KLEINFELDER

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PRELIMINARY REMEDIAL INVESTIGATION REPORT FORMER KING PETROLEUM PROPERTY ALAMEDA, CALIFORNIA

November 5, 1990

A Report Prepared for:

Mr. Clifford Mapes
and
Mr. Richard King

PRELIMINARY REMEDIAL INVESTIGATION REPORT FORMER KING PETROLEUM PROPERTY ALAMEDA, CALIFORNIA

Kleinfelder Job No. 10-2156-01

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1. SUMMARY

This report describes work conducted by Kleinfelder, Inc. (Kleinfelder) at the former King Petroleum site in Alameda, California. The site is located on the northwestern corner of the intersection of Versailles Avenue and Fernside Drive (Plate 1).

The site was a bulk petroleum product distribution facility that operated for more than 50 years. All above ground structures had been removed prior to any work being performed by Kleinfelder. Plate 2 indicates the former locations of buildings, tanks, sumps and other intra-structure as presented in earlier environmental reports supplied to Kleinfelder by the client.

Previous reports had indicated that ground water at the site was not contaminated. Because of concerns about the past site usage and evidence of petroleum staining and odors in shallow soils, Kleinfelder recommended a trenching and soil sampling program to evaluate soil with in the upper most ten feet.

For our investigation, ten trenches were excavated at several areas of concern on the site as indicated in Plate 3. Field activities were conducted in late July and August 1990. Soil and other trenching spoils were evaluated, logged, and sampled for chemical analysis. All work on site was overseen by a Kleinfelder geologist.

Soils were analyzed for several chemicals of concern using EPA-approved test methods. Summaries of analytical results are presented in Tables 1, 2 and 3.

This work was conducted in accordance with California State and local regulatory guidelines for preliminary Remedial Investigations at leaking underground storage tank sites.

The following sections present our conclusions and recommendations which are supported by the information contained in the remainder of the report.

2. RESULTS AND CONCLUSIONS

The following conclusions were developed and are presented based on the scope of services described in this report. Former site features, the locations of exploratory trenches, sampling points, and trenching logs are included as Plates 2 through 14, and may serve as a reference for the following conclusions:

1. Twelve of the 14 soil samples analyzed revealed variable levels of total petroleum hydrocarbons and the associated volatile aromatic compounds benzene, toluene, xylenes, and ethylbenzene (BTXE). Total petroleum hydrocarbons were quantified as gasoline, diesel, and oil.

2. Discolored blue-green soils were encountered in nine of the ten exploratory trenches from approximately three feet to nine feet below grade (the total depth explored). Discolored soils revealed hydrocarbon odors that varied from faint to very strong. Discolored soils were screened in the field using a photoionization detector (PID). This device quantifies total organic vapors above soils and has a resolution of one part per million (ppm). Typically, concentrations for the discolored soils ranged from approximately 10 ppm to greater than 2000 ppm (the upper limit of the device). Ground water was encountered locally at approximately nine feet below grade.

3. Soils encountered during trenching were typically well graded, unconsolidated, homogeneous clayey sands and silty sands of the Merritt Formation. Lateral and vertical changes in soil types were gradational. In general, moisture content and density of soils increased with depth. Clayey sands and silty sands encountered throughout the site are interpreted as being moderately to highly permeable, although in situ or bench-scale permeability testing was not included in this scope of services.

4. A 1000 gallon underground storage tank that had reportedly been removed was encountered at a depth of approximately 3 feet below grade during excavation of trench T-1. The top of the tank was inadvertently punctured by the teeth of the backhoe bucket. Approximately 5 to 10 gallons of liquid flowed from the top of the

tank. The liquid appeared to be water, although a sample was not collected for chemical analysis. The tank was immediately covered with dirt and the excavation was backfilled to reduce potential explosive hazards. A soil sample collected approximately six feet from the tank at a depth of approximately four feet contained 2,600 ppm diesel fuel; 260 ppm oil; 2,400 ppm total oil and grease; 2 parts per billion (ppb) benzene; and 6 ppb toluene. Very strong hydrocarbon odor and blue-green discolored soils were noted throughout Trench T-1.

6. Several trenches were excavated across a former tank vault that reportedly had contained two 10,000 gallon and two 8,000 gallon gasoline tanks, as well as one 8,000 gallon diesel tank (see trenches T-3, T-3a, and T-11). Soil samples collected in this area revealed up to 670 ppm gasoline; 320 ppm diesel; 20 ppm oil; 2,900 ppb benzene; 4 ppb toluene; 11,000 ppb xylenes; and 7,000 ppb ethylbenzene. Strong hydrocarbon odors and discolored blue-green soils were noted almost entirely across trenches T-3 and T-3a beginning at approximately three feet below grade. Soils logged from the southern half of Trench T-11 did not appear discolored or register on the field photoionization device. The soils encountered while trenching through the former tank vault were very similar to native soils encountered elsewhere on the site, with the exception of the uppermost 2 to 3 feet of fill material.

7. A soil sample collected from approximately 9 feet below grade in the area of the former 800 gallon spill tank (see trench T-2) did not contain detectable concentrations of total petroleum hydrocarbons or the aromatic hydrocarbons benzene, toluene, xylenes, and ethylbenzene (BTXE).

8. A north-south trending trench was excavated across the area formerly occupied by a large warehouse building (see trench T-7). A soil sample collected from approximately 5 feet below grade near the southern end of trench T-7 contained 1,100 ppm gasoline; 20 ppm diesel; 630 ppb benzene; 5,500 toluene; 63,000 ppb xylenes; and 14,000 ppb ethylbenzene. A soil sample collected from a depth of approximately 4.5 feet below grade near the former oil receptacle located near the northern end of T-7 contained 1,100 ppm gasoline, 6,100 ppm diesel, 1,200 ppm oil, 7,200 ppm oil and grease, 1,400 ppb xylenes, and 120 ppb ethylbenzene. Discolored soils revealing strong hydrocarbons odors were present throughout trench T-7 from depths of approximately two to nine feet below grade (the total depth explored).

9. Trench T-5 was excavated across the western end of the former warehouse. This area was historically used for drum and product storage, as well as for cleaning oily parts. Soil samples collected from depths of approximately 1.5 and 7.0 feet in trench T-5 revealed a maximum of 190 ppm gasoline; 280 ppm diesel; 30 ppm oil; 600 ppb xylenes; and 500 ppb ethylbenzene. Soils in this trench were strongly discolored and had a strong hydrocarbon odor. Discolored and odoriferous soils began at a depth of approximately 2.5 feet below grade and extended throughout the total depth of the trench. Should run 624 - 8240

10. Trench T-8 was excavated across the former concrete sump, pump house, and manifold lines located on the eastern end of the former warehouse building. A soil sample collected from a depth of approximately 7 feet below grade revealed 8,200 ppm gasoline; 520 ppm diesel; and 2,000 ppb xylenes. Extremely strong hydrocarbon odors were noted and soils were discolored to blue-green. The photoionization detector registered transient background readings up to 50 ppm total organic vapors at an elevation of six feet above grade adjacent to the trench.

11. Two trenches were excavated in the vicinity of the former above ground fuel storage tanks. Trench T-9 was excavated in a north-south orientation. Black organic-rich soil collected from a depth of approximately 1.0 foot below grade did not contain total petroleum hydrocarbons as oil and grease. However, a soil sample collected from a blue-green clayey sands at depth of approximately 7.5 feet below grade revealed 940 ppm gasoline; 880 ppm diesel; 490 ppb benzene; 1,700 ppb xylenes; and 2,300 ethylbenzene.

12. Trench T-10 was excavated in the vicinity of the northernmost former above ground fuel storage tanks. A shallow soil sample collected from a depth of 2.5 feet revealed 20 ppm gasoline. A sample collected from the northern wall of trench T-10 at a depth of approximately 8 feet revealed 110 ppm diesel, 600 ppm gasoline; and 30 ppm oil. Additionally, this sample contained polynuclear aromatic compounds (PNAs). These semivolatile compounds were identified using EPA Test Method 8270 and include 540 ppb flourene; 740 ppb 2-methylnaphthalene; and 430 ppb phenanthrene. The concentrations of these compounds exceed the California State Department of Health Services Applied Action Level (AAL) for human contact with soils. The AAL for these compounds in soils is 100 ppb. The AAL for these compounds in water is 20 ppb. A description of the AAL is included in section 6.3 of this report. This soil sample was collected in the northeastern-most part of the

property. Kleinfelder estimates that ground water flow (hydraulic gradient) is towards the northeast beneath the site. Based on this estimate, this sample was collected in the furthermost downgradient area of the site. It is possible that soil (and possibly ground water) contamination has migrated off site.

13. Eight of the 14 soil samples were analyzed for volatile organic compounds using EPA Test Method 8240. Aromatic hydrocarbon compounds commonly associated with gasoline were noted in significant concentrations. These compounds include benzene, toluene, xylenes, and ethylbenzene. Other volatile organic compounds, including halogenated hydrocarbon solvents, were not present at concentrations above analytical detection limits in any of the samples analyzed.

14. The historic high ground water level in the vicinity of the site was reportedly less than five feet below grade. (Harding-Lawson Associates, Subsurface Investigation, King Petroleum, Alameda, 1985). Contaminated soils appear to be nearly ubiquitous beneath the site in soils above the present water-bearing zone and below the historic high ground water level. Petroleum hydrocarbons and other associated compounds may have been mobilized and redistributed by fluctuating ground water levels. In addition to seasonal fluctuations, ground water levels beneath the site may be influenced by tidal action.

15. It is likely that numerous source areas for soil contamination existed both above and below ground at the site. These source areas may have included underground storage tanks, product pipelines, sumps, oil receptacles, above ground storage tanks, and above ground uncontained drum storage. In addition, surface disposal practices such as uncontained spray-down areas, tank overfilling and spillage, and fuel dispensing may also have contributed to the general degradation of soil quality beneath the site. The amount that one source impacted the soil versus another source is unknown at this time. It should be noted that source area characterization will be very difficult and costly. It does not appear that soil contamination described in this report is the result of an acute problem in one isolated area, but rather a site-wide chronic problem associated with over fifty years of industrial activity involving storage and distribution of petroleum hydrocarbons and other chemicals.

16. Soils beneath the site are considered hazardous materials based on the types and concentrations of chemicals detected during this investigation. The soils are

considered a potential secondary source for ground water contamination, and represent a possible threat to human health and the environment.

17. Soils analyzed for 13 priority pollutant metals did not reveal concentrations of metals above the Total Threshold Limit Concentrations (TTLC). Several soils revealed concentrations of metals above the Soluble Threshold Limit Concentrations (STLC). Sample 47721 collected from trench T-1 contained 67 ppm total chromium. It is unknown what percentage of total chromium is hexavalent chromium (chromium VI). Total chromium in this sample exceeds the STLC for chromium (VI) by more than a factor of ten.

3. RECOMMENDATIONS

The following recommendations were prepared based on our conclusions from the information described in this report.

1. The party or parties responsible for the existing underground 1000-gallon storage tank that was uncovered while trenching should be identified. The underground storage tank should be properly removed under permit by the responsible party. The contents, age, and integrity of the tank are unknown. Tank closure requires contracting with a firm experienced and licensed in tank removal and hauling. The tank will be considered hazardous waste and must be disposed of accordingly. Tank closures are typically overseen by Fire Department officials and personnel from the Alameda County Environmental Health Department, Hazardous Materials Division. Soil sampling will be required during tank closure, and should include analyses for total petroleum hydrocarbons as gasoline, diesel, waste oil, volatile organic compounds (EPA 8240), and Priority Pollutant Metals (CAM 17). Kleinfelder can provide you with the names of licensed firms in the area familiar with tank closures.

2. It is Kleinfelder's professional opinion that a ground water investigation is necessary at the site. We understand that a ground water investigation was conducted by Harding-Lawson Associates for Exxon Corporation beginning in the early 1980s. However, based on the magnitude and proximity of soil contamination to ground water, there is a strong likelihood that ground water beneath the site has been impacted by petroleum hydrocarbons. Previous ground water investigations may not have accurately or adequately defined the extent of ground water contamination. Also, site conditions may have changed during the past five years. These changes may include fluctuations in the level of ground water and the potential redistribution of the compounds of interest via chemical and physical forces. In addition, the extensive trenching, soil sampling, and analysis conducted within this investigation provide a database to evaluate "hot spots" and therefore provide for a

rationale to locate future ground water monitoring wells. This recommendation is based on the concentration of hydrocarbons and associated compounds detected in shallow soils directly overlying the first water-bearing zone. The ubiquitous nature of soil contamination beneath the site suggests that there may have been numerous sources of contamination. For this reason, several ground water monitoring wells may be necessary to characterize site hydrogeology and the areal and vertical distribution of hydrocarbons (if present) in ground water.

3. As defined in Title 22 of the California Administrative Code, most of the compounds identified in soils beneath the site are considered "hazardous materials". Because these compounds are in a soil matrix, the soil itself is considered a hazardous material. Many of the compounds detected in soils within this work have been identified as known or suspected carcinogens by the State of California Health and Welfare Agency, under the Safe Drinking Water and Toxic Enforcement Act of 1986. This Act is commonly referred to as Proposition 65.

4. The reporting requirements for sites with known releases of hazardous materials are incorporated under various different local, Federal and California State laws,. California State Assembly Bill 2185, Chapter 7, describes reporting of a "Release or Threatened Release of Hazardous Materials." Assembly Bill AB 2185 defines a "release" or "threatened release" as a "condition creating a substantial probability of harm, when the probability and potential extent of harm make it reasonably necessary to take immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment." It is Kleinfelder's professional opinion that such a condition exists at the subject property. A copy of AB 2185, Chapter 7 is included in the Appendix of this report. Additionally, under the California State Porter-Cologne Water Quality Control Act, discharge to land of a "hazardous material" is a reportable condition. Specifically, Chapter 4, Article 4, sub-chapter 13271 and 13272 of the Porter-Cologne Act states that "any person who, without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any water of the state, or discharged or deposited where it is, or probably will be, discharged in or on waters of the state, shall, as soon as (1) such person has knowledge of the discharge, (2) notification is possible, (3) notification can be provided without substantially impeding cleanup or other emergency measures notify the Office of Emergency Services..."

Under the circumstances described above, it would appear that notifying the Regional Water Quality Control Board is warranted at this time. Additionally, a copy of this report should be sent to the Alameda County Environmental Health Department, Hazardous Materials Unit.

5. Identifying the party (or parties) responsible for unauthorized discharge to land is a logical next step. We strongly recommend legal assistance from an attorney familiar with environmental law.

6. Ground water should be sampled and analyzed from the domestic well adjacent to the site. Analyses should include total petroleum hydrocarbons, volatile organic hydrocarbons, and priority pollutant metals. It is our understanding that the total depth of this well is approximately 30 feet and therefore the well probably drafts water from the first water-bearing zone.

7. Future soil analyses should include a Waste Extraction Test and analysis for Chromium (VI).

8. A secure fence should be placed around the perimeter of the property. The fence should have a locking gate and include "no trespassing" signs as well as Proposition 65 notifications. Smoking should not be permitted on the site.

4. BACKGROUND

4.1 SITE DESCRIPTION

The site is located in eastern Alameda near the Oakland-Alameda Estuary (Plate 1). The property was formerly used as a bulk petroleum product distribution center. Petroleum products on site reportedly included gasoline, diesel, oil, and other hydraulic fluid products. Additionally, solvents may have been used as a degreaser.

The site is currently vacant and all structures and other infrastructure have been removed. Former site structures and other salient site features include a warehouse and garage space, above ground and underground fuel storage tanks, product sumps, uncontained drum storage areas, manifold lines, and an oil receptacle (Plate 2).

It is our understanding that the site has been used for petroleum product distribution for approximately 50 years. According to Richard King, the property was originally developed by Chevron Oil in the 1930s. It is our understanding that Chevron Oil sold the property to the Exxon Corporation in 1968. Richard and Molly King leased the property from Exxon Corporation beginning at that time. Richard and Molly King purchased the property from Exxon in the mid 1980s. In 1990, Clifford E. Mapes, Inc. purchased the property from Mr. King. It is our understanding that 14 "duet" type houses are proposed for the site.

It is our understanding that all above ground structures were removed during the past 12 months. According to Mr. King, all underground storage tanks were reportedly removed prior to his purchasing the property.

It is our understanding that this site was under investigation by the Regional Water Quality Control Board, and that no further action was required based on the results of a Harding-Lawson Associcates ground water investigation concluded in 1985.

(NEED REPORT)

4.2 PURPOSE OF THIS STUDY

The objective of this study was to evaluate general soil quality beneath the site in several areas of concern. Previous environmental work conducted at the site suggested that the soil may have been impacted by former site activities although ground water was reportedly not affected. The extent and magnitude of soil contamination was unknown, and therefore was a primary concern prior to site development.

4.3 SCOPE OF WORK

The following work elements were conducted to assess the current environmental conditions in the shallow subsurface beneath the subject site:

- Observing the excavation by backhoe of 10 exploratory trenches to a depth of 8 to 10 feet. Soils from each trench were inspected and logged by a Kleinfelder hydrogeologist
- Collecting soil samples from the exploratory trenches for chemical analysis
- Chemical analysis of soils for compounds of concern using EPA-approved analytical test methods
- Evaluating field observations and analytical results
- Preparing this report.

5. FIELD OPERATIONS

5.1 TRENCHING OPERATIONS

A total of ten exploratory trenches were excavated in several areas of concern on the site using a Case 580 D extend-a-hoe backhoe. The locations of the trenches are shown on Plate 2. The backhoe was operated by personnel from R. R. Sheets Construction in El Sobrante, California, who was contracted directly by the client. The excavations were directed by a Kleinfelder hydrogeologist.

The location and orientation of the ten proposed trenches were slightly revised based on field conditions. Each trench, whether proposed or actual, was given a discrete trench number to reduce confusion. Proposed trenches 4 and 6 were not excavated. Trenches 11 and 3a were excavated at right angles to trench 3 to evaluate soil contamination in a north-south orientation (parallel to the estimated ground water flow direction).

Each trench was logged by Kleinfelder staff using Unified Soil Classification System nomenclature as well as other appropriate descriptors. The locations of the trenches are shown on Plate 3. Soil cuttings were screened in the field using a TIP photoionization detector to check for organic vapors. The TIP was calibrated daily to zero air and 100 parts per million isobutyldiene. The readings from the TIP are included on the trench logs.

Soils suspected of containing fuel hydrocarbons were stockpiled above grade and covered with plastic. The trenches were backfilled with clean, imported fill. None of the trenches were compacted to engineering specifications.

5.2 SOIL SAMPLING

Soil samples were collected from the backhoe bucket by driving a clean brass sample tube through the soil. In general, soils were collected from the sidewalls of the trenches. The sampling points were directed by the geologist based on field observations of soil

discoloration, odor, or detectable readings on the TIP. The sample locations were recorded on the trenching logs. Soil samples were sealed with Teflon tape, capped with plastic end caps, labelled, and immediately placed in refrigerated storage for preservation prior to chemical analysis. All soil samples were accompanied by a sampler's chain-of-custody control form to document sample handling. Copies of the Chain-of-Custody forms are included in the Appendix A.

6. CHEMICAL ANALYSIS

6.1 INTRODUCTION

A total of 14 soil samples collected during field activities were submitted to the analytical laboratory. All analyses were conducted by Med-Tox Associates, Inc. Laboratory, a California State-certified analytical laboratory located in Pleasant Hill, California.

6.2 ANALYTICAL METHODS

The following is a brief description of the analytical test methods conducted during this investigation:

- Total petroleum hydrocarbons as gasoline using EPA Test Method 8015 (purge and trap).
- Total petroleum hydrocarbons as diesel, kerosene, and oil using EPA Test Method 8015 (extraction)
- Total petroleum hydrocarbons as diesel, kerosene, and oil with a distinction for the volatile aromatic compounds benzene, toluene, xylenes, and ethylbenzene using a modified EPA Test Method 8015/8020.
- Volatile organic compounds using EPA Test Method 8240 (GC/MS).
- Semivolatile organic compounds using EPA Test Method 8270 (GC/MS).
- Total oil and grease and total hydrocarbons using DHS Test Method 503d/e (IR).

- Priority Pollutant Metals using CAM 13 (Inductively Coupled Argon Plasma (ICP) and Atomic Absorption (AA) spectroscopic methods.

Table 1 through 3 indicates the sample identification number, the trench from which the sample was collected the sample depth and the analysis results. A summary of the analytical data is shown in Tables 1 through 3. A complete copy of the laboratory analytical report and chain-of-custody documents are included in Appendix A.

7. DISCUSSION

Blue-gray soils encountered from approximately three to nine feet (the total depth explored) below grade beneath the site revealed variable levels of petroleum hydrocarbon compounds quantified as gasoline, diesel, oil, and the associated aromatic compounds benzene, toluene, xylenes, and ethylbenzene. Trenching locations and soil sampling points are shown on Plate 4. Included on Plate 4 are the analytical results for the above listed petroleum hydrocarbon compounds. Based on the analytical results and field observations, it appears that extensive petroleum hydrocarbon contamination exists in shallow soils beneath the site.

Seven soil samples were analyzed for Priority Pollutant metals using CAM 13 analytical protocols. An analytical summary is provided as Table 2. Priority pollutant metals are considered inorganic, persistent, and bioaccumulative toxic substances as defined in Title 22, subchapter 66699. Acceptable levels of these elements in soil and water were established by the Department of Health Services based on known toxicity data. Included on Table 2 are the soluble threshold limit concentration (STLC) and the total threshold limit concentration (TTLC). Soils containing priority pollutant metals in concentrations exceeding the TTLC are considered hazardous materials. The STLC evaluates the potential for leaching of the element over time. This "leaching potential" can be characterized using a Waste Extraction Test (WET). In general, if the actual concentration of the element in soils exceeds the STLC by a factor of ten, a Waste Extraction Test is necessary to determine if the soils should be characterized as hazardous materials.

