



ALISTO ENGINEERING GROUP

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ENVIRONMENTAL
PROTECTION

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September 22, 1997

Ms. Susan Hugo
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Alameda County Health Care Services Agency
Hazardous Materials Division
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Alameda, California 94502

10-229-04-001

Subject: Case Closure Submittal
Kaiser Mosswood Building
3505 Broadway, Oakland, California

Dear Ms. Hugo:

On behalf of Kaiser Foundation Health Plan, Alisto Engineering Group is pleased to submit this case closure submittal report for the Kaiser Mosswood Building, 3505 Broadway, Oakland, California.

Please call me at (510) 987-4050 if you have questions or need additional information.

Sincerely,

ALISTO ENGINEERING GROUP

Brady Nagle
Project Manager

cc: Eddy So, Regional Water Quality Control Board
Mark Zemelman, Kaiser Foundation Health Plan, Inc.
John Eckmann, Kaiser Foundation Health Plan, Inc.

CASE CLOSURE SUBMITTAL

**Kaiser Mosswood Building
3505 Broadway
Oakland, California**

Project No. 10-229-04-001

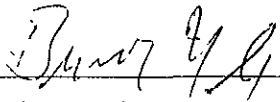
Prepared for:

**Kaiser Foundation Health Plan, Inc.
1950 Franklin Street
Oakland, California**

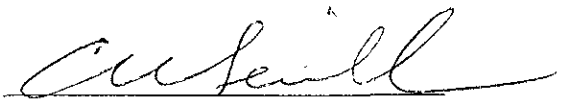
Prepared by:

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September 10, 1997



**Brady Nagle
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**Al Sevilla, P.E.
Principal**



CONTENTS

1.0 INTRODUCTION	1
2.0 SITE DESCRIPTION AND BACKGROUND	1
3.0 PROJECT BACKGROUND	1
3.1 Assessment Activities	1
3.2 Source Removal/Abatement	2
4.0 SITE GEOLOGY/HYDROGEOLOGY	3
5.0 RATIONALE FOR CASE CLOSURE/NO FURTHER ACTION STATUS	3

REFERENCES

TABLES

1	Summary of Results of Soil Sampling
2	Summary of Results of Groundwater Monitoring and Sampling
3	Summary of Product Thickness/Recovery Data

FIGURES

1	Site Vicinity Map
2	Potentiometric Groundwater Elevation Map, December 13, 1995

APPENDICES

A	Case Closure Summary Form and Sensitive Receptor Survey
B	Site Photographs
C	Boring Logs



1.0 INTRODUCTION

Kaiser Foundation Health Plan retained Alisto Engineering Group to prepare a case closure submittal for the Kaiser Mosswood Building, 3505 Broadway, Oakland, California. A site vicinity map is shown in Figure 1. The Case Closure Summary form, developed by the RWQCB to assist in the case closure request process, is included as Appendix A.

On June 24, 1996 and January 3, 1997, Kaiser Foundation Health Plan, Inc. requested the Alameda County Health Care Services Agency (ACHCSA) approval for case closure. This submittal was prepared to facilitate the case closure review process by the local and state regulatory agencies, in accordance with the letter of Alisto to the ACHCSA dated August 6, 1997.

2.0 SITE DESCRIPTION AND LOCATION

The Kaiser Mosswood Building is on the northwest side of Broadway, immediately northeast of the Highway 580 overpass in Oakland, California. Adjacent to the building is Mosswood Park, which is comprised primarily of irrigated lawn and landscaping. At present, the only underground storage tank at the site is for oil storage, which is located by the garage entrance. Photographs of the site taken on August 5, 1997 are presented in Appendix B.

A sensitive receptor survey was conducted to identify surrounding facilities or environmental features that may be affected by or may have an effect on subsurface conditions at the site. The sensitive receptor survey is included in Appendix A.

3.0 PROJECT BACKGROUND

A brief summary of assessment and source removal activities completed to date at the site is presented below.

