of the drilling permit is included in Attachment A.

2.2 Well Drilling and Installation

Monitoring well installation was conducted in May and June of 2006. On May 8 and 9 monitoring wells MW-4, MW-6, and MW-8 were installed into the shallow aquifer. Water level measurements were then collected from these wells to determine the static groundwater surface and flow direction across the Site. Following this determination, the locations of the remaining five wells were selected. Their locations were approved by Caltrans, and the wells were installed

on May 22, June 2, and June 6, 2006. Well locations were selected adjacent to the soil stockpiles rather than on the stockpiles; these locations were selected to minimize any disturbance to the wells from any future construction work for the bypass on the stockpiles.

Well installation was conducted in accordance with the procedures provided in the Work Plan (Shaw, 2006a). The deepest of the wells (MW-7) was drilled to 48 feet bgs, and the screen interval was completed to between 35.5 and 45.5 feet bgs. The remaining seven wells were installed with maximum screen depths ranging between to 39 feet bgs and 45 feet bgs (Table 2). The locations of the eight wells installed during the project are shown on Figure 2.

The wells were installed using a hollow-stem auger rig with 8-inch diameter augers. Soil samples were collected at 5-foot intervals for the purpose of describing the subsurface soil. The soil lithology is a mixture of sand and silt with intermittent clayey zones. The depth to first-encountered groundwater varied from 33 to 40 feet bgs. Wells were drilled to a total depth of approximately 5 feet below the first-encountered groundwater. Static water levels were generally above the depths of the first-encountered water. Boring logs are presented in Attachment B. Figure 3 illustrates a cross-sectional view of Site lithology.

The wells were constructed of 2-inch diameter schedule 40 polyvinyl chloride riser and screen. A 10-foot length of 0.010-inch slot size screen was installed in each well and a blank riser was installed to the surface. Well completion information is provided in Table 2. A small drain hole (1/32-inch [0.03-inch]) was drilled in each bottom of each end cap. A filter pack of #2/12 silica sand was emplaced around the screen to a height of between 2 and 5 feet above the top of the screen. A seal consisting of a 1-foot thickness of bentonite pellets was placed above the filter pack and hydrated in place, followed by installation of bentonite-cement grout to the surface. The wells were secured using a flush-mount surface completion and a lockable well cap. The wells were surveyed by Espinoza Surveying to accuracies of 0.01 foot vertically and 0.1 foot horizontally. The surveyed locations are presented on Table 2.

2.3 Well Development

Following the completion of monitoring well installation, the wells were developed to restore natural hydraulic conditions and to provide sediment-free water samples representative of the groundwater in the formation. Well development was performed between 48 hours and seven days after well installation. The screened interval of each well was gently surged for at least 10 minutes and sediment-laden water was removed with a bailer. Surging continued until all sediment was removed from the well. After surging and bailing were completed, the water level and total depth were measured in each well, and the measurements were used to calculate the total volume of the well. Groundwater was pumped from the well until the well was adequately developed and suitable for sampling, as indicating by the following conditions:

- The water appeared clear to the unaided eye.
- Sediment thickness in the bottom of the well was less than 0.2 foot.
- At least three well volumes, but no more than five volumes, had been removed.
- Water quality parameters had stabilized such that three successive measurements met the following criteria:
  - pH $\pm$ 0.1 pH unit
  - Turbidity had been reduced to 10 nephelometric turbidity units or less
  - Temperature $\pm$ 1 degree Fahrenheit (^{o}F)
  - Electrical Conductivity (EC) $\pm$ 10 percent

Monitoring wells MW-5 and MW-6 produced groundwater at very low rates and development consisted of bailing wells until dry. Water quality parameters were measured during bailing but insufficient water was available to allow for stabilization of parameters. Turbidity levels remained high in wells well MW-5 and MW-6 throughout the development process.

2.4 Groundwater Sample Collection

Two groundwater sampling events were conducted as part of the groundwater assessment. The first groundwater sampling event was conducted on June 13 and 14, 2006 and included all eight wells. A second groundwater sampling event was conducted in October 2006 with groundwater samples collected on October 4 and 5. Water levels were measured prior to sampling wells on June 13 and 14, 2006 for the first event and on October 4 and 5 for the second event. The groundwater samples were collected and shipped in accordance with the procedures presented in the Work Plan (Shaw, 2006a).

Groundwater samples were collected from the well using a low-flow pump. The samples were collected directly into laboratory-prepared containers with preservatives outlined in the Work Plan (Shaw, 2006a). Water level and water quality parameters (temperature, pH, EC, dissolved oxygen) were measured in each well throughout purging. Sample collection began when successive purge measurements met the following criteria:

- pH $\pm$ 0.1 pH unit
- Temperature $\pm$ 1 ^{o}F
- EC $\pm$ 5 percent
- Dissolved oxygen $\pm$ 10 percent

Monitoring well MW-6 was purged dry during the June groundwater sampling event and was allowed to recover prior to sampling. In addition to the required purge parameters, turbidity was measured during the pre-sample purging. The turbidity remained high in monitoring wells

MW-1, MW-5, and MW-6 throughout the purge process. The samples were collected once the required parameters had stabilized.

Analytical suites for all the wells were similar for each of the respective sampling events. During the June sampling event, one groundwater sample was collected from each well and analyzed for dissolved metals, sulfide, sulfate, nitrate, and PAHs. The October sampling event was similar, except that general water quality analyses were added to the analytical suite.

The groundwater sample fraction for analysis of dissolved metals was passed through a 0.45-micron filter in the field to remove suspended sediment and the associated total metals adsorbed onto the sediment particles.

Sampling equipment was washed in a detergent rinse, a clear water rinse, and a final deionized (DI) water rinse prior to sample collection. One equipment blank sample was collected each field day to check the effectiveness of decontamination. The equipment blank sample was collected by pouring DI water through/over the decontaminated sampling equipment into laboratory-prepared containers. The equipment blank sample was analyzed for the same constituents as the groundwater samples.

All groundwater samples were labeled, packaged, and stored in an insulated chest for transport under chain-of-custody manifest to Creek Environmental Laboratories in San Luis Obispo, California, a California-certified analytical laboratory. Samples were shipped to the laboratory via overnight courier.

2.5 Laboratory Analysis

The groundwater samples were submitted to the analytical laboratory via overnight courier within 24 hours of collection. The analyses were conducted in accordance with U.S. Environmental Protection Agency (EPA 1983, 1986) specified holding times, and on a normal turnaround basis. General water quality parameters, which include total dissolved solids (TDS), alkalinity (total carbonate-bicarbonate) and chloride concentrations, were evaluated during the October event only. Calcium, magnesium, sodium, and potassium were also added to the requested analyte list for the October 2006 event to provide data for general water quality evaluation. Analyses were performed in accordance with the following methods, for the analytes listed:

Analyte[1]	Groundwater Samples	Method	Sample Preservation
Dissolved Metals (field-filtered through 0.45-micron filter)	8 samples/event	EPA 6020B/7470A	HNO_3; 4 ± 2°C
Chloride	8 samples (October only)	EPA Method 9056/300	4 ± 2°C
Nitrate	8 samples/event	EPA Method 9056/300	4 ± 2°C
Sulfate	8 samples/event	EPA Method 9056/300	4 ± 2°C
Sulfide	8 samples/event	EPA Method 9030B/376	NaOH; ZnOAc; 4 ± 2°C
Alkalinity	8 samples (October only)	Carbonate and Bi carbonate	4 ± 2°C
Total Dissolved Solids	8 samples (October only)	EPA 160.1	4 ± 2°C
PAHs	8 samples/event	EPA Method 8270C-SIM	4 ± 2°C

Note 1: calcium, magnesium, sodium, and potassium analyzed in October 2006

HNO_3 = nitric acid

°C = degrees Celsius

NaOH = sodium hydroxide

ZnOAc = zinc acetate

The results of the requested analyses are presented in Tables 3 through 6 and certified analytical laboratory reports are presented in Attachment C.

2.6 Department of Water Resources Well Survey

The groundwater assessment included a survey of groundwater wells located in the vicinity of the Site. A request was submitted to the Department of Water Resources, San Joaquin District, to identify existing wells within a 1-mile radius of the Site. The results of this request are presented on Figure 1 of Attachment D and discussed in Section 3.0.

3.0 Site Investigation Results

The groundwater analytical results for the June and October 2006 sampling events are presented on Table 3 (metals), Table 4 (nitrate, sulfate, and sulfide), Table 5 (PAHs) and Table 6 (general groundwater chemistry) and are summarized below.

3.1 Metals

Analytical results for dissolved metals are presented on Table 3 along with the California maximum contaminant levels (MCLs) and the FMC site groundwater background values (Parsons, 2006). Antimony, beryllium, cadmium, mercury, and thallium were not detected above their respective reporting limits in any groundwater samples. The maximum concentrations reported in samples and the associated monitoring wells were as follows:

Analyte	Number of Samples with Detection >RL		Maximum Concentration (µg/L)		Well with Maximum Concentration	
Sampling Event	June 2006	October 2006	June 2006	October 2006	June 2006	October 2006
Arsenic	8	8	3.6	5.2	MW-6	MW-6
Barium	8	8	400	410	MW-5	MW-5
Chromium	8	8	16	29	MW-6	MW-6
Cobalt	2	0	3	ND	MW-6	ND
Copper	3	8	6.2	2.1	MW-6	MW-4
Lead	2	0	3.4	ND	MW-6	ND
Manganese	8	5	260	130	MW-5	MW-6
Molybdenum	6	4	13	14	MW-6	MW-5
Nickel	8	5	7.1	3.4	MW-5	MW-5
Selenium	6	1	3	1.2	MW-6	MW-7
Silver	0	1	ND	2.1	ND	MW-5
Vanadium	8	8	33	34	MW-6	MW-6
Zinc	1	0	15	ND	MW-6	/ND

Note: µg/L = micrograms per liter; RL = reporting limit, ND=no detections

Analytical results for the June and October 2006 sampling events were comparable, showing some variability but similar concentrations of nearly all constituents. No metals exceeded their respective primary MCLs (State of California, 2003) in samples collected during the groundwater assessment sampling. Manganese was detected in three samples (MW-4, MW-5 and MW-6) in excess of the secondary consumer acceptance MCL criteria (50 µg/L) during the

June event. Samples from only two of the wells (MW5 and MW-6) exceeded the secondary MCL criteria for manganese during the October sampling event.

Three metals (cobalt, lead, and zinc) detected in June (at maximum concentrations of 3 µg/L, 3.4 µg/L and 15 µg/L, respectively) were not detected in any groundwater samples during the October event. Silver, which was not detected in June, was detected in October at a concentration of 2.1 µg/L in the sample from monitoring well MW-5.

Copper was detected in samples collected during both June and October, with maximum concentrations of 6.2 ug/L and 2.1 ug/L, respectively. Three of the June 2006 copper results were qualified as non-detected due to equipment blank contamination.

Molybdenum, nickel, and selenium were detected sporadically during the groundwater assessment sampling at concentrations well below their MCL criteria. No FMC background values are established for these metals.

Arsenic was detected in samples collected from all eight wells during both sampling events at concentrations below the MCL (10 µg/L) and FMC background level (5.9 µg/L). Concentrations ranged between 1.8 µg/L and 3.6 µg/L during the June event and from 2.1 µg/L to 5.2 µg/L during the October event. The highest arsenic concentrations detected during the sampling events were in the samples collected from monitoring well MW-6.

Barium was detected in all samples during both the June and October events. Barium detections ranged from 60 µg/L to 400 µg/L during June and between 57 µg/L and 410 µg/L during October. All of the sample concentrations were well below the barium MCL of 1,000 µg/L. Seven of the June samples and five of the October samples exceeded the FMC barium background concentration of 76 µg/L. Samples from monitoring well MW-5 produced the maximum detected barium concentrations during both the June and October events.

Chromium was detected at concentrations below the MCL (50 µg/L) but above the FMC background level (5.3 µg/L) in all samples collected during the June and October 2006 sampling events. The June event concentrations ranged between 7 µg/L and 16 µg/L. The October 2006 results were similar, although the chromium concentrations were slightly higher, ranging from 7.9 µg/L to 29 µg/L. The highest detected chromium concentrations for both monitoring events were in the samples collected from monitoring well MW-6.

Metal concentrations detected in Site wells are from two sampling events as compared to statistical FMC background values from twenty-five years of sampling.

3.2 Nitrate, Sulfate, and Sulfide

Nitrate and sulfate concentrations varied somewhat between sampling events but were generally within the same concentration ranges for both events. Statistical values for FMC were used to compare the nitrate and sulfate concentrations at the Site.

Nitrate was detected in all groundwater samples collected during June and October 2006 at maximum concentrations of 12,000 µg/L in June and 15,000 µg/L in October. All nitrate detections were well below the MCL of 45,000 µg/L. The maximum nitrate concentrations for both events were detected in samples from well MW-6 which exceeded the adjacent FMC site nitrate background value of 11,000 µg/L. Monitoring well MW-6 was the only well that produced samples exceeding the background concentration.

Sulfate was also detected in all samples during both sampling events, with concentrations ranging from 11,000 µg/L to 76,000 µg/L. The sulfate content of the groundwater samples generally decreased between June and October 2006 with one exception, the sample from well MW-6, in which sulfate increased slightly. No primary MCL has been established for sulfate, but the secondary recommended MCL for sulfate is 250,000 µg/L. All samples collected from the Site wells were well below the secondary recommended MCL concentration. The sulfate concentration in samples collected from well MW-6 exceeded the FMC site background value (46,000 µg/L) during both sampling events.

Sulfide was not detected in any of the samples collected from Site monitoring wells.

3.3 General Chemistry

Analyses were added to the analytical suite during the October 2006 sampling event to provide general groundwater chemistry data. These analytes included calcium, magnesium, potassium, and sodium, TDS, total carbonate-bicarbonate alkalinity, and chloride. The results of these analyses are presented on Table 6. General groundwater chemistry provides insight into the origin and chemical condition of the aquifer waters. These parameters are graphically represented as Stiff diagrams presented in Attachment E. The Stiff diagrams were used to evaluate the relative composition of groundwater with respect to major anion and cation species. Similarities in the Stiff diagrams indicate possible similarities in a groundwater's origin. Conversely, differences may reflect distinct origins or the influence of source areas. General groundwater chemistry results suggest that multiple water types are present at the Site with variations in sodium content and alkalinity being the principal difference between the types.

No primary MCLs are established for the above-mentioned general groundwater chemistry parameters, although secondary MCLs have been established for chloride and TDS. Chloride was detected in all eight of the October 2006 groundwater samples at concentrations ranging from 7,400 µg/L to 28,000 µg/L. The highest chloride concentrations were detected in samples

from wells MW-2 and MW-5 (23,000 µg/L and 28,000 µg/L, respectively). The lowest concentration was 7,400 µg/L detected in a sample from well MW-7. The secondary recommended MCL for chloride is 250,000 µg/L, with a secondary upper-limit MCL designated at 500,000 µg/L. None of the October 2006 groundwater samples exceeded the secondary recommended MCL for chloride. No background value has been established for chloride at the FMC site.

The secondary recommended MCL for TDS is 500,000 µg/L, with an upper limit designated at 1,000,000 µg/L. Groundwater samples from three wells (MW-1, MW-5, and MW-6) contained TDS at concentrations equal to or exceeding the recommended MCL (500,000 µg/L) but no collected samples exceeded the 1,000,000 µg/L upper limit. Samples from wells MW-5 and MW-6 exceeded the FMC site background statistical value of 563,000 µg/L. The two highest TDS concentrations for the October event were detected in samples collected from wells MW-5 and MW-6 (730,000 µg/L and 700,000 µg/L, respectively).

The remaining general groundwater chemistry analytes (calcium, magnesium, potassium, sodium, and bicarbonate) were detected in groundwater samples from all eight monitoring wells. The maximum detected concentrations for calcium, magnesium, potassium, sodium, and bicarbonate were reported in the sample collected from well MW-5. Sodium concentrations in samples from wells MW-5 and MW-6 were higher than in samples from other Site wells. Sodium concentrations in samples from both these wells were 160,000 µg/L with the next highest concentration (77,000 µg/L) detected in a sample from well MW-8.

Standard indicators for general groundwater chemistry (anion-cation balance, TDS and EC ratios) are presented for each well along with Stiff diagrams (Attachment E). The anion-cation balances were, with the exception of MW-5, below 15 percent indicating a reasonable balance given analytical uncertainties. Well MW-5 slightly exceeded the range at 16.4 percent. Ratios of measured/calculated concentrations for TDS and EC are slightly out of expected ranges. The TDS ratios for groundwater samples are slightly below the ideal (1.0 to 1.2.), implying either a high bias in one or more elemental analyses or a low bias in the TDS measurements. The EC ratios are also slightly outside the ideal range (0.9 to 1.1), potentially resulting from assumptions made about aqueous speciation and redox conditions.

The Stiff diagrams for the groundwater analyses from the Site indicate variations in the potassium+sodium and alkalinity composition between Site wells. The variations are primarily related the groundwater's sodium content with the potassium content being less variable between wells. Samples from monitoring wells MW-1 and MW-7, which are located at opposite ends of the Site, have compositions that are similar, being deficient in sodium content in comparison to samples from other Site wells.

Samples from wells MW-5, MW-6, and MW-08 represent contrasting groundwater compositions with higher proportions of sodium. Samples from monitoring wells MW-2, MW-3, and MW-4 are intermediate with respect to sodium-potassium content, potentially the result of mixing two distinct groundwater types. This suggests, although not conclusively, that Site groundwater may be derived from two sources and mixing of these waters is occurring on site. The location of the similar groundwater types, at opposite ends of the Site, presents complications with respect to determining the origin of the distinct groundwater types.

3.4 Polycyclic Aromatic Hydrocarbons

Sixteen groundwater samples were analyzed for PAHs during the two sampling events as shown on Table 5. There were no detections of PAHs in any of the groundwater samples.

3.5 Department of Water Resources Well Survey

At the request of Shaw, the Department of Water Resources conducted a well survey for all wells within a 1-mile radius of the Site. The survey identified 43 existing or former wells. Attachment D depicts wells identified in the survey and indicates their current status. Information for all but eight of the recorded wells provided sufficient detail to identify their locations. These eight wells are approximately located on the location map (Figure D-1 in Attachment D). Nineteen of the wells were noted as abandoned and nine are monitoring wells that are not designed for domestic or commercial use. Within the area of the well survey, there were no active water supply wells identified in the general (southeast) flow direction from the Site.

3.6 Hydrogeology

The installation, measurements of water levels, and sampling of wells provide a characterization of lithology, groundwater flow, and water quality at the Site. The monitoring wells, which are completed in first-encountered groundwater adjacent to the stockpiles, provide data for an assessment of groundwater conditions. The data provide information which may assist in evaluating the effects (if any) of soil stockpiles on the underlying groundwater.

Eight monitoring wells were installed into the unconsolidated sand, silty sand, and silt layers within the Modesto Formation which underlies the Site. The wells were installed into the first-encountered water within the shallow zone aquifer of the upper aquifer (shallow zone). The shallow zone groundwater is present in unconfined to semi-confined water-bearing zones under the Site. Semi-confined conditions may be indicated in some Site wells by static water levels shallower than the first-encountered water observed during drilling (Figure 3).

The results of water level measurements for the June and October 2006 sampling events are presented on Table 2 and are illustrated on Figures 4 and 5. The groundwater depths beneath the

Caltrans Site ranged from approximately 30 to 41 feet bgs during the groundwater investigation. The water level declined 2 to 3 feet from initial levels in June 2006 to the October 2006 levels, reflecting what is considered to be seasonal variation.

The potentiometric surface (Figure 4), although higher than originally anticipated, is comparable to historic groundwater elevations in the shallow zone wells at the FMC site. The elevation of the shallow water table in June 2006 ranged from 50.44 feet above mean sea level (msl) in the western well MW-1, to 47.61 feet msl in well MW-8 at the southeastern Site boundary. The potentiometric surface observed during the October 2006 sampling event was similar in configuration, although generally deeper (lower in elevation). The potentiometric surface ranged from 47.91 to 44.78 feet msl in October, representing a decline of between 2.2 and 2.8 feet since June 2006.

The groundwater flow direction of the shallow-upper aquifer, as indicated by the potentiometric surfaces for both June and October, is generally southeast with a hydraulic gradient of approximately 0.001 foot/foot (Figures 4 and 5). Localized potentiometric surface anomalies may exist near the eastern Site boundary, potentially resulting from preferential flow pathways (e.g., buried channel), from off-site pumping, or from the screening of individual wells in slightly different depths.

4.0 Summary and Conclusions

Groundwater quality in the shallow-upper aquifer at the Site was assessed through the collection and analysis of samples from eight monitoring wells adjacent to the stockpiles during June and October 2006. The monitoring wells were installed just prior to the June 2006 sampling event. The regional flow direction in the upper-shallow aquifer is to the southeast, as observed in the more widespread FMC monitoring well network (Parsons 2005 and 2006). The groundwater flow regime at the Caltrans Modesto Site generally reflects the current regional southeastly flow direction. Similarities in general groundwater chemistry between samples from wells MW-1 (to the west) and MW-7 (to the east), as indicated by similar Stiff diagram patterns, suggest complexities in groundwater flow, or the screening of wells in semi-isolated geologic units. The isolation of units and flow patterns may influence the observed distribution of groundwater constituents at the Site.

Groundwater constituents analyzed during the assessment did not exceed respective primary MCLs for drinking water established by the California Department of Health Services. Manganese was detected at a concentration above the secondary consumer acceptance limit MCL in samples collected from wells MW-4, MW-5, and MW-6. TDS exceeded the secondary recommended MCL in samples from three wells (MW-1, MW-5, and MW-6) with the highest detection found in a sample from well MW-5. Background concentrations established for the upper-shallow aquifer at the FMC site (Parsons 2006) were used as a comparison of groundwater quality.

The work conducted during the Caltrans Modesto Site groundwater assessment has produced a characterization of the Site geology, groundwater hydrology, and water quality. The groundwater analytical data show distinct trends with respect to the distribution of potential COCs. Samples from monitoring wells MW-5 and MW-6 generally produced the largest number and (generally) the highest constituent concentrations during both the June and October events.

The presence of two distinct groundwater types as illustrated by the Stiff diagrams also suggests that subtleties may exist in the groundwater flow regime. Continued monitoring of temporal changes to the local and regional flow regimes would provide additional insight into the variability of groundwater flow patterns. The installation of another well within Caltrans' right of way northwest of MW-6 adjacent to the SR 99 northbound onramp from Kansas Ave. may provide additional water quality data useful to further assess Site hydrogeology and COC distributions.

5.0 References

Caltrans (California Department of Transportation), 2006, *California Department of Transportation, District 6, Contract No. 06A0752, Task Order No. 35*, dated March 10, 2006.

California Environmental Protection Agency Department of Toxic Substances Control, 2005, *Caltrans Modesto Soil Stockpile (State Route 99/132 Project), Caltrans/Department of Toxic Substances Control Interagency Agreement Task Order No. 10-43A0142-03; Department of Toxic Substances Control No. 03-T2641*, letter to Mr. Gerald H. White, Chief, Hazardous Waste Branch, Caltrans, District 6, dated April 8, 2005.

Geotrans Inc, 2004, *Comprehensive Remedial Investigation Report, FMC Corporation 1200 Graphics Drive, Modesto, Stanislaus County, California*, dated January 2004.

Geotrans Inc, 2005, *The GeoTrans January 2005 report, Addendum to the Comprehensive Remedial Investigation Report, FMC Corporation, 1200 Graphics Drive, Modesto, Stanislaus County, California.*

Parsons, 2005, *Annual Groundwater Monitoring and Groundwater Remediation Report, FMC Corporation, 1200 Graphics Drive, Modesto, Stanislaus County, California*, dated October 2005.

Parsons, 2006, *Revised Semi-Annual Groundwater Monitoring and Groundwater Remediation Report, FMC Corporation, 1200 Graphics Drive, Modesto, Stanislaus County, California*, dated May, 2006.

Shaw Environmental, Inc., 2006a, *Final Work Plan for Groundwater Assessment, Caltrans Modesto Soil Stockpiles, State Route 99/132 Project, Stanislaus County, California*, dated January 26, 2006.

Shaw Environmental, Inc., 2006b, *Health and Safety Plan Groundwater Assessment, Caltrans Modesto Soil Stockpiles, State Route 99/132 Project, Stanislaus County, California*, dated January 25, 2006.

State of California, 2003, California Code of Regulations, Title 22, Toxics, Division 22, Department of Health Services: Subsections; 22-64431. *Maximum Contaminant Levels-Inorganic Chemicals,* 22-64441, *Levels-Organic Chemicals.* September 12, 2003.

U.S. Environmental Protection Agency (EPA), 1983, *Methods for Chemical Analysis of Water and Wastes*.

U.S. Environmental Protection Agency (EPA), 1986, *Test Methods for Evaluating Solid Waste, Physical Chemical Methods*, SW-846.

Tables

Table 1
FMC Corporation Site Background Concentrations
Caltrans Modesto Groundwater Monitoring, State Route 99/132
Stanislaus County, California
Task Order No. 35

	Analyte	FMC Site Background Value	Unit
Metals	Antimony	0.7	ug/L
	Arsenic	5.9	ug/L
	Barium	76	ug/L
	Chromium	5.3	ug/L
General Chemisty	Nitrate as Nitrogen	11,000	ug/L
	Sulfate	46,000	ug/L
	Sulfide	<100	ug/L
	Total Dissolved Solids	563,000	ug/L

Notes:

FMC Corporation = Food Machinery and Chemical Corporation
FMC Site Background Value: Parsons, 2006.
ug/L = micrograms per liter

Table 2
Summary of Boring Locations, Well Construction and Water Levels
Caltrans Modesto Groundwater Monitoring, State Route 99/132
Stanislaus County, California
Task Order No. 35

Location Group	Boring	Longitude	Latitude	Surface Elevation	Drilled Depth (ft. bgs)	Screen Interval (ft. bgs)	Sand Interval (ft. bgs)	Seal Interval (ft. bgs)	Top Of Casing (ft. MSL)	GW Depth (ft. bgs)	GW Elevation (ft. MSL)	GW Date Measured
Stockpile #1	SR99/132-MW-1	121.023056679	37.645141287	80.62	44	32-42	27-44	25-27	80.26	29.82	50.44	6/14/2006
										32.35	47.91	10/5/2006
Stockpile #1	SR99/132-MW-2	121.023110425	37.644619564	81.33	40	29.0-39	27.5-40	25.5-27.5	81.1	30.72	50.38	6/13/2006
										33.35	47.75	10/5/2006
Stockpile #2	SR99/132-MW-3	121.018265697	37.645190884	82.13	41	31-41	28-41	26.5-28	81.76	32.28	49.48	6/13/2006
										34.88	46.88	10/5/2006
Stockpile #2	SR99/132-MW-4	121.020984836	37.644596871	82.53	42	30-40	26-42	23-26	82.36	32.39	49.97	6/13/2006
										35.05	47.31	10/4/2006
Stockpile #2	SR99/132-MW-5	121.016421214	37.644601236	88.03	45	35-45	33.7-46.5	31-33.7	87.73	38.79	48.94	6/14/2006
										41.4	46.33	10/5/2006
Stockpile #3	SR99/132-MW-6	121.014319224	37.645079394	84.55	46.5	33-43	30-46.5	28-30	84.37	36.35	48.02	6/14/2006
										38.55	45.82	10/5/2006
Stockpile #3	SR99/132-MW-7	121.012913369	37.644428102	83.88	48	35.5-45.5	34.5-48	30.5-34.5	83.64	35.59	48.05	6/14/2006
										38.32	45.32	10/4/2006
Stockpile #3	SR99/132-MW-8	121.011423619	37.643547007	83.97	45	31-41	27-45	23-27	83.73	36.12	47.61	6/14/2006
										38.95	44.78	10/4/2006

Notes:

bgs = below ground surface
MSL = mean sea level
GW = Groundwater
Horizontal datum = California State Plane Zone NAD83
Vertical datum = North American Vertical Datum 1988

Table 3
Summary of Dissolved Heavy Metals Results
Caltrans Modesto Groundwater Monitoring, State Route 99/132
Stanislaus County, California
Task Order No. 35

Sample Group	Sample Description	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		Units	**ug/L for all metals**																	
Stockpile #1	SR99/132-MW-1	6/14/2006	ND	2.1	130	ND	ND	10	ND	1.1	ND	34	ND	2.9	2.9	ND	ND	ND	23	ND
		10/5/2006	ND	2.2	120	ND	ND	16	ND	2	ND	ND	ND	ND	1.5	ND	ND	ND	26	ND
Stockpile #1	SR99/132-MW-2	6/13/2006	ND	2.1	87	ND	ND	8.5	ND	1.2 U	ND	24	ND	3.3	2	1.3	ND	ND	22	ND
		10/5/2006	ND	2.6	84	ND	ND	11	ND	1.7	ND	ND	ND	ND	1.2	ND	ND	ND	27	ND
Stockpile #2	SR99/132-MW-3	6/13/2006	ND	3	60	ND	ND	7.1	ND	1 U	ND	4.7	ND	ND	1.4	1.4	ND	ND	25	ND
		10/5/2006	ND	3.3	58	ND	ND	7.9	ND	1.5	ND	18	ND	2.2	ND	ND	ND	ND	29	ND
Stockpile #2	SR99/132-MW-4	6/13/2006	ND	1.8	130	ND	ND	8.9	ND	1.6 U	ND	62	ND	2.5	2.4	ND	ND	ND	19	ND
		10/4/2006	ND	2.1	100	ND	ND	9.9	ND	2.1	ND	4.1	ND	ND	ND	ND	ND	ND	24	ND
Stockpile #2	SR99/132-MW-5	6/14/2006	ND	1.8	400	ND	ND	9.6	2.2	4.8	1.4	260	ND	9.9	7.1	2	ND	ND	23	ND
		10/5/2006	ND	2.5	410	ND	ND	18	ND	1.9	ND	120	ND	14	3.4	ND	2.1	ND	24	ND
Stockpile #3	SR99/132-MW-6	6/14/2006	ND	3.6	160	ND	ND	16	3	6.2	3.4	190	ND	13	5.9	3	ND	ND	33	15
		10/5/2006	ND	5.2	120	ND	ND	29	ND	1.5	ND	130	ND	13	1.7	ND	ND	ND	34	ND
Stockpile #3	SR99/132-MW-7	6/14/2006	ND	2.3	80	ND	ND	7	ND	ND	ND	9	ND	2.6	2.2	1.1	ND	ND	17	ND
		10/4/2006	ND	2.7	73	ND	ND	10	ND	1.6	ND	1.1	ND	ND	1.4	1.2	ND	ND	23	ND
Stockpile #3	SR99/132-MW-8	6/14/2006	ND	2.7	84	ND	ND	8.8	ND	ND	ND	5.8	ND	ND	1.2	1.6	ND	ND	25	ND
		10/4/2006	ND	4	57	ND	ND	9.7	ND	1.7	ND	ND	ND	2	ND	ND	ND	ND	32	ND
		Reporting Limit	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**0.2**	**2**	**1**	**1**	**1**	**1**	**1**	**10**
		Maximum Contaminant Level	**6**	**10**	**1000**	**4**	**5**	**50**	**--**	**1000**[1]	**15**	**50**[1]	**2**	**--**	**100**	**50**	**100**[1]	**2**	**--**	**5000**[1]
		FMC Site Background Value	**0.7**	**5.9**	**76**	**--**	**--**	**5.3**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Notes:
-- = not applicable
ug/L = micrograms per liter
U = The result was qualified as a non-detect due to equipment blank contamination .
FMC = Food Machinery and Chemical (Corporation)
MCL = Maximum Contaminant Level, Sept. 12, 2003, California Title 22
(1) = Secondary Drinking Water Standard
FMC Site Background Value: Parsons, 2006.
ND = not detected

Table 4
Summary of Nitrate, Sulfate, and Sulfide Results
Caltrans Modesto Site Groundwater Monitoring, State Route 99/132
Stanislaus County, California
Task Order No. 35

Sample Group	Sample Description (site-boring)	Sample Date	Nitrate (ug/L)	Sulfate (ug/L)	Sulfide (ug/L)
Stockpile #1	SR99/132-MW-1	6/14/2006	5000	18000	ND
		10/5/2006	6800	18000	ND
Stockpile #1	SR99/132-MW-2	6/13/2006	5500	21000	ND
		10/5/2006	6100	16000	ND
Stockpile #2	SR99/132-MW-3	6/13/2006	5400	18000	ND
		10/5/2006	5000	17000	ND
Stockpile #2	SR99/132-MW-4	6/13/2006	3500	15000	ND
		10/4/2006	3500	11000	ND
Stockpile #2	SR99/132-MW-5	6/14/2006	8300	37000	ND
		10/5/2006	10000	32000	ND
Stockpile #3	SR99/132-MW-6	6/14/2006	12000	70000	ND
		10/5/2006	15000	76000	ND
Stockpile #3	SR99/132-MW-7	6/14/2006	3000	29000	ND
		10/4/2006	3100	26000	ND
Stockpile #3	SR99/132-MW-8	6/14/2006	9200	26000	ND
		10/4/2006	7800	21000	ND
		Reporting Limit	**100**	**500**	**100**
		Maximum Contaminant Level	**45,000**	**250,000** [(1)]	**-**
		FMC Site Background Value	**11,000**	**46,000**	**100**

Notes:

- = not applicable
ug/L = micrograms per liter
FMC = Food Machinery and Chemical Corporation
MCL = Maximum Contaminant Level, Sept. 12, 2003, California Title 22
(1) Secondary MCL - recommended = 250,000 ug/L
ND = not detected

Table 5
Summary of Polycyclic Aromatic Hydrocarbons (PAH) Results
Caltrans Modesto Groundwater Monitoring, State Route 99/132
Stanislaus County, California
Task Order No. 35

Sample Group	Sample Description	Sample Group	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
		Units	**ug/L for all PAHs**																
Stockpile #1	SR99/132-MW-1	6/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/5/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #1	SR99/132-MW-2	6/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/5/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #2	SR99/132-MW-3	6/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/5/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #2	SR99/132-MW-4	6/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/4/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #2	SR99/132-MW-5	6/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/5/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #3	SR99/132-MW-6	6/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/5/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #3	SR99/132-MW-7	6/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/4/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Stockpile #3	SR99/132-MW-8	6/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		10/4/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Reporting Limit	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
		Maximum Contaminant Level	**--**	**--**	**--**	**--**	**--**	**0.2**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Notes:

-- = not applicable
ug/L = micrograms per liter
ND = not detected

Table 6
Summary of General Groundwater Chemistry Results
Caltrans Modesto Site Groundwater Monitoring, State Route 99/132
Stanislaus County, California
Task Order No. 35

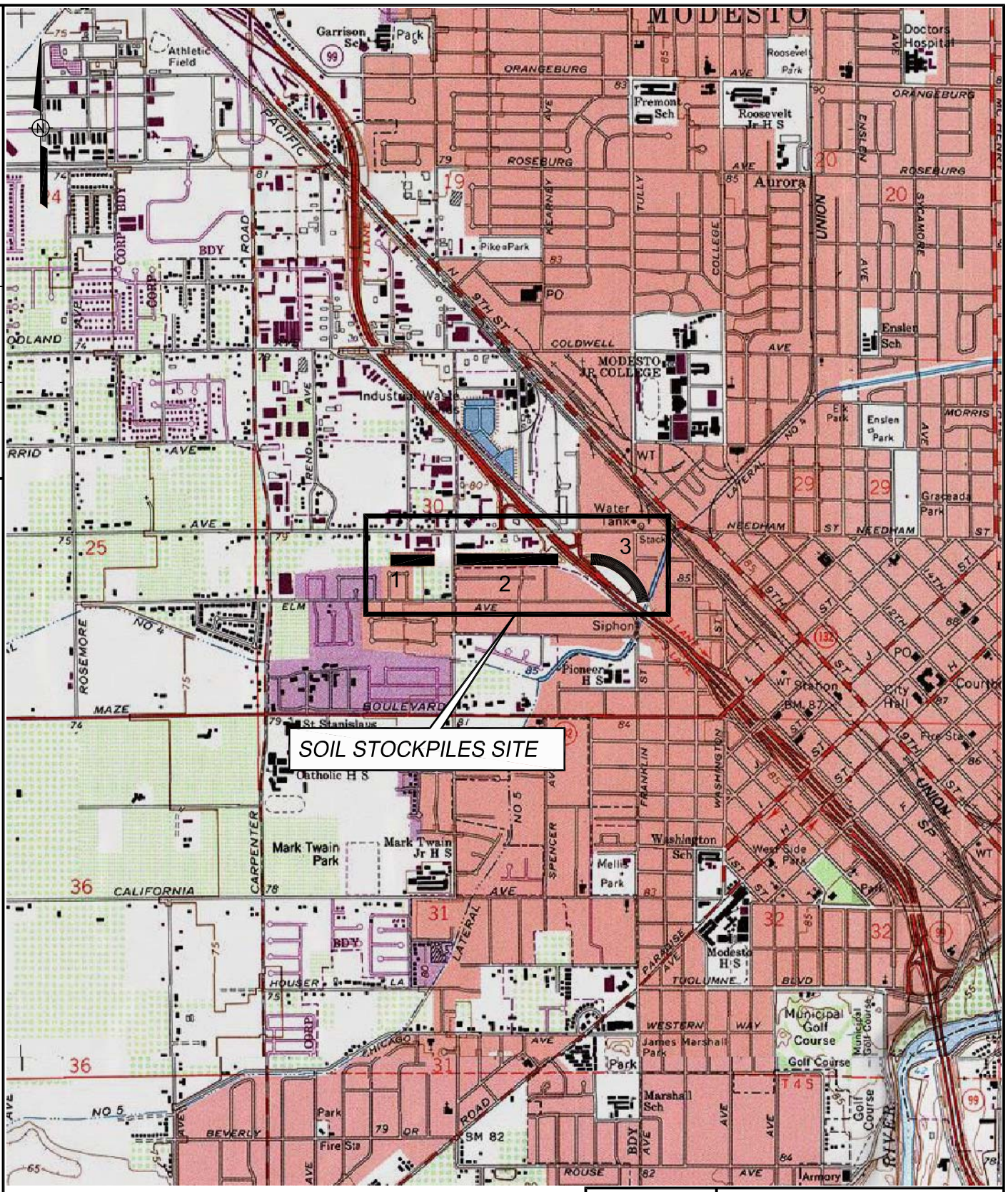
Sample Group	Sample Description	Sample Group	Calcium	Magnesium	Potassium	Sodium	Chloride	Total Dissolved Solids	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3
		Units	**ug/L for all analytes**								
Stockpile #1	SR99/132-MW-1	10/5/2006	88000	34000	3700	22000	14000	500000	360000	ND	360000
Stockpile #1	SR99/132-MW-2	10/5/2006	49000	16000	2700	56000	23000	390000	250000	ND	250000
Stockpile #2	SR99/132-MW-3	10/5/2006	42000	15000	2500	43000	11000	340000	220000	ND	220000
Stockpile #2	SR99/132-MW-4	10/4/2006	43000	13000	2600	43000	6600	340000	250000	ND	250000
Stockpile #2	SR99/132-MW-5	10/5/2006	100000	37000	7500	160000	28000	730000	540000	ND	540000
Stockpile #3	SR99/132-MW-6	10/5/2006	67000	22000	5600	160000	21000	700000	420000	ND	420000
Stockpile #3	SR99/132-MW-7	10/4/2006	69000	21000	2900	16000	7400	370000	270000	ND	270000
Stockpile #3	SR99/132-MW-8	10/4/2006	22000	6800	2400	77000	12000	360000	200000	ND	200000
		Reporting Limit	**40**	**40**	**40**	**40**	**1,000**	**10,000**	**1,000**	**1,000**	**2,000**
		Maximum Contaminant Level	--	--	--	--	**250,000 (1)**	**1,000,000 (2)**	--	--	--
		FMC Site Background Value	--	--	--	--	--	**563,000**	--	--	--

Notes:

CaCO3 = calcium carbonate
-- = not analyzed
n/a = not applicable
ug/L = micrograms per liter
FMC = Food Machinery and Chemical Corporation
MCL = Maximum Contaminant Level, Sept. 12, 2003, California Title 22
(1) Secondary MCL - recommended = 250,000 ug/L
(2) Secondary MCL - recommended = 500,000 ug/L; upper limit = 1,000,000 ug/L
FMC Site Background Value: Parsons, 2006.
ND = not detected