The metallic elements silver, cadmium, mercury, antimony, and selenium were not present in soils in concentrations at or above analytical detection limits.

None of the 13 priority pollutant metals analyzed were present in concentrations greater than the TTLC. Zinc and beryllium were present in concentrations below the STLC. The remaining elements arsenic, chromium, copper, nickel, lead, thallium, and zinc were present at levels less than 10 times the STLC. It must be noted that the CAM 13 analysis

conducted for soils within this work quantified chromium as "total chromium." As with most metals, chromium exists under many different valence states or charges. One particularly toxic form of chromium is chromium (VI), or simply chromium that has a charge of plus 6. The STLC and TTLC for chromium (VI) is included in Table 2. Because it is unknown whether the total chromium detected in soils from this investigation is chromium (VI) or other valence states, at least one soil sample collected during future environmental work at the site should include a WET analysis to determine total chromium (VI). One of the seven soil samples collected and analyzed (47721) exceeded the STLC for chromium (VI) by greater than a factor of 10. This would only be a concern if the partition of total chromium as chromium IV exceeded specific limits for chromium IV.

The polynuclear aromatic compounds (PNAs) 2-methylnaphthalene (740 ppb), phenanthrene (430 ppb), and flourene (540 ppb) were detected in soils collected from a depth of eight feet in trench T-10 (Table 3). These concentrations exceed the Department of Health Services Applied Action Levels (AAL) for human contact with soils. The AAL for these compounds in soils is 100 ppb. The AAL for these compounds in water is 20 ppb.

AALs are criteria derived by the California Department of Health Services Toxic Substances Control Program. AALs should be used in conjunction with the California Site Mitigation Decision Tree (DHS, 1986) to assess the potential of health risks due to exposure to chemicals. AALs are specific for media of exposure (e.g., air, ground water, soil), receptor (e.g., fish, human) and health effect (e.g., carcinogen, pulmonary toxin).

The AALs for fluorene, napthalene and phenanthrene cited in this report are specific for assessing noncarcinogenic health effects relating to human exposure to soils affected with the particular compound. It should be noted that the condition where a chemical concentration in a (soil) sample exceeds the specific AAL does not necessarily imply a negative impact to human health. Human health impacts can only be quantified after the possible exposure to the chemical is quantified, as in a formal health risk assessment.

8. LIMITATIONS

This report was prepared in general accordance with the accepted standard of practice which exists in Northern California at the time the investigation was performed. It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact art. Judgements leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies. If the Client wishes to reduce the uncertainty beyond the level associated with this study, Kleinfelder should be notified for additional consultation.

Our firm has prepared this report for the Client's exclusive use for this particular project and in accordance with generally accepted engineering practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

TABLE 2

Analytical Summary - Soils
13 Priority Pollutant Metals
(Concentrations in mg/kg)*

Metalic Element	Sample Number 47700	47701	47712	47698	47707	47721	47703	STLC	TTLC
Silver	ND	ND	ND	ND	ND	ND	ND	5	500
Arsenic	5	3	ND	7	5	8	6	5	500
Beryllium	0.3	0.2	0.2	0.2	0.3	0.5	0.4	0.75	75
Cadmium	ND	ND	ND	ND	ND	ND	ND	1	100
Total Chromium	35	25	25	22	26	67	33	560	2500
Chromium (VI)	NT	NT	NT	NT	NT	NT	NT	5	500
Copper	15	10	39	6	6	46	21	25	2500
Mercury	ND	ND	ND	ND	ND	ND	ND	0.2	20
Nickel	40	9	8	11	15	59	42	20	2000
Lead	ND	8	3	3	ND	ND	ND	5.0	1000
Antimony	ND	ND	ND	ND	ND	ND	ND	15	500
Selenium	ND	ND	ND	ND	ND	ND	ND	1.0	100
Thallium	13	9	8	5	12	31	20	7.0	700
Zinc	20	10	21	7	12	31	24	250	500

STLC = Soluble Threshold Limit Concentration
TTLC = Total Threshold Limit Concentration
ND = Not detected at or above Analytical Detection Limits
NT = Not tested
* = Concentrations reported as mg/kg are approximately equal to parts per million

TABLE 1

Summary of Analytical Results - Soils
Total Petroleum Hydrocarbons and Volatile Organic Compounds

			Method 8015 (ppm)			EPA Test Method8240 (ppb)				DHS Test Method 503 d/e (ppm)
Sample #	Location	Depth[1]	TPH (gasoline)	TPH (diesel)	TPH (oil)	Benzene	Toluene	Total Xylenes	Ethylbenzene	Total Oil and Grease
47700	Trench 5	7.0	190	280	30	ND	ND	ND	ND	160
47701	Trench 5	1.5	NT	NT	NT	ND	ND	600	500	3,100
47712	Trench 7	4.5	1,100	6,100	1,200	ND	ND	ND	ND	7,200
47715	Trench 7	5.0	1,100	20	ND	630	5,500	63,000	14,000	50
47703	Trench 8	7.0	8,200	570	ND	ND	ND	2,000	ND	1,200
47699	Trench 9	7.5	940	880	ND	490	ND	1,700	2,300	NT
47698	Trench 9	1.0	NT	NT	NT	NT	NT	NT	NT	ND
47707	Trench 10	2.5	NT	NT	NT	NT	NT	NT	NT	20
47704	Trench 10	8.0	600	110	30	ND	ND	ND	ND	NT
47708	Trench 11	7.5	670	320	20	2,900	ND	11,000	7,000	NT
47721	Trench 1	4.0	ND	2,600	260	2	6	ND	ND	2,400
47702	Trench 2	9.0	NT	ND	ND	ND	ND	ND	ND	NT
47720	Trench 3	6.0	9.2	ND	ND	3	4	28	43	NT
47717	Trench 3a	4.0	0.2	ND	ND	ND	ND	5	1	NT

TPH = Total Petroleum Hydrocarbons (PPM)
ppm = Parts per million
ppb = Parts per billion
NT = Not tested
ND = None detected at or above analytical detection limits
1 = Approximate depth, feet below grade

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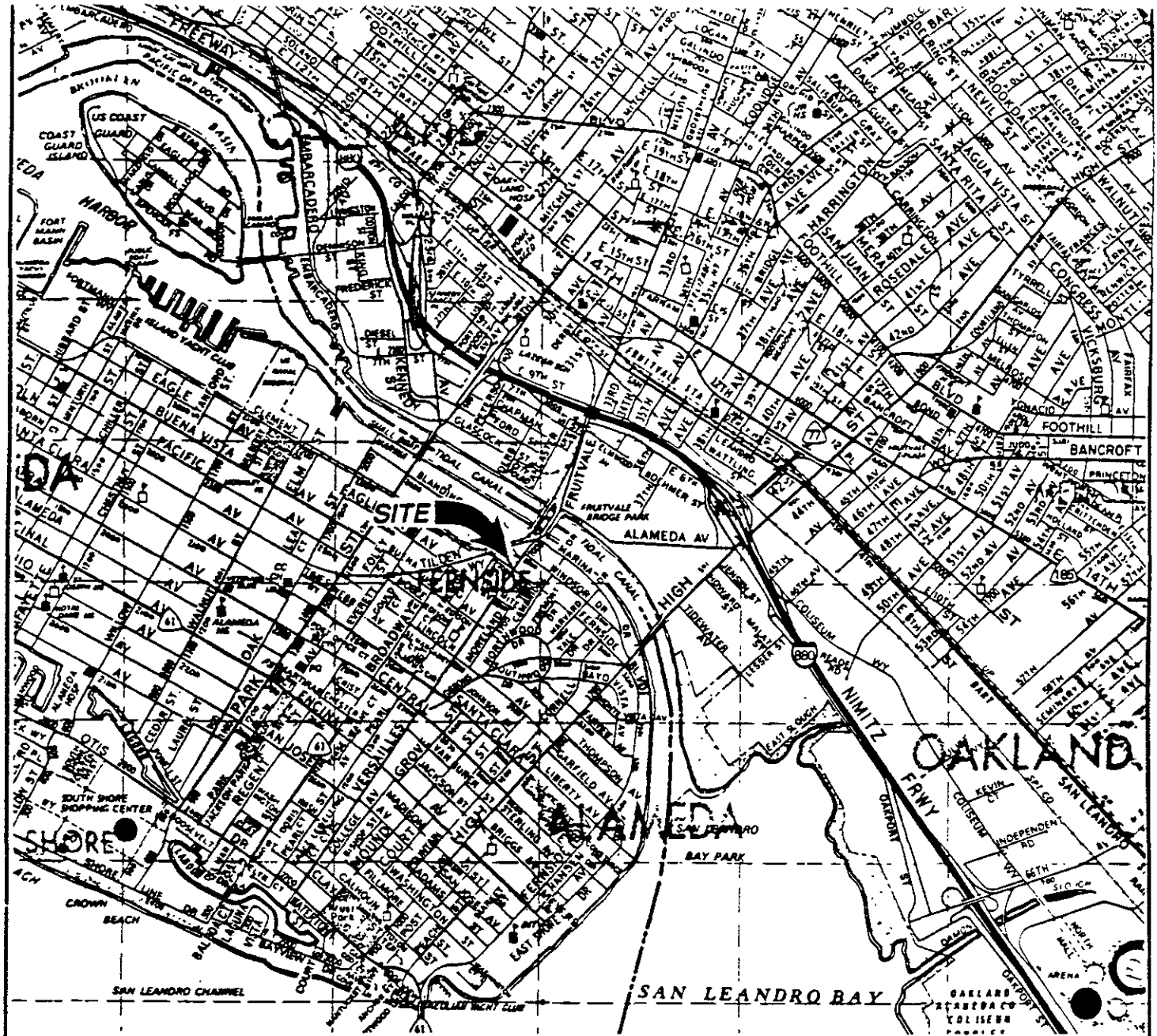
TABLE 3

Summary of Analytical Results - Soils
Semivolatile Organic Compounds
(EPA Test Method 8270)

Sample Number	Location	Depth	Flourene	2-Methylnapthalene	Phenanthrene	Other Method 8270 Compounds
47712	Trench 7	4.5	ND	ND	ND	ND
47703	Trench 8	7.0	ND	ND	ND	ND
47704	Trench 10	8.0	540 ppb	740 ppb	430 ppb	ND

ND = Not detected at or above analytical detection limits

ppb = Parts per billion ($\mu g/mg$)



Map modified from Thomas Bros. Guide, 1988

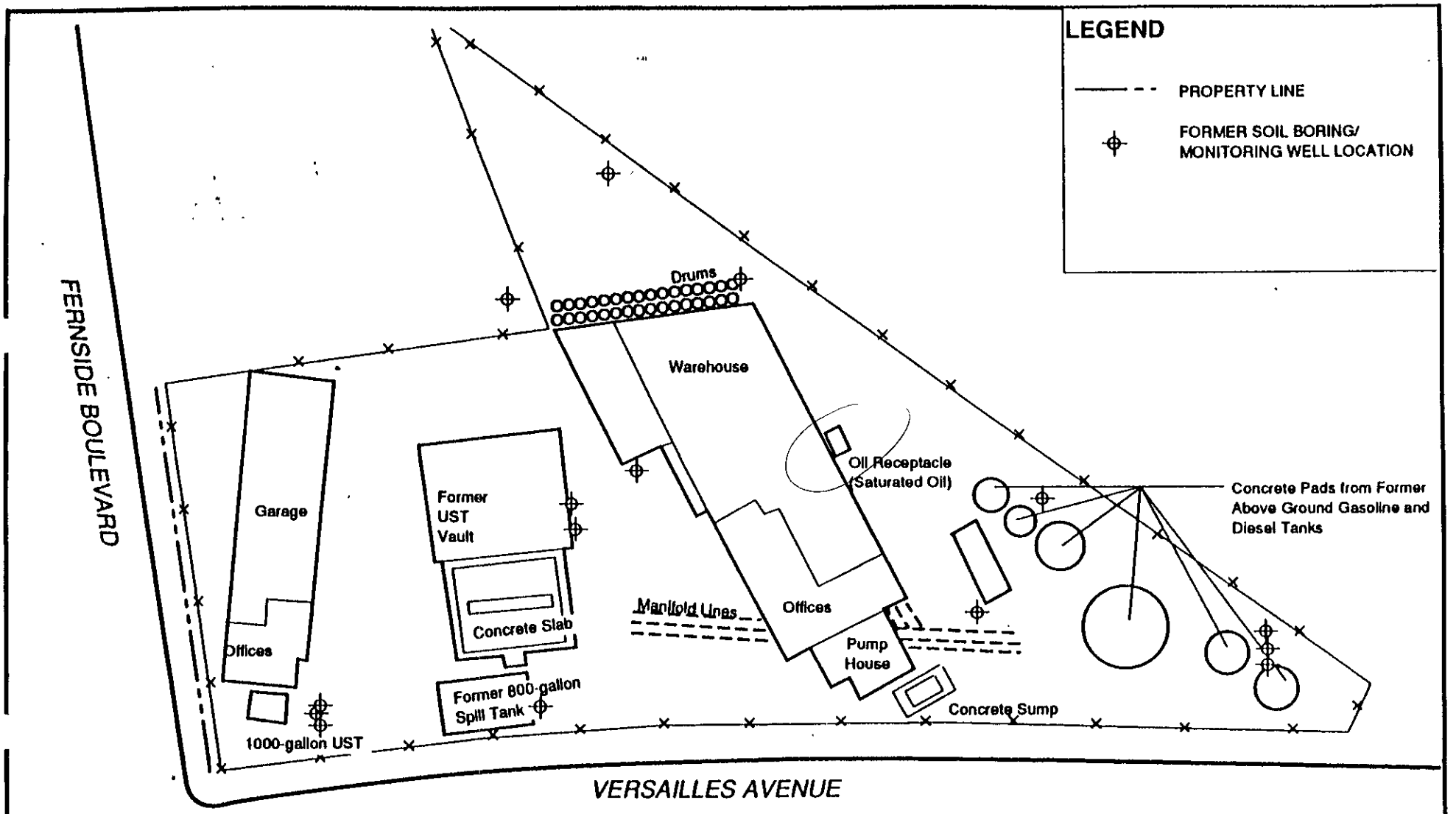
KLEINFELDER

PROJECT NO 10-2156-01

SITE LOCATION MAP

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PLATE 1



N

50 0 50

Approximate Scale (feet)

BASE MAP: Modified from Earth Metrics

KLEINFELDER

DRAFTED BY: L. Sue DATE: 8-21-90

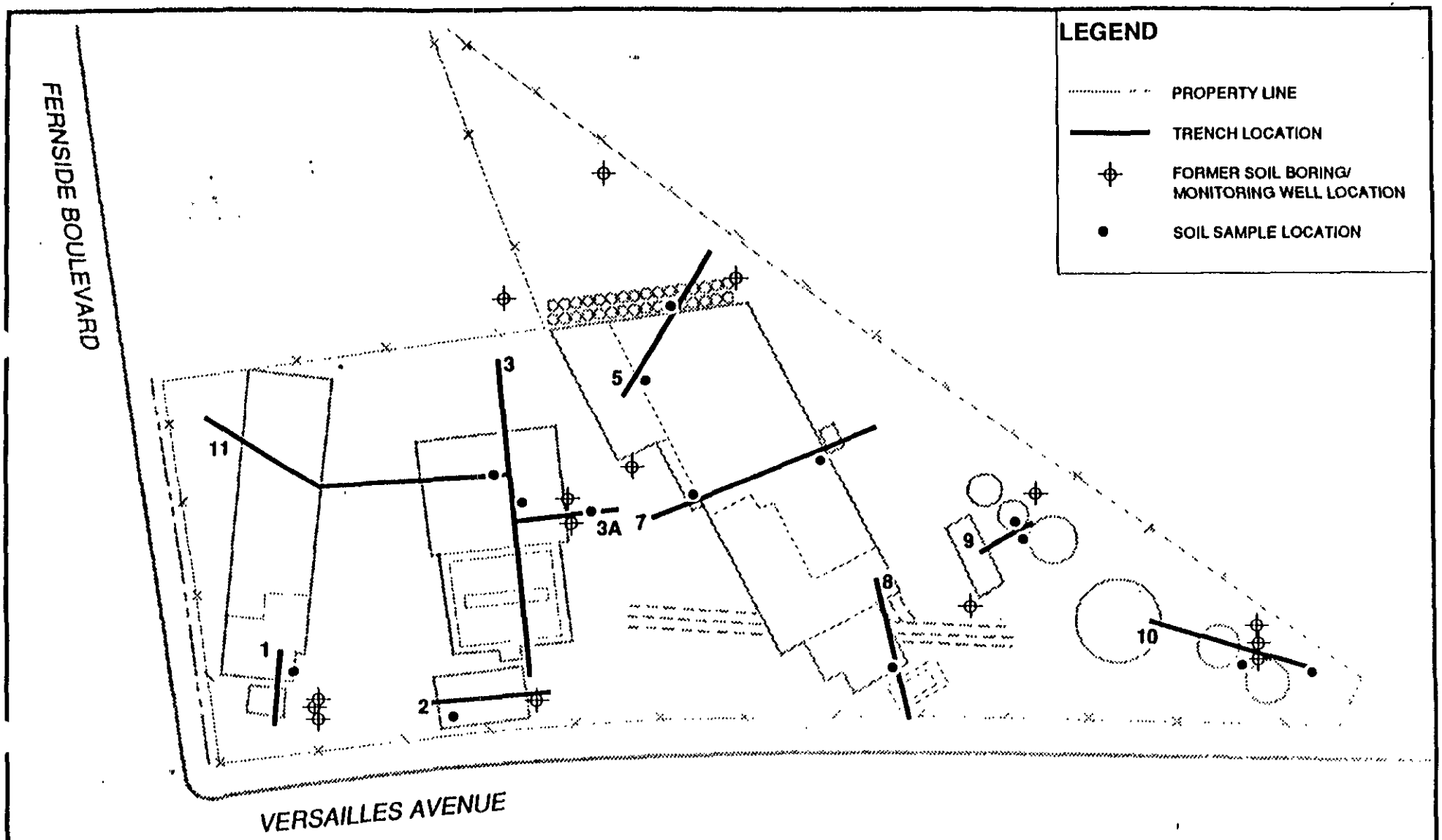
CHECKED BY: L. Larsen DATE: 8-22-90

SITE PLAN

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO 10-2156-01

PLATE 2



N

50 0 50

Approximate Scale (feet)

BASE MAP: *Modified from Earth Metrics*

KLEINFELDER

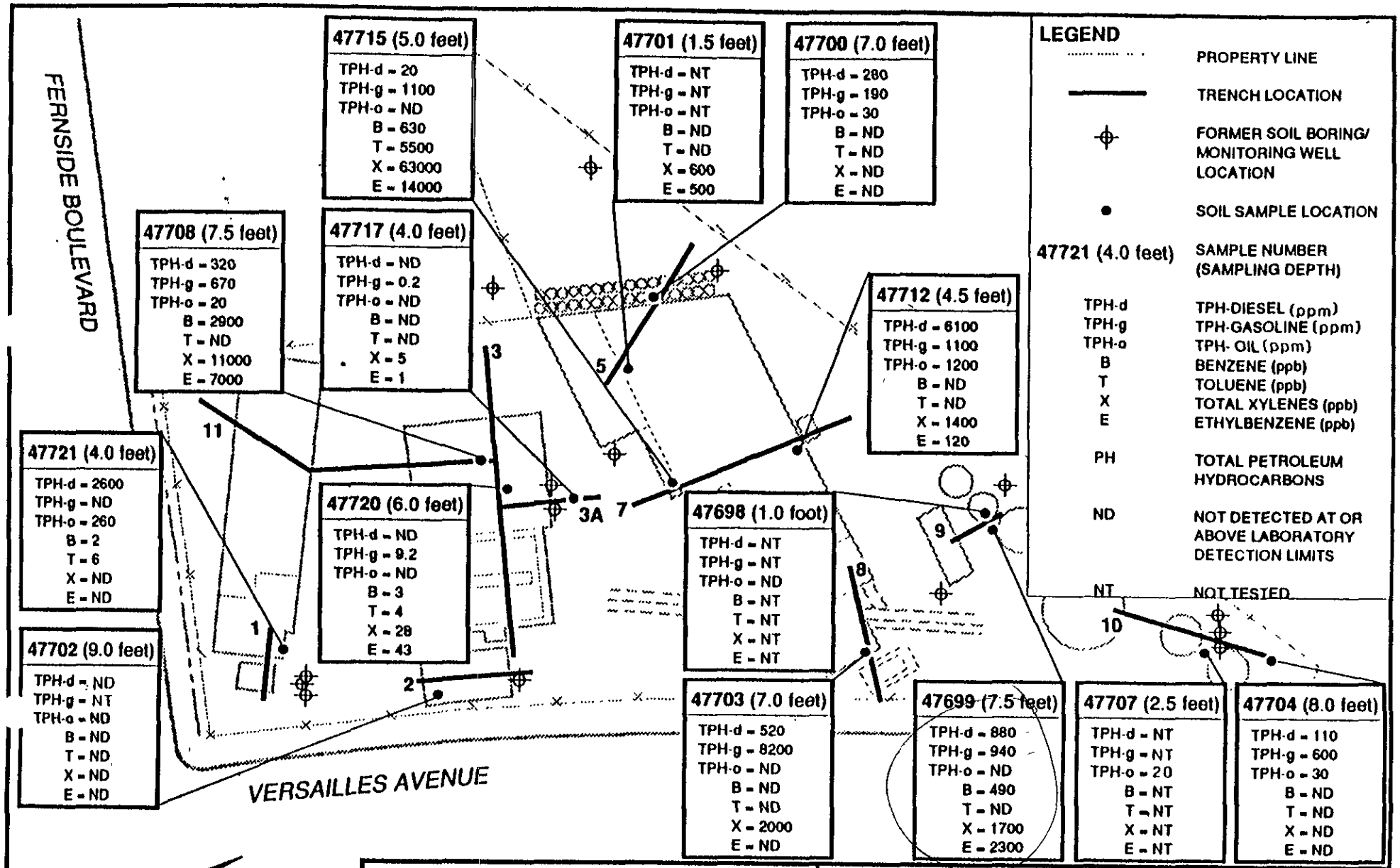
DRAFTED BY: L. Sue	DATE: 8-21-90	
CHECKED BY: L. Larsen	DATE. 8-22-90	