3.1 Assessment Activities

In February 1989, Kaiser discovered a leak in the pumping mechanism controlling the flow from the two underground gasoline storage tanks at the site. The capacities of the underground storage tank were 4000 and 7000 gallons. Gasoline was observed in a transformer vault within the basement of the building (Levine-Fricke, 1992).

After discovering the release, Kaiser removed all petroleum fuel from each tank and conducted a soil gas survey to assess the lateral extent of petroleum hydrocarbons in the subsurface. The soil gas survey detected petroleum hydrocarbons in the vicinity of the underground fuel tanks and the transformer vaults. The survey results were then used to determine the locations for groundwater monitoring wells (Levine-Fricke, 1989).

On September 30, 1989, Groundwater Monitoring Well LF-1 was installed adjacent to and within the backfill of the underground gasoline storage tanks. On November 6, 1989, Wells LF-2 and LF-3 were installed in the public right-of-way of Broadway; and on April 10, 1990,



Well LF-4 was installed west of the underground tanks in an easement (Levine-Fricke, 1990). In December 1990, an additional well, LF-5, was installed in the fuel tank cavity to expedite removal of free product from the groundwater (Levine-Fricke, 1992).

Before removal of the underground gasoline tanks, Monitoring Wells LF-1 and LF-5 were destroyed on February 3, 1992. A replacement well, LF-5A, was installed within the former tank backfill.

Analysis of soil samples collected during monitoring well installation detected petroleum hydrocarbons at concentrations of up to 8.0 milligrams per kilogram (mg/kg) total petroleum hydrocarbon as gasoline (TPH-G) and 0.31 mg/kg benzene. The results of soil sample analysis are presented in Table 1.

Groundwater samples were collected from monitoring wells for analysis beginning in November 1989. From the fourth quarter 1990 until the fourth quarter 1992, groundwater monitoring was conducted on a quarterly basis and then semiannually until the fourth quarter 1995. The highest concentrations of dissolved phase petroleum hydrocarbons detected were 1000 micrograms per liter (µg/l) TPH-G in LF-5A in August 1994 and 320 µg/l benzene in LF-2 in March 1992 (Alisto, 1996).

Separate-phase product had been observed in Monitoring Well LF-1 and LF-5 at initial thicknesses of up to 3.2 feet. Product was removed on a weekly basis from LF-1, and by December 1991, product thickness was reduced to 0.2 foot. After tank removal in February 1992, product was no longer observed in the former tank backfill well, LF-5A. Approximately 206 gallons of product and product/water mixture was recovered from Monitoring Wells LF-1 and LF-5. A summary of product thickness and product removal efforts are summarized in Table 3.

3.2 Source Removal/Abatement

Activities completed at the site to remove the source of petroleum hydrocarbons to soil and groundwater and remediate residual petroleum hydrocarbons in the subsurface included the following:

- Removal of two underground gasoline storage tanks in February 1992.
- Recovery of approximately 206 gallons of product and product/water mixture from Monitoring Well LF-1 on a weekly basis and as necessary from LF-5.
- Each of the groundwater monitoring wells at the site was purged of approximately 3 casing volumes. To date, an estimated 800 gallons of purged groundwater has been removed from the site.



4.0 SITE GEOLOGY AND HYDROGEOLOGY

The site is in the Quaternary alluvium consisting of unconsolidated nonmarine sediments at approximately 80 feet above mean sea level, as shown on Figure 1. Subsurface material encountered at the site during subsurface investigations generally consisted of interbedded clayey silt and sand with occasional sandy gravel to approximately 5 feet below grade. Underlying these materials was primarily sandy gravel to gravelly sand to depths of approximately 12 feet. Silty to sandy clay was observed from about 12 feet below grade to the total depth of the borings (Levine-Fricke, 1990). The available boring logs and well completion diagrams are included in Appendix C.