Figures

PROJECT NUMBER	120854-A7
DRAWN BY	SCHAEFFER
3/15/07	



REFERENCE:
7.5' USGS TOPOGRAPHIC QUADRANGLE OF "SALIDA" CALIFORNIA; DATED 1987; SCALE = 1:24000

STOCKPILE AND IDENTIFICATION NUMBER
1

SCALE
0 2000 4000 FEET

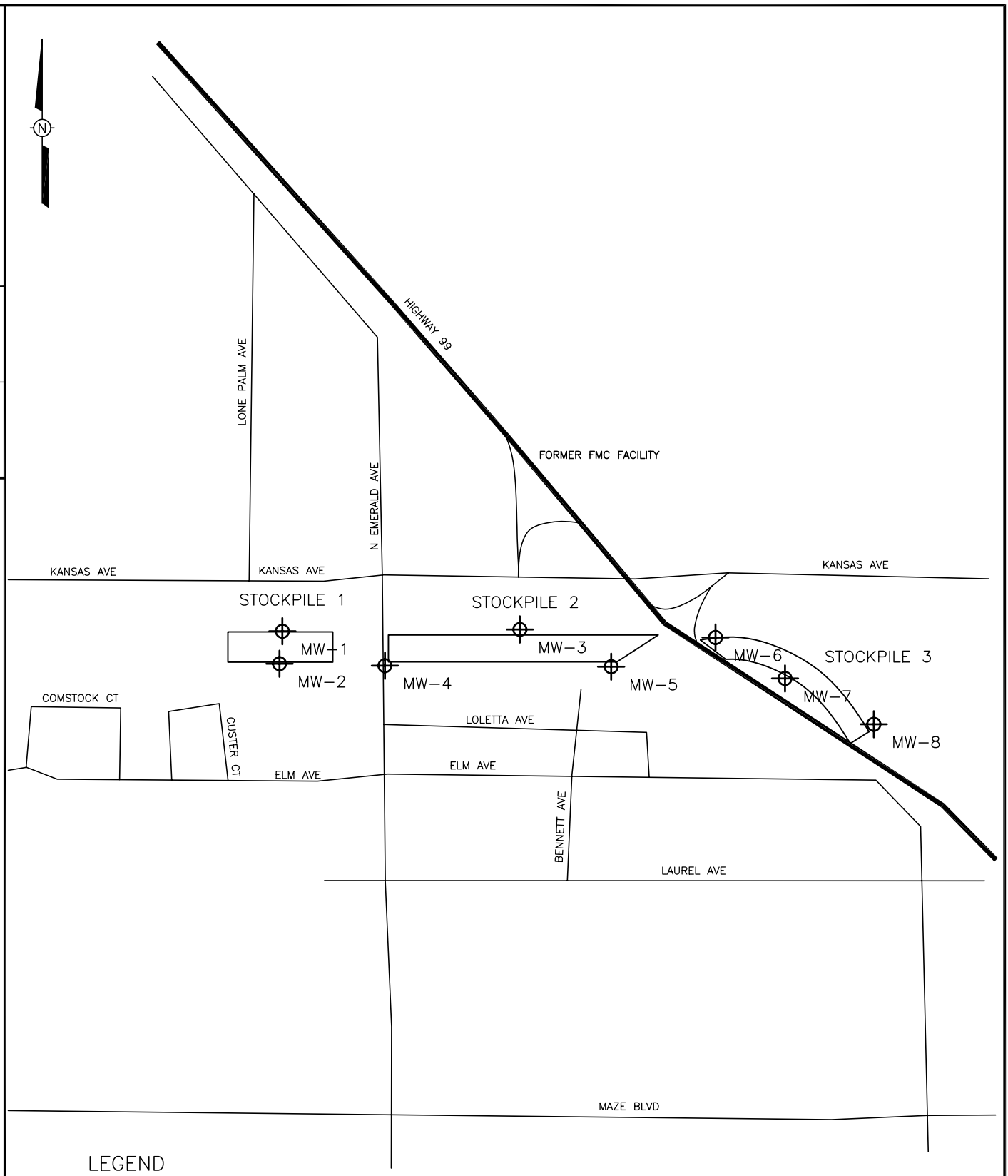
Shaw®

CALIFORNIA DEPARTMENT OF TRANSPORTATION
STATE ROUTE 99/132 PROJECT
MODESTO, CALIFORNIA
TASK ORDER 35

FIGURE 1

SITE LOCATION MAP

DRAWN BY	PROJECT NUMBER
SCHAEFFER 4-27-07	120854-A3



LEGEND

⌖ MONITORING WELL LOCATION

SCALE

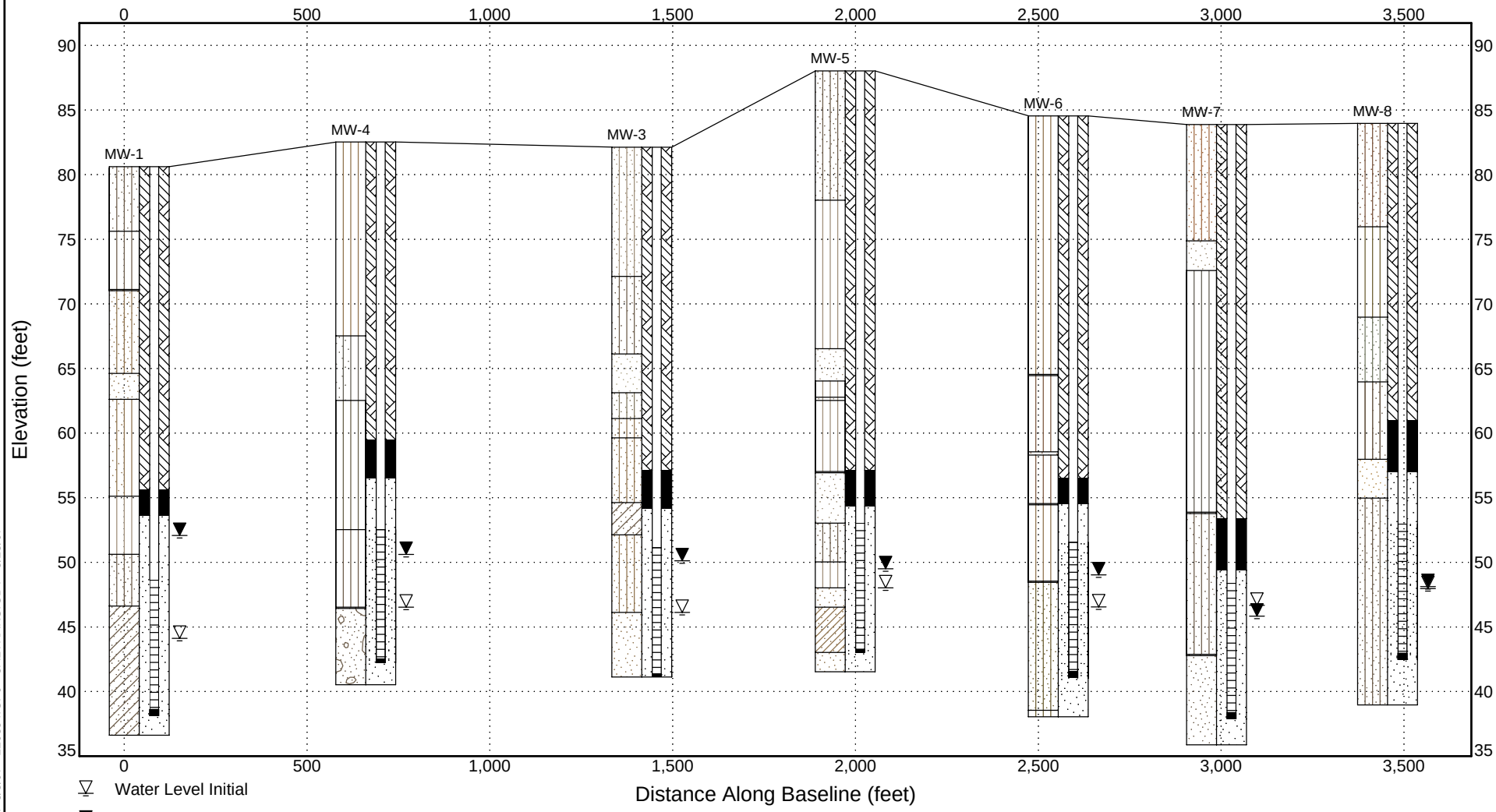
0 800 1600 FEET

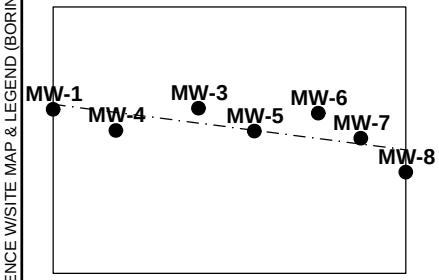
Shaw®

CALIFORNIA DEPARTMENT
OF TRANSPORTATION
STATE ROUTE 99/132 PROJECT
MODESTO, CALIFORNIA
TASK ORDER 35

FIGURE 2

WELL LOCATION MAP





- USCS Sandy Silt
- USCS Silty Sand
- USCS Silty Sand variable with Sandy Silt
- USCS Well-graded Sand with Gravel
- USCS Silt
- USCS Poorly-graded Sand
- USCS Clayey Sand
- USCS Low Plasticity Sandy Clay

Shaw®

CROSS-SECTION

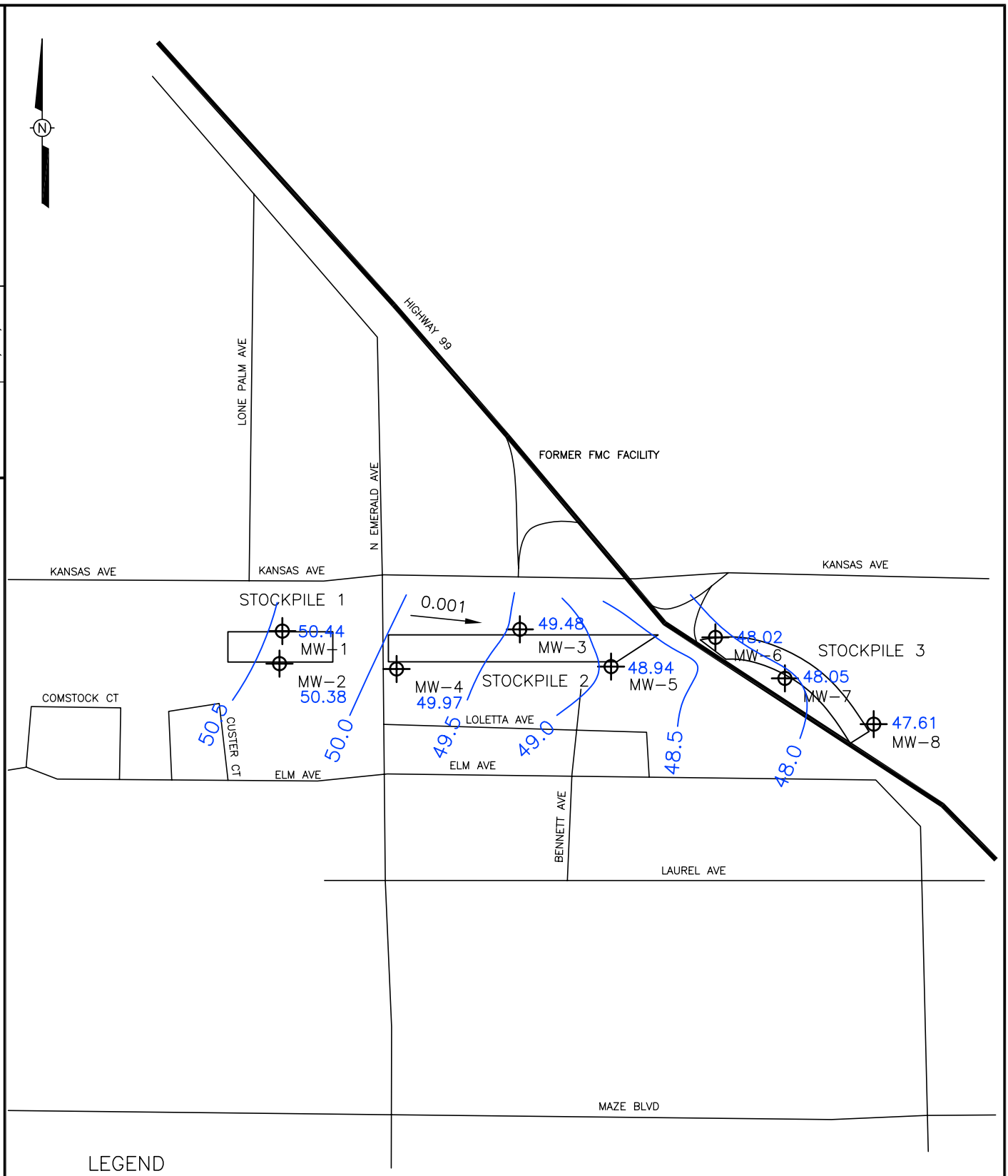
Caltrans TO-35

Modesto, California

PROJECT #	DATE	FIGURE
120854	13 Mar 07	3

FENCE W/SITE MAP & LEGEND (BORINGS) Rev: 3/8/07 120854.GPJ CALTRANS.GDT 3/13/07

PROJECT NUMBER	120854-A5
DRAWN BY	SCHAEFFER
	5/10/07



LEGEND

⌖ MONITORING WELL LOCATION

50.44 GROUNDWATER ELEVATION (JUNE 13/14, 2006)

0.001 → GROUNDWATER FLOW DIRECTION AND GRADIENT

SCALE

0 800 1600 FEET

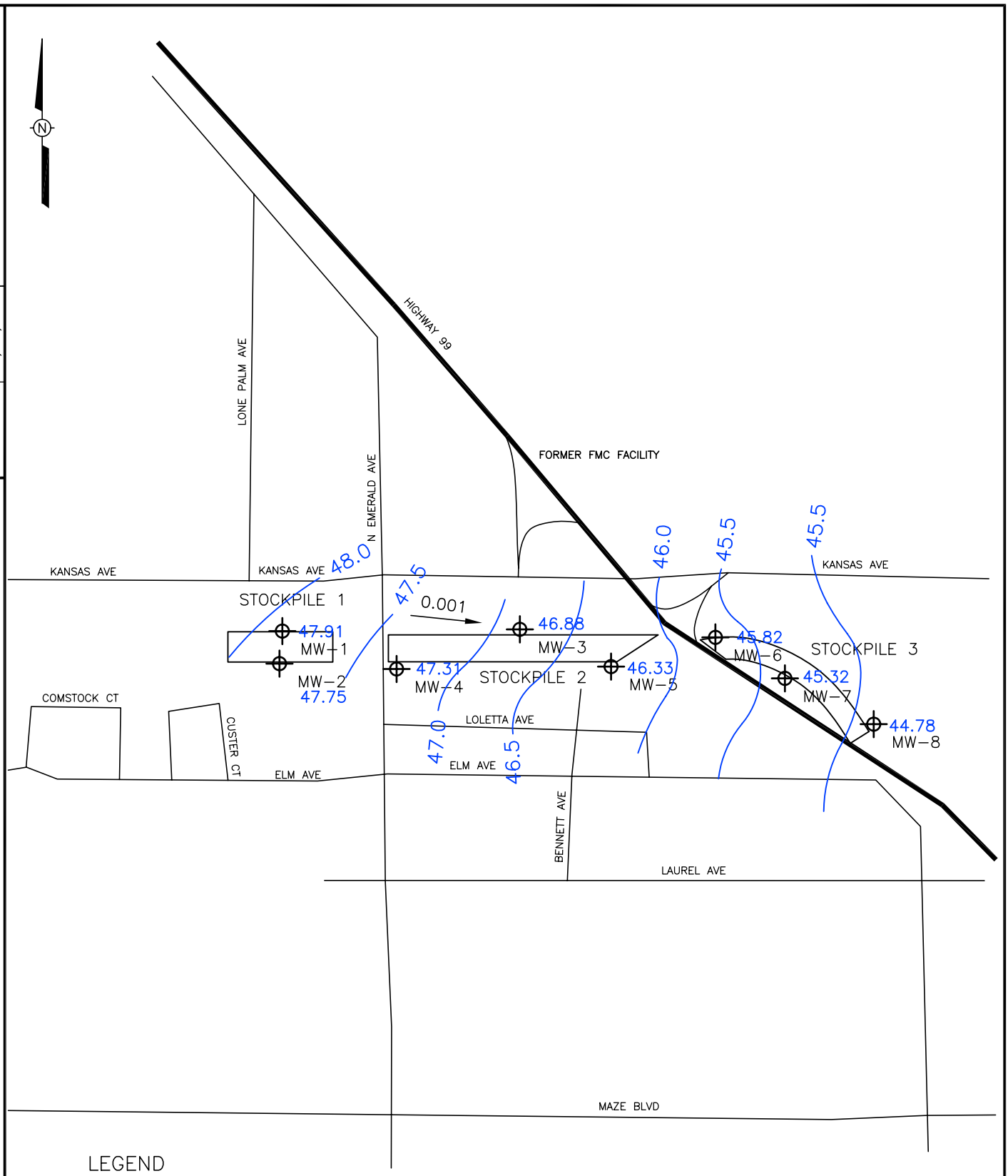
Shaw®

CALIFORNIA DEPARTMENT OF TRANSPORTATION
STATE ROUTE 99/132 PROJECT
MODESTO, CALIFORNIA
TASK ORDER 35

FIGURE 4

GROUNDWATER ELEVATIONS
FIRST SAMPLING EVENT
JUNE 2006

PROJECT NUMBER	120854-A6
DRAWN BY	SCHAEFFER
	5/10/07



LEGEND

⌖ MONITORING WELL LOCATION

50.44 GROUNDWATER ELEVATION (OCTOBER 4/5 2006)

0.001 → GROUNDWATER FLOW DIRECTION AND GRADIENT

SCALE

0 800 1600 FEET

Shaw®

CALIFORNIA DEPARTMENT OF TRANSPORTATION
STATE ROUTE 99/132 PROJECT
MODESTO, CALIFORNIA
TASK ORDER 35

FIGURE 5

GROUNDWATER ELEVATIONS
SECOND SAMPLING EVENT
OCTOBER 2006

Attachment A
Drilling Permit

PERMIT NO. W 4559

Valid From : 5/8/2006 To: 11/7/2006

CITY OF MODESTO

Public Works
1010 Tenth Street
P.O. Box 642
Modesto, CA 95353

Development Services, Suite 4100
Permits Tel. No. (209) 571-5569
Permits Fax: (209) 577-5461
Inspection: (209) 577-5452

Applicant/Owner: Shaw Environmental — phone: 925-288-2011
Attn: Tim Ault — fax: 916-565-4356
Street Address: 4005 Port Chicago Hwy. — email:
City, State, & Zip Code: Concord, CA 94520

Contractor: Twining Drilling — phone: 559-978-1903
Attn: Anthony Galvan — cell:
Street Address: 2527 Fresno St. — fax:
City, State, & Zip Code: Fresno, CA 93721 — email:

Kansas Av near Highway 99 — Plans Attached*: Y N

Description	Qty	Unit	Unit Cost	Total	Tran Code
Monitoring Well/Emergency Extraction Well			$ -	$ -	
or other excavation that may intersect groundwater			$ -	$ -	
Application Fee	1	ea	$ 42.00	$ 42.00	3010
Inspection Fee	8	ea	$ 96.00	$ 768.00	3015
			$ -	$ -	
SEE ADDITIONAL REQUIREMENTS ATTACHED			$ -	$ -	
			TOTAL	$ 810.00	

Copies of all reports generated as a result of this Well/Boring will be submitted to the City of Modesto, Water Division, Pumps & Maint. Supervisor

ADMINISTRATIVE CHECKS
- [ ] Over 1 acre (NOI required)
- [ ] Point Discharge Systems
- [X] Workers' Compensation
- [X] General Liability
- [ ] Engineering plans

SAFETY
- [ ] Traffic Controls
- [ ] Detour Plan
- [ ] Police Notification
- [ ] Fire Notification
- [ ] Public Release

FEES/REIMBURSEMENTS
- [ ] CFF Fee
- [ ] CFD Fee
- [ ] CFF Reimbursement
- [ ] CFD Reimbursement
- [ ] Trench Cut Ordinance
- [ ] Canal District Fee
- [ ] Storm District Fee
- [ ] Sewer Reimbursement
- [ ] Water Reimbursement

PERMIT ISSUED BY: W. Correia DATE: 5/5/2006
ASSIGNED INSPECTOR: Robert Snell
INSPECTOR'S ACCEPTANCE: DATE:

Permit Distribution:
Applicant — File (original)
CAO — Police
Streets — Other

STANDARD ENCROACHMENT PERMIT CONDITIONS

The following conditions are for the City standard encroachment permit:

1 **Call the inspector 48 hours BEFORE starting work AND for final inspection – 577-5452.**
2 Perform work according to City of Modesto Standard Specifications and MMC Sec. 7-2.01 et seq and Sec 7-1.105 et seq.
3 Call USA at 800-642-2444 and 800-227-2600 and MID at 209-526-7373 for utility locations at least **48 hours before digging**. Other companies include, but are not limited to: PG&E, SBC, and Comcast.
4 Provide a copy of these permit conditions to **ALL** contractors doing work covered under this permit.
5 Construct subdivision improvements in accordance with approved plan set. Inspection fees to be reimbursed in accordance with Subdivision Agreement and/or Modesto Municipal Code (MMC).
6 Prior to receiving any water taps, the developer shall pay the water service connection charges.
7 Prior to issuance of the permit for a project over 1 acre, the contractor or developer shall provide the Developer/Contractor Information and a copy of the Notice of Intent (NOI) filed with the Water Resources Board. In compliance with the Water Resources Board, the Stormwater Pollution Prevention Plan is required to be onsite. A copy of the NOI shall be attached to this permit.
8 A copy of the City of Modesto Erosion and Sediment Control and Standard Specifications for Construction Activities is available at Kinko's or on the City of Modesto's Website (www.ci.modesto.ca.us).
9 For projects with no existing concrete or asphalt, an aggregate pad shall be constructed at each ingress and egress point to the street pavement.
10 Off-site inlets adjacent to your project shall have filter screens placed in the grates to prevent silt contamination. These shall be maintained during the entire duration of the project.
11 All CFD, CFF and reimbursable utility line construction work shall be permitted by a separate agreement. No work shall be done on these items until a reimbursement agreement is executed and a permit is issued specifically for the items.
12 No landscaping work is permitted unless plans are approved by the Parks, Recreation and Neighborhoods Department.

Street and Alley Closures / Traffic Control

13 Call Fire and Police at 572-9679 **BEFORE** closing any part of the street or alley.
14 Open all traffic lanes during peak hours: Mon-Fri: 7:30 – 8:30 AM; 4:30 – 5:30 PM.
15 Full street closures will require a separate permit. Street closure permits will be conditioned to post all streets converging to this location with public warning signs of the pending closure. The traffic plan shall be approved a minimum of 2 weeks prior to pending closure. The traffic plan will address the detour of traffic. The permit will minimize the amount of time the closure is in effect.
16 Partial street closures may be coordinated with the inspector. Partial street closures may be limited in time to 8:30 am to 4:30 pm. All construction traffic control shall follow the Caltrans manual.

ADDITIONAL CONDITIONS:

APPLICANT'S SIGNATURE: See Attached Application DATE: _____

4/1

APPLICATION TO INSTALL MONITORING WELL(S), EMERGENCY EXTRACTION WELL(S), OR ANY OTHER EXCAVATION(S) THAT MAY INTERSECT GROUNDWATER WITHIN THE CITY OF MODESTO.

1. Location of Well Site: Highway 99 at Kansas Ave. No. of Wells or Borings: 8

2. Applicant-Company: Caltrans, District 6 Fresno
   Mailing Address: 2015 Shields Ave., Fresno, CA 93726
   Telephone No: 559-243-8229 Authorized Agent: Richard Stewart

3. Consulting Firm: Shaw Environmental Inc.
   Mailing Address: 4005 Port Chicago Highway, Concord, CA 94520
   Telephone No: 925-288-2011 Point of Contact: Tim Ault

4. Contractor/Driller: Twining Drilling
   Mailing Address: 2527 Fresno St., Fresno, CA 93721
   Telephone Number: 559-978-1903 Point of Contact: Anthony Galvan
   C57 License Number: 506159

Permit# mw06-36

The undersigned requests that the City of Modesto grant permission pursuant to Sections 5-1.501 and 5-1.505 of the Modesto Municipal Code to install, construct, repair, modify, or destroy a water well, observation well, monitoring well, or any other excavation that may intersect groundwater in the City for any purpose whatsoever.

The undersigned agrees to the following provisions:

5. The installation of the wells shall be subject to the supervision of the Public Works Director of the City of Modesto and the Environmental Resources Department of the County of Stanislaus.

6. The installation shall be made in accordance with all requirements of the laws of the State of California, County of Stanislaus, and the City of Modesto. Installation shall meet all requirements set forth in the latest revision of the State Department of Water Resources Bulletin 74-81, Water Well Standards: State of California and supplement No. 74-90, California Well Standards: Water Wells, Monitoring Wells, Cathodic Protection Wells. Well-head locks are required on all Wells.

7. When the wells are no longer required, the undersigned shall abandon and permanently seal them in accordance with the requirements of Public Works Director. The undersigned agrees at its sole cost and expense, in accordance with applicable laws, to permanently and effectively abandon any well(s) that it has installed thereon according to the latest revision of the State Department of Water Resources Bulletin 74-81 and 74-90. Said abandonment shall be done to the reasonable satisfaction of the City of Modesto's Public Works Director, or his authorized representative.

W4559

8. In the event that the undersigned fails to vacate and abandon the well(s) when no longer required, then the City of Modesto, or its authorized agents, may enter upon the premises and abandon the well(s) in accordance with paragraph 3. In such case, the undersigned agrees to reimburse the City of Modesto for any and all reasonable expenses it may so incur and waive any and all claims for damages against the City of Modesto, it's agents or employees.

9. All construction, repair, modification, destruction, or abandonment of permitted wells shall be subject to the supervision of the CITY and the Environmental Resources Department of Stanislaus County.

10. The undersigned agrees that the permission granted hereby will be binding on all of its successor's, assigns and heirs.

Stanislaus County Department of Environmental Resources signifies by the signature below that it has received and reviewed the initial work plan proposal.

Nicole Damin

Stanislaus County Department of Environmental Resources Division of Hazardous Materials

MW06-36

Please Note: Actual construction, repair, modification, destruction, or abandonment cannot begin until the Stanislaus County Department of Environmental Resources has reviewed and approved the initial work plan. Any well information generated, as a result of this effort, shall be released to the CITY and the Department of Environmental Resources.

I/We agree to the above:

Name of Authorized Agent

Signature of Authorized Agent

Title of Authorized Agent Date

Permission to install monitoring test well(s) and/or Emergency extraction well(s) on the above referred to Property located in the City of Modesto, in accordance with The provisions of Section 5, Article 5, Construction, Operations, and Maintenance of Wells and subject to the above Name of Company conditions. In addition, actual installation/abandonment cannot begin until the County Department of Environmental Resources has also approved the project.

Public Works Director 5/5/06 Date

8. In the event that the undersigned fails to vacate and abandon the well(s) when no longer required, then the City of Modesto, or its authorized agents, may enter upon the premises and abandon the well(s) in accordance with paragraph 3. In such case, the undersigned agrees to reimburse the City of Modesto for any and all reasonable expenses it may so incur and waive any and all claims for damages against the City of Modesto, it's agents or employees.

9. All construction, repair, modification, destruction, or abandonment of permitted wells shall be subject to the supervision of the CITY and the Environmental Resources Department of Stanislaus County.

10. The undersigned agrees that the permission granted hereby will be binding on all of its successor's, assigns and heirs.

Stanislaus County Department of Environmental Resources signifies by the signature below that it has received and reviewed the initial work plan proposal.

Nicole Damin
Stanislaus County Department of Environmental Resources Division of Hazardous Materials

MW06-36

Please Note: Actual construction, repair, modification, destruction, or abandonment cannot begin until the Stanislaus County Department of Environmental Resources has reviewed and approved the initial work plan. Any well information generated, as a result of this effort, shall be released to the CITY and the Department of Environmental Resources.

I/We agree to the above:

Martha Alsaana
Name of Authorized Agent

Martha Alsaana
Signature of Authorized Agent

Project Manager 4.17.06
Title of Authorized Agent Date

Permission to install monitoring test well(s) and/or Emergency extraction well(s) on the above referred to Property located in the City of Modesto, in accordance with The provisions of Section 5, Article 5, Construction, Operations, and Maintenance of Wells and subject to the above Name of Company conditions. In addition, actual installation/abandonment cannot begin until the County Department of Environmental Resources has also approved the project.

Public Works Director Date

Attachment B
Boring Logs

Drilling Log

Monitoring Well **MW-1**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Surface Elev. *80.6 ft.* Total Hole Depth *44.0 ft.* North *2057796.329* East *6410228.597*

Top of Casing *80.26 ft.* Water Level Initial *36.5 ft.* Static *28.5 ft.* Diameter *8 in.*

Screen: Dia *2 in.* Length *10 ft.* Type/Size *Sch 40 PVC/0.010 in.*

Casing: Dia *2 ' in.* Length *32 ft.* Type *Sch 40 PVC*

Fill Material *See Comments* Rig/Core *CME 75*

Drill Co. *Twining Laboratories* Method *Hollow Stem Auger*

Driller *James Rodriguez* Log By *Joseph Strack* Date *6/2/06* Permit # *4559*

Checked By *Tim Ault* License No. *PG 7608*

COMMENTS
Annular Seal - Bentonite-Cement Grout
Plug - Bentonite Chips
Filter Pack - #2/12 Sand

Static water level measured 6/7/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Unpaved, soil surface
0						ML	SANDY SILT; dark yellowish brown (10YR 4/2); 60% fines, nonplastic; 40% very fine sand; stiff; nonindurated; dry to damp
2							
4							
6		0.0	65%	8 4 3			Becomes dry and silt content increases to 90% at 5 feet.
8							
10		0.0	65%	5 7 8		SM	SILTY SAND; moderate yellowish brown (10YR 5/4); 80% very fine sand; 20% fines; medium dense; nonindurated; noncohesive; damp
12							
14							
16		0.0	60%	7 9 9		SP	Sand becomes very fine to fine; somewhat cohesive and weak to nonindurated at 15 feet. POORLY GRADED SAND; very fine to fine sand; loose; damp
18							INTERBEDDED SANDY SILT AND SILTY SAND; 50% very fine sand; 50% fines, nonplastic; cohesive; damp
20		0.0	90%			ML/ SM	
22							
24							

Continued Next Page

Drilling Log

Monitoring Well **MW-1**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26		0.0	100%	8 25 17		ML	SILT WITH CLAY; pale yellowish brown (10YR 6/2); nonplastic; stiff; cohesive; damp to moist
28							Clay content increases and low plasticity at 29 feet.
30		0.0	65%	10 22 19		SM	SILTY SAND; dark yellowish brown (10YR 4/2); 70% very fine to fine sand; trace medium sand; 30% fines, nonplastic; dense; nonindurated; moist; some siltier interbeds
32							
34						SC	CLAYEY SAND WITH SILT; 60% sand; 40% fines, low plasticity; cohesive; firm consistency; medium dense; moist to wet
36		0.0	90%	7 8 7			Saturated at 36.5 to 37 feet.
38							
40							
42							
44							Boring terminated at 44 feet.
46							
48							
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-2**

Project *Caltrans TO-35* Owner *Caltrans*
Location *Modesto, California* Proj. No. *120854*
Surface Elev. *81.3 ft.* Total Hole Depth *40.0 ft.* North *2057606.452* East *6410211.974*
Top of Casing *81.10 ft.* Water Level Initial *33.3 ft.* Static *33.1 ft.* Diameter *8 in.*
Screen: Dia *2 in.* Length *10 ft.* Type/Size *Sch 40 PVC/0.010 in.*
Casing: Dia *2 ' in.* Length *29 ft.* Type *Sch 40 PVC*
Fill Material *See Comments* Rig/Core *CME 75*
Drill Co. *Twining Laboratories* Method *Hollow Stem Auger*
Driller *James Rodriguez* Log By *Joseph Strack* Date *6/2/06* Permit # *4559*
Checked By *Tim Ault* License No. *PG 7608*

COMMENTS
Annular Seal - Bentonite-Cement Grout
Plug - Bentonite Chips
Filter Pack - #2/12 Sand

Static water level measured 6/9/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Unpaved, soil/grass
0						ML	SILT WITH SAND; pale yellowish brown (10YR 6/2); 90% fines, nonplastic; 10% very fine sand; stiff; cohesive; damp
2							
4							
6		0.0	45% Grab	5 7 11			
8							
10		0.0	65% Grab	5 5 6		SP	POORLY GRADED SAND; 98% very fine sand; trace silt; loose; dry
12							
14						SM	SILTY SAND; dark yellowish brown (10YR 4/2); 75% sand; 25% fines; damp
16		0.0	65% Grab	3 3 2			
18						ML	SANDY SILT; moderate yellowish brown; 60% fines, nonplastic; 40% very fine sand; firm; cohesive; damp
20		0.0	100% Grab	5 7 10			
22							
24							

Continued Next Page

Drilling Log

Monitoring Well **MW-2**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26		0.0	90% Grab	9 12 17			Sand content increases to 50% at 25 feet. Becomes mottled (very dark red) from oxidation staining at 26 feet.
28							
30		0.0	65% Grab	19 50/6		ML	Sand content decreases to 15% at 30 feet. Becomes very stiff. Remains damp.
32							
34							Becomes wet near 33 feet.
36			90% Grab	5 10 19		SW	WELL GRADED SAND WITH GRAVEL; 95% very fine to very coarse sand, near equal fractions; 5% fine gravel, subangular; saturated
38							
40							Boring terminated at 40 feet.
42							
44							
46							
48							
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-3**

Project	Caltrans TO-35	Owner	Caltrans		
Location	Modesto, California	Proj. No.	120854		
Surface Elev.	82.1 ft.	Total Hole Depth	41.0 ft.	North	2057806.67
East	6411615.793				
Top of Casing	81.76 ft.	Water Level Initial	▽ 36.0 ft.	Static	▼ 32.0 ft.
Diameter	8 in.				
Screen: Dia	2 in.	Length	10 ft.	Type/Size	Sch 40 PVC/0.010 in.
Casing: Dia	2 ' in.	Length	31 ft.	Type	Sch 40 PVC
Fill Material	See comments	Rig/Core	CME 75		
Drill Co.	Twining Laboratories	Method	Hollow Stem Auger		
Driller	J. Rodriquez/J. Kidwell	Log By	Larkin Harman	Date	5/22/06
Permit #	4559				
Checked By	Tim Ault	License No.	PG 7608		

COMMENTS
Annular Seal - Cement Grout
Plug - Bentonite Chips
Filter Pack - #3 Sand

Static water level measured 6/7/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Ground surface-no cover
0						SM	SILTY SAND; pale yellowish brown (10YR 6/2); <5% medium sand, 10% very fine to fine sand; 35% fines, nonplastic; buttery texture; dry to slightly damp
2							
4							
6			75%	7, 20, 28			Mottling at 6 feet.
8							
10			70%	10, 15, 13			Loose and moist at 9.5 feet. SANDY SILT; dark yellowish brown (10YR 4/2); 55% fines, nonplastic; 45% very fine sand; cohesive Becomes yellowish gray (5Y 7/2) and hard at 11 feet.
12						ML	
14							
16			95%	4, 6, 7			WELL GRADED "CLEAN" SAND; yellowish gray (5Y 7/2); 30% coarse sand, 40% medium sand, 30% fine sand; loose; dry
18						SW	
20			100%	5, 10, 22		SM	SILTY SAND; light olive gray; 15% coarse sand, 45% medium sand, 20% fine sand; 20% fines, nonplastic; loose; moist
22						ML	SANDY SILT; moderate yellowish brown (10YR 5/4); 55% fines, nonplastic; 45% very fine sand; cohesive; hard; moderate induration
24						SM	SILTY SAND; moderate yellowish brown (10YR 5/4); 10% coarse sand, 25% medium sand, 40% fine to very fine sand; 25% fines, nonplastic; loose; damp to dry

Continued Next Page

Drilling Log

Monitoring Well **MW-3**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26			95%	8 10 22		SM	Mottling and moist to slightly wet at 26 feet.
28						SC	CLAYEY SAND; dark yellowish brown (10YR 4/2) to moderate yellowish brown (10YR 5/4); 60% fine sand; 40% fines, low plasticity; loose to moderately cohesive; soft
30			95%	6 19 27		SM	SILTY SAND; moderate yellowish brown (10YR 5/4); 20% medium sand, 60% fine sand; 20% fines, nonplastic; very little cohesion; loose; soft; moist to wet
32							
34							Wet; plasticity increases to Clayey Sand at 34 feet.
36			95%	5 15 18		SW	WELL GRADED SAND; moderate yellowish brown (10YR 5/4); 25% coarse sand, 60% medium sand, 25% fine sand; saturated
38							
40							
42							Boring terminated at 41 feet.
44							
46							
48							
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-4**

Project: Caltrans TO-35 | Owner: Caltrans
Location: Modesto, California | Proj. No.: 120854
Surface Elev.: 82.5 ft. | Total Hole Depth: 42.0 ft. | North: 2057594.756 | East: 6410827.338
Top of Casing: 82.36 ft. | Water Level Initial: 36.0 ft. | Static: 31.9 ft. | Diameter: 8 in.
Screen: Dia 2 in. | Length: 10 ft. | Type/Size: Sch 40 PVC/0.010 in.
Casing: Dia 2 ' in. | Length: 30.3 ft. | Type: Sch 40 PVC
Fill Material: See Comments | Rig/Core: CME 75
Drill Co.: Twining Laboratories | Method: Hollow Stem Auger
Driller: James Rodriguez | Log By: Joseph Strack | Date: 5/8/06 | Permit #: 4559
Checked By: Tim Ault | License No.: PG 7608

COMMENTS
Annular Seal - Bentonite-Cement Grout
Plug - Bentonite Chips
Filter Pack - #2/12 Sand
Bottom Plug - #2/12 Sand

Static water level measured 5/12/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Unpaved, grassy area
0							SANDY SILT; dry; dark yellowish brown to moderate yellowish brown (10YR 5/4); 30% very fine sand; 70% fines; slight to no cohesion
2							
4							
6			100%	13 13 9		ML	Minor oxidation <1-inch thick near 5 feet.
8							
10			100%	7 7 9			Becomes olive gray and damp at 11 feet. Predominantly (90%) nonplastic silt. Some cohesion. Nonindurated.
12							
14							
16			100%	12 5 7		ML/ SM	INTERBEDDED SANDY SILT AND SILTY SAND; damp to moist; olive gray (5Y 4/1); cohesive; nonplastic; nonindurated
18							
20			100%	4 7 12		ML	SILT WITH SAND; damp; grayish olive; firm; nonplastic; weakly indurated; cohesive; some sampdy interbeds; 80% silt; 20% very fine sand
22							
24							

Continued Next Page

Drilling Log

Monitoring Well **MW-4**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26			100%	12 15 17			Becomes damp to dry, stiff, and moderately indurated at 25 feet. Sand content reduced to trace.
28							
30			100%	10 15 25/0		ML	SANDY SILT WITH CLAY; dark yellowish brown (10YR 4/2); 70% fines, nonplastic; 30% very fine sand; cohesive; weakly indurated
32							
34							
36			65%	5 5 7			Becomes damp to moist with some sandier interbeds at 36 feet. Lost recovery 36 to 36.5 feet due to loose sand.
38						SW	WELL GRADED SAND WITH GRAVEL; 90% sand; 10% gravel to 10 mm, subrounded; trace silt; loose; heaving; wet to saturated; recovered handful of sand from plug on rod
40							
42							Boring terminated at 42 feet.
44							
46							
48							
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-5**

Project	Caltrans TO-35	Owner	Caltrans		
Location	Modesto, California			Proj. No.	120854
Surface Elev.	88.0 ft.	Total Hole Depth	46.5 ft.	North 2057589.022	East 6412148.626
Top of Casing	87.73 ft.	Water Level Initial	40.0 ft.	Static 38.5 ft.	Diameter 8 in.
Screen: Dia	2 in.	Length	10 ft.	Type/Size	Sch 40 PVC/0.010 in.
Casing: Dia	2 ' in.	Length	35 ft.	Type	Sch 40 PVC
Fill Material	See comments			Rig/Core	CME 75
Drill Co.	Twining Laboratories	Method	Hollow Stem Auger		
Driller	J. Rodriquez/J. Kidwell	Log By	Larkin Harman	Date 5/22/06	Permit # 4559
Checked By	Tim Ault			License No.	PG 7608

COMMENTS
Annular Seal - Cement Grout
Plug - Bentonite Chips
Filter Pack - #3 Sand

Static water level measured 6/7/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Ground surface-no cover
0							SILTY SAND; dark yellowish brown (10YR 4/2); 5% coarse sand, 15% medium sand, 60% fine to very fine sand; 20% fines, nonplastic; loose; damp; some asphalt fragments and vegetation
2							
4							
6			30%	5 4 4		SM	
8							
10			85%	7 11 17			SILT WITH SAND; pale yellowish brown (10YR 6/2) with iron oxidation mottling; 70% fines, low plasticity; 5% fine sand, 25% very fine sand; cohesive; firm to very firm; dry to damp
12							
14							
16			85%	4 5 9		ML	Some interbedded fine to medium sand layers with clayey sand intervals around 16 feet.
18							
20			90%	5 5 11			
22						SW	WELL GRADED SAND; pale yellowish brown (10YR 6/2); 15% coarse sand, 40% medium sand, 40% fine to very fine sand; 5% fines, nonplastic
24						ML	SILT WITH SAND; pale yellowish brown (10YR 6/2) with iron

