

GETTLER-RYAN INC.

1364 North McDowell Blvd. Suite B2
Petaluma, CA 94954-1116
Phone (707) 789-3255, Fax (707) 789-3218

TRANSMITTAL

TO: David B. De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

DATE: May 20, 2002
PROJECT NO. 140165.07
SUBJECT: Investigation Report
F: Tosco SS No. 1871
96 MacArthur Boulevard
Oakland, California

FROM: Clyde Galantine

MAY 21 2002

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	May 16, 2002	Off-Site Subsurface Investigation Report

THESE ARE TRANSMITTED as checked below:

- | | | |
|--|---|--|
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> Approved as submitted | <input checked="" type="checkbox"/> For your files |
| <input checked="" type="checkbox"/> As Requested | <input type="checkbox"/> Approved as noted | <input type="checkbox"/> For your use |
| <input checked="" type="checkbox"/> For Approval | <input type="checkbox"/> Returned for corrections | <input checked="" type="checkbox"/> As noted below |

COMMENTS:

Enclosed is a copy of the above report. If you have any questions or comments, please call me at (707) 789-3255.

Signed:

Clyde Galantine

cc: Don Hwang, Alameda County Health Care Services Agency



GETTLER-RYAN INC.

OFF-SITE SUBSURFACE INVESTIGATION REPORT

at

Former Tosco (76) Service Station No. 1871
96 MacArthur Boulevard
Oakland, California

MAY 21 2002

Report No. 140165.07

Prepared for:

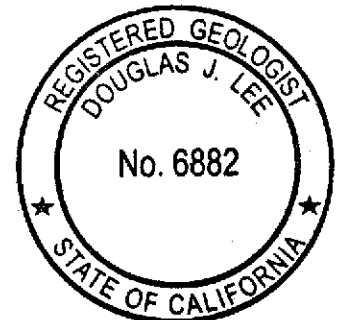
Mr. David B. De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Prepared by:

Gettler-Ryan Inc.
1364 North McDowell Blvd., Suite B2
Petaluma, California 94954

Clyde J. Galantine
Senior Geologist

Douglas J. Lee
Senior Geologist
RG 6882



May 16, 2002

TABLE OF CONTENTS

INTRODUCTION 1

SITE DESCRIPTION 1

SITE HISTORY/PREVIOUS ENVIRONMENTAL WORK 1

REGIONAL GEOLOGY..... 4

FIELD ACTIVITIES 5

 Well Installation 6

 Well Monitoring, Development, and Sampling..... 6

 Wellhead Survey..... 6

SUBSURFACE CONDITIONS..... 6

CHEMICAL ANALYTICAL RESULTS..... 6

 Chemical Analytical Procedures..... 7

 Soil Chemical Analytical Results 7

 Groundwater Chemical Analytical Results 7

 Stockpile Chemical Analytical Results 7

WASTE DISPOSAL..... 7

SUMMARY..... 8

CONCLUSIONS..... 8

DISTRIBUTION..... 8

REFERENCES 8

TABLES

- Table 1. Groundwater Monitoring Data and Analytical Results
- Table 2. Groundwater Analytical Results
- Table 3. Groundwater Analytical Results-Oxygenate Compounds
- Table 4. Soil Sample Analytical Results

FIGURES

- Figure 1. Vicinity Map
- Figure 2. Site Plan
- Figure 3. Potentiometric Map
- Figure 4. Concentration Map
- Figure 5. Cross Section A-A'
- Figure 6. Cross Section B-B'
- Figure 7. Cross Section C-C'

APPENDICES

- Appendix A. GR Field Methods and Procedures
- Appendix B. Permits, Boring Logs, and Well Construction Details
- Appendix C. Well Development and Groundwater Sampling Field Data Sheets
- Appendix D. Surveyor's Report
- Appendix E. Laboratory Reports and Chain-of-Custody Forms
- Appendix F. Waste Disposal Confirmation Form

OFF-SITE SUBSURFACE INVESTIGATION REPORT

at

Former Tosco (76) Service Station No. 1871
96 MacArthur Boulevard
Oakland, California

Report No. 140165.07

INTRODUCTION

This report summarizes an off-site subsurface investigation performed by Gettler-Ryan Inc. (GR) in December 2001 and January 2002 at the subject site. The purpose of this subsurface investigation was to delineate the lateral extent of hydrocarbon-impacted soil and groundwater downgradient of the subject site. The work performed included: drilling three off-site soil borings and constructing a groundwater monitoring well in each boring; collecting soil samples for description and chemical analysis; developing and sampling the newly installed groundwater monitoring wells and sampling the existing wells; surveying the wells; submitting the soil and groundwater samples for analysis; arranging for waste disposal; and preparing this report. This work was performed at the request of Tosco Corporation (Tosco), a subsidiary of Philips Petroleum Company, and in response to a request by Alameda County Health Care Services Agency (ACHSCA). This work was proposed in the GR Report No. 140165.07, *Work Plan for a Limited Subsurface Investigation*, dated November 1, 1999. The Work Plan was approved with conditions in a letter from the ACHSCA dated November 4, 1999.

SITE DESCRIPTION

The site is located on the north corner of the intersection of MacArthur Boulevard and Harrison Street in Oakland, California. The site is currently a QuikStop market and petroleum dispensing facility. The Tosco underground and above ground facilities, including the station building, two dispenser islands, two gasoline underground storage tanks (USTs), one waste oil UST, and four groundwater monitoring wells, were demolished and removed from the site. One on-site groundwater monitoring well (MW-1) and three off-site monitoring wells (MW-6, MW-7, MW-8) remain. Pertinent former and existing site features are shown on Figure 2.

SITE HISTORY/PREVIOUS ENVIRONMENTAL WORK

A dispenser and product piping modification project was performed at the site in May 1992. Four soil samples were collected from beneath the dispensers by representatives of Roux Associates (Roux) at depths ranging from 2 to 5 feet bgs. Petroleum hydrocarbon concentrations reported in the samples ranged from not detected to 58 parts per million (ppm) of Total Petroleum Hydrocarbons as Gasoline (TPHg), and not detected to 0.20 ppm of benzene. An additional sample was collected

below the south end of the east island at 8 feet bgs. The sample contained 1,700 ppm of TPHg and 3.1 ppm of benzene (KEI, 1996).

Three 4-inch diameter groundwater monitoring wells designated MW-1, MW-2, and MW-3 were installed on-site by Roux in October 1992 (Figure 2). The wells were completed to total depths of 24 and 25 feet bgs. Groundwater was encountered at depths of 14 to 15 feet bgs. Soil samples collected from well borings MW-1 and MW-2 were reported as not detected for TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX). Soil samples collected from MW-3 at depths of 12-13.5 feet bgs and 13.5-15 feet bgs contained 4.2 ppm of TPHg and 0.079 ppm of benzene, and 10 ppm of TPHg and 0.040 ppm of benzene, respectively. Groundwater samples collected from the wells contained petroleum hydrocarbon concentrations ranging from 140 to 260,000 parts per billion (ppb) of TPHg and 2.2 to 2,300 ppb of benzene. Quarterly groundwater monitoring and sampling was initiated upon receipt of the initial groundwater sample results. In February 1996, ACHCSA approved Unocal's request to reduce the groundwater monitoring and sampling program from quarterly to semi-annually (KEI, 1996).

A 280-gallon single-wall steel waste oil UST was replaced with a 550-gallon double-wall fiberglass UST in August 1994. One soil sample was collected from below the UST at a depth of 9 feet bgs by a representative from Kaprealian Engineering Incorporated (KEI). The excavation was deepened to 14 feet bgs and another soil sample was collected due to the obvious presence of petroleum hydrocarbons in the soil. Four sidewall soil samples were also collected at 9 feet bgs. The bottom sample collected at 9 feet bgs contained 46 ppm of TPHg, 0.12 ppm of benzene, 97 ppm of Total Petroleum Hydrocarbons as Diesel (TPHd), 1,400 ppm of Oil and Grease (O&G), and elevated concentrations of various semi-volatile organic (EPA Method 8270) compounds. One sidewall sample contained 960 ppm of TPHg, 2.2 ppm of benzene, 1,400 ppm of TPHg, 17,000 ppm of TOG, and elevated concentrations of 8270 compounds. The three other sidewall samples contained O&G concentrations ranging from 160 to 2,400 ppm. The soil sample collected at the bottom of the excavation at 14 feet bgs was reported as not detected for O&G and 8270 compounds (KEI, 1996).

In March 1996, KEI personnel witnessed the advancing of two soil borings (EB-1, EB-2) and installation of two additional monitoring wells (MW-4, MW-5) at the site (Figure 2). Soil borings EB-1 and EB-2 were advanced to depths of 13.5 and 14 feet bgs, respectively. Wells MW-4 and MW-5 were installed to a total depth of 20 feet bgs. Soil samples collected from boring EB-1 were reported as not detected for TPHg, BTEX, TPHd, O&G, 8270 compounds, and volatile organic (EPA Method 8010) compounds, except for 6.6 ppb of 1,1-dichloroethene (8010 compound) detected in the sample collected at 5 feet bgs. The soil sample collected at 5 feet bgs in boring EB-2 was reported as not detected for all analytes. The soil sample collected at 10 feet bgs in boring EB-2 contained 5.7 ppm of TPHg, 73 ppm of TPHd, 540 ppm of O&G, and elevated concentrations of 8270 compounds, and was reported as not detected for benzene and 8010 compounds. The soil sample collected at 5 feet bgs from well boring MW-4 was reported as not detected for TPHg, benzene, O&G, and 8270 compounds and contained 1.1 ppm of TPHd and elevated concentrations of 8010 compounds. The soil sample collected at 9.5 feet bgs from well boring MW-4 contained 24 ppm of TPHg, 350 ppm of TPHd, 1,000 ppm of O&G, and elevated concentrations of 8010 and 8270 compounds, and was reported as not detected for benzene. The soil samples collected from well boring MW-5 were

reported as not detected for TPHg and BTEX, except for 0.023 ppm of benzene detected in the sample collected at 9 feet bgs (KEI, 1996).

Grab groundwater samples were collected from both soil borings. Groundwater sample EB-1 was reported as not detected for all analytes except for 1.3 ppb xylenes and 0.54 ppb 1,1-dichloroethane. Groundwater EB-2 was reported as not detected for O&G and 8010 compounds and contained 1,400 ppb of TPHg, 690 ppb of benzene, 410 ppb of TPHd, and elevated concentrations of 8270 compounds. A groundwater sample collected from well MW-4 was reported as not detected for TPHg and contained 630 ppb of benzene, 110 ppb of TPHd and 18,000 ppb of methyl tertiary butyl ether (MtBE). A groundwater sample collected from MW-5 contained 31,000 ppb of TPHg, 5,500 ppb of benzene, and 66,000 ppb MtBE (KEI, 1996).

In May 1998, all underground and aboveground equipment and facilities were removed by John's Excavating of Santa Rosa, California. Facilities included two 12,000-gallon double-wall steel gasoline USTs, one 550-gallon double-wall steel waste oil UST, two hydraulic lifts, two dispenser islands and related single-wall product piping, and one service station building. GR personnel performed soil and groundwater sampling activities in conjunction with the station demolition.

Soil samples were collected beneath or near the USTs, hydraulic lifts, and dispenser islands/product piping. Four soil samples were collected from the sidewalls of the gasoline UST excavation at a depth of 11.5 feet bgs. Petroleum hydrocarbon concentrations in the samples ranged between not detected to 2,000 ppm of TPHg, not detected to 9.7 ppm of benzene, and 1.9 to 16 ppm of MtBE. The areas south and west of the excavation were overexcavated to groundwater and two confirmation sidewall samples were collected. These two samples, collected at 11 feet bgs, contained petroleum hydrocarbon concentrations ranging from not detected and 5.0 ppm of TPHg, 0.049 and 0.080 ppm of benzene, and 6.6 and 12 ppm of MtBE.

One soil sample was collected beneath each of the dispenser islands at a depth of 4 feet bgs. The sample collected beneath the north dispenser island was reported as not detected for TPHg and BTEX and contained 0.74 ppm of MtBE. The sample collected from beneath the south dispenser island was reported as not detected for benzene and MtBE and contained 15 ppm of TPHg. One soil sample was collected from the bottom of the waste oil UST excavation at a depth of 11 feet bgs. The sample was reported as not detected for all analytes except for 140 ppm of O&G. One soil sample was collected beneath each of the hydraulic lifts at a depth of 8 feet bgs. Both of these samples were reported as not detected for Total Petroleum Hydrocarbons as hydraulic fluid (TPHhf).

Grab groundwater samples were collected from the gasoline and waste oil UST excavations. The sample collected from the gasoline UST excavation was reported as not detected for benzene and MtBE and contained 620,000 ppb of TPHg. The groundwater sample collected from the waste oil UST excavation was reported as not detected for BTEX, MtBE, O&G and 8270 compounds, and contained 90 ppb of TPHg, 890 ppb of TPHd, and elevated concentrations of 8010 compounds.

A total of 1,252.78 tons of soil were removed from the site during demolition activities and transported to Forward Landfill for disposal (GR, 1998).

The tops of casings on monitoring wells MW-2 through MW-5 were damaged during site demolition activities. On September 14, 1998, these wells were properly destroyed by overdrilling and the boreholes were backfilled with neat cement to grade. In addition, one soil boring (EB-3) was advanced on-site to a total depth of 16.5 feet bgs (Figure 2). Groundwater was encountered at approximately 10.5 feet bgs. Soil and groundwater samples were collected for use in a RBCA analysis for the site.

A Risk-Based Corrective Action (RBCA) Evaluation was performed by the site by GR in February 1999. The RBCA Evaluation determined that, since the site was scheduled for construction of a fuel dispensing facility covered with concrete and asphalt and no groundwater receptors were located within a ¼-mile radius of the site, the potential threat to public health and environment is not of significant concern (GR, 1999a).

A limited subsurface investigation was performed in June 1999, which included the installation of three off-site groundwater monitoring wells (MW-6, MW-7, MW-8), and advancing seven Geoprobos (B-4 through B-10) and two soil borings (B-11, B-12) on and near the site. Depth-discrete soil and groundwater samples were collected and analyzed for TPHg, BTEX, MtBE, and five oxygenate compounds. Soil samples were reported to contain petroleum hydrocarbon concentrations ranging from not detected to 210 ppm of TPHg, not detected to 1.6 ppm of benzene, and not detected to 3.3 ppm of MtBE. Nine grab groundwater samples collected from the Geoprobos and soil borings were reported as not detected for TPHg and benzene, except for 0.54 ppb of benzene in B-6 at 11.7 feet bgs and 95,000 ppb of TPHg and 10,000 ppb of benzene in B-10 at 15.2 feet bgs. MtBE concentrations ranged from not detected in borings B-4, B-5, B-6, B-8, B-9, and B-12, to a maximum concentration of 270,000 ppb in boring B-10 at 15.2 feet bgs. Petroleum hydrocarbon concentrations in wells MW-1, MW-6, MW-7, and MW-8 ranged from not detected to 49,000 ppb of TPHg (MW-1), not detected to 6,900 ppb of benzene (MW-1), and not detected to 97,000 ppb of MtBE (MW-6). The oxygenate compounds (excluding MtBE) were reported as not detected for all samples (GR, 1999b).

Groundwater monitoring and sampling has been performed quarterly semiannually at the site since January 1993. Depth to groundwater has ranged from 7.70 to 15.50 feet from top of casing. Groundwater flow direction has ranged from southwest to south-southwest with an average hydraulic gradient of 0.03. Petroleum hydrocarbon concentrations have ranged from not detected to 260,000 ppb of TPHg, not detected to 8,700 ppb of benzene, and 270 to 120,000 ppb of MtBE (GR, 2002).

A 10-point ozone sparge remediation system was installed at the site and activated on April 8, 2002. System installation and startup will be documented in a future report.

REGIONAL GEOLOGY

The site is located on the western flank of the Oakland Hills and is underlain by Late Pleistocene age alluvium. These deposits are composed of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand, and gravel. The northwest-southeast trending Hayward Fault

is located approximately 2.3 miles northeast of the site (Helley, 1979). The nearest surface water is Glen Echo Creek, located approximately 1,000 feet northwest of the site.

Based on previous subsurface investigations, the site is underlain by clay to approximately 5 to 7 feet below ground surface (bgs). The clay is underlain by silt, silty sand, and poorly graded, fine sand to 16 feet bgs. Clay was encountered beneath these sediments to a total explored depth of 25.5 feet bgs. See Figures 5 through 7 for geologic cross sections of the area. The site is currently monitored and sampled semiannually in January and July. Groundwater was measured at approximately 8 to 15 feet bgs during the January 31, 2002 groundwater monitoring event (GR, 2002). This shallow groundwater at the site appears to be unconfined. The groundwater flow direction has ranged from west-southwest to southwest with an average gradient of 0.03 to 0.06 feet/foot. A potential artificial barrier may exist downgradient of the site as a result of the presence and construction of the I-580 freeway structure (conversation with ACHCSA personnel).

FIELD ACTIVITIES

Field work was performed in accordance with the GR Site Safety Plan No. 140165.06, dated November 14, 2001. GR Field Methods and Procedures and Site Safety Plan are presented in Appendix A. Underground Service Alert (USA) was notified prior to beginning the drilling activities and a utility locator service was employed to clear the drilling location. Off-site access permitting with State of California Department of Transportation (Caltrans) was initiated in January 1999 and completed in August 2001. Drilling and well installation was performed under Alameda County Public Works Agency (ACPWA) Permits Nos. WOI-2135 through WOI-2137 and Caltrans Encroachment Permit No. 0400-NSV-0643. A copy of the permits are included in Appendix B.

Three off-site soil borings were drilled on December 27, 2001 and completed as groundwater monitoring wells MW-9, MW-10, and MW-11, which were installed to total depths of approximately 20, 20, and 30 feet bgs, respectively. The purpose of these wells was to delineate hydrocarbon-impacted groundwater downgradient of the site. The locations of the wells are shown on Figure 2.

The borings were drilled using a limited access drill rig equipped with eight-inch diameter hollow stem augers. Drilling was performed by Gregg Drilling and Testing, Inc. of Martinez, California (#C57 485165). A GR geologist observed the drilling and well installation activities, described the encountered soil, field screened the soil samples for the presence of volatile organic compounds and prepared a log of the boring. Logs of the soil borings are included in Appendix B.

Soil cuttings generated during drilling were placed in drums and stored at the site pending disposal. Sample Comp 1 was collected from the stockpiled soil cuttings and submitted to the laboratory to be composited and analyzed as one sample. Stockpile sampling procedures are presented in Appendix A.

Well Installation

Wells MW-9, MW-10, and MW-11 were constructed using 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 0.020-inch machine-slotted well screen. The annular space around the well screen in the well boring was packed with Lonestar #3 sand to approximately one foot above the top of the well screen. The sandpack in the well was followed by a bentonite transition seal and then completed with neat cement. The top of the well is protected by a vault box, locking well cap, and lock. Well construction details are presented on the boring logs in Appendix B.

Well Monitoring, Development, and Sampling

Monitoring, development, and sampling of the newly installed wells and semiannual monitoring and sampling of the existing wells was performed by GR personnel on January 31, 2002. Copies of the well development and field monitoring data sheets are included in Appendix C. Purge water generated during development and sampling procedures was stored in two properly labeled drums on-site pending disposal. Monitoring data are summarized in Table 1.

Wellhead Survey

Following installation of the wells, the well casing elevations were surveyed by Virgil Chavez Land Surveying of Vallejo, California (California Land Surveyor No. 6323). Top of casing and vault box elevations were measured relative to MSL, and the horizontal locations of the wells were surveyed using GPS. A copy of the surveyor's report is included in Appendix D.