SITE PLAN WITH TRENCH AND SOIL SAMPLE LOCATIONS

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO 10-2156-01

PLATE 3



BASE MAP: *Modified from Earth Metrics*

KLEINFELDER

DRAFTED BY: L. Sue DATE: 8-21-90

CHECKED BY: L. Larsen DATE: 8-22-90

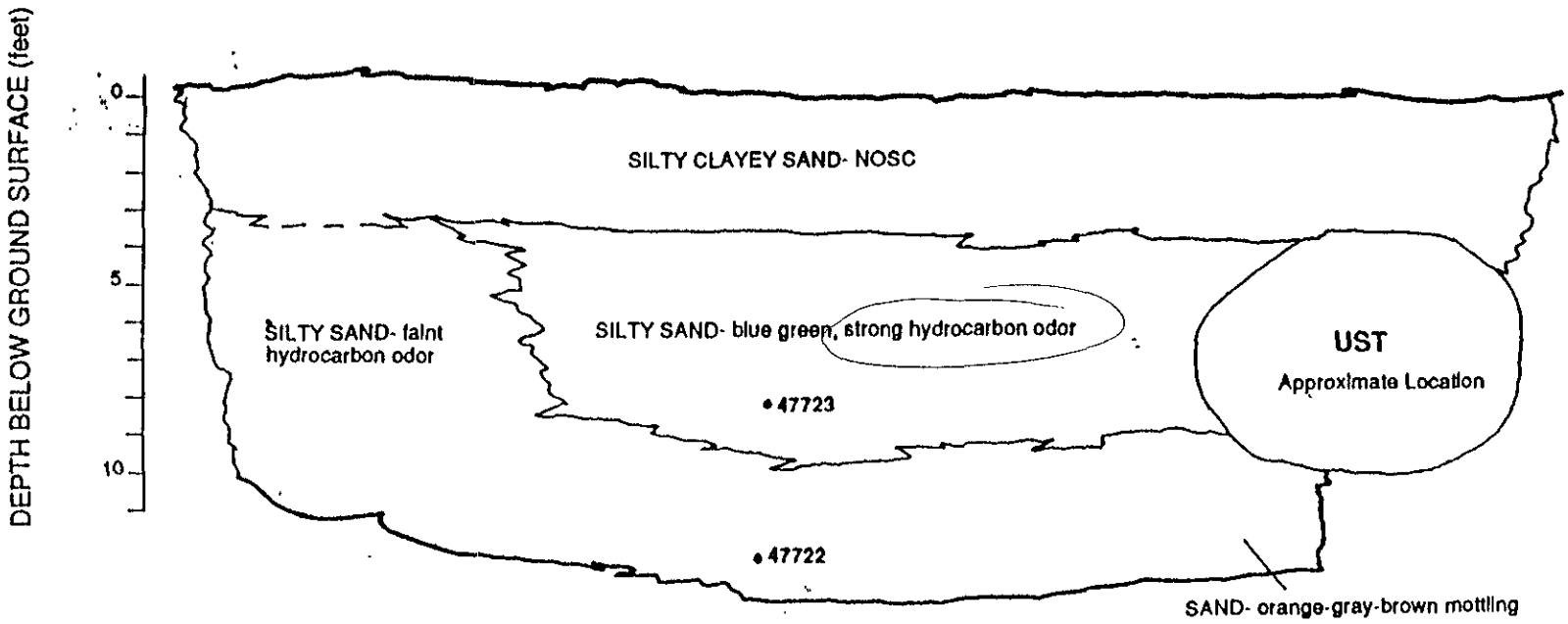
SAMPLING POINTS AND ANALYTICAL DATA

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE 4

VIEW TOWARDS SOUTH



LEGEND

• 47707	Soil Sample
NOSC	No odor, scent, or fluid cut
TIP	Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong	DATE: 8-21-90
CHECKED BY: L. Larsen	DATE: 8-23-90

TRENCH LOG T-1

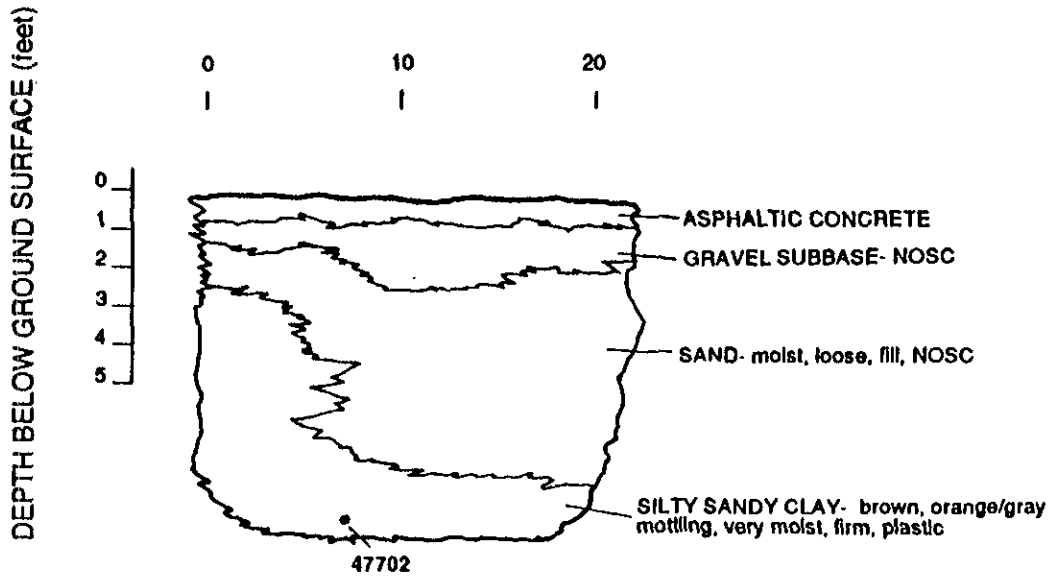
FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE

5

VIEW TOWARDS NORTHWEST



Soils do not have detectable hydrocarbon odor TIP= background

LEGEND

- ●47707 Soil Sample
- NOSC No odor, scent, or fluid cut
- TIP Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

CHECKED BY: L. Larsen DATE: 8-23-90

TRENCH LOG T-2

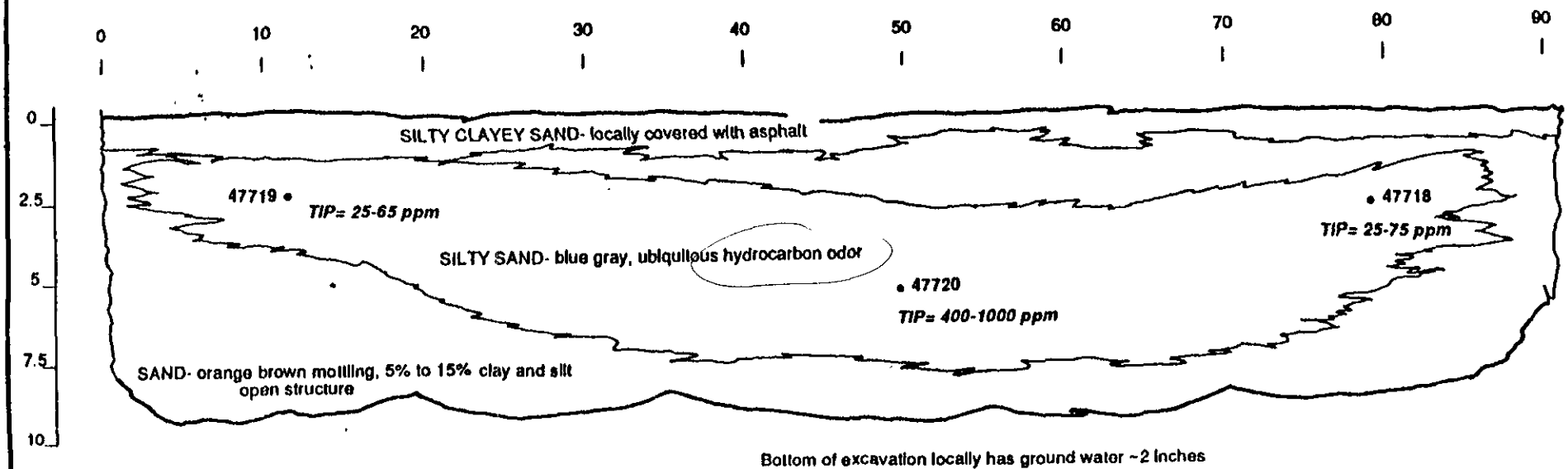
FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE

6

VIEW TOWARDS NORTH-NORTHEAST



LEGEND

• 47707	Soil Sample
NOSC	No odor, scent, or fluid cut
TIP	Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

CHECKED BY: L. Larsen DATE: 8-23-90

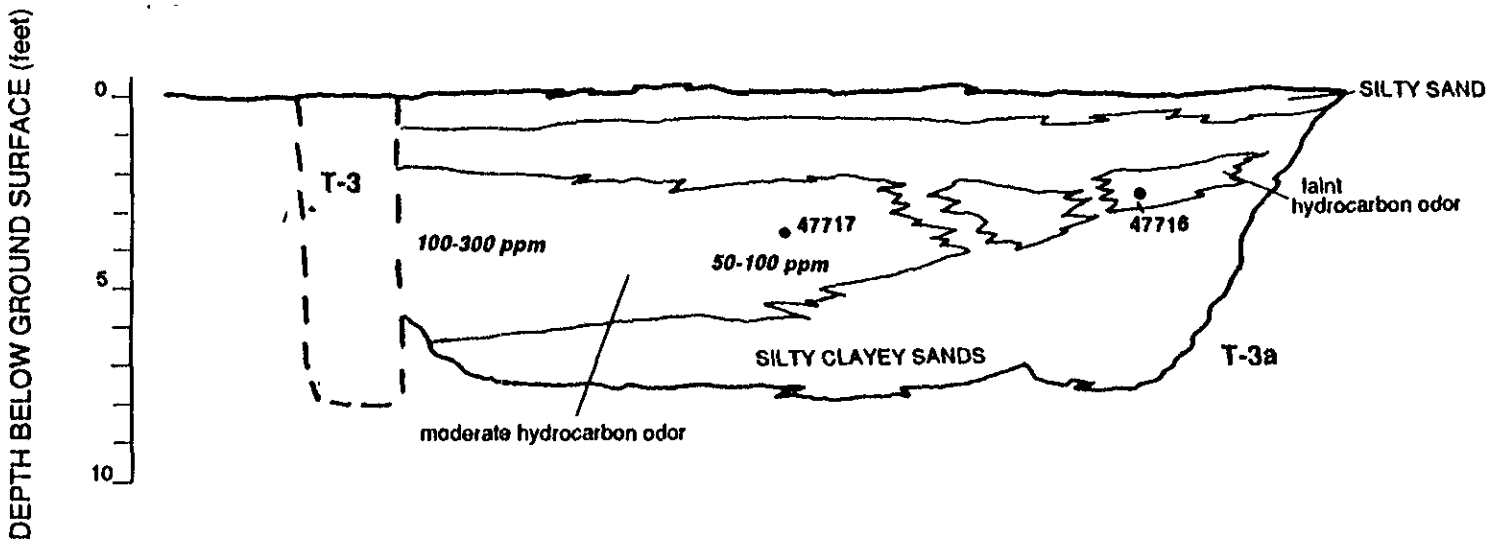
TRENCH LOG T-3

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE 7

VIEW TOWARDS WEST



LEGEND

•47707	Soil Sample
NOSC	No odor, scent, or fluid cut
TIP	Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

CHECKED BY: L. Larsen DATE 8-23 90

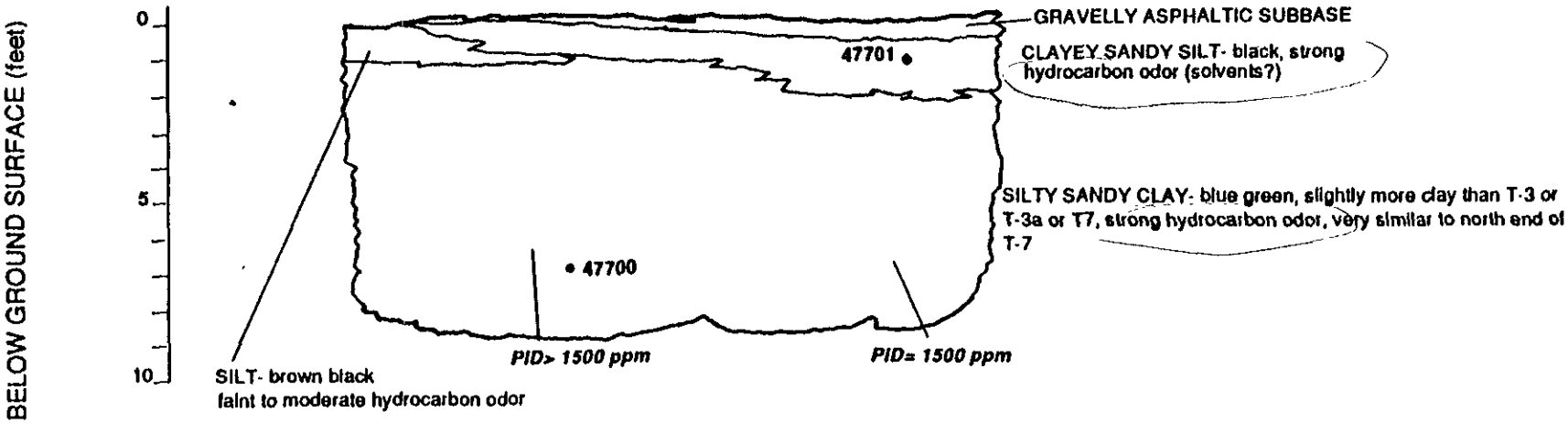
TRENCH LOG T-3A

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE 8

VIEW TO EAST/NORTHEAST



LEGEND

•47707	Soil Sample
NOSC	No odor, scent, or fluid cut
TIP	Total organic vapors (parts per million) measured by a photoionization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong	DATE: 8-21-90	
CHECKED BY: L. Larsen	DATE: 8-23-90	

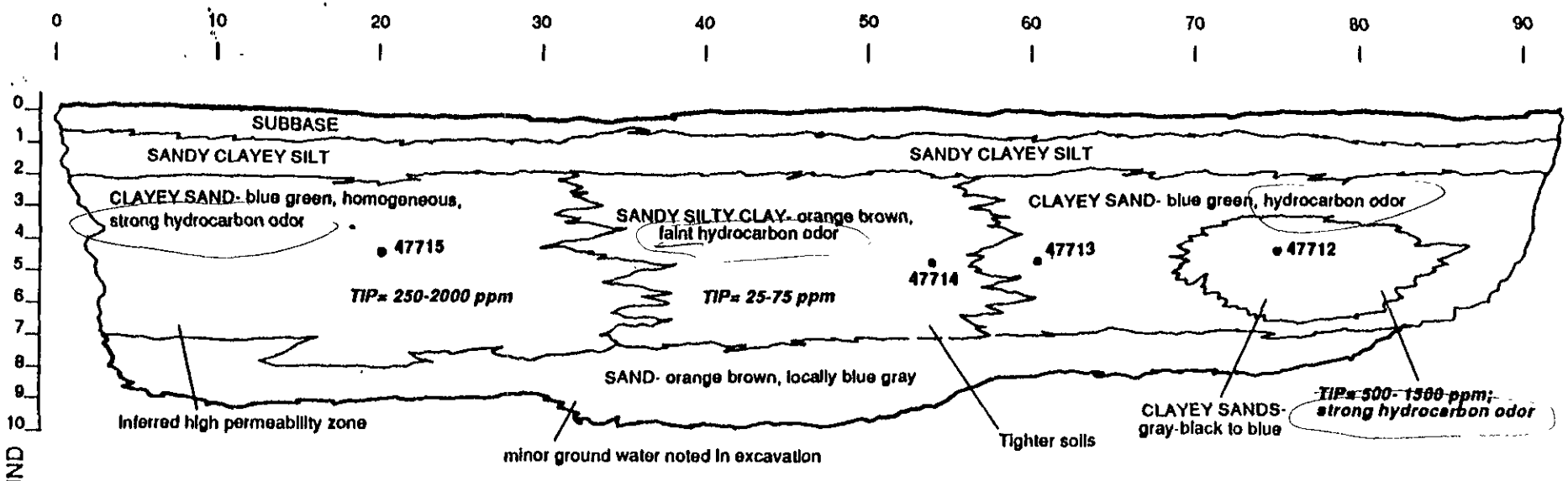
TRENCH LOG T-5

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO 10-2156-01

PLATE 9

VIEW TOWARDS WEST



LEGEND

- •47707 Soil Sample
- NOSC No odor, scent, or fluid cut
- *TIP* Total organic vapors (parts per million) measured by a photoionization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

CHECKED BY: L. Larsen DATE: 8-23-90

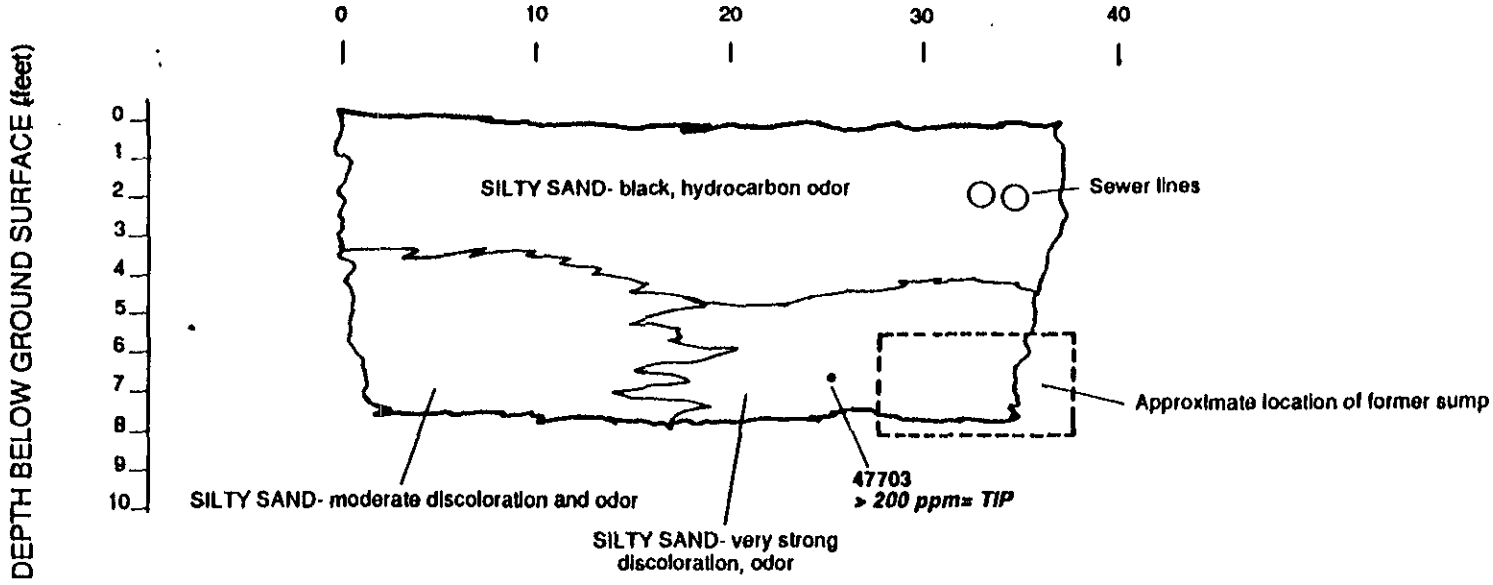
TRENCH LOG T-7

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO 10-2156-01

PLATE 10

VIEW TOWARDS NORTH



LEGEND

•47707 Soil Sample
NOSC No odor, scent, or fluid cut
TIP Total organic vapors (parts per million) measured by a photoionization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