Continued Next Page

Drilling Log

Monitoring Well **MW-5**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26			100%	25 39 25 1		ML	oxidation mottling; 70% fines, low plasticity; 5% fine sand, 25% very fine sand; soft to very soft; moist 3-inch Sandy Silt lens at 25.25 feet. Moderate yellowish brown (10YR 5/4) and hard at 26 feet.
28							
30			100%	8 20 15			
32						SP	POORLY GRADED "CLEAN" SAND; pale yellowish brown (10YR 6/2) with iron oxidation; all very fine to fine sand; loose; damp
34							
36			95%	4 16 12		SM	SILTY SAND; dark yellowish brown (10YR 4/2); 5% coarse sand, 15% medium sand, 60% fine to very fine sand; 20% fines, nonplastic; loose; damp
38						ML	SILT WITH SAND; pale yellowish brown (10YR 6/2) with iron oxidation mottling; 70% fines, low plasticity; 5% fine sand, 25% very fine sand; cohesive; firm to very firm; dry to damp
40			70%	6 7 15		SW	WELL GRADED SAND; moderate yellowish brown (10YR 5/4); 5% coarse sand, 55% medium sand, 40% fine to very fine sand; loose; wet
42						CL	SANDY CLAY; moderate yellowish brown (10YR 5/4); somewhat cohesive; moist
44							
46			95%	9 12 17		SW	WELL GRADED SAND; saturated; loose
48							Boring terminated at 46.5 feet.
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-6**

Project *Caltrans TO-35* Owner *Caltrans*
Location *Modesto, California* Proj. No. *120854*
Surface Elev. *84.6 ft.* Total Hole Depth *46.5 ft.* North *2057759.772* East *6412758.161*
Top of Casing *84.37 ft.* Water Level Initial *38.0 ft.* Static *35.5 ft.* Diameter *8 in.*
Screen: Dia *2 in.* Length *10 ft.* Type/Size *Sch 40 PVC/0.010 in.*
Casing: Dia *2 ' in.* Length *33.5 ft.* Type *Sch 40 PVC*
Fill Material *See Comments* Rig/Core *CME 75*
Drill Co. *Twining Laboratories* Method *Hollow Stem Auger*
Driller *James Rodriguez* Log By *Joseph Strack* Date *5/9/06* Permit # *4559*
Checked By *Tim Ault* License No. *PG 7608*

COMMENTS
Annular Seal - Bentonite-Cement Grout
Plug - Bentonite Chips
Filter Pack - #2/12 Sand
Bottom Plug - #2/12 Sand

Location: Kansas Avenue at Econo Lodge

Static water level measured 5/15/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Unpaved, grassy area
0							SILT WITH SAND; dry; stiff; nonplastic; moderate brown to pale yellowish brown; 80% silt; 20% very fine sand
2							
4							
6			100%	6 10 25			Very fine sand increases to 50% at 6 feet.
8							
10			65%	8 13 14		ML	Interbedded silt and silty very fine sand at 10 feet. Dry to damp, stiff, noncohesive, and nonplastic.
12							
14							
16			65%	6 9 10			Becomes dark yellowish brown (10YR 4/2) at 15 feet. Remains consistently damp.
18							
20			100%	6 6 7			SILT; moderate brown (5YR 4/4); damp; firm; nonplastic; noncohesive
22						ML	
24							

Continued Next Page

Drilling Log

Monitoring Well **MW-6**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26			100%	7 8 12		ML	Stiff, with trace fine sand at 25 feet. 4-inch fine to very fine sand lens at 26 feet.
28							
30			100%	6 6 12		ML	SANDY SILT; damp; moderate yellowish brown; stiff; cohesive; nonplastic; 30% very fine sand; 70% silt; trace clay and fine sand
32							
34							
36			65%	6 8 11		SM	Very stiff and indurated at 35.5 feet. SILTY SAND; moist; moderate olive brown (5Y 4/4); medium dense; 80% very fine to fine sand; 20% silt; abundant mica flakes
38							
40			35%	4 6 8			Silt content increases at 40 feet. Very moist to wet and dense.
42							
44							Saturated at 44 feet.
46			100%	1 8 15		ML	Silt at 46 feet. Moist and cohesive (stiff).
48							Boring terminated at 46.5 feet.
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-7**

Project *Caltrans TO-35* Owner *Caltrans*
Location *Modesto, California* Proj. No. *120854*
Surface Elev. *83.9 ft.* Total Hole Depth *48.0 ft.* North *2057520.397* East *6413163.887*
Top of Casing *83.64 ft.* Water Level Initial *37.2 ft.* Static *38.0 ft.* Diameter *8 in.*
Screen: Dia *2 in.* Length *10 ft.* Type/Size *Sch 40 PVC/0.010 in.*
Casing: Dia *2 ' in.* Length *35.5 ft.* Type *Sch 40 PVC*
Fill Material *See Comments* Rig/Core *CME 75*
Drill Co. *Twining Laboratories* Method *Hollow Stem Auger*
Driller *James Rodriguez* Log By *Joseph Strack* Date *6/6/06* Permit # *4559*
Checked By *Tim Ault* License No. *PG 7608*

COMMENTS
Annular Seal - Bentonite-Cement Grout
Plug - Bentonite Chips
Filter Pack - #2/12 Sand

Static water level measured 6/9/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Unpaved, grassy area
0						SM	SILTY SAND; light brown (5YR 5/6); 70% very fine sand; 30% silt; loose; dry
2							
4							
		0.0	45%	2 2 2			
6							
8							
10		0.0	50%	4 3 4		SP	POORLY GRADED SAND; pale yellowish brown (10YR 6/2); 90% very fine to fine sand; 10% silt
12						ML	SILT WITH CLAY; olive gray (5Y 4/1); 99% fines, nonplastic; trace sand; cohesive; damp
14							
16		0.0	45%	9 11 12			
18							
20		0.0	80%	2 6 10			Soft, noncohesive interbeds at 20 feet. Light olive gray (5Y 5/2) and moderate yellowish brown (10YR 5/4). Remains predominantly damp, nonplastic silt.
22							
24							

Continued Next Page

Drilling Log

Monitoring Well **MW-7**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26		0.0	65%	2 5 10		ML	Moist at 25 feet. Light olive gray (5Y 5/2) mottled with light brown (5YR 5/6) and soft to firm.
28							
30		0.0	90%	3 7 14			SANDY SILT; dark yellowish brown (10YR 4/2) with grayish brown (5YR 3/2), some staining due to oxidation; 70% fines, nonplastic; 30% very fine sand; firm to stiff; cohesive; damp
32							
34							
36		0.0	65%	2 5 10		ML	Damp to moist at 35 feet. Some siltier interbeds and abundant tiny mica flakes.
38							
40		0.0	70%	2 3 12			Sand content increases and becomes wet at 40 feet.
42						SW	WELL GRADED SAND WITH SILT; dark yellowish brown (10YR 4/2); 90% very fine to medium sand, trace coarse sand; 10% silt; medium dense; saturated
44							
46							
48							Boring terminated at 48 feet.
50							
52							
54							
56							
58							

Drilling Log

Monitoring Well **MW-8**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Surface Elev. *84.0 ft.* Total Hole Depth *45.0 ft.* North *2057197.223* East *6413593.455*

Top of Casing *83.73 ft.* Water Level Initial *36.0 ft.* Static *35.9 ft.* Diameter *8 in.*

Screen: Dia *2 in.* Length *10 ft.* Type/Size *Sch 40 PVC/0.010 in.*

Casing: Dia *2 ' in.* Length *31.5 ft.* Type *Sch 40 PVC*

Fill Material *See Comments* Rig/Core *CME 75*

Drill Co. *Twining Laboratories* Method *Hollow Stem Auger*

Driller *James Rodriguez* Log By *Joseph Strack* Date *5/9/06* Permit # *4559*

Checked By *Tim Ault* License No. *PG 7608*

COMMENTS
Annular Seal - Bentonite-Cement Grout
Plug - Bentonite Chips
Filter Pack - #2/12 Sand
Bottom Plug - #2/12 Sand

Location: End of Franklin Avenue

Static water level measured 5/12/06

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Unpaved, vegetated area
0							SILTY SAND; damp; moderate brown (5YR 4/4); 50% very fine sand; 50% fines; some cohesion
2							
4						SM	
			100%	3 2 3			
6							
8							SILT; moderate olive brown (5Y 4/4); firm to stiff; nonplastic; nonindurated; some sandy interbeds; damp
10			100%	8 10 12		ML	
12							
14							
16			100%	7 6 8			SILTY SAND; dusky yellow green (5GY 5/2); 70% very fine sand; 30% nonplastic silt; damp
18						SM	
20			100%	5 6 8			SANDY SILT; dark yellowish brown (10YR 4/2); stiff; some cohesion; nonplastic; nonindurated; some oxidation (light brown mottling); damp
22						ML	
24							

Continued Next Page

Drilling Log

Monitoring Well **MW-8**

Project *Caltrans TO-35* Owner *Caltrans*

Location *Modesto, California* Proj. No. *120854*

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic Descriptions are Based on the USCS.
							Continued
26			100%	6 12 13		ML	Clayey silt with sand at 25 feet. Moist, stiff, and low plasticity.
28						SW	WELL GRADED SAND; dark yellowish orange (10YR 6/6); 90% very fine to medium sand, 10% coarser sand, subrounded; trace silt; loose to medium dense; damp to dry
30			100%	9 14 15		SM	SILT SAND WITH CLAY; damp to moist; dark yellowish brown (10YR 4/2); firm; weak to no induration; 60% very fine sand; 40% fines; cohesive
32							
34							
36			35%	6 8 13			Becomes moist to very moist at 35 feet. Wet with very fine to fine sand at 36 feet. Sand coarsens, with trace micas, from 36.5 feet.
38							
40			65%	3 4 8			Sticky/clayey interbeds near 39-40 feet. Well graded, loose, and saturated at 41 feet.
42							
44							
46							Boring terminated at 45 feet.
48							
50							
52							
54							
56							
58							

Attachment C
Laboratory Analytical Reports and Chain-of-Custody Forms

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

July 14, 2006

SDG Number: **N3432**

Client Name: SHAW ENVIRONMENTAL

Project Name: CALTRANS MODESTO – MONITORING WELLS TO-35

CERTIFICATION

This is to certify that this data package is in compliance with the ELAP Standards for applicable certified methods under ELAP certificate No. 1958, and the Data Deliverables Package Requirements set forth in the Statement of Work of the client project.

The release of analytical results is approved and authorized as proven by the signature of the Laboratory Director below.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

TABLE OF CONTENTS

1. Case Narrative – Receipt, Preparation, Analysis, QC
2. Chain-of-Custody Form – Sample Receiving Documentation
3. Analytical Reports – Data Summary, Batch Cross-reference
4. QC Reports – MB, LCS, MS/MSD, DUP, Surrogate
5. PAH Raw Data – Extraction Log, CCV
6. ICP-MS Metals Raw Data – Run Log, CCV, CCB
7. Mercury Raw Data – Digestion Log, CCV
8. Nitrate & Sulfate Raw Data – Run Log, CCV
9. Sulfide Results – Run Log, CCV

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

CASE NARRATIVE

N3432: Samples 06-C7275 to 06-C7281

SAMPLE RECEIPT

Samples in this SDG were received on 06/15/06, intact and in good condition. Cooler temperatures were within 0 - 6°C. The samples were verified against the chain-of-custody (COC) forms and found no discrepancy.

SAMPLE PREPARATION AND ANALYSIS

For Polynuclear Aromatic Hydrocarbons (PAH), the samples were extracted by EPA method 3510C using separatory funnel liquid-liquid extraction and analyzed by EPA method 8270-SIM using gas chromatography-mass spectrometry (GC/MS) in selective ion monitoring (SIM) mode.

The samples had been field filtered and preserved for Dissolved Metals. They were analyzed directly without digestion by EPA method 6020 using inductively coupled plasma-mass spectrometry (ICP-MS). For Dissolved Mercury, separate aliquots of the field-filtered samples were digested and analyzed by EPA method 7470A using cold-vapor atomic absorption spectroscopy (CVAAS).

For Nitrate and Sulfate, the samples were analyzed by EPA method 300.0 using ion chromatography.

For Sulfide, the samples were analyzed by EPA method 376.2 using UV-VIS spectrophotometry.

QUALITY CONTROL

All QC parameters were acceptable with no notable anomaly.

PRINTED ON RECYCLED PAPER

N3432

CHAIN OF CUSTODY

Ref. Document # TO35-00024

Shaw

Shaw Environmental Inc.
4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 6/14/06
Waybill Number: UPS - J181 606 3890
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): D.Delgado; J. Strack

Analyses Requested

	Sample ID Number	Sample Description	Collection Information Date	Time	Method	Matrix	# of containers	Preservative (water) / Container Type	Title 22 - Dissolved Metals 6020/7470A	Nitrate/Sulfate EPA 9056	Sulfide 9030B	PAH - EPA 8270-SIM	Cooler Temperature			
									HNO_3 500 ml HDPE	Ice 500 ml HDPE	pH>9 NaOH 1 - L HDPE	Ice 2- L (amber)				
1	MW-6	Stockpile # 3	6/14/2006	0800	G	GW	5	7275	X	X	X	X				
2	MW-1	Stockpile # 1	6/14/2006	0945	G	GW	5	7276	X	X	X	X				
3	MW-5	Stockpile # 2	6/14/2006	1030	G	GW	5	7277	X	X	X	X				
~~4~~	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~5~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~6~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~7~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~8~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
9																
10	~~Temperature Blank~~												X			
11																
14																
15																

Special Instructions: UPS 0°C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour ☐ 3-day ☐ 5-day
STANDARD TAT

Level Of QC Required: I II III

Project Specific: Caltrans Requirements

Relinquished By: Daniel Delgado Date: 6/14/06 Time: 1530

Received By: UPS Date: Time:

Relinquished By: Date: Time:

Received By: J Shuttes Date: 6/15/06 Time: 1110

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO = Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

N3432

CHAIN OF CUSTODY

Ref. Document # TO35-0008 3

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: *Martha Adams 916-565-4183*
(Name & phone #)

Shipment Date: 6/14/06
Waybill Number: UPS - 1Z81606 7216
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	*Martha Adams*
Phone/Fax Number:	*916-565-4183*
Address:	*1326 North Market Blvd*
City:	*Sacramento, CA 95834*

Sampler's Name(s): D.Delgado; J. Strack

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (water) / Container Type	Title 22 - Dissolved Metals 6020/7470A	Nitrate/Sulfate EPA 9056	Sulfide 9030B	PAH - EPA 8270-SIM	Cooler Temperature			
									HNO_3 500 ml HDPE	Ice 500 ml HDPE	pH>9 NaOH 1 - L HDPE	Ice 2- L (amber)				
1	MW- 7	Stockpile # 3	6/14/2006	1215	G	GW	5	7278	X	X	X	X				
2	MW- 8	Stockpile # 3	6/14/2006	1315	G	GW	5	7279	X	X	X	X				
3	~~MW-~~ SR99-ER2-0614	~~Stockpile #~~ Equipment Rinse	6/14/2006	1515	G	GW	5	7280	X	X	X	X				
4	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
5	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
6	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
7	~~MW-~~	Stockpile #	6/ /2006		G	GW	5		X	X	X	X				
8	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
9																
10	Temperature Blank		6/14/06	1515				7281					X			
11																
14																
15																

Special Instructions: UPS 0° C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour
STANDARD TAT ☐ 3-day ☐ 5-day

Level Of QC Required: I II III Project Specific: Caltrans Requirements

Relinquished By: D. Delgado	Date: 6/14/06 Time: 1536	Received By: UPS	Date: Time:
Relinquished By:	Date: Time:	Received By: J Struthers	Date: 6/15/06 Time: 1110

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO = Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7275
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-6 Stockpile #3	D. Delgado, J. Strack	06/14/06@08:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	12,000	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	70,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	3.6	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	160	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	16	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	3.0	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	6.2	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7275
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-6 Stockpile #3	D. Delgado, J. Strack	06/14/06@08:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	3.4	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	13	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	5.9	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	3.0	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	33	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	15	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	190	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7276
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-1 Stockpile #1	D. Delgado, J. Strack	06/14/06@09:45	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	5,000	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	18,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.1	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	130	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	10	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.1	1	1	ug/L	EPA 6020	06/29/06		5988

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7276
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-1 Stockpile #1	D. Delgado, J. Strack	06/14/06@09:45	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	2.9	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.9	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	23	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	34	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7277
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-5 Stockpile #2	D. Delgado, J. Strack	06/14/06@10:30	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	8,300	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	37,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	1.8	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	400	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	9.6	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	2.2	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	4.8	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7277
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-5 Stockpile #2	D. Delgado, J. Strack	06/14/06@10:30	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	1.4	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	9.9	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	7.1	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	2.0	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	23	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	260	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7278
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-7 Stockpile #3	D. Delgado, J. Strack	06/14/06@12:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	3,000	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	29,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.3	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	80	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	7.0	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7278
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-7 Stockpile #3	D. Delgado, J. Strack	06/14/06@12:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	2.6	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.2	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.1	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	17	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	9.0	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7279
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-8 Stockpile #3	D. Delgado, J. Strack	06/14/06@13:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	9,200	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	26,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.7	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	84	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	8.8	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5988

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7279
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-8 Stockpile #3	D. Delgado, J. Strack	06/14/06@13:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	1.2	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.6	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	25	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	5.8	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7280
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER2-0614 Equipment rinse	D. Delgado, J. Strack	06/14/06@15:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	Not Detected	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	Not Detected	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7280
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER2-0614 Equipment rinse	D. Delgado, J. Strack	06/14/06@15:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7281
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
Temperature blank	D. Delgado, J. Strack	06/14/06@15:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Temperature (Laboratory)	0	---	1	degrees C	SM 2550B	06/15/06		5466

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432
Laboratory Reagent Blank

Analyte	Method	Results	Units	Batch
Nitrate as N	EPA 300.0	< 100	ug/L	5973
Sulfate	EPA 300.0	< 500	ug/L	5977
Sulfide, Total	EPA 376.2	< 100	ug/L	5974
Mercury, Dissolved	EPA 7470	< 0.2	ug/L	5978
Acenaphthene	EPA 8270 SIM	< 0.2	ug/L	5968
Acenaphthylene	EPA 8270 SIM	< 0.2	ug/L	5968
Anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benz[a]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[a]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[b]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[ghi]perylene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[k]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Chrysene	EPA 8270 SIM	< 0.2	ug/L	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluorene	EPA 8270 SIM	< 0.2	ug/L	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Naphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Phenanthrene	EPA 8270 SIM	< 0.2	ug/L	5968
Pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
2-Methylnaphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Antimony, Dissolved	EPA 6020	< 1	ug/L	5982
Arsenic, Dissolved	EPA 6020	< 1	ug/L	5983
Barium, Dissolved	EPA 6020	< 1	ug/L	5984
Beryllium, Dissolved	EPA 6020	< 1	ug/L	5998
Cadmium, Dissolved	EPA 6020	< 1	ug/L	5985
Chromium, Dissolved	EPA 6020	< 1	ug/L	5986
Cobalt, Dissolved	EPA 6020	< 1	ug/L	5987
Copper, Dissolved	EPA 6020	< 1	ug/L	5988
Lead, Dissolved	EPA 6020	< 1	ug/L	5989
Molybdenum, Dissolved	EPA 6020	< 2	ug/L	5990
Nickel, Dissolved	EPA 6020	< 1	ug/L	5991
Selenium, Dissolved	EPA 6020	< 1	ug/L	5992
Silver, Dissolved	EPA 6020	< 1	ug/L	5993
Thallium, Dissolved	EPA 6020	< 1	ug/L	5994
Vanadium, Dissolved	EPA 6020	< 1	ug/L	5995
Zinc, Dissolved	EPA 6020	< 10	ug/L	5996
Manganese, Dissolved	EPA 6020	< 1	ug/L	5997

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Nitrate as N	EPA 300.0	87%	4,500	ug/L	80 - 120	5973
Sulfate	EPA 300.0	89%	20,000	ug/L	80 - 120	5977

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Sulfide, Total	EPA 376.2	88%	1,300	ug/L	60 - 140	5974
Mercury, Dissolved	EPA 7470	100%	3.2	ug/L	80 - 120	5978
Acenaphthene	EPA 8270 SIM	77%	10	ug/L	36 - 124	5968
Pyrene	EPA 8270 SIM	85%	10	ug/L	58 - 110	5968
Antimony, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5982
Arsenic, Dissolved	EPA 6020	91%	250	ug/L	80 - 120	5983
Barium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5984
Beryllium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5998
Cadmium, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5985
Chromium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5986
Cobalt, Dissolved	EPA 6020	106%	250	ug/L	80 - 120	5987
Copper, Dissolved	EPA 6020	104%	250	ug/L	80 - 120	5988
Lead, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5989
Molybdenum, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5990
Nickel, Dissolved	EPA 6020	102%	250	ug/L	80 - 120	5991
Selenium, Dissolved	EPA 6020	100%	1,000	ug/L	80 - 120	5992
Silver, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5993
Thallium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5994
Vanadium, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5995
Zinc, Dissolved	EPA 6020	97%	250	ug/L	80 - 120	5996
Manganese, Dissolved	EPA 6020	101%	250	ug/L	80 - 120	5997

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Nitrate as N	EPA 300.0	87%	81%	2	06-C7279	4,500	ug/L	80 - 120	20	5973
Sulfate	EPA 300.0	83%	83%	0	06-C7279	20,000	ug/L	80 - 120	20	5977
Sulfide, Total	EPA 376.2	95%	93%	2	06-C7161	880	ug/L	60 - 140	30	5974
Mercury, Dissolved	EPA 7470	96%	94%	2	06-C7323	5.0	ug/L	80 - 120	20	5978
Acenaphthene	EPA 8270 SIM	66%			06-C7162	10	ug/L	25 - 135	30	5968
Pyrene	EPA 8270 SIM	70%			06-C7162	10	ug/L	58 - 110	30	5968
Antimony, Dissolved	EPA 6020	100%	102%	3	06-C7160	250	ug/L	80 - 120	20	5982
Arsenic, Dissolved	EPA 6020	99%	98%	1	06-C7160	250	ug/L	80 - 120	20	5983
Barium, Dissolved	EPA 6020	91%	90%	1	06-C7160	250	ug/L	80 - 120	20	5984
Beryllium, Dissolved	EPA 6020	104%	104%	0	06-C7160	250	ug/L	80 - 120	20	5998
Cadmium, Dissolved	EPA 6020	99%	101%	2	06-C7160	250	ug/L	80 - 120	20	5985
Chromium, Dissolved	EPA 6020	90%	90%	0	06-C7160	250	ug/L	80 - 120	20	5986
Cobalt, Dissolved	EPA 6020	94%	96%	3	06-C7160	250	ug/L	80 - 120	20	5987
Copper, Dissolved	EPA 6020	94%	94%	0	06-C7160	250	ug/L	80 - 120	20	5988
Lead, Dissolved	EPA 6020	95%	97%	2	06-C7160	250	ug/L	80 - 120	20	5989
Molybdenum, Dissolved	EPA 6020	95%	95%	0	06-C7160	250	ug/L	80 - 120	20	5990
Nickel, Dissolved	EPA 6020	91%	92%	1	06-C7160	250	ug/L	80 - 120	20	5991
Selenium, Dissolved	EPA 6020	111%	111%	0	06-C7160	1,000	ug/L	80 - 120	20	5992

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Silver, Dissolved	EPA 6020	91%	93%	3	06-C7160	250	ug/L	80 - 120	20	5993
Thallium, Dissolved	EPA 6020	94%	92%	2	06-C7160	250	ug/L	80 - 120	20	5994
Vanadium, Dissolved	EPA 6020	90%	91%	1	06-C7160	250	ug/L	80 - 120	20	5995
Zinc, Dissolved	EPA 6020	96%	98%	2	06-C7160	250	ug/L	80 - 120	20	5996
Manganese, Dissolved	EPA 6020	93%	93%	0	06-C7160	250	ug/L	80 - 120	20	5997

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Nitrate as N	EPA 300.0	06-C7279	9,200	9,300	1	ug/L	20.	5973
Sulfate	EPA 300.0	06-C7279	26,000	26,000	2	ug/L	20.	5977
Sulfide, Total	EPA 376.2	06-C7280	< 100	< 100	0	ug/L	30.	5974
Mercury, Dissolved	EPA 7470	06-C7163	< 0.2	< 0.2	0	ug/L	20.	5978
Acenaphthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Acenaphthylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benz[a]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[a]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[b]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[ghi]perylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[k]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Chrysene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluorene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Naphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Phenanthrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
2-Methylnaphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Antimony, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5982
Arsenic, Dissolved	EPA 6020	06-C7160	2.1	2.1	0	ug/L	20.	5983
Barium, Dissolved	EPA 6020	06-C7160	87	87	0	ug/L	20.	5984
Beryllium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5998
Cadmium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5985
Chromium, Dissolved	EPA 6020	06-C7160	8.5	9.2	8	ug/L	20.	5986
Cobalt, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5987
Copper, Dissolved	EPA 6020	06-C7160	1.2	1.1	9	ug/L	20.	5988
Lead, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5989
Molybdenum, Dissolved	EPA 6020	06-C7160	3.3	3.2	3	ug/L	20.	5990
Nickel, Dissolved	EPA 6020	06-C7160	2.0	2.0	0	ug/L	20.	5991
Selenium, Dissolved	EPA 6020	06-C7160	1.3	1.1	17	ug/L	20.	5992

mw2

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Silver, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5993
Thallium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5994
Vanadium, Dissolved	EPA 6020	06-C7160	22	22	1	ug/L	20.	5995
Zinc, Dissolved	EPA 6020	06-C7160	< 10	< 10	0	ug/L	20.	5996
Manganese, Dissolved	EPA 6020	06-C7160	24	24	2	ug/L	20.	5997

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Surrogate Report

Sample Number	Batch	Method	Surrogate	% Recovery	QC Limits
06-C7275	5968	EPA 8270 SIM	o-Terphenyl	79.	53-145
06-C7276	5968	EPA 8270 SIM	o-Terphenyl	129.	53-145
06-C7277	5968	EPA 8270 SIM	o-Terphenyl	124.	53-145
06-C7278	5968	EPA 8270 SIM	o-Terphenyl	134.	53-145
06-C7279	5968	EPA 8270 SIM	o-Terphenyl	126.	53-145
06-C7280	5968	EPA 8270 SIM	o-Terphenyl	126.	53-145
blank	5968	EPA 8270 SIM	o-Terphenyl	88.	53-145
LCS	5968	EPA 8270 SIM	o-Terphenyl	91.	53-145
06-C7161 dup.	5968	EPA 8270 SIM	o-Terphenyl	79.	53-145
06-C7162 MS	5968	EPA 8270 SIM	o-Terphenyl	86.	53-145

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

July 14, 2006

SDG Number: **N3382**

Client Name: SHAW ENVIRONMENTAL

Project Name: CALTRANS MODESTO – MONITORING WELLS TO-35

CERTIFICATION

This is to certify that this data package is in compliance with the ELAP Standards for applicable certified methods under ELAP certificate No. 1958, and the Data Deliverables Package Requirements set forth in the Statement of Work of the client project.

The release of analytical results is approved and authorized as proven by the signature of the Laboratory Director below.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

TABLE OF CONTENTS

1. Case Narrative – Receipt, Preparation, Analysis, QC
2. Chain-of-Custody Form – Sample Receiving Documentation
3. Analytical Reports – Data Summary, Batch Cross-reference
4. QC Reports – MB, LCS, MS/MSD, DUP, Surrogate
5. PAH Raw Data – Extraction Log, CCV
6. ICP-MS Metals Raw Data – Run Log, CCV, CCB, DIL Check
7. Mercury Raw Data – Digestion Log, CCV
8. Nitrate & Sulfate Raw Data – Run Log, CCV
9. Sulfide Results – Run Log, CCV

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

CASE NARRATIVE

N3382: Samples 06-C7160 to 06-C7164

SAMPLE RECEIPT

Samples in this SDG were received on 06/14/06, intact and in good condition. Cooler temperatures were within 0 - 6°C. The samples were verified against the chain-of-custody (COC) forms with the following discrepancy noted:

> Two Temperature Blanks were listed on the COC but only one Temperature Blank was received.

SAMPLE PREPARATION AND ANALYSIS

For Polynuclear Aromatic Hydrocarbons (PAH), the samples were extracted by EPA method 3510C using separatory funnel liquid-liquid extraction and analyzed by EPA method 8270-SIM using gas chromatography-mass spectrometry (GC/MS) in selective ion monitoring (SIM) mode.

The samples had been field filtered and preserved for Dissolved Metals. They were analyzed directly without digestion by EPA method 6020 using inductively coupled plasma-mass spectrometry (ICP-MS). For Dissolved Mercury, separate aliquots of the field-filtered samples were digested and analyzed by EPA method 7470A using cold-vapor atomic absorption spectroscopy (CVAAS).

For Nitrate and Sulfate, the samples were analyzed by EPA method 300.0 using ion chromatography.

For Sulfide, the samples were analyzed by EPA method 376.2 using UV-VIS spectrophotometry.

QUALITY CONTROL

All QC parameters were acceptable except for the following notations:

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

1. For ICP-MS Metals analysis, dilution test on sample 06-C7163 was performed on 07/07/06, instead of with the original batch on 06/29/06.

2. For Mercury analysis, laboratory duplicate on sample 06-C7163 was extracted on 07/05/06 and analyzed on 07/06/06, instead of with the original batch extracted on 06/18/06 and analyzed on 06/19/06.

PRINTED ON RECYCLED PAPER

N 3382

CHAIN OF CUSTODY

Ref. Document # TO35-0001

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 6/13/06
Waybill Number: UPS - J I 88 5123187
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): D.Delgado; J. Strack

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (water) / Container Type	Title 22 - Dissolved Metals 6020/7470A: HNO_3, 500 ml HDPE	Nitrate/Sulfate EPA 9056: Ice, 500 ml HDPE	Sulfide 9030B: pH>9 NaOH, 1 - L HDPE	PAH - EPA 8270-SIM: Ice, 2- L (amber)	Cooler Temperature			
1	~~MW-4~~	~~Stockpile # 2~~	~~6/13/2006~~	~~0955~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
2	~~MW-3~~	~~Stockpile # 2~~	~~6/13/2006~~	~~1115~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
3	MW-2	Stockpile # 1	6/13/2006	1400	G	GW	5	7160	X	X	X	X				
4	~~MW-5~~ SR99-ER-0613	~~Stockpile # 2~~ Equip Rinse	6/13/2006	1600	G	GW	5	7161	X	X	X	X				
5	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
6	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
7	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
8	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
9																
10	Temperature Blank *		6/13/06	1600				—					X			
11																
14																
15																

Special Instructions:
* did not receive in this cooler UPS cooler temp 5°C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour
STANDARD TAT ☐ 3-day ☐ 5-day

Level Of QC Required: I II III

Project Specific: **Caltrans Requirements**

Relinquished By: [signature] Date: 6/13/06 Time: 1700
Relinquished By: Date: Time:

Received By: UPS Date: Time: (MN)
Received By: J Struthers Date: 6/16/06 Time: 1100

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO =Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

N3382

CHAIN OF CUSTODY

Ref. Document # TO35-0001

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: *Martha Adams 916-565-4183* (Name & phone #)

Shipment Date: 6/13/06
Waybill Number: UPS - J188 5123178
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	*Martha Adams*
Phone/Fax Number:	*916-565-4183*
Address:	*1326 North Market Blvd*
City:	*Sacramento, CA 95834*

Sampler's Name(s): D.Delgado; J. Strack

	Sample ID Number	Sample Description	Collection Information Date	Time	Method	Matrix	# of containers	Container Type	Title 22 - Dissolved Metals 6020/7470A	Nitrate/Sulfate EPA 9056	Sulfide 9030B	PAH - EPA 8270-SIM	Cooler Temperature
								Preservative (water)	HNO_3	Ice	pH>9 NaOH	Ice	
								Container Type	500 ml HDPE	500 ml HDPE	1 - L HDPE	2- L (amber)	
1	MW-4	Stockpile # 2	6/13/2006	0955	G	GW	5	7162	X	X	X	X	
2	MW-3	Stockpile # 2	6/13/2006	1115	G	GW	5	7163	X	X	X	X	
3	~~MW-2~~	~~Stockpile # 1~~	~~6/13/2006~~	~~1400~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
4	~~MW-5 SR99-ER-0613~~	~~Stockpile # 1~~ Equip Rinsate	~~6/13/2006~~	~~1500~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
5	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
6	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
7	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
8	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
9													
10	Temperature Blank		6/13/06	1600				7164					X
11													
14													
15													

Special Instructions:

UPS ~~Cooler~~ 2°C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour
STANDARD TAT ☐ 3-day ☐ 5-day

Level Of QC Required: I II III

Project Specific: **Caltrans Requirements**

Relinquished By:	Date: Time:	Received By: UPS	Date: Time: 14 MP
Relinquished By:	Date: Time:	Received By: J Shuttleu	Date: 6/14/06 Time: 1100

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO =Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7160
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-2 Stockpile #1	D. Delgado, J. Strack	06/13/06@14:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	5,500	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	21,000	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.1	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	87	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	8.5	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.2	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7160
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-2 Stockpile #1	D. Delgado, J. Strack	06/13/06@14:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	3.3	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.0	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.3	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	22	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	24	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7161
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER-0613 Equip Rinse	D. Delgado, J. Strack	06/13/06@16:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	Not Detected	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	Not Detected	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	1.2	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.6	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7161
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER-0613 Equip Rinse	D. Delgado, J. Strack	06/13/06@16:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7162
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-4 Stockpile #2	D. Delgado, J. Strack	06/13/06@09:55	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	3,500	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	15,000	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	1.8	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	130	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	8.9	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.6	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7162
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-4 Stockpile #2	D. Delgado, J. Strack	06/13/06@09:55	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	2.5	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.4	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	19	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	62	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7163
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-3 Stockpile #2	D. Delgado, J. Strack	06/13/06@11:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	5,400	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	18,000	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	3.0	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	60	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	7.1	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.0	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7163
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-3 Stockpile #2	D. Delgado, J. Strack	06/13/06@11:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	1.4	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.4	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	25	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	4.7	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7164
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
Temperature Blank	D. Delgado, J. Strack	06/13/06@16:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Temperature (Laboratory)	2	---	1	degrees C	SM 2550B	06/14/06		5440

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382
Laboratory Reagent Blank

Analyte	Method	Results	Units	Batch
Nitrate as N	EPA 300.0	< 100	ug/L	5972
Sulfate	EPA 300.0	< 500	ug/L	5976
Sulfide, Total	EPA 376.2	< 100	ug/L	5974
Mercury, Dissolved	EPA 7470	< 0.2	ug/L	5978
Acenaphthene	EPA 8270 SIM	< 0.2	ug/L	5968
Acenaphthylene	EPA 8270 SIM	< 0.2	ug/L	5968
Anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benz[a]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[a]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[b]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[ghi]perylene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[k]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Chrysene	EPA 8270 SIM	< 0.2	ug/L	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluorene	EPA 8270 SIM	< 0.2	ug/L	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Naphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Phenanthrene	EPA 8270 SIM	< 0.2	ug/L	5968
Pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
2-Methylnaphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Antimony, Dissolved	EPA 6020	< 1	ug/L	5982
Arsenic, Dissolved	EPA 6020	< 1	ug/L	5983
Barium, Dissolved	EPA 6020	< 1	ug/L	5984
Beryllium, Dissolved	EPA 6020	< 1	ug/L	5998
Cadmium, Dissolved	EPA 6020	< 1	ug/L	5985
Chromium, Dissolved	EPA 6020	< 1	ug/L	5986
Cobalt, Dissolved	EPA 6020	< 1	ug/L	5987
Copper, Dissolved	EPA 6020	< 1	ug/L	5988
Lead, Dissolved	EPA 6020	< 1	ug/L	5989
Molybdenum, Dissolved	EPA 6020	< 2	ug/L	5990
Nickel, Dissolved	EPA 6020	< 1	ug/L	5991
Selenium, Dissolved	EPA 6020	< 1	ug/L	5992
Silver, Dissolved	EPA 6020	< 1	ug/L	5993
Thallium, Dissolved	EPA 6020	< 1	ug/L	5994
Vanadium, Dissolved	EPA 6020	< 1	ug/L	5995
Zinc, Dissolved	EPA 6020	< 10	ug/L	5996
Manganese, Dissolved	EPA 6020	< 1	ug/L	5997

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Nitrate as N	EPA 300.0	93%	4,500	ug/L	80 - 120	5972
Sulfate	EPA 300.0	96%	20,000	ug/L	80 - 120	5976

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Sulfide, Total	EPA 376.2	88%	1,300	ug/L	60 - 140	5974
Mercury, Dissolved	EPA 7470	100%	3.2	ug/L	80 - 120	5978
Acenaphthene	EPA 8270 SIM	77%	10	ug/L	36 - 124	5968
Pyrene	EPA 8270 SIM	85%	10	ug/L	58 - 110	5968
Antimony, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5982
Arsenic, Dissolved	EPA 6020	91%	250	ug/L	80 - 120	5983
Barium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5984
Beryllium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5998
Cadmium, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5985
Chromium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5986
Cobalt, Dissolved	EPA 6020	106%	250	ug/L	80 - 120	5987
Copper, Dissolved	EPA 6020	104%	250	ug/L	80 - 120	5988
Lead, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5989
Molybdenum, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5990
Nickel, Dissolved	EPA 6020	102%	250	ug/L	80 - 120	5991
Selenium, Dissolved	EPA 6020	100%	1,000	ug/L	80 - 120	5992
Silver, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5993
Thallium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5994
Vanadium, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5995
Zinc, Dissolved	EPA 6020	97%	250	ug/L	80 - 120	5996
Manganese, Dissolved	EPA 6020	101%	250	ug/L	80 - 120	5997

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Nitrate as N	EPA 300.0	98%	101%	2	06-C7128	4,500	ug/L	80 - 120	20	5972
Sulfate	EPA 300.0	90%	91%	0	06-C7128	20,000	ug/L	80 - 120	20	5976
Sulfide, Total	EPA 376.2	95%	93%	2	06-C7161	880	ug/L	60 - 140	30	5974
Mercury, Dissolved	EPA 7470	96%	94%	2	06-C7323	5.0	ug/L	80 - 120	20	5978
Acenaphthene	EPA 8270 SIM	66%			06-C7162	MW-4 10	ug/L	25 - 135	30	5968
Pyrene	EPA 8270 SIM	70%			06-C7162	10	ug/L	58 - 110	30	5968
Antimony, Dissolved	EPA 6020	100%	102%	3	06-C7160	MW-2 250	ug/L	80 - 120	20	5982
Arsenic, Dissolved	EPA 6020	99%	98%	1	06-C7160	250	ug/L	80 - 120	20	5983
Barium, Dissolved	EPA 6020	91%	90%	1	06-C7160	250	ug/L	80 - 120	20	5984
Beryllium, Dissolved	EPA 6020	104%	104%	0	06-C7160	250	ug/L	80 - 120	20	5998
Cadmium, Dissolved	EPA 6020	99%	101%	2	06-C7160	250	ug/L	80 - 120	20	5985
Chromium, Dissolved	EPA 6020	90%	90%	0	06-C7160	250	ug/L	80 - 120	20	5986
Cobalt, Dissolved	EPA 6020	94%	96%	3	06-C7160	250	ug/L	80 - 120	20	5987
Copper, Dissolved	EPA 6020	94%	94%	0	06-C7160	250	ug/L	80 - 120	20	5988
Lead, Dissolved	EPA 6020	95%	97%	2	06-C7160	250	ug/L	80 - 120	20	5989
Molybdenum, Dissolved	EPA 6020	95%	95%	0	06-C7160	250	ug/L	80 - 120	20	5990
Nickel, Dissolved	EPA 6020	91%	92%	1	06-C7160	250	ug/L	80 - 120	20	5991
Selenium, Dissolved	EPA 6020	111%	111%	0	06-C7160	1,000	ug/L	80 - 120	20	5992

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Silver, Dissolved	EPA 6020	91%	93%	3	06-C7160	250	ug/L	80 - 120	20	5993
Thallium, Dissolved	EPA 6020	94%	92%	2	06-C7160	250	ug/L	80 - 120	20	5994
Vanadium, Dissolved	EPA 6020	90%	91%	1	06-C7160	250	ug/L	80 - 120	20	5995
Zinc, Dissolved	EPA 6020	96%	98%	2	06-C7160	250	ug/L	80 - 120	20	5996
Manganese, Dissolved	EPA 6020	93%	93%	0	06-C7160	250	ug/L	80 - 120	20	5997

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Nitrate as N	EPA 300.0	06-C7128	3,300	3,300	1	ug/L	20.	5972
Sulfate	EPA 300.0	06-C7128	30,000	29,000	1	ug/L	20.	5976
Sulfide, Total	EPA 376.2	06-C7280	< 100	< 100	0	ug/L	30.	5974
Mercury, Dissolved	EPA 7470	06-C7163	< 0.2	< 0.2	0	ug/L	20.	5978
Acenaphthene	EPA 8270 SIM	06-C7161 Rinse Blank	< 0.2	< 0.2	0	ug/L	30.	5968
Acenaphthylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benz[a]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[a]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[b]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[ghi]perylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[k]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Chrysene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluorene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Naphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Phenanthrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
2-Methylnaphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Antimony, Dissolved	EPA 6020	06-C7160 MW2	< 1	< 1	0	ug/L	20.	5982
Arsenic, Dissolved	EPA 6020	06-C7160	2.1	2.1	0	ug/L	20.	5983
Barium, Dissolved	EPA 6020	06-C7160	87	87	0	ug/L	20.	5984
Beryllium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5998
Cadmium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5985
Chromium, Dissolved	EPA 6020	06-C7160	8.5	9.2	8	ug/L	20.	5986
Cobalt, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5987
Copper, Dissolved	EPA 6020	06-C7160	1.2	1.1	9	ug/L	20.	5988
Lead, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5989
Molybdenum, Dissolved	EPA 6020	06-C7160	3.3	3.2	3	ug/L	20.	5990
Nickel, Dissolved	EPA 6020	06-C7160	2.0	2.0	0	ug/L	20.	5991
Selenium, Dissolved	EPA 6020	06-C7160	1.3	1.1	17	ug/L	20.	5992

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Silver, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5993
Thallium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5994
Vanadium, Dissolved	EPA 6020	06-C7160	22	22	1	ug/L	20.	5995
Zinc, Dissolved	EPA 6020	06-C7160	< 10	< 10	0	ug/L	20.	5996
Manganese, Dissolved	EPA 6020	06-C7160	24	24	2	ug/L	20.	5997

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Surrogate Report

Sample Number	Batch	Method	Surrogate	% Recovery	QC Limits
06-C7160	5968	EPA 8270 SIM	o-Terphenyl	84.	53-145
06-C7161	5968	EPA 8270 SIM	o-Terphenyl	75.	53-145
06-C7162	5968	EPA 8270 SIM	o-Terphenyl	81.	53-145
06-C7163	5968	EPA 8270 SIM	o-Terphenyl	82.	53-145
blank	5968	EPA 8270 SIM	o-Terphenyl	88.	53-145
LCS	5968	EPA 8270 SIM	o-Terphenyl	91.	53-145
06-C7161 dup.	5968	EPA 8270 SIM	o-Terphenyl	79.	53-145
06-C7162 MS	5968	EPA 8270 SIM	o-Terphenyl	86.	53-145

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

July 14, 2006

SDG Number: **N3432**

Client Name: SHAW ENVIRONMENTAL

Project Name: CALTRANS MODESTO – MONITORING WELLS TO-35

CERTIFICATION

This is to certify that this data package is in compliance with the ELAP Standards for applicable certified methods under ELAP certificate No. 1958, and the Data Deliverables Package Requirements set forth in the Statement of Work of the client project.