SUBSURFACE CONDITIONS

The unsaturated (vadose) zone is comprised predominantly of 1 to 8 feet of fill material overlying clay and silt. The saturated zone is comprised of the same clay and silt with interbedded sands to a total explored depth of 30 feet bgs. See Figures 5 through 7 for geologic cross sections of the area. Prior to collection of groundwater samples on January 31, 2002, GR personnel measured the depth to groundwater at 7.91 to 14.72 feet below top of casing (TOC). The groundwater flow direction was to the southwest with a gradient of 0.03 to 0.06 feet/foot (Figure 3).

CHEMICAL ANALYTICAL RESULTS

A total of four soil samples from the well borings, one composite sample from the stockpiled drill cuttings, and seven groundwater samples were collected and submitted for chemical analysis. Soil samples were not collected from well boring MW-10 due to its proximity to previously advanced soil boring B-8. Soil samples were selected using field screening data and geologic criteria. Analyses of soil and groundwater samples were performed by Sequoia Analytical of Redwood City or Petaluma, California (ELAP #1210 or 2384). Copies of the laboratory reports and chain-of-custody forms are included in Appendix E.

Chemical Analytical Procedures

Selected soil samples from the borings were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX), methyl tert-butyl ether (MtBE) according to Environmental Protection Agency (EPA) Method 5030/8015/8020. Groundwater samples were analyzed for TPHg, BTEX, and MtBE by EPA Methods 8021 and 8260B. In addition, groundwater samples MW-9, MW-10 and MW-11 were analyzed for oxygenate and lead scavenger compounds ethanol, tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), 1,2-dibromoethane (EDB), and 1,2-dichloroethane (EDC) by EPA Method 8260B. Soil stockpile sample Comp 1 was analyzed for TPHg, BTEX, MtBE and total lead.

Soil Chemical Analytical Results

No petroleum hydrocarbons were detected in two soil samples collected from well boring MW-9 at 6.5 and 9 feet bgs or from well boring MW-11 at 16 or 24.5 feet bgs. Soil chemical analytical data are summarized in Table 4.

Groundwater Chemical Analytical Results

Groundwater samples from newly installed downgradient wells MW-10, MW-11 and MW-12 were reported as not detected at for all petroleum hydrocarbons except for 680 and 910 ppb of MtBE by EPA Methods 8020 and 8260, respectively, in MW-9 and 1.2 ppb of MtBE by EPA Method 8260 in MW-10. Petroleum hydrocarbon concentrations in the remaining wells ranged from not detected to 42,000 ppb of TPHg, not detected to 5,800 ppb of benzene, and 700 to 31,000 ppb of MtBE. Groundwater sample chemical analytical data are summarized in Tables 1, 2 and 3 and shown on Figure 4.

Stockpile Chemical Analytical Results

Soil stockpile sample Comp 1 was reported as not detected for TPHg and BTEX, or MtBE and contained 7.7 ppm of total lead. Sample analytical data are summarized in Table 4.

WASTE DISPOSAL

Approximately 107 gallons of waste water generated by cleaning the drilling equipment and well development procedures were removed from the site by GR, and transported to the Tosco Refinery in Rodeo, California, for disposal. A total of five drums of soil (drill cuttings) were removed from the site by Denbeste Transportation of Windsor, California and transported to the Forward Incorporated facility in Manteca, California for disposal. A copy of the Forward disposal confirmation form is included in Appendix F.

SUMMARY

Three downgradient groundwater monitoring wells (MW-9, MW-10, MW-11) were installed on December 27, 2001. These wells were sampled during the first quarter 2002 groundwater monitoring and sampling event on January 31, 2002. Soil samples collected from the well borings were reported as not detected for all petroleum hydrocarbons. Petroleum hydrocarbon concentrations from the monitoring well groundwater samples ranged from not detected for all analytes to 42,000 ppb of TPHg, 5,800 ppb of benzene, and 31,000 ppb of MtBE. The groundwater flow direction was to the southwest at a hydraulic gradient of 0.03 to 0.06 feet/feet. An ozone sparge remediation system was installed on the site and activated on April 8, 2002.

CONCLUSIONS

The purpose of this investigation was to delineate the lateral extent of hydrocarbon-impacted soil and groundwater downgradient of the site. Analytical data from the well boring soil samples indicates that hydrocarbon-impacted soil has been delineated. Groundwater analytical data from the newly installed downgradient monitoring wells indicate that the extent of hydrocarbon-impacted groundwater has been delineated southwest of the site. The groundwater sample from monitoring well MW-9, located approximately 150 feet west of the site, contained 910 ppb of MtBE. Based on the southwesterly flow direction exhibited in the January 31, 2002 Potentiometric Map, MW-9 is not directly downgradient of the former source, and therefore the MtBE concentration in MW-9 should be confirmed by further sampling. At this time, it is unclear whether preferential pathways or the construction of the support structures for Interstate 580 influence groundwater flow in the area southwest and west of the site. Therefore, GR recommends that additional groundwater monitoring and sampling be performed to verify groundwater flow direction and hydrocarbon concentrations at and in the vicinity of the site. Based on the results of the monitoring and sampling events, GR will make recommendations for further actions as warranted.

DISTRIBUTION

GR recommends that a copy of this report be forwarded to Mr. Don Hwang of Alameda County Health Care Services Agency at 1131 Harbor Bay Parkway, 2nd Floor, Alameda, CA 94502.

REFERENCES

Gettler-Ryan Inc., 1998, Soil Sampling During Underground Storage Tank and Piping Removal at Former Tosco 76 Branded Facility No. 1871, 96 MacArthur Boulevard, Oakland, California: Report No. 140165.02 dated October 19, 1998.

Gettler-Ryan Inc., 1999a, Risk-Based Corrective Action Evaluation at Former Tosco 76 Branded Facility No. 1871, 96 MacArthur Boulevard, Oakland, California: Report No. 140165.05-1 dated February 25, 1999.

Gettler-Ryan Inc., 1999b, Limited Subsurface Investigation Report at Former Tosco 76 Branded Facility No. 1871, 96 MacArthur Boulevard, Oakland, California: Report No. 140165.04-1 dated August 6, 1999.

Gettler-Ryan Inc., 2002, First Semi-Annual 2002 Groundwater Monitoring & Sampling Report for Tosco (Unocal) Service Station No. 1871, 96 MacArthur Boulevard, Oakland, California: Job #180068 dated March 14, 2002.

Helley, E. J. and K. R. Lajoie, 1979, Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning: U.S. Geological Survey Professional Paper 943.

Kaprealian Engineering Incorporated, 1996, Continuing Soil and Groundwater Investigation at Unocal Service Station No. 1871, 96 MacArthur Boulevard, Oakland, California: Report KEI-P94-0601.R4 dated May 17, 1996.

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1	11/03/92	--	9.5-24.5	--	260,000	2,300	4,600	3,700	17,000	--
	01/25/93	--		--	120,000	2,100	4,600	4,900	22,000	--
81.18	04/29/93	13.71		67.47	100,000	850	2,000	4,300	19,000	--
	07/16/93	14.51		66.67	29,000	590	560	980	4,200	--
	10/19/93	15.20		65.98	67,000	1,400	2,600	2,900	5,000	--
	01/20/94	15.17		66.01	92,000	1,200	3,000	3,400	17,000	--
	04/13/94	14.44		66.74	51,000	1,000	2,600	3,200	15,000	--
	07/13/94	14.88		66.30	35,000	550	150	1,400	5,700	--
	10/10/94	15.55		65.63	52,000	1,000	810	3,300	12,000	--
	01/10/95	12.44		68.74	810	16	18	59	250	--
	04/17/95	12.68		68.50	48,000	880	530	2,500	11,000	--
	07/24/95	13.97		67.21	48,000	1,500	420	2,700	9,700	--
86.24	10/23/95	14.85		66.33	47,000	780	210	2,100	11,000	270
	01/18/96	14.21		66.97	30,000	1,500	500	3,500	13,000	2,400
	04/18/96	13.40		72.84	66,000	2,700	2,200	3,100	13,000	57,000
	07/24/96	14.15		72.09	5,600	2,100	ND	160	160	24,000
	10/24/96	14.85		71.39	110,000	7,500	8,000	3,300	14,000	58,000
	01/28/97	11.25		74.99	94,000	7,700	19,000	3,100	15,000	120,000
	07/29/97	14.67		71.57	ND	ND	ND	ND	ND	70,000
	01/14/98	12.27		73.97	85,000	6,100	10,000	3,000	17,000	110,000
	07/01/98	14.32		71.92	110,000	8,700	12,000	2,700	15,000	110,000
	06/18/99	13.93		72.31	49,000	6,900	6,500	380	12,000	72,000/47,000 ⁴
	01/21/00	15.05		71.19	63,700 ⁵	5,520	2,000	2,640	13,100	57,100
	07/10/00	13.97		72.27	67,800 ⁵	9,910	4,120	3,330	16,100	67,400/54,000 ⁴
	01/04/01	14.92		71.32	63,900 ⁵	6,270	784	2,670	12,900	--/38,100 ⁴
07/16/01	14.32		71.92	66,000 ⁵	7,100	330	2,300	9,800	36,000/41,000 ⁴	
86.99 ♦	01/31/02	13.54		73.45	42,000⁵	5,800	1,800	2,000	8,200	26,000/26,000⁴
MW-2	11/03/92	--	--	--	140	2.2	ND	ND	2.0	--
	01/25/93	--		-	2,100	56	1.1	90	140	--
76.61	04/29/93	9.73		66.88	1,500	290	ND	33	11	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2	07/16/93	10.17	--	66.44	510 ¹	17	0.60	3.2	2.5	--
(cont)	10/19/93	11.18		65.43	670	24	1.1	7.7	23	--
	01/20/94	11.12		65.49	820	97	ND	12	ND	--
	04/13/94	10.12		66.49	550	71	ND	5.1	1.3	--
	07/13/94	10.86		65.75	2,000	490	ND	17	13	--
	10/10/94	11.48		65.13	2,300	340	ND	25	ND	--
	01/10/95	8.71		67.90	850	3.8	ND	8.5	1.3	--
	04/17/95	8.90		67.71	1,300	4.7	ND	8.3	1.2	--
	07/24/95	9.94		66.67	960	20	ND	4.2	6.2	--
	10/23/95	10.70		65.91	ND	ND	ND	ND	ND	19
	01/18/96	10.11		66.50	900	300	86	7.6	18	4,300
81.66	04/18/96	9.27		72.39	18,000	3,600	680	890	4,100	19,000
	07/24/96	10.02		71.64	100,000	13,000	21,000	2,700	16,000	120,000
	10/24/96	10.78		70.88	800	110	17	11	20	20,000
	01/28/97	7.70		73.96	45,000	2,400	2,900	2,000	7,600	29,000
	07/29/97	10.28		71.38	ND	1.2	0.72	0.63	0.62	17,000
	01/14/98	8.63		73.03	14,000	1,000	150	790	3,300	23,000
	07/01/98	9.53		72.13	2,700	100	ND ³	180	78	7,100
	DESTROYED									
MW-3	11/03/92	--	--	--	2,100	120	15	38	200	--
	01/25/93	--		--	2,300	80	1	55	52	--
77.48	04/29/93	11.37		66.11	4,500	1,700	ND	200	140	--
	07/16/93	12.09		65.39	4,000 ¹	1,100	28	52	70	--
	10/19/93	12.69		64.79	3,800	42	ND	50	56	--
	01/20/94	12.65		64.83	4,200	11	ND	21	15	--
	04/13/94	12.02		65.46	4,200	210	ND	36	53	--
	07/13/94	12.46		65.02	1,800 ²	16	16	ND	21	--
	10/10/94	12.98		64.50	4,300	11	ND	12	ND	--
	01/10/95	10.42		67.06	310	4.6	ND	3.5	2.1	--
	04/17/95	10.42		67.06	7,800	ND	4.6	300	450	--

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	07/24/95	11.76	--	65.72	3,200	170	ND	22	16	--
(cont)	10/23/95	12.50		64.98	3,900	55	ND	19	11	4,500
	01/18/96	11.79		65.69	2,200	270	33	26	18	5,500
82.55	04/18/96	11.30		71.25	6,000	1,800	ND	100	230	48,000
	07/24/96	12.17		70.38	ND	2,500	ND	ND	ND	71,000
	10/24/96	12.65		69.90	3,800	660	ND	15	ND	65,000
	01/28/97	9.50		73.05	4,400	250	13	87	47	54,000
	07/29/97	11.99		70.56	ND	3,500	ND	220	ND	75,000
	01/14/98	10.30		72.25	ND ³	430	ND ³	100	380	37,000
	07/01/98	11.70		70.85	ND ³	430	ND ³	ND ³	ND ³	45,000
	DESTROYED									
MW-4										
82.04	04/18/96	9.83	--	72.21	ND	630	ND	ND	ND	18,000
	07/24/96	10.47		71.57	ND	ND	ND	ND	5.2	3,900
	10/24/96	11.14		70.90	ND	ND	ND	ND	ND	6,300
	01/28/97	7.94		74.10	1,200	490	ND	17	6.8	16,000
	07/29/97	10.86		71.18	50	1.5	0.61	0.73	0.78	15,000
	01/14/98	8.73		73.31	ND ³	ND ³	ND ³	ND ³	ND ³	5,200
	07/01/98	10.51		71.53	ND	ND	ND	ND	ND	640
	DESTROYED									
MW-5										
81.80	04/18/96	9.65	--	72.15	31,000	5,500	1,400	1,700	8,100	66,000
	07/24/96	10.80		71.00	32,000	6,400	ND	1,600	6,100	120,000
	10/24/96	11.40		70.40	17,000	6,900	ND	970	130	84,000
	01/28/97	7.76		74.04	19,000	6,100	62	82	310	160,000
	07/29/97	11.58		70.22	ND	ND	ND	ND	ND	71,000

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5	01/14/98	9.08	--	72.72	ND ³	3,600	ND ³	ND ³	ND ³	80,000
(cont)	07/01/98	11.25		70.55	6,400	2,100	21	120	330	61,000
	DESTROYED									
MW-6										
78.91	06/18/99	9.30	5.0-25.0	69.61	2,100	21	29	ND ³	47	97,000/71,000 ⁴
	01/21/00	9.37		69.54	1,880 ⁵	143	31.2	106	196	41,200/48,800 ⁴
	07/10/00	8.94		69.97	5,710 ⁵	869	209	301	1,430	22,200/19,500 ⁴
	01/04/01	9.21		69.70	ND	ND	ND	ND	ND	--/9,510 ⁴
	07/16/01	9.42		69.49	4,800 ⁵	200	21	150	440	29,000/34,000 ⁴
	01/31/02	8.50		70.41	12,000⁷	250	92	500	1,500	26,000/31,000⁴
MW-7										
79.92	06/18/99	8.70	5.0-25.0	71.22	ND	ND	ND	ND	ND	16,000/13,000 ⁴
	01/21/00	9.30		70.62	ND ³	ND ³	ND ³	ND ³	ND ³	12,300/18,200 ⁴
	07/10/00	8.72		71.20	ND ³	ND ³	ND ³	ND ³	ND ³	16,900/13,800 ⁴
	01/04/01	9.17		70.75	ND	ND	ND	ND	0.719	--/37.3 ⁴
	07/16/01	9.02		70.90	ND	ND	ND	ND	ND	7,200/4,700 ⁴
	01/31/02	7.91		72.01	<50	<0.50	<0.50	<0.50	<0.50	8,900/9,900⁴
MW-8										
80.96	06/18/99	9.10	5.0-25.0	71.86	ND	ND	ND	ND	ND	290/160 ⁴
	01/21/00	10.00		70.96	ND	ND	ND	ND	1.09	224/221 ⁴
	07/10/00	7.94		73.02	ND	ND	ND	ND	ND	234/223 ⁴
	01/04/01	9.76		71.20	3,790 ⁵	141	8.92	128	375	--/34,200 ⁴
	07/16/01	9.15		71.81	ND	ND	ND	ND	ND	66/70 ⁴
	01/31/02	7.99		72.97	5,900⁷	86	<10	630	390	670/700⁴

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft. bgs.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-9 81.32	01/31/02 ⁶	14.72	--	66.60	<50	<0.50	<0.50	<0.50	<0.50	680/910 ⁴
MW-10 74.23	01/31/02 ⁶	8.02	--	66.21	<50	<0.50	<0.50	<0.50	<0.50	<5.0/1.2 ⁴
MW-11 76.56	01/31/02 ⁶	11.71	--	64.85	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<1.0 ⁴
Trip Blank										
TB-LB	01/14/98	--	--	--	ND	ND	ND	ND	ND	ND
	07/01/98	--	--	--	ND	ND	ND	ND	ND	ND
	06/18/99	--	--	--	ND	ND	ND	ND	ND	ND
	01/21/00	--	--	--	ND	ND	ND	ND	ND	14.6
	07/10/00	--	--	--	ND	ND	ND	ND	ND	ND
	01/04/01	--	--	--	ND	ND	ND	ND	ND	ND
	07/16/01	--	--	--	ND	ND	ND	ND	ND	ND
	01/31/02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing	TPH-G = Total Petroleum Hydrocarbons as Gasoline	(ppb) = Parts per billion
DTW = Depth to Water	B = Benzene	ND = Not Detected
(ft.) = Feet	T = Toluene	-- = Not Measured/Not Analyzed
S. I. = Screen Interval	E = Ethylbenzene	
(ft. bgs.) = Feet Below Ground Surface	X = Xylenes	
GWE = Groundwater Elevation	MTBE = Methyl tertiary butyl ether	
(msl) = Mean sea level		

* TOC elevation were surveyed by Virgil Chaves Land Surveying on January 15, 2002. Elevations were based on a USGS bronze disc located near the north end of the curb return at the northwest corner of 38th Street and Broadway, Oakland, California. A cut square in the mid return at the south corner of Oakland Avenue and Moss Avenue. (Elevation = 130.416 feet, msl.)

TOC elevations were re-surveyed by Kier & Wright in May, 1996, per City of Oakland Benchmark No. 2310, a cut square in concrete curb at mid point of return at the northeast corner of El Dorado and Fairmont Street. (Elevation = 77.53 feet msl).

◆ Well elevation has been adjusted up 0.75 feet based on Virgil Chavez Land Survey dated March 5, 2002.

- 1 Laboratory report indicates the presence of discrete peaks not indicative of gasoline.
- 2 Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- 3 Detection limit raised. Refer to analytical reports.
- 4 MTBE by EPA Method 8260.
- 5 Laboratory report indicates gasoline C6-C12.
- 6 Well development performed.
- 7 Laboratory report indicates weathered gasoline C6-C12.

Table 2
Groundwater Analytical Results
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	TPH-D (ppb)	TOG (ppb)	HVOC (ppb)	SVOC (ppb)
MW-1	06/18/99	--	--	ND	--
MW-4	04/18/96	110 ¹	ND	ND	--
	07/24/96	ND	ND	ND	ND
	10/24/96	ND	ND	ND	ND ²
	01/28/97	210 ³	ND	ND	ND ⁴
	07/29/97	ND	ND	ND	ND
	01/14/98	ND	ND	ND	ND
	07/01/98	ND	ND	ND	ND
	DESTROYED				
MW-6	06/18/99	--	--	ND	--
MW-7	06/18/99	--	--	ND	--
MW-8	06/18/99	--	--	ND	ND ⁵

EXPLANATIONS:

Groundwater analytical results prior to January 14, 1998, were compiled from reports prepared by MPDS Services, Inc.

TPH-D = Total Petroleum Hydrocarbons as Diesel

TOG = Total Oil and Grease

HVOC = Halogenated Volatile Organic Compounds by EPA Method 8010

SVOC = Semi-Volatile Organic Compounds by EPA Method 8270

(ppb) = Parts per billion

-- = Not Analyzed

ND = Not Detected

¹ Laboratory report indicates the hydrocarbons detected did not appear to contain diesel.

² Bis (2-ethylhexyl) phthalate was detected at a concentration of 14 ppb.

³ Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

⁴ Naphthalene was detected at a concentration of 17 ppb.