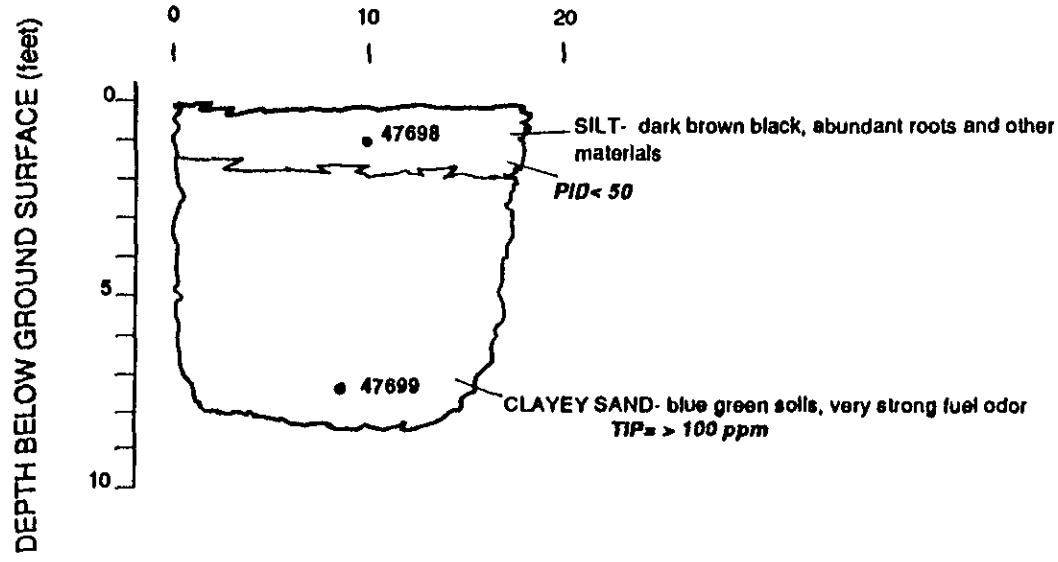
CHECKED BY: L. Larsen DATE: 8-23-90

TRENCH LOG T-8

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO 10-2156-01

PLATE 11



LEGEND

•47707	Soil Sample
NOSC	No odor, scent, or fluid cut
TIP	Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong	DATE: 8-21-90	
CHECKED BY: L. Larsen	DATE: 8-23-90	

TRENCH LOG T-9

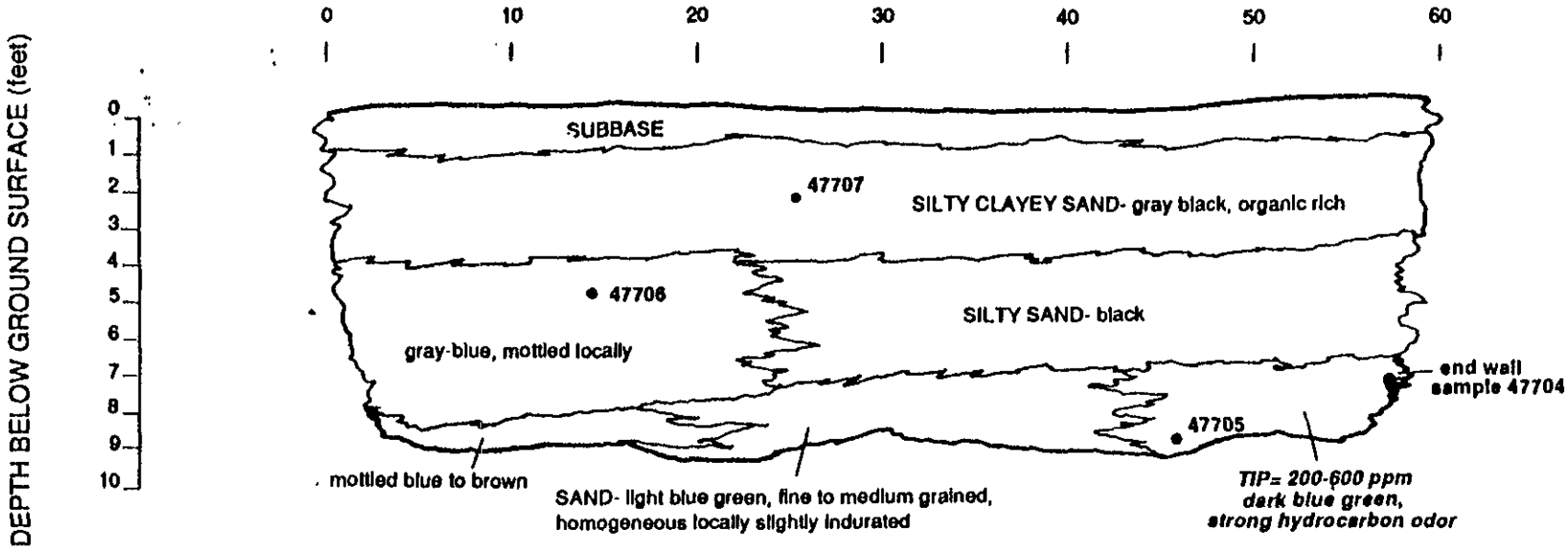
FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE

12

VIEW TOWARDS WEST



LEGEND

- • 47707 Soil Sample
- NOSC No odor, scent, or fluid cut
- *TIP* Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

CHECKED BY: L. Larsen DATE: 8-23-90

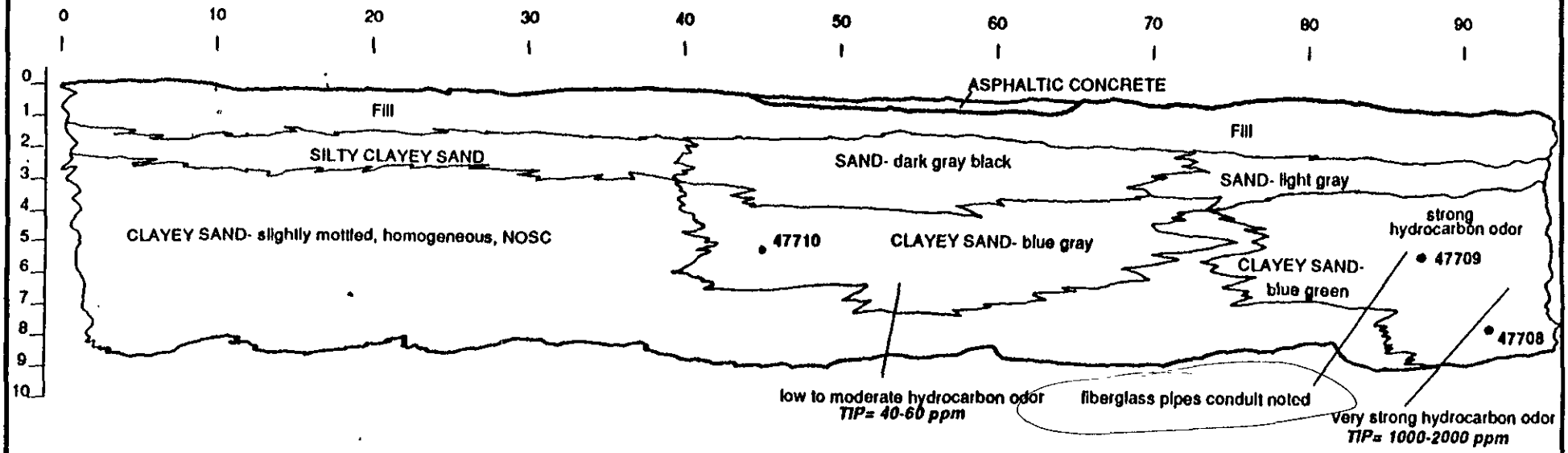
TRENCH LOG T-10

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE 13

VIEW TO WEST



DEPTH BELOW GROUND SURFACE (feet)

LEGEND

•47707 Soil Sample
NOSC No odor, scent, or fluid cut
TIP Total organic vapors (parts per million) measured by a photolonization device

5 feet

APPROXIMATE SCALE

10 feet

0

VERTICAL EXAGGERATION = 2X

KLEINFELDER

DRAFTED BY: J. Leong DATE: 8-21-90

CHECKED BY: L. Larsen DATE: 8-23-90

TRENCH LOG T-11

FORMER KING PETROLEUM PROPERTY
2001 VERSAILLES AVENUE
ALAMEDA, CALIFORNIA

PROJECT NO. 10-2156-01

PLATE 14

MED-TOX ASSOCIATES, INC.

ENVIRONMENTAL & OCCUPATIONAL HEALTH SERVICES

3440 Vincent Road Pleasant Hill, CA 94523 • (415) 930-9090 • FAX# (415) 930-0256

LABORATORY ANALYSIS REPORT

KLEINFELDER, INC.
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
ATTN: LANCE LARSON

REPORT DATE: 08/06/90

DATE SAMPLED: 07/31/90

DATE RECEIVED: 08/01/90

CLIENT ID NO: 10-2156-01

MED-TOX JOB NO: 9008001

ANALYSIS OF: SOIL SAMPLES

See attached for results

Michael Lynch, Manager
Organic Laboratory

Results FAXed to Lance Larson 08/03/90

KLEINFELDER, INC.

CLIENT ID: T35E47720
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 07/31/90
DATE RECEIVED: 08/01/90

REPORT DATE: 08/06/90

MED-TOX LAB NO: 9008001-01A
MED-TOX JOB NO: 9008001
DATE EXTRACTED: 08/02/90
DATE ANALYZED: 08/02/90
INSTRUMENT: 3, 9

BTXE AND HYDROCARBONS

METHOD: EPA 8020, 8015 MODIFIED (PURGE & TRAP AND EXTRACTION)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	3	1
Toluene	4	1
Ethylbenzene.	43	1
Total Xylenes	28	3
PURGEABLE HYDROCARBONS AS:		
Gasoline*	9.2 mg/kg	0.2 mg/kg
EXTRACTABLE HYDROCARBONS AS:		
Diesel	ND mg/kg	10 mg/kg
Oil	ND mg/kg	20 mg/kg

ND = Not Detected

* This sample appears to be 'weathered' gasoline.

KLEINFELDER, INC.

CLIENT ID: T14N47721
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 07/31/90
DATE RECEIVED: 08/01/90

REPORT DATE: 08/06/90

MED-TOX LAB NO: 9008001-02A
MED-TOX JOB NO: 9008001
DATE EXTRACTED: 08/02/90
DATE ANALYZED: 08/02/90
INSTRUMENT: 3, 9

BTXE AND HYDROCARBONS

METHOD: EPA 8020, 8015 MODIFIED (PURGE & TRAP AND EXTRACTION)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	2	1
Toluene	6	1
Ethylbenzene.	ND	50
Total Xylenes	ND	100
PURGEABLE HYDROCARBONS AS:		
Gasoline	ND mg/kg	40 mg/kg
EXTRACTABLE HYDROCARBONS AS:		
Diesel	2,600 mg/kg	10 mg/kg
Oil	260 mg/kg	20 mg/kg

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: T3a547717
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 07/31/90
DATE RECEIVED: 08/01/90

REPORT DATE: 08/06/90

MED-TOX LAB NO: 9008001-03A
MED-TOX JOB NO: 9008001
DATE EXTRACTED: 08/02/90
DATE ANALYZED: 08/02/90
INSTRUMENT: 3, 9

BTXE AND HYDROCARBONS

METHOD: EPA 8020, 8015 MODIFIED (PURGE & TRAP AND EXTRACTION)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene.	1	1
Total Xylenes	5	3
PURGEABLE HYDROCARBONS AS:		
Gasoline*	0.2 mg/kg	0.2 mg/kg
EXTRACTABLE HYDROCARBONS AS:		
Diesel	ND mg/kg	10 mg/kg
Oil . . .	ND mg/kg	20 mg/kg

ND = Not Detected

* This sample appears to be 'weathered' gasoline.

KLEINFELDER, INC.

CLIENT PROJECT NO: 10-2156-01

REPORT DATE: 08/31/90
DATE EXTRACTED: 08/08,14/90
DATE ANALYZED: 08/08-15/90
MED-TOX JOB NO: 9008019

Sample Identification Client Id.	Lab No.	Purgeable Hydrocarbons as Gasoline* (mg/kg)	Extractable Hydrocarbons as Diesel (mg/kg)	Extractable Hydrocarbons as Oil (mg/kg)	Total Oil & Grease (mg/kg)	Hydrocarbons (mg/kg)
47700T5	01A	190	280	30	160	160
47701T5	02A	---	---	---	3,100	3,100
47712T7	03A	1,100	6,100	1,200	7,200	7,200
47715T7	04A	1,100	20	ND	50	50
47703T8	05A	8,200	570	ND	1,200	1,200
47699T9	06A	940	880	ND	---	---
47698T9	07A	---	---	---	ND	ND
47707T10	08A	---	---	---	20	ND
47704T10	09A	600	110	30	---	---
47708T11	10A	670	320	20	---	---
47721T1	11A	---	---	---	2,400	2,200
Detection limit		0.2	10	20	10	10
Method		8015 (Modified)	8015 (Modified)	8015 (Modified)	SM503D	SM503E
Instrument		9	3	3	IR	IR

ND = Not Detected

* All purgeable hydorcarbon samples appear to contain a "weathered" gasoline

KLEINFELDER, INC.

CLIENT ID: 47700T5
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/03/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-01A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08-09/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	5000
Benzene	71-43-2	ND	300
Bromodichloromethane	75-27-4	ND	300
Bromoform	75-25-2	ND	300
Bromomethane	74-83-9	ND	500
2-Butanone	78-93-3	ND	5000
Carbon Disulfide	75-15-0	ND	500
Carbon Tetrachloride	56-23-5	ND	300
Chlorobenzene	108-90-7	ND	300
Chloroethane	75-00-3	ND	500
2-Chloroethyl Vinyl Ether	110-75-8	ND	500
Chloroform	67-66-3	ND	300
Chloromethane	74-87-3	ND	500
Dibromochloromethane	124-48-1	ND	300
1,1-Dichloroethane	75-34-3	ND	300
1,2-Dichloroethane	107-06-2	ND	300
1,1-Dichloroethene	75-35-4	ND	300
1,2-Dichloroethene, total	540-59-0	ND	300
1,2-Dichloropropane	78-87-5	ND	300
cis-1,3-Dichloropropene	10061-01-5	ND	300
trans-1,3-Dichloropropene	10061-02-6	ND	300
Ethylbenzene	100-41-4	ND	300
2-Hexanone	591-78-6	ND	3000
Methylene Chloride	75-09-2	ND	300
4-Methyl-2-pentanone	108-10-1	ND	3000
Styrene	100-42-5	ND	300
1,1,2,2-Tetrachloroethane	79-34-5	ND	300
Tetrachloroethene	127-18-4	ND	300
Toluene	108-88-3	ND	300
1,1,1-Trichloroethane	71-55-6	ND	300
1,1,2-Trichloroethane	79-00-5	ND	300
Trichloroethene	79-01-6	ND	300
Vinyl Acetate	108-05-4	ND	3000
Vinyl Chloride	75-01-4	ND	500
Xylenes, total	1330-20-7	ND	500

ND = Not Detected

MED-TOX ASSOCIATES, INC.

ENVIRONMENTAL & OCCUPATIONAL HEALTH SERVICES
3440 Vincent Road Pleasant Hill, CA 94523 • (415) 930-9090 • FAX# (415) 930-0256

LABORATORY ANALYSIS REPORT

KLEINFELDER, INC.
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
ATTN: LANCE LARSEN

REPORT DATE: 08/31/90

DATE SAMPLED: 07/31-08/03/90

DATE RECEIVED: 08/01-03/90

CLIENT PROJECT NO: 10-2156-01

MED-TOX JOB NO: 9008019

ANALYSIS OF: SOIL SAMPLES

See attached for results

Michael Lynch, Manager
Organic Laboratory

Results FAXed to Lance Larsen 08/17/90, 08/20/90, & 08/21/90

KLEINFELDER, INC.

CLIENT ID: 4770175
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/03/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-02A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	5000
Benzene	71-43-2	ND	300
Bromodichloromethane	75-27-4	ND	300
Bromoform	75-25-2	ND	300
Bromomethane	74-83-9	ND	500
2-Butanone	78-93-3	ND	5000
Carbon Disulfide	75-15-0	ND	500
Carbon Tetrachloride	56-23-5	ND	300
Chlorobenzene	108-90-7	ND	300
Chloroethane	75-00-3	ND	500
2-Chloroethyl Vinyl Ether	110-75-8	ND	500
Chloroform	67-66-3	ND	300
Chloromethane	74-87-3	ND	500
Dibromochloromethane	124-48-1	ND	300
1,1-Dichloroethane	75-34-3	ND	300
1,2-Dichloroethane	107-06-2	ND	300
1,1-Dichloroethene	75-35-4	ND	300
1,2-Dichloroethene, total	540-59-0	ND	300
1,2-Dichloropropane	78-87-5	ND	300
cis-1,3-Dichloropropene	10061-01-5	ND	300
trans-1,3-Dichloropropene	10061-02-6	ND	300
Ethylbenzene	100-41-4	500	300
2-Hexanone	591-78-6	ND	3000
Methylene Chloride	75-09-2	ND	300
4-Methyl-2-pentanone	108-10-1	ND	3000
Styrene	100-42-5	ND	300
1,1,2,2-Tetrachloroethane	79-34-5	ND	300
Tetrachloroethene	127-18-4	ND	300
Toluene	108-88-3	ND	300
1,1,1-Trichloroethane	71-55-6	ND	300
1,1,2-Trichloroethane	79-00-5	ND	300
Trichloroethene	79-01-6	ND	300
Vinyl Acetate	108-05-4	ND	3000
Vinyl Chloride	75-01-4	ND	500
Xylenes, total	1330-20-7	600	500

ND = Not Detected

KLEINFELDER

K-4 S-7

9008001

PROJ. NO.	PROJECT NAME	NO. OF CONTAINERS
10-7156-01	KING / MAPES ALAMEDA	Soils / Brass Tubes
LP NO (PO NO)	SAMPLERS (Signature/Number) [signature]	

ANALYSIS: TPH(G) + BTXE 8015/8020; TPH extractables

DATE MM/DD/YY	SAMPLE I.D. TIME HH MM SS	SAMPLE I.D.	NO. OF CONTAINERS	TPH(G)+BTXE 8015/8020	TPH extractables	REMARKS
						NOTE
7-31-90	T-3-5E	47720 9008001-01A		✓	✓	PLEASE QUANTIFY
						Extractables, as Diesel,
	T-1-4N	47721 02A		✓	✓	Kerosene, waste oil, or
						other
	T-3a-5	47717 03A		✓	✓	
						- Sample 47720 revealed
						>100 ppm on thalo...
						detector
						- 48 Hour Turn
7-31-90						time if possible

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/1/90 745	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
[signature]	8/1/90 0932	[signature]

Remarks: Accelerated 48 or 72 hr Turnaround Time

Lance Larson

Send Results To

KLEINFELDER
2121 N. CALIFORNIA BLVD
SUITE 570
WALNUT CREEK, CA 94596
(415) 938-5610

M 60 White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy

No.

CHAIN OF CUSTODY

KLEINFELDER, INC.