The release of analytical results is approved and authorized as proven by the signature of the Laboratory Director below.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

TABLE OF CONTENTS

1. Case Narrative – Receipt, Preparation, Analysis, QC
2. Chain-of-Custody Form – Sample Receiving Documentation
3. Analytical Reports – Data Summary, Batch Cross-reference
4. QC Reports – MB, LCS, MS/MSD, DUP, Surrogate
5. PAH Raw Data – Extraction Log, CCV
6. ICP-MS Metals Raw Data – Run Log, CCV, CCB
7. Mercury Raw Data – Digestion Log, CCV
8. Nitrate & Sulfate Raw Data – Run Log, CCV
9. Sulfide Results – Run Log, CCV

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

CASE NARRATIVE

N3432: Samples 06-C7275 to 06-C7281

SAMPLE RECEIPT

Samples in this SDG were received on 06/15/06, intact and in good condition. Cooler temperatures were within 0 - 6°C. The samples were verified against the chain-of-custody (COC) forms and found no discrepancy.

SAMPLE PREPARATION AND ANALYSIS

For Polynuclear Aromatic Hydrocarbons (PAH), the samples were extracted by EPA method 3510C using separatory funnel liquid-liquid extraction and analyzed by EPA method 8270-SIM using gas chromatography-mass spectrometry (GC/MS) in selective ion monitoring (SIM) mode.

The samples had been field filtered and preserved for Dissolved Metals. They were analyzed directly without digestion by EPA method 6020 using inductively coupled plasma-mass spectrometry (ICP-MS). For Dissolved Mercury, separate aliquots of the field-filtered samples were digested and analyzed by EPA method 7470A using cold-vapor atomic absorption spectroscopy (CVAAS).

For Nitrate and Sulfate, the samples were analyzed by EPA method 300.0 using ion chromatography.

For Sulfide, the samples were analyzed by EPA method 376.2 using UV-VIS spectrophotometry.

QUALITY CONTROL

All QC parameters were acceptable with no notable anomaly.

PRINTED ON RECYCLED PAPER

N3432

CHAIN OF CUSTODY

Ref. Document # TO35-00024

Shaw

Shaw Environmental Inc.
4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 6/14/06
Waybill Number: UPS - J181 606 3890
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): D.Delgado; J. Strack

Analyses Requested

	Sample ID Number	Sample Description	Collection Information Date	Time	Method	Matrix	# of containers	Preservative (water) / Container Type	Title 22 - Dissolved Metals 6020/7470A	Nitrate/Sulfate EPA 9056	Sulfide 9030B	PAH - EPA 8270-SIM	Cooler Temperature			
									HNO_3 500 ml HDPE	Ice 500 ml HDPE	pH>9 NaOH 1 - L HDPE	Ice 2- L (amber)				
1	MW-6	Stockpile # 3	6/14/2006	0800	G	GW	5	7275	X	X	X	X				
2	MW-1	Stockpile # 1	6/14/2006	0945	G	GW	5	7276	X	X	X	X				
3	MW-5	Stockpile # 2	6/14/2006	1030	G	GW	5	7277	X	X	X	X				
~~4~~	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~5~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~6~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~7~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
~~8~~	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
9																
10	~~Temperature Blank~~												X			
11																
14																
15																

Special Instructions: UPS 0°C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour ☐ 3-day ☐ 5-day
STANDARD TAT

Level Of QC Required: I II III

Project Specific: Caltrans Requirements

Relinquished By: Daniel Delgado Date: 6/14/06 Time: 1530

Received By: UPS Date: Time:

Relinquished By: Date: Time:

Received By: J Shuttes Date: 6/15/06 Time: 1110

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO = Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

N3432

CHAIN OF CUSTODY

Ref. Document # TO35-0008 3

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: *Martha Adams 916-565-4183*
(Name & phone #)

Shipment Date: 6/14/06
Waybill Number: UPS - 1Z81606 7216
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	*Martha Adams*
Phone/Fax Number:	*916-565-4183*
Address:	*1326 North Market Blvd*
City:	*Sacramento, CA 95834*

Sampler's Name(s): D.Delgado; J. Strack

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (water) / Container Type	Title 22 - Dissolved Metals 6020/7470A	Nitrate/Sulfate EPA 9056	Sulfide 9030B	PAH - EPA 8270-SIM	Cooler Temperature			
									HNO_3 500 ml HDPE	Ice 500 ml HDPE	pH>9 NaOH 1 - L HDPE	Ice 2- L (amber)				
1	MW- 7	Stockpile # 3	6/14/2006	1215	G	GW	5	7278	X	X	X	X				
2	MW- 8	Stockpile # 3	6/14/2006	1315	G	GW	5	7279	X	X	X	X				
3	~~MW-~~ SR99-ER2-0614	~~Stockpile #~~ Equipment Rinse	6/14/2006	1515	G	GW	5	7280	X	X	X	X				
4	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
5	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
6	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
7	~~MW-~~	Stockpile #	6/ /2006		G	GW	5		X	X	X	X				
8	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		G	GW	5		X	X	X	X				
9																
10	Temperature Blank		6/14/06	1515				7281					X			
11																
14																
15																

Special Instructions: UPS 0° C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour
STANDARD TAT ☐ 3-day ☐ 5-day

Level Of QC Required: I II III Project Specific: Caltrans Requirements

Relinquished By: D. Delgado	Date: 6/14/06 Time: 1536	Received By: UPS	Date: Time:
Relinquished By:	Date: Time:	Received By: J Struthers	Date: 6/15/06 Time: 1110

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO = Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7275
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-6 Stockpile #3	D. Delgado, J. Strack	06/14/06@08:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	12,000	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	70,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	3.6	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	160	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	16	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	3.0	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	6.2	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7275
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-6 Stockpile #3	D. Delgado, J. Strack	06/14/06@08:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	3.4	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	13	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	5.9	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	3.0	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	33	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	15	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	190	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7276
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-1 Stockpile #1	D. Delgado, J. Strack	06/14/06@09:45	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	5,000	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	18,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.1	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	130	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	10	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.1	1	1	ug/L	EPA 6020	06/29/06		5988

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7276
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-1 Stockpile #1	D. Delgado, J. Strack	06/14/06@09:45	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	2.9	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.9	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	23	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	34	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7277
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-5 Stockpile #2	D. Delgado, J. Strack	06/14/06@10:30	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	8,300	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	37,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	1.8	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	400	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	9.6	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	2.2	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	4.8	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7277
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-5 Stockpile #2	D. Delgado, J. Strack	06/14/06@10:30	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	1.4	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	9.9	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	7.1	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	2.0	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	23	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	260	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7278
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-7 Stockpile #3	D. Delgado, J. Strack	06/14/06@12:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	3,000	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	29,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.3	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	80	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	7.0	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7278
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-7 Stockpile #3	D. Delgado, J. Strack	06/14/06@12:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	2.6	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.2	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.1	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	17	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	9.0	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7279
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-8 Stockpile #3	D. Delgado, J. Strack	06/14/06@13:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	9,200	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	26,000	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.7	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	84	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	8.8	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5988

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7279
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-8 Stockpile #3	D. Delgado, J. Strack	06/14/06@13:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	1.2	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.6	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	25	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	5.8	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7280
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER2-0614 Equipment rinse	D. Delgado, J. Strack	06/14/06@15:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	Not Detected	100	1	ug/L	EPA 300.0	06/16/06		5973
Sulfate	Not Detected	500	1	ug/L	EPA 300.0	06/16/06		5977
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7280
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER2-0614 Equipment rinse	D. Delgado, J. Strack	06/14/06@15:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7281
Order: N3432
Project: Caltrans TO-35 Modesto
Received: 06/15/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
Temperature blank	D. Delgado, J. Strack	06/14/06@15:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Temperature (Laboratory)	0	---	1	degrees C	SM 2550B	06/15/06		5466

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432
Laboratory Reagent Blank

Analyte	Method	Results	Units	Batch
Nitrate as N	EPA 300.0	< 100	ug/L	5973
Sulfate	EPA 300.0	< 500	ug/L	5977
Sulfide, Total	EPA 376.2	< 100	ug/L	5974
Mercury, Dissolved	EPA 7470	< 0.2	ug/L	5978
Acenaphthene	EPA 8270 SIM	< 0.2	ug/L	5968
Acenaphthylene	EPA 8270 SIM	< 0.2	ug/L	5968
Anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benz[a]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[a]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[b]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[ghi]perylene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[k]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Chrysene	EPA 8270 SIM	< 0.2	ug/L	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluorene	EPA 8270 SIM	< 0.2	ug/L	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Naphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Phenanthrene	EPA 8270 SIM	< 0.2	ug/L	5968
Pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
2-Methylnaphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Antimony, Dissolved	EPA 6020	< 1	ug/L	5982
Arsenic, Dissolved	EPA 6020	< 1	ug/L	5983
Barium, Dissolved	EPA 6020	< 1	ug/L	5984
Beryllium, Dissolved	EPA 6020	< 1	ug/L	5998
Cadmium, Dissolved	EPA 6020	< 1	ug/L	5985
Chromium, Dissolved	EPA 6020	< 1	ug/L	5986
Cobalt, Dissolved	EPA 6020	< 1	ug/L	5987
Copper, Dissolved	EPA 6020	< 1	ug/L	5988
Lead, Dissolved	EPA 6020	< 1	ug/L	5989
Molybdenum, Dissolved	EPA 6020	< 2	ug/L	5990
Nickel, Dissolved	EPA 6020	< 1	ug/L	5991
Selenium, Dissolved	EPA 6020	< 1	ug/L	5992
Silver, Dissolved	EPA 6020	< 1	ug/L	5993
Thallium, Dissolved	EPA 6020	< 1	ug/L	5994
Vanadium, Dissolved	EPA 6020	< 1	ug/L	5995
Zinc, Dissolved	EPA 6020	< 10	ug/L	5996
Manganese, Dissolved	EPA 6020	< 1	ug/L	5997

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Nitrate as N	EPA 300.0	87%	4,500	ug/L	80 - 120	5973
Sulfate	EPA 300.0	89%	20,000	ug/L	80 - 120	5977

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Sulfide, Total	EPA 376.2	88%	1,300	ug/L	60 - 140	5974
Mercury, Dissolved	EPA 7470	100%	3.2	ug/L	80 - 120	5978
Acenaphthene	EPA 8270 SIM	77%	10	ug/L	36 - 124	5968
Pyrene	EPA 8270 SIM	85%	10	ug/L	58 - 110	5968
Antimony, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5982
Arsenic, Dissolved	EPA 6020	91%	250	ug/L	80 - 120	5983
Barium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5984
Beryllium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5998
Cadmium, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5985
Chromium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5986
Cobalt, Dissolved	EPA 6020	106%	250	ug/L	80 - 120	5987
Copper, Dissolved	EPA 6020	104%	250	ug/L	80 - 120	5988
Lead, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5989
Molybdenum, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5990
Nickel, Dissolved	EPA 6020	102%	250	ug/L	80 - 120	5991
Selenium, Dissolved	EPA 6020	100%	1,000	ug/L	80 - 120	5992
Silver, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5993
Thallium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5994
Vanadium, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5995
Zinc, Dissolved	EPA 6020	97%	250	ug/L	80 - 120	5996
Manganese, Dissolved	EPA 6020	101%	250	ug/L	80 - 120	5997

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Nitrate as N	EPA 300.0	87%	81%	2	06-C7279	4,500	ug/L	80 - 120	20	5973
Sulfate	EPA 300.0	83%	83%	0	06-C7279	20,000	ug/L	80 - 120	20	5977
Sulfide, Total	EPA 376.2	95%	93%	2	06-C7161	880	ug/L	60 - 140	30	5974
Mercury, Dissolved	EPA 7470	96%	94%	2	06-C7323	5.0	ug/L	80 - 120	20	5978
Acenaphthene	EPA 8270 SIM	66%			06-C7162	10	ug/L	25 - 135	30	5968
Pyrene	EPA 8270 SIM	70%			06-C7162	10	ug/L	58 - 110	30	5968
Antimony, Dissolved	EPA 6020	100%	102%	3	06-C7160	250	ug/L	80 - 120	20	5982
Arsenic, Dissolved	EPA 6020	99%	98%	1	06-C7160	250	ug/L	80 - 120	20	5983
Barium, Dissolved	EPA 6020	91%	90%	1	06-C7160	250	ug/L	80 - 120	20	5984
Beryllium, Dissolved	EPA 6020	104%	104%	0	06-C7160	250	ug/L	80 - 120	20	5998
Cadmium, Dissolved	EPA 6020	99%	101%	2	06-C7160	250	ug/L	80 - 120	20	5985
Chromium, Dissolved	EPA 6020	90%	90%	0	06-C7160	250	ug/L	80 - 120	20	5986
Cobalt, Dissolved	EPA 6020	94%	96%	3	06-C7160	250	ug/L	80 - 120	20	5987
Copper, Dissolved	EPA 6020	94%	94%	0	06-C7160	250	ug/L	80 - 120	20	5988
Lead, Dissolved	EPA 6020	95%	97%	2	06-C7160	250	ug/L	80 - 120	20	5989
Molybdenum, Dissolved	EPA 6020	95%	95%	0	06-C7160	250	ug/L	80 - 120	20	5990
Nickel, Dissolved	EPA 6020	91%	92%	1	06-C7160	250	ug/L	80 - 120	20	5991
Selenium, Dissolved	EPA 6020	111%	111%	0	06-C7160	1,000	ug/L	80 - 120	20	5992

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Silver, Dissolved	EPA 6020	91%	93%	3	06-C7160	250	ug/L	80 - 120	20	5993
Thallium, Dissolved	EPA 6020	94%	92%	2	06-C7160	250	ug/L	80 - 120	20	5994
Vanadium, Dissolved	EPA 6020	90%	91%	1	06-C7160	250	ug/L	80 - 120	20	5995
Zinc, Dissolved	EPA 6020	96%	98%	2	06-C7160	250	ug/L	80 - 120	20	5996
Manganese, Dissolved	EPA 6020	93%	93%	0	06-C7160	250	ug/L	80 - 120	20	5997

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Nitrate as N	EPA 300.0	06-C7279	9,200	9,300	1	ug/L	20.	5973
Sulfate	EPA 300.0	06-C7279	26,000	26,000	2	ug/L	20.	5977
Sulfide, Total	EPA 376.2	06-C7280	< 100	< 100	0	ug/L	30.	5974
Mercury, Dissolved	EPA 7470	06-C7163	< 0.2	< 0.2	0	ug/L	20.	5978
Acenaphthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Acenaphthylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benz[a]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[a]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[b]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[ghi]perylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[k]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Chrysene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluorene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Naphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Phenanthrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
2-Methylnaphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Antimony, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5982
Arsenic, Dissolved	EPA 6020	06-C7160	2.1	2.1	0	ug/L	20.	5983
Barium, Dissolved	EPA 6020	06-C7160	87	87	0	ug/L	20.	5984
Beryllium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5998
Cadmium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5985
Chromium, Dissolved	EPA 6020	06-C7160	8.5	9.2	8	ug/L	20.	5986
Cobalt, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5987
Copper, Dissolved	EPA 6020	06-C7160	1.2	1.1	9	ug/L	20.	5988
Lead, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5989
Molybdenum, Dissolved	EPA 6020	06-C7160	3.3	3.2	3	ug/L	20.	5990
Nickel, Dissolved	EPA 6020	06-C7160	2.0	2.0	0	ug/L	20.	5991
Selenium, Dissolved	EPA 6020	06-C7160	1.3	1.1	17	ug/L	20.	5992

mw2

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3432

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Silver, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5993
Thallium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5994
Vanadium, Dissolved	EPA 6020	06-C7160	22	22	1	ug/L	20.	5995
Zinc, Dissolved	EPA 6020	06-C7160	< 10	< 10	0	ug/L	20.	5996
Manganese, Dissolved	EPA 6020	06-C7160	24	24	2	ug/L	20.	5997

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Surrogate Report

Sample Number	Batch	Method	Surrogate	% Recovery	QC Limits
06-C7275	5968	EPA 8270 SIM	o-Terphenyl	79.	53-145
06-C7276	5968	EPA 8270 SIM	o-Terphenyl	129.	53-145
06-C7277	5968	EPA 8270 SIM	o-Terphenyl	124.	53-145
06-C7278	5968	EPA 8270 SIM	o-Terphenyl	134.	53-145
06-C7279	5968	EPA 8270 SIM	o-Terphenyl	126.	53-145
06-C7280	5968	EPA 8270 SIM	o-Terphenyl	126.	53-145
blank	5968	EPA 8270 SIM	o-Terphenyl	88.	53-145
LCS	5968	EPA 8270 SIM	o-Terphenyl	91.	53-145
06-C7161 dup.	5968	EPA 8270 SIM	o-Terphenyl	79.	53-145
06-C7162 MS	5968	EPA 8270 SIM	o-Terphenyl	86.	53-145

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

July 14, 2006

SDG Number: **N3382**

Client Name: SHAW ENVIRONMENTAL

Project Name: CALTRANS MODESTO – MONITORING WELLS TO-35

CERTIFICATION

This is to certify that this data package is in compliance with the ELAP Standards for applicable certified methods under ELAP certificate No. 1958, and the Data Deliverables Package Requirements set forth in the Statement of Work of the client project.

The release of analytical results is approved and authorized as proven by the signature of the Laboratory Director below.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

TABLE OF CONTENTS

1. Case Narrative – Receipt, Preparation, Analysis, QC
2. Chain-of-Custody Form – Sample Receiving Documentation
3. Analytical Reports – Data Summary, Batch Cross-reference
4. QC Reports – MB, LCS, MS/MSD, DUP, Surrogate
5. PAH Raw Data – Extraction Log, CCV
6. ICP-MS Metals Raw Data – Run Log, CCV, CCB, DIL Check
7. Mercury Raw Data – Digestion Log, CCV
8. Nitrate & Sulfate Raw Data – Run Log, CCV
9. Sulfide Results – Run Log, CCV

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

CASE NARRATIVE

N3382: Samples 06-C7160 to 06-C7164

SAMPLE RECEIPT

Samples in this SDG were received on 06/14/06, intact and in good condition. Cooler temperatures were within 0 - 6°C. The samples were verified against the chain-of-custody (COC) forms with the following discrepancy noted:

> Two Temperature Blanks were listed on the COC but only one Temperature Blank was received.

SAMPLE PREPARATION AND ANALYSIS

For Polynuclear Aromatic Hydrocarbons (PAH), the samples were extracted by EPA method 3510C using separatory funnel liquid-liquid extraction and analyzed by EPA method 8270-SIM using gas chromatography-mass spectrometry (GC/MS) in selective ion monitoring (SIM) mode.

The samples had been field filtered and preserved for Dissolved Metals. They were analyzed directly without digestion by EPA method 6020 using inductively coupled plasma-mass spectrometry (ICP-MS). For Dissolved Mercury, separate aliquots of the field-filtered samples were digested and analyzed by EPA method 7470A using cold-vapor atomic absorption spectroscopy (CVAAS).

For Nitrate and Sulfate, the samples were analyzed by EPA method 300.0 using ion chromatography.

For Sulfide, the samples were analyzed by EPA method 376.2 using UV-VIS spectrophotometry.

QUALITY CONTROL

All QC parameters were acceptable except for the following notations:

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

1. For ICP-MS Metals analysis, dilution test on sample 06-C7163 was performed on 07/07/06, instead of with the original batch on 06/29/06.

2. For Mercury analysis, laboratory duplicate on sample 06-C7163 was extracted on 07/05/06 and analyzed on 07/06/06, instead of with the original batch extracted on 06/18/06 and analyzed on 06/19/06.

PRINTED ON RECYCLED PAPER

N 3382

CHAIN OF CUSTODY

Ref. Document # TO35-0001

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 6/13/06
Waybill Number: UPS - J I 88 5123187
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): D.Delgado; J. Strack

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (water) / Container Type	Title 22 - Dissolved Metals 6020/7470A: HNO_3, 500 ml HDPE	Nitrate/Sulfate EPA 9056: Ice, 500 ml HDPE	Sulfide 9030B: pH>9 NaOH, 1 - L HDPE	PAH - EPA 8270-SIM: Ice, 2- L (amber)	Cooler Temperature			
1	~~MW-4~~	~~Stockpile # 2~~	~~6/13/2006~~	~~0955~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
2	~~MW-3~~	~~Stockpile # 2~~	~~6/13/2006~~	~~1115~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
3	MW-2	Stockpile # 1	6/13/2006	1400	G	GW	5	7160	X	X	X	X				
4	~~MW-5~~ SR99-ER-0613	~~Stockpile # 2~~ Equip Rinse	6/13/2006	1600	G	GW	5	7161	X	X	X	X				
5	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
6	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
7	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
8	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~				
9																
10	Temperature Blank *		6/13/06	1600				—					X			
11																
14																
15																

Special Instructions:
* did not receive in this cooler UPS cooler temp 5°C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour
STANDARD TAT ☐ 3-day ☐ 5-day

Level Of QC Required: I II III

Project Specific: **Caltrans Requirements**

Relinquished By: [signature] Date: 6/13/06 Time: 1700
Relinquished By: Date: Time:

Received By: UPS Date: Time: (MN)
Received By: J Struthers Date: 6/16/06 Time: 1100

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO =Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

N3382

CHAIN OF CUSTODY

Ref. Document # TO35-0001

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120854
Project Name / Location: Caltrans - TO-35 Modesto

Project Manager: *Martha Adams 916-565-4183* (Name & phone #)

Shipment Date: 6/13/06
Waybill Number: UPS - J188 5123178
Lab Destination: Creek, 141 Suburban Rd. #C5, SLO, 93401
Lab Contact Name / ph. #: Orval Osborne 805-545-9838

Send Report To:	*Martha Adams*
Phone/Fax Number:	*916-565-4183*
Address:	*1326 North Market Blvd*
City:	*Sacramento, CA 95834*

Sampler's Name(s): D.Delgado; J. Strack

	Sample ID Number	Sample Description	Collection Information Date	Time	Method	Matrix	# of containers	Container Type	Title 22 - Dissolved Metals 6020/7470A	Nitrate/Sulfate EPA 9056	Sulfide 9030B	PAH - EPA 8270-SIM	Cooler Temperature
								Preservative (water)	HNO_3	Ice	pH>9 NaOH	Ice	
								Container Type	500 ml HDPE	500 ml HDPE	1 - L HDPE	2- L (amber)	
1	MW-4	Stockpile # 2	6/13/2006	0955	G	GW	5	7162	X	X	X	X	
2	MW-3	Stockpile # 2	6/13/2006	1115	G	GW	5	7163	X	X	X	X	
3	~~MW-2~~	~~Stockpile # 1~~	~~6/13/2006~~	~~1400~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
4	~~MW-5 SR99-ER-0613~~	~~Stockpile # 1~~ Equip Rinsate	~~6/13/2006~~	~~1500~~	~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
5	~~MW-~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
6	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
7	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
8	~~MW~~	~~Stockpile #~~	~~6/ /2006~~		~~G~~	~~GW~~	~~5~~		~~X~~	~~X~~	~~X~~	~~X~~	
9													
10	Temperature Blank		6/13/06	1600				7164					X
11													
14													
15													

Special Instructions:

UPS ~~Cooler~~ 2°C intact

Turnaround Time: ☐ 24-hr ☐ 48-hour
STANDARD TAT ☐ 3-day ☐ 5-day

Level Of QC Required: I II III

Project Specific: **Caltrans Requirements**

Relinquished By:	Date: Time:	Received By: UPS	Date: Time: 14 MP
Relinquished By:	Date: Time:	Received By: J Shuttleu	Date: 6/14/06 Time: 1100

Method Codes
C = Composite G = Grab

Matrix Codes
SW = Surface Water SO =Soil
GW = Ground Water SL = Sludge
WW = Waste Water CP = Chip Samples

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7160
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-2 Stockpile #1	D. Delgado, J. Strack	06/13/06@14:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	5,500	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	21,000	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	2.1	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	87	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	8.5	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.2	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7160
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-2 Stockpile #1	D. Delgado, J. Strack	06/13/06@14:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	3.3	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.0	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.3	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	22	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	24	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7161
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER-0613 Equip Rinse	D. Delgado, J. Strack	06/13/06@16:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	Not Detected	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	Not Detected	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	1.2	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.6	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7161
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
SR99-ER-0613 Equip Rinse	D. Delgado, J. Strack	06/13/06@16:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7162
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-4 Stockpile #2	D. Delgado, J. Strack	06/13/06@09:55	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	3,500	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	15,000	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	1.8	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	130	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	8.9	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.6	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7162
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-4 Stockpile #2	D. Delgado, J. Strack	06/13/06@09:55	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	2.5	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	2.4	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	19	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	62	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7163
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-3 Stockpile #2	D. Delgado, J. Strack	06/13/06@11:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Nitrate as N	5,400	100	1	ug/L	EPA 300.0	06/14/06		5972
Sulfate	18,000	500	1	ug/L	EPA 300.0	06/14/06		5976
Sulfide, Total	Not Detected	100	1	ug/L	EPA 376.2	06/20/06		5974
Mercury, Dissolved	Not Detected	0.2	1	ug/L	EPA 7470	06/19/06	06/18/06	5978
Acenaphthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Acenaphthylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benz[a]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[a]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[b]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[ghi]perylene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Benzo[k]fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Chrysene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Dibenz[a,h]anthracene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluoranthene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Fluorene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Indeno[1,2,3-cd]pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Naphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Phenanthrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Pyrene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
2-Methylnaphthalene	Not Detected	0.2	1	ug/L	EPA 8270 SIM	06/16/06	06/16/06	5968
Antimony, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5982
Arsenic, Dissolved	3.0	1	1	ug/L	EPA 6020	06/29/06		5983
Barium, Dissolved	60	1	1	ug/L	EPA 6020	06/29/06		5984
Beryllium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5998
Cadmium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5985
Chromium, Dissolved	7.1	1	1	ug/L	EPA 6020	06/29/06		5986
Cobalt, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5987
Copper, Dissolved	1.0	1	1	ug/L	EPA 6020	06/29/06		5988

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7163
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
MW-3 Stockpile #2	D. Delgado, J. Strack	06/13/06@11:15	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5989
Molybdenum, Dissolved	Not Detected	2	1	ug/L	EPA 6020	06/29/06		5990
Nickel, Dissolved	1.4	1	1	ug/L	EPA 6020	06/29/06		5991
Selenium, Dissolved	1.4	1	1	ug/L	EPA 6020	06/29/06		5992
Silver, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5993
Thallium, Dissolved	Not Detected	1	1	ug/L	EPA 6020	06/29/06		5994
Vanadium, Dissolved	25	1	1	ug/L	EPA 6020	06/29/06		5995
Zinc, Dissolved	Not Detected	10	1	ug/L	EPA 6020	06/29/06		5996
Manganese, Dissolved	4.7	1	1	ug/L	EPA 6020	06/29/06		5997

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Martha Adams
Shaw Environmental
1326 North Market Blvd.
Sacramento, CA 95834-1912

Log Number: 06-C7164
Order: N3382
Project: Caltrans - TO-35 Modesto
Received: 06/14/06
Printed: 06/30/06

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
Temperature Blank	D. Delgado, J. Strack	06/13/06@16:00	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Temperature (Laboratory)	2	---	1	degrees C	SM 2550B	06/14/06		5440

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382
Laboratory Reagent Blank

Analyte	Method	Results	Units	Batch
Nitrate as N	EPA 300.0	< 100	ug/L	5972
Sulfate	EPA 300.0	< 500	ug/L	5976
Sulfide, Total	EPA 376.2	< 100	ug/L	5974
Mercury, Dissolved	EPA 7470	< 0.2	ug/L	5978
Acenaphthene	EPA 8270 SIM	< 0.2	ug/L	5968
Acenaphthylene	EPA 8270 SIM	< 0.2	ug/L	5968
Anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benz[a]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[a]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[b]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[ghi]perylene	EPA 8270 SIM	< 0.2	ug/L	5968
Benzo[k]fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Chrysene	EPA 8270 SIM	< 0.2	ug/L	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluoranthene	EPA 8270 SIM	< 0.2	ug/L	5968
Fluorene	EPA 8270 SIM	< 0.2	ug/L	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
Naphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Phenanthrene	EPA 8270 SIM	< 0.2	ug/L	5968
Pyrene	EPA 8270 SIM	< 0.2	ug/L	5968
2-Methylnaphthalene	EPA 8270 SIM	< 0.2	ug/L	5968
Antimony, Dissolved	EPA 6020	< 1	ug/L	5982
Arsenic, Dissolved	EPA 6020	< 1	ug/L	5983
Barium, Dissolved	EPA 6020	< 1	ug/L	5984
Beryllium, Dissolved	EPA 6020	< 1	ug/L	5998
Cadmium, Dissolved	EPA 6020	< 1	ug/L	5985
Chromium, Dissolved	EPA 6020	< 1	ug/L	5986
Cobalt, Dissolved	EPA 6020	< 1	ug/L	5987
Copper, Dissolved	EPA 6020	< 1	ug/L	5988
Lead, Dissolved	EPA 6020	< 1	ug/L	5989
Molybdenum, Dissolved	EPA 6020	< 2	ug/L	5990
Nickel, Dissolved	EPA 6020	< 1	ug/L	5991
Selenium, Dissolved	EPA 6020	< 1	ug/L	5992
Silver, Dissolved	EPA 6020	< 1	ug/L	5993
Thallium, Dissolved	EPA 6020	< 1	ug/L	5994
Vanadium, Dissolved	EPA 6020	< 1	ug/L	5995
Zinc, Dissolved	EPA 6020	< 10	ug/L	5996
Manganese, Dissolved	EPA 6020	< 1	ug/L	5997

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Nitrate as N	EPA 300.0	93%	4,500	ug/L	80 - 120	5972
Sulfate	EPA 300.0	96%	20,000	ug/L	80 - 120	5976

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Sulfide, Total	EPA 376.2	88%	1,300	ug/L	60 - 140	5974
Mercury, Dissolved	EPA 7470	100%	3.2	ug/L	80 - 120	5978
Acenaphthene	EPA 8270 SIM	77%	10	ug/L	36 - 124	5968
Pyrene	EPA 8270 SIM	85%	10	ug/L	58 - 110	5968
Antimony, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5982
Arsenic, Dissolved	EPA 6020	91%	250	ug/L	80 - 120	5983
Barium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5984
Beryllium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5998
Cadmium, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5985
Chromium, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5986
Cobalt, Dissolved	EPA 6020	106%	250	ug/L	80 - 120	5987
Copper, Dissolved	EPA 6020	104%	250	ug/L	80 - 120	5988
Lead, Dissolved	EPA 6020	99%	250	ug/L	80 - 120	5989
Molybdenum, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5990
Nickel, Dissolved	EPA 6020	102%	250	ug/L	80 - 120	5991
Selenium, Dissolved	EPA 6020	100%	1,000	ug/L	80 - 120	5992
Silver, Dissolved	EPA 6020	98%	250	ug/L	80 - 120	5993
Thallium, Dissolved	EPA 6020	94%	250	ug/L	80 - 120	5994
Vanadium, Dissolved	EPA 6020	96%	250	ug/L	80 - 120	5995
Zinc, Dissolved	EPA 6020	97%	250	ug/L	80 - 120	5996
Manganese, Dissolved	EPA 6020	101%	250	ug/L	80 - 120	5997

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Nitrate as N	EPA 300.0	98%	101%	2	06-C7128	4,500	ug/L	80 - 120	20	5972
Sulfate	EPA 300.0	90%	91%	0	06-C7128	20,000	ug/L	80 - 120	20	5976
Sulfide, Total	EPA 376.2	95%	93%	2	06-C7161	880	ug/L	60 - 140	30	5974
Mercury, Dissolved	EPA 7470	96%	94%	2	06-C7323	5.0	ug/L	80 - 120	20	5978
Acenaphthene	EPA 8270 SIM	66%			06-C7162	MW-4 10	ug/L	25 - 135	30	5968
Pyrene	EPA 8270 SIM	70%			06-C7162	10	ug/L	58 - 110	30	5968
Antimony, Dissolved	EPA 6020	100%	102%	3	06-C7160	MW-2 250	ug/L	80 - 120	20	5982
Arsenic, Dissolved	EPA 6020	99%	98%	1	06-C7160	250	ug/L	80 - 120	20	5983
Barium, Dissolved	EPA 6020	91%	90%	1	06-C7160	250	ug/L	80 - 120	20	5984
Beryllium, Dissolved	EPA 6020	104%	104%	0	06-C7160	250	ug/L	80 - 120	20	5998
Cadmium, Dissolved	EPA 6020	99%	101%	2	06-C7160	250	ug/L	80 - 120	20	5985
Chromium, Dissolved	EPA 6020	90%	90%	0	06-C7160	250	ug/L	80 - 120	20	5986
Cobalt, Dissolved	EPA 6020	94%	96%	3	06-C7160	250	ug/L	80 - 120	20	5987
Copper, Dissolved	EPA 6020	94%	94%	0	06-C7160	250	ug/L	80 - 120	20	5988
Lead, Dissolved	EPA 6020	95%	97%	2	06-C7160	250	ug/L	80 - 120	20	5989
Molybdenum, Dissolved	EPA 6020	95%	95%	0	06-C7160	250	ug/L	80 - 120	20	5990
Nickel, Dissolved	EPA 6020	91%	92%	1	06-C7160	250	ug/L	80 - 120	20	5991
Selenium, Dissolved	EPA 6020	111%	111%	0	06-C7160	1,000	ug/L	80 - 120	20	5992

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS Rec.	MSD Rec.	RPD	Matrix Sample	Spike Amount	Units	Recovery Limits	RPD Limit	Batch
Silver, Dissolved	EPA 6020	91%	93%	3	06-C7160	250	ug/L	80 - 120	20	5993
Thallium, Dissolved	EPA 6020	94%	92%	2	06-C7160	250	ug/L	80 - 120	20	5994
Vanadium, Dissolved	EPA 6020	90%	91%	1	06-C7160	250	ug/L	80 - 120	20	5995
Zinc, Dissolved	EPA 6020	96%	98%	2	06-C7160	250	ug/L	80 - 120	20	5996
Manganese, Dissolved	EPA 6020	93%	93%	0	06-C7160	250	ug/L	80 - 120	20	5997

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Nitrate as N	EPA 300.0	06-C7128	3,300	3,300	1	ug/L	20.	5972
Sulfate	EPA 300.0	06-C7128	30,000	29,000	1	ug/L	20.	5976
Sulfide, Total	EPA 376.2	06-C7280	< 100	< 100	0	ug/L	30.	5974
Mercury, Dissolved	EPA 7470	06-C7163	< 0.2	< 0.2	0	ug/L	20.	5978
Acenaphthene	EPA 8270 SIM	06-C7161 Rinse Blank	< 0.2	< 0.2	0	ug/L	30.	5968
Acenaphthylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benz[a]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[a]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[b]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[ghi]perylene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Benzo[k]fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Chrysene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Dibenz[a,h]anthracene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluoranthene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Fluorene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Indeno[1,2,3-cd]pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Naphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Phenanthrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Pyrene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
2-Methylnaphthalene	EPA 8270 SIM	06-C7161	< 0.2	< 0.2	0	ug/L	30.	5968
Antimony, Dissolved	EPA 6020	06-C7160 MW2	< 1	< 1	0	ug/L	20.	5982
Arsenic, Dissolved	EPA 6020	06-C7160	2.1	2.1	0	ug/L	20.	5983
Barium, Dissolved	EPA 6020	06-C7160	87	87	0	ug/L	20.	5984
Beryllium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5998
Cadmium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5985
Chromium, Dissolved	EPA 6020	06-C7160	8.5	9.2	8	ug/L	20.	5986
Cobalt, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5987
Copper, Dissolved	EPA 6020	06-C7160	1.2	1.1	9	ug/L	20.	5988
Lead, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5989
Molybdenum, Dissolved	EPA 6020	06-C7160	3.3	3.2	3	ug/L	20.	5990
Nickel, Dissolved	EPA 6020	06-C7160	2.0	2.0	0	ug/L	20.	5991
Selenium, Dissolved	EPA 6020	06-C7160	1.3	1.1	17	ug/L	20.	5992

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Quality Control Results

Order No.: N3382

Sample Duplicate

Analyte	Method	Sample ID	Sample Value	Sample Duplicate	RPD	Units	RPD Limit	Batch
Silver, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5993
Thallium, Dissolved	EPA 6020	06-C7160	< 1	< 1	0	ug/L	20.	5994
Vanadium, Dissolved	EPA 6020	06-C7160	22	22	1	ug/L	20.	5995
Zinc, Dissolved	EPA 6020	06-C7160	< 10	< 10	0	ug/L	20.	5996
Manganese, Dissolved	EPA 6020	06-C7160	24	24	2	ug/L	20.	5997

PRINTED ON RECYCLED PAPER

CREEK ENVIRONMENTAL LABORATORIES, INC.
A Minority-owned Business Enterprise
141 SUBURBAN ROAD, SUITE C-5 • SAN LUIS OBISPO, CA 93401 • (805) 545-9838 • FAX (805) 545-0107

Surrogate Report

Sample Number	Batch	Method	Surrogate	% Recovery	QC Limits
06-C7160	5968	EPA 8270 SIM	o-Terphenyl	84.	53-145
06-C7161	5968	EPA 8270 SIM	o-Terphenyl	75.	53-145
06-C7162	5968	EPA 8270 SIM	o-Terphenyl	81.	53-145
06-C7163	5968	EPA 8270 SIM	o-Terphenyl	82.	53-145
blank	5968	EPA 8270 SIM	o-Terphenyl	88.	53-145
LCS	5968	EPA 8270 SIM	o-Terphenyl	91.	53-145
06-C7161 dup.	5968	EPA 8270 SIM	o-Terphenyl	79.	53-145
06-C7162 MS	5968	EPA 8270 SIM	o-Terphenyl	86.	53-145

PRINTED ON RECYCLED PAPER

Attachment D
Department of Water Resources Well Survey

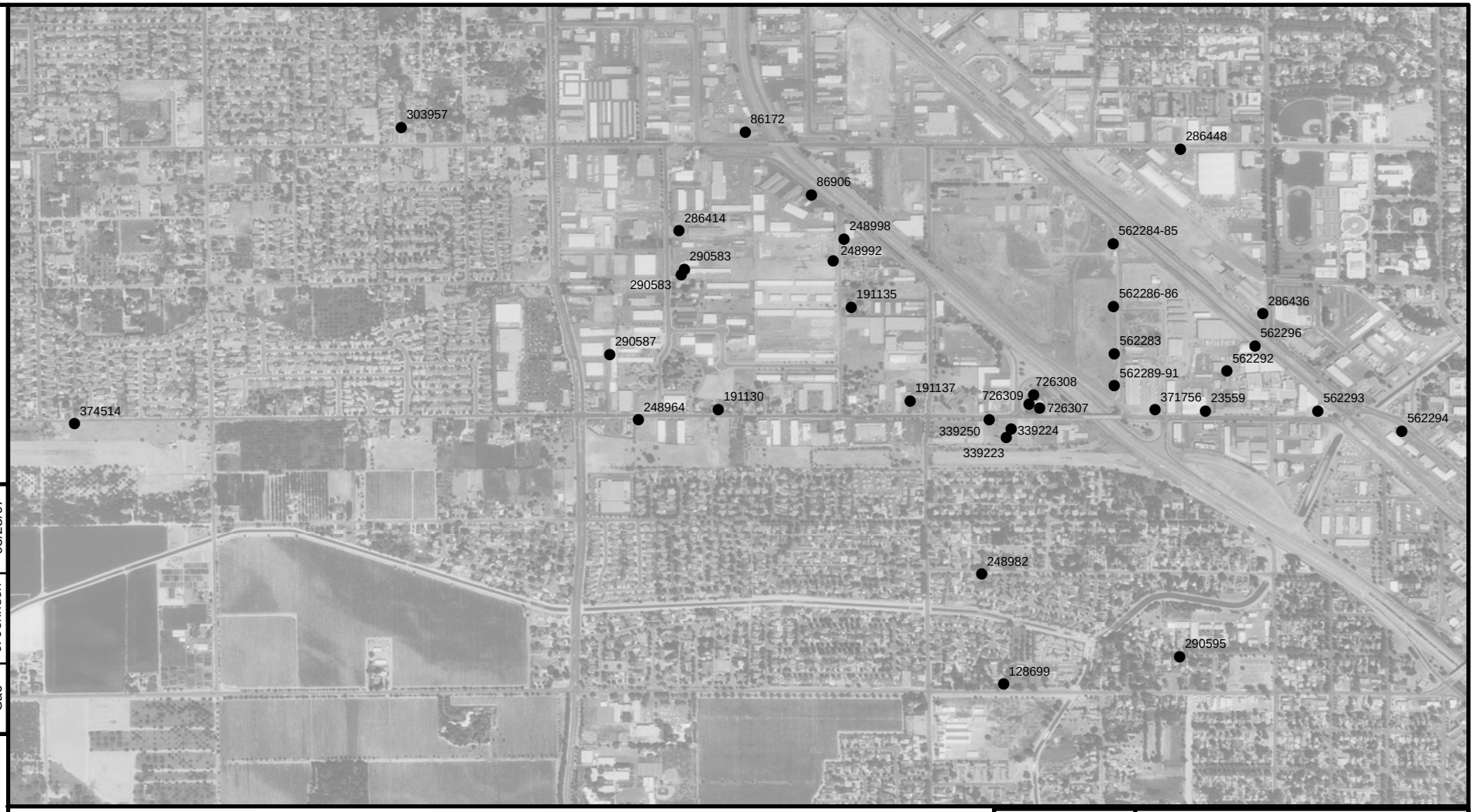
DWR Wells Logs With Address Information

Log No.	Description
86172	1243 Deevon Loop
128699	815 Maze Blvd
191130	1219 Kansas Ave (destroyed)
191135	1012 Lone Palm Ave (destroyed)
191137	1001 Kansas Ave (2 wells destroyed)
23559	527 Kansas Ave
248964	1312 Kansas Ave (destroyed)
248982	701 Laurel Ave (destroyed)
248992	1111 Lone Palm Ave (destroyed)
248998	1155 Lone Palm Ave (destroyed)
286414	1128 Reno Ave (destroyed)
286436	233 Tully Rd (destroyed)
286448	1400 Coldwell Ave (destroyed)
290583	1060 Reno Ave (destroyed)
290583	1070 Reno Ave (destroyed)
290587	1001 Franzia Ct (destroyed)
290595	539 Locust St (destroyed)
303957	1324 Bennett Rd

Log No.	Description
339223	820 Kansas Ave (MW-2)
339224	820 Kansas Ave (MW-3)
339250	820 Kansas Ave (MW-1)
371756	Kansas Ave & Hwy 99
374514	2524 Kansas Ave
562283	1200 Graphics Dr (M-110, destroyed)
562284-85	1200 Graphics Dr (E-1)
562286-88	1200 Graphics Dr (E-2)
562289-91	1200 Graphics Dr (E-3)
562292	Kansas Ave (M-116, destroyed)
562293	Kansas Ave (M-124, destroyed)
562294	9th St (M-122, destroyed)
562296	Kansas Ave (M-114, destroyed)
726307	815 Kansas Ave (MW-1)
726308	815 Kansas Ave (MW-3)
726309	815 Kansas Ave (MW-2)
86906	1219 N Emerald Ave

DWR Wells Logs Without Address Information

Log No.	Well Type	Date Installed	Approximate Location	Proximate to Highway 99?
14285	industrial	8/23/54	Lone Palm Road, ¼ mile south of Woodland Avenue	yes
25959	municipal	4/8/67	S30, T3S, R9E	unknown
286403	unknown (destroyed)	12/28/88	Vicinity of Coldwell Avenue and North 9th Street	yes
32645	municipal	7/5/55	W½ NE¼ S30 T3S R9E	unknown
52246	industrial	9/25/70	Woodland Avenue off Old Highway 99	unknown
96163/5	industrial	5/2/62	SE¼ NE¼ S30 T3S R9E	unknown
96172	irrigation	6/18/62	NE¼ S30 T3S R9E	unknown
na	industrial	7/3/51	Bennett Street	unknown



● DWR Well Location (interpreted from boring log)

See table for address information and well status

N

0 0.5 1 Miles

Shaw®

Caltrans TO-35
Modesto, California

FIGURE 1

DWR WELL LOCATIONS

OFFICE	DRAWN BY		DRAWING NUMBER
Sac	J. Johnson	03/28/07	*120854_dwr_wells.mxd*

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF WATER RESOURCES
SAN JOAQUIN DISTRICT
3374 EAST SHIELDS AVENUE
FRESNO, CA 93726-6913

June 16, 2006

Ms. Danielle Delgado
Shaw Environmental, Incorporated
4005 Port Chicago Highway
Concord, California 94520

Dear Ms. Delgado:

In response to your request of June 12, we have enclosed groundwater data for wells in Section 30 of Township 03 South, Range 09 East in Stanislaus County.