⁵ All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 11 ppb.

All EPA Method 8010 and 8270 constituents were ND, unless noted.

Table 3
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
MW-1	06/18/99	ND ¹	ND ¹	47,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	07/10/00	--	--	54,000	--	--	--	--	--
	01/04/01	--	--	38,100	--	--	--	--	--
	07/16/01	ND ¹	ND ¹	41,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/31/02	--	--	26,000	--	--	--	--	--
MW-6	06/18/99	ND ¹	ND ¹	71,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/21/00	--	--	48,800	--	--	--	--	--
	07/10/00	--	--	19,500	--	--	--	--	--
	01/04/01	--	--	9,510	--	--	--	--	--
	07/16/01	ND ¹	ND ¹	34,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
01/31/02	--	--	31,000	--	--	--	--	--	
MW-7	06/18/99	ND ¹	ND ¹	13,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/21/00	--	--	18,200	--	--	--	--	--
	07/10/00	--	--	13,800	--	--	--	--	--
	01/04/01	--	--	37.3	--	--	--	--	--
	07/16/01	ND ¹	ND ¹	4,700	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
01/31/02	--	--	9,900	--	--	--	--	--	
MW-8	06/18/99	ND ¹	ND ¹	160	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	01/21/00	--	--	221	--	--	--	--	--
	07/10/00	--	--	223	--	--	--	--	--
	01/04/01	--	--	34,200	--	--	--	--	--
	07/16/01	ND	ND	70	ND	ND	ND	ND	ND
01/31/02	--	--	700	--	--	--	--	--	

Table 3
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Former Unocal) Service Station #1871
 96 MacArthur Boulevard
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
MW-9	01/31/02	<3,600	<140	910	<7.1	<7.1	<7.1	<7.1	<7.1
MW-10	01/31/02	<500	<20	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
MW-11	01/31/02	<500	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Table 3
Groundwater Analytical Results - Oxygenate Compounds
Tosco (Former Unocal) Service Station #1871
96 MacArthur Boulevard
Oakland, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
EDB = 1,2-Dibromoethane
1,2-DCA = 1,2-Dichloroethane
(ppb) = Parts per billion
-- = Not Analyzed
ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

¹ Detection limit raised. Refer to analytical reports.

Table 4 - Soil Sample Analytical Results

Former Tosco (76) Service Station No. 1871

96 MacArthur Boulevard

Oakland, California

Sample Location and ID	Date Sampled	Sample Depth (feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Xylenes (ppm)	MTBE (ppm)
Well Boring MW-9								
MW-9-6.5	12/27/01	6.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-9-9	12/27/01	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Well Boring MW-11								
MW-11-16	12/27/01	16	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-11-24.5	12/27/01	24.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Soil Stockpile								
Comp 1 ¹	12/27/01	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

ANALYTICAL LABORATORY:

Sequoia Analytical (ELAP #2374)

ANALYTICAL METHODS:

TPHg = Total Petroleum Hydrocarbons as gasoline by EPA Method 8015 Modified

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8021

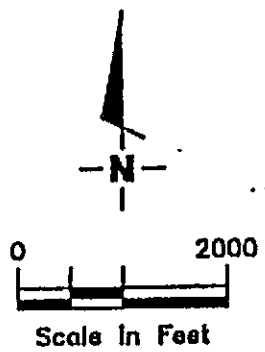
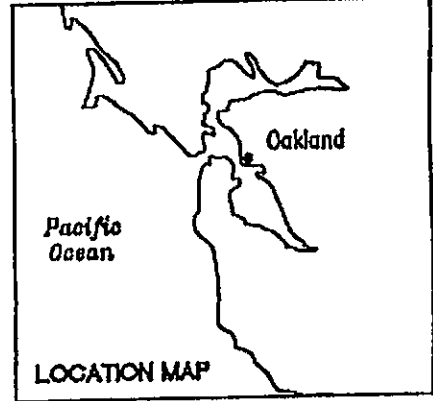
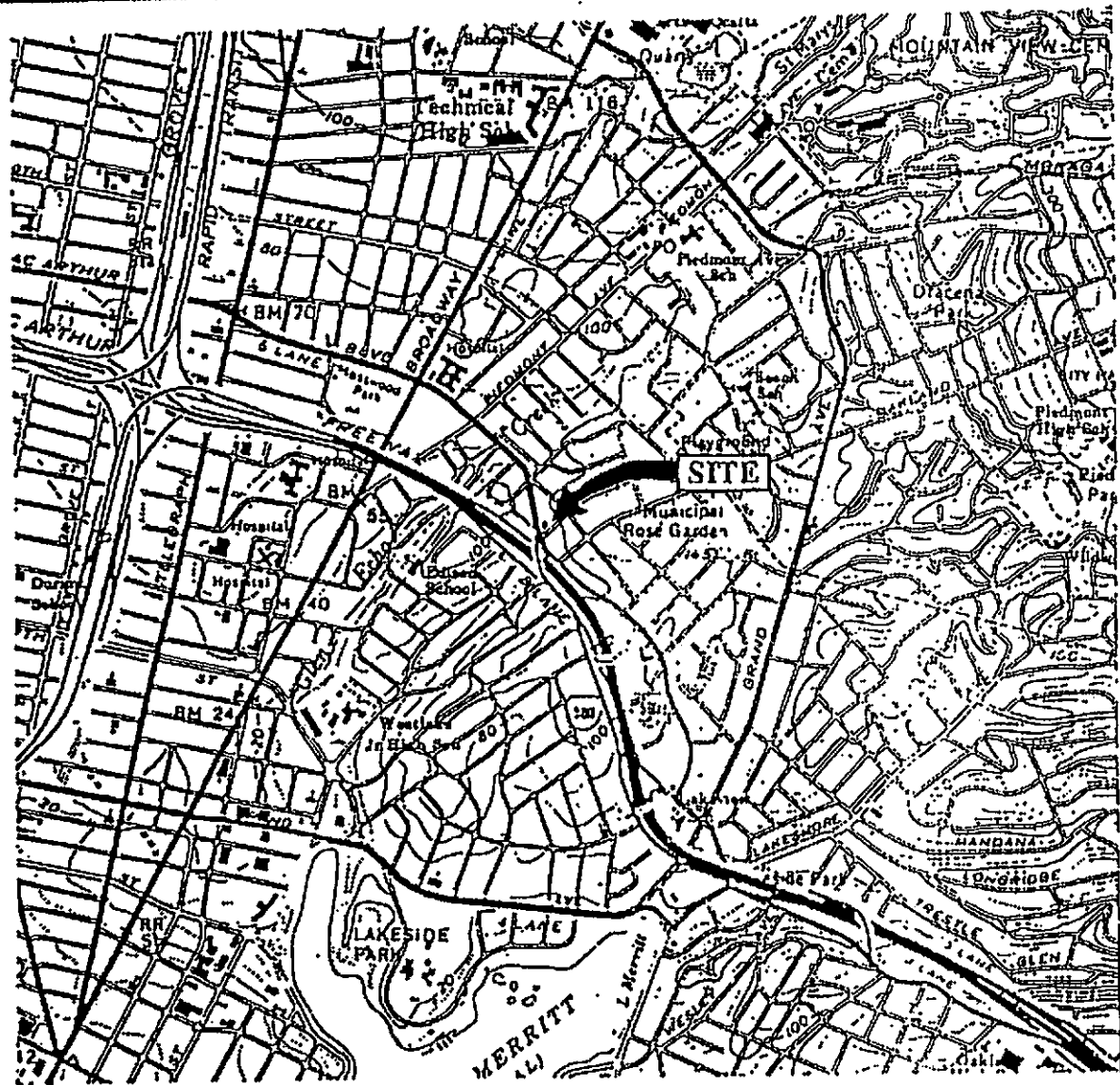
MtBE = Methyl tertiary butyl ether by EPA Method 8021

EXPLANATION:

ppm = parts per million

-- = analysis not requested/not applicable

¹ = Sample was also reported to contain 7.7 ppm of total lead.



Base Map: USGS Topographic Map

FIGURE 1



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

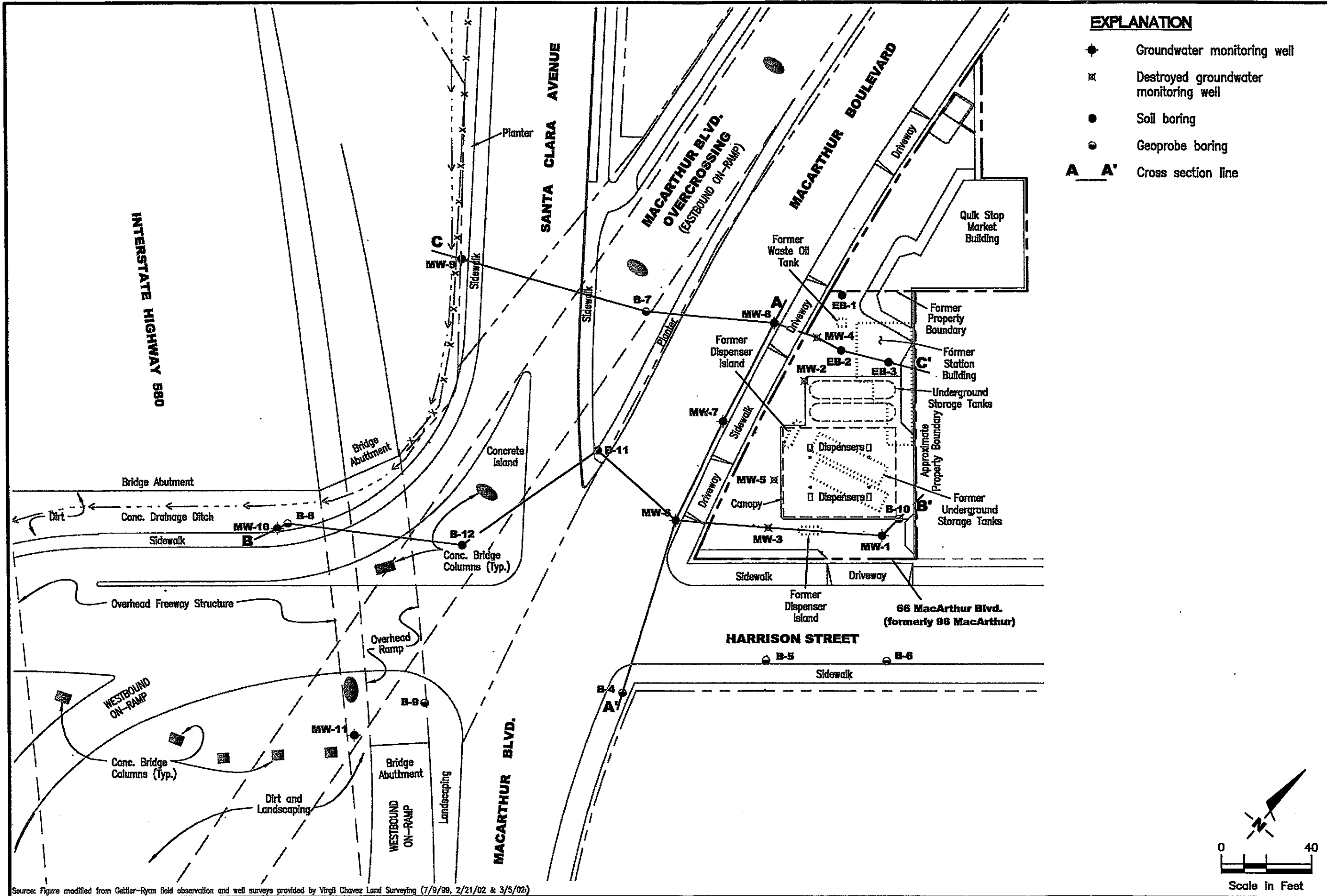
VICINITY MAP
Former Tosco 76 Branded Facility No. 1871
96 MacArthur Boulevard
Oakland, California

JOB NUMBER
140165

REVIEWED BY

DATE
July, 1998

REVISED DATE



EXPLANATION

- Groundwater monitoring well
- ⊗ Destroyed groundwater monitoring well
- Soil boring
- Geoprobe boring
- A—A' Cross section line

FIGURE

2

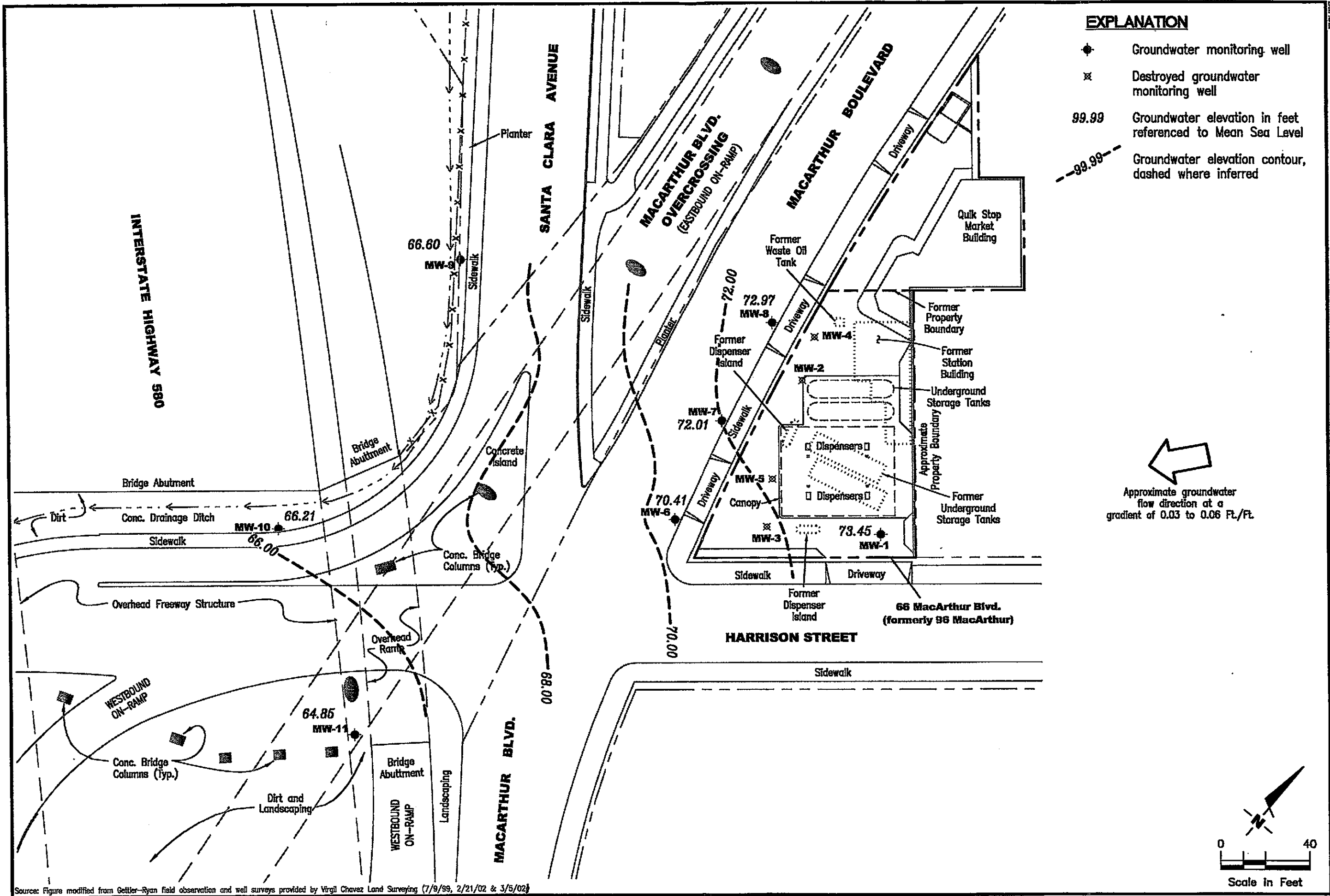
SITE PLAN
 Former Tosco (76) Service Station No. 1871
 96 MacArthur Boulevard
 Oakland, California

GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568
 (925) 551-7555

PROJECT NUMBER 140165.07
 REVIEWED BY
 DATE 3/02
 REVISED DATE

Source: Figure modified from Gettler-Ryan field observation and well surveys provided by Virgil Chavez Land Surveying (7/9/99, 2/21/02 & 3/5/02)

FILE NAME: P:\ENVIRON\TOSCO\1871\02-1871.DWG | Layout: Tab: Well Install 3-02

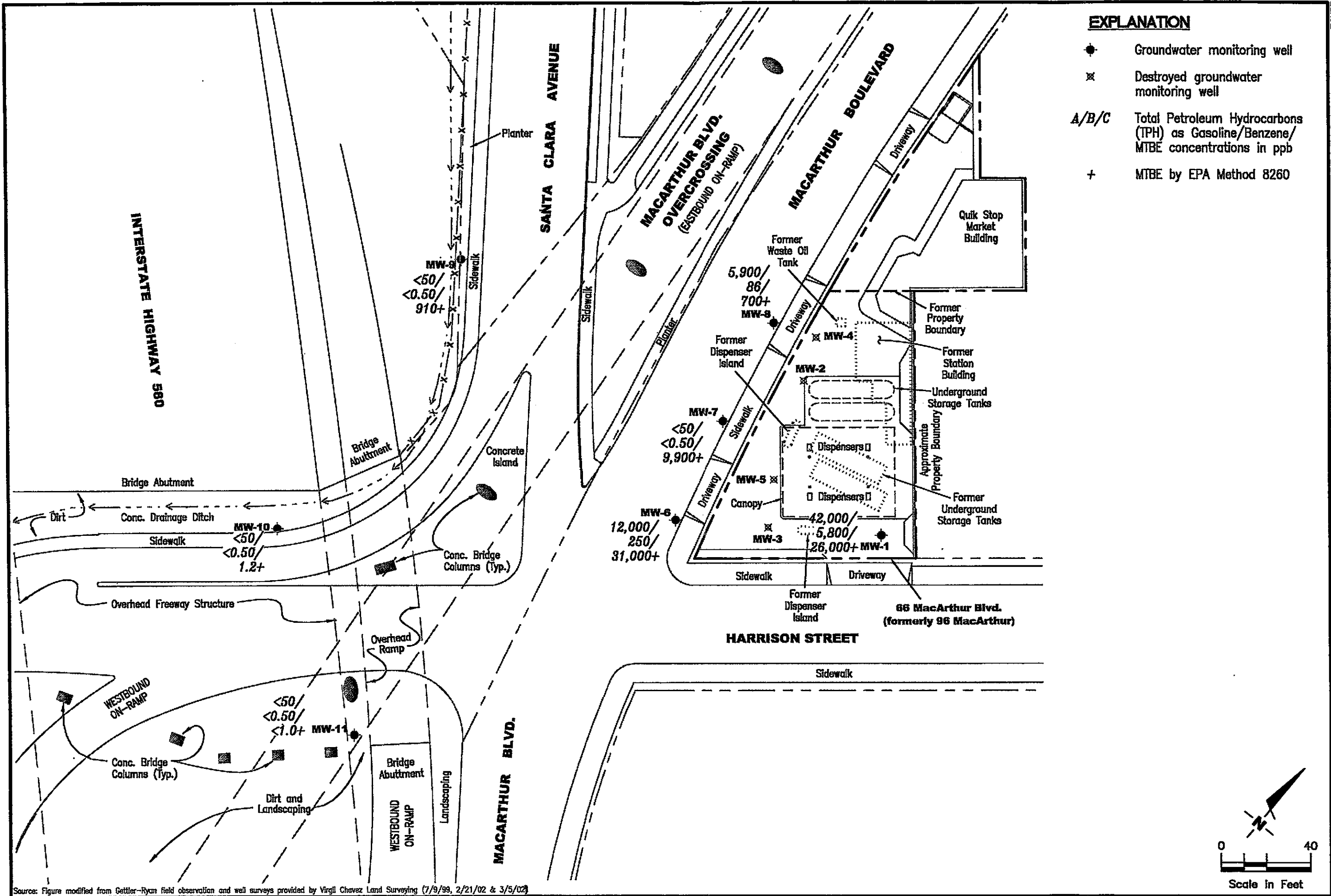


Source: Figure modified from Gettler-Ryan field observation and well surveys provided by Virgil Chavez Land Surveying (7/9/99, 2/21/02 & 3/5/02)