CLIENT ID: 47712T7
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-03A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	1000
Benzene	71-43-2	ND	50
Bromodichloromethane	75-27-4	ND	50
Bromoform	75-25-2	ND	50
Bromomethane	74-83-9	ND	100
2-Butanone	78-93-3	ND	1000
Carbon Disulfide	75-15-0	ND	100
Carbon Tetrachloride	56-23-5	ND	50
Chlorobenzene	108-90-7	ND	50
Chloroethane	75-00-3	ND	100
2-Chloroethyl Vinyl Ether	110-75-8	ND	100
Chloroform	67-66-3	ND	50
Chloromethane	74-87-3	ND	100
Dibromochloromethane	124-48-1	ND	50
1,1-Dichloroethane	75-34-3	ND	50
1,2-Dichloroethane	107-06-2	ND	50
1,1-Dichloroethene	75-35-4	ND	50
1,2-Dichloroethene, total	540-59-0	ND	50
1,2-Dichloropropane	78-87-5	ND	50
cis-1,3-Dichloropropene	10061-01-5	ND	50
trans-1,3-Dichloropropene	10061-02-6	ND	50
Ethylbenzene	100-41-4	120	50
2-Hexanone	591-78-6	ND	500
Methylene Chloride	75-09-2	ND	100
4-Methyl-2-pentanone	108-10-1	ND	500
Styrene	100-42-5	ND	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	50
Tetrachloroethene	127-18-4	ND	50
Toluene	108-88-3	ND	50
1,1,1-Trichloroethane	71-55-6	ND	50
1,1,2-Trichloroethane	79-00-5	ND	50
Trichloroethene	79-01-6	ND	50
Vinyl Acetate	108-05-4	ND	500
Vinyl Chloride	75-01-4	ND	100
Xylenes, total	1330-20-7	1,400	100

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47715T7
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-04A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08-14/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	5000
Benzene	71-43-2	630	300
Bromodichloromethane	75-27-4	ND	300
Bromoform	75-25-2	ND	300
Bromomethane	74-83-9	ND	500
2-Butanone	78-93-3	ND	5000
Carbon Disulfide	75-15-0	ND	500
Carbon Tetrachloride	56-23-5	ND	300
Chlorobenzene	108-90-7	ND	300
Chloroethane	75-00-3	ND	500
2-Chloroethyl Vinyl Ether	110-75-8	ND	500
Chloroform	67-66-3	ND	300
Chloromethane	74-87-3	ND	500
Dibromochloromethane	124-48-1	ND	300
1,1-Dichloroethane	75-34-3	ND	300
1,2-Dichloroethane	107-06-2	ND	300
1,1-Dichloroethene	75-35-4	ND	300
1,2-Dichloroethene, total	540-59-0	ND	300
1,2-Dichloropropane	78-87-5	ND	300
cis-1,3-Dichloropropene	10061-01-5	ND	300
trans-1,3-Dichloropropene	10061-02-6	ND	300
Ethylbenzene	100-41-4	14,000	300
2-Hexanone	591-78-6	ND	3000
Methylene Chloride	75-09-2	ND	300
4-Methyl-2-pentanone	108-10-1	ND	3000
Styrene	100-42-5	ND	300
1,1,2,2-Tetrachloroethane	79-34-5	ND	300
Tetrachloroethene	127-18-4	ND	300
Toluene	108-88-3	5,500	300
1,1,1-Trichloroethane	71-55-6	ND	300
1,1,2-Trichloroethane	79-00-5	ND	300
Trichloroethene	79-01-6	ND	300
Vinyl Acetate	108-05-4	ND	3000
Vinyl Chloride	75-01-4	ND	500
Xylenes, total	1330-20-7	63,000	500

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47703I8
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-05A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	10000
Benzene	71-43-2	ND	500
Bromodichloromethane	75-27-4	ND	500
Bromoform	75-25-2	ND	500
Bromomethane	74-83-9	ND	1000
2-Butanone	78-93-3	ND	10000
Carbon Disulfide	75-15-0	ND	1000
Carbon Tetrachloride	56-23-5	ND	500
Chlorobenzene	108-90-7	ND	500
Chloroethane	75-00-3	ND	1000
2-Chloroethyl Vinyl Ether	110-75-8	ND	1000
Chloroform	67-66-3	ND	500
Chloromethane	74-87-3	ND	1000
Dibromochloromethane	124-48-1	ND	500
1,1-Dichloroethane	75-34-3	ND	500
1,2-Dichloroethane	107-06-2	ND	500
1,1-Dichloroethene	75-35-4	ND	500
1,2-Dichloroethene, total	540-59-0	ND	500
1,2-Dichloropropane	78-87-5	ND	500
cis-1,3-Dichloropropene	10061-01-5	ND	500
trans-1,3-Dichloropropene	10061-02-6	ND	500
Ethylbenzene	100-41-4	ND	500
2-Hexanone	591-78-6	ND	5000
Methylene Chloride	75-09-2	ND	500
4-Methyl-2-pentanone	108-10-1	ND	5000
Styrene	100-42-5	ND	500
1,1,2,2-Tetrachloroethane	79-34-5	ND	500
Tetrachloroethene	127-18-4	ND	500
Toluene	108-88-3	ND	500
1,1,1-Trichloroethane	71-55-6	ND	500
1,1,2-Trichloroethane	79-00-5	ND	500
Trichloroethene	79-01-6	ND	500
Vinyl Acetate	108-05-4	ND	5000
Vinyl Chloride	75-01-4	ND	1000
Xylenes, total	1330-20-7	2,000	1000

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47699T9
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/03/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-06A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	1000
Benzene	71-43-2	490	50
Bromodichloromethane	75-27-4	ND	50
Bromoform	75-25-2	ND	50
Bromomethane	74-83-9	ND	100
2-Butanone	78-93-3	ND	1000
Carbon Disulfide	75-15-0	ND	100
Carbon Tetrachloride	56-23-5	ND	50
Chlorobenzene	108-90-7	ND	50
Chloroethane	75-00-3	ND	100
2-Chlcroethyl Vinyl Ether	110-75-8	ND	100
Chloroform	67-66-3	ND	50
Chloromethane	74-87-3	ND	100
Dibromochloromethane	124-48-1	ND	50
1,1-Dichloroethane	75-34-3	ND	50
1,2-Dichloroethane	107-06-2	ND	50
1,1-Dichloroethene	75-35-4	ND	50
1,2-Dichloroethene, total	540-59-0	ND	50
1,2-Dichloropropane	78-87-5	ND	50
cis-1,3-Dichloropropene	10061-01-5	ND	50
trans-1,3-Dichloropropene	10061-02-6	ND	50
Ethylbenzene	100-41-4	2,300	50
2-Hexanone	591-78-6	ND	500
Methylene Chloride	75-09-2	ND	50
4-Methyl-2-pentanone	108-10-1	ND	500
Styrene	100-42-5	ND	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	50
Tetrachloroethene	127-18-4	ND	50
Toluene	108-88-3	ND	50
1,1,1-Trichloroethane	71-55-6	ND	50
1,1,2-Trichloroethane	79-00-5	ND	50
Trichloroethene	79-01-6	ND	50
Vinyl Acetate	108-05-4	ND	500
Vinyl Chloride	75-01-4	ND	100
Xylenes, total	1330-20-7	1,700	100

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47704T10
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-09A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	5000
Benzene	71-43-2	ND	300
Bromodichloromethane	75-27-4	ND	300
Bromoform	75-25-2	ND	300
Bromomethane	74-83-9	ND	500
2-Butanone	78-93-3	ND	5000
Carbon Disulfide	75-15-0	ND	500
Carbon Tetrachloride	56-23-5	ND	300
Chlorobenzene	108-90-7	ND	300
Chloroethane	75-00-3	ND	500
2-Chloroethyl Vinyl Ether	110-75-8	ND	500
Chloroform	67-66-3	ND	300
Chloromethane	74-87-3	ND	500
Dibromochloromethane	124-48-1	ND	300
1,1-Dichloroethane	75-34-3	ND	300
1,2-Dichloroethane	107-06-2	ND	300
1,1-Dichloroethene	75-35-4	ND	300
1,2-Dichloroethene, total	540-59-0	ND	300
1,2-Dichloropropane	78-87-5	ND	300
cis-1,3-Dichloropropene	10061-01-5	ND	300
trans-1,3-Dichloropropene	10061-02-6	ND	300
Ethylbenzene	100-41-4	ND	300
2-Hexanone	591-78-6	ND	3000
Methylene Chloride	75-09-2	ND	300
4-Methyl-2-pentanone	108-10-1	ND	3000
Styrene	100-42-5	ND	300
1,1,2,2-Tetrachloroethane	79-34-5	ND	300
Tetrachloroethene	127-18-4	ND	300
Toluene	108-88-3	ND	300
1,1,1-Trichloroethane	71-55-6	ND	300
1,1,2-Trichloroethane	79-00-5	ND	300
Trichloroethene	79-01-6	ND	300
Vinyl Acetate	108-05-4	ND	3000
Vinyl Chloride	75-01-4	ND	500
Xylenes, total	1330-20-7	ND	500

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47708T11
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-10A
MED-TOX JOB NO: 9008019
DATE ANALYZED: 08/08-09/90
INSTRUMENT: 12

EPA METHOD 8240
GC/MS VOLATILE ORGANIC COMPOUNDS

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acetone	67-64-1	ND	5000
Benzene	71-43-2	2,900	300
Bromodichloromethane	75-27-4	ND	300
Bromoform	75-25-2	ND	300
Bromomethane	74-83-9	ND	500
2-Butanone	78-93-3	ND	5000
Carbon Disulfide	75-15-0	ND	500
Carbon Tetrachloride	56-23-5	ND	300
Chlorobenzene	108-90-7	ND	300
Chloroethane	75-00-3	ND	500
2-Chloroethyl Vinyl Ether	110-75-8	ND	500
Chloroform	67-66-3	ND	300
Chloromethane	74-87-3	ND	500
Dibromochloromethane	124-48-1	ND	300
1,1-Dichloroethane	75-34-3	ND	300
1,2-Dichloroethane	107-06-2	ND	300
1,1-Dichloroethene	75-35-4	ND	300
1,2-Dichloroethene, total	540-59-0	ND	300
1,2-Dichloropropane	78-87-5	ND	300
cis-1,3-Dichloropropene	10061-01-5	ND	300
trans-1,3-Dichloropropene	10061-02-6	ND	300
Ethylbenzene	100-41-4	7,000	300
2-Hexanone	591-78-6	ND	3000
Methylene Chloride	75-09-2	ND	300
4-Methyl-2-pentanone	108-10-1	ND	3000
Styrene	100-42-5	ND	300
1,1,2,2-Tetrachloroethane	79-34-5	ND	300
Tetrachloroethene	127-18-4	ND	300
Toluene	108-88-3	ND	300
1,1,1-Trichloroethane	71-55-6	ND	300
1,1,2-Trichloroethane	79-00-5	ND	300
Trichloroethene	79-01-6	ND	300
Vinyl Acetate	108-05-4	ND	3000
Vinyl Chloride	75-01-4	ND	500
Xylenes, total	1330-20-7	11,000	500

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47712T7
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-03A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 1

EPA METHOD 8270
SEMI-VOLATILE ORGANIC COMPOUNDS

GC/MS EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acenaphthene	83-32-9	ND	3300
Acenaphthylene	208-96-8	ND	3300
Anthracene	120-12-7	ND	3300
Benzidine	92-87-5	ND	16000
Benzoic Acid	65-85-0	ND	16000
Benzo(a)anthracene	56-55-3	ND	3300
Benzo(b)fluoranthene	205-99-2	ND	3300
Benzo(k)fluoranthene	207-08-9	ND	3300
Benzo(g,h,i)perylene	191-24-2	ND	3300
Benzo(a)pyrene	50-32-8	ND	3300
Benzyl Alcohol	100-51-6	ND	6600
Bis(2-chloroethoxy) methane	111-91-1	ND	3300
Bis(2-chloroethyl)ether	111-44-4	ND	3300
Bis(2-chloroisopropyl) ether	39638-32-9	ND	3300
Bis(2-ethylhexyl) phthalate	117-81-7	ND	3300
4-Bromophenyl phenyl ether	101-55-3	ND	3300
Butylbenzyl phthalate	85-68-7	ND	3300
4-Chloroaniline	106-47-8	ND	6600
2-Chloronaphthalene	91-58-7	ND	3300
4-Chlorophenyl phenyl ether	7005-72-3	ND	3300
Chrysene	218-01-9	ND	3300
Dibenzo(a,h)anthracene	53-70-3	ND	3300
Dibenzofuran	132-64-9	ND	3300
Di-n-butylphthalate	84-74-2	ND	3300
1,2-Dichlorobenzene	95-50-1	ND	3300

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47712T7
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-03A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 1

EPA METHOD 8270
GC/MS EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
1,3-Dichlorobenzene	541-73-1	ND	3300
1,4-Dichlorobenzene	106-46-7	ND	3300
3,3'-Dichlorobenzidine	91-94-1	ND	6600
Diethylphthalate	84-66-2	ND	3300
Dimethylphthalate	131-11-3	ND	3300
2,4-Dinitrotoluene	121-14-2	ND	3300
2,6-Dinitrotoluene	606-20-2	ND	3300
Di-n-octylphthalate	117-84-0	ND	3300
1,2-Diphenylhydrazine	122-66-7	ND	3300
Fluoranthene	206-44-0	ND	3300
Fluorene	86-73-7	ND	3300
Hexachlorobenzene	118-74-1	ND	3300
Hexachlorobutadiene	87-68-3	ND	3300
Hexachlorocyclopentadiene	77-47-4	ND	3300
Hexachloroethane	67-72-1	ND	3300
Indeno(1,2,3-cd)pyrene	193-39-5	ND	3300
Isophorone	78-59-1	ND	3300
2-Methylnaphthalene	91-57-6	ND	3300
Naphthalene	91-20-3	ND	3300
2-Nitroaniline	88-74-4	ND	16000
3-Nitroaniline	99-09-2	ND	16000
4-Nitroaniline	100-01-6	ND	16000
Nitrobenzene	98-95-3	ND	3300
N-nitrosodimethylamine	62-75-9	ND	3300
N-nitrosodiphenylamine	86-30-6	ND	3300
N-nitroso-di-n-propylamine	621-64-7	ND	3300
Phenanthrene	85-01-8	ND	3300
Pyrene	129-00-0	ND	3300
1,2,4-Trichlorobenzene	120-82-1	ND	3300

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47712T7
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-03A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 1

EPA METHOD 8270

GC/MS EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
4-Chloro-3-methylphenol	59-50-7	ND	3300
2-Chlorophenol	95-57-8	ND	3300
2,4-Dichlorophenol	120-83-2	ND	3300
2,4-Dimethylphenol	105-67-9	ND	3300
4,6-Dinitro-2-methylphenol	534-52-1	ND	16000
2,4-Dinitrophenol	51-28-5	ND	16000
2-Methylphenol	95-48-7	ND	3300
4-Methylphenol	106-44-5	ND	3300
2-Nitrophenol	88-75-5	ND	3300
4-Nitrophenol	100-02-7	ND	16000
Pentachlorophenol	87-86-5	ND	16000
Phenol	108-95-2	ND	3300
2,4,5-Trichlorophenol	95-95-4	ND	3300
2,4,6-Trichlorophenol	88-06-2	ND	3300

ND = Not Detected

Due to an apparent 'matrix effect', it was necessary to dilute this sample 10x to achieve adequate internal standard recovery. Reported detection limits have been adjusted accordingly.

KLEINFELDER, INC.

CLIENT ID: 47703T8
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-05A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 11

EPA METHOD 8270
SEMI-VOLATILE ORGANIC COMPOUNDS

GC/MS EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acenaphthene	83-32-9	ND	3300
Acenaphthylene	208-96-8	ND	3300
Anthracene	120-12-7	ND	3300
Benzidine	92-87-5	ND	16000
Benzoic Acid	65-85-0	ND	16000
Benzo(a)anthracene	56-55-3	ND	3300
Benzo(b)fluoranthene	205-99-2	ND	3300
Benzo(k)fluoranthene	207-08-9	ND	3300
Benzo(g,h,i)perylene	191-24-2	ND	3300
Benzo(a)pyrene	50-32-8	ND	3300
Benzyl Alcohol	100-51-6	ND	6600
Bis(2-chloroethoxy) methane	111-91-1	ND	3300
Bis(2-chloroethyl)ether	111-44-4	ND	3300
Bis(2-chloroisopropyl) ether	39638-32-9	ND	3300
Bis(2-ethylhexyl) phthalate	117-81-7	ND	3300
4-Bromophenyl phenyl ether	101-55-3	ND	3300
Butylbenzyl phthalate	85-68-7	ND	3300
4-Chloroaniline	106-47-8	ND	6600
2-Chloronaphthalene	91-58-7	ND	3300
4-Chlorophenyl phenyl ether	7005-72-3	ND	3300
Chrysene	218-01-9	ND	3300
Dibenzo(a,h)anthracene	53-70-3	ND	3300
Dibenzofuran	132-64-9	ND	3300
Di-n-butylphthalate	84-74-2	ND	3300
1,2-Dichlorobenzene	95-50-1	ND	3300

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47703T8
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-05A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 11

EPA METHOD 8270
GC/MS EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
1,3-Dichlorobenzene	541-73-1	ND	3300
1,4-Dichlorobenzene	106-46-7	ND	3300
3,3'-Dichlorobenzidine	91-94-1	ND	6600
Diethylphthalate	84-66-2	ND	3300
Dimethylphthalate	131-11-3	ND	3300
2,4-Dinitrotoluene	121-14-2	ND	3300
2,6-Dinitrotoluene	606-20-2	ND	3300
Di-n-octylphthalate	117-84-0	ND	3300
1,2-Diphenylhydrazine	122-66-7	ND	3300
Fluoranthene	206-44-0	ND	3300
Fluorene	86-73-7	ND	3300
Hexachlorobenzene	118-74-1	ND	3300
Hexachlorobutadiene	87-68-3	ND	3300
Hexachlorocyclopentadiene	77-47-4	ND	3300
Hexachloroethane	67-72-1	ND	3300
Indeno(1,2,3-cd)pyrene	193-39-5	ND	3300
Isophorone	78-59-1	ND	3300
2-Methylnaphthalene	91-57-6	ND	3300
Naphthalene	91-20-3	ND	3300
2-Nitroaniline	88-74-4	ND	16000
3-Nitroaniline	99-09-2	ND	16000
4-Nitroaniline	100-01-6	ND	16000
Nitrobenzene	98-95-3	ND	3300
N-nitrosodimethylamine	62-75-9	ND	3300
N-nitrosodiphenylamine	86-30-6	ND	3300
N-nitroso-di-n-propylamine	621-64-7	ND	3300
Phenanthrene	85-01-8	ND	3300
Pyrene	129-00-0	ND	3300
1,2,4-Trichlorobenzene	120-82-1	ND	3300

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47703T8
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-05A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 11

EPA METHOD 8270

GC/MS EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
4-Chloro-3-methylphenol	59-50-7	ND	3300
2-Chlorophenol	95-57-8	ND	3300
2,4-Dichlorophenol	120-83-2	ND	3300
2,4-Dimethylphenol	105-67-9	ND	3300
4,6-Dinitro-2-methylphenol	534-52-1	ND	16000
2,4-Dinitrophenol	51-28-5	ND	16000
2-Methylphenol	95-48-7	ND	3300
4-Methylphenol	106-44-5	ND	3300
2-Nitrophenol	88-75-5	ND	3300
4-Nitrophenol	100-02-7	ND	16000
Pentachlorophenol	87-86-5	ND	16000
Phenol	108-95-2	ND	3300
2,4,5-Trichlorophenol	95-95-4	ND	3300
2,4,6-Trichlorophenol	88-06-2	ND	3300

ND = Not Detected

Due to an apparent 'matrix effect', it was necessary to dilute this sample 10x to achieve adequate internal standard recovery. Reported detection limits have been adjusted accordingly.

KLEINFELDER, INC.

CLIENT ID: 47704T10
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-09A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 11

EPA METHOD 8270
SEMI-VOLATILE ORGANIC COMPOUNDS

GC/MS EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Acenaphthene	83-32-9	ND	330
Acenaphthylene	208-96-8	ND	330
Anthracene	120-12-7	ND	330
Benzidine	92-87-5	ND	1600
Benzoic Acid	65-85-0	ND	1600
Benzo(a)anthracene	56-55-3	ND	330
Benzo(b)fluoranthene	205-99-2	ND	330
Benzo(k)fluoranthene	207-08-9	ND	330
Benzo(g,h,i)perylene	191-24-2	ND	330
Benzo(a)pyrene	50-32-8	ND	330
Benzyl Alcohol	100-51-6	ND	660
Bis(2-chloroethoxy) methane	111-91-1	ND	330
Bis(2-chloroethyl)ether	111-44-4	ND	330
Bis(2-chloroisopropyl) ether	39638-32-9	ND	330
Bis(2-ethylhexyl) phthalate	117-81-7	ND	330
4-Bromophenyl phenyl ether	101-55-3	ND	330
Butylbenzyl phthalate	85-68-7	ND	330
4-Chloroaniline	106-47-8	ND	660
2-Chloronaphthalene	91-58-7	ND	330
4-Chlorophenyl phenyl ether	7005-72-3	ND	330
Chrysene	218-01-9	ND	330
Dibenzo(a,h)anthracene	53-70-3	ND	330
Dibenzofuran	132-64-9	ND	330
Di-n-butylphthalate	84-74-2	ND	330
1,2-Dichlorobenzene	95-50-1	ND	330

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47704T10
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-09A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 11

EPA METHOD 8270
GC/MS EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
1,3-Dichlorobenzene	541-73-1	ND	330
1,4-Dichlorobenzene	106-46-7	ND	330
3,3'-Dichlorobenzidine	91-94-1	ND	660
Diethylphthalate	84-66-2	ND	330
Dimethylphthalate	131-11-3	ND	330
2,4-Dinitrotoluene	121-14-2	ND	330
2,6-Dinitrotoluene	606-20-2	ND	330
Di-n-octylphthalate	117-84-0	ND	330
1,2-Diphenylhydrazine	122-66-7	ND	330
Fluoranthene	206-44-0	ND	330
Fluorene	86-73-7	540	330
Hexachlorobenzene	118-74-1	ND	330
Hexachlorobutadiene	87-68-3	ND	330
Hexachlorocyclopentadiene	77-47-4	ND	330
Hexachloroethane	67-72-1	ND	330
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330
Isophorone	78-59-1	ND	500
2-Methylnaphthalene	91-57-6	740	330
Naphthalene	91-20-3	ND	330
2-Nitroaniline	88-74-4	ND	1600
3-Nitroaniline	99-09-2	ND	1600
4-Nitroaniline	100-01-6	ND	1600
Nitrobenzene	98-95-3	ND	330
N-nitrosodimethylamine	62-75-9	ND	330
N-nitrosodiphenylamine	86-30-6	ND	330
N-nitroso-di-n-propylamine	621-64-7	ND	330
Phenanthrene	85-01-8	430	330
Pyrene	129-00-0	ND	330
1,2,4-Trichlorobenzene	120-82-1	ND	330

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47704T10
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/01/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-09A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/10/90
DATE ANALYZED: 08/12-15/90
INSTRUMENT: 11

EPA METHOD 8270

GC/MS EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
4-Chloro-3-methylphenol	59-50-7	ND	330
2-Chlorophenol	95-57-8	ND	330
2,4-Dichlorophenol	120-83-2	ND	330
2,4-Dimethylphenol	105-67-9	ND	330
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600
2,4-Dinitrophenol	51-28-5	ND	1600
2-Methylphenol	95-48-7	ND	330
4-Methylphenol	106-44-5	ND	330
2-Nitrophenol	88-75-5	ND	330
4-Nitrophenol	100-02-7	ND	1600
Pentachlorophenol	87-86-5	ND	1600
Phenol	108-95-2	ND	330
2,4,5-Trichlorophenol	95-95-4	ND	330
2,4,6-Trichlorophenol	88-06-2	ND	330

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47702T2
CLIENT JOB NO: 10-2156-01
DATE SAMPLED: 08/03/90
DATE RECEIVED: 08/03/90
REPORT DATE: 08/31/90

MED-TOX LAB NO: 9008019-12A
MED-TOX JOB NO: 9008019
DATE EXTRACTED: 08/15/90
DATE ANALYZED: 08/08-16/90
INSTRUMENT: 9,3

BTXE AND HYDROCARBONS

METHOD: EPA 8020, 8015 (PURGE & TRAP AND EXTRACTION)

	CONCENTRATION (ug/kg)	DETECTION LIMIT (ug/kg)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene.	ND	1
Xylenes	ND	3
EXTRACTABLE HYDROCARBONS AS:		
Diesel	ND mg/kg	10 mg/kg
Oil	ND mg/kg	20 mg/kg

ND = Not Detected

KLEINFELDER, INC.