The Department of Water Resources' policy is to charge for requests that require staff time and copies exceeding $25. The following is a list of charges for your request:

Scans	55	copies	at	$.15	per copy	=	$8.25
Staff time	.5	hour	at	50.00	per hour	=	25.00
					Total		$33.25

Please send a check payable to the Department of Water Resources to:

Department of Water Resources
Attention: Ms. Iris M. Yamagata
3374 East Shields Avenue, Room A7
Fresno, California 93726

If you have any questions, please call me at (559) 230-3327.

Sincerely,

Iris M. Yamagata, Chief
Water Management Section
San Joaquin District

Enclosures

STATE OF CALIFORNIA - THE RESOURCES AGENCY GRAY DAVIS, Governor
DEPARTMENT OF WATER RESOURCES

CENTRAL DISTRICT	NORTHERN DISTRICT	SAN JOAQUIN DISTRICT	SOUTHERN DISTRICT
3251 S Street	2440 Main Street	3374 East Shields Avenue	770 Fairmont Avenue
Sacramento, CA 95816	Red Bluff, CA 96080	Fresno, CA 93726	Glendale, CA 91203
(916) 227-7632	(530) 529-7300	(559) 230-3300	(818) 543-4600
(916) 227-7600(Fax)	(530) 529-7322 (Fax)	(559) 230-3301 (Fax)	(818) 543-4604 (Fax)

WELL COMPLETION REPORT RELEASE AGREEMENT--AGENCY
(Government and Regulatory Agencies and their Authorized Agents)

Project/Contract No. 120854.23500011 County Stanislaus

Township, Range, and Section SE + SW Qtr S 30 T3S R9E Radius 1 mile
(Must include entire study area and a map that shows the area of interest.)

Under California Water Code Section 13752, the agency named below requests permission from Department of Water Resources to inspect or copy, or for our authorized agent named below to inspect or copy, Well Completion Reports filed pursuant to Section 13751 to (check one):

- [✓] Make a study, or,
- [✓] Perform an environmental cleanup study associated with an unauthorized release of a contaminant within a distance of 2 miles.

In accordance with Section 13752, information obtained from these reports shall be kept confidential and shall not be disseminated, published, or made available for inspection by the public without written authorization from the owner(s) of the well(s). The information shall be used only for the purpose of conducting the study. Copies obtained shall be stamped **CONFIDENTIAL** and shall be kept in a restricted file accessible only to agency staff or the authorized agent.

Danielle Delgado	Karen for Chris Guevara - San Joaquin District
Authorized Agent	Government or Regulatory Agency
4005 Port Chicago Hwy	3374 East Shields Ave, Room A7
Address	Address
Concord, CA 94520-1120	Fresno, CA 93726
City, State, and Zip Code	City, State, and Zip Code
Signature Danielle Delgado	Signature
Title Staff Scientist	Title
Telephone (925) 288-2384	Telephone (559) 230-3356
Fax (925) 827-2029	Fax (559) 230-3301
Date May 5, 2006	Date
E-mail danielle.delgado@shawgrp.com	E-mail

6 June 2001

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 086172

State Well No. 3/9-30

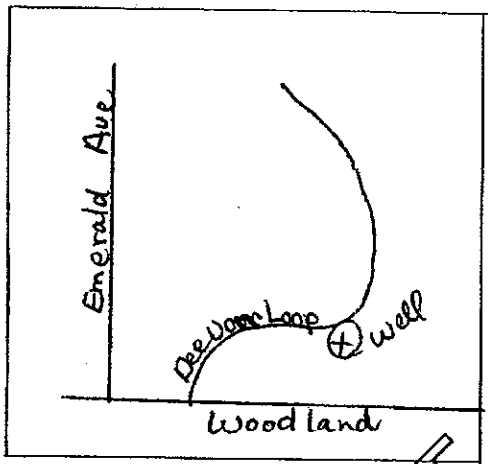
Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name Vonlite-Layne Co.
Address ~~[illegible]~~ P.O. Box 4141
City Modesto, Ca Zip

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number
Well address if different from above 1243 Deerwood Loop
Township Range Section
Distance from cities, roads, railroads, fences, etc.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☑ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☑
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☑ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☑ No ☐ Size pea gravel
Diameter of bore 11"
Packed from 105 to 155 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☑ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	155	6"	160 PVC

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
140	155	2 1/8"

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☑ No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☐ No ☑ Interval ft.
Method of sealing Bentonite

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☑ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☑ If yes, by whom?
Was electric log made? Yes ☐ No ☑ If yes, attach copy to this report

(12) WELL LOG: Total depth 331 ft. Depth of completed well 155 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	19	Sand
19	31	Clay
31	36	S
36	50	C + S St.
50	54	C
54	62	S
62	75	C
75	77	S
77	81	C
81	82	S
82	90	C
90	92	S
92	97	C
97	108	S
108	137	C
137	143	S
143	151	Fair S
151	165	C
165	192	Blue C
192	195	" "
195	202	C
202	206	S (4)
206	214	C + S St
214	218	C
218	220	S
220	245	C
245	246	S
246	247	C
247	250	S
250	262	C
262	306	Shale
306	307	S
307	322	C
322	331	S (9)
331		C

Work started 6/13 19 79 Completed 6/14 1979

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED Vicky Tomelli (Well Driller)

NAME calwater drilling company (Person, firm, or corporation) (Typed or printed)
800 South Kiley
Turlock CA 95380

Address

City Zip

License No. 321252 Date of this report 6/18/79

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL WATER GUIDE
OUTSIDE CORG CLAY AREA

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 128699

State Well No. 3/9-30

Other Well No.

Notice of Intent No.

Local Permit No. or Date 2934

(1) OWNER: Name WARREN GANT
Address 815 MAZE BLVD.
City MODESTO Zip

(2) LOCATION OF WELL (See instructions):
County STANISLAUS Owner's Well Number
Well address if different from above
Township Range Section
Distance from cities, roads, railroads, fences, etc.
MAZE BLVD. 600' EAST OF EMERALD AVE.
NORTH SIDE

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Stock
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size BIRDSEYE
Diameter of bore 14"
Packed from 100 to 160 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

(8) PERFORATIONS: Screen
Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	160	8	160	120	160	

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 100 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing CEMENT

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion 48' ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☑ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☑ If yes, by whom?
Was electric log made? Yes ☐ No ☑ If yes, attach copy to this report

(12) WELL LOG: Total depth 165 ft. Depth of completed well 160 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	3	Topsoil
3	6	Hardpan
6	25	Clay
25	35	~~Clay~~ Shale
35	68	Clay & Shale
68	71	Coarse sand
71	80	Shale
80	85	Sand, fine
85	93	Shale & Clay
93	103	Sand coarse-10
103	110	Clay sand str.
110	120	Sand Coarse-10
120	125	Clay & sand str.
125	150	Sand
150	154	Sand Clay Str.
154	159	Sand
159	165	Clay & Shale

Work started June 9 1978 Completed 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED Anna E Long Secy
(Well Driller)

NAME HENNINGS BROS. DRILLING CO., INC.
(Person, firm, or corporation) (Typed or printed)
Address 3525 Pelandale Avenue
City Modesto Zip 95350
License No. 298813 Date of this report June 26, 1978

OUTSIDE CORC. CLAY AREA

CONFIDENTIAL NOT FOR PUBLIC USE WATER CODE SEC. 13752

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

3/9-30

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION NOT ACCURATE — DO NOT PLOT

№ 14285

State Well No.

Other Well No. 3S/9E-30

Original, Duplicate and Triplicate with the REGIONAL WATER POLLUTION CONTROL BOARD No. 5 (Insert appropriate number)

CONFIDENTIAL Section 7076.1 Water Code

(1) OWNER:
Name W. G. White Wightman
Address Rt. 5 Box 558
Modesto, Calif.

(2) LOCATION OF WELL:
County Stanislaus Owner's number, if any —
R. F. D. or Street No. Lone Palm Road 1/4 mi south of Woodland Road
Section #30
Modesto, Calif

(3) TYPE OF WORK (check):
New well ☑ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☑
Cable ☐
Dug Well ☐

(6) CASING INSTALLED: 1 — X
SINGLE ☑ DOUBLE ☐
From 0 ft. to 80 ft. 6 1/4 in. 12 Gage or Wall
(1125)
Type and size of shoe or well ring
Describe joint Welded

If gravel packed
Diameter of Bore in. from ft. to ft.
Size of gravel:

(7) PERFORATIONS:
Type of perforator used
Size of perforations in., length, by in.
From ft. to ft. Perf. per row Rows per ft.

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☑ Yes ☐ No To what depth 80 ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata
From ft. to ft.
Method of Sealing Cond. seal to 80 feet

(9) WATER LEVELS:
Depth at which water was first found 38 ft.
Standing level before perforating ft.
Standing level after perforating 28 ft.

(10) WELL TESTS:
Was a pump test made? ☐ Yes ☑ No If yes, by whom?
Yield: gal./min. with ft. draw down after hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☑ No
Was electric log made of well? ☐ Yes ☑ No

(11) WELL LOG:
Total depth 87 ft. Depth of completed well 87 ft.
Formations Describe by color, character, size of material, and structure.

ft. to	ft.	
0	3	top soil
3	4	hard pan
4	10	brown clay
10	17	sand & clay streaks
17	27	brn. clay
27	28	fine sand
28	38	brn. clay
38	39	fine sand
39	40	brn. clay
40	42	coarse sand
42	49	brn. clay
49	57	fine sand
57	60	brn. clay
60	61	fine sand
61	63	brn. clay
63	65	fine silt sand
65	66	brn. clay
66	67	fine sand
67	69	brn. clay
69	72	fine sand
72	73	brn. clay
73	78	fine sand
78	81	brn. clay
81	83	fine silt sand
83	86	(coarse sand)
86	87	brn. clay

Work started Aug 23 1954 Completed Aug 23 1954

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Modesto Well Drillers (Person, firm, or corporation) (Typed or printed)
Address 316 Covena
Modesto, Calif.
[Signed] Loyd A. Rempfield Well Driller
License No. 135518 Dated Sept. 29 1954

95589 2-54 50M GUIM ⊙ SPO DWR FORM NO. 240 (REV. 2-54)

ORIGINAL

File with DWR

Notice of Intent No.

Local Permit No. or Date

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 191130

State Well No. 3/9-30

Other Well No.

(1) OWNER: Name

Address 1219 KANSAS AVE

City MODESTO CAL Zip 95350

(2) LOCATION OF WELL (See instructions):

County STANISLAUS Owner's Well Number

Well address if different from above

Township Range Section

Distance from cities, roads, railroads, fences, etc.

N

WELL & SITE 1219

KANSAS AVE.

WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☐ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☐ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☒ Size

Diameter of bore

Packed from to ft.

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.

Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.

Method of sealing

(10) WATER LEVELS:

Depth of first water, if known ft.

Standing level after well completion ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom?

Type of test Pump ☐ Bailer ☐ Air lift ☐

Depth to water at start of test ft. At end of test ft

Discharge gal/min after hours Water temperature

Chemical analysis made? Yes ☐ No ☐ If yes, by whom?

Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 80 ft. Depth of completed well ft.

from ft. to ft. Formation (Describe by color, character, size or material)

FILLED WELL WITH
5 SACK MIX OF
CEMENT TO WITHIN
ONE FOOT OF SURFACE

Work started 19 Completed 12-10 19 87

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)

NAME (Person, firm, or corporation) (Typed or printed)

Address

City Zip

License No. Date of this report

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

al Sneed
CITY OF MODESTO

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL

File with DWR

Notice of Intent No. _____

Local Permit No. or Date _____

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 191135

State Well No. 3/9-30

Other Well No. _____

(1) OWNER: Name _____

Address 1012 Lone Palm Ave

City Modesto Zip _____

(2) LOCATION OF WELL (See instructions):

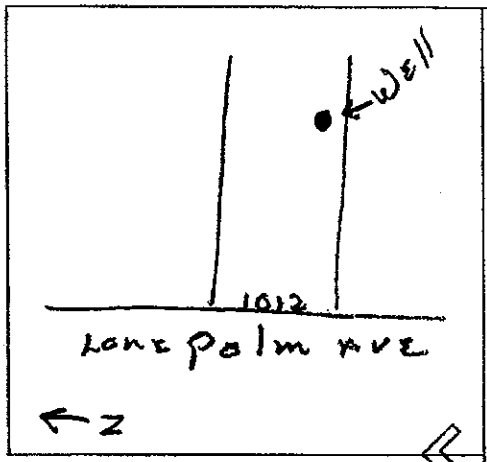
County Stanislaus Owner's Well Number Dom.

Well address if different from above _____

Township 30 Range 3 Section 9

Distance from cities, roads, railroads, fences, etc.

80' East of Center Line Lone Palm Ave



WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☐ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☑ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☐ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☐ Size _____

Diameter of bore _____

Packed from _____ to _____ ft.

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:

Type of perforation or size of screen _____

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth _____ ft.

Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.

Method of sealing _____

(10) WATER LEVELS:

Depth of first water, if known _____ ft.

Standing level after well completion _____ ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom? _____

Type of test Pump ☐ Bailer ☐ Air lift ☐

Depth to water at start of test _____ ft. At end of test _____ ft

Discharge _____ gal/min after _____ hours Water temperature _____

Chemical analysis made? Yes ☐ No ☐ If yes, by whom? _____

Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth _____ ft. Depth of completed well _____ ft.

from ft. to ft. Formation (Describe by color, character, size or material)

Well Filled 80' with 5 sx mix concrete 6" x 3' pad on top

DESTROYED

Work started _____ 19__ Completed 3-14 1988

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED L. Wallace (Well Driller)

NAME City of Modesto (Person, firm, or corporation) (Typed or printed)

Address _____

City Modesto Zip 95350

License No. _____ Date of this report _____

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL

File with DWR

Notice of Intent No. _____

Local Permit No. or Date _____

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 191137

State Well No. 3/9-30

Other Well No. _____

(1) OWNER: Name _____

Address 1001 KANSAS AVE

City MODESTO, CAL. Zip _____

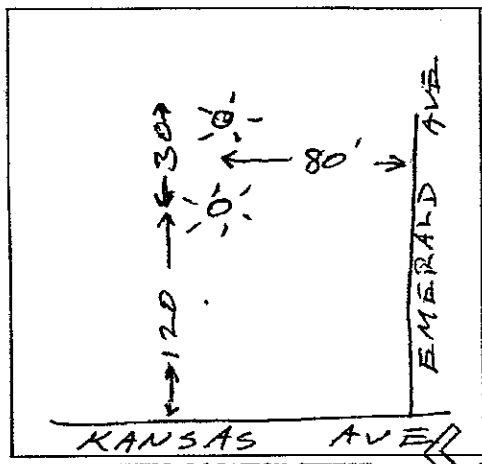
(2) LOCATION OF WELL (See instructions):

County STANISLAUS Owner's Well Number _____

Well address if different from above _____

Township 30 Range 3 Section 9

Distance from cities, roads, railroads, fences, etc. ONE WELL 120' FROM KANSAS & ONE WELL 150' FROM KANSAS



WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☐ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☐ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☐ Size _____

Diameter of bore _____

Packed from _____ to _____ ft.

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth _____ ft.

Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.

Method of sealing _____

(10) WATER LEVELS:

Depth of first water, if known _____ ft.

Standing level after well completion _____ ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom? _____

Type of test Pump ☐ Bailer ☐ Air lift ☐

Depth to water at start of test _____ ft. At end of test _____ ft

Discharge _____ gal/min after _____ hours Water temperature _____

Chemical analysis made? Yes ☐ No ☐ If yes, by whom? _____

Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 150 ft. Depth of completed well _____ ft.

from ft. to ft. Formation (Describe by color, character, size or material)

FILLED TWO (2) WELLS OF 8" SIZE ON SAME PROPERTY

WELLS ARE FILLED WITH CEMENT TO 6' BELOW GROUND LEVEL

Al Sweet

DESTROYED

Work started _____ 19 _____ Completed 3/21 19 88

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED _____ (Well Driller)

NAME _____ (Person, firm, or corporation) (Typed or printed)

Address _____

City _____ Zip _____

License No. _____ Date of this report _____

NOT VALID FOR PUBLIC USE
WATER CODE SEC. 13752

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

3/9-30

ORIGINAL
File with DWR

WATER WELL DRILLERS REPORT

(Sections 7079, 7080, 7081, 7082, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Do Not Fill In ✓

№ 23559

State Well No.
Other Well No. 3/9E-30

(1) OWNER:
Name JOHN RAMOS
Address 1211 McHENRY AVE
MODESTO

(2) LOCATION OF WELL:
County STANISLAUS Owner's number, if any
Township, Range, and Section MODESTO
Distance from cities, roads, railroads, etc. 1/4 MI WEST OF 99 HIWAY
527 KANSAS AVE.

(3) TYPE OF WORK (check):
New Well ☒ Deepening ☐ Reconditioning ☐ Destroying ☐
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☒
Cable ☐
Other ☐

(6) CASING INSTALLED:
STEEL: SINGLE ☒ DOUBLE ☐ OTHER:

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	76	6 5/8"	12			

If gravel packed

Size of shoe or well ring: Size of gravel:
Describe joint BELLED

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
		NONE		

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes ☒ No ☐ To what depth 76 ft.
Were any strata sealed against pollution? Yes ☒ No ☐ If yes, note depth of strata
From 0 ft. to 76 ft.
From ft. to ft.
Method of sealing

(9) WATER LEVELS:
Depth at which water was first found, if known 39 ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing ft.

(10) WELL TESTS:
Was pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes ☐ No ☒
Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG:
Total depth 100 ft. Depth of completed well 100 ft.
Formation: Describe by color, character, size of material, and structure

ft. to ft.	
0-6	TOP SOIL
6-18	SAND
19-29	CLAY
29-36	SAND
36-38	CLAY
38-48	SAND
48-49	CLAY
49-66	SAND
66-77	CLAY
77-100	COURSE SAND & CLAY

CONFIDENTIAL
Water Code Sec. 7080

Work started 4-12 19 66. Completed 4-12 19 66

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME MODESTO WELL DRILLERS
(Person, firm, or corporation) (Typed or printed)
Address 316 COVENA MODESTO
[SIGNED] Lyal A. Hemfill
(Well Driller)
License No. 135578 Dated 4-21, 19 66

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 8-65)

85201-850 10-68 50M THIP ① △ 06P

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 248964

State Well No. 3/9-30

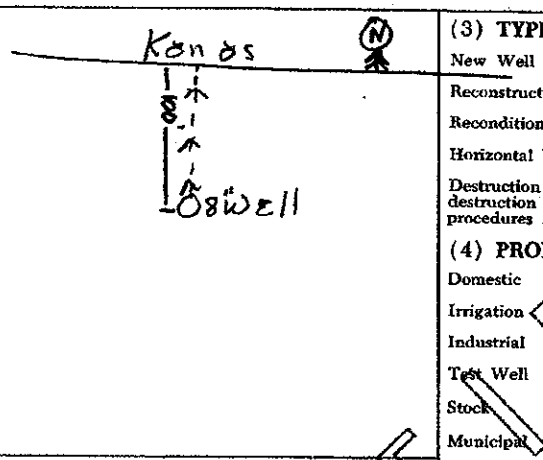
Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name Bill Kirtpatric
Address 1312 Kanas
City Modesto Zip

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number 1
Well address if different from above
Township 30 Range 3 Section 9
Distance from cities, roads, railroads, fences, etc.
100' South OF Ck OF Kanas



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☐ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 80' ft. Depth of completed well ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		Well Filled to 3' OF SURFACE
		with 55x mix Concret
		77' Aprox 10' Cavity. At bottom

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED Glenn Wallace (Well Driller)

NAME City OF Modesto
(Person, firm, or corporation) (Typed or printed)

Address
City Zip
License No. Date of this report 10-8-85

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752
OUTSIDE CORC.
CLAY AREA

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL

File with DWR

Notice of Intent No.

Local Permit No. or Date

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 248982

State Well No. 3/9-30

Other Well No.

(1) OWNER: Name

Address #701 Laurel

City Modesto Zip 95351

(2) LOCATION OF WELL (See instructions):

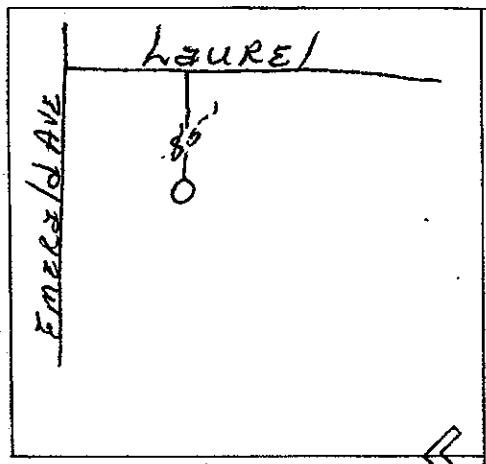
County Stanislaus Owner's Well Number

Well address if different from above

Township 30 Range 3 Section 9

Distance from cities, roads, railroads, fences, etc.

85' South of Laurel



WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☐ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☐ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☐ Size

Diameter of bore

Packed from to ft.

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.

Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.

Method of sealing

(10) WATER LEVELS:

Depth of first water, if known ft.

Standing level after well completion ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom?

Type of test Pump ☐ Bailer ☐ Air lift ☐

Depth to water at start of test ft. At end of test ft

Discharge gal/min after hours Water temperature

Chemical analysis made? Yes ☐ No ☐ If yes, by whom?

Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth ft. Depth of completed well ft.

from ft. to ft. Formation (Describe by color, character, size or material)

Well Filled w/ 5 sx m/x from Bottom of Well to 1' from Floor of Garage

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED L. Wallace Al. Snzed (Well Driller)

NAME (Person, firm, or corporation) (Typed or printed)

Address 801 11th St.

City Zip

License No. Date of this report March 3-86

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

OUTSIDE CORC. CLAY AREA

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL

File with DWR

Notice of Intent No.

Local Permit No. or Date

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 248992

State Well No. 3/9-30

Other Well No.

(1) OWNER: Name

Address 1111 LONE PALM

City MODESTO CAL Zip 95353

(2) LOCATION OF WELL (See instructions):

County STANISLAUS Owner's Well Number

Well address if different from above

Township Range Section

Distance from cities, roads, railroads, fences, etc. 100' W. OF E. PROP. LINE

N

LONE PALM

100'

WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☐ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☐ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☒ Size

Diameter of bore

Packed from ft. to ft.

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.

Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.

Method of sealing

(10) WATER LEVELS:

Depth of first water, if known ft.

Standing level after well completion ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom?

Type of test Pump ☐ Bailer ☐ Air lift ☐

Depth to water at start of test ft. At end of test ft

Discharge gal/min after hours Water temperature

Chemical analysis made? Yes ☐ No ☐ If yes, by whom?

Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 80 ft. Depth of completed well ft.

from ft. to ft. Formation (Describe by color, character, size or material)

FILLED WELL WITH 5 SACK MIX OF CONCRETE FROM BOTTOM TO TOP

al Sneed

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)

NAME (Person, firm, or corporation) (Typed or printed)

Address

City Zip

License No. Date of this report

VOIDED
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 248998

State Well No. 3/9-30

Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name

Address 1155 Lone Palm

City Modesto Zip 95350

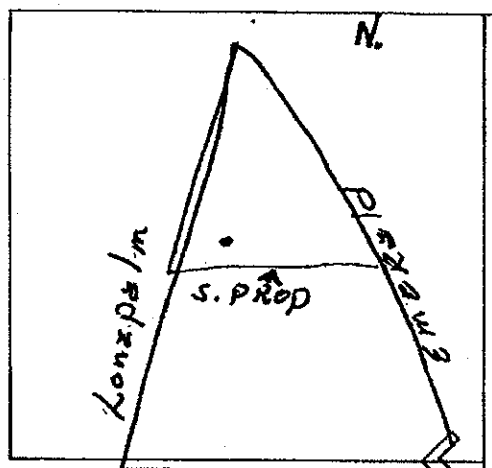
(2) LOCATION OF WELL (See instructions):

County Stanislaus Owner's Well Number

Well address if different from above

Township 30 Range 3 Section 9

Distance from cities, roads, railroads, fences, etc. Well is 100' East of Lone Palm & 40' North of South Property Line



WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☐ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic ☐

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☐ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☐ Size

Diameter of bore

Packed from to ft.

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.

Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.

Method of sealing

(10) WATER LEVELS:

Depth of first water, if known ft.

Standing level after well completion ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom?

Type of test Pump ☐ Bailer ☐ Air lift ☐

Depth to water at start of test ft. At end of test ft

Discharge gal/min after hours Water temperature

Chemical analysis made? Yes ☐ No ☐ If yes, by whom?

Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth ft. Depth of completed well ft.

from ft. to ft. Formation (Describe by color, character, size or material)

Filled well with 5.5 x mix 130' with in two ft. of Ground Level

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)

NAME (Person, firm, or corporation) (Typed or printed)

Address

City Zip

License No. Date of this report 5-13-87

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

3/9-30E1

ORIGINAL
File with DWR

WATER WELL DRILLERS REPORT

(Sections 7079, 7080, 7081, 7082, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

3S/9E-30E1

Do Not Fill In

№ 25959 DWR 7/1/93

State Well No.
Other Well No. 3S/9E-30

(1) OWNER:

Name City of Modesto
Address Modesto, California

(2) LOCATION OF WELL:

County Stanislaus Owner's number, if any #34
Township, Range, and Section T. 3S. R. 9E. Sec. 30
Distance from cities, roads, railroads, etc.

(3) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Destroying ☐
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Other ☐

(6) CASING INSTALLED:

STEEL: X OTHER:
SINGLE ☐ DOUBLE ☒

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	100	16"	#10D.			

If gravel packed

Size of shoe or well ring: 3/4x6x16 Size of gravel:
Describe joint Welded

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen None Used

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes ☐ No ☐ To what depth ft.
Were any strata sealed against pollution? Yes ☐ No ☐ If yes, note depth of strata
From ft. to ft.
From ft. to ft.
Method of sealing

(9) WATER LEVELS:

Depth at which water was first found, if known 32 ft.
Standing level before perforating, if known " ft.
Standing level after perforating and developing " ft.

(10) WELL TESTS:

Was pump test made? Yes ☒ No ☐ If yes, by whom? Us
Yield: 2200 gal./min. with 66' ft. drawdown after 32 hrs.
Temperature of water Was a chemical analysis made? Yes ☐ No ☒
Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG:

Total depth 112 ft. Depth of completed well 112 ft.

Formation: Describe by color, character, size of material, and structure

ft.	ft. to	
0	8	Top Soil
8	21	Sand
21	35	Clay
35	42	Sand
42	49	Clay
49	57	Sand
57	62	Clay
62	65	Sand
65	90	Clay
90	96	Sand
96	103	Clay
103	105	Sand (set hard)
105	107	Clay
107	112	Sand (set)
112	+	Sand

CONFIDENTIAL
Water Code Sec. 13752

Work started March 28 Completed April 8, 1967

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Osterberg & Stewart
(Person, firm, or corporation) (Typed or printed)

Address 2523 River Road
Modesto, California

(SIGNED) John F. Stewart
(Well Driller)

License No. 231715 Dated April 14, 1967

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9.63)

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 286403

State Well No. 3/9-30

Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name

Address Co.

City Modesto ZIP 95355

(2) LOCATION OF WELL (See instructions):

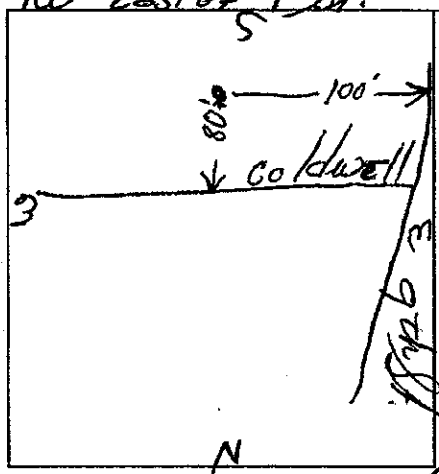
County Stanislaus Owner's Well Number

Well address if different from above

Township 30 Range 3 Section 9

Distance from cities, roads, railroads, fences, etc.

Well 80' south of Coldwell
100' East of 9th St.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☑ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size

(8) PERFORATIONS:
Type of perforation or size of screen

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth ft. Completed depth ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		12" Well Filled
		200' with sand + Gravel mix
		40' Colum with 5 SX mix
		Concrete

Work started 12-28 1988 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed L Wallace
(Well Driller)

NAME
(Person, firm, or corporation) (Typed or printed)

Address

City ZIP

License No. Date of this report

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

ORIGINAL
File with DWR

Do not fill in

No. 286414

State Well No. 3/9-30

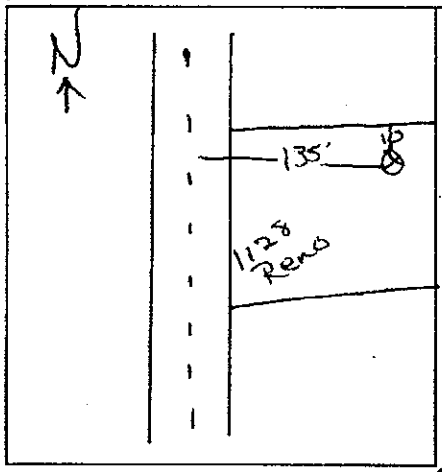
Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name Tri County Builders
Address 1128 Reno
City Modesto ZIP 95351

(2) LOCATION OF WELL (See instructions):
County Stan Owner's Well Number
Well address if different from above
Township 3 Range 9 Section 30
Distance from cities, roads, railroads, fences, etc. 4" well was located 10' S. of N.P.L. + 135' E from E of Reno ave.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☒
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size

(8) PERFORATIONS:
Type of perforation or size of screen

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing 5 sx Concrete mix

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 75' ft. Completed depth ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		4" well 75' in depth was sealed with 5 sx Concrete to a level of 2' below ground level with a 2'x2'x6" cap atop the well casing.

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed Tony Williams (Well Driller)
NAME City of Modesto (Person, firm, or corporation) (Typed or printed)
Address 801 N. Jefferson
City Modesto ZIP 95351
License No. Date of this report 8/30/89

NOT FOR PUBLIC USE
WATER CODE SEC. 13752

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 286436

State Well No. 3/9-30

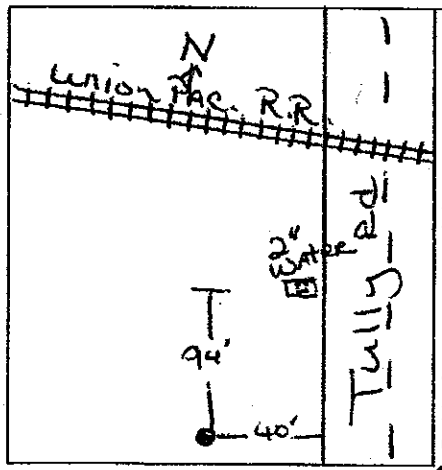
Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name RUUD
Address 233 Tully Rd.
City Modesto ZIP 95350

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number
Well address if different from above
Township 3 Range 9 Section 30
Distance from cities, roads, railroads, fences, etc. Well located 94' S of 2" Water tap & 40' W of W. F. L.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☑
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☑ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.
Were strata sealed against pollution? Yes ☑ No ☐ Interval Completely ft.
Method of sealing 5 sx Concrete Mix

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 140' ft. Completed depth ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		8" well 140' in depth was completely filled with 5 sx concrete mix to a level of 4' below ground level & a 3'x3'x2' cap atop.

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed Tony Williams (Well Driller)
NAME City of Modesto (Person, firm, or corporation) (Typed or printed)
Address 901 H St
City Modesto ZIP 95351
License No. Date of this report 2-8-90

ONLY FOR PUBLIC USE
NOT FOR WATER CODE SEC. 13752
COPY

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

ORIGINAL
File with DWR

Do not fill in

No. 286448

State Well No. 3/9-30

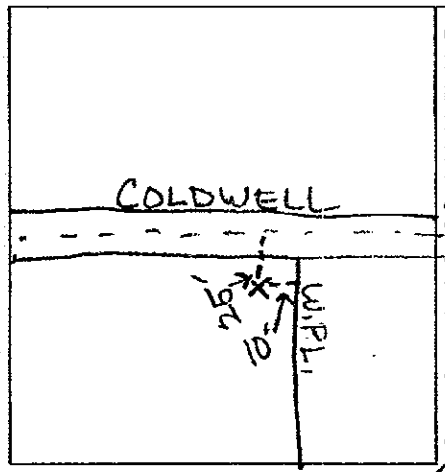
Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name
Address 1400 COLDWELL
City MODESTO ZIP 95354

(2) LOCATION OF WELL (See instructions):
County STANISLAUS Owner's Well Number
Well address if different from above
Township 3 Range 9 Section 30
Distance from cities, roads, railroads, fences, etc.
10' E. OF W.P.L. — 25' S. OF ¢
COLDWELL



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval COMPLETE ft.
Method of sealing 5 SACK CONCRETE MIX

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 150 ft. Completed depth ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		10" WELL 150' IN DEPTH
		COMPLETELY FILLED WITH
		5 SACK CONCRETE MIX TO 4'
		BELOW GROUND LEVEL

Work started 19 Completed 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed (Well Driller)
NAME CITY OF MODESTO (Person, firm, or corporation) (Typed or printed)
Address 801 H ST
City MODESTO ZIP 95354
License No. Date of this report 8-3-90

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752
OUTSIDE CORC. CLAY AREA

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

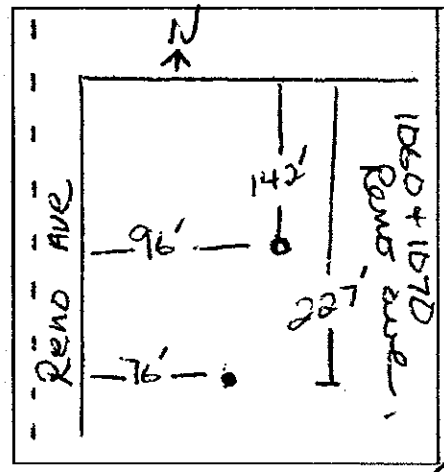
WATER WELL DRILLERS REPORT

Do not fill in
No. 290583
State Well No. 3/9-30

Notice of Intent No. _____
Local Permit No. or Date _____
Other Well No. _____

(1) OWNER: Name N/A
Address 1060 + 70 Reno ave
City Modesto ZIP 95351

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number _____
Well address if different from above _____
Township 3 Range 9 Section 30
Distance from cities, roads, railroads, fences, etc. 96' E of FL + 142' S of PL. #2-76' E of FL + 227' S of PL.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐ (Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size _____
Diameter of bore _____
Packed from _____ to _____ ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth _____ ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval Completely ft.
Method of sealing 5 sx Concrete mix

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion _____ ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom? _____
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☐ If yes, by whom? _____
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 80' ft. Completed depth _____ ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		2-6" wells approx. 80' where filled with 5 sx concrete mix to a level of 6' below grade where the casing was cut + a 2'x2' concrete cap poured atop.