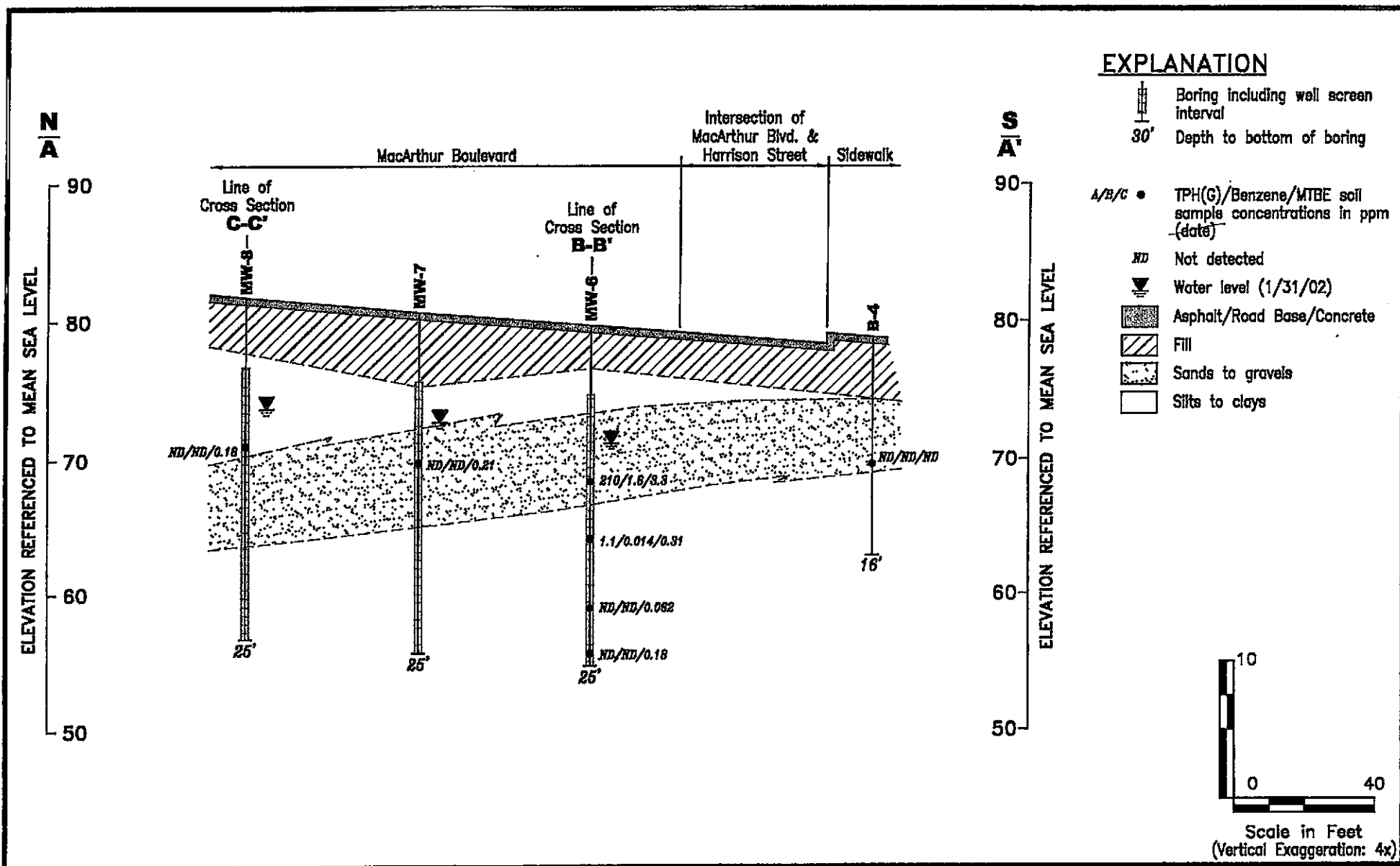
POTENTIOMETRIC MAP
 Former Tosco (76) Service Station No. 1871
 96 MacArthur Boulevard
 Oakland, California

GETTLER-RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568
 (925) 551-7555

PROJECT NUMBER: 140165.07
 FILE NAME: P:\ENVIRON\TOSCO\1871\02-1871.DWG | Layout Tab: Pott 3-02
 REVIEWED BY: [Signature]
 DATE: January 31, 2002
 REVISED DATE:



Source: Figure modified from Gettler-Ryan field observation and well surveys provided by Virgil Chavez Land Surveying (7/9/99, 2/21/02 & 3/5/02)



GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

CROSS SECTION A-A'
 Former Tosco (76) Service Station No. 1871
 96 MacArthur Boulevard
 Oakland, California

FIGURE

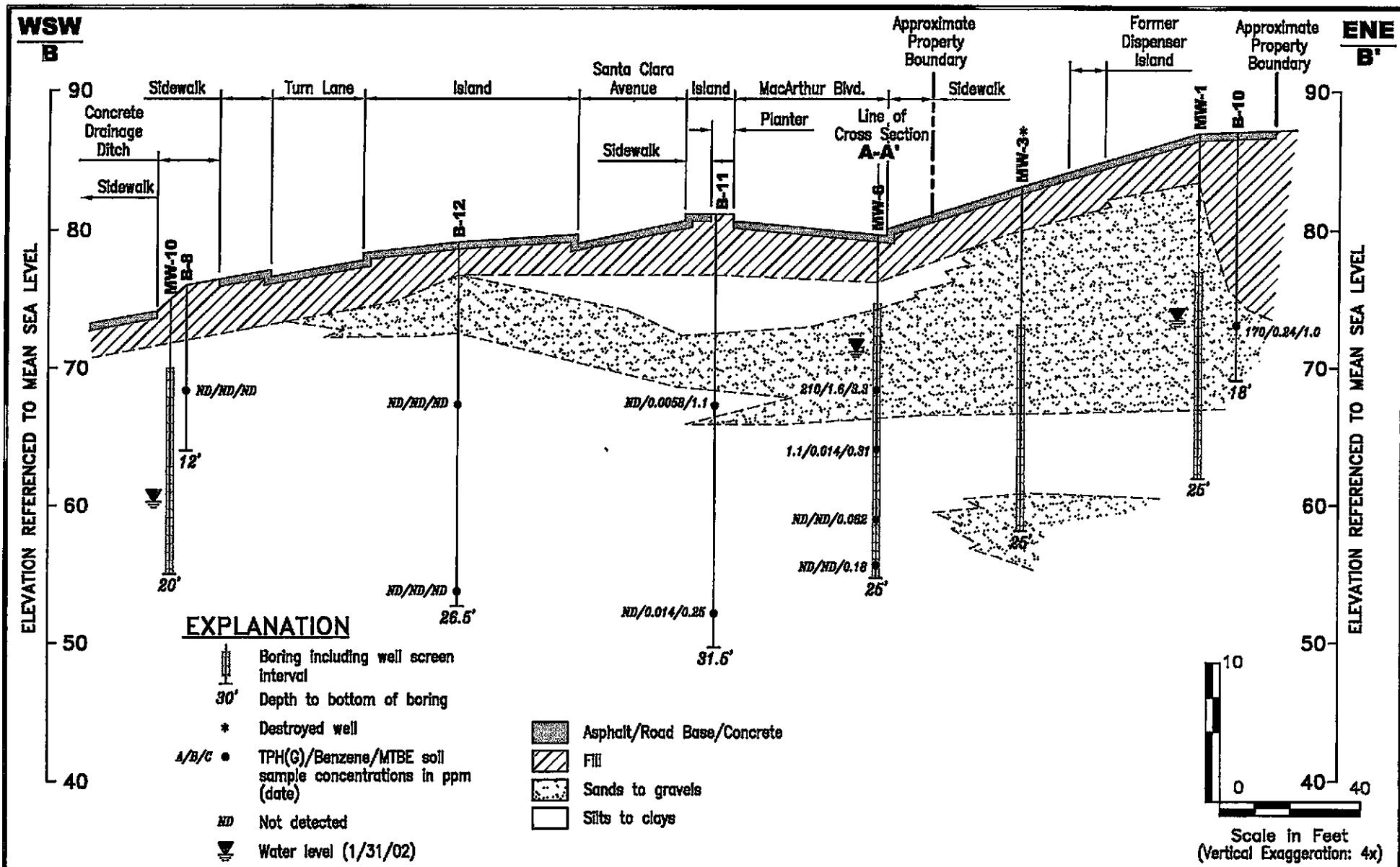
5

PROJECT NUMBER
 140165.07

REVIEWED BY

DATE
 7/99

REVISED DATE
 3/02



GETTLER - RYAN INC.
 8747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

CROSS SECTION B-B'
 Former Tosco (76) Service Station No. 1871
 96 MacArthur Boulevard
 Oakland, California

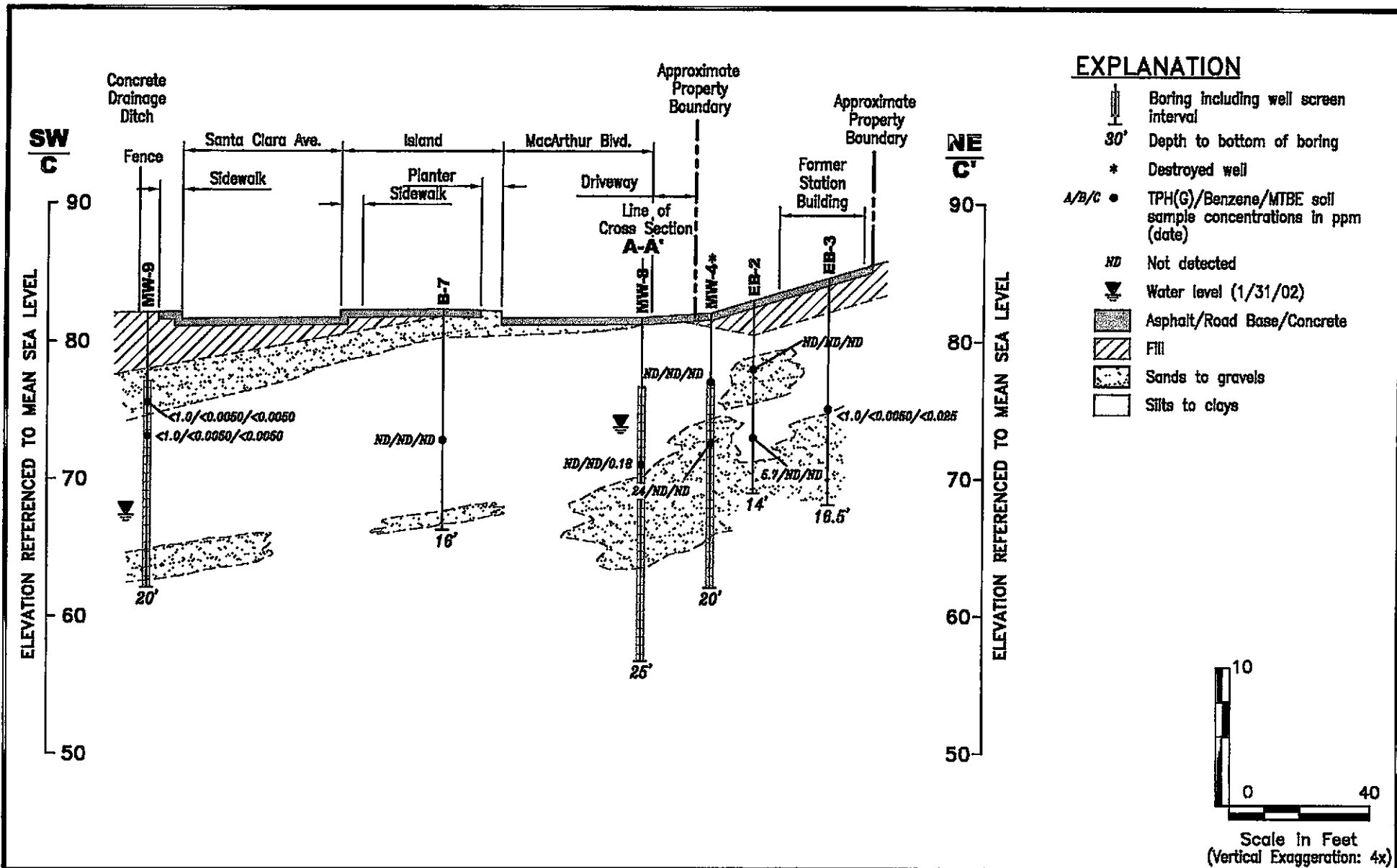
FIGURE
6

PROJECT NUMBER
 140165.07

REVIEWED BY

DATE
 7/99

REVISED DATE
 3/02



GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

CROSS SECTION C-C'
 Former Tosco (76) Service Station No. 1871
 96 MacArthur Boulevard
 Oakland, California

FIGURE

7

PROJECT NUMBER
 140165.07

REVIEWED BY

DATE
 3/02

REVISED DATE

APPENDIX A

GR FIELD METHODS AND PROCEDURES

**GETTLER-RYAN INC.
FIELD METHODS AND PROCEDURES**

Site Safety Plan

Field work performed by Gettler-Ryan Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the contents of these plans prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Exploratory soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring. Soil samples are collected from the exploratory soil boring with a split-barrel sampler or other appropriate sampling device fitted with clean brass or stainless steel liners. The sampling device is driven approximately 18 inches with a 140-pound hammer falling 30 inches. The number of blows required to advance the sampler each successive 6 inches is recorded on the boring log. The encountered soil is described using the Unified Soil Classification System (ASTM 2488-84) and the Munsell Soil Color Chart.

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Samples are selected for chemical analysis based on:

- a. depth relative to underground storage tanks and existing ground surface
- b. depth relative to known or suspected groundwater
- c. presence or absence of contaminant migration pathways
- d. presence or absence of discoloration or staining
- e. presence or absence of obvious gasoline hydrocarbon odors
- f. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves removing some soil from one of the sample tubes not retained for chemical analysis and immediately covering the end of the tube with a plastic cap. The PID probe is inserted into the headspace inside the tube through a hole in the plastic cap. Head-space screening results are recorded on the boring log. Head-space screening procedures are performed and results recorded as reconnaissance data. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Stockpile Sampling

Stockpile samples consist of four individual sample liners collected from each 100 cubic yards (yd³) of stockpiled soil material. Four arbitrary points on the stockpiled material are chosen, and discrete soil sample is collected at each of these points. Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless steel or brass tube into the stockpiled material with a wooden mallet or hand driven soil sampling device. The sample tubes are then covered on both ends with teflon sheeting or aluminum foil, capped, labeled, placed in the cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

Construction of Monitoring Wells

Monitoring wells are constructed in the exploratory borings with Schedule 40 polyvinyl Chloride (PVC) casing. All joints are thread-joined; no glues, cements, or solvents are used in well construction. The screened interval is constructed of machine-slotted PVC well screen which generally extends from the total well depth to a point above the groundwater. An appropriately-sized sorted sand is placed in the annular space adjacent to the entire screened interval. A bentonite transition seal is placed in the annular space above the sand, and the remaining annular space is sealed with neat cement or cement grout.

Wellheads are protected with water-resistant traffic rated vault boxes placed flush with the ground surface. The top of the well casing is sealed with a locking cap. A lock is placed on the well cap to prevent vandalism and unintentional introduction of materials into the well.

Storing and Sampling of Drill Cuttings

Drill cuttings are stockpiled on plastic sheeting or stored in drums depending on site conditions and regulatory requirements. Stockpile samples are collected and analyzed on the basis of one composite sample per 100 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis.

Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless or brass sample tube into the stockpiled material with a hand, mallet, or drive sampler. The sample tubes are then covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

Wellhead Survey

The top of the newly-installed well casing is surveyed by a California-licensed Land Surveyor to mean sea level (MSL).

Well Development

The purpose of well development is to improve hydraulic communication between the well and surrounding aquifer. Prior to development, each well is monitored for the presence of separate-phase hydrocarbons and the depth-to-water is recorded. Wells are then developed by alternately surging the well with the bailer, then purging the well with a pump to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized.

Groundwater Monitoring and Sampling

Decontamination Procedures

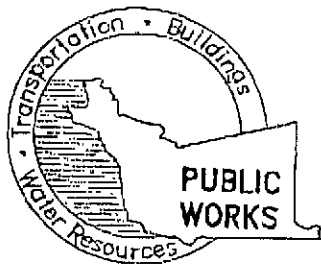
All physical parameter measuring and sampling equipment are decontaminated prior to sample collection using Alconox or equivalent detergent followed by steam cleaning with deionized water. During field sampling, equipment placed in a well are decontaminated before purging or sampling the next well by cleaning with Alconox or equivalent detergent followed by steam cleaning with deionized water.

Water-Level Measurements

Prior to sampling each well, the static water level is measured using an electric sounder and/or calibrated portable oil-water interface probe. Both static water-level and separate-phase product thickness are measured to the nearest ± 0.01 foot. The presence of separate-phase product is confirmed using a clean, acrylic or polyvinylchloride (PVC) bailer, measured to the nearest ± 0.01 foot with a decimal scale tape. The monofilament line used to lower the bailer is replaced between borings with new line to preclude the possibility of cross-contamination. Field observations (e.g. product color, turbidity, water color, odors, etc.) are noted. Water-levels are measured in wells with known or suspected lowest dissolved chemical concentrations to the highest dissolved concentrations.

Sample Collection and Labeling

A temporary PVC screen is installed in the boring to facilitate a grab groundwater sample collection. Samples of groundwater are collected from the surface of the water in each well or boring using the teflon bailer or a pump. The water samples are then gently poured into laboratory-cleaned containers and sealed with teflon-lined caps, and inspected for air bubbles to check for headspace. The samples are then labeled by an adhesive label, noted in permanent ink, and promptly placed in an ice storage. A Chain-of-Custody Record is initiated and updated throughout handling of the samples, and accompanies the samples to the laboratory certified by the State of California for analyses requested.



COUNTY OF ALAMEDA
 PUBLIC WORKS AGENCY
 WATER RESOURCES SECTION
 399 Elmhurst Street, Hayward, CA 94544-1395

FAX TRANSMITTAL

TO: *Gettler Ryan Inc*

DATE: *12-20-01*

Attn: Clyde Galantre

FAX NO.: *(925) 551-7888*

TRANSMITTING THE FOLLOWING:

SHEETS	DATED	TITLE/DESCRIPTION
<i>3</i>		<i>Drinking Permit Application - 401-2135-2137</i>
<i>(4)</i>	TOTAL PAGES INCLUDING THIS SHEET.	

FROM WATER RESOURCES SECTION

NAME: JAMES YOO

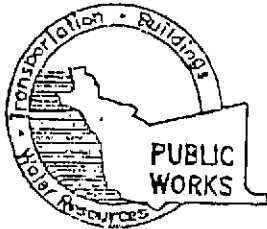
TEL: (510) 670-6633

FAX: (510) 782-1939

E-MAIL: jamesy@acpwa.mail.co.alameda.ca.us

IF YOU EXPERIENCE PROBLEMS WITH THIS TRANSMISSION, PLEASE CALL ME.