CLIENT ID: 47700T5
CLIENT JOB NO: 10-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-01A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	5	3	6010	ICP
Be	Beryllium	0.3	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	35	6	6010	ICP
Cu	Copper	15	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	40	3	6010	ICP
Pb	Lead	ND	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	13	3	6010	ICP
Zn	Zinc	20	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER, INC.

CLIENT ID: 47701T5
CLIENT JOB NO: 10-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-02A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	3	3	6010	ICP
Be	Beryllium	0.2	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	25	6	6010	ICP
Cu	Copper	10	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	9	3	6010	ICP
Pb	Lead	8	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	9	3	6010	ICP
Zn	Zinc	10	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER, INC.

CLIENT ID: 47712T7
CLIENT JOB NO: 10-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-03A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	ND	3	6010	ICP
Be	Beryllium	0.2	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	25	6	6010	ICP
Cu	Copper	39	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	8	3	6010	ICP
Pb	Lead	3	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	8	3	6010	ICP
Zn	Zinc	21	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER, INC.

CLIENT ID: 47703T8
CLIENT JOB NO: J10-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-05A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	6	3	6010	ICP
Be	Beryllium	0.4	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	33	6	6010	ICP
Cu	Copper	21	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	42	3	6010	ICP
Pb	Lead	ND	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	20	3	6010	ICP
Zn	Zinc	24	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER, INC.

CLIENT ID: 47698T9
CLIENT JOB NO: 10-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-07A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	7	3	6010	ICP
Be	Beryllium	0.2	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	22	6	6010	ICP
Cu	Copper	6	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	11	3	6010	ICP
Pb	Lead	3	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	5	3	6010	ICP
Zn	Zinc	7	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER, INC.

CLIENT ID: 47707T10
CLIENT JOB NO: 10-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-08A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	5	3	6010	ICP
Be	Beryllium	0.3	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	26	6	6010	ICP
Cu	Copper	6	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	15	3	6010	ICP
Pb	Lead	ND	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	12	3	6010	ICP
Zn	Zinc	12	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER, INC.

CLIENT ID: 47721T1
CLIENT JOB NO: 40-2156-01
DATE RECEIVED: 08/03/90

MED-TOX LAB NO: 9008019-11A
MED-TOX JOB NO: 9008019
REPORT DATE: 08/31/90

PRIORITY POLLUTANT METALS

CODE	METAL	CONCENTRATION (mg/kg)	DETECTION LIMIT (mg/kg)	METHOD REFERENCE	INST.*
Ag	Silver	ND	0.2	6010	ICP
As	Arsenic	8	3	6010	ICP
Be	Beryllium	0.5	0.1	6010	ICP
Cd	Cadmium	ND	0.2	6010	ICP
Cr	Chromium	67	6	6010	ICP
Cu	Copper	46	1	6010	ICP
Hg	Mercury	ND	0.2	7471	Hg
Ni	Nickel	59	3	6010	ICP
Pb	Lead	ND	2	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	ND	2	6010	ICP
Tl	Thallium	31	3	6010	ICP
Zn	Zinc	31	2	6010	ICP

ND = Not Detected

* INST. = Instrument Number

KLEINFELDER

R-4, 8-E

700819

PROJ. NO	PROJECT NAME
10.215601	KING / MARES
L.P. NO (P.O. NO)	SAMPLERS (Signature/Number)

DATE MM/DD/YY	SAMPLE ID TIME HH.MM SS	SAMPLE ID		BTEX NO OF CONTAINERS	ANALYSIS: TPH(G) 8015	TPH extractables 8015	TPH diesel + extractables 8015	Volatile Organics 8240	Semivolatiles 8270	0&G 5030 E-A	Priority Pollutant Metals (17)	REMARKS
8-3-90	T-5	47700	01A'	1	✓	✓		✓		✓	✓	Please quantify TPH extractables as oil, diesel, kerosene, etc. Also please note if gasoline is weathered or unweathered
	T-5	47701	02A	1				✓		✓	✓	
				1								
8-1-90	T-7	47712	03A'	1	✓	✓		✓	✓	✓	✓	
8-1-90	T-7	47715	04A	1	✓	✓		✓		✓		
8-1-90	T-8	47703	05A'	1	✓	✓		✓	✓	✓	✓	
8-3-90	T-9	47699	06A	1	✓	✓		✓				
8-3-90	T-9	47698	07A	1						✓	✓	
8-1-90	T-10	47707	08A'	1						✓	✓	
8-1-90	T-10	47704	09A'	1	✓	✓		✓	✓			
8-1-90	T-11	47708	10A'	1	✓	✓		✓				
7-31-90	T-1	47721 (Delivered 9-1-90)	11A							✓	✓	-MedTox has this sample
8-3-90	T-2	47702	12A				✓					

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	8-3-90 1659	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	8/3/90 1800	

Remarks

STANDARD T.A.T.

Please FAX Prelim Results and Finals to Lance Larson

Send Results To

KLEINFELDER
2121 N. CALIFORNIA BLVD.
SUITE 570
WALNUT CREEK, CA 94596
(415) 938-5610

M 60 White Sample Canary Return Copy To Shipper Pink Lab Copy

No. 0075

E. Hazardous Materials Storage, Handling and Emergency Response Planning

1. Introduction

The model Hazardous Materials Storage Ordinance (the HMSO, described in Subchapter II.B, *supra*) is the first in a growing series of enactments that require facilities to report inventories of regulated hazardous materials onsite. Typically, these inventory reports are intended to serve several purposes: to inform emergency response agencies (firefighters, etc) of the potential hazards in responding to emergencies at such sites; and/or to assist such agencies in planning their emergency response activities; and/or to provide the public with information about neighboring facilities that pose potential hazards to community health and safety (public "right to know").

These initiatives were accelerated greatly after the toxic gas disaster in Bhopal, India in December 1984. Domestically, this disaster (and a near-repeat at Union Carbide's twin plant at Institute, West Virginia) focused public attention on the hazards associated with the use of toxic chemicals that might produce deadly toxic gas clouds in the event of onsite accidents. This attention produced a flurry of governmental attacks on the problem—much as Love Canal spawned programs to prevent and clean up chronic toxic contamination of drinking water and soil (*see* Chapter VII of this Manual).

At the state level over the past seven years, California has adopted a series of inventory and emergency response planning laws. The first statewide piece was the UST regulatory program described above in Subchapter C, which derived from focused concern that underground releases would contaminate drinking water supplies. Health & Safety Code sec. 25280 *et seq.* In 1985 the Legislature adopted the Waters Bill (AB 2185), which incorporated into state law the hazardous materials inventory requirements of the model HMSO and, in the wake of the Bhopal disaster, assigned additional emergency response planning requirements to businesses and local governments. Health & Safety Code sec. 25500 *et seq.*

The La Follette Bill (AB 3777) of 1986 marks the California Legislature's primary response to Bhopal. Health & Safety Code sec. 25531 *et seq.* This legislation creates a new set of "acutely hazardous materials (AHM)" which are capable of producing offsite harm from a storage or handling accident, and establishes requirements for Risk Management and Prevention Programs involving AHM.

Also in 1986, the United States Congress adopted the "Emergency Preparedness and Community Right-to-Know Act of 1986," as Title III to the Superfund Amendments and Reauthorization Act of 1986—SARA Title III. 42 U.S.C. sec. 11001 *et seq.* SARA Title III establishes several distinct sets of reporting and emergency planning requirements, all of which overlap California's provisions.

In addition, a host of other local, state, and national efforts also address handling and storage of acutely toxic chemicals, and the health and safety implications of allowing these uses near populated areas. The subchapters below describe regional, state, and local level efforts through fire and building codes. Some of these efforts complement one another, while others conflict.

2. Waters Bill (AB 2185 et al)

The Legislature first adopted statewide requirements for hazardous material inventory reporting and release planning in 1985 when AB 2185 (Waters) added chapter 6.95 to the Health and Safety Code, captioned "Hazardous Materials Release Response Plans and Inventory." Health & Safety Code sec. 25500 *et seq.*; 1985 Cal. Stat. 1167. In adopting AB 2185, the Legislature made a number of findings and declarations, including the following:

> "Basic information on the location, type, quantity, and the health risks of hazardous materials handled, used, stored, or disposed of in the state, which could be accidentally released into the environment, is not now available to firefighters, health officials, planners, public safety officers, health care providers, regulatory agencies, and other interested persons. The information provided by business and area plans [adopted by this legislation] is necessary in order to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of hazardous materials into the workplace and environment."

Health & Safety Code sec. 25500.

The Waters Bill requires local governments to regulate storage of hazardous materials by businesses, and to plan for emergency response to releases of hazardous materials. This legislation was based on a model hazardous materials storage ordinance developed in Santa Clara County in 1983 (*see* Subchapter B, *supra*). The Waters Bill was initially adopted in 1985 to take effect in 1986, and has been amended a number of times since.

a. Local Administering Agencies and Limited State Guidance

The Waters Bill provides only a limited direct role for the state, consisting of the preparation of regulations, receipt of notifications of releases, and review of local "area plans" by the state Office of Emergency Services (OES). 19 Cal. Code Regs. sec. 2620 *et seq.* Most duties fall to local "Administering Agencies."

OES provides regulations defining the minimal statewide inventory reporting standards, and a model Business Plan reporting form. Health & Safety Code sec. 25503(a), (f); 19 Cal. Code Regs. sec. 2729 *et seq.* Appendix II-B of this Manual presents a copy of the latest model form. OES has also prescribed release reporting standards, and receives reports of releases. Health & Safety Code secs. 25503.1, 25507; 19 Cal. Code Regs. sec. 2701 *et seq.* OES also defined standards for county Area Plans and reviewed counties' plans. Health & Safety Code sec. 25503(a), (c)-(f); 19 Cal. Code Regs. sec. 2720 *et seq.* OES also is to develop informational materials to assist businesses with compliance. Health & Safety Code sec. 25517.5(a). As state laws are amended to improve coordination among the Waters Bill, state La Follette Bill (AB 3777, et al.; *see* Subchapter 3, *infra*), and SARA Title III (*see* Subchapter 4, *infra*), OES has been charged to provide or support these coordination efforts. Health & Safety Code secs. 25503.1, 25545.[35] In December 1989, OES proposed substantial revisions to its Waters Bill regulations which were still pending as of June 1990.

Each county was required to designate an Administering Agency by January 30, 1986. Health & Safety Code sec. 25502(c). Typically, counties assigned their county environmental health agencies to perform this task; many county units combine implementation of the Sher Bill UST program (*see* Subchapter C, *supra*), Waters Bill, and subsequent La Follette Bill (discussed in Subchapter F, *infra*). Until September 2, 1986, cities could opt unilaterally to implement the Bill within their boundaries, in cooperation with the overlying county; after that date, cities can only assume Waters Bill implementation with the agreement of their county. Health & Safety Code sec. 25502(b). Counties or cities which had ordinances in place as of September 1, 1985, creating inventory provisions "substantially similar" to the Waters Bill (such as a locally adopted version of the model HMSO) could claim exemption from the requirement to implement this law if they amended their ordinances to be at least as stringent as the Waters Bill, submitted documents supporting their claim to OES by November 23, 1986, and received certification from OES. Health & Safety Code sec. 25505.2. There presently are 124 state-recognized Administering Agencies, including 56 of the 58 counties and 68 self-designated cities. In addition, ten city programs in Santa Clara County enforce the Waters Bill requirements under an informal agreement with the county, which is not officially recognized by OES. Appendix II-B provides a list of these agencies.

Local Administering Agencies are empowered to adopt more stringent requirements for any element of the program. Health & Safety Code sec. 25500. Many local programs incorporated earlier programs based on the model hazardous materials storage ordinance, and on the State UST Law.

b. Definitions

1) Defining Hazardous Materials

For purpose of the Waters Bill, the state has adopted expansive definitions of "hazardous material," "hazardous substance" and "hazardous waste." These are defined as follows:

> "**Hazardous material**' means any material that, because of its quantity, concentration, or physical and chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. 'Hazardous materials' include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing would be injurious to the health or safety of persons or harmful to the environment if released into the workplace or the environment."

---

[35] OES has prepared an informative manual, "Hazardous Material Emergency Planning and Community Right-to-Know, A Comparison of California and Federal Requirements." This manual may be obtained by calling OES at (916) 427-4287.

Health & Safety Code sec. 25501(j). This formulation of the definition requires further clarification of hazardous substances and hazardous wastes. Note that this definition does not allow handlers to rely upon lists of hazardous materials, substances or wastes issued by agencies or professional groups, but creates an independent duty to identify any otherwise unlisted materials for which there is a "reasonable basis for believing" that a potential for harm exists.

"'**Hazardous substance**' means any substance or chemical product for which one of the following applies:..."

(1) a Material Safety Data Sheet (MSDS) is required (*see* chapter III of this Manual);

(2) the substance is listed as radioactive by the Nuclear Regulatory Commission;

(3) the substance is listed as hazardous by the US Department of Transportation (DOT);[36]

(4) the material is listed in Labor Code sec. 6382(b).[37]

Health & Safety Code sec. 25501(k). "**Hazardous waste**" includes wastes defined as hazardous or extremely hazardous by the Department of Health Services (DHS) in Health and Safety Code sections 25115, 25117 and 25136. Health & Safety Code sec. 25501(l).

2) Defining Regulated Parties

The Waters Bill inventory and Business Plan requirements apply to any "business" that "handles" hazardous materials (also referred to as a "handler"). The definition of these terms has evolved over time. Initially, AB 2185 provided:

"'**Business**' means an employer, self-employed individual, trust, firm, joint stock company, corporation, partnership, or association. For purposes of this chapter, 'business' includes a business organized for profit and a nonprofit business."

Health & Safety Code sec. 25501(c). As the Waters Bill was implemented, this definition was interpreted to exclude government agencies and public educational institutions. In order to remove this limitation, a new section was added in 1988, which provides in part:

"25501.4 (a) Notwithstanding subdivision (c) of Section 25501, 'business' also includes the federal government, to the extent authorized by federal law, or any agency department, office, board, commission, or bureau of state government, including, but not limited to, the campuses of the California Community Colleges, the California State University, and the University of California.

Health & Safety Code sec. 25501.4(a). These newly included "businesses" were to be in compliance by January 1, 1990 [Health & Safety Code sec. 25501.4(b)],[38] except that campuses are allowed to phase in inventory and placarding requirements through January 1, 1992. Health & Safety Code sec. 25501.4(c).[39]

The legislation defines "handle" broadly:

"'**Handle**' means to use, generate, process, package, treat, store, emit, discharge, or dispose of a hazardous material in any fashion." Health & Safety Code sec. 25501(h).

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[36] Health & Safety Code section 25501(k)(3) includes all "substances listed pursuant to Title 49 of the Code of Federal Regulations." Taken literally, this would apply Waters Bill provisions to all materials listed anywhere in that title by DOT, whether or not DOT treated them as hazardous. To clarify this overbroad drafting, the Legislature added a new section in 1986 which provides: "Notwithstanding Section 25501, for purposes of this chapter, a hazardous substance specified in paragraph (3) of subdivision (k) of Section 25501 means those hazardous materials or substances listed in Parts 172 and 173 of Title 49 of the Code of Federal Regulations." Health & Safety Code sec. 25501.1. Those lists present the materials DOT deems hazardous. *See* Chapter VIII of this Manual, *infra*.

[37] This list incorporates several categories of carcinogens and toxic materials. *See* Chapter IV of this Manual, footnote 54, for more detail regarding these lists.

[38] Because this subsection requires compliance with "this chapter," the newly defined "businesses" are also subject to La Follette Bill (codified as article 2 of Chapter 6.95) requirements as of January 1, 1990. *See* Subchapter E.3, *infra*.

[39] Prior to January 1, 1992, these campuses cannot be required to include in their inventories any materials handled in quantities below the state reporting thresholds; this restricts the discretionary authority of Administering Agencies to demand such listing. Health & Safety Code sec. 25501.4(c). In addition, until January 1, 1992 the campuses are to post signs in accordance with standards adopted by the Occupational Safety and Health Standards Board. *Id.*

A 1986 amendment clarified that "store" excludes storage of any hazardous materials which are in transit or temporarily maintained in a fixed facility for less than thirty days during the course of transportation. Health & Safety Code sec. 25501.2. A futher amendment the same year provides that a railroad car containing any hazardous material which will remain within the same railroad facility or business facility for more than thirty days constitutes storage requiring submission of an inventory form and Business Plan. Health & Safety Code sec. 25503.7. "Handler" means any business which handles a hazardous material. Health & Safety Code sec. 25501(i).

c. **Business Plans**

1) **Reporting Thresholds**

AB 2185 established a basic set of reporting thresholds for any "hazardous material." These reporting thresholds differ depending on the physical state of the materials, and are set as follows:

(1) 55 gallons of a liquid;

(2) 500 pounds of a solid; or

(3) 200 cubic feet of a compressed gas, measured at standard temperature and pressure.

Health & Safety Code sec. 25503.5(a).

In general, businesses handling less than these threshold quantities are exempt from the Business Plan requirements unless their Administering Agency decides to require them to report. Health & Safety Code sec. 25503.5(c)(2). However, there are a number of exceptions and subsequent amendments which complicate the assessment of whether a particular business is subject to Business Plan requirements.

The Waters Bill provides a general exemption for hazardous materials stored as consumer packages for direct distribution to the general public (e.g., small containers of paint thinner). Health & Safety Code sec. 25503.5(c)(1). Farms are also exempt, provided they instead submit inventory information to the county agricultural commissioner. Health & Safety Code sec. 25503.5(c)(5); this alternative program is discussed *infra*. A 1989 amendment to the legislation (AB 1081, Allen) exempts from annual inventory requirements the storage of up to 1,000 cubic feet of oxygen and nitrous oxide by physicians, dentists, podiatrists, veterinarians, and pharmacists. However, Administering Agencies may collect a one-time inventory fee of up to $50 from these exempted medical practitioners. Health & Safety Code sec. 25503.5(b). The Administering Agency may grant additional exemptions, or require reporting of otherwise exempt quantities, on a case-by-case basis. Health & Safety Code sec. 25503.5.

A 1988 amendment to the Waters Bill attempts to improve coordination with SARA Title III. 1988 Cal. Stat. 1585 (AB 2189, Waters). AB 2189 directs OES and each Administering Agency to implement the Waters Bill by means "consistent with" Title III. Health & Safety Code sec. 25503.1. The amendment also adds a further complication by creating a parallel second set of reporting thresholds for certain materials as part of the state's efforts to improve coordination among the Waters Bill, La Follette Bill, and SARA Title III. AB 2189 extends the Business Plan requirement to cover all businesses which SARA Section 312 (42 U.S.C. sec. 11022) requires in order to file an inventory of:

(1) "extremely hazardous substances" stored onsite, above federal threshold reporting quantities. (these materials are identical to the Acutely Hazardous Materials designated by the La Follette Bill—*see* discussion *infra*); and

(2) all chemicals requiring a Material Safety Data Sheet (MSDS; *see* Chapter III of this Manual), when stored onsite in quantities over 10,000 pounds.

Health & Safety Code sec. 25503.8(a); *see* Subchapter E.4, *infra*. Any business first brought under Waters bill regulation by these provisions must file its initial Business Plan on the first annual filing date after January 1, 1989. Health & Safety Code sec. 25503.8(b).

2) Contents of Business Plans

Any business handling hazardous materials or wastes above state threshold quantities must submit a Business Plan to its local Administering Agency. Health & Safety Code sec. 25503.5(a).[40] Each business must certify the continued accuracy of its Business Plan at least every two years,[41] or submit an amended plan. Health & Safety Code sec. 25505(c). The Administering Agency must be notified within 30 days of any substantial changes, including a 100 percent or greater increase in the handling of any hazardous material, any handling of any new hazardous material, or a change of business address, ownership or name. Health & Safety Code secs. 25505(b), 25510. A separate plan is required for each "facility, site or branch" of a business that handles any regulated material above threshold quantities. Health & Safety Code sec. 25501(d).

Business Plans must contain detailed inventory forms. Health & Safety Code sec. 25504(a). With the addition of all amended requirements effective as of January 1, 1990, these forms must include at least the following information:

(1) The chemical and common name of every hazardous material and hazardous waste handled.

(2) The category of each hazardous waste, including chemical and mineral compositions and the range of probable minimum and maximum concentrations.

(3) A listing of the chemical and common name of every other hazardous chemical or mixture not already disclosed as a result of requirements (1) and (2).

(4) The maximum amount of each material onsite at any one time during the year.

(5) A description of how and where the hazardous materials are handled, sufficient for fire, safety, health and other appropriate agencies to prepare for emergency response.

6) The Standard Industrial Classification (SIC) Code number and nature of the business.

7) The name, title, and 24-hour telephone number of an emergency response contact person, as well as that of an alternate.