Work started _____ 19__ Completed 4-14 1992

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed Tony Williams (Well Driller)
NAME City of Modesto (Person, firm, or corporation) (Typed or printed)
Address 801 11th
City Modesto ZIP 95354
License No. _____ Date of this report 4-15-92

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 290587

State Well No. 3/9-30

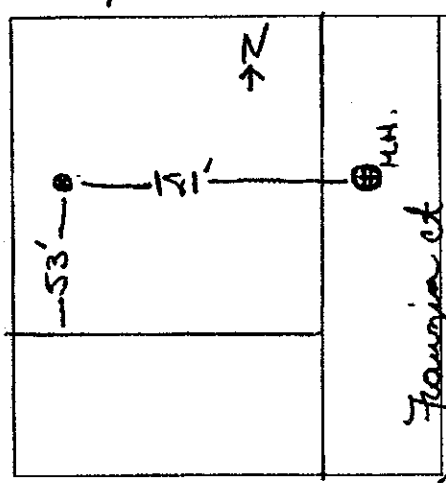
Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name N/A
Address 1001 Fearnyer Ct
City Modesto ZIP 95351

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number
Well address if different from above
Township 3 Range 9 Section 30
Distance from cities, roads, railroads, fences, etc. 6" well was 53' N. of S.P.L. + 181' W. of M.H. on Fearnyer Ct.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia in.	Gage or Wall

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval Completely
Method of sealing 5 sx Concrete mix

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 120 ft. Completed depth ft.
from ft. to ft. Formation (Describe by color, character, size or material)

6" well approx. 120' in depth was completely filled with 5 sx concrete to 5' below grade where upon the casing was cut + a 3'x3'x2' concrete cap poured atop

Work started 19 Completed 4-27 1992

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed Tony Williams (Well Driller)
NAME City of Modesto (Person, firm, or corporation) (Typed or printed)
Address 801 11th
City Modesto ZIP 95354
License No. Date of this report 4-28-92

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DWR 188 (REV. 12-86) 86 96355

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 290595

State Well No. 3/9-30

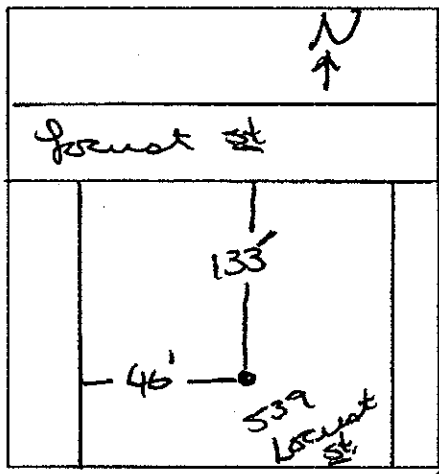
Notice of Intent No. _____

Local Permit No. or Date _____

Other Well No. _____

(1) OWNER: Name _____
Address 539 Locust St
City Modesto ZIP 95351

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number _____
Well address if different from above _____
Township 3 Range 9 Section 30
Distance from cities, roads, railroads, fences, etc. Well was 46' E. of W. P.L. & 133' S. of S.F.L. of Locust St.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☒ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size _____
Diameter of bore _____
Packed from _____ to _____ ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth _____ ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval Completely
Method of sealing 5 sk Concrete Mix

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion _____ ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom? _____
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☐ If yes, by whom? _____
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth _____ ft. Completed depth 130 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
		8" well approx. 130' in depth was filled completely with 5 sk concrete mix.

Work started _____ 19__ Completed 7-23 1992

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed Tony Williams (Well Driller)
NAME City of Modesto (Person, firm, or corporation) (Typed or printed)
Address 801 11th St.
City Modesto ZIP 95354
License No. _____ Date of this report _____

ONLY NOT FOR PUBLIC USE WATER CODE SEC. 13752

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 303957

State Well No. 3/9-30

Other Well No.

Notice of Intent No.

Local Permit No. or Date 89-84

(1) OWNER: Name A.L. Pratt
Address 1324 Bennett Rd.
City Modesto, Ca. ZIP 95351

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number
Well address if different from above
Township Modesto Range Section
Distance from cities, roads, railroads, fences, etc.

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic Priv. ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary XX Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes XX No ☐ Size Roofing
Diameter of bore 11"
Packed from 50 to 160 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic XX Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall	
0	160	6	160	
			PVC	

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
140	160	

(9) WELL SEAL:
Was surface sanitary seal provided? Yes XX No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing Bentonite

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 157 ft. Completed depth 160 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	18	Sand
18	42	Clay
42	46	Sand
46	62	Clay
62	67	Sand
67	79	Clay
79	96	Sand
96	140	Clay
140	157	Sand

Work started 19 Completed 3-23 19 89

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed Willadeen Chandler, Bkkpr.
(Well Driller)
NAME Calwater Drilling Co., Inc.
(Person, firm, or corporation) (Typed or printed)
Address 300 S. Kilroy
City Turlock, Ca. ZIP 95380
License No. 321252 Date of this report 3-28-89

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752
OUTSIDE CORC. CLAY AREA

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

3/9-30

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 5
(Insert appropriate number)

WATER WELL DRILLERS REPORT
(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION NOT CHECKED
Do Not Fill In
No. 32645
State Well No.
Other Well No. 35-9E-30

(1) OWNER:
Name: California Frozen Foods
Address: Modesto, California

(2) LOCATION OF WELL:
County: Stanislaus Owner's number, if any:
R. F. D. or Street No.: About 400 ft. s. & 400 W. of N. E. Corner of Sec. 30 R. 9 E. T. 3 S.

(3) TYPE OF WORK (check):
New Well ☐ Deepening ☒ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check): 4
Domestic ☐ Industrial ☒ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☒ 2
Cable ☒
Dug Well ☐

(6) CASING INSTALLED: 1-4
SINGLE ☒ DOUBLE ☐

From ft.	to ft.	Diam.	Gage or Wall
0	112	8	10

If gravel packed 2

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring: 8 x 4 x 8 Size of gravel:
Describe joint: Welded

(7) PERFORATIONS: 6
Type of perforator used: None
Size of perforations: in., length, by in.

From ft.	to ft.	Perf. per row	Rows per ft.

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☐ Yes ☐ No To what depth: 1-3 ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata: 2

From ft.	to ft.

Method of Sealing: With cement grout from 0 to 105 Ft.

(9) WATER LEVELS:
Depth at which water was first found: 180 ft.
Standing level before perforating: ft.
Standing level after perforating: ft.

(10) WELL TESTS:
Was a pump test made? ☒ Yes ☐ No If yes, by whom?
Yield: 475 gal./min. with 65 ft. draw down after 21 hrs.
Temperature of water: Was a chemical analysis made? ☐ Yes ☐ No
Was electric log made of well? ☐ Yes ☐ No

(11) WELL LOG:
Total depth: 118 ft. Depth of completed well: 118 ft.
Formation: Describe by color, character, size of material, and structure.

ft. to	ft.	
103	105	Sand
105	118	Clay
118		Sand

CONFIDENTIAL
Section 7076.1, Water Code

Work started 7/1/55 19 Completed 7/5/55 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME: Osterberg & Carroll
(Person, firm, or Corporation) (Typed or printed)
Address: Rt. 7 Box 1520
Modesto, California
[SIGNED] [signature]
Well Driller
License No. 87245 Dated ____, 19

DWR FORM NO. 246 (REV. 2.54)

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

ORIGINAL
File with DWR

Do not fill in

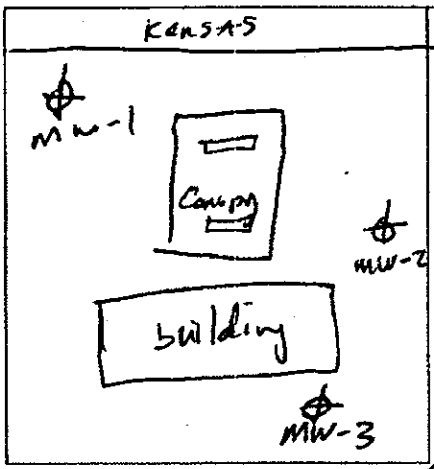
No. 339250

Notice of Intent No. _____
Local Permit No. or Date _____

State Well No. 3/9-30
Other Well No. MW1

(1) OWNER: Name Shell Oil Company
Address P.O. BOX 4023
City CONCORD, CALIFORNIA ZIP 94524

(2) LOCATION OF WELL (See instructions):
County STANISLAUS Owner's Well Number MW1
Well address if different from above 820 KANSAS AVE, Modesto
Township 3 South Range 9 EAST Section 30
Distance from cities, roads, railroads, fences, etc.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☒
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size #3
Diameter of bore 10 1/4 inch
Packed from 45' to 65' ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia in.	Gage or Wall	From ft.	To ft.	Slot size
0'	41'	4"	Sch 40	45	65	.020

(8) PERFORATIONS:
Type of perforation or size of screen

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 43' ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.
Method of sealing Bentonite Pellets, Sand Cement Grout

(10) WATER LEVELS:
Depth of first water, if known ≈ 55.5' ft.
Standing level after well completion 55.45' ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☒ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 65 ft. Completed depth 65 ft.
from ft. 0 to 65 ft. Formation (Describe by color, character, size or material)

0 - 5' FILL
5' - 13' SAND; brown, medium grained
13' - 18' SILTY SAND; light brown medium to fine grained
18' - 30' CLAY & SILT; fine grained
30' - 45' SILT; olive and brown fine grained
45' - 55' SAND; light brown
55' - 65' SAND; light brown

OUTSIDE CORC. CLAY AREA

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed Gary Ruppert (Well Driller)
NAME West Hazmat Drilling (Person, firm, or corporation) (Typed or printed)
Address 3233 Fitzgerald Rd
City Rancho Cordova ZIP 95742
License No. C-57-554979 Date of this report 6/28/90

Work started 5-24 1990 Completed 5-24 1990

NOT A PUBLIC RECORD
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DWR 188 (REV. 12-86) 86 96355

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 339223

State Well No. 3/9-30

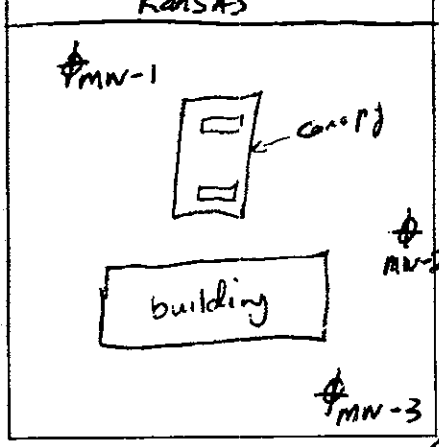
Other Well No. MW-2

Notice of Intent No. _____

Local Permit No. or Date _____

(1) OWNER: Name Shell Oil Company
Address P.O. Box 4023
City Concord, CA ZIP 94524

(2) LOCATION OF WELL (See instructions):
County STANISLAUS Owner's Well Number MW-2
Well address if different from above 820 KANSAS AVE, MODESTO
Township 3 South Range 9 EAST Section 30
Distance from cities, roads, railroads, fences, etc.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☒
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size 3/8 Screen
Diameter of bore 10 3/8"
Packed from 25' to 70' ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	46	4	Sch 40	46'	70	0.020

(8) PERFORATIONS:
Type of perforation or size of screen

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 46' ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.
Method of sealing Bentonite Pellets, Sand Cement Grout

(10) WATER LEVELS:
Depth of first water, if known 60' ft.
Standing level after well completion — ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☒ If yes, by whom? _____
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☐ If yes, by whom? _____
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 70' ft. Completed depth 70' ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0'	13'	SAND; Brown
13'	25'	CLAYEY SAND; brown and grey
25'	45'	SANDY SILT; brown, fine grained
45'	65'	SAND; brown, coarse to medium grained
65'	70'	SILTY SAND; brown, coarse to medium grained

Work started 5-24 1990 Completed 5-24 1990

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed Gary Pippert (Well Driller)

NAME West Hazmat Drilling (Person, firm, or corporation) (Typed or printed)
Address 3233 Fitzgerald Rd
City Rancho Cordova, CA ZIP 95742
License No. C-57-554974 Date of this report 6/28/90

ONLY FOR PUBLIC USE
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DWR 188 (REV. 12-86) 86 96355

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

ORIGINAL
File with DWR

Do not fill in

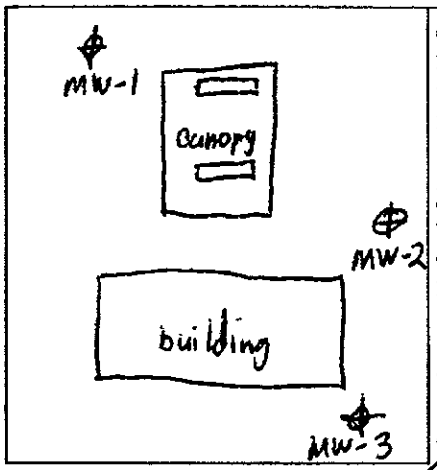
No. 339224

Notice of Intent No. _____
Local Permit No. or Date _____

State Well No. 3/9-30
Other Well No. MW-3

(1) OWNER: Name Shell Oil Company
Address P.O. Box 4023
City Concord, CA ZIP 94524

(2) LOCATION OF WELL (See instructions):
County STANISLAUS Owner's Well Number MW-3
Well address if different from above 820 KANSAS AVE, MODESTO
Township 3 South Range 9 East Section 30
Distance from cities, roads, railroads, fences, etc.



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☒
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size #3 sand
Diameter of bore 10 in.
Packed from 48' ft. to 70' ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	46'	4"	Sch 40

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
48'	70'	0.020

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 46' ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.
Method of sealing Bentonite Pellets, Sand Cement Grout

(10) WATER LEVELS:
Depth of first water, if known 60' ft.
Standing level after well completion — ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☒ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 70' ft. Completed depth 70' ft.

from ft. to ft.	Formation (Describe by color, character, size or material)
0'-13'	SAND; brown, medium grained
13'-18'	SILT; olive and grey, fine grained
18'-23'	SAND; light brown and tan medium grained
23'-28'	SILTY CLAY; brown, fine grained
28'-45'	SILTY SAND; brown, medium grained
45'-60'	SAND, light brown, coarse grained
60'-70'	CLAYEY SAND; brown medium grained

Work started 5-23 1990 Completed 5-23 1990

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed [signature] (Well Driller)
NAME West Hazmat Drilling (Person, firm, or corporation) (Typed or printed)
Address 3233 Fitzgerald Rd
City Rancho Cordova, CA ZIP 95742
License No. C-57-534979 Date of this report 6/28/90

UNOFFICIAL COPY
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 371756

State Well No. 3/9-30

Other Well No.

Notice of Intent No.

Local Permit No. or Date

(1) OWNER: Name Foster Farms
Address Kansas Ave.
City Modesto, Ca 95350 ZIP

(2) LOCATION OF WELL (See instructions):
County Stan. Owner's Well Number
Well address if different from above
Township 3S Range 9E Section 30
Distance from cities, roads, railroads, fences, etc.

Prev. DWR # 96163-5/62

KANSAS X

CS Freeway

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☐ Deepening ☐
Reconstruction ☒
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☒
Test Well ☐
Municipal ☐
Other ☒
(Describe)

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☒ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☒ Size
Diameter of bore
Packed from ft. to ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	201	12OD	#10

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
none		

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth 201 ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval 140-197 ft.
Method of sealing neat cement grout

(10) WATER LEVELS:
Depth of first water, if known 68 ft.
Standing level after well completion 68 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom? US
Type of test Pump ☒ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge 300 gal/min after 6 hours Water temperature
Chemical analysis made? Yes ☒ No ☐ If yes, by whom? WHF
Was electric log made Yes ☐ No ☒ If yes, attach copy to this report TV

(12) WELL LOG: Total depth 244 ft. Completed depth 228 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)

Work started 9/6 1990 Completed 9/16 1990

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed (Well Driller)
NAME Osterberg & Stewart, Inc.
(Person, firm, or corporation) (Typed or printed)
Address 2523 River Rd.
City Modesto, Ca., 95351 ZIP
License No. 446670 Date of this report 9/24/90

CONFIDENTIAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 374514

State Well No. 3/9-30

Other Well No.

Notice of Intent No.

Local Permit No. or Date 91-99

(1) OWNER: Name Ray Bray
Address 2524 Kansas Ave.
City Modesto, Ca. ZIP 95351

(2) LOCATION OF WELL (See instructions):
County Stanislaus Owner's Well Number
Well address if different from above
Township Modesto Range Section
Distance from cities, roads, railroads, fences, etc.

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic Priv. ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary XX Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes XX No ☐ Size 6-12 sand
Diameter of bore 14"
Packed from 50 ft. to 175 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic XX Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall	
0	175	8"	160	
			PVC	

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
135	175	

(9) WELL SEAL:
Was surface sanitary seal provided? Yes XX No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing Bentonite

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 382 ft. Completed depth 175 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	6	Top soil
6	16	Clay
16	20	Sand
20	30	Clay
30	34	Sand
34	78	Clay
78	113	Sand
113	131	Clay
131	150	Sand
150	167	Clay
167	173	Sand
173	186	Brown and blue clay
186	217	Blue clay
217	252	Brown clay (sand streaks)
252	280	Sand and clay streaks
280	310	Clay
310	313	Sand
313	382	Clay (shale streaks)

Work started 19 Completed 4-28 19 91

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed Chelladeen Chandler, Bkkpr.
(Well Driller)
NAME Calwater Drilling Co., Inc.
(Person, firm, or corporation) (Typed or printed)
Address 300 S. Kilroy
City Turlock, Ca. ZIP 95380
License No. 321252 Date of this report 4-30-91

ORIGINAL
NOT FOR PUBLIC USE
WATER CODE SEC. 13752
UNCONFINED

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

№ 52246

State Well No.
Other Well No. 3S/9E-30

(1) OWNER:
Name Tom Suther
Address Woodland Ave
Modesto Calif.

(2) LOCATION OF WELL:
County Stanislaus Owner's number, if any
Township, Range, and Section S-side Woodland Ave.
Distance from cities, roads, railroads, etc. off old 99 Hwy, Modesto

(3) TYPE OF WORK (check):
New Well ☑ Deepening ☐ Reconditioning ☐ Destroying ☐
If destruction, describe material and procedure in item 11.

(4) PROPOSED USE (check):
Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☑
Cable ☐
Other ☐

(6) CASING INSTALLED:
STEEL: SINGLE ☑ DOUBLE ☐ OTHER:

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	100	6 5/8	12	9"		

If gravel packed

Size of shoe or well ring:
Size of gravel: 3/8" PEA
Describe joint: Welded + Threaded

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
80	100	4 Rows		3/16" x 4"
Staggered		4" Apart.		

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes ☑ No ☐ To what depth 10 ft.
Were any strata sealed against pollution? Yes ☐ No ☐ If yes, note depth of strata
From ft. to ft.
From ft. to ft.
Method of sealing Tamped Earth

(9) WATER LEVELS:
Depth at which water was first found, if known 34-43 ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing 31 ft.

(10) WELL TESTS:
Was pump test made? Yes ☐ No ☑ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes ☐ No ☑
Was electric log made of well? Yes ☐ No ☑ If yes, attach copy

(11) WELL LOG: UNCONFINED
Total depth 105 ft. Depth of completed well 100 ft.
Formation: Describe by color, character, size of material, and structure

ft. to ft.	
0-10	Sand
10-11	Clay
11-15	Sand
15-19	Clay
19-21	Sand
21-24	Clay
24-25	Sand
25-34	Clay
34-43	Sand
43-47	Clay
47-76	Sand
76-78	Clay
78-84	Sand
84-89	Sand in Clay
89-97	Sand
97-98	Clay
98-102	Sand
102-103	Clay
103-105	Sand

CONFIDENTIAL
Water Code Sec. 13752

Work started 9/24/1970, Completed 9/25/1970

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

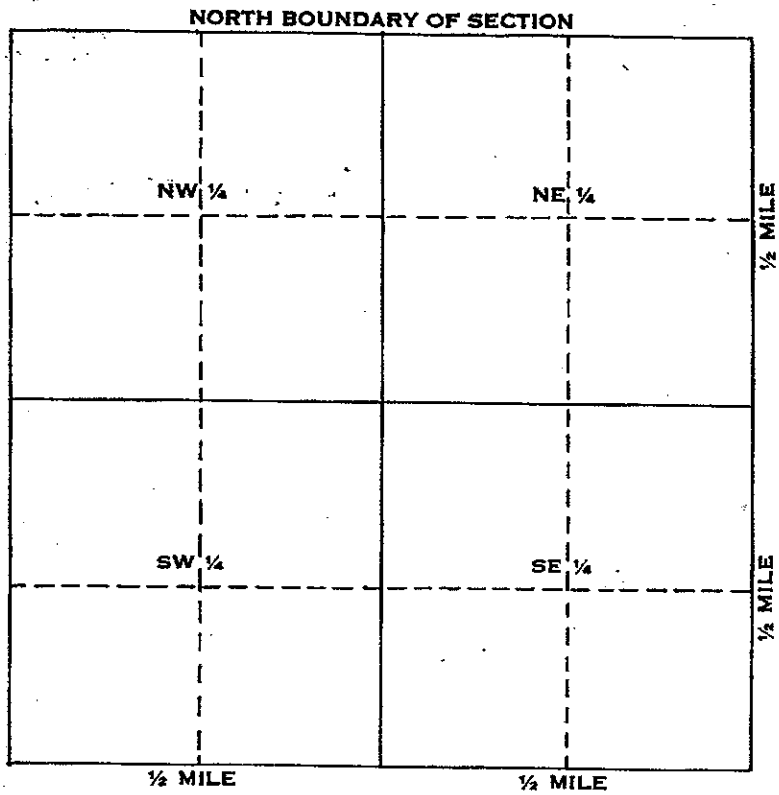
NAME Martin Pump + Supply
(Person, firm, or corporation) (Typed or printed)
Address 25 Reed Rd.
Oakdale
[SIGNED] [signature]
(Well Driller)
License No. 250103 Dated 10/24/1970

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9-68)

N.I. # 70927

25179-950 9-68 50M TRIP △D OSP

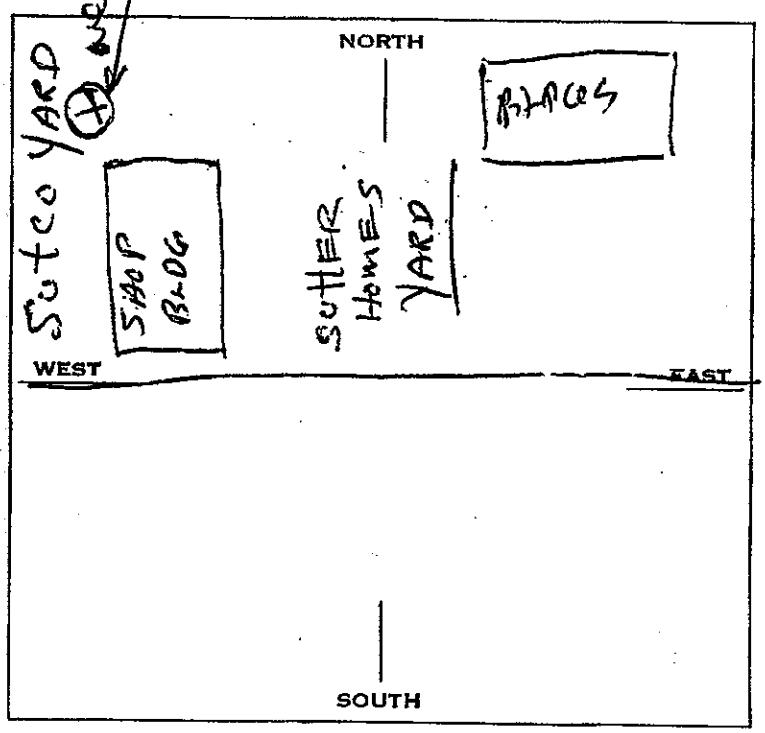


Township _____ N/S

Range _____ E/W

Section No. _____

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.



MODESTO

WOODLAND AVE

B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

RECEIVED
SAN JOAQUIN DISTRICT
1970 OCT 27 AM 11 21
DEPT. OF WATER RESOURCES

200 99 HWY

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. M-110

Date Work Began 4/4/95, Ended 4/4/95

Local Permit Agency Stanislaus County

Permit No. N/A Permit Date 4/3/95

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 562283

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO. 03S/09E-30

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER 60 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
5	200	Pressure grout well casing and gravel pack using a tremie pipe placed at 195'bgs.
		Grout mixture: 30 gallon H_2O, 4: 94lb sacks Type III Portland cement, 8 lbs bentonite powder.
		A total of 450 gallons of grout were pumped into the well casing and gravel pack.
		Vault was removed as well as the well casing to 5'bgs. The soil around the casing was also removed to 5'bgs. The cement was mushroomed over the top of the remaining well casing and then the excavation was back filled with soil from the surrounding area.

TOTAL DEPTH OF BORING ___ (Feet)

TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

City Philadelphia State PA Zip 19103

WELL LOCATION

Address 1200 Graphics Dr.

City Modesto

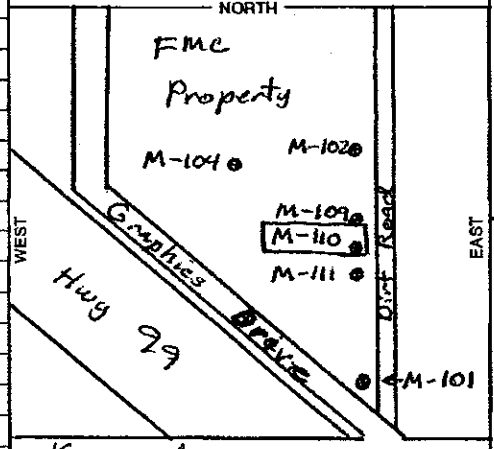
County Stanislaus

APN Book ___ Page ___ Parcel ___

or Township 3S Range 9E Section 30

or Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

✓ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD ___ FLUID ___

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

** May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other Site Map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tom Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

8482 Cherry Ave, Fontana Ca 92335
ADDRESS CITY STATE ZIP

Signed Mark E Pot 5-8-95 647348
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 1 of 2

Owner's Well No. E-1

Date Work Began 4/24/95, Ended 4/28/95

Local Permit Agency Stanislaus County

Permit No. 95-40 Permit Date 4/3/95

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 562284

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO. 03S/09E30

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ✓ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER 62 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	5	Silt; pale yellow (2.5Y, 7/3), poorly indurated, soft, dry.
5	20	Sand; light brownish gray (2.5Y, 6/2), loose, fine, well sorted, subangular to rounded, dry.
20	45	Sandy silt; very pale brown (10YR, 7/4), well to poorly indurated, sand: fine, well sorted, subangular to rounded, dry. 40% to 45% sand and 55% to 60% silt.
45	50	Sand; pale yellow (2.5Y, 8/3), loose, medium to coarse, moderately sorted, subangular to rounded, dry, quartz and lithic fragments.
50	61	Silt; pale yellow (5Y, 7/3), poorly to moderately indurated, dry.
61	72	Sandy silt; light gray (5Y, 7/2), well to poorly indurated, soft, sand: fine, well sorted, subangular to rounded, dry.

TOTAL DEPTH OF BORING 132 (Feet)

TOTAL DEPTH OF COMPLETED WELL 125 (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market St.

Philadelphia, PA 19103

CITY STATE ZIP

WELL LOCATION

Address 1200 Graphics Drive

City Modesto

County Stanislaus

APN Book ___ Page ___ Parcel ___

Township 3S Range 9E Section 30

Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

LOCATION SKETCH

NORTH

See attached

WEST EAST

OUTSIDE CORC. CITY LIMITS

SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	90	12	✓				mild steel	6	0.25	—
90	120	12		✓			mild steel	6	0.25	0.05
120	125	12	✓				mild steel	6	0.25	—

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	77.5	✓			
77.5	83		✓		
83	85				#30 sand
85	132				medium aquarium

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other site map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

8482 Cherry Ave., Fontana, Ca 92335
ADDRESS CITY STATE ZIP

Signed [signature] 5-8-95 447348
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR
Page 2 of 2

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 562285

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. E-1
Date Work Began 4/24/95 Ended 4/28/95
Local Permit Agency Stanislaus County
Permit No. Permit Date

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ✓ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
72	90	Silty clay; light gray (5Y, 7/1), well to moderately indurated, dry.
90	95	Silty sand; dark gray (5Y, 4/1), poorly indurated; sand: fine to medium, moderately sorted, angular to subrounded, moist.
95	100	Silty sand; olive gray (5Y, 5/2), poorly indurated, sand: fine to coarse, poorly sorted, angular to subrounded, moist.
101	110	Sand; olive yellow (2.5Y, 6/8), loose, fine to medium, moderately sorted, angular to subrounded, moist, quartz and lithic fragments.
110	122.5	Sand; light olive brown (2.5Y, 5/6), loose, fine to coarse, poorly sorted, angular to subrounded, moist, quartz, biotite and lithic fragments.
122.5	132	Clay; olive (5Y, 5/3) soft to firm, sticky, wet.

TOTAL DEPTH OF BORING 132 (Feet)
TOTAL DEPTH OF COMPLETED WELL 125 (Feet)

WELL OWNER
Name FMC
Mailing Address 1735 Market St.
City Philadelphia, STATE PA ZIP 19103

WELL LOCATION
Address 1200 Graphics Drive
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township 3S Range 9E Section 30
Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

LOCATION SKETCH
NORTH
WEST See attached EAST
SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
See Page 1										

ANNULAR MATERIAL

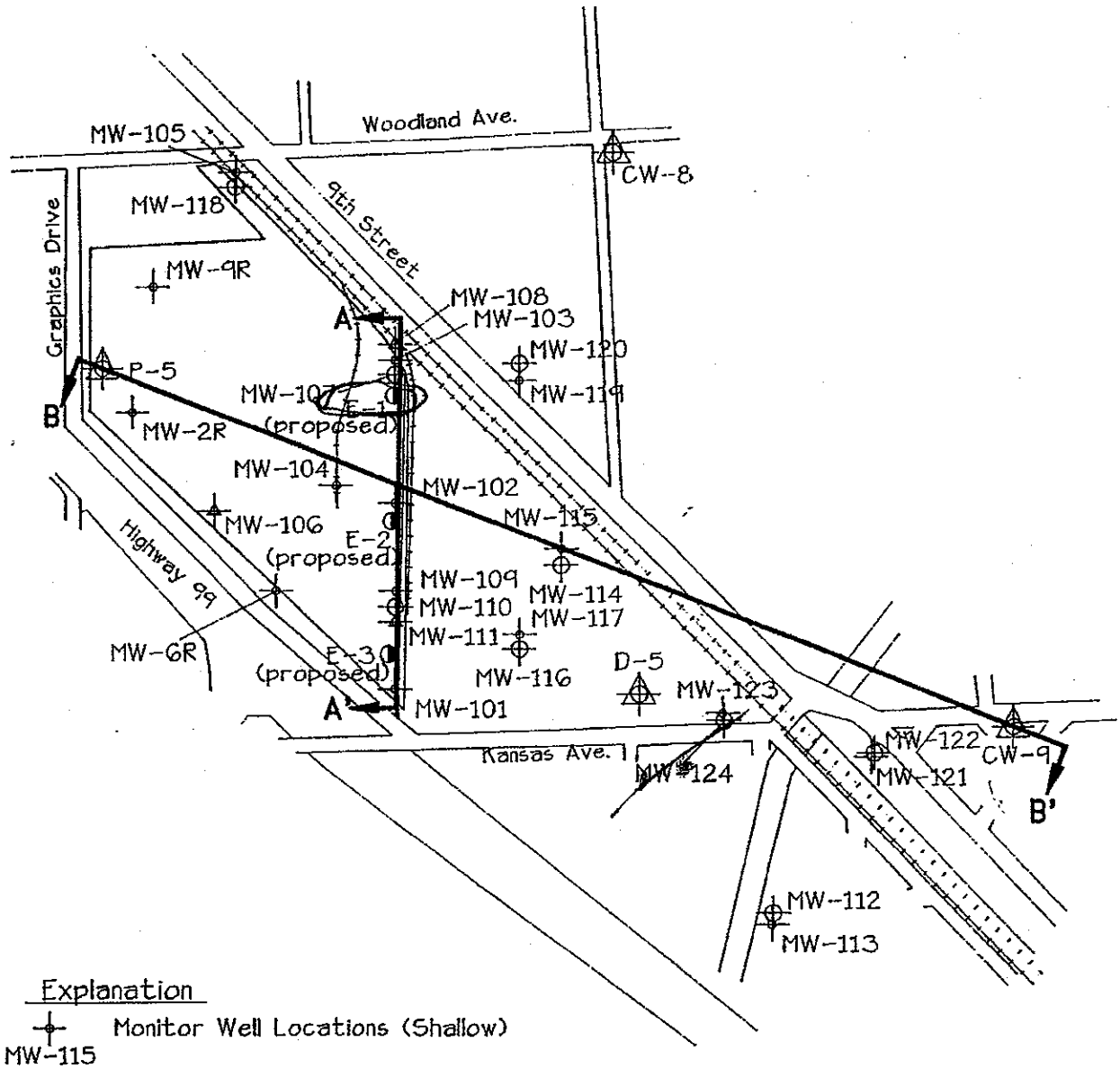
DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
See Page 1					

ATTACHMENTS (✓)
___ Geologic Log
✓ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
✓ Other site map
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 8482 Cherry Ave. CITY Fontana STATE Ca ZIP 92335
Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED 5-8-95 C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90 IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

562293



Explanation

MW-115 — Monitor Well Locations (Shallow)

MW-9R — Monitor Well Locations (Intermediate)

MW-116 — Monitor Well Locations (Deep)

E-1 — Proposed Extraction Well Locations

CW-8 — City Production Well

P-5 — Private Production Well

FMC Property Boundary

A A' — Cross-Section Location

Scale: 1"=800'
0 400' 800'

FMC Corporation Modesto, California	DATE: 05/02/94
	DESIGNED: LAM
	CHECKED: DH
Site Plan	APPROVED: DH
	DRAWN: RDH
	PROJ.: 501135013
SIMON HYDRO-SEARCH	Figure 2-2

D:\FMC\MODESTO\135013\1006\13SM07-A.dwg

ORIGINAL
File with DWR
Page 1 of 3
Owner's Well No. E-2
Date Work Began 4/18/95 Ended 4/27/95
Local Permit Agency Stanislaus County
Permit No. 95-40 Permit Date 4/3/95

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 562286

DWR USE ONLY — DO NOT FILL IN
03S/09E+30
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER 62 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	12	Silt; yellowish brown (10YR 5/4), poorly to moderately indurated, dry.
12	20	Sand; very pale brown (10YR 7/3), loose, fine to medium, well sorted, angular to rounded, quartz and lithic fragments, dry.
20	35	Silt; brownish yellow (10YR 6/6), poorly to moderately indurated, dry.
35	40	Sand; light yellowish brown (10YR 6/4), loose, fine, well sorted, subangular to rounded, quartz and lithic fragments, dry.
40	49	Clayey silt; very pale brown (10YR 7/3), well to poorly indurated, dry.
49	56	Sand; very pale brown (10YR 7/4), loose, fine, well sorted, angular to subrounded, quartz, biotite, and lithic fragments, dry.

TOTAL DEPTH OF BORING 130 (Feet)
TOTAL DEPTH OF COMPLETED WELL 125 (Feet)

WELL OWNER
Name FMC
Mailing Address 1735 Market Street
Philadelphia, PA 19103
CITY STATE ZIP

WELL LOCATION
Address 1200 Graphics Drive
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township 3S Range 9E Section 30
Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

LOCATION SKETCH
NORTH
WEST EAST
See Attached
SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
** May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	60	12	✓				mild steel	6	0.25"	
60	90	12		✓			mild steel	6	0.25"	0.05
90	100	12	✓				mild steel	6	0.25"	
100	120	12		✓			mild steel	6	0.25"	0.05
120	125	12	✓				mild steel	6	0.25"	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	45	✓			
45	51		✓		
51	54.4				#30 sand
54.4	130				med aquarium

ATTACHMENTS (✓)
___ Geologic Log
✓ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
✓ Other site map
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 8482 Cherry Ave CITY Fontana STATE Ca ZIP 92335
Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE
DATE SIGNED 5-8-95 C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR
Page 2 of 3

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 562287

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. E-2
Date Work Began 4/18/95, Ended 4/27/95
Local Permit Agency Stanislaus County
Permit No. 95-40 Permit Date 4/3/95

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER 62 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
56	62	Silty sand; light gray (10YR, 7/2), loose to well indurated, sand: fine to medium, well sorted, subrounded, dry.
62	66	Sand; light gray (10YR, 7/2), poorly to moderately indurated, fine to coarse, poorly sorted, angular to rounded, dry.
66	80	Silty sand; gray (10YR, 6/1), well to moderately indurated, sand: fine, well sorted, sub-angular to rounded, dry.
80	82	Sandy gravel; light gray (10YR, 7/1), loose to moderately indurated, poorly sorted, subangular to rounded, dry.
82	98	Silty sand; gray (10YR, 5/1), poorly indurated, sand: fine to medium, well sorted, angular to rounded, moist.
98	101	Sandy silty clay; very pale brown (10YR, 7/3), well to moderately indurated, dry

TOTAL DEPTH OF BORING 130 (Feet)
TOTAL DEPTH OF COMPLETED WELL 125 (Feet)

WELL OWNER
Name FMC
Mailing Address 1735 Market Street
Philadelphia, PA 19103
CITY STATE ZIP

WELL LOCATION
Address 1200 Graphics Drive
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township 35 Range 9E Section 30
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH
NORTH
WEST — See Attached — EAST
SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
See page 1									

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
See Page 1				

ATTACHMENTS (✓)
___ Geologic Log
✓ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
✓ Other site map
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
8482 Cherry Avenue Fontana, Ca 92335
ADDRESS CITY STATE ZIP
Signed [signature] 5-8-95 647348
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 7-90 IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL — File with DWR

Page 3 of 3

Owner's Well No. E-2

Date Work Began 4/18/95 Ended 4/27/95

Local Permit Agency Stanislaus County

Permit No. 95-40 Permit Date 4/3/95

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 562288

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER 62 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
101	105	Sand; grayish brown (10YR, 5/2) loose, fine to coarse, poorly sorted, angular to subrounded, moist.
105	128	Sand; grayish brown (10YR 5/2) loose, medium, well sorted, angular to rounded, quartz and lithic fragments, wet.
128	130	Clayey silty sand; grayish brown (10YR, 5/2), poorly to moderately indurated, sand: fine, well sorted, angular to rounded, silt and clay: dense, wet.