REMARKS:



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAY

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Harrison St @ Santa Clara Avenue, Oakland, CA
(F TOSCO #1871)

California Coordinates Source _____ ft. Accuracy ± _____ ft.
ICN _____ ft. COE _____ ft.
APN _____

CLIENT Name Tosco Marketing Co.
Address 2000 Crow Canyon Phone (925) 277-2384
City San Ramon Zip 94583

APPLICANT Name Gettler-Ryan Inc
Clyde Galante Fax (925) 551-7888
Address 6747 Sierra Ct Suite 107 Phone (925) 551-7555
City Dublin CA Zip 94568

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

DRILLER'S LICENSE NO. CS7 48516S
Gregg Drilling

WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum	
Casing Diameter	<u>2</u> in.	Depth	<u>20</u> ft.
Surface Seal Depth	<u>4</u> ft.	Number	<u>8-8</u>

GEOTECHNICAL PROJECTS

Number of Borings	_____	Maximum	
Hole Diameter	_____ in.	Depth	_____ ft.

ESTIMATED STARTING DATE 12/27/01
ESTIMATED COMPLETION DATE 12/27/01

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-63.

APPLICANT'S SIGNATURE Clyde Galante DATE 11/7/01

FOR OFFICE USE

PERMIT NUMBER W01-2135
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL

Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings

E. CATHODIC

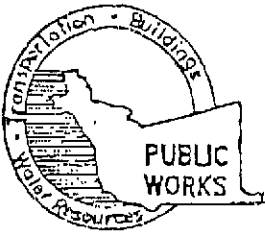
Fill hole above anode zone with concrete placed by tremie

F. WELL DESTRUCTION

See attached.

G. SPECIAL CONDITIONS

APPROVED _____ DATE 12-20-01



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Harrison St @ Santa Clara Avenue, Oakland, CA
(E. Tower #187D)

PERMIT NUMBER W01-2136
WELL NUMBER _____
APN _____

California Coordinates Source _____ ft. Accuracy ± _____ ft.
NAD 83 _____ ft. CGE _____ ft.
NAD 83 _____ ft.

PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT Tosco Marketing Co.
Name _____
Address 2000 Crow Canyon Phone (925) 277-2384
City San Ramon Zip 94583

- A. GENERAL**
1. A permit application should be submitted as soon as possible to arrive at the ACPWA office five days prior to proposed starting date.
 2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
 3. Permit is void if project not begun within 90 days of approval date.

APPLICANT Gettler-Ryan Inc
Name _____
Address 6747 Sierra St Suite D Phone (925) 551-7888
City Dublin CA Zip 94568

- B. WATER SUPPLY WELLS**
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

- D. GEOTECHNICAL**
- Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

- E. CATHODIC**
Fill hole above anode zone with concrete placed by tremie
- F. WELL DESTRUCTION**
See attached.
- G. SPECIAL CONDITIONS**

DRILLER'S LICENSE NO. C57 485165
Gregg Drilling

WELL PROJECTS

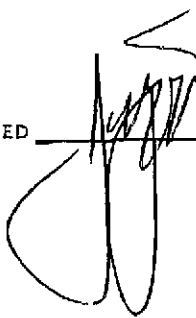
Drill Hole Diameter	<u>8</u> in	Maximum	
Casing Diameter	<u>2</u> in	Depth	<u>20</u> ft.
Surface Seal Depth	<u>4</u> ft.	Number	<u>1</u>

GEOTECHNICAL PROJECTS

Number of Borings	_____	Maximum	
Hole Diameter	_____ in	Depth	_____ ft.

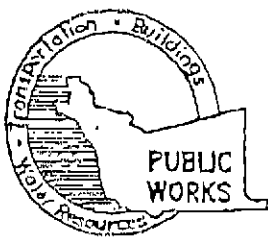
ESTIMATED STARTING DATE 12/21/01
ESTIMATED COMPLETION DATE 12/23/01

APPROVED _____ DATE 12-20-01



I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-63.

APPLICANT'S SIGNATURE Cheryl Galante DATE 11/7/01



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5268 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Harrison St @ Santa Clara Avenue, Oakland, CA
(F. TOSCO #1871)

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. COE _____ ft.
APN _____

CLIENT Name Tosco Marketing Co.
Address 2000 Crow Canyon Phone (925) 277-2384
City San Ramon Zip 94583

APPLICANT Name Gettler-Ryan Inc
Clyde Galante Fax (925) 551-7888
Address 6747 Sierra Ct Switzer Phone (925) 551-7555
City Dublin CA Zip 94568

TYPE OF PROJECT

Well Construction Geotechnical Investigation
Cathodic Protection General
Water Supply Contamination
Monitoring Well Destruction

PROPOSED WATER SUPPLY WELL USE

New Domestic Replacement Domestic
Municipal Irrigation
Industrial Other _____

DRILLING METHOD:

Mud Rotary Air Rotary Auger
Cable Other

DRILLER'S LICENSE NO. C57 485165
Gregg Drilling

WELL PROJECTS

Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 20 ft.
Surface Seal Depth 4 ft. Number 2

GEOTECHNICAL PROJECTS

Number of Borings _____ Maximum
Hole Diameter: _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 12/21/01
ESTIMATED COMPLETION DATE 12/27/01

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Clyde Galante DATE 11/7/01

FOR OFFICE USE

PERMIT NUMBER W01-2137
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL

Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremie cement grout shall be used in place of compacted cuttings.

E. CATHODIC

Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION

See attached.

G. SPECIAL CONDITIONS

APPROVED _____

DATE 12-20-01

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT
 TR-0120

Permit No. 0400-NSV-0643	
Dist/Co/Rte/PM 04-A1a-580-44.5	
Date August 4, 2001	
Fee Paid \$240.00	Deposit \$320.00
Performance Bond Amount (1) \$6,000.00	Payment Bond Amount (2)
Bond Company AMWEST SURETY INSURANCE CO.	
Bond Number (1) 107002371	Bond Number (2)

In compliance with (Check one):

- Your application of March 6, 2000
- Utility Notice No. _____ of _____
- Agreement No. _____ of _____
- R/W Contract No. _____ of _____

TO: GETTLER-RYAN, INC.
 1364 N. McDowell Boulevard, Suite B2
 Petaluma, CA 94954-1116

Attn: Clyde Galantine
 Phone: (707) 789-3256 , PERMITTEE

and subject to the following, **PERMISSION IS HEREBY GRANTED** to:

Perform soil borings and install three monitoring wells under State Highway 04-A1a-580, Post Mile 44.5, at the westbound on-ramp and Santa Clara Avenue intersection, in the City of Oakland.

A minimum of one week prior to start work under this permit, notice shall be given to, and approval of construction details, operations, public safety, and traffic control shall be obtained from State Representative Norm Freitag, 600 Lewelling Boulevard, San Leandro, 94579, 510-614 5951, weekdays, between 7:30 AM and 4:00 PM.
520-0849 cell phone

All permitted work requiring traffic control requires the permittee to apply for and obtain a lane closure number prior to start of any work that may affect traffic. See the attached "Encroachment Permit Project Traffic Control Procedures" and the attached "Permit Project Traffic Control Request Form".

The following attachments are also included as part of this permit (Check applicable):

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | General Provisions |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Utility Maintenance Provisions |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Special Provisions |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | A Cal-OSHA permit required prior to beginning work:
_____ |

In addition to fee, the permittee will be billed actual costs for:

- | | | |
|---|--|------------|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Review |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Inspection |
| <input checked="" type="checkbox"/> Yes | ----- | Field Work |

(If any Caltrans effort expended)

Yes No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before December 31, 2002

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
 No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

APPROVED:

HARRY Y. YAHATA, District Director

BY:


S. S. NOZZARI, District Permit Engineer

Additional time beyond the minimum seven days advanced notice required in the above paragraph may be required for obtaining the traffic control approval.

Immediately following completion of the work permitted herein, the permittee shall fill out and mail the Notice of completion attached to this permit.

All personnel shall wear hard hats and lime green reflective vests, shirts, or jackets as appropriate during construction.

The site of the work shall be enclosed by suitable barricades, signs and lights, as approved by State's representative, to warn and protect traffic effectively.

Traffic control is authorized only between 9:00 A.M. and 3:00 P.M., Monday through Friday, holidays excluded.

Before any work is begun which will interrupt the normal flow of public traffic, approval shall be obtained from State's representative, and lane closures shall be as shown on the attached copy of Standard Plan T11.

No excavation shall be left open overnight without written permission from the Caltrans representative or unless otherwise specified herein.

Certain details of work authorized hereby are shown on permittee's plan dated 1/11/01, submitted with request for permit.

Any collected survey data requested by Caltrans shall be furnished to Caltrans without charge.

All painted markings shall be made with water-soluble paint.

The location of the monitoring wells shall not be within the traveled way portion of the highway. Their location shall be reviewed and approved by the State's representative before starting the work.

Drainage of treated or untreated effluent into the State drainage system is not permitted.

Upon completion of observation and testing, the well shall be abandoned in compliance with the requirements the Department of Water Resources publication "California Well Standards"- Bulletin 74 -90 latest edition.

Any damage to existing facilities, landscaping or irrigation within the State's Right of Way shall be replaced in kind by the permittee at permittee's expense.

If an accident or other incident (related to or not related to the permitted activity) occurs within, or close to the permitted activity, the permittee shall immediately stop work and remove traffic controls from the highway unless public health, welfare and safety is endangered by unfinished work. Only traffic control to protect open excavations may remain in place. After free traffic flow is restored, work in accordance with the conditions of the permit may be resumed.

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT GENERAL PROVISIONS
TR-0045 (REV. 8/98)

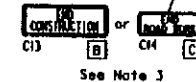
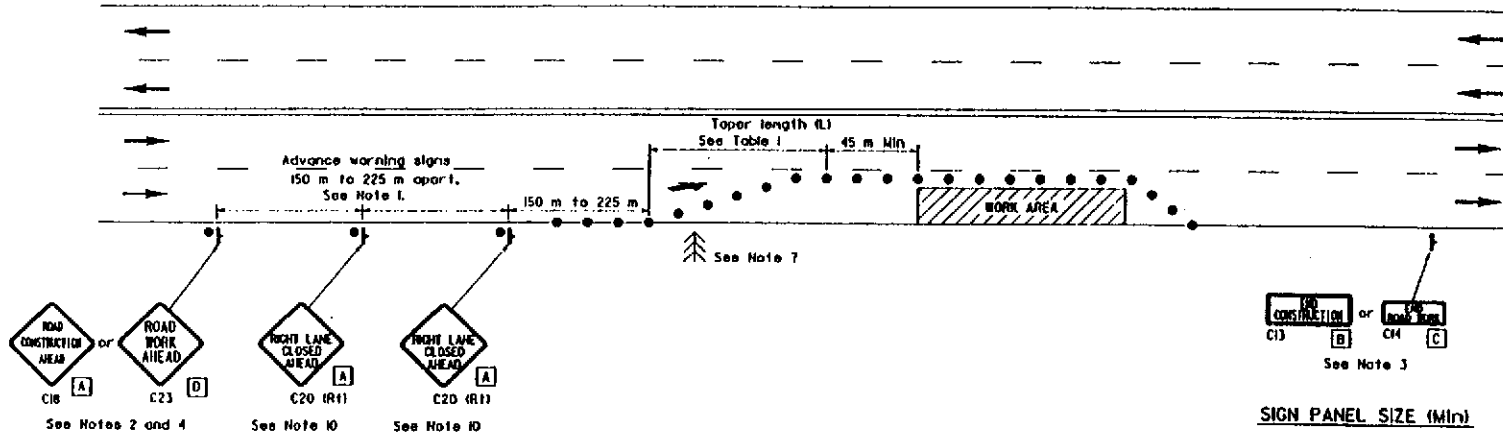
1. **AUTHORITY:** The Department's authority to issue encroachment permits is provided under, Div. 1, Chpt. 3, Art. 1, Sect: 660 to 734 of the Streets and Highways Code.
2. **REVOCATION:** Encroachment permits are revocable on five days notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. These General Provisions and the Encroachment Permit Utility Provisions are subject to modification or abrogation at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State highway right of way are exceptions to this revocation.
3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay permit fees when due can result in rejection of future applications and denial of permits.
4. **ASSIGNMENT:** No party other than the permittee or permittee's authorized agent is allowed to work under this permit.
5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept these General Provisions and all attachments to this permit, for any work to be performed under this permit.
6. **BEGINNING OF WORK:** When traffic is not impacted (see Number 35), the permittee shall notify the Department's representative, two (2) days before the intent to start permitted work. Permittee shall notify the Department's Representative if the work is to be interrupted for a period of five (5) days or more, unless otherwise agreed upon. All work shall be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this permit.
7. **STANDARDS OF CONSTRUCTION:** All work performed within highway right of way shall conform to recognized construction standards and current Department Standard Specifications, Department Standard Plans High and Low Risk Facility Specifications, and Utility Special Provisions. Where reference is made to "Contractor and Engineer," these are amended to be read as "Permittee and Department representative."
8. **PLAN CHANGES:** Changes to plans, specifications, and permit provisions are not allowed without prior approval from the State representative.
9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, permittee shall request a final inspection for acceptance and approval by the Department. The local agency permittee shall not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.
10. **PERMIT AT WORKSITE:** Permittee shall keep the permit package or a copy thereof, at the work site and show it upon request to any Department representative or law enforcement officer. If the permit package is not kept and made available at the work site, the work shall be suspended.
11. **CONFLICTING ENCROACHMENTS:** Permittee shall yield start of work to ongoing, prior authorized, work adjacent to or within the limits of the project site. When existing encroachments conflict with new work, the permittee shall bear all cost for rearrangements, (e.g., relocation, alteration, removal, etc.).
12. **PERMITS FROM OTHER AGENCIES:** This permit is invalidated if the permittee has not obtained all permits necessary and required by law, from the Public Utilities Commission of the State of California (PUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction.
13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum passageway of 1.21 meter (4') shall be maintained through the work area at existing pedestrian or bicycle facilities. At no time shall pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades shall be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street.
14. **PUBLIC TRAFFIC CONTROL:** As required by law, the permittee shall provide traffic control protection warning signs, lights, safety devices, etc., and take all other measures necessary for traveling public's safety. Day and night time lane closures shall comply with the Manuals of Traffic Controls, Standard Plans, and Standard Specifications for traffic control systems. These General Provisions are not intended to impose upon the permittee, by third parties, any duty or standard of care, greater than or different from, as required by law.
15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee shall plan and conduct work so as to create the least possible inconvenience to the traveling public; traffic shall not be unreasonably delayed. On conventional highways, permittee shall place properly attired flagger(s) to stop or warn the traveling public in compliance with the Manual of Traffic Controls and Instructions to Flaggers Pamphlet.
16. **STORAGE OF EQUIPMENT AND MATERIALS:** Equipment and material storage in State right of way shall comply with Standard Specifications, Standard Plans, and Special Provisions. Whenever the permittee places an obstacle within 3.63 m (12') feet of the traveled way, the permittee shall place temporary railing (Type K).
17. **CARE OF DRAINAGE:** Permittee shall provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Standard Specifications, Standard Plans and/or as directed by the Department's representative.
18. **RESTORATION AND REPAIRS IN RIGHT OF WAY:** Permittee is responsible for restoration and repair of State highway right of way resulting from permitted work (State Streets and Highways Code, Sections 670 et. seq.).
19. **RIGHT OF WAY CLEAN UP:** Upon completion of work, permittee shall remove and dispose of all scraps, brush, timber, materials, etc. off the right of way. The aesthetics of the highway shall be as it was before work started.
20. **COST OF WORK:** Unless stated in the permit, or a separate written agreement, the permittee shall bear all costs incurred for work within the State right of way and waives all claims for indemnification or contribution from the State.
21. **ACTUAL COST BILLING:** When specified in the permit, the Department will bill the permittee actual costs at the currently set hourly rate for encroachment permits.
22. **AS-BUILT PLANS:** When required, permittee shall submit one (1) set of as-built plans in compliance with Department's requirements. Plans shall be submitted within thirty (30) days after completion and approval of work.

As-Built plans or accompanying correspondence shall not include disclaimer statements of any kind. Such statements shall constitute non-compliance with these provisions. Failure to provide complete and signed As-Built plans shall be cause for bond or deposit retention by the Department.
23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the right of way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt permit is issued to the permittee for the purpose of providing a notice and record of work. The Permittee's prior rights shall be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" shall be stamped across the face of the permit.
24. **BONDING:** The permittee shall file bond(s), in advance, in the amount set by the Department. Failure to maintain bond(s) in full force and effect will result in the Department stopping of all work and revoking permit(s). Bonds are not required of public corporations or privately owned utilities, unless permittee failed to comply with the provision and conditions under a prior permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedures, Section 337.15. Local agency permittee shall comply with requirements established as follows: In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local agency permittee agrees to require the construction contractor furnish both a payment and performance bond in the local agency's name with both bonds complying with the requirements set forth in Section 3-1.02 of State's current Standard Specifications before performing any project construction work. The local agency permittee shall defend, indemnify, and hold harmless the State, its officers and employees from all project construction related claims by contractors and all stop notice or mechanic's lien claimants. The local agency also agrees to remedy, in a timely manner and to State's satisfaction, any latent defects occurring as a result of the project construction work.
25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to rearrange a permitted installation upon request by the Department, for State construction, reconstruction, or maintenance



DISK	COPY	DATE	PREPARED FOR	TOTAL SHEETS
			STATE OF CALIFORNIA	NO.
REGISTERED PROFESSIONAL ENGINEER July 1, 1997 THIS APPROVAL DATE The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.				

TYPICAL LANE CLOSURE



SIGN PANEL SIZE (Min)

- A 900 mm x 900 mm
- B 1200 mm x 450 mm
- C 900 mm x 450 mm
- D 750 mm x 150 mm

LEGEND

- Traffic Cone
- ⊥ Portable Sign
- ← Direction of Travel
- ⚡ Flashing Arrow Sign

NOTES

- Where approach speeds are low, signs may be placed at 90 m spacing, and in urban areas, closer.
- All advance warning sign installations shall be equipped with flags for daytime closures.
- A C13 "END CONSTRUCTION" or C14 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
- If the C18 or C23 sign would follow within 500 m of a stationary C18, C23, or C11 "STATE HIGHWAY CONSTRUCTION NEXT _____ MILES", use a C20 sign for the first advance warning sign.
- All cones used for night lane closures shall be fitted with reflective sleeves as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used in lieu of cones for daytime closures only.
- Flashing arrow sign shall be either Type I or Type II.
- The maximum spacing between cones in a taper shall be approximately as shown in Table I and 15 m maximum spacing on tangent.
- For approach speeds over 80 km/h, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
- Where specified in the special provisions, a W11 "LANE REDUCTION SYMBOL" sign is to be used in place of the C20 "RIGHT LANE CLOSED AHEAD" sign.

TABLE I

Approach Speed (km/h)	# Taper Length (L) (m)	# Number of Cones for Taper	Spacing of Cones Along Taper (m)
0-40	38	6	7.5
40-65	98	9	12
65-80	183	13	15
Over 80	See Note 9		

Based on 3.6 m wide lane. This column is also appropriate for lane widths less than 3.6 m.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM FOR
 LANE CLOSURE ON MULTILANE
 CONVENTIONAL HIGHWAYS**

NO SCALE

STD. PLAN T11

Encroachment Permit Project Traffic Control Request Form



Requests for scheduling and approval of traffic control shall be submitted, through the designated State representative, on attached form via facsimile at 510-286-3960, or E-mail: Permit_Duty_Engineer@DOT.CA.GOV, by Noon on the Monday preceding the proposed work week.