Health & Safety Code sec. 25509(a).[42] The annual inventory must also include the total estimated amount of hazardous waste handled by the business in the year. Health & Safety Code sec. 25509.3. The legislation gives Administering Agencies the option to allow the reporting of chemicals by ranges instead of by specific maximum quantities, so long as the ranges provide sufficient information for emergency response personnel and for implementation of the law. Health & Safety Code sec. 25509(b).[43] Effective January 1, 1989, these inventories are also to be used to record all inventory information required by SARA Title III section 312 (42 U.S.C. sec. 11022), which requires disclosure of the presence onsite of 10,000 pounds or more of any hazardous chemical that is required by OSHA to carry an MSDS, or of any federally defined Extremely Hazardous Substances if stored above the lower of 500 pounds, 55 gallons, or the federal threshold planning quantities.[44] Health & Safety Code sec. 25509(c). A copy of the latest OES model inventory form is included in Appendix II-B.

Administering Agencies must make inventory information available to emergency response personnel on a 24-hour basis. Health & Safety Code sec. 25503.5(d).

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40 Initial Business Plans were due by March 1, 1987, six months after OES promulgated initial regulations. Health & Safety Code sec. 25505(a). A 1986 amendment provides that no public entity may be held liable for any injury or damages resulting from an inadequate or negligent review of a Business Plan. Health & Safety Code sec. 25505.5.

41 As discussed below, inventories must be updated annually. Many Administering Agencies require annual reevaluation of the complete Business Plan.

42 19 California Code of Regulations section 2730 presents OES' "Optional Model Inventory Form." The December 1989 version of the proposed amendments to the inventory regulations would change the specific reporting requirements considerably, primarily to add information required under SARA Title III; these amendments were still pending as of June 1990.

43 Administering Agencies may also collect equivalent information from other agencies, if there is no delay, and if the donor agency received the information under a statutory mandate. Health & Safety Code sec. 25509.1.

44 *See* Subchapters II.E.3 and II.E.4, *infra* for details. Federal EHS are identical to the chemicals that California's La Follette Bill defines as Acutely Hazardous Materials. The requirements of section 25509(c) will cease to apply if there is ever a determination that the inventory requirements in subsections (a) or (b) provide "substantial equivalency" with Title III requirements. Health & Safety Code sec. 25509(d). At present, SARA makes no provision for findings of substantial equivalency.

Business Plans must also include at least the following emergency response plans and procedures to be carried out in the event of an actual or threatened release:

(1) Immediate notification of the Administering Agency and appropriate local emergency rescue personnel.

(2) Procedures for mitigating releases or threatened releases to minimize potential harm.

(3) Evacuation plans and procedures.

Health & Safety Code sec. 25504(b); 19 Cal. Code Regs. sec. 2731.[45] Business Plans must also provide training sessions for all new employees, as well as annual refresher training, in safety procedures to follow in response to actual or threatened releases; this training may be tailored to account for employees' different positions. Health & Safety Code sec. 25504(c).

Business Plans are to be filed at the Administering Agency's offices and remain open to public inspection. Health & Safety Code sec. 25506(a). However, trade secret protection is available. Health & Safety Code sec. 25511. The Waters Bill also provides for confidentiality of site plans as a means to protect site security. Health & Safety Code sec. 25506(a).

One of the 1988 amendments (AB 924, Tanner) adds a requirement that any regulated business which rents or leases its location must notify the property owner that Waters Bill requirements apply (that is, that the renter/lessee handles hazardous materials). If the owner requests, the renter/lessee then must provide a copy of its Business Plan within five days. This requirement took effect on February 18, 1988. Health & Safety Code sec. 25503.6.

3) Exemptions for Farms

The Waters Bill exempts farms from the specific Business Plan requirements, provided they comply with similar requirements administered by their county agricultural commissioner, and that the local Administering Agency has delegated authority to the agricultural commissioner. Where delegation does occur, the Waters Bill requires handlers to post signs showing where pesticides, fuels, and fertilizers are stored,[46] and to submit to the commissioner annual hazardous materials inventories consistent with Business Plan requirements. The commissioner must forward copies of the inventories to the Administering Agency within 30 days of receipt. Health & Safety Code sec. 25503.5(c)(5). This delegation is based on the fact the commissioners already regulate pesticide use and application at farms. *See* Chapter V, *infra*. Where Administering Agencies do not provide for this delegation, they may use the offices of the county agricultural commissioner to distribute Business Plan forms to farmers. Health & Safety Code sec. 25505.1.

d. Reporting Actual or Threatened Releases

The Waters Bill also requires that any actual or threatened release of any hazardous material be reported immediately by "the handler, or any employee, authorized representative, agent, or designee of a handler" to its Administering Agency and OES. Health & Safety Code sec. 25507(a); 19 Cal. Code Regs. sec. 2701 *et seq.*[47] Spills during transport are exempt from these notification requirements, in deference to reporting requirements imposed by the Vehicle Code. Health & Safety Code sec. 25507(c).

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[45] Businesses required to file pipeline operations contingency plans in compliance with state and federal requirements may instead file copies of these plans with their Administering Agency. Health & Safety Code sec. 25504(d).

[46] Health & Safety Code sec. 25503.5(c)(5)(B); 19 Cal. Code Regs. secs. 2733, 2734.

[47] OES' telephone numbers for receiving these notifications are 1-800-852-7550, or (916) 427-4341. 19 Cal. Code Regs. sec. 2703(a).

OES regulations specify that the notice must include:

(1) the exact location of the release or threatened release;

(2) the name of the person making the report;

(3) the hazardous materials involved;

(4) an estimate of the quantities of hazardous materials involved; and

(5) if known, the potential hazards presented.

19 Cal. Code Regs. sec. 2703(b). No notice is required if there is a reasonable belief that the release or threatened release poses no significant present or potential hazard to human health and safety, property or the environment. 19 Cal. Code Regs. sec. 2703(c). Neither the statute nor regulations define minimum quantities beneath which this immediate reporting is not required. However, in practice these requirements tend to be interpreted as consistent with the "reportable quantity" thresholds designated under spill reporting provisions of Superfund [CERCLA sec. 103(a)]; *see* discussion in Chapters VII and IX, *infra*; a cautious handler should nt rely on this, however, but should make notifications whenever releases occur.

A 1988 amendment adds a provision linking this reporting to "followup emergency notices" required by SARA section 304(c) (42 U.S.C. sec. 11004; *see* discussion in Subchapter 3, *infra*). OES is to develop a form on which future reports are to be submitted. Health & Safety Code sec. 25507.1. A version of this required form is part of the proposed OES regulations pending as of June 1990;[48] an example is included in Appendix II-B of this Manual.

In the event of a release, handlers must also provide facility access to all responding state, city, or county fire, public health or safety personnel and emergency rescue personnel. Health & Safety Code sec. 25507(b).

e. Area Plans

In addition to the onsite business reporting and planning described above, the Waters Bill requires each Administering Agency to develop and maintain an Area Plan for emergency responses to actual or threatened releases of hazardous substances within its jurisdiction. Health & Safety Code sec. 25503(c).[49] Area Plans must define:

(1) procedures and protocols for emergency rescue personnel, including their safety and health;

(2) pre-emergency planning;

(3) notification and coordination of onsite activities with agencies, responsible parties, and special districts;

(4) training of appropriate employees;

(5) onsite public safety and information;

(6) required supplies and equipment;

(7) access to emergency response contractors and hazardous waste disposal sites;

(8) incident critique and followup;

(9) requirements for notification to OES of release notifications required by section 25507.

Health & Safety Code sec. 25503(c); 19 Cal. Code Regs. sec. 2720 *et seq.* Each Administering Agency was required to submit its initial Area Plan to OES by August 27, 1987, although OES granted extensions of up to 120 days. Area Plans are to be reviewed formally by the Administering Agency at least every three years. Health & Safety Code sec. 25503(d).

Along with its initial Area Plan, each Administering Agency was required to submit a plan for onsite inspections plus a plan for a hazardous materials data management system. Health & Safety Code sec. 25503(e).

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[48] Proposed 19 Cal. Code Regs. sections 2703 and 2705 include the proposed form and a recitation of the reporting requirement.

[49] An Area Plan is not a statute, ordinance, or regulation for purposes of Evidence Code sec. 669. *Id.* Therefore, failure to comply with Area Plan requirements does not create a presumption of failure of due care.

Area Plan information has been incorporated into emergency response planning requirements imposed by Title III and discussed in Subchapter 4, *infra*.

f. Coordination with Building Permit Requirements

Legislation adopted in 1988 imposes a strict coordination requirement between Waters Bill and La Follette Bill implementation, and the building and occupancy permit programs operated by local governments. 1988 Cal. Stat. 1589 (AB 3205, Waters). This law requires that after July 1, 1989, each city and county must include in its building permit application a space for applicants to identify whether they will be subject to chapter 6.95 of the Health and Safety Code (Waters Bill and La Follette Bill) or local air district permit requirements. Gov't Code sec. 56850.2(a). Also, after July 1, 1989, no city or county may issue a final occupancy permit unless the applicant provides proof from the appropriate agencies that all such requirements have been or are being met. Gov't Code sec. 65850.2(b).[50]

g. Administration and Enforcement

The Waters Bill authorizes Administering Agencies to perform a variety of administrative and enforcement duties. Most provisions apply to "this chapter" (6.95), and so are available for enforcement of the La Follette Bill also (*see* Subchapter 3, *infra*).

1) Inspections and Fees

Administering Agencies are authorized to inspect the premises of any handler, and any property within 2,000 feet of any handler, in order to carry out their Waters Bill responsibilities. Health & Safety Code sec. 25508.[51] These inspections are to "ensure compliance with this chapter and shall identify existing safety hazards that could cause or contribute to a release and, where appropriate, enforce any applicable laws and suggest preventative measures designed to minimize the risk of the release of hazardous material into the workplace or environment."[52] Health & Safety Code sec. 25503(e)(1).

Jurisdictions are authorized to establish fee schedules to recover their costs of administering this program. Health & Safety Code sec. 25513.

2) Injunctive Relief

The Administering Agency, or the city or district attorney on their own motion, may seek injunctive relief in superior court when it is determined that a business has engaged in, is engaged in, or is about to engage in any acts which violate the Waters bill or its regulations. An order may be issued if it is shown that such a condition exists. Health & Safety Code sec. 25516. In these actions, the courts "shall" issue a temporary restraining order or temporary or permanent injunction without requiring that the agency allege or prove irreparable damage or inadequate remedy at law, which is the normal standard of proof for injunctive relief. Health & Safety Code sec. 25516.2.

3) Civil Penalties

Any business that violates a provision or regulation regarding the preparation of an inventory or business plan (Health & Safety Code secs. 25503.5-25505, 25508-25510) is liable for a civil penalty of up to $2,000 per day the violation continues. If the violation results in or contributes to any emergency the business will also be assessed the full cost of the response, including the cost of cleanup and disposal. Health & Safety Code sec. 25514(a).

If it is shown that such a violation is committed "knowingly" then the business is subject to a fine of up to $5,000 per day of violation. Health & Safety Code sec. 25514(b). The city attorney, district attorney, or attorney general will prosecute all civil actions. Health & Safety Code sec. 25516.1.

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[50] AB 3205 also imposed additional requirements for compliance with La Follette Bill and air district requirements for facilities sited in proximity to a school. *See* discussion in Subchapter 3, *infra*.

[51] Citing inspection authority found in Health and Safety Code sections 25185 and 25185.5. Since this grant of authority covers all of Chapter 6.95, it authorizes inspections under the La Follette Bill as well. Health & Safety Code sec. 25508; *see* Subchapter 3, *infra*.

[52] Despite the comprehensive nature of this assignment, the legislation explicitly provides that this responsibility does not alter agencies' immunity from liability for failure to make any, or adequate, inspections as provided in Govt Code sec. 818.6. *Id.*

4) Criminal Sanctions

Any person or business who fails to report the release of a reportable quantity of a hazardous material as required under Health & Safety Code section 25507 is subject to a fine of up to $25,000 per day of violation and/or imprisonment in the county jail for up to one year. Health & Safety Code sec. 25525. Subsequent violations subject the person or business to a fine of $50,000 per day of violation and/or imprisonment for up to two years in state prison. *Id.* If the violation results in an emergency "to which a county or city is required to respond," then the violator is also liable for the total cost of response, including cleanup and disposal. *Id.* Willful interference or an attempt to impede enforcement of these provisions is a misdemeanor. Health & Safety Code sec. 25515.1.

5) Apportioning Penalties and Rewards

The Waters Bill provides for an apportionment of all civil and criminal penalties collected as part of enforcement of Chapter 6.95, with half going to the prosecuting office that brought the action, and the other half to the agency responsible for the investigation of the action. However, before calculating the apportionment, $200 is to be deducted from the penalty amount for deposit in the Hazardous Material and Waste Enforcement Training Fund, which is used to support training in investigation and prosecution of violations of hazardous materials and wastes laws. Health & Safety Code sec. 25515.2.

Any person who materially contributes to the imposition of a civil or criminal fine under the provisions of Health and Safety Code section 25514 or 25515 is to be paid a reward equal to 10 percent of the amount actually collected, but in no event greater than $5,000. Public officers are not eligible for the reward unless the information was provided completely outside their official duties. An employee of the business which paid the fine is ineligible if he or she intentionally or negligently caused the violation or had a duty to investigate the violation, "unless the business knowingly caused the violations." Health & Safety Code sec. 25517. If rewards are paid, they are subtracted prior to the interagency apportionment described above. Health & Safety Code sec. 25515.2(e).

3. La Follette Bill (AB 3777 et al)

a. Introduction

In 1986 the Legislature, partially in response to the toxic gas disaster in Bhopal, India, adopted legislation to expand control over materials that can produce toxic clouds after fires, explosions or other accidents (AB 3777, La Follette). Health & Safety Code sec. 25531 *et seq.*, sec. 42301.7; 1986 Cal. Stat. 1260. The La Follette Bill expands the statewide hazardous materials inventory and emergency response programs mandated by the Waters Bill (AB 2185, et al.; *see* Subchapter 2, *supra*), for businesses handling a newly defined set of regulated substances identified as "acutely hazardous materials" (AHM).

The La Follette Bill is codified as article 2 of Chapter 6.95 of the Health and Safety Code, of which the Waters Bill is codified as article 1. Since many of the provisions codified within article 1 apply to "this chapter," many of the defining provisions of the La Follette Bill appear in the Waters Bill (Health & Safety Code sec. 25501 *et seq.*); the following discussion provides independent descriptions of La Follette Bill requirements, but the reader is encouraged to review the preceding subchapter as well.

b. Administering Agencies and OES

The La Follette Bill is implemented by the same local Administering Agencies that implement the Waters Bill. Health & Safety Code sec. 25532(c). There are 124 such Administering Agencies in 56 of the 58 counties, including those in the 68 cities that self-designated to implement the Waters Bill; Appendix II-B lists these agencies.

The La Follette Bill provides for limited statewide guidance by the state Office of Emergency Services (OES), which also guides implementation of the Waters Bill. OES was required by the original legislation to develop a state registration form for facilities handling AHM. Health & Safety Code sec. 25533(a). The 1987 amendments (AB 1059, La Follette) directed OES to prepare non-binding guidelines for the preparation of Risk Management and Prevention Programs (RMPP; *see* below); these guidelines were issued in February 1990. Health & Safety Code sec. 25534(l).

wastes or fluid into an injection well, to furnish the state board or regional board with a complete report on the condition and operation of the facility or injection well, or any other information that may be reasonably required to determine whether the injection well could affect the quality of the waters of the state.

13268. (a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars ($1,000) for each day in which the violation occurs.

(2) Civil liability may be imposed by the superior court in accordance with Articles 5 (commencing with Section 13350) and 6 (commencing with Section 13360) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed five thousand dollars ($5,000) for each day in which the violation occurs.

(c) Any person discharging hazardous waste, as defined in Section 25117 of the Health and Safety Code, knowingly failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or knowingly falsifying any information provided therein, is guilty of a misdemeanor and may be civilly liable in accordance with subdivision (d).

This subdivision shall not be applicable to any waste discharge which is subject to Chapter 5.5 (commencing with Section 13370).

(d)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (c) in an amount which shall not exceed five thousand dollars ($5,000) for each day in which the violation occurs.

(2) Civil liability may be imposed by the superior court in accordance with Articles 5 (commencing with Section 13350) and 6 (commencing with Section 13360) of Chapter 5 for a violation of subdivision (c) in an amount which shall not exceed twenty-five thousand dollars ($25,000) for each day in which the violation occurs.

13269. The provisions of subdivisions (a) and (b) of Section 13260, subdivision (a) of Section 13263, or subdivision (a) of Section 13264 may be waived by a regional board as to a specific discharge or a specific type or discharge where such waiver is not against the public interest. Such waiver shall be conditional and may be terminated at any time by the board.

13270. Where a public agency as defined in subdivision (b) of Section 13400 leases land for waste disposal purposes to any other public agency, including the State of California, or to any public utility regulated by the Public Utilities Commission, the provision of Sections 13260, 13263, 13264 shall not require the lessor public agency to file any waste discharge report for the subject waste disposal, and the regional board and the state board shall not prescribe waste discharge requirements for the lessor public agency as to such land provided that the lease from the lessor public agency shall not contain restrictions which would unreasonably limit the ability of the lessee to comply with waste discharge requirements appurtenant to the leased property.

13271. (a) Except as provided by subdivision (b), any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the state, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the state, shall, as soon as (1) that person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the state toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code and immediately notify the state board or the appropriate regional board of the discharge. The state board or the regional board shall list all notifications received by them pursuant to this section in the minutes of the next business meeting and shall provide a copy of the minutes to the appropriate local health officials.

(b) The notification required by this section shall not apply to a discharge in compliance with waste discharge requirements or other provisions of this division.

(c) Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine of not more than twenty thousand dollars ($20,000) or imprisonment of not more than one year, or both. Except where a discharge to the waters of this state would have occurred but for cleanup or emergency response by a public agency, this subdivision shall not apply to any discharge to land which does not result in a discharge to the waters of this state.

(d) Notification received pursuant to this section or information obtained by use of such notification shall not be used against any person providing the notification in any criminal case, except in a prosecution for perjury or giving a false statement.

(e) Immediate notification of an appropriate agency of the federal government of the discharge shall constitute compliance with the requirements of subdivision (a).

(f) For substances listed as hazardous wastes or hazardous material pursuant to Section 25140 of the Health and Safety Code, the state board in consultation with the State Department of Health Services, shall by regulation establish reportable quantities for purposes of this section. The regulations shall be based on what quantities should be reported because they may pose a risk to public health or the environment if discharged to ground or surface water. Regulations need not set reportable quantities on all listed substances at the same time. Regulations establishing reportable quantities shall not supersede waste discharge requirements or water quality objectives adopted pursuant to this division, and shall not supersede or affect in any way the list, criteria, and guidelines for the identification of hazardous wastes and extremely hazardous wastes adopted by the State Department of Health Services pursuant to Chapter 6.5 (commencing with Section 25100) of Division 20 of the Health and Safety Code. The regulations of the Environmental Protection Agency for reportable quantities of hazardous substances for purposes of the Comprehensive Environment Response, Compensation,

and Liability Act of 1980 shall be in effect for purposes of the enforcement of this section until the time that the regulations required by this subdivision are adopted.

(g) The state board shall, on or before June 30, 1987, adopt regulations establishing reportable quantities of sewage for purposes of this section. The regulations shall be based on the quantities that should be reported because they may pose a risk to public health or the environment if discharged to ground or surface water. Regulations establishing reportable quantities shall not supersede waste discharge requirements or water quality objectives adopted pursuant to this division. For purposes of this section, "sewage" means the effluent of a municipal waste water treatment plant or a private utility waste water treatment plant, as those terms are defined in Section 13625.

13272. (a) Except as provided by subdivision (b), any person who, without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the state, or discharged or deposited where it is, or probably will be, discharged in or any waters of the state, shall, as soon as (1) such person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the state oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code.

(b) The notification required by this section shall not apply to a discharge in compliance with waste discharge requirements or other provisions of this division.

(c) Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars ($500) or more than five thousand dollars ($5,000) per day for each day of failure to notify, or imprisonment of not more than one year, or both. Except where a discharge to the waters of this state would have occurred but for cleanup or emergency response by a public agency, this subdivision shall not apply to any discharge to land which does not result in a discharge to the waters of this state. This subdivision shall not apply to any person who is fined by the federal government for a failure to report a discharge of oil.

(d) Notification received pursuant to this section or information obtained by use of such notification shall not be used against any person providing the notification in any criminal case, except in a prosecution for perjury or giving a false statement.

(e) Immediate notification of an appropriate agency of the federal government of the discharge shall constitute compliance with the requirements of subdivision (a).

(f) Immediate notification of the appropriate regional board of the discharge, in accordance with reporting requirements set under Section 13267 or 13383, shall constitute compliance with the requirements of subdivision (a).

(g) The reportable quantity for oil or petroleum products shall be one barrel (42 gallons) or more, by direct discharge to the receiving waters, unless a more restrictive reporting standard for a particular body of water is adopted subsequent to January 1, 1983.

13273. (a) The state board shall, on or before January 1, 1986, rank all solid waste disposal sites, as defined in Section 66714.1 of the Government Code, based upon the threat which they may pose to water quality. On or before July 1, 1987, the operators of the first 150 solid waste disposal sites ranked on the list shall submit a solid waste water quality assessment test to the appropriate regional board for its examination pursuant to subdivision (d). On or before July 1 of each succeeding year, the operators of the next 150 solid waste disposal sites ranked on the list shall submit a solid waste water quality assessment test to the appropriate regional board for its examination pursuant to subdivision (d).