TOTAL DEPTH OF BORING 130 (Feet)

TOTAL DEPTH OF COMPLETED WELL 125 (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

Philadelphia, PA 19103

CITY STATE ZIP

WELL LOCATION

Address 1200 Graphic Dr

City Modesto

County Stanislaus

APN Book ___ Page ___ Parcel ___

or Township 33 Range 9E Section 30

or Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

LOCATION SKETCH

NORTH

WEST

See Attached

EAST

SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
See Page 1									

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
See Page 1				

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other Site map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc. (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

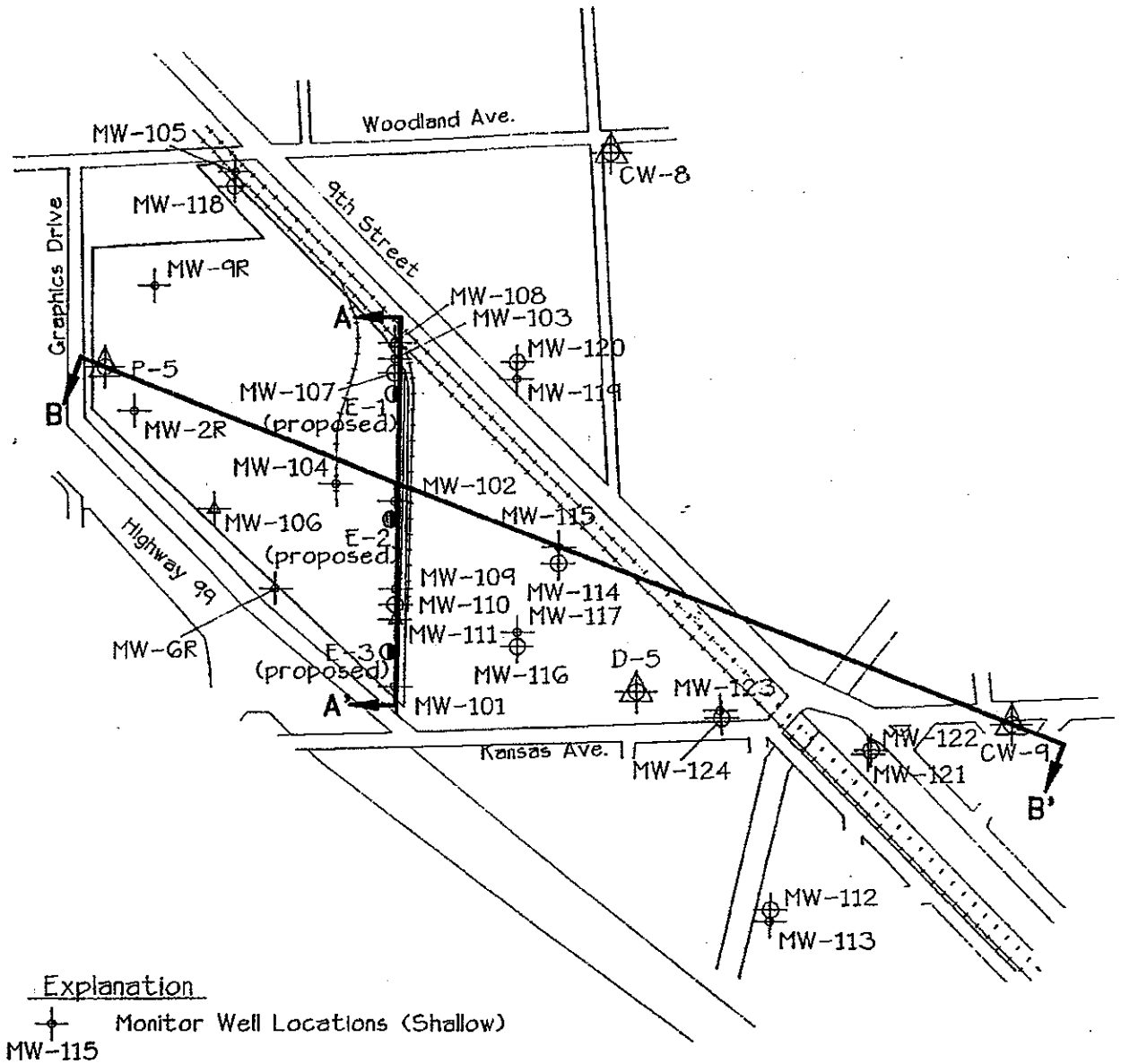
ADDRESS 8482 Cherry Ave CITY Fontana STATE Ca ZIP 92335

Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED 5-8-95 C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

562286



Explanation

MW-115 — Monitor Well Locations (Shallow)

MW-9R — Monitor Well Locations (Intermediate)

MW-116 — Monitor Well Locations (Deep)

E-1 — Proposed Extraction Well Locations

CW-8 — City Production Well

P-5 — Private Production Well

FMC Property Boundary

A A' — Cross-Section Location

Scale: 1"=800'
0 400' 800'

FMC Corporation Modesto, California	DATE: 05/02/94
	DESIGNED: LAM
	CHECKED: DH
Site Plan	APPROVED: DH
	DRAWN: RDH
	PROJ.: 501135013
SIMON HYDRO-SEARCH	Figure 2-2

D:\FMC\MODESTO\1135013\1006\13SM07-A.dwg

ORIGINAL
File with DWR

Page 1 of 3

Owner's Well No. E-3

Date Work Began 4/11/95, Ended 4/12/95

Local Permit Agency Stanislaus County

Permit No. 95-40 Permit Date 4/3/95

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 562289

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO. 03S/09E-30

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER 60 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	7	Gravelly sandy silt and clay brown, 40% silt, 20% fine to coarse sand, 5% sub-angular gravel; and plastic clay, moist.
7	16.5	Silty sand; brown, 65% fine to medium sand, 30% silt, less than 5% gravel and clay combined, moist
16.5	30	Silty sand; tan-brown, fine sand, 20% silt, moist
30	34	Silty sand; tan-reddish brown, fine to medium sand, 20% silt, moist.
34	44	Sandy silt; tan-brown, 40% fine to medium sand, moist.
44	47	Silty clay; greenish-tan, plastic clay, with less than 5% angular gravel (clasts composed of poorly indurated sandstone and siltstone), moist.

TOTAL DEPTH OF BORING 138 (Feet)

TOTAL DEPTH OF COMPLETED WELL 134 (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

City Philadelphia, State PA Zip 19103

WELL LOCATION

Address 1200 Graphics Drive

City Modesto

County Stanislaus

APN Book ___ Page ___ Parcel ___

Township 3S Range 9E Section 30

Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH

NORTH

WEST

See Attached

EAST

SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	69	12	✓				mild steel	6	0.25	
69	89	12		✓			mild steel	6	0.25	0.05
89	109	12	✓				mild steel	6	0.25	
109	129	12		✓			mild steel	6	0.25	0.05
129	134	12	✓				mild steel	6	0.25	

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	59	✓			
59	63		✓		
63	65				#3 sand
65	138				coarse aquarium

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other site map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc. (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 8482 Cherry Avenue, CITY Fontana, STATE Ca ZIP 92335

Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED 5-8-95 C-57 LICENSE NUMBER 640348

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR
Page 2 of 3

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 562290

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. E-3
Date Work Began 4/11/95 Ended 4/26/95
Local Permit Agency Stanislaus County
Permit No. 95-40 Permit Date 4/3/95

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DEPTH TO FIRST WATER 60 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
47	50	Sandy silt; tan, 30% fine sand, moist
50	78.5	Sandy silt and clay; greenish-tan, 45% silt and 40% plastic clay, 10% fine sand, rare angular gravels composed of poorly indurated sandstone and siltstone, moist.
78.5	90	Silty sand; gray-green to tan, fine to coarse sand, interbedded with occasional thin layers of brown to reddish-brown plastic clay (up to 3"), rare angular gravels.
90	97	Sandy silt; gray-green to brown, fine to coarse sand, abundant gravel size sandy clay concretions, wet.
97	100	Sandy silt and clay; tan-brown, 10% sand, fine to coarse, with silt and plastic clay, wet.

TOTAL DEPTH OF BORING 138 (Feet)
TOTAL DEPTH OF COMPLETED WELL 134 (Feet)

WELL OWNER
Name FMC
Mailing Address 1735 Market Street
City Philadelphia, State PA Zip 19103

WELL LOCATION
Address 1200 Graphics Drive
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township 3S Range 9E Section 30
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH
NORTH
WEST See Attached EAST
SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
✓ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY (*Describe Procedures and Materials Under "GEOLOGIC LOG"*)

PLANNED USE(S) (✓)
___ MONITORING
WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
See Page 1									

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
See Page 1				

ATTACHMENTS (✓)
___ Geologic Log
✓ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
✓ Other Site Map
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Tonto Environmental Drilling, Inc. (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 8482 Cherry Ave. CITY Fontana STATE Ca ZIP 92335
Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED 5-8-95 C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90 IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 3 of 3

Owner's Well No. E-3

Date Work Began 4/11/95, Ended 4/12/95

Local Permit Agency Stanislaus County

Permit No. 95-40 Permit Date 4/3/95

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 562291

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ✓ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER 60 (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
100	108	Silty clay; green-gray to tan, abundant sandy and silty clay concretions, wet.
108	118	Sandy clay; gray-green to tan, poorly indurated, fine sand to gravel size concretions, wet.
118	128.5	Silty sand; gray tan, fine to medium sand, wet.
128.5	138	Silty sand and clay; tan-brown, fine to medium sand, with hard clay in thin layers, wet.

TOTAL DEPTH OF BORING 138 (Feet)

TOTAL DEPTH OF COMPLETED WELL 134 (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

CITY Philadelphia STATE PA ZIP 19103

WELL LOCATION

Address 1200 Graphics

City Modesto

County Stanislaus

APN Book ___ Page ___ Parcel ___

Township 3S Range 9E Section 30

Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH

NORTH

WEST See Attached EAST

SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

✓ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

✓ OTHER (Specify) Extraction

DRILLING METHOD Air Rotary FLUID Air

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
See Page 1									

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
See Page 1				

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other site map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

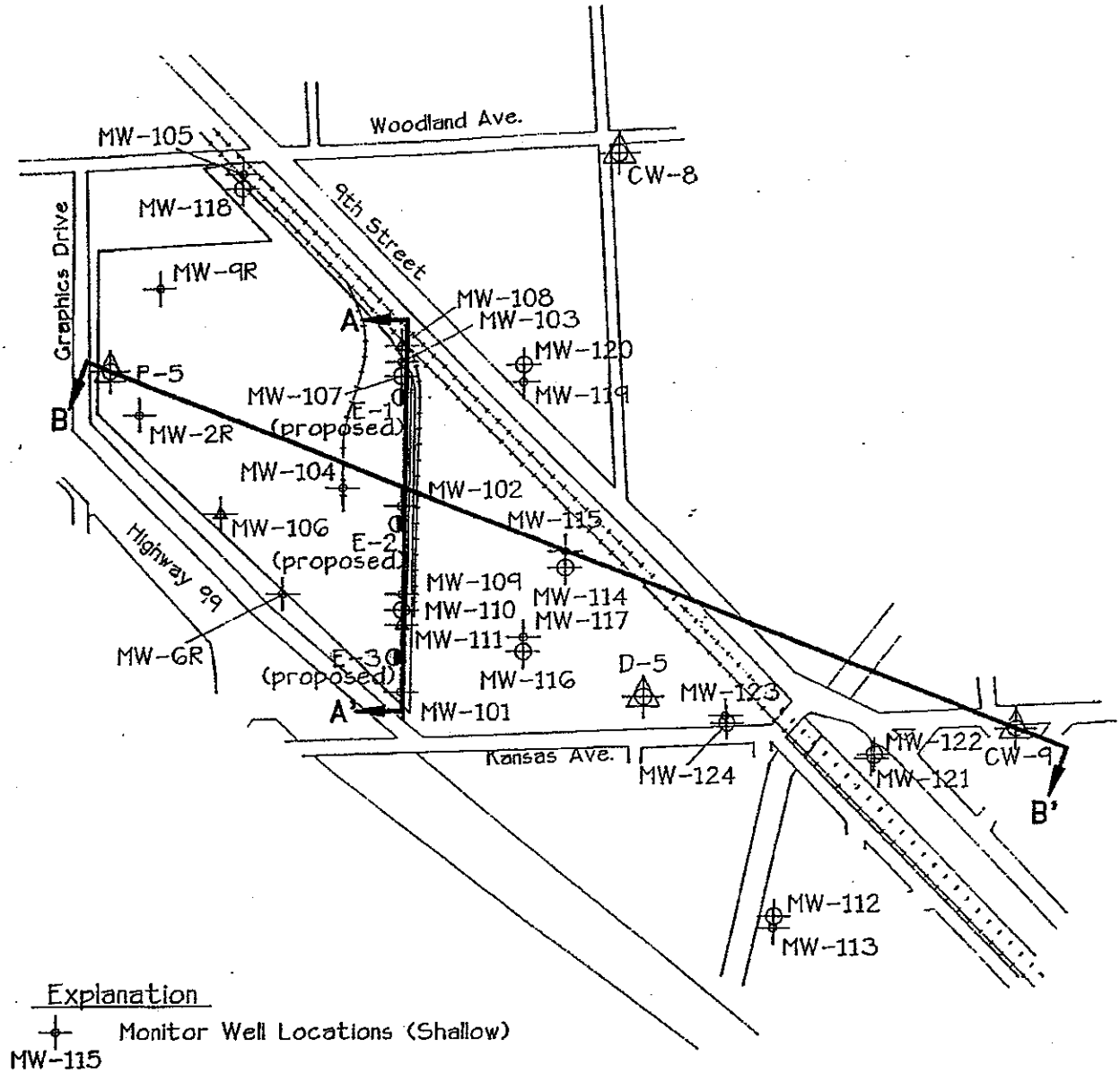
ADDRESS 8482 Cherry Ave CITY Fontana STATE Ca ZIP 92335

Signed Marlo S. Bo
WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED 5-8-95 C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM



Explanation

MW-115 — Monitor Well Locations (Shallow)

MW-9R — Monitor Well Locations (Intermediate)

MW-116 — Monitor Well Locations (Deep)

E-1 — Proposed Extraction Well Locations

CW-8 — City Production Well

P-5 — Private Production Well

FMC Property Boundary

A A' — Cross-Section Location

Scale: 1"=800'
0 400' 800'

FMC Corporation Modesto, California	DATE: 05/02/94
	DESIGNED: LAM
	CHECKED: DH
Site Plan	APPROVED: DH
	DRAWN: RDH
	PROJ.: 501135013
SIMON HYDRO-SEARCH	Figure 2-2

D:\FMC\MODESTO\1135013\1006\13SH07-A.dwg

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. M-116

Date Work Began 4/6/95, Ended 4/6/95

Local Permit Agency City of Modesto

Permit No. N/A Permit Date 4/3/95

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 562292

DWR USE ONLY — DO NOT FILL IN
03S/09E30R
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	185	Pressure grout well casing and gravel pack using a tremie pipe placed at 180' bgs.
		Grout mixture: 30 gallons of H_2O, 4-94 lb sacks of Type I-II cement, 8 lbs of bentonite powder.
		The well casing was perforated from 115' bgs to 161' bgs.
		A total of 315 gallons of grout was pumped into the well casing and surrounding gravel pack.
		Vault was removed and the ground excavated to 5' bgs. Cement mushroomed overtop of well casing at 5' bgs. Excavation filled with sand cement to the surface.

TOTAL DEPTH OF BORING ___ (Feet)

TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

City Philadelphia, State PA Zip 19103

WELL LOCATION

Address Kansas Ave

City Modesto

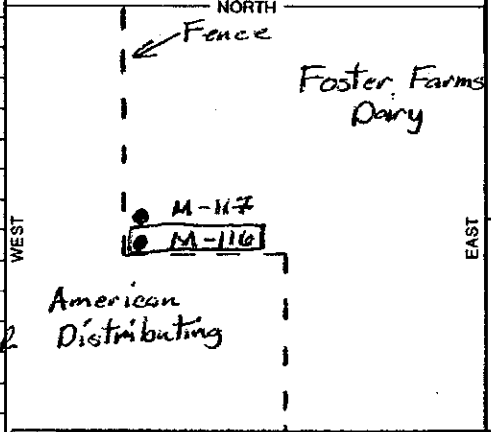
County Stanislaus

APN Book ___ Page ___ Parcel ___

Township 3S Range 9E Section 30

Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

✓ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD ___ FLUID ___

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

** May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other Site Map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 8482 Cherry Ave CITY Fontana STATE Ca ZIP 92335

Signed Marie E Roa
WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED 5-8-95

C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. M-124

Date Work Began 4/6/95, Ended 4/6/95

Local Permit Agency City of Modesto

Permit No. _____ Permit Date _____

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 562293

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO. 03S/09E-30
LATITUDE _____ LONGITUDE _____
APN/TRS/OTHER _____

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	166	Pressure grout well casing and surrounding gravel pack. Tremie pipe placed at 160' bgs.
		Grout mixture: 30 gallons of H_2O, 4-94 sacks of Type I-II cement, 8 lbs of bentonite powder
		A total of 180 gallons of grout was pumped into the well. 183.56 gallons was was the estimated amount needed.
		The vault was removed and the cement core also removed from around the well. (Well at grade in a cement driveway) It was the filled with sand cement to the surface.

TOTAL DEPTH OF BORING _____ (Feet)

TOTAL DEPTH OF COMPLETED WELL _____ (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

Philadelphia, PA 19103
CITY STATE ZIP

WELL LOCATION

Address Kansas Ave.

City Modesto

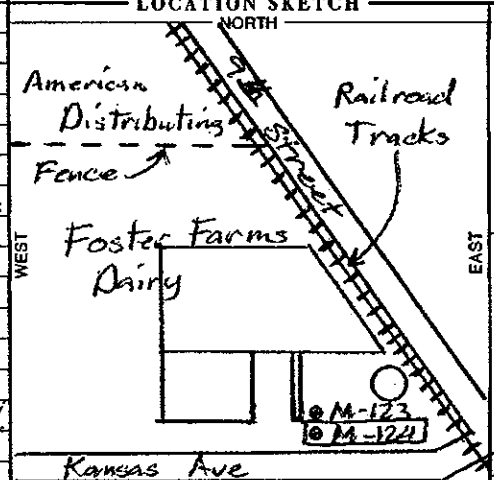
County Stanislaus

APN Book _____ Page _____ Parcel _____

Township or 3S Range 9E Section 30

Latitude _____ DEG. MIN. SEC. NORTH Longitude _____ DEG. MIN. SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

✓ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD _____ FLUID _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____

ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____

TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other Site Map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Enviromental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

8482 Cherry Ave., Fontana Ca 92335
ADDRESS CITY STATE ZIP

Signed [signature] 5-8-95 647348
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. M-122

Date Work Began 4/5/95, Ended 4/5/95

Local Permit Agency City of Modesto

Permit No. _____ Permit Date _____

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 562294

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.: 03S/09E+30

LATITUDE _____ LONGITUDE _____

APN/TRS/OTHER _____

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	173	Pressure grout well casing and gravel pack using a tremie pipe placed at 160' bgs.
		Grout mixture: 30 gallons H_2O 4-94lb sacks of Type I-II cement. 8 lbs of bentonite powder.
		The well casing was perforated from 116' bgs to 135' bgs.
		A total of 405 gallons of grout was used to grout this well and the surrounding gravel pack.
		The vault was removed and the ground excavated to 5' bgs. Cement mushroomed over the top of the remaining well casing also at 5' bgs. The excavation was then backfilled with dirt and sand to grade.

TOTAL DEPTH OF BORING _____ (Feet)

TOTAL DEPTH OF COMPLETED WELL _____ (Feet)

WELL OWNER

Name FMC

Mailing Address 1735 Market Street

Philadelphia, PA 19103

CITY STATE ZIP

WELL LOCATION

Address 9th Street

City Modesto

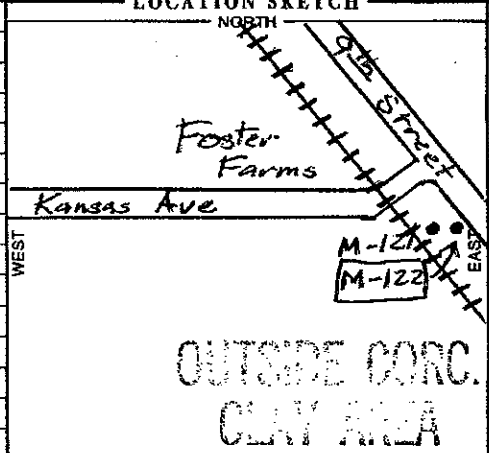
County Stanislaus

APN Book _____ Page _____ Parcel _____

Township 3S Range 9E Section 30

Latitude _____ DEG. MIN. SEC. NORTH Longitude _____ DEG. MIN. SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

✓ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD _____ FLUID _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____

ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____

TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other Site Map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 8482 Cherry Ave. CITY Fontana STATE Ca ZIP 92335

Signed Mark S. [illegible] WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED 5-8-95

C-57 LICENSE NUMBER 647348

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. MW-114

Date Work Began 4/24/95, Ended 4/24/95

Local Permit Agency City of Modesto, CA

Permit No. _____ Permit Date _____

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 562296

DWR USE ONLY — DO NOT FILL IN
03S/09E-30
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
	WELL DESTRUCTION.
	PROCEDURES – 1) Rip casing with casing perforator from 150'–134', and from 122'–116'.
	2) Pump Neat Cement with 2% bentonite through tremmie from 170' to surface.
	(Calculated Volume of well and gravel pack – n = 25% – is 269 gallons) Total volume pumped = 400 gallons.
	3) Let well set for three days. Top off well with redi-mix concrete.
	M. Hartzell, Hydro-Search, Inc.

TOTAL DEPTH OF BORING _____ (Feet)

TOTAL DEPTH OF COMPLETED WELL _____ (Feet)

WELL OWNER

Name FMC-MODESTO

Mailing Address 1735 MARKET ST.

Philadelphia, PA 19103
CITY STATE ZIP

WELL LOCATION

Address 1800 Kansas Ave.

City Modesto

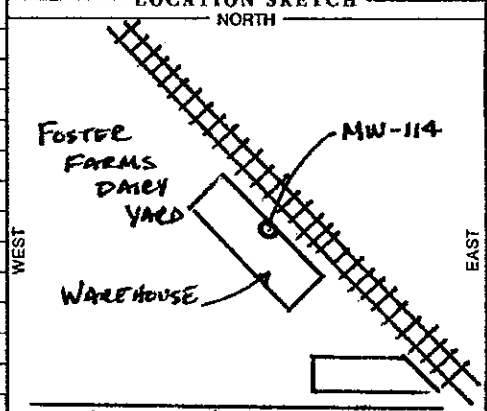
County Stanislaus Co.

APN Book _____ Page _____ Parcel _____

Township or 3S Range 9E Section 30

Latitude _____ DEG. MIN. SEC. NORTH Longitude _____ DEG. MIN. SEC. WEST

LOCATION SKETCH



- site plan attached.

SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc.
PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

✓ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY

___ Domestic

___ Public

___ Irrigation

___ Industrial

___ "TEST WELL"

___ CATHODIC PROTECTION

___ OTHER (Specify)

DRILLING METHOD _____ FLUID _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____

ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____

TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL/GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE: CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log

✓ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

✓ Other Site map

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Tonto Environmental Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

8482 Cherry Ave Fontana Ca 92335
ADDRESS CITY STATE ZIP

Signed [signature] 5-8-95 647348
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

DWR 188 REV. 7-90

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

Page 1 of 3

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 726307

DWR USE ONLY — DO NOT FILL IN
03S/09E30
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. MW-1
Date Work Began 11/01/01 Ended 11/02/01
Local Permit Agency Stanislaus Co. Dept. of Env. Resources
Permit No. MW01-58 Permit Date 9/27/01

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD H.S.A. FLUID

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
	SEE ATTACHED WELL LOG

TOTAL DEPTH OF BORING ___ (Feet)
TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER
Name Chevron Products Co.
Mailing Address 6001 Bollinger Canyon
San Ramon, CA 94583
CITY STATE ZIP

WELL LOCATION
Address 815 Kansas Ave
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township ___ Range ___ Section ___
Latitude ___ NORTH (DEG. MIN. SEC.) Longitude ___ WEST (DEG. MIN. SEC.)

LOCATION SKETCH
NORTH
SEE ATTACHED SITE PLAN
WEST EAST
SOUTH
Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. ***PLEASE BE ACCURATE & COMPLETE.***

ACTIVITY (✓)
X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)
WATER SUPPLY
___ Domestic ___ Public
___ Irrigation ___ Industrial
MONITORING X
TEST WELL ___
CATHODIC PROTECTION ___
HEAT EXCHANGE ___
DIRECT PUSH ___
INJECTION ___
VAPOR EXTRACTION ___
SPARGING ___
REMEDIATION ___
OTHER (SPECIFY) ___

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD * ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
						SEE ATTACHED WELL LOG			

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Cascade Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
3632 Omec Circle, Rancho Cordova, CA 95742
ADDRESS CITY STATE ZIP
Signed ___ WELL DRILLER/AUTHORIZED REPRESENTATIVE
DATE SIGNED 1-4-02
C-57 LICENSE NUMBER 717510

DWR 188 REV. 11-97
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: Chevron 9-0883, 815 Kansas Ave., Modesto	Log of Boring/Monitoring Well: 033/09E-30 MW-1
Boring Location:	Project No. 07.4356.10
Subcontractor and Equipment: Cascade Drilling	Logged By: FB / Drawn By: T.Z.
Sampling Method: HSA, CAD Mod Split Spoon	Monitoring Device: PID
Start Date/Time: 11/1/01 10:35	Finish Date/Time: 11/1/01 13:00
First Water (bgs): 40'	Stabilized Water Level (bgs):
Comments:	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
			0				Asphalt	
			1					TD: 50'
			2					
			3					
			4					Screen: 20-50
10:45	7 9 10	Ø	5 6		SP		Sand, dk brown (3/4-7.5YR), fine to medium grain sand, poorly graded, med dense, dry, no odor (0,95,5,0)	35-50
			7					Sand
			8					33-50
			9					
10:50	17 19 24	Ø	10 11		SM		Silty Sand, brown (5/2-7.5YR), fine grained sands, dense, poorly graded, dry, no odor (0,65,35,0)	bentonite
			12					31-33'
			13					Grout
			14					0-31
10:55	22 24 29	Ø	15 16		SP		Sand, brown (5/2-7.5YR) fine grain sands, poorly sorted, dense, S/mo, no odor (0,95,5,0)	
			17					
			18					
			19					
11:00	24 28 31	Ø	20 21		SP		Sand, lt gray (7/1-7.5YR) med grain sands, poorly sorted, dense, S/mo, no odor (0,100,0,0)	
			22					
			23					
			24					
11:05	26 28 32	Ø	25 26		SM		Silty Sand, brown (4/4-7.5YR), fine grain sands, dense, S/mo, no odor (0,75,20,5)	
			27					
			28					
			29					
			30					

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

SECOR

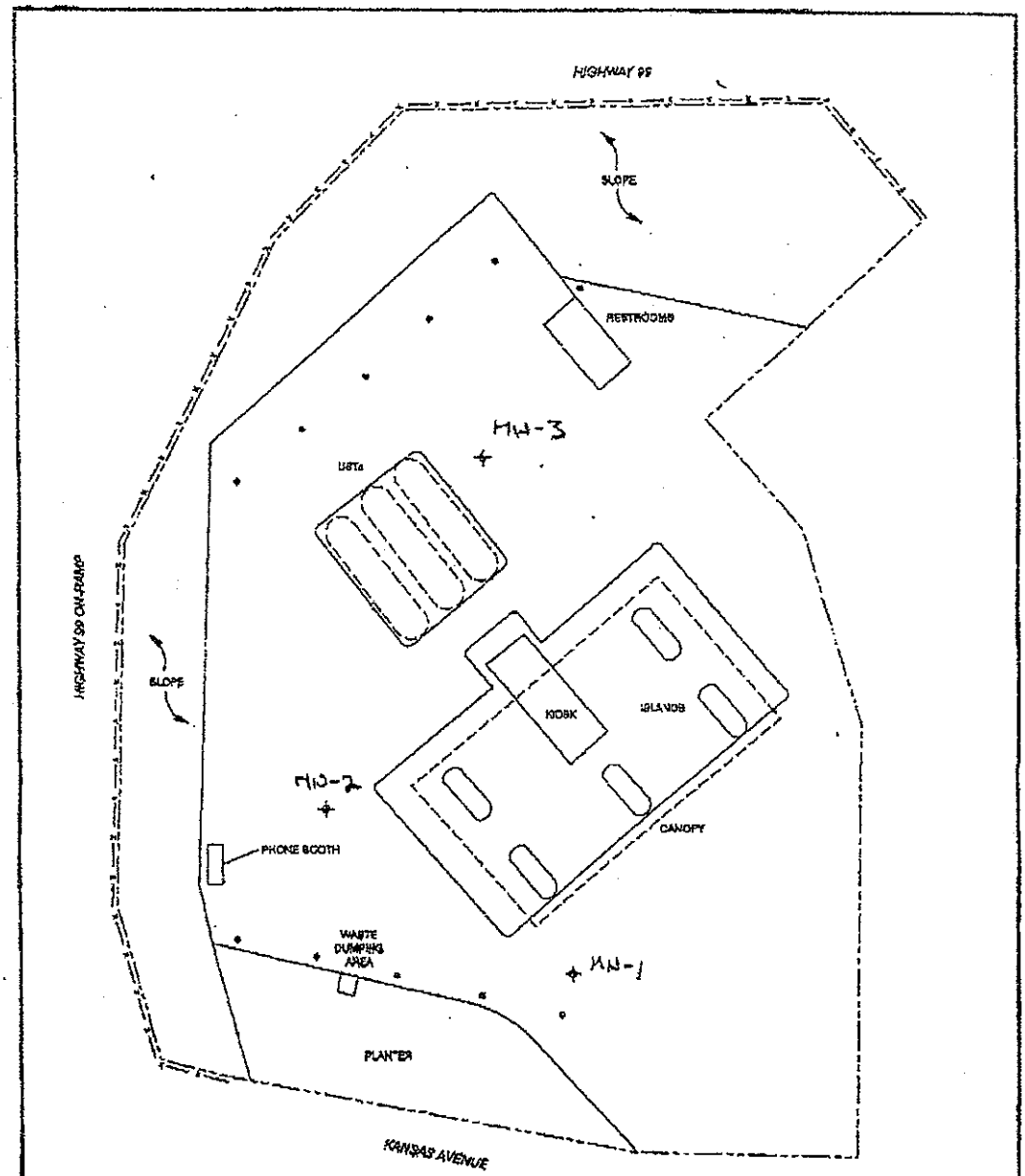
Project: Chevron 9-0883, 815 Kansas Ave., Modesto
Boring Location:
Project No.: 077.43510
Log of Boring/Monitoring Well: MW-1

033/09E-30

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
11:20	29 33 36	0	30–34		SC		Clayey Silty Sand, brown (5/2-7.5YR) fine grain sands, dense, low plasticity, s/mo, no odor (0,85,15,20)	
11:25	33 34 39	0	35–39		SM		Silty Sand, brown (4/3-7.5YR) fine to medium grain sands, dense, s/mo, no odor, some cementation (0,85,15,0)	
11:35	34 35 38	0	40–44		SW	▼	Sand, brown (4/4-7.5YR) med to coarse grain sands, well graded, dense, wet, no odor (0,100,0,0)	
11:40	35 37 38	0	45–49		SP		Sand, brown (5/2-7.5YR), med grain sands, poorly graded, dense, wet, no odor (0,100,0,0)	
11:50	34 36 38	0	50–53		SP		Same as above	

SECOR

Reviewed By: _____ Date: _____
Revised By: _____ Date: _____



SECOR International Incorporated	DRAWN PR APPR BS DATE 4SEP2001 JOB NO. 077.43570.110	FIGURE 2 CHEVRON SERVICE STATION #9-0663 418 KANSAS AVENUE MODESTO, CALIFORNIA SITE PLAN WITH PROPOSED SOIL BORING LOCATIONS

M:\CAD\CHEVRON-80450-SITEPLAN.DWG

ORIGINAL
File with DWR

Page 3 of 3

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 726308

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.: 03S/09E-30
LATITUDE
LONGITUDE
APN/TRS/OTHER

Owner's Well No. MW-3
Date Work Began 11/01/01, Ended 11/02/01
Local Permit Agency Stanislaus Co. Dept. of Env. Resources
Permit No. MW01-58 Permit Date 9/27/01

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD H.S.A. FLUID

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
	SEE ATTACHED WELL LOG

TOTAL DEPTH OF BORING _____ (Feet)
TOTAL DEPTH OF COMPLETED WELL _____ (Feet)

WELL OWNER

Name Chevron Products Co.
Mailing Address 6001 Bollinger Canyon
San Ramon, CA 94583
CITY STATE ZIP

WELL LOCATION

Address 815 Kansas Ave
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township ___ Range ___ Section ___
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH

NORTH
SEE ATTACHED SITE PLAN
WEST EAST
SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. ***PLEASE BE ACCURATE & COMPLETE.***

ACTIVITY (✓)

X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)

WATER SUPPLY
___ Domestic ___ Public
___ Irrigation ___ Industrial
MONITORING X
TEST WELL ___
CATHODIC PROTECTION ___
HEAT EXCHANGE ___
DIRECT PUSH ___
INJECTION ___
VAPOR EXTRACTION ___
SPARGING ___
REMEDIATION ___
OTHER (SPECIFY) ___

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL _____ (Ft.) & DATE MEASURED _____
ESTIMATED YIELD * _____ (GPM) & TEST TYPE _____
TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)
** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
						SEE ATTACHED WELL LOG			

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Cascade Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 3632 Omec Circle, Rancho Cordova, CA 95742 CITY STATE ZIP

Signed _____ 1-4-02 717510
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: Chevron 9-0883, 815 Kansas Ave., Modesto		Log of Boring/Monitoring Well: 03S/09E-30 MW-3
Boring Location:	Project No.: 077.43570	
Subcontractor and Equipment: Cascade Drilling	Logged By: EG / Drawn By: T.Z.	
Sampling Method: HSA, Cal. Mod Split Spoon	Monitoring Device: PID	Comments:
Start Date/Time: 11/1/01 14:25	Finish Date/Time: 11/1/01	
First Water (bgs): 39'	Stabilized Water Level (bgs):	

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
			0				Asphalt	
			1					TD =
			2					49'
			3					
			4					screen interval
14:32	23 27 19	Ø	5		SM		Silty Sand, gray (5/1-7.5YR), fine grain sands, cemented, dense, dry, no odor (0, 70, 30, 0)	34 - 49
			6					Sand
			7					32 - 49
			8					
			9					
14:35	21 29 36	Ø	10		SM		Silty Sand, brown (5/2-7.5YR) fine grain sands, dense, dry, no odor (0, 65, 35, 0)	bentonite
			11					30 - 32'
			12					
			13					
			14					
14:50	29 34 39	Ø	15		SM		Silty Sand, pinkish gray (6/2-7.5YR) fine to med grain sands, dense, s/mo, no odor (0, 85, 15, 0)	grout
			16					0 - 30
			17					
			18					
			19					
14:55	31 35 31	Ø	20		SC		Clayey Silty Sand, brown (5/3-7.5YR) fine grain sands, dense, low plasticity, s/mo, no odor (0, 60, 15, 25)	
			21					
			22					
			23					
			24					
15:00	45 35 33	Ø	25		SM		Silty Sand, brown (5/4-7.5YR) fine grain sands, dense, s/mo, no odor (0, 80, 20, 0)	
			26					
			27					
			28					
			29					
			30					

SECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

Project: Chevron 9-0883, 315 Kansas Ave, Modesto
Boring Location:
Project No.: 017-43510
Log of Boring/Monitoring Well: MW-3

035/09E-30

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
15:05	35 37 36	Ø	30–34		SW		Silty Sand, brown (4/4-7.5YR) fine to medium grain, well graded, dense, moist, no odor (0,85,15,0)	
15:10	29 34 37	Ø	35–39		SW		Sand, brown (4/4-7.5YR), fine to medium grain sands, well graded, dense, moist to wet, no odor (0,95,5,0)	
15:20	29 25 34	Ø	40–44		SP	▼	Sand, brown (5/2-7.5YR), fine to medium grain, poorly graded, dense, wet, no odor (0,95,5,0)	
15:25	14 27 19	Ø	45–47		SC		Clayey Silty Sand, brown (4/3-7.5YR) fine grain sands, dense, wet, no odor (0,50,15,35)	
15:30	29 34 30	Ø	50–51		SC		Same as above	

Reviewed By: _____ Date: _____
Revised By: _____ Date: _____

SECOR

ORIGINAL
File with DWR

Page 2 of 3

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 726309

DWR USE ONLY — DO NOT FILL IN
03S/09E-30
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. MW-2
Date Work Began 11/01/01, Ended 11/02/01
Local Permit Agency Stanislaus Co. Dept. of Env. Resources
Permit No. MW01-58 Permit Date 9/27/01

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD H.S.A. FLUID

DEPTH FROM SURFACE Ft. to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
	SEE ATTACHED WELL LOG

TOTAL DEPTH OF BORING ___ (Feet)
TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER
Name Chevron Products Co.
Mailing Address 6001 Bollinger Canyon
San Ramon, CA 94583
CITY STATE ZIP

WELL LOCATION
Address 815 Kansas Ave
City Modesto
County Stanislaus
APN Book ___ Page ___ Parcel ___
Township ___ Range ___ Section ___
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH
NORTH
SEE ATTACHED SITE PLAN
WEST EAST
SOUTH
Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. ***PLEASE BE ACCURATE & COMPLETE.***

ACTIVITY (✓)
X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)
WATER SUPPLY
___ Domestic ___ Public
___ Irrigation ___ Industrial
X MONITORING
TEST WELL
CATHODIC PROTECTION
HEAT EXCHANGE
DIRECT PUSH
INJECTION
VAPOR EXTRACTION
SPARGING
REMEDIATION
OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD * ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
						SEE ATTACHED WELL LOG			

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft. to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Cascade Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 3632 Omec Circle, Rancho Cordova, CA 95742
CITY STATE ZIP
Signed ___ WELL DRILLER/AUTHORIZED REPRESENTATIVE
DATE SIGNED 1-4-02
C-57 LICENSE NUMBER 717510

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Project: Chevron 9-0983, 815 Kansas Ave, Modesto			Log of Boring/Monitoring Well: 035/096-30 MW-2
Boring Location:	Project No.: 077.4357.0		
Subcontractor and Equipment: Cascade Drilling	Logged By: EG	Drawn By: T.Z.	
Sampling Method: HSA, CalMod Split Spoon	Monitoring Device: PID		Comments:
Start Date/Time: 11/2/01 8:30	Finish Date/Time: 11/2/01		
First Water (bgs):	Stabilized Water Level (bgs):		

Surface Elevation: Top Casing Elevation:

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
			0				Asphalt	
			1					TD = 49.5
			2					
			3					
			4					
8:35	7 9 12	0	5		SM		Silty Sand, dk brown (3/4-7.5YR) fine to medium grain sands, well graded, loose, dry, no odor (0, 60, 20, 0)	Screen interval 39.5-49.5
			6					
			7					
			8					
			9					Sand 32 - 49.5'
8:41	11 15 21	0	10		SP		Sand, brown (5/4-7.5YR) medium grain sands, poorly graded, med dense, s/mo, no odor (0, 95, 5, 0)	
			11					
			12					bentonite 30-32'
			13					
			14					
8:45	12 14 19	0	15		SW		Sand, lt brown (6/3-7.5YR), fine to medium grain sands, well graded, med dense, s/mo, no odor (0, 95, 5, 0)	grout 0-30
			16					
			17					
			18					
			19					
9:30	14 15 18	0	20		SW		Sand, lt brown (6/4-7.5YR), fine to medium grain sands, well graded, med dense, s/mo, no odor (0, 95, 5, 0)	
			21					
			22					
			23					
			24					
9:35	22 25 21	0	25		SW		Sand, strong brown (4/6-7.5YR) medium grain sands, well graded, dense, moist, no odor (0, 95, 5, 0)	
			26					
			27					
			28					
			29					
			30					

SECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

Project: Chevron 9-0883, 85 Kansas Ave, Modesto

Boring Location:

Project No.: -

Log of Boring/Monitoring Well: MW-2

3/3

033/095-30

Sample Number	Blows/Foot	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
9:40	23 26 22	0	30–31		SW		Sand, brown (5/4 - 7.5YR) med grain sands, well graded, dense, moist, no odor (0, 100, 0, 0)	
9:45	24 25 28	0	35–36		SM		Silty Sand, brown (4/2 - 7.5YR) fine to medium grain sands, well graded, dense, moist, no odor (0, 75, 20, 5)	
			38			▼		
		0	40–41				no recovery	
9:55	26 26 34	0	45–46		SW		Sand, brown (4/3 - 7.5YR) fine to coarse grain sands, well graded, dense, wet, no odor (0, 100, 0, 0)	
10:00	15 21 29	0	50–51		SW		Sand, brown (5/3 - 7.5YR) fine to medium grain, well graded, dense, wet, no odor (0, 100, 0, 0)	

SECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

№ 86906

State Well No. 3/9-30

Other Well No.

(1) OWNER:

Name Andy Fontana

Address 1219 N. Emerald Ave
Modesto, CA.

(2) LOCATION OF WELL:

County Stanislaus Owner's Number, if any

Township, Range, and Section 1219 Emerald Ave

Distance from cities, roads, railroads, etc. Modesto, CA.

(3) TYPE OF WORK (check):

New Well ☑ Deepening ☐ Reconditioning ☐ Destroying ☐

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☑
Cable ☐
Other ☐

(6) CASING INSTALLED:

STEEL: SINGLE ☑ DOUBLE ☐ OTHER:

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	If gravel packed From ft.	To ft.
0	103	6 5/8	10	10"	40	103

Size of shoe or well ring

Size of gravel: 3/8" Rock

Describe joints Welded

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
83	103	4 Rows		7/16x4
		4" apart.		

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes ☑ No ☐ To what depth 20 ft.

Were any strata sealed against pollution? Yes ☐ No ☑ If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing Bentonite + Slab Conc

(9) WATER LEVELS:

Depth at which water was first found, if known 32-41 ft.

Standing level before perforating, if known ft.

Standing level after perforating and developing 34 ft.

(10) WELL TESTS:

Was pump test made? Yes ☐ No ☑ If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Temperature of water Was a chemical analysis made? Yes ☐ No ☑

Was electric log made of well? Yes ☐ No ☑ If yes, attach copy

(11) WELL LOG: UNCONFINED

Total depth 120 ft. Depth of completed well 103 ft.

Formation: *Describe by color, character, size of material, and structure*

ft. to	ft.	
0	4	topsoil
4	16	Sand
16	32	Sand in Clay
32	41	Sand
41	57	Clay
57	75	Sand
75	80	Clay
80	115	Sand
115	120	Clay

CONFIDENTIAL
~~Water Code Sec. 13752~~

Work started 11/10/1973 Completed 11/10/1973

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Martin Pump + Supply
(Person, firm, or corporation) (Typed or printed)

Address 25 Reed Rd.
Ceres, Calif.