1. Permit No.: _____ State Representative: _____
2. County/City: County: _____ City: _____
3. Route Number: Route: _____
4. Milepost/Kilopost: From: _____ To: _____ Check here, if info is in Kilopost
5. Describe Location: From: _____ To: _____
6. Nearest Crossing/Landmark: _____
7. Permit Work Hours: _____
8. Total Available Lanes: _____
9. Requested Work Week: From: _____ To: _____ (Enter maximum one-week period)
10. Requested Traffic Control*: _____

NO.	DATE	DAY	TIME		DIR.	LANE(S)										RAMP**		TRAFFIC BREAK			CLOSURE No. ***	
			START (10-97)	END (10-98)		ALL	SHLDR	1	2	3	4	5	6	AUX	CD	ON-	OFF-	< 5'	< 15'	ROLL'G		
1.																						
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						

NOTES:

- * Closure requests shall be entered on separate lines for each highway direction, closure type, work periods, location, etc.
- DATE: Enter date (month/day/year) for which traffic control is requested.
- DAY: Enter day of week (Mon, Wed., Tues., Wed., Thurs., Fri., Sat. or Sun.) for which traffic control is requested.
- TIME: Enter requested work hours, using 24 hour clock format (hh:mm). Requested hours must be consistent with permit provisions.
- DIR: Enter North, South, East, or West. Separate lane closure numbers are required for each direction of highway.
- LANE(S): Check lanes or portions of highway to be closed, including Shoulder (SHLDR), Auxiliary Lane (AUX), Center Divider(CD). Lanes are numbered from left to right in the direction of traffic.
- **RAMP: Check On- or Off-ramp and provide name and indicate below lanes closed if ramp includes more than one lane:
 - 1. Name _____ Closing: Lane(s) _____ or, Complete
 - 2. Name _____ Closing: Lane(s) _____ or, Complete
- CLOSURE No***: To be provided by Caltrans after review and approval.

11. Description of work: _____

12. Detour: _____

 (Required for full closure)

13. On-site CHP: No Yes (Check Yes, if CHP will be on-site during work per prior arrangement)

14. Comments:

Permittee:	_____		
Address:	_____		
24-hour or On-site Contact:	Name:	_____	
	Telephone:	Facsimile:	_____
	Cellular:	Pager:	Other: _____

15. Contingency Plan: _____



MAJOR DIVISIONS				TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES		GW	Well graded gravels with or without sand, little or no fines
				GP	Poorly graded gravels with or without sand, little or no fines
		GRAVELS WITH OVER 15% FINES		GM	Silty gravels, silty gravels with sand
				GC	Clayey gravels, clayey gravels with sand
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES		SW	Well graded sands with or without gravel, little or no fines
				SP	Poorly graded sands with or without gravel, little or no fines
		SANDS WITH OVER 15% FINES		SM	Silty sands with or without gravel
				SC	Clayey sands with or without gravel
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML	Inorganic silts and very fine sands, rock flour, silts with sands and gravels	
			CL	Inorganic clays of low to medium plasticity, clays with sands and gravels, lean clays	
			OL	Organic silts or clays of low plasticity	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH	Inorganic silts, micaceous or diatomaceous, fine sandy or silty soils, elastic silts	
			CH	Inorganic clays of high plasticity, fat clays	
			OH	Organic silts or clays of medium to high plasticity	
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils	

PID Volatile vapors in ppm
(2.5YR 6/2) Soil color according to Munsell Soil Color Charts (1993 Edition)

BLOWS/FT. Sample drive hammer weight - 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs.

- Observed contact
- - - - - Inferred contact
- No soil sample recovered
- "Undisturbed" sample
- First encountered groundwater level
- Static groundwater level



GETTLER - RYAN INC.

6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

UNIFIED SOIL CLASSIFICATION
ASTM D 2488-85

AND
KEY TO SAMPLING DATA

Gettler-Ryan, Inc.

Log of Boring MW-9

PROJECT: *Tosco (76) Service Station No. 1871*

LOCATION: *96 MacArthur Boulevard, Oakland, California*

GR PROJECT NO.: *140165.07*

CASING ELEVATION:

DATE STARTED: *12/27/01*

WL (ft. bgs): *16.0* DATE: *12/27/01* TIME: *10:00*

DATE FINISHED: *12/27/01*

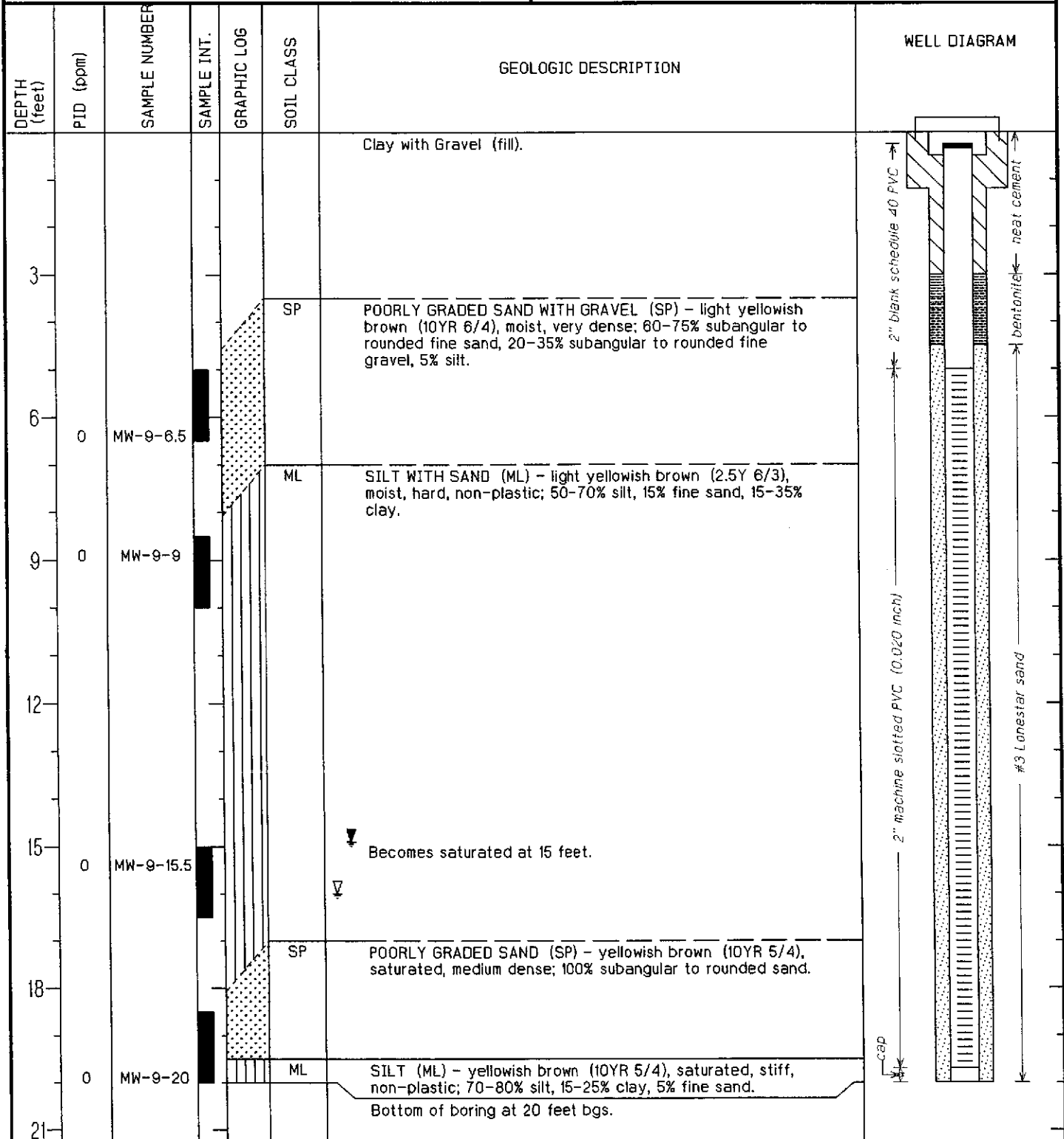
WL (ft. bgs): *14.9* DATE: *12/27/01* TIME: *15:15*

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *20 feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*



Gettler-Ryan, Inc.

Log of Boring MW-10

PROJECT: *Tosco (76) Service Station No. 1871*

LOCATION: *96 MacArthur Boulevard, Oakland, California*

GR PROJECT NO.: *140165.07*

CASING ELEVATION:

DATE STARTED: *12/27/01*

WL (ft. bgs): *19.9* DATE: *12/27/01* TIME: *15:15*

DATE FINISHED: *12/27/01*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *20 feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
3						Boring not logged from 0 to 15 feet due to proximity to boring B-8.	
6							
9							
12							
15	0				ML	SILT (ML) - grayish brown (10YR 5/2), moist, hard, non-plastic; 60-80% silt, 15-35% clay, 5% fine sand.	
18							
21	0					Bottom of boring at 20 feet bgs.	

Gettler-Ryan, Inc.

Log of Boring MW-11

PROJECT: *Tosco (76) Service Station No. 1871*

LOCATION: *96 MacArthur Boulevard, Oakland, California*

GR PROJECT NO.: *140165.07*

CASING ELEVATION:

DATE STARTED: *12/27/01*

WL (ft. bgs): *28.3* DATE: *12/27/01* TIME: *15:40*

DATE FINISHED: *12/27/01*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *30 feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT. GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
0 - 3					Clay with Gravel (fill).	
3 - 6	0			CL	CLAY (CL) - very dark grayish brown (10YR 3/2), moist, stiff, plastic; 60-70% clay, 5-10% fine to coarse sand, trace of fine gravel.	
6 - 12	0	MW-11-11		ML	SILT (ML) - light olive brown (2.5Y 5/3), moist, hard, non-plastic; 60-80% silt, 15-35% clay, 5% fine sand.	
12 - 15	0	MW-11-16		SM	SILTY SAND (SM) - olive brown (2.5Y 4/4), moist, dense; 85% subangular to rounded fine sand, 15% silt.	
15 - 21	0	MW-11-20		MI		

Gettler-Ryan, Inc.

Log of Boring MW-11

PROJECT: *Tosco (76) Service Station No. 1871*

LOCATION: *96 MacArthur Boulevard, Oakland, California*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
24	0	MW-11-24.5			ML	SILT (ML) - dark grayish brown (2.5Y 4/2), moist, hard, non-plastic; 80% silt, 15% clay, 5% fine sand.	<p>2" machine slotted PVC (0.020 inch)</p> <p>#3 Lonestar sand</p> <p>Cap</p>
27		MW-11-26.5				<p>∇</p> <p>Color changes to light olive brown (2.5Y 5/3).</p>	
30	0	MW-11-30				Bottom of boring at 30 feet bgs.	
33							
36							
39							
42							
45							

**MONITORING WELL
OBSERVATION SUMMARY SHEET**

CLIENT/
FACILITY #: 1871

G-R JOB #: 180068

LOCATION: 96 MacArthur Blvd.

DATE: 1-31-02

CITY: Oakland

TIME: -

Well ID	Total Depth	Depth to Water	Product Thickness	TOB or TOC	Comments <i>Purge water</i>
MW-1	24.08	13.54	⊙	TOC	21
MW-6	24.73	8.50			8.5
MW-7	24.50	7.91			8.5
MW-8	24.81	7.99			9
MW-9	19.91	14.72			9
MW-10	19.98	8.02			20
MW-11	30.08	11.71			31

Comments: _____

Sampler: Jol

Assistant: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 1871
Address: 96 MacArthur Blvd.
City: Oakland

Job#: 180068
Date: 1-31-02
Sampler: 50c

Well ID MW-9

Well Condition: O.K.

Well Diameter 2 in.

Hydrocarbon
Thickness: 0 in. Amount Bailed
(product/water): 0 (gal.)

Total Depth 19.91 ft.

Volume	1" = 0.17	3" = 0.38	4" = 0.66
Factor (VF)	6" = 1.50	12" = 5.80	

Depth to Water 14.72 ft.

5.19 X VF 0.17 = 0.88 X 3 (case volume) = Estimated Purge Volume: 9 (gal.)

Purge
Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling
Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 1:00
Sampling Time: 1:26 P.M. (1326)
Purging Flow Rate: 0.5 gpm.
Did well de-water? _____

Weather Conditions: clear/cold
Water Color: clear Odor: mild
Sediment Description: _____
If yes, Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm X)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1:07</u>	<u>1</u>	<u>7.58</u> <u>7.46</u>	<u>5.87</u> <u>7.65</u>	<u>69.1</u> <u>69.2</u>			
	<u>2</u>	<u>7.48</u>	<u>7.51</u>	<u>69.5</u>			
	<u>3</u>	<u>7.42</u>	<u>7.56</u>	<u>70.0</u>			
	<u>4</u>	<u>7.48</u>	<u>7.78</u>	<u>70.2</u>			
	<u>5</u>	<u>7.46</u>	<u>7.59</u>	<u>70.5</u>			
	<u>6</u>	<u>7.51</u>	<u>7.68</u>	<u>71.0</u>			
	<u>7</u>	<u>7.62</u>		<u>71.2</u>			
<u>1:20</u>	<u>8</u>	<u>7.60</u>	<u>7.78</u>	<u>71.3</u>			
	<u>10</u>	<u>7.57</u>	<u>7.67</u>	<u>71.5</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>3 vOA</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>2 vOA</u>	<u>Y</u>	<u>"</u>	<u>"</u>	<u>(8) oxy's by 8260</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 1871
Address: 96 MacArthur Blvd.
City: Oakland

Job#: 180068
Date: 1-31-02
Sampler: JOC

Well ID: MW-10
Well Diameter: 2 in.
Total Depth: 19.98 ft.
Depth to Water: 8.02 ft.

Well Condition: O.K.
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)
Volume Factor (VF):
2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

11.96 X VF 0.17 = 2.03 X 3 (case volume) = Estimated Purge Volume: 20 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 12:00
Sampling Time: 12:38 PM (1238)
Purging Flow Rate: 1 gpm.
Did well de-water? _____

Weather Conditions: clear/cold
Water Color: clear Odor: none
Sediment Description: _____
If yes: Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm) ¹⁰	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:09	2	7.14	7.95	72.2			
	4	7.08	8.62	72.4			
	6	7.15	8.02	72.5			
	8	7.18	8.02	72.6			
	10	7.21	7.83	72.6			
	12	7.22	7.82	72.9			
	14	7.35	7.89	72.5			
	16	7.38	7.40	72.6			
	18	7.38	7.64	71.9			
12:30	20	7.40					

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10	3VOL	Y	HCL	Seq.	TPHG, BTEX, MTBE
	2VOL	✓	"	"	(8) OXY 248260

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/Facility # 1871 Job#: 180068
 Address: 96 MacArthur Blvd. Date: 1-31-02
 City: Oakland Sampler: Joe

Well ID: MW-11 Well Condition: O.K.
 Well Diameter: 2 in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 30.08 ft
 Depth to Water: 11.71 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

18.37 x VF 0.17 = 3.12 x 3 (case volume) = Estimated Purge Volume: 31 (gal.)

Purge Equipment: Disposable Bailer, Bailer, Stack, Suction, Grundfos, Other: _____
 Sampling Equipment: Disposable Bailer, Bailer, Pressure Bailer, Grab Sample, Other: _____

Starting Time: 10:55 Weather Conditions: clear/cold
 Sampling Time: 11:35 A.M. (11:35) Water Color: clear Odor: none
 Purging Flow Rate: 1.0 gpm Sediment Description: _____
 Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm K)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:07</u>	<u>3</u>	<u>7.46</u>	<u>6.91</u>	<u>73.00</u>			
	<u>9</u>	<u>7.57</u>	<u>6.68</u>	<u>71.6</u>			
	<u>12</u>	<u>7.57</u>	<u>6.65</u>	<u>72.4</u>			
	<u>15</u>	<u>7.42</u>	<u>6.80</u>	<u>71.8</u>			
	<u>18</u>	<u>7.45</u>	<u>6.32</u>	<u>71.3</u>			
	<u>21</u>	<u>7.50</u>	<u>6.75</u>	<u>71.7</u>			
	<u>24</u>	<u>7.48</u>	<u>6.69</u>	<u>71.5</u>			
	<u>27</u>	<u>7.53</u>	<u>6.71</u>	<u>72.0</u>			
<u>11:25</u>	<u>30</u>	<u>7.53</u>	<u>6.72</u>	<u>71.9</u>			
	<u>33</u>	<u>7.46</u>	<u>6.74</u>	<u>71.8</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</u>	<u>3 vol</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>2 vol</u>	<u>11</u>	<u>11</u>	<u>11</u>	<u>(8) Oxy's by 8260</u>

COMMENTS: _____

Virgil Chavez Land Surveying

312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

March 5, 2002
Project No.: 1704-11

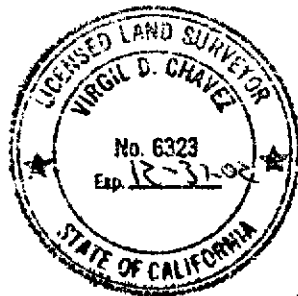
Clyde Galantine
Gettler-Ryan, Inc.
1364 N. McDowell Rd., Suite B2
Petaluma, CA 94564

Subject: Monitoring Well Survey
Former Texaco Service Station
96 MacArthur Blvd.
Oakland, CA

Dear Clyde:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on January 15, 2002. The benchmark for this survey was a USGS bronze disc located near the north end of the curb return at the northwest corner of 38th St. and Broadway. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83).
Benchmark Elevation 85.41 feet (NGVD 29).