The groundwater gradient at site as interpreted from groundwater elevation data has consistently been in an easterly to southeasterly direction. The groundwater gradient magnitude, as calculated from the December 13, 1995 groundwater monitoring event, was 0.10 in a southeasterly direction. The potentiometric groundwater elevations as interpreted from the results of the December 13, 1995 monitoring event are shown on Figure 2.

5.0 RATIONALE FOR CASE CLOSURE/NO FURTHER ACTION STATUS

Justification for case closure and no further action status for this site is as follows:

- The two former gasoline storage tanks were removed in February 1992, during which the ongoing source of separate-phase product appears to have been eliminated
- TPH-G and benzene, toluene, ethylbenzene, and total xylenes (BTEX) have not been detected in samples collected from Wells LF-3, LF-4, and LF-5A in the last four quarters. TPH-G and BTEX have not been detected in the sample collected from LF-2 in the last two quarters.
- Since August 1994, TPH-G, benzene, and ethylbenzene have been detected on only one event at concentrations of 170, 3.8, and 3.3, respectively. Chemical concentrations have declined since the August 1991 sampling event.
- Groundwater is not considered suitable or potentially suitable for a municipal or domestic water supply.
- The site does not appear to represent a significant threat to human health or a risk to the environment.



REFERENCES

Alisto Engineering Group, 1994. Groundwater Monitoring and Sampling Report. Kaiser Mosswood Building. September 12.

Alisto Engineering Group, 1995. Groundwater Monitoring and Sampling Report. Kaiser Mosswood Building. April 7.

Alisto Engineering Group, 1996. Groundwater Monitoring and Sampling Report. Kaiser Mosswood Building. February 7.

Levine-Fricke, 1990. Phase II Soil and Ground-Water Investigation, Kaiser Mosswood Building, 3505 Broadway, Oakland, California. June 21.

Levine-Fricke, 1992. Quarterly Ground-Water Monitoring Report for the Period from October 1 through December 31, 1991, Kaiser Mosswood Building, 3505 Broadway, Oakland, California. January 29.

Levine-Fricke, 1994. Semiannual Ground-Water Monitoring Report, July 1 through December 31, 1993, Kaiser Mosswood Building, 3505 Broadway, Oakland, California. May 11.



TABLES

TABLE 1 - SUMMARY OF RESULTS OF SOIL SAMPLING
 KAISER MOSSWOOD BUILDING
 3505 BROADWAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-229

BORING ID	DEPTH (feet)	TPH-G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	LAB
LF-1	8 to 8.5	--- 0.200	0.004 ---	0.003 ---	ND<0.001 ---	0.004 ---	M-T
LF-1	27.0 to 27.5	--- 1.300	0.037 ---	0.120 ---	0.025 ---	0.120 ---	M-T
LF-2	9.0 to 9.5	--- 8.00	0.11 ---	0.260 ---	0.059 ---	0.330 ---	M-T
LF-2	14.0 to 14.5	3.900 ---	0.31 ---	0.770 ---	0.077 ---	0.670 ---	M-T
LF-3	12.0 to 12.5	--- 0.600	0.003 ---	0.017 ---	ND<0.001 ---	ND<0.003 ---	M-T

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 ND Not detected above reported detection limit
 mg/kg Milligrams per kilogram
 M-T Med-Tox Associates, Inc.

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TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING AND SAMPLING
 KAISER MOSSWOOD BUILDING
 3505 BROADWAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-229