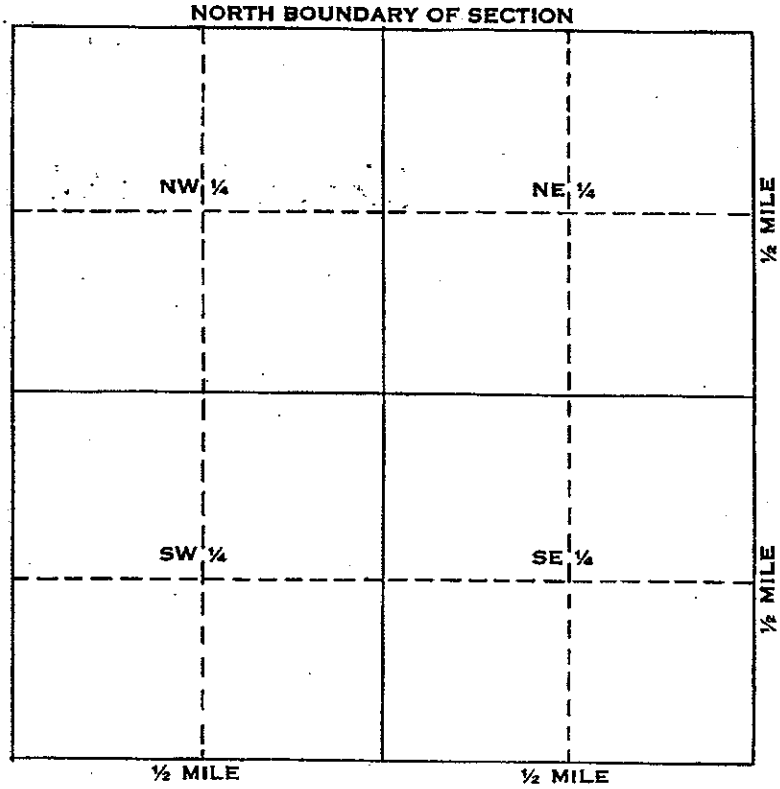
[SIGNED] [signature]
(Well Driller)

License No. 250103 Dated 12/14/, 1973

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9-68)

25179-950 9-68 50M TRIP △D OSP



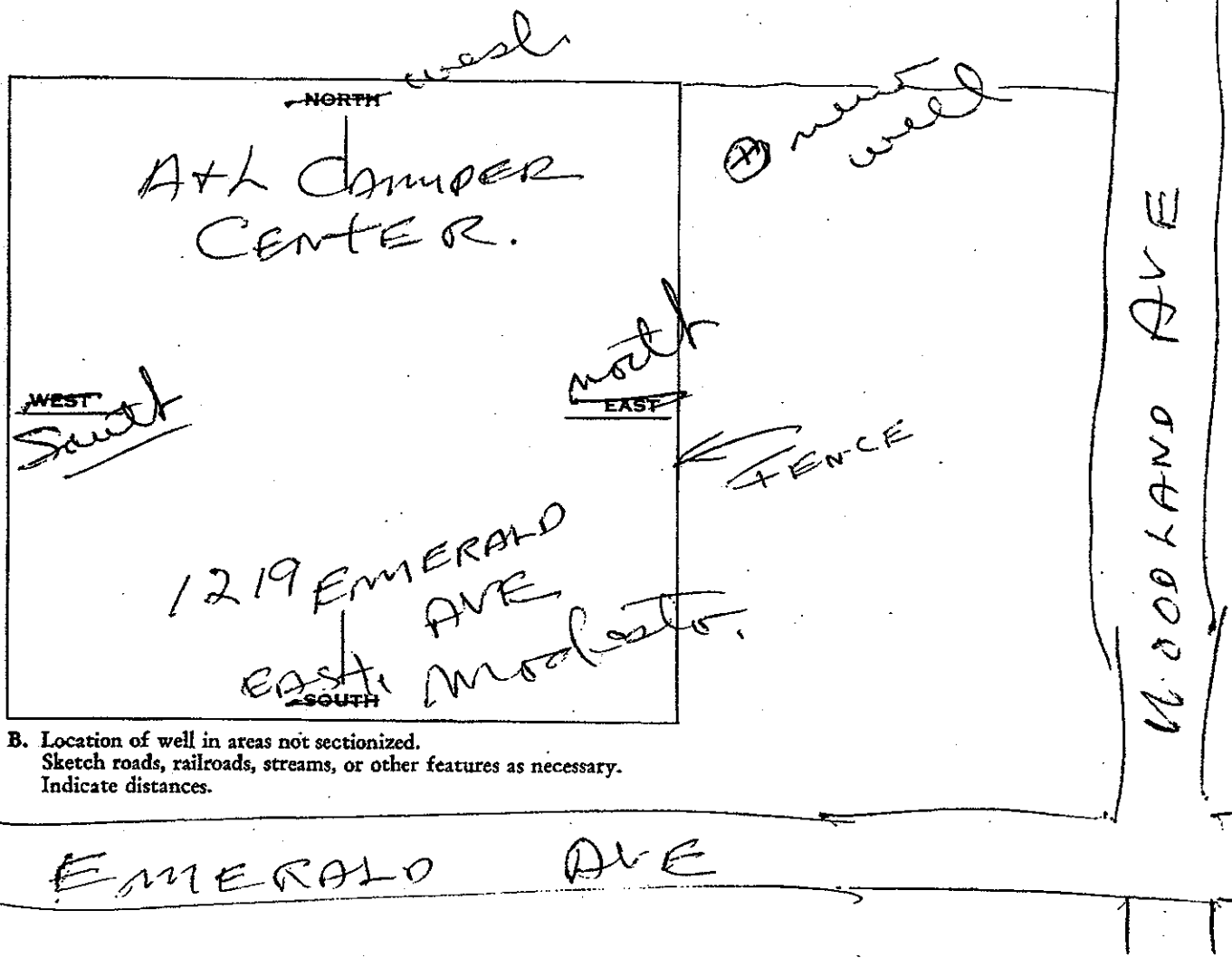
RECEIVED
DEC 1 8 1973
SAN JOAQUIN DISTRICT

Township _____ N/S

Range _____ E/W

Section No. _____

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

3/9-30

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 5
(Insert appropriate number)

WATER WELL DRILLERS REPORT
(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION NOT CHECKED

Do Not Fill In:
No 96163
State Well No.
Other Well No. 3S/9E-30

(1) OWNER:
Name: The Borden Company
Address: Modesto, California

(2) LOCATION OF WELL:
County: Stanislaus Owner's number, if any—
R. F. D. or Street No.
Near center of S. E. ¼ of N. E. ¼ of Sec. 30, T. 3 S., R. 9 E.

(3) TYPE OF WORK (check):
New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic ☐ Industrial ☒ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☐
Cable ☒
Dug Well ☐

(6) CASING INSTALLED:
SINGLE ☒ DOUBLE ☐

From ft.	to ft.	Diam.	Gage or Wall
0	140	16	10" D.

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring: 3/4x6x16"
Describe joint: Welded
Size of gravel:

(7) PERFORATIONS:
Type of perforator used: Machine
Size of perforations: 1/8 in., length, by 1 in.

From ft.	to ft.	Perf. per row	Rows per ft.
137	197		

(8) CONSTRUCTION:
Was a surface sanitary seal provided? ☐ Yes ☐ No To what depth ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata

From ft.	to ft.	ft.

Method of Sealing

(9) WATER LEVELS:
Depth at which water was first found: 52 ft.
Standing level before perforating: ft.
Standing level after perforating: ft.

(10) WELL TESTS:
Was a pump test made? ☒ Yes ☐ No If yes, by whom? Us
Yield: 2500 gal./min. with 73 ft. draw down after 72 hrs.
Temperature of water: Was a chemical analysis made? ☐ Yes ☐ No
Was electric log made of well? ☐ Yes ☐ No

(11) WELL LOG:
Total depth: 260 ft. Depth of completed well: 260 ft.
Formations: Describe by color, character, size of material, and structure.

From ft.	to ft.	Formation
0	2	Top Soil
2	6	Hard Pan
6	10	Clay
10	30	Sand
30	38	Clay
38	48	Sand
48	53	Silt
53	56	Clay
56	70	Sand
70	76	Clay
76	84	Silt
84	108	Sand
108	110	Clay
110	120	Sand
120	124	Silt
124	135	Sand
135	150	Clay
150	170	Sand
170	180	Gravel
180	230	Clay
230	250	Set Sand
250	260	Clay
260		Sand

CONFIDENTIAL
Section 7076.1, Water Code

Work started 4/16/62 19 . Completed 5/2/62 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME: Osterberg & Carroll
(Person, firm, or corporation.) (Typed or printed.)
Address: 2537 River Road
Modesto, California

[SIGNED] M. F. Osterberg
Well Driller

License No. 201248 Dated , 19

8103S 6-57 50M QUIN △ SPO

DWR 188 (REV. 3-54)

3/9-30

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. ~~3~~ 5
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION NOT CHECKED

Do Not Fill In
No 96165
State Well No.
Other Well No. 3S/9E-30

(1) OWNER:

Name The Borden Company
Address Modesto, California

(2) LOCATION OF WELL:

County Stanislaus Owner's number, if any—
R. F. D. or Street No.
Near center of S. E. ¼ of N. E. ¼ of Sec. 30, T. 3 S., R. 9 E.

(3) TYPE OF WORK (*check*):

New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):

Domestic ☐ Industrial ☒ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Dug Well ☐

(6) CASING INSTALLED:

SINGLE ☒ DOUBLE ☒

From ft.	to ft.	Diam.	Gage or Wall
0	140	16	10 D

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring 3/4x6x16"
Describe joint Welded
Size of gravel:

(7) PERFORATIONS:

Type of perforator used Machine
Size of perforations 1/8 in., length, by 1 in.

From ft.	to ft.	Perf. per row	Rows per ft.
137	~~188~~ 197		

(8) CONSTRUCTION:

Was a surface sanitary seal provided? ☐ Yes ☐ No To what depth ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata

From ft.	to ft.

Method of Sealing

(9) WATER LEVELS:

Depth at which water was first found 52 ft.
Standing level before perforating ft.
Standing level after perforating ft.

(10) WELL TESTS:

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Us
Yield: 2500 gal./min. with 73 ft. draw down after 72 hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No
Was electric log made of well? ☐ Yes ☐ No

(11) WELL LOG:

Total depth 260 ft. Depth of completed well 260 ft.
Formations *Describe by color, character, size of material, and structure.*

ft. to	ft.	
0	2	Top Toil
2	6	Hard Pan
6	10	Clay
10	30	Sand
30	38	Clay
38	48	Sand
48	53	Silt
53	56	Clay
56	70	Sand
70	76	Clay
76	84	Silt
84	108	Sand
108	110	Clay
110	120	Sand
120	124	Silt
124	135	Sand
135	150	Clay
150	170	Sand
170	180	Gravel
180	230	Clay
230	250	Set Sand
250	260	Clay
260		Sand

Work started ~~1/5~~ 4/16/62 Completed 5/2/62 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Osterberg & Carroll
(Person, firm, or corporation) (Typed or printed)
Address 2537 River Road
Modesto, California

[SIGNED] M. F. Osterberg
Well Driller

License No. 201248 Dated ....., 19....

3/9-30

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No. 5
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

LOCATION NOT CHECKED
Do Not Fill In
No 96172
State Well No.
Other Well No. 3/9E-30

(1) OWNER:

Name Modesto Irrigation District
Address Modesto, California

(2) LOCATION OF WELL:

County Stanislaus Owner's number, if any—
R. F. D. or Street No.

Near center of N. E. ¼ of
Sec. 30, T. 3 S., R. 9 E.

(3) TYPE OF WORK (*check*):

New well ☒ Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):

Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Dug Well ☐

(6) CASING INSTALLED:

SINGLE ☒ DOUBLE ☐

From ft.	to ft.	Diam.	Gage or Wall
0	109	12	10

If gravel packed

Diameter of Bore	from ft.	to ft.

Type and size of shoe or well ring 5/8x4x12"
Size of gravel:
Describe joint Welded

(7) PERFORATIONS:

Type of perforator used None
Size of perforations in., length, by in.

From ft.	to ft.	Perf. per row	Rows per ft.

(8) CONSTRUCTION:

Was a surface sanitary seal provided? ☐ Yes ☐ No To what depth ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata

From ft.	to ft.

Method of Sealing

(9) WATER LEVELS:

Depth at which water was first found 39 ft.
Standing level before perforating ft.
Standing level after perforating ft.

(10) WELL TESTS:

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Us
Yield: 1500 gal./min. with 63 ft. draw down after 22 hrs.
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No
Was electric log made of well? ☐ Yes ☐ No

(11) WELL LOG:

Total depth 140 ft. Depth of completed well 140 ft.

Formation: *Describe by color, character, size of material, and structure.*

From ft.	to ft.	Formation
1	18	Top Soil
18	24	Sand
24	41	Clay
41	43	Sand
43	98	Clay
98	107	Sand
107	111	Clay
111	112	Set Sand
112	140	Clay
140		Sand

Work started 6/12/62 19 . Completed 6/18/62 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Osterberg & Carroll
(Person, firm, or corporation) (Typed or printed)
Address 2537 River Road
Modesto, California

[SIGNED] M. J. Osterberg
Well Driller
License No. 201248 Dated , 19

87025 6-57 80M QUIN △ BPO

DWR 188 (REV. 3-54)

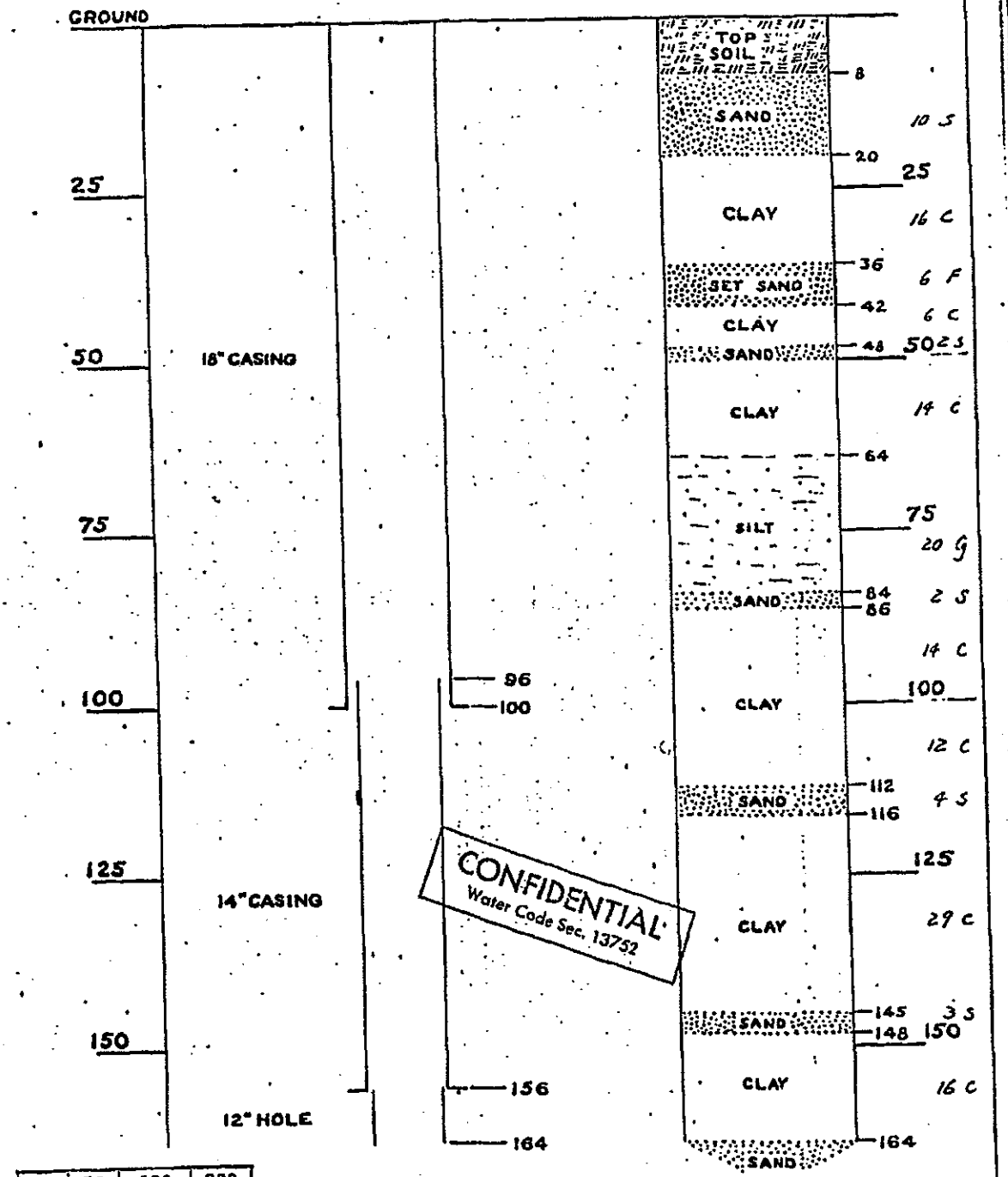
3/9-30P1 3/9-30P1

MAR 01 1965

J. C. BUSH

U.S.G.S. FEB D.W.R.

LSD Elev. 80



CONFIDENTIAL
Water Code Sec. 13752

	50	100	200
G			
S	12	2	7
F	6		
C		20	
G	22	28	57
	40	50	64

LOLLICH PUMP - WELL Nº 207

VERTICAL SCALE 1"=20' DRILLED OCT. 1949

319-30Q1 cp #175

M. F. OSTERBERG
"WOULD" BOX 1520
PHONE 116-F-3

"DRILL WELL WATERS"

C. B. CARROLL
PHONE 3521-W

PEG

Modesto, Calif. Aug. 19 1950

Del Este Water Company 3/9-30Q1.

Modesto, California

IN ACCOUNT WITH

LSD Elev. 80

Osterberg & Carroll Emerald Avenue & Laurel Street

WELL DRILLERS

Contractor's License No. 87245

ANY SIZE WELL DRILLED FROM SEVEN TO TWENTY-FOUR INCHES

228	Ft.	well @ $3.50 per Ft.	$
27	"	12" # 12 single casing in column @ $2.02	
3		Well rings 12 x 4 x ⅜ @ $17.55	
1		Well ring 10 x 4 x 5/8	
		Tax	
			$

LOG:

	0 - 8	Top Soil	94 - 114	Clay	6/14	C
2' C	8 - 12	Hard Pan	114 - 194	Sand	80	S
8 S	12 - 20	Sand	194 - 195	Clay	1	C
16 C	20 - 36	Clay	195 - 204	Sand & Gra	5/4	G
2 S	36 - 38	Sand	204 - 224	Clay		
12/14 C	38 - 64	Clay	224 -	Sand		
16 S	64 - 80	Sand				
8 C	80 - 88	Clay				
6 S	88 - 94	Sand				

97½ Ft. 14" casing landed at 97'
103 " 12" casing landed at 194'
42" 10" casing landed at 206'

C.10"Ø - Brannelly Tract WO#399
Emerald well.

CONFIDENTIAL
Water Code Sec. 13752

	50	100	200
G			5
S	10	22	80
C	30	28	15
	40	50	100

ORIGINAL
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 5, CALIFORNIA

3/9-30B1

SHEET 2 of 3

Stanislaus

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

(CONT.)

Do Not Fill In
State Well No. 3/9-30B1 (62)
Other Well No. 3S/9E-30
Region

(7) Perforations:

Type of perforator used: Machine

Perforated 97 ft. to 161 ft. Hole size 1/8 x 1 No. of holes 3" centers

12-16-49

(8) Water levels:

Depth at which water first encountered: 28 ft.
Depth to water before perforating: 28 ft.
Depth to water after perforating: 28 ft.
Note any change in water level while drilling: None

(9) Well pumping test:

Date of test 7/3/51 By whom: Osterberg & Carroll
Depth to water when test started: 70 ft.
G.P.M. at beginning of test: 800
Drawdown from standing level: 42 ft.
G.P.M. at completion of test: 2300
Drawdown at completion of test: 40 ft.
Length of time tested: 31 Hrs.
Temperature of water:
Was gas present in water? ☐ Yes ☒ No

(10) General:

Was well gravel packed? No Size of rock: Thickness of pack:
Was a surface sanitary seal provided?
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, attach detailed description
Strata sealed:
Was analysis made of water? ☐ Yes ☒ No If yes, attach copy.
Was electric log made of well? ☐ Yes ☒ No If yes, attach copy.
If well abandoned, was it plugged and sealed?
Method of plugging and sealing:

OFFICIAL RECORD
Section 7076.1, Water Code

(11) Location:

North

Well located 306 Ft. west of center line of Michigan Avenue. Also called Bennett Street, in Barium Products plant.

1 MILE

Section No. 30
Township 3S
Range 8E
Base & Meridian Mt. Diablo
Show location of well in Section, thus (X)
Distances to section lines from well, N or S ft. and E or W ft.
Show location of nearest known well, thus (O)
Distance to nearest known well ft.

(12) Time of work:

Work started date 6/16/51 Completed date 7/3/51
Date of this report 7/3/51

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[SIGNED] Osterberg & Carroll
Well Driller

By M. F. Osterberg

License No. 87245 Classification C 57

Dated ; 19

D.W.R. FORM NO. 246 REGIONAL WATER POLLUTION CONTROL BOARD COPY

ORIGINAL
File Original, Duplicate and Triplicate with the
DIVISION OF WATER RESOURCES
P. O. BOX 1079
SACRAMENTO 8, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

SHEET 1

Do Not Fill In
State Well No.
Other Well No. 33/9E-30
Region

33/9-30B1

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

(CONT.)

(1) Driller:
Name: Osterberg & Carroll
Address: Rt. 7 Box 1520
Modesto, California
License No. 87245 Classification c 57

(2) Proposed use or uses (check):
Domestic ☐ Municipal ☐
Irrigation ☐ Industrial ☒
Domestic and Irrigation ☐ Test well ☐
Other

(3) Equipment used (check):
Rotary ☐
Cable ☒
Dug well ☐
Other

Owner:
Name: Barium Products Ltd.
Address: Modesto, California

(4) Type of work (check):
New well ☒ Reconditioning of well ☐
Deepening existing well ☐

(5) Well log:
Total depth of well 212 ft.

Give details of formations penetrated, such as silt, peat, muck, sand, gravel, clay, shale, sandstone, hardpan, rock. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (loose, packed, cemented, soft, hard, brittle).

Depth From Ground Surface				
0	ft. to	2	ft.	Top Soil
2	" "	5	"	Hard Pan
5	" "	9	"	Sand
9	" "	34	"	Clay
34	" "	36	"	Sand
36	" "	48	"	Clay
48	" "	70	"	Sand
70	" "	92	"	Clay
92	" "	98	"	Sand
98	" "	117	"	Clay
117	" "	120	"	Sand
120	" "	212	"	Clay
212	" "		"	Sand

CONFIDENTIAL
Section 7076.1, Water Code

If additional space is required, continue on DWR Form No. 246—Supplement, and attach to respective report copies.

(6) Casing left in well:

LENGTH FT.	DIAMETER INCHES	SINGLE, DOUBLE, WELDED, OTHER	LBS. PER FOOT OR GAGE OF CASING	SEATING BELOW GROUND SURFACE, FT.
102	16	Double welded	12	100
72	14	Single welded	12	165

Type and size of shoe or well ring 1 - 16 x 3/4 x 6, 2 - 14 x 5/8 x 4 Welded joints ☒ Yes ☐ No

D.W.R. FORM NO. 245 REGIONAL WATER POLLUTION CONTROL BOARD COPY

Attachment E
General Water Quality Stiff Diagrams
October 2006 Samples

Table E-1

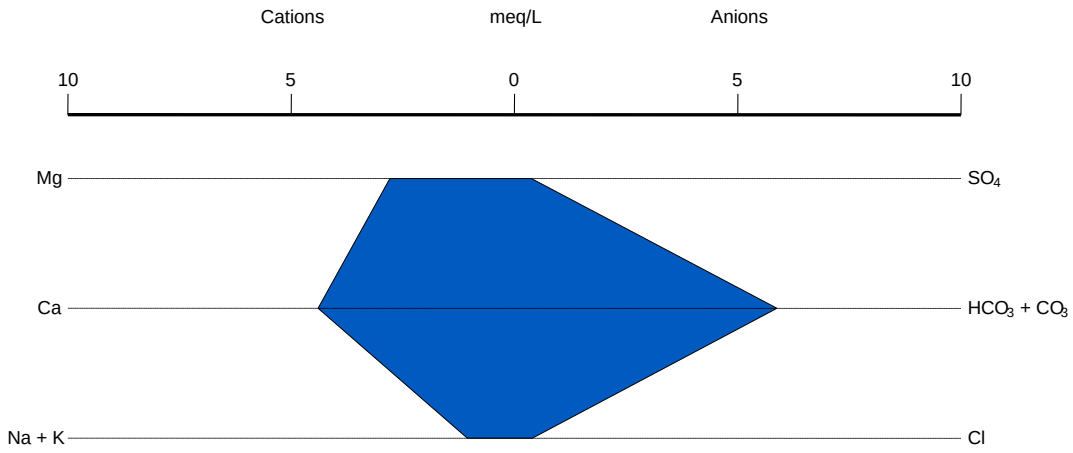
Stiff Diagram Input Parameters,
Caltrans-Modesto, California
Task Order 35
October 2006

Sample ID	SR99/132-MW-1	SR99/132-MW2	SR99/132-MW3	SR99/132-MW4	SR99/132-MW5	SR99/132-MW6	SR99/132-MW7	SR99/132-MW8
Date	10/5/2006	10/5/2006	10/5/2006	10/4/2006	10/5/2006	10/5/2006	10/4/2006	10/4/2006
Calcium µg/L	88000	49000	42000	43000	100000	67000	69000	22000
Magnesium µg/L	34000	16000	15000	13000	37000	22000	21000	6800
Sodium µg/L	22000	56000	43000	43000	160000	160000	16000	77000
Potassium µg/L	3700	2700	2500	2600	7500	5600	2900	2400
Bicarbonate µg/L[1]	439024	304878	268292	304878	658536	512195	329268	243902
Sulfate µg/L	18000	16000	17000	11000	32000	76000	26000	21000
Chloride µg/L	14000	23000	11000	6600	28000	21000	7400	12000
TDS µg/L	500000	390000	340000	340000	730000	700000	370000	360000
Conductivity[2]	773	601	512	521	1130	1160	577	510
pH[3]	6.98	6.94	7.15	7.04	7.12	7.6	7.38	7.2
Carbonate µg/L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nitrate µg/L	6800	6100	5000	3500	10000	15000	3100	7800
Arsenic µg/L	2.2	2.6	3.3	2.1	2.5	5.2	2.7	4
Barium µg/L	120	84	58	100	410	120	73	57
Chromium µg/L	16	11	7.9	9.9	18	29	10	9.7
Copper µg/L	2	1.7	1.5	2.12	1.9	1.5	1.6	1.7
Manganese µg/L	0.0	0.0	18	4.1	120	130	1.1	0.0
Molybdenum µg/L	0.0	0.0	2.2	0.0	14	13	0.0	0.0
Nickel µg/L	1.5	1.2	0.0	0.0	3.4	1.7	1.4	0.0
Vanadium µg/L	26	27	29	24	24	34	23	32

Notes
1. Bicarbonate as $CaCO_3$ converted to Bicarbonate Alkalinity through division by 0.82.
2: Conductivity in µmho/cm from pre-sample well purge data.
3. Data derived from pre-sample well purge data.

Figure E-1

Stiff Diagram
SR99/132 MW-1
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

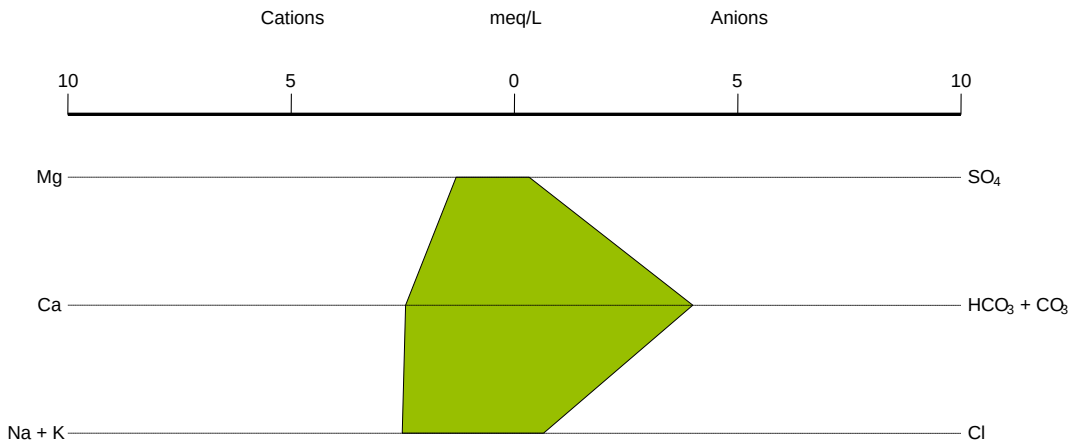
Anion-Cation Balance	
Anions	6.75
Cations	8.25
% Difference	10.014
Measured TDS = Calculated TDS	
Measured	501.299
Calculated	627.317
Ratio	0.799
Measured EC = Calculated EC	
Measured	773.000
Calculated	638.329
Ratio	1.211

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.872597
Cations	1.066804
Calculated TDS to EC ratio	0.812
Measured TDS to EC ratio	0.649

Figure E-2

Stiff Diagram
SR99/132 MW-2
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

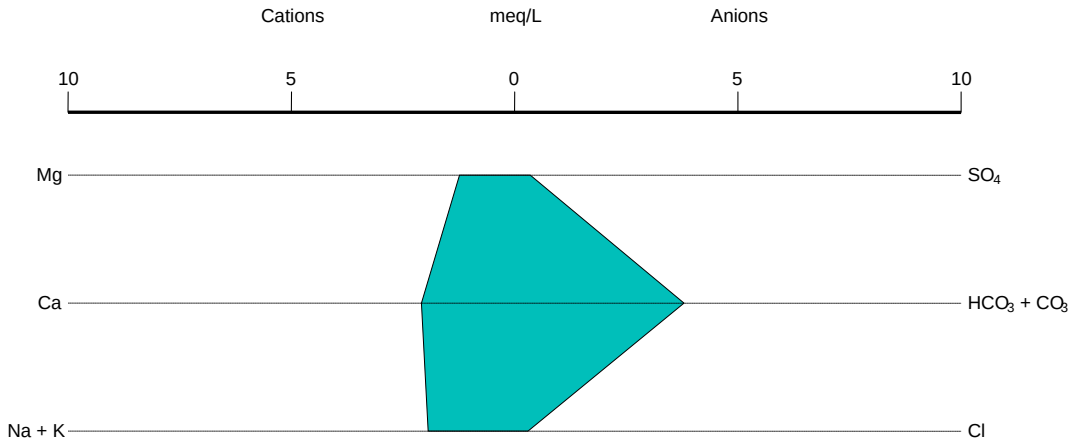
Anion-Cation Balance	
Anions	5.07
Cations	6.27
% Difference	10.607
Measured TDS = Calculated TDS	
Measured	391.046
Calculated	475.076
Ratio	0.823
Measured EC = Calculated EC	
Measured	601.000
Calculated	501.769
Ratio	1.198

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.843382
Cations	1.043536
Calculated TDS to EC ratio	0.790
Measured TDS to EC ratio	0.651

Figure E-3

Stiff Diagram
SR99/132 MW-3
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

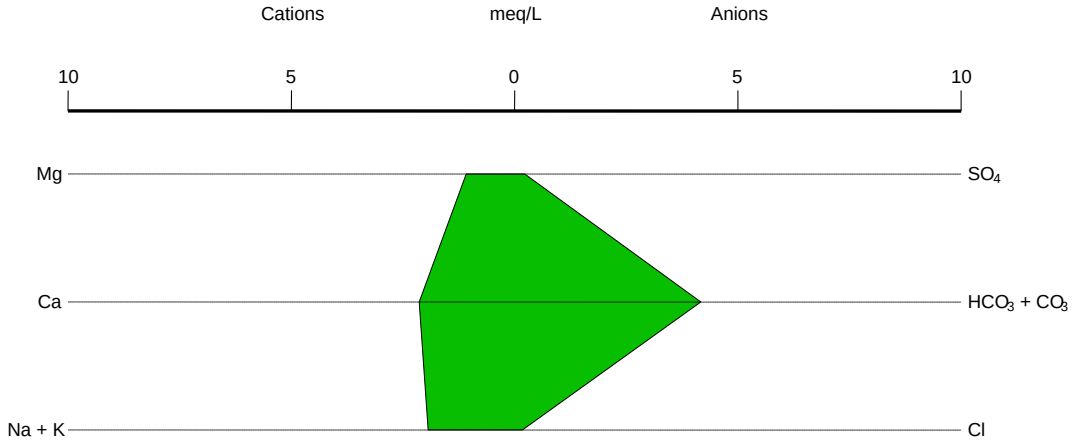
Anion-Cation Balance	
Anions	4.55
Cations	5.27
% Difference	7.349
Measured TDS = Calculated TDS	
Measured	340.925
Calculated	405.010
Ratio	0.842
Measured EC = Calculated EC	
Measured	512.000
Calculated	433.635
Ratio	1.181

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.888335
Cations	1.029267
Calculated TDS to EC ratio	0.791
Measured TDS to EC ratio	0.666

Figure E-4

Stiff Diagram
SR99/132 MW-4
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

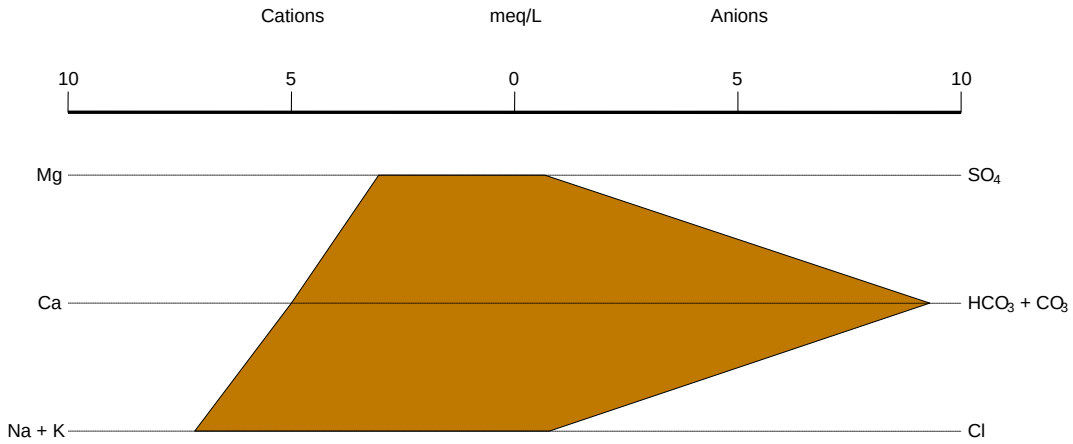
Anion-Cation Balance	
Anions	4.63
Cations	5.16
% Difference	5.392
Measured TDS = Calculated TDS	
Measured	340.925
Calculated	428.883
Ratio	0.795
Measured EC = Calculated EC	
Measured	521.000
Calculated	425.041
Ratio	1.226

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.888587
Cations	0.989882
Measured TDS to EC ratio	0.654

Figure E-5

Stiff Diagram
SR99/132 MW-5
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

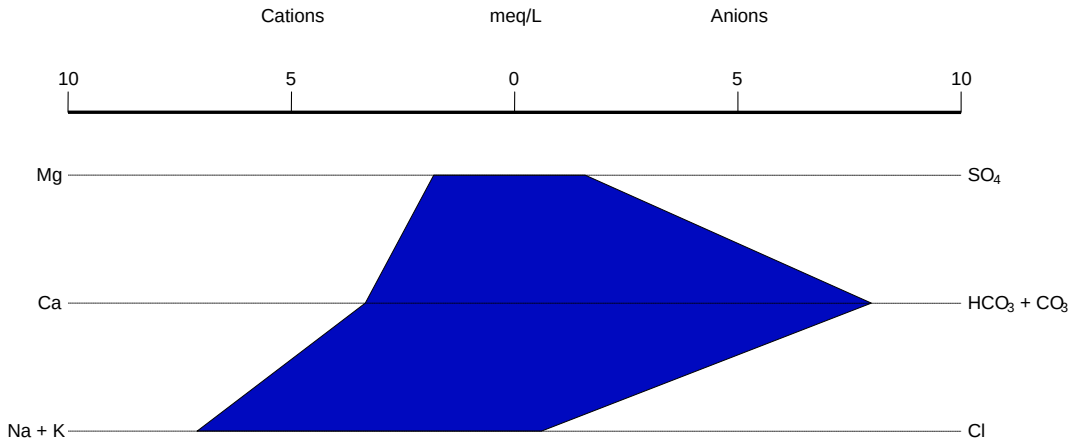
Anion-Cation Balance	
Anions	10.9
Cations	15.2
% Difference	16.388
Measured TDS = Calculated TDS	
Measured	731.769
Calculated	1036.134
Ratio	0.706
Measured EC = Calculated EC	
Measured	1130.000
Calculated	1045.869
Ratio	1.080

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.966423
Cations	1.345255
Calculated TDS to EC ratio	0.917
Measured TDS to EC ratio	0.648

Figure E-6

Stiff Diagram
SR99/132 MW-6
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

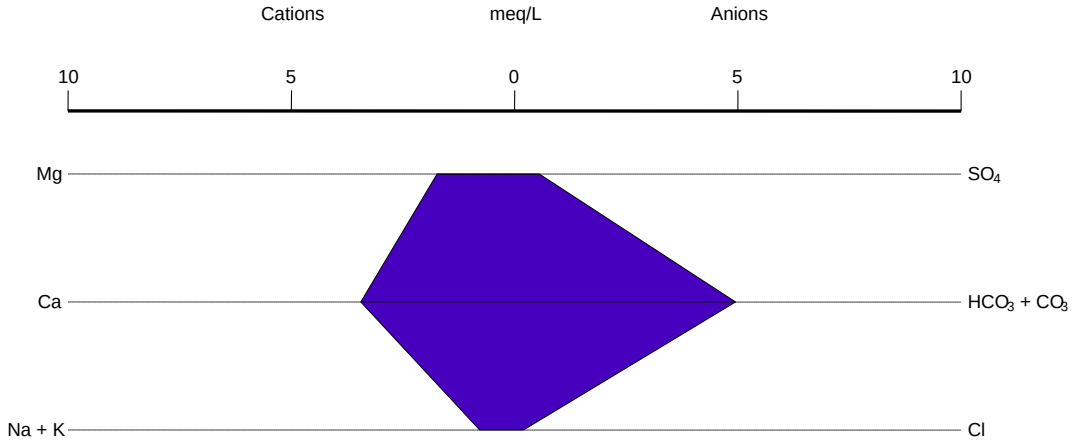
Anion-Cation Balance	
Anions	10.4
Cations	12.3
% Difference	8.232
Measured TDS = Calculated TDS	
Measured	701.712
Calculated	881.279
Ratio	0.796
Measured EC = Calculated EC	
Measured	1160.000
Calculated	939.124
Ratio	1.235

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.896814
Cations	1.057709
Calculated TDS to EC ratio	0.760
Measured TDS to EC ratio	0.605

Figure E-7

Stiff Diagram
SR99/132 MW-7
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

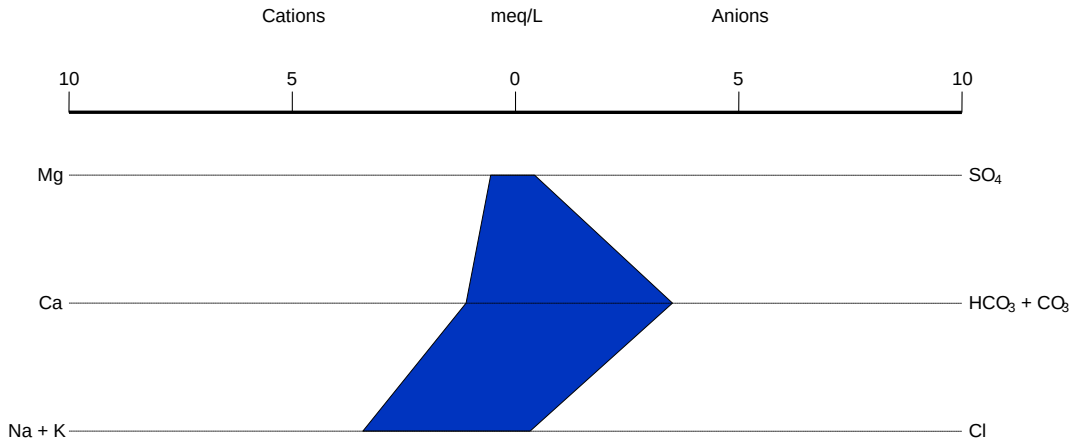
Anion-Cation Balance	
Anions	5.75
Cations	5.95
% Difference	1.662
Measured TDS = Calculated TDS	
Measured	370.998
Calculated	476.061
Ratio	0.779
Measured EC = Calculated EC	
Measured	577.000
Calculated	510.769
Ratio	1.130

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.996753
Cations	1.030454
Calculated TDS to EC ratio	0.825
Measured TDS to EC ratio	0.643

Figure E-8

Stiff Diagram
SR99/132 MW-8
Caltrans-Modesto, California
Task Order 35
October 2006



<u>Primary Tests</u>

Anion-Cation Balance	
Anions	4.41
Cations	5.07
% Difference	7.005
Measured TDS = Calculated TDS	
Measured	360.973
Calculated	394.069
Ratio	0.916
Measured EC = Calculated EC	
Measured	510.000
Calculated	419.643
Ratio	1.215

<u>Secondary Tests</u>

Measured EC and Ion Sums:	
Anions	0.864479
Cations	0.994712
Calculated TDS to EC ratio	0.773
Measured TDS to EC ratio	0.708