<u>Latitude</u>	<u>Longitude</u>	<u>Northing</u>	<u>Easting</u>	<u>Elev.</u>	<u>Desc.</u>
37.8200131	-122.2541029	2125795.42	6055030.24	80.10	RIM MW-6
				79.67	TOC MW-6
				80.99	RIM MW-7
37.8201434	-122.2541486	2125843.10	6055017.93	80.67	TOC MW-7
				81.97	RIM MW-8
37.8202757	-122.2541900	2125891.47	6055006.88	81.71	TOC MW-8
				82.55	RIM MW-9
37.8200833	-122.2546161	2125823.74	6054882.51	82.07	TOC MW-9
				75.60	RIM MW10
37.8196849	-122.2545543	2125678.37	6054897.62	74.98	TOC MW10
				77.61	RIM MW11
37.8195546	-122.2542555	2125629.30	6054983.02	77.31	TOC MW11



Sincerely,

Virgil D. Chavez

 Virgil D. Chavez, PLS 6323



**Sequoia
Analytical**

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

11 January, 2002

Clyde Galantine
Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma, CA 94954-1116

RE: TOSCO/PHILLIPS
Sequoia Work Order: P112541

Enclosed are the results of analyses for samples received by the laboratory on 12/27/01 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari
Client Services Representative

CA ELAP Certificate #2374



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-9-6.5	P112541-01	Soil	12/27/01 08:40	12/27/01 17:45
MW-9-9	P112541-02	Soil	12/27/01 08:45	12/27/01 17:45
MW-9-15.5	P112541-03	Soil	12/27/01 08:50	12/27/01 17:45
MW-9-20	P112541-04	Soil	12/27/01 08:55	12/27/01 17:45
MW-11-11	P112541-05	Soil	12/27/01 13:20	12/27/01 17:45
MW-11-16	P112541-06	Soil	12/27/01 13:30	12/27/01 17:45
MW-11-20	P112541-07	Soil	12/27/01 13:40	12/27/01 17:45
MW-11-24.5	P112541-08	Soil	12/27/01 13:50	12/27/01 17:45
MW-11-26.5	P112541-09	Soil	12/27/01 14:00	12/27/01 17:45
MW-11-30	P112541-10	Soil	12/27/01 14:15	12/27/01 17:45

Sequoia Analytical - Petaluma

Angelee Cari

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Angelee Cari, Client Services Representative



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-9-6.5 (P112541-01) Soil Sampled: 12/27/01 08:40 Received: 12/27/01 17:45									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	2010037	01/03/02	01/03/02	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95 %	65-135		"	"	"	"	
MW-9-9 (P112541-02) Soil Sampled: 12/27/01 08:45 Received: 12/27/01 17:45									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	2010037	01/03/02	01/03/02	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94 %	65-135		"	"	"	"	
MW-11-16 (P112541-06) Soil Sampled: 12/27/01 13:30 Received: 12/27/01 17:45									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	2010037	01/03/02	01/03/02	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		108 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	65-135		"	"	"	"	



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-11-24.5 (P112541-08) Soil Sampled: 12/27/01 13:50 Received: 12/27/01 17:45									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	2010037	01/03/02	01/03/02	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<i>101 %</i>		<i>65-135</i>	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>94 %</i>		<i>65-135</i>	"	"	"	"	



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 2010037 - EPA 5030, soils

Blank (2010037-BLK1)

Prepared & Analyzed: 01/03/02

Gasoline (C6-C12)	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							

Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.586		"	0.600		98	65-135			
Surrogate: 4-Bromofluorobenzene	0.644		"	0.600		107	65-135			

Blank (2010037-BLK2)

Prepared & Analyzed: 01/04/02

Gasoline (C6-C12)	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							

Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.593		"	0.600		99	65-135			
Surrogate: 4-Bromofluorobenzene	0.631		"	0.600		105	65-135			

Blank (2010037-BLK3)

Prepared & Analyzed: 01/07/02

Gasoline (C6-C12)	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							

Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.586		"	0.600		98	65-135			
Surrogate: 4-Bromofluorobenzene	0.625		"	0.600		104	65-135			



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 2010037 - EPA 5030, soils

LCS (2010037-BS1)

Prepared & Analyzed: 01/03/02

Gasoline (C6-C12)	6.25	1.0	mg/kg	5.50		114	65-135			
Benzene	0.0682	0.0050	"	0.0660		103	65-135			
Toluene	0.421	0.0050	"	0.397		106	65-135			
Ethylbenzene	0.0933	0.0050	"	0.0920		101	65-135			
Xylenes (total)	0.506	0.0050	"	0.461		110	65-135			
Methyl tert-butyl ether	0.126	0.0050	"	0.105		120	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>0.613</i>		<i>"</i>	<i>0.600</i>		<i>102</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.638</i>		<i>"</i>	<i>0.600</i>		<i>106</i>	<i>65-135</i>			

LCS (2010037-BS2)

Prepared & Analyzed: 01/04/02

Gasoline (C6-C12)	6.22	1.0	mg/kg	5.50		113	65-135			
Benzene	0.0662	0.0050	"	0.0660		100	65-135			
Toluene	0.421	0.0050	"	0.397		106	65-135			
Ethylbenzene	0.0940	0.0050	"	0.0920		102	65-135			
Xylenes (total)	0.513	0.0050	"	0.461		111	65-135			
Methyl tert-butyl ether	0.141	0.0050	"	0.105		134	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>0.613</i>		<i>"</i>	<i>0.600</i>		<i>102</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.665</i>		<i>"</i>	<i>0.600</i>		<i>111</i>	<i>65-135</i>			

LCS (2010037-BS3)

Prepared & Analyzed: 01/07/02

Gasoline (C6-C12)	5.90	1.0	mg/kg	5.50		107	65-135			
Benzene	0.0686	0.0050	"	0.0660		104	65-135			
Toluene	0.415	0.0050	"	0.397		105	65-135			
Ethylbenzene	0.0924	0.0050	"	0.0920		100	65-135			
Xylenes (total)	0.507	0.0050	"	0.461		110	65-135			
Methyl tert-butyl ether	0.132	0.0050	"	0.105		126	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>0.611</i>		<i>"</i>	<i>0.600</i>		<i>102</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.645</i>		<i>"</i>	<i>0.600</i>		<i>108</i>	<i>65-135</i>			



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 2010037 - EPA 5030, soils

Matrix Spike (2010037-MS1)		Source: P112541-01		Prepared & Analyzed: 01/03/02						
Gasoline (C6-C12)	5.98	1.0	mg/kg	5.50	ND	109	65-135			
Benzene	0.0730	0.0050	"	0.0660	ND	111	65-135			
Toluene	0.464	0.0050	"	0.397	ND	117	65-135			
Ethylbenzene	0.102	0.0050	"	0.0920	ND	111	65-135			
Xylenes (total)	0.561	0.0050	"	0.461	ND	122	65-135			
Methyl tert-butyl ether	0.163	0.0050	"	0.105	ND	155	65-135			QM-07
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	0.623		"	0.600		104	65-135			
Surrogate: 4-Bromofluorobenzene	0.573		"	0.600		96	65-135			

Matrix Spike (2010037-MS2)		Source: P201025-02		Prepared & Analyzed: 01/04/02						
Gasoline (C6-C12)	5.45	1.0	mg/kg	5.50	ND	97	65-135			
Benzene	0.0740	0.0050	"	0.0660	ND	112	65-135			
Toluene	0.448	0.0050	"	0.397	ND	113	65-135			
Ethylbenzene	0.0988	0.0050	"	0.0920	ND	107	65-135			
Xylenes (total)	0.543	0.0050	"	0.461	0.0094	116	65-135			
Methyl tert-butyl ether	0.141	0.0050	"	0.105	ND	134	65-135			
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	0.624		"	0.600		104	65-135			
Surrogate: 4-Bromofluorobenzene	0.544		"	0.600		91	65-135			

Matrix Spike Dup (2010037-MSD1)		Source: P112541-01		Prepared & Analyzed: 01/03/02						
Gasoline (C6-C12)	5.54	1.0	mg/kg	5.50	ND	101	65-135	8	20	
Benzene	0.0700	0.0050	"	0.0660	ND	106	65-135	4	20	
Toluene	0.437	0.0050	"	0.397	ND	110	65-135	6	20	
Ethylbenzene	0.0970	0.0050	"	0.0920	ND	105	65-135	5	20	
Xylenes (total)	0.529	0.0050	"	0.461	ND	115	65-135	6	20	
Methyl tert-butyl ether	0.144	0.0050	"	0.105	ND	137	65-135	12	20	QM-07
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	0.616		"	0.600		103	65-135			
Surrogate: 4-Bromofluorobenzene	0.569		"	0.600		95	65-135			

Gettler - Ryan Inc.
 1364 North Mc Dowell Blvd., Suite B2
 Petaluma CA, 94954-1116

 Project: TOSCO/PHILLIPS
 Project Number: 1871/Oakland, CA.
 Project Manager: Clyde Galantine

Reported:
 01/11/02 14:26

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2010037 - EPA 5030, soils										
Matrix Spike Dup (2010037-MSD2)										
		Source: P201025-02			Prepared & Analyzed: 01/04/02					
Gasoline (C6-C12)	5.32	1.0	mg/kg	5.50	ND	95	65-135	2	20	
Benzene	0.0722	0.0050	"	0.0660	ND	109	65-135	2	20	
Toluene	0.427	0.0050	"	0.397	ND	108	65-135	5	20	
Ethylbenzene	0.0933	0.0050	"	0.0920	ND	101	65-135	6	20	
Xylenes (total)	0.521	0.0050	"	0.461	0.0094	111	65-135	4	20	
Methyl tert-butyl ether	0.141	0.0050	"	0.105	ND	134	65-135	0	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.622		"	0.600		104	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.568		"	0.600		95	65-135			



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/11/02 14:26

Notes and Definitions

- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

N^o 007516
TOSCO

PI1254

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 778-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd; North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: Gettler-Ryan MOK 5.07 Tosco Engineer: Dave DeWitt
 Address: 1364 N. McDowell Blvd Suite B2 Site #: 1871
 City: Petaluma State: CA Zip Code: 94954 Site Address: 96 McArthur Blvd
 Telephone: (707) 781-3255 Fax #: 707 781-3218 City, State: Oakland, CA
 Report To: Chyle Gendantic Sampler: Chyle Gendantic QC Data: Level D (Standard) Level C Level B Level A

Turnaround Time: 10 Work Days 5 Work Days 3 Work Days
 2 Work Days 1 Work Day 2.5 Hours

- Analyses Requested
- Drinking Water
 - Waste Water
 - Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested	Comments
1. MW-9-6.5	12/27/01 9:40	Soil	1	tube	PI1254-01	TEXMIBE TPT (18015) TOS (418-1) COPPER (6) 8260 MANGANESE (6) 8260 ZINC (6) 8260	Hold
2. MW-9-9	8:45				-02		
3. MW-9-15.5	8:50				-03		
4. MW-9-20	8:55				-04		
5. MW-11-11	1:30				-05		
6. MW-11-16	1:30				-06 X		
7. MW-11-20	1:40				-07		
8. MW-11-24.5	1:50				-08 X		
9. MW-11-26.5	2:00				-09		
10. MW-11-30	2:15				-10		

Relinquished By: Chyle Gendantic Date: 12/27/01 Time: 12:45 Received By: Jane [Signature] Date: 12/27/01 Time: 17:45
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

Were Samples Received In Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page _____ of _____

To be completed upon receipt of report:
 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____
 Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
 Yellow - Sequoia
 White - Sequoia

10 Angeles

JAN 2 10:21:09 FROM GETTLER RYAN

TO SEQUIOR PET

PAGE.001

** TOTAL PAGE.001 **



**Sequoia
Analytical**

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

3 January, 2002

Clyde Galantine
Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma, CA 94954-1116

RE: TOSCO/PHILLIPS
Sequoia Work Order: P112541

Enclosed are the results of analyses for samples received by the laboratory on 12/27/01 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari
Client Services Representative

CA ELAP Certificate #2374



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/03/02 14:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Comp 1	P112541-11	Soil	12/27/01 15:30	12/27/01 17:45

Sequoia Analytical - Petaluma

Angelee Cari

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Angelee Cari, Client Services Representative



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/03/02 14:37

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Comp 1 (P112541-11) Soil Sampled: 12/27/01 15:30 Received: 12/27/01 17:45									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120641	12/31/01	12/31/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		92 %		65-135	"	"	"	"	



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/03/02 14:37

**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Comp 1 (P112541-11) Soil Sampled: 12/27/01 15:30 Received: 12/27/01 17:45									
Lead	7.7	6.8	mg/kg	1	2010019	01/02/02	01/03/02	EPA 6010B	

Gettler - Ryan Inc.
 1364 North Mc Dowell Blvd., Suite B2
 Petaluma CA, 94954-1116

 Project: TOSCO/PHILLIPS
 Project Number: 1871/Oakland, CA.
 Project Manager: Clyde Galantine

 Reported:
 01/03/02 14:37

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1120641 - EPA 5030, soils
Blank (1120641-BLK1)

Prepared & Analyzed: 12/28/01

Gasoline (C6-C12)	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.579		"	0.600		96	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.594		"	0.600		99	65-135			

Blank (1120641-BLK2)

Prepared & Analyzed: 12/31/01

Gasoline (C6-C12)	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.593		"	0.600		99	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.629		"	0.600		105	65-135			

LCS (1120641-BS1)

Prepared & Analyzed: 12/28/01

Gasoline (C6-C12)	6.10	1.0	mg/kg	5.50		111	65-135			
Benzene	0.0859	0.0050	"	0.0660		130	65-135			
Toluene	0.414	0.0050	"	0.397		104	65-135			
Ethylbenzene	0.0922	0.0050	"	0.0920		100	65-135			
Xylenes (total)	0.505	0.0050	"	0.461		110	65-135			
Methyl tert-butyl ether	0.139	0.0050	"	0.105		132	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.598		"	0.600		100	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.618		"	0.600		103	65-135			



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/03/02 14:37

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1120641 - EPA 5030, soils

LCS (1120641-BS2)

Prepared & Analyzed: 12/31/01

Gasoline (C6-C12)	6.47	1.0	mg/kg	5.50		118	65-135			
Benzene	0.0704	0.0050	"	0.0660		107	65-135			
Toluene	0.437	0.0050	"	0.397		110	65-135			
Ethylbenzene	0.0962	0.0050	"	0.0920		105	65-135			
Xylenes (total)	0.526	0.0050	"	0.461		114	65-135			
Methyl tert-butyl ether	0.133	0.0050	"	0.105		127	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>0.620</i>		"	<i>0.600</i>		<i>103</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.653</i>		"	<i>0.600</i>		<i>109</i>	<i>65-135</i>			

Matrix Spike (1120641-MS1)

Source: P112521-02

Prepared & Analyzed: 12/28/01

Gasoline (C6-C12)	5.83	1.0	mg/kg	5.50	ND	94	65-135			
Benzene	0.0766	0.0050	"	0.0660	ND	116	65-135			
Toluene	0.432	0.0050	"	0.397	ND	108	65-135			
Ethylbenzene	0.0979	0.0050	"	0.0920	ND	103	65-135			
Xylenes (total)	0.530	0.0050	"	0.461	0.0085	113	65-135			
Methyl tert-butyl ether	0.168	0.0050	"	0.105	0.0055	155	65-135			QM-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>0.581</i>		"	<i>0.600</i>		<i>97</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.555</i>		"	<i>0.600</i>		<i>92</i>	<i>65-135</i>			

Matrix Spike Dup (1120641-MSD1)

Source: P112521-02

Prepared & Analyzed: 12/28/01

Gasoline (C6-C12)	5.83	1.0	mg/kg	5.50	ND	94	65-135	0	20	
Benzene	0.0873	0.0050	"	0.0660	ND	132	65-135	13	20	
Toluene	0.419	0.0050	"	0.397	ND	104	65-135	3	20	
Ethylbenzene	0.0954	0.0050	"	0.0920	ND	100	65-135	3	20	
Xylenes (total)	0.514	0.0050	"	0.461	0.0085	110	65-135	3	20	
Methyl tert-butyl ether	0.160	0.0050	"	0.105	0.0055	147	65-135	5	20	QM-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>0.591</i>		"	<i>0.600</i>		<i>98</i>	<i>65-135</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.563</i>		"	<i>0.600</i>		<i>94</i>	<i>65-135</i>			



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/03/02 14:37

**Total Metals by EPA 6000/7000 Series Methods - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2010019 - EPA 3050B										
Blank (2010019-BLK1) Prepared: 01/02/02 Analyzed: 01/03/02										
Lead	ND	7.5	mg/kg							
LCS (2010019-BS1) Prepared: 01/02/02 Analyzed: 01/03/02										
Lead	52.7	7.5	mg/kg	50.0		105	80-120			
Matrix Spike (2010019-MS1) Source: P112541-11 Prepared: 01/02/02 Analyzed: 01/03/02										
Lead	57.4	7.4	mg/kg	49.0	7.7	101	75-125			
Matrix Spike Dup (2010019-MSD1) Source: P112541-11 Prepared: 01/02/02 Analyzed: 01/03/02										
Lead	49.6	6.6	mg/kg	43.9	7.7	95	75-125	15	35	



Gettler - Ryan Inc.
1364 North Mc Dowell Blvd., Suite B2
Petaluma CA, 94954-1116

Project: TOSCO/PHILLIPS
Project Number: 1871/Oakland, CA.
Project Manager: Clyde Galantine

Reported:
01/03/02 14:37

Notes and Definitions

QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

N^o 007517
TOSCO

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>Gettler-Ryan 11/01/05.07</u>	Tosco Engineer: <u>Dave DeWitt</u>
Address: <u>1364 W McDowell Blvd, Suite B2</u>	Site #: <u>1871</u>
City: <u>Petaluma</u> State: <u>CA</u> Zip Code: <u>94954</u>	Site Address: <u>96 MacArthur Blvd</u>
Telephone: <u>(707) 789-3255</u> Fax #: <u>(707) 789-3213</u>	City, State: <u>Oakland CA</u>
Report To: <u>Chyle Galant</u> Sampler: <u>Chyle Galant</u>	QC Data: <input type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A

Turnaround <input type="checkbox"/> 10 Work Days <input type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days Time: <input checked="" type="checkbox"/> 2 Work Days <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2-8 Hours	<input type="checkbox"/> Drinking Water <input type="checkbox"/> Waste Water <input type="checkbox"/> Other	Analyses Requested <div style="display: flex; justify-content: space-around; font-size: small;"> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 2px;">TPH/g/BTEX/MTBE</div> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 2px;">TPH Diesel (8015)</div> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 2px;">TOG (418.1)</div> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 2px;">Oxygenates (6) 8280</div> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 2px;">Oxygenates (6) + EDB 1,2-DCA (8260)</div> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 2px;">Total Pb</div> </div>
--	---	--

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #								Comments
1. <u>Comp 1</u>	<u>12/27/01 3:30</u>	<u>soil</u>	<u>4</u>	<u>tube</u>	<u>P112541-11</u>	<input checked="" type="checkbox"/>							
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

COOLER CUSTODY SEALS INTACT
 NOT INTACT
 COOLER TEMPERATURE 4.8 °C

Relinquished By: <u>Chyle Galant</u>	Date: <u>12/27/01</u>	Time: <u>17:45</u>	Received By: <u>[Signature]</u>	Date: <u>12/27/01</u>	Time: <u>12:45</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment Client Page ___ of ___

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Sequoia
White - Sequoia



**Sequoia
Analytical**

1551 Industrial Road
San Carlos, CA 94070
(650) 232-9600
FAX (650) 232-9612
www.sequoialabs.com

15 February, 2002

Deanna Harding
Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin, CA 94568

RECEIVED

FEB 15 2002

GETTLER-RYAN INC.
GENERAL CONTRACTORS

RE: Tosco(1)
Sequoia Report: L202005

Enclosed are the results of analyses for samples received by the laboratory on 01/31/02 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson
Project Manager

CA ELAP Certificate #2360



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L202005-01	Water	01/31/02 00:00	01/31/02 18:00
MW-1	L202005-02	Water	01/31/02 15:44	01/31/02 18:00
MW-6	L202005-03	Water	01/31/02 15:20	01/31/02 18:00
MW-7	L202005-04	Water	01/31/02 14:41	01/31/02 18:00
MW-8	L202005-05	Water	01/31/02 14:08	01/31/02 18:00
MW-9	L202005-06	Water	01/31/02 13:26	01/31/02 18:00
MW-10	L202005-07	Water	01/31/02 12:38	01/31/02 18:00
MW-11	L202005-08	Water	01/31/02 11:35	01/31/02 18:00

Sequoia Analytical - San Carlos

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Wayne Stevenson, Project Manager



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (L202005-01) Water Sampled: 01/31/02 00:00 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020025	02/07/02	02/08/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88.5 %		70-130	"	"	"	"	
MW-1 (L202005-02) Water Sampled: 01/31/02 15:44 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	42000	10000	ug/l	200	2020031	02/08/02	02/09/02	EPA 8021B	P-01
Benzene	5800	100	"	"	"	"	"	"	
Toluene	1800	100	"	"	"	"	"	"	
Ethylbenzene	2000	100	"	"	"	"	"	"	
Xylenes (total)	8200	100	"	"	"	"	"	"	
Methyl tert-butyl ether	26000	1000	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.2 %		70-130	"	"	"	"	
MW-6 (L202005-03) Water Sampled: 01/31/02 15:20 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	12000	5000	ug/l	100	2020031	02/08/02	02/09/02	EPA 8021B	P-02
Benzene	250	50	"	"	"	"	"	"	
Toluene	92	50	"	"	"	"	"	"	
Ethylbenzene	500	50	"	"	"	"	"	"	
Xylenes (total)	1500	50	"	"	"	"	"	"	
Methyl tert-butyl ether	26000	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.6 %		70-130	"	"	"	"	

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (L202005-04) Water Sampled: 01/31/02 14:41 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020025	02/07/02	02/08/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	8900	1000	"	200	"	"	02/09/02	"	M-04
Surrogate: a,a,a-Trifluorotoluene		89.3 %		70-130	"	"	02/08/02	"	
MW-8 (L202005-05) Water Sampled: 01/31/02 14:08 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	5900	1000	ug/l	20	2020031	02/08/02	02/09/02	EPA 8021B	P-02
Benzene	86	10	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	630	10	"	"	"	"	"	"	
Xylenes (total)	390	10	"	"	"	"	"	"	
Methyl tert-butyl ether	670	100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.3 %		70-130	"	"	"	"	
MW-9 (L202005-06) Water Sampled: 01/31/02 13:26 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020031	02/08/02	02/09/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	680	100	"	20	"	"	02/11/02	"	M-04
Surrogate: a,a,a-Trifluorotoluene		88.8 %		70-130	"	"	02/09/02	"	