(b) Before a solid waste water quality assessment test report may be submitted to the regional board, a registered geologist, registered pursuant to Section 7850 of the Business and Professions Code, a certified engineering geologist, certified pursuant to Section 7842 of the Business and Professions Code, or a civil engineer registered pursuant to Section 6762 of the Business and Professions Code, who has at least five years' experience in groundwater hydrology, shall certify that the report contains all of the following information and any other information which the state board may, by regulation, require.

(1) An analysis of the surface and groundwater on, under, and within one mile of the solid waste disposal site to provide a reliable indication whether there is any leakage of hazardous waste.

(2) A chemical characterization of the soil-pore liquid in those areas which are likely to be affected if the solid waste disposal site is leaking, as compared to geologically similar areas near the solid waste disposal site which have not been affected by leakage or waste discharge

(c) If the regional board determines that the information specified in paragraph (1) or (2) is not needed because other information demonstrates that hazardous wastes are migrating into the water, the regional board may waive the requirement to submit this information specified in paragraphs (1) and (2) of subdivision (b). The regional board shall also notify the State Department of Health Services, and shall take appropriate remedial action pursuant to Chapter 5 (commencing with Section 13300).

(d) The regional board shall examine the report submitted pursuant to subdivision (b) and determine whether the number, location, and design of the wells and the soiling testing could detect any leachate buildup, leachate migration, or hazardous waste migration. If the regional board determines that the monitoring program could detect the leachate and hazardous waste, the regional board shall take the action specified in subdivision (e). If the regional board determines that the monitoring program was inadequate, the regional board shall require the solid waste disposal site to correct the monitoring program and resubmit the solid waste assessment test based upon the results from the corrected monitoring program.

(e) The regional board shall examine the approved solid waste assessment test report and determine whether any hazardous waste migrated into the water. If the regional board determines that hazardous waste has migrated into the water, it shall notify the State Department of Health Services and the California Waste Management Board and shall take appropriate remedial action pursuant to Chapter 5 (commencing with Section 13300).

(f) When a regional board revises the

waste discharge requirements for a solid waste disposal site, the regional board shall consider the information provided in the solid waste assessment test report and any other relevant site-specific engineering data provided by the site operator for that solid waste disposal site as part of a report of waste discharge.

13273.1. (a) Except as provided in subdivision (b), an operator of a solid waste disposal site may submit a solid waste assessment questionnaire to the appropriate regional board at least 24 months prior to the site's solid waste water quality assessment test due date as established pursuant to Section 13273. The regional board shall require the operator to submit any additional information, as needed, or require onsite verification of the solid waste assessment questionnaire data in order to render a decision pursuant to subdivision (c).

(b) Any solid waste disposal site which is larger than 50,000 cubic yards or is known or suspected to contain hazardous substances, other than household hazardous wastes, shall be prohibited from submitting a solid waste assessment questionnaire under this section.

(c) The regional board shall complete a thorough analysis of each solid waste assessment questionnaire submitted pursuant to this section by a date 18 months prior to the solid waste assessment test due date. Based upon this analysis, the regional board shall determine whether or not the site has discharged hazardous substances which will impact the beneficial uses of water. If the regional board determines that the site has not so discharged hazardous substances, the regional board shall notify the operator that the operator is not required to prepare a solid waste water quality assessment test pursuant to Section 13273.

(d) If the regional board does not make the determination specified in subdivision (c), the operator shall submit all, or a portion of, a solid waste water quality assessment test. The regional board shall notify the operator of this determination and indicate if all, or what portion of, a solid waste water quality assessment test shall be required. The operator shall submit the solid waste water quality assessment test, or a portion thereof, by the date established pursuant to Section 13273.

(e) The state board shall develop a solid waste assessment questionnaire and guidelines for submittal no later than three months after the effective date of this statute adding this section. The questionnaire shall contain, but not be limited to, a characterization of the wastes, size of the site, age of the site, and other appropriate factors.

(f) Those operators of solid waste disposal sites listed by the state board pursuant to Section 13273 in Rank 3 and seeking an exemption under this section shall submit their solid waste assessment questionnaire no later than July 1, 1988. If the regional board does not make the determination specified in subdivision (c), the regional board shall require the operator to submit all, or a portion of, a solid waste water quality assessment test by July 1, 1990.

13273.2. Notwithstanding subdivision (b) of Section 13273.1, a regional board may reevaluate the status of any solid waste disposal site ranked pursuant to Section 13273, including those sites exempted pursuant to Section 13273.1, and may require the operator to submit or revise a solid waste water quality assessment test after July 1, 1989. The regional board shall give written notification to the operator that a solid waste assessment test is required and the due date. This section shall not require submittal of a solid waste water quality assessment test by a date earlier than established in accordance with Section 13273.

13273.3. As used in Sections 13273, 13273.1, and 13273.2, "operator" means a person who operates or manages, or who has operated or managed, the solid waste disposal site. If the operator of the solid waste disposal site no longer exists, or is unable, as determined by the regional board, to comply with the requirements of Section 13273, 13273.1, or 13273.2, "operator" means any person who owns or who has owned the solid waste disposal site.

Article 5. Individual Disposal Systems

13280. A determination that discharge of waste from existing or new individual disposal systems or from community collection and disposal systems which utilize subsurface disposal should not be permitted shall be supported by substantial evidence in the record that discharge of waste from such disposal systems will result in violation of water quality objectives, will impair present or future beneficial uses of water, will cause pollution, nuisance, or contamination, or will unreasonably degrade the quality of any waters of the state.

13281. In making such determination, the regional board shall consider all relevant evidence related to such discharge, including, but not limited to, those factors set forth in Section 13241, possible adverse impacts if such discharge is permitted, failure rates of any existing individual disposal systems whether due to inadequate design, construction or maintenance or unsuitable hydrogeologic conditions, evidence of any existing, prior, or potential contamination, existing and planned land use, dwelling density, historical population growth, and such other criteria as may be established pursuant to guidelines, regulations, or policies adopted by the state board.

13282. Where it appears that adequate protection of water quality, protection of beneficial uses of water, and prevention of nuisance, pollution, and contamination can be attained by appropriate design, location, sizing, spacing, construction, and maintenance of individual disposal systems in lieu of elimination of discharges from such systems, and where an authorized public agency provides satisfactory assurance to the regional board that such systems will be appropriately designed, located, sized, spaced, constructed, and maintained, such discharges shall be permitted so long as such systems are adequately designed, located, sized, spaced, constructed, and maintained.

13283. In reviewing any determination that discharge of waste from existing or new individual disposal systems should not be permitted, the state board shall include a preliminary review of possible alternatives necessary to achieve protection of water quality and present and future beneficial uses of water, and prevention of nuisance, pollution, and contamination, including, but not limited to, community collection and waste disposal systems which utilize subsurface disposal, and possible combinations of individual disposal systems, community collection and disposal systems which utilize subsurface disposal, and conventional treatment systems.

13284. The state board may adopt guidelines, regulations, or policies

necessary to implement the provisions of this article.

CHAPTER 5. ENFORCEMENT AND IMPLEMENTATION

Article 1. Administrative Enforcement and Remedies by Regional Boards

13300. Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

13301. When a regional board finds that a discharge of waste is taking place or threatening to take place within its region in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302.

13301.1. The regional board shall render to persons against whom a cease and desist order is issued pursuant to Section 13301 all possible assistance in making available current information on successful and economical water quality control programs, as such information is developed by the state board pursuant to Section 13167, and information and assistance in applying for federal and state funds necessary to comply with the cease and desist order.

13302. (a) Hearings for consideration of issuance of a cease and desist order may be conducted by hearing panels designated by the regional board, each panel to consist of three or more members of the board as it may specify. A member of the board may serve on more than one panel.

(b) Due notice of the hearing shall be given to all affected persons. After the hearing, the panel shall report its proposed decision and order to the regional board and shall supply a copy to all parties who appeared at the hearing and requested a copy. Members of the panel are not disqualified from sitting as members of the board in deciding the matter. The board, after making such independent review of the record and taking such additional evidence as may be necessary, may adopt, which or without revision, the proposed decision and order of the panel.

13303. Cease and desist orders of the board shall become effective and final upon issuance thereof. Copies shall be served forthwith by personal service or by registered mail upon the person being charged with the violation of the requirements and upon other affected persons who appeared at the hearing and requested a copy.

13304. (a) Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up such waste or abate the effects thereof or, in the case of threatened pollution or nuisance, take other necessary remedial action. Upon failure of any person to comply with such cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring such person to comply therewith. In any such suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent as the facts may warrant.

(b) The regional board may expend available moneys to perform any cleanup, abatement, or remedial work required under the circumstances set forth in subdivision (a) which in its judgment is required by the magnitude of endeavor or urgency of prompt action needed to prevent substantial pollution, nuisance, or injury to any waters of the state. Such action may be taken in default of, or in addition to, remedial work by the waste discharger or other persons, and regardless of whether injunctive relief is being sought. The regional board may perform the work itself, or by or in cooperation with any other governmental agency, and may use rented tools or equipment, either with operators furnished or unoperated. Nothwithstanding any other provisions of law, the regional board may enter into oral contacts for such work, and the contracts, whether written or oral, may include provisions for equipment rental and in addition the funishing of labor and materials necessary to accomplish the work. Such contracts shall be exempt from approval by the Department of General Services pursuant to the provisions of Section 14780 of the Government Code.

(c) If such waste is cleaned up, the effects thereof abated, or, in the case of threatened pollution or nuisance, other necessary remedial action is taken by any governmental agency, the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit or permit the discharge of the waste, within the meaning of subdivision (a), shall be liable to that governmental agency to the extent of the reasonable costs actually incurred in cleaning up such waste, abating the effects thereof, or taking other remedial action. The amount of such costs shall be recoverable in a civil action by, and paid to, such governmental agency and the state board to the extent of the latter's contribution to the cleanup costs from the State Water Pollution Cleanup and Abatement Account of other available funds.

(d) If, despite reasonable effort by the regional board to identify the person responsible for the discharge of waste or the condition of pollution or nuisance, such person is not identified at the time cleanup, abatement, or remedial work must be performed, the regional board shall not be required to issue an order under this section.

(e) "Threaten," for purposes of this section, means a condition creating a substan-

tial probability of harm, when the probability and potential extent of harm make it reasonably necessary to take immediate action to prevent, reduce, or mitigate damages to persons, property, or natural resources.

(f) This section does not impose any new liability for acts occurring before January 1, 1981, if the acts were not in violation of existing laws or regulations at the time they occurred.

13305. (a) Upon determining that a condition of pollution or nuisance exists which has resulted from a nonoperating industrial or business location within its region, a regional board may cause notice of such condition to be posted upon the property in question. The notice shall state that such condition constitutes either a condition of pollution or nuisance which must be abated by correction of such condition, otherwise it will be corrected by the city, county, other public agency, or regional board at the property owner's expense. Such notice shall further state that all property owners having any objections to the proposed correction of such condition may attend a hearing to be held by the board at a time not less than 10 days from the posting of the notice.

(b) Notice of the hearing prescribed in this section shall be given in the county where the property is located pursuant to Section 6061 of the Government Code.

(c) In addition to posting and publication, notice as required in this section shall be mailed to the property owners as their names and addresses appear from the last equalized assessment roll.

(d) At the time stated in the notices, the board shall hear and consider all objections or protests, if any, to the proposed correction of the condition, and may continue the hearing from time to time.

(e) After final action is taken by the board on the disposition of any protests or objections, or in case no protests or objections are received, the board shall request the city, county, or other public agency in which the conditions of pollution or the nuisance exists to abate it. In the event that such city, county, or other public agency does not abate such condition within a reasonable time the board shall cause the condition to be abated. It may proceed by force account, contract or other agreement or any other method deemed most expedient by the board, and shall apply to the state board for the necessary funds.

(f) The owner of the property on which the condition exists, or is created, is liable for all reasonable costs incurred by the board or any city, county, or public agency in abating in condition. The amount of the cost for abating the condition upon the property in question shall constitute a lien upon the property so posted upon the recordation of a notice of lien, particularly describing the property on which the condition was abated and the amount of such lien, and naming the owner of record of such property in the office of the county recorder of the county in which the property is located. Upon such recordation, the lien shall have the same force, effect, and priority as if it had been a judgment lien imposed upon real property which was not exempt from execution except that it shall attach only to the property so posted and described in such notice of lien, and shall continue for 10 years from the time of the recording of such notice unless sooner released or otherwise discharged. Such lien may be foreclosed by an action brought by the city, county, other public agency, or state board, on behalf of the regional board, for a money judgment. Money recovered by a judgment in favor of the state board shall be returned to the State Water Pollution Cleanup and Abatement Account.

(g) The city, county, other public agency, or state board on behalf of a regional board, may at any time release all or any portion of the property subject to a lien imposed pursuant to subdivision (f) from the lien or subordinate such lien to other liens and encumbrances if it determines that the amount owed is sufficiently secured by a lien on other property or that the release or subordination of such lien will not jeopardize the collection of such amount owed. A certificate by such board, city, county, or other public agency to the effect that any property has been released from such lien or that such lien has been subordinated to other liens and encumbrances shall be conclusive evidence that the property has been released or that the lien has been subordinated as provided in such certificate.

(h) As used in this section, the words "nonoperating" or "not in operation" means the business is not conducting routine operations usually associated with that kind of business.

13306. A majority vote of the entire membership of a regional board shall be required to adopt, rescind, or modify any enforcement action authorized by Section 13301.

Article 2. Administrative Enforcement and Remedies by the State Board

13320. (a) Within 30 days of any action or failure to act by a regional board under subdivision (c) of Section 13225, Article 4 (commencing with Section 13260) of Chapter 4, Chapter 5 (commencing with Section 13300), Chapter 5.5 (commencing with Section 13370), or Chapter 7 (commencing with Section 13500), any aggrieved person may petition the state board to review such action or failure to act. In case of failure to act, the 30-day period shall commence upon refusal of the board to act, or 60 days after request has been made of the board to act. The state board may, on its own motion, at any time review such action or failure to act and also any failure to act under Article 3 (commencing with Section 13240) of Chapter 4.

(b) The evidence before the state board shall consist of the record before the regional board, and any other relevant evidence which, in the judgment of the state board, should be considered to effectuate and implement the policies of this division.

(c) The state board may find the regional board action or inaction to be appropriate and proper. Upon finding that the action the regional board, or the failure of the regional board to act, was inappropriate or improper, the state board may direct that the appropriate action be taken by the regional board, refer the matter to any other state agency having jurisdiction, take the appropriate action itself, or any combination of the foregoing. In taking any such action, the state board is vested with all the powers of the regional boards under this division.

(d) In the event a waste discharge in one region affects the waters in another region and there is any disagreement between the regional boards involved as to the requirements which should be established, either regional board may submit the disagreement to the state board which shall determine the applicable requirements.

13321. (a) In the case of a review by the state board under Section 13320, the state board, upon notice and a hearing, may stay in whole or in part the effect of

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT

(California Health and Safety Code, Division 20 — Miscellaneous Health and Safety Provisions, Chapter 6.6 — Safe Drinking Water and Toxic Enforcement Act of 1986; Enacted by California Proposition 65, November 4, 1986)

Administering Agency: Health and Welfare Agency
1600 Ninth Street
Sacramento, California 95814

25249.5. Prohibition on contaminating drinking water with chemicals known to cause cancer or reproductive toxicity

No person in the course of doing business shall knowingly discharge or release a chemical known to the state to cause cancer or reproductive toxicity into water or onto or into land where such chemical passes or probably will pass into any source of drinking water, notwithstanding any other provision or authorization of law except as provided in Section 25249.9.

25249.6. Required warning before exposure to chemicals known to cause cancer or reproductive toxicity

No person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the state to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individual, except as provided in Section 25249.10.

25249.7. Enforcement

(a) Any person violating or threatening to violate Section 25249.5 or Section 25249.6 may be enjoined in any court of competent jurisdiction.

(b) Any person who has violated Section 25249.5 or Section 25249.6 shall be liable for a civil penalty not to exceed $2500 per day for each such violation in addition to any other penalty established by law. Such civil penalty may be assessed and recovered in a civil action brought in any court of competent jurisdiction.

(c) Actions pursuant to this section may be brought by the Attorney General in the name of the people of the State of California or by any district attorney or by any city attorney of a city having a population in excess of 750,000 or with the consent of the district attorney by a city prosecutor in any city or city and county having a full-time city prosecutor, or as provided in subdivision (d).

(d) Actions pursuant to this section may be brought by any person in the public interest if (1) the action is commenced more than sixty days after the person has given notice of the violation which is the subject of the action to the Attorney General and the district attorney and any city attorney in whose jurisdiction the violation is alleged to occur and to the alleged violator, and (2) neither the Attorney General nor any district attorney nor any city attorney or prosecutor has commenced and is diligently prosecuting an action against such violation.

25249.8. List of chemicals known to cause cancer or reproductive toxicity

(a) On or before March 1, 1987, the Governor shall cause to be published a list of those chemicals known to the state to cause cancer or reproductive toxicity within the meaning of this chapter, and he shall cause such list to be revised and republished in light of additional knowledge at least once per year thereafter. Such list shall include at a minimum those substances identified by reference in Labor Code Section 6382(b)(1) and those substances identified additionally by reference in Labor Code Section 6382(d).

(b) A chemical is known to the state to cause cancer or reproductive toxicity within the meaning of this chapter if in the opinion of the state's qualified experts it has been clearly shown through scientifically valid testing according to generally accepted principles to cause cancer or reproductive toxicity, or if a body considered to be authoritative by such experts has formally identified it as causing cancer or reproductive toxicity, or if an agency of the state or federal government has formally required it to be labeled or identified as causing cancer or reproductive toxicity.

(c) On or before January 1, 1989, and at least once per year thereafter, the Governor shall cause to be published a separate list of those chemicals that at the time of publication are required by state or federal law to have been tested for potential to cause cancer or reproductive toxicity but that the state's qualified experts have not found to have been adequately tested as required.

(d) The Governor shall identify and consult with the state's qualified experts as necessary to carry out his duties under this section.

(e) In carrying out the duties of the Governor under this section, the Governor

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and his designates shall not be considered to be adopting or amending a regulation within the meaning of the Administrative Procedure Act as defined in Government Code Section 11370.

25249.9. Exemptions from discharge prohibition

(a) Section 25249.5 shall not apply to any discharge or release that takes place less than twenty months subsequent to the listing of the chemical in question on the list required to be published under subdivision (a) of Section 25249.8.

(b) Section 25249.5 shall not apply to any discharge or release that meets both of the following criteria:

(1) The discharge or release will not cause any significant amount of the discharged or released chemical to enter any source of drinking water.

(2) The discharge or release is in conformity with all other laws and with every applicable regulation, permit, requirement, and order.

In any action brought to enforce Section 25249.5, the burden of showing that a discharge or release meets the criteria of this subdivision shall be on the defendant.

25249.10. Exemptions from warning requirement

Section 25249.6 shall not apply to any of the following:

(a) An exposure for which federal law governs warning in a manner that preempts state authority.

(b) an exposure that takes place less than twelve months subsequent to the listing of the chemical in question on the list required to be published under subdivision (a) of Section 25249.8.

(c) An exposure for which the person responsible can show that the exposure poses no significant risk assuming lifetime exposure at the level in question for substances known to the state to cause cancer, and that the exposure will have no observable effect assuming exposure at one thousand (1000) times the level in question for substances known to the state to cause reproductive toxicity, based on evidence and standards of comparable scientific validity to the evidence and standards which form the scientific basis for the listing of such chemical pursuant to subdivision (a) of Section 25249.8. In any action brought to enforce Section 25249.6, the burden of showing that an exposure meets the criteria of this subdivision shall be on the defendant.

25249.11. Definitions

For purposes of this chapter:

(a) "Person" means an individual, trust, firm, joint stock company, corporation, company, partnership, and association.

(b) "Person in the course of doing business" does not include any person employing fewer than ten employees in his business; any city, county, or district or any department or agency thereof or the state or any department or agency thereof or the federal government or any department or agency thereof; or any entity in its operation of a public water system as defined in Section 4010.1.

(c) "Significant amount" means any detectable amount except an amount which would meet the exemption test in subdivision (c) of Section 25249.10 if an individual were exposed to such an amount in drinking water.

(d) "Source of drinking water" means either a present source of drinking water or water which is identified or designated in a water quality control plan adopted by a regional board as being suitable for domestic or municipal uses.

(e) "Threaten to violate" means to create a condition in which there is a substantial probability that a violation will occur.

(f) "Warning" within the meaning of Section 25249.6 need not be provided separately to each exposed individual and may be provided by general methods such as labels on consumer products, inclusion of notices in mailings to water customers, posting of notices, placing notices in public news media, and the like, provided that the warning accomplished is clear and reasonable. In order to minimize the burden on retail sellers of consumer products including foods, regulations implementing Section 25249.6 shall to the extent practicable place the obligation to provide any warning materials such as labels on the producer or packager rather than on the retail seller, except where the retail seller itself is responsible for introducing a chemical known to the state to cause cancer or reproductive toxicity into the consumer product in question.

25249.12. Implementation

The Governor shall designate a lead agency and such other agencies as may be required to implement the provisions of the chapter including this section. Each agency so designated may adopt and modify regulations, standards, and permits as necessary to conform with and implement the provisions of this chapter and to further its purposes.

25249.13. Preservation of existing rights, obligations, and penalties

Nothing in this chapter shall alter or diminish any legal obligation otherwise required in common law or by statute or regulation, and nothing in this chapter shall create or enlarge any defense in any action to enforce such legal obligation. Penalties and sanctions imposed under this chapter shall be in addition to any penalties or sanctions otherwise prescribed by law.