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-10 (L202005-07) Water Sampled: 01/31/02 12:38 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020036	02/11/02	02/12/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %		70-130	"	"	"	"	
MW-11 (L202005-08) Water Sampled: 01/31/02 11:35 Received: 01/31/02 18:00									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2020031	02/08/02	02/08/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87.2 %		70-130	"	"	"	"	



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

MTBE Confirmation by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (L202005-03) Water Sampled: 01/31/02 15:20 Received: 01/31/02 18:00									
Methyl tert-butyl ether	31000	330	ug/l	333.33	2020039	02/13/02	02/13/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		118 %	70-130		"	"	"	"	
MW-7 (L202005-04) Water Sampled: 01/31/02 14:41 Received: 01/31/02 18:00									
Methyl tert-butyl ether	9900	50	ug/l	50	2020039	02/13/02	02/13/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		115 %	70-130		"	"	"	"	
MW-8 (L202005-05) Water Sampled: 01/31/02 14:08 Received: 01/31/02 18:00									
Methyl tert-butyl ether	700	7.1	ug/l	7.143	2020039	02/13/02	02/13/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		119 %	70-130		"	"	"	"	



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L202005-02) Water Sampled: 01/31/02 15:44 Received: 01/31/02 18:00									
Methyl tert-butyl ether	26000	250	ug/l	250	2020019	02/07/02	02/07/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		105 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	70-130		"	"	"	"	
MW-9 (L202005-06) Water Sampled: 01/31/02 13:26 Received: 01/31/02 18:00									
Ethanol	ND	3600	ug/l	7.143	2020012	02/05/02	02/05/02	EPA 8260B	
1,2-Dibromoethane	ND	7.1	"	"	"	"	"	"	
1,2-Dichloroethane	ND	7.1	"	"	"	"	"	"	
Di-isopropyl ether	ND	7.1	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	7.1	"	"	"	"	"	"	
Methyl tert-butyl ether	910	7.1	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	7.1	"	"	"	"	"	"	
Tert-butyl alcohol	ND	140	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	70-130		"	"	"	"	
MW-10 (L202005-07) Water Sampled: 01/31/02 12:38 Received: 01/31/02 18:00									
Ethanol	ND	500	ug/l	1	2020006	02/05/02	02/05/02	EPA 8260B	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	1.2	1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		99.2 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		94.2 %	70-130		"	"	"	"	



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

**Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-11 (L202005-08) Water Sampled: 01/31/02 11:35 Received: 01/31/02 18:00									
Ethanol	ND	500	ug/l	1	2020006	02/05/02	02/05/02	EPA 8260B	
1,2-Dibromoethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	1.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	20	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.4 %		70-130	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		92.2 %		70-130	"	"	"	"	

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020025 - EPA 5030B (P/T)										
Blank (2020025-BLK1) Prepared & Analyzed: 02/07/02										
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.35		"	10.0		83.5	70-130			
LCS (2020025-BS1) Prepared & Analyzed: 02/07/02										
Benzene	9.60	0.50	ug/l	10.0		96.0	70-130			
Toluene	9.47	0.50	"	10.0		94.7	70-130			
Ethylbenzene	9.49	0.50	"	10.0		94.9	70-130			
Xylenes (total)	29.0	0.50	"	30.0		96.7	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.00		"	10.0		90.0	70-130			
LCS (2020025-BS2) Prepared & Analyzed: 02/07/02										
Purgeable Hydrocarbons as Gasoline	221	50	ug/l	250		88.4	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.33		"	10.0		93.3	70-130			
Matrix Spike (2020025-MS1) Source: L201137-02 Prepared & Analyzed: 02/07/02										
Purgeable Hydrocarbons as Gasoline	260	50	ug/l	250	ND	104	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.30		"	10.0		93.0	70-130			
Matrix Spike Dup (2020025-MSD1) Source: L201137-02 Prepared & Analyzed: 02/07/02										
Purgeable Hydrocarbons as Gasoline	260	50	ug/l	250	ND	104	60-140	0.00	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.24		"	10.0		92.4	70-130			

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control
 Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch 2020031 - EPA 5030B (P/T)
Blank (2020031-BLK1)

Prepared & Analyzed: 02/08/02

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l						
Benzene	ND	0.50	"						
Toluene	ND	0.50	"						
Ethylbenzene	ND	0.50	"						
Xylenes (total)	ND	0.50	"						
Methyl tert-butyl ether	ND	5.0	"						

Surrogate: a,a,a-Trifluorotoluene

8.66 " 10.0 86.6 70-130

LCS (2020031-BS1)

Prepared & Analyzed: 02/08/02

Benzene	9.26	0.50	ug/l	10.0		92.6	70-130		
Toluene	9.17	0.50	"	10.0		91.7	70-130		
Ethylbenzene	9.10	0.50	"	10.0		91.0	70-130		
Xylenes (total)	27.8	0.50	"	30.0		92.7	70-130		

Surrogate: a,a,a-Trifluorotoluene

8.57 " 10.0 85.7 70-130

LCS (2020031-BS2)

Prepared & Analyzed: 02/08/02

Purgeable Hydrocarbons as Gasoline	222	50	ug/l	250		88.8	70-130		
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.51		"	10.0		85.1	70-130		

Matrix Spike (2020031-MS1)

Source: L202005-08

Prepared & Analyzed: 02/08/02

Benzene	9.23	0.50	ug/l	10.0	ND	92.3	60-140		
Toluene	9.11	0.50	"	10.0	ND	91.1	60-140		
Ethylbenzene	9.09	0.50	"	10.0	ND	90.9	60-140		
Xylenes (total)	27.4	0.50	"	30.0	ND	91.3	60-140		

Surrogate: a,a,a-Trifluorotoluene

9.03 " 10.0 90.3 70-130

Matrix Spike Dup (2020031-MSD1)

Source: L202005-08

Prepared & Analyzed: 02/08/02

Benzene	7.90	0.50	ug/l	10.0	ND	79.0	60-140	15.5	25
Toluene	7.83	0.50	"	10.0	ND	78.3	60-140	15.1	25
Ethylbenzene	7.62	0.50	"	10.0	ND	76.2	60-140	17.6	25
Xylenes (total)	23.1	0.50	"	30.0	ND	77.0	60-140	17.0	25

Surrogate: a,a,a-Trifluorotoluene

8.14 " 10.0 81.4 70-130

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 2020036 - EPA 5030B (P/T)									
Blank (2020036-BLK1)					Prepared & Analyzed: 02/11/02				
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l						
Benzene	ND	0.50	"						
Toluene	ND	0.50	"						
Ethylbenzene	ND	0.50	"						
Xylenes (total)	ND	0.50	"						
Methyl tert-butyl ether	ND	5.0	"						
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.20		"	10.0		92.0	70-130		
LCS (2020036-BS1)					Prepared & Analyzed: 02/11/02				
Benzene	9.33	0.50	ug/l	10.0		93.3	70-130		
Toluene	9.71	0.50	"	10.0		97.1	70-130		
Ethylbenzene	9.12	0.50	"	10.0		91.2	70-130		
Xylenes (total)	27.3	0.50	"	30.0		91.0	70-130		
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.95		"	10.0		89.5	70-130		
LCS (2020036-BS2)					Prepared & Analyzed: 02/11/02				
Purgeable Hydrocarbons as Gasoline	229	50	ug/l	250		91.6	70-130		
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.07		"	10.0		90.7	70-130		
Matrix Spike (2020036-MS1)					Source: L202005-07 Prepared: 02/11/02 Analyzed: 02/12/02				
Purgeable Hydrocarbons as Gasoline	261	50	ug/l	250	ND	104	60-140		
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.47		"	10.0		84.7	70-130		
Matrix Spike Dup (2020036-MSD1)					Source: L202005-07 Prepared: 02/11/02 Analyzed: 02/12/02				
Purgeable Hydrocarbons as Gasoline	240	50	ug/l	250	ND	96.0	60-140	8.38	25
<i>Surrogate: a,a,a-Trifluorotoluene</i>	8.67		"	10.0		86.7	70-130		

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

MTBE Confirmation by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020039 - EPA 5030B [P/T]										
Blank (2020039-BLK1)				Prepared & Analyzed: 02/12/02						
Methyl tert-butyl ether	ND	1.0	ug/l							
Surrogate: 1,2-Dichloroethane-d4	53.3		"	50.0		107	70-130			
Blank (2020039-BLK2)				Prepared & Analyzed: 02/13/02						
Methyl tert-butyl ether	ND	1.0	ug/l							
Surrogate: 1,2-Dichloroethane-d4	51.3		"	50.0		103	70-130			
LCS (2020039-BS1)				Prepared & Analyzed: 02/12/02						
Methyl tert-butyl ether	45.3	1.0	ug/l	50.0		90.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	54.4		"	50.0		109	70-130			
LCS (2020039-BS2)				Prepared & Analyzed: 02/13/02						
Methyl tert-butyl ether	47.0	1.0	ug/l	50.0		94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	51.9		"	50.0		104	70-130			
Matrix Spike (2020039-MS1)				Source: L202068-06		Prepared & Analyzed: 02/12/02				
Methyl tert-butyl ether	48.2	1.0	ug/l	50.0	ND	96.4	60-140			
Surrogate: 1,2-Dichloroethane-d4	56.9		"	50.0		114	70-130			
Matrix Spike Dup (2020039-MSD1)				Source: L202068-06		Prepared & Analyzed: 02/12/02				
Methyl tert-butyl ether	46.1	1.0	ug/l	50.0	ND	92.2	60-140	4.45	25	
Surrogate: 1,2-Dichloroethane-d4	56.6		"	50.0		113	70-130			

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	-----------	------------	---------	-----------	-------

Batch 2020006 - EPA 5030B [P/T]
Blank (2020006-BLK1)

Prepared & Analyzed: 02/04/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							

Surrogate: 1,2-Dichloroethane-d4

48.2

"

50.0

96.4

70-130

Surrogate: Toluene-d8

48.4

"

50.0

96.8

70-130

Blank (2020006-BLK2)

Prepared & Analyzed: 02/05/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							

Surrogate: 1,2-Dichloroethane-d4

48.0

"

50.0

96.0

70-130

Surrogate: Toluene-d8

47.4

"

50.0

94.8

70-130

LCS (2020006-BS1)

Prepared & Analyzed: 02/04/02

Methyl tert-butyl ether	47.5	1.0	ug/l	50.0		95.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.9		"	50.0		102	70-130			
<i>Surrogate: Toluene-d8</i>	47.9		"	50.0		95.8	70-130			

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

 Reported:
 02/15/02 10:38

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 2020006 - EPA 5030B [P/T]
LCS (2020006-BS2)

Prepared & Analyzed: 02/05/02

Methyl tert-butyl ether	44.3	1.0	ug/l	50.0		88.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	49.7		"	50.0		99.4	70-130			
Surrogate: Toluene-d8	45.1		"	50.0		90.2	70-130			

Matrix Spike (2020006-MS1)

Source: L201137-07

Prepared & Analyzed: 02/04/02

Methyl tert-butyl ether	52.2	1.0	ug/l	50.0	2.9	98.6	60-140			
Surrogate: 1,2-Dichloroethane-d4	48.9		"	50.0		97.8	70-130			
Surrogate: Toluene-d8	46.6		"	50.0		93.2	70-130			

Matrix Spike Dup (2020006-MSD1)

Source: L201137-07

Prepared & Analyzed: 02/04/02

Methyl tert-butyl ether	58.1	1.0	ug/l	50.0	2.9	110	60-140	10.7	25	
Surrogate: 1,2-Dichloroethane-d4	51.3		"	50.0		103	70-130			
Surrogate: Toluene-d8	46.9		"	50.0		93.8	70-130			

Batch 2020012 - EPA 5030B [P/T]
Blank (2020012-BLK1)

Prepared & Analyzed: 02/05/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
Surrogate: 1,2-Dichloroethane-d4	48.0		"	50.0		96.0	70-130			
Surrogate: Toluene-d8	47.4		"	50.0		94.8	70-130			

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

 Reported:
 02/15/02 10:38

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020012 - EPA 5030B [P/T]										
Blank (2020012-BLK2) Prepared & Analyzed: 02/06/02										
Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.7		"	50.0		101	70-130			
<i>Surrogate: Toluene-d8</i>	48.5		"	50.0		97.0	70-130			
LCS (2020012-BS1) Prepared & Analyzed: 02/05/02										
Methyl tert-butyl ether	44.3	1.0	ug/l	50.0		88.6	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.7		"	50.0		99.4	70-130			
<i>Surrogate: Toluene-d8</i>	45.1		"	50.0		90.2	70-130			
LCS (2020012-BS2) Prepared & Analyzed: 02/06/02										
Methyl tert-butyl ether	45.0	1.0	ug/l	50.0		90.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.1		"	50.0		104	70-130			
<i>Surrogate: Toluene-d8</i>	47.3		"	50.0		94.6	70-130			
Matrix Spike (2020012-MS1) Source: L202014-04 Prepared & Analyzed: 02/05/02										
Methyl tert-butyl ether	50.7	1.0	ug/l	50.0	ND	101	60-140			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	54.2		"	50.0		108	70-130			
<i>Surrogate: Toluene-d8</i>	45.3		"	50.0		90.6	70-130			
Matrix Spike Dup (2020012-MSD1) Source: L202014-04 Prepared & Analyzed: 02/05/02										
Methyl tert-butyl ether	51.3	1.0	ug/l	50.0	ND	103	60-140	1.18	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.5		"	50.0		107	70-130			
<i>Surrogate: Toluene-d8</i>	45.1		"	50.0		90.2	70-130			

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 2020019 - EPA 5030B [P/T]
Blank (2020019-BLK1)

Prepared & Analyzed: 02/06/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	50.7		"	50.0		101	70-130			
<i>Surrogate: Toluene-d8</i>	48.5		"	50.0		97.0	70-130			

Blank (2020019-BLK2)

Prepared & Analyzed: 02/07/02

Ethanol	ND	500	ug/l							
1,2-Dibromoethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
Di-isopropyl ether	ND	1.0	"							
Ethyl tert-butyl ether	ND	1.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Tert-amyl methyl ether	ND	1.0	"							
Tert-butyl alcohol	ND	20	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.4		"	50.0		107	70-130			
<i>Surrogate: Toluene-d8</i>	50.6		"	50.0		101	70-130			

LCS (2020019-BS1)

Prepared & Analyzed: 02/06/02

Methyl tert-butyl ether	45.0	1.0	ug/l	50.0		90.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.1		"	50.0		104	70-130			
<i>Surrogate: Toluene-d8</i>	47.3		"	50.0		94.6	70-130			

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #1871
 Project Manager: Deanna Harding

Reported:
 02/15/02 10:38

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2020019 - EPA 5030B [P/T]										
LCS (2020019-BS2)										
					Prepared & Analyzed: 02/07/02					
Methyl tert-butyl ether	40.0	1.0	ug/l	50.0		80.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	53.9		"	50.0		108	70-130			
Surrogate: Toluene-d8	46.5		"	50.0		93.0	70-130			
Matrix Spike (2020019-MS1)										
					Source: L202014-02		Prepared & Analyzed: 02/06/02			
Methyl tert-butyl ether	58.3	1.0	ug/l	50.0	ND	117	60-140			
Surrogate: 1,2-Dichloroethane-d4	53.1		"	50.0		106	70-130			
Surrogate: Toluene-d8	47.6		"	50.0		95.2	70-130			
Matrix Spike Dup (2020019-MSD1)										
					Source: L202014-02		Prepared & Analyzed: 02/06/02			
Methyl tert-butyl ether	49.4	1.0	ug/l	50.0	ND	98.8	60-140	16.5	25	
Surrogate: 1,2-Dichloroethane-d4	52.4		"	50.0		105	70-130			
Surrogate: Toluene-d8	45.5		"	50.0		91.0	70-130			



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #1871
Project Manager: Deanna Harding

Reported:
02/15/02 10:38

Notes and Definitions

M-04 MTBE was reported from second analysis.
P-01 Chromatogram Pattern: Gasoline C6-C12
P-02 Chromatogram Pattern: Weathered Gasoline C6-C12
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

GLOBAL ID# T0600101493

Chain-of-Custody-Record



TOSCO

Tosco Marketing Company
2020 Howe Canyon Pl., Ste. 400
San Ramon, CA 94583

Facility Number Tosco #1871
 Facility Address 96 MacArthur Blvd., Oakland, CA
 Consultant Project Number 180068
 Consultant Name Gettler-Ryan Inc. (G-R Inc.)
 Address 6747 SIERRA COURT, SUITE J, DUBLIN, CA 94568
 Project Contact (Name) Deanna L. Harding
 (Phone) 925-551-7555 (Fax Number) 925-551-7899

Contact (Name) MR. Dave DeWitt
 (Phone) 925-277-2384
 Laboratory Name Sequoia Analytical
 Laboratory Release Number _____
 Samples Collected by (Name) JOE ASEMIAN
 Collection Date 1-31-02
 Signature [Signature]

620005

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed															
								TOTX Gas - BTX (8016)	TOTX Gas - BTX w/MTBE (8009)	TPH Blend (8015)	Oil and Grease (8020)	Purgeable Hydrocarbons (8019)	Purgeable Aromatics (8023)	Purgeable Organics (8024)	Extractable Organics (8029)	Metals Cd, Cr, Pb, Zn, Ni (8048 or 8049)	(8) Oxys 5.54 8260						
TB-LB	01	1	VOA	W	G	-	HCL	Y	✓														
MW-1	02	3	VOA			1544			✓														
MW-6	03	"	"	"	"	1520			✓														
MW-7	04	"	"	"	"	1441			✓														
MW-8	05	"	"	"	"	1408			✓														
MW-9	06	5	VOA			1326			✓														
MW-10	07	"	"	"	"	1238			✓														
MW-11		"	"	"	"	1135			✓														

DO NOT BILL TB-LB ANALYSIS

Run MTBE by 8260 on all 8020 MTBE hits.

8 Oxys - MTBE, THA, DIPE, E11113, TAME, 1,2DCA, BDB, Ethanol

Relinquished By (Signature) [Signature]

Organization G-R Inc.

Date/Time 1-31-02

Received By (Signature) [Signature]

Organization _____

Date/Time 1/31/02

Relinquished By (Signature) _____

Organization _____

Date/Time _____

Received By (Signature) _____

Organization _____

Date/Time _____

Relinquished By (Signature) _____

Organization _____

Date/Time _____

Received For Laboratory By (Signature) _____

Date/Time _____

Turn Around Time (Circle Choice)

24 Hrs.
 48 Hrs.
 5 Days
 10 Days



NORTHERN CALIFORNIA SALES OFFICE • SPECIAL WASTE

Forward • Keller Canyon • Newby Island • Ox Mountain



ALLIED WASTE COMPANIES

Fax (925) 551-7888

April 8, 2002

Gettler-Ryan, Inc.
Clyde Galantine
6747 Sierra Court, Suite J
Dublin, CA 94568

Re: **FORWARD, INC.** Approval No. 1558
Contaminated Soil from
Former Tosco 96 MacArthur Blvd. - ss# 1871
OAKLAND, CA

Dear Mr. Galantine:

FORWARD, INC. is pleased to confirm the disposal of Five drums and 10.48 tons of bulk soil as referenced above. The material was received at our Manteca, California facility for disposal on January 18, March 20, 22 and 27, 2002. The material was placed in a Class 2 waste management unit.

Approval for this material was based on the information provided in the waste profile and associated materials submitted on behalf of Tosco Marketing Company (Generator). Acceptance of the waste is subject to the "Terms and Conditions" agreed to and signed by the Generator on the Waste Profile Form.

Thank you for the opportunity to be of service. Should you have any questions regarding this matter, please contact me or Customer Service at (800) 204-4242.

Sincerely,

FORWARD, INC.

Brad Bonner/jg

Brad J. Bonner
Sales Manager