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
LF-1	03/01/91	98.38	16.87	0.50	81.89	---	---	---	---	---	---
LF-1	06/14/91	98.38	16.88	0.43	81.82	---	---	---	---	---	---
LF-1	08/13/91	98.38	18.05	2.38	82.12	---	---	---	---	---	---
LF-1 (c)	11/11/91	98.38	18.03	0.15	80.46	---	---	---	---	---	---
LF-2	11/01/89	96.85	---	---	---	200	17	5	1	18	BCA
LF-2	10/01/90	96.85	---	---	---	910	240	20	9	420	BCA
LF-2	03/01/91	96.85	15.00	---	81.85	230	100	7.1	3.8	35	BCA
LF-2 (d)	03/01/91	96.85	---	---	---	230	110	6.5	4.1	37	BCA
LF-2	05/17/91	96.85	---	---	---	510	160	9.5	5.8	20	BCA
LF-2 (d)	05/17/91	96.85	---	---	---	500	160	9.4	5.8	20	BCA
LF-2	06/14/91	96.85	15.25	---	81.60	310	35	6.4	3.2	41	BCA
LF-2 (d)	06/14/91	96.85	---	---	---	330	37	7	3.7	47	BCA
LF-2	08/13/91	96.85	15.18	---	81.67	800	280	33	38	100	BCA
LF-2 (d)	08/13/91	96.85	---	---	---	570	210	22	28	72	BCA
LF-2	11/11/91	96.85	16.23	---	80.62	---	---	---	---	---	---
LF-2	11/28/91	96.85	---	---	---	800	280	17	34	12	BCA
LF-2 (d)	11/28/91	96.85	---	---	---	570	250	14	31	11	BCA
LF-2	03/10/92	96.85	13.40	---	83.45	---	---	---	---	---	---
LF-2	03/27/92	96.85	---	---	---	250	270	19	18	71	BCA
LF-2 (d)	03/27/92	96.85	---	---	---	290	320	23	22	85	BCA
LF-2	06/19/92	96.85	14.82	---	82.03	1200	280	24	36	41	BCA
LF-2	09/09/92	96.85	15.42	---	81.43	420	81	3.3	1.7	5.9	BCA
LF-2	12/02/92	96.85	15.34	---	81.51	580	120	4	2.8	6.9	BCA
LF-2	06/28/93	96.85	13.69	---	83.16	600	77	2	28	4	AEN
LF-2	12/07/93	96.85	14.61	---	82.24	400	22	1	15	ND<2	AEN
LF-2	08/19/94	96.85	14.57	---	82.28	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-2	03/06/95	96.85	11.09	---	85.76	170	3.8	ND<0.5	3.3	ND<0.5	MCA
LF-2	12/13/95	96.85	13.62	---	83.23	ND<50	ND<0.5	ND<0.5	ND<0.5	0.96	MCA
QC-1 (e)	12/13/95	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	0.91	MCA

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING AND SAMPLING
 KAISER MOSSWOOD BUILDING
 3505 BROADWAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-229

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
LF-3	11/01/89	95.96	---	---	---	ND<0.1	ND<0.5	ND<1.0	ND<0.5	ND<2.0	MT
LF-3	10/01/90	95.96	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	03/01/91	95.96	13.99	---	81.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	06/14/91	95.96	14.00	---	81.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	08/13/91	95.96	15.18	---	80.78	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	11/11/91	95.96	15.63	---	80.33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	03/10/92	95.96	12.66	---	83.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	06/19/92	95.96	14.10	---	81.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	09/09/92	95.96	14.83	---	81.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	12/02/92	95.96	14.90	---	81.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-3	06/28/93	95.96	13.16	---	82.80	ND<50	20	ND<0.5	ND<0.5	ND<0.2	AEN
LF-3	12/07/93	95.96	14.56	---	81.40	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.2	AEN
LF-3	08/19/94	95.96	14.14	---	81.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-3	03/06/95	95.96	10.57	---	85.39	ND<50	ND<0.5	0.75	ND<0.5	ND<0.5	MCA
LF-3	12/13/95	95.96	13.14	---	82.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-4	10/01/90	99.35	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	03/01/91	99.35	11.39	---	87.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	04/01/91	99.35	---	---	---	ND<50	ND<0.3	0.7	0.3	1.8	BCA
LF-4	05/17/91	99.35	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	06/14/91	99.35	11.87	---	87.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	08/13/91	99.35	12.26	---	87.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	11/11/91	99.35	12.30	---	87.05	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	11/28/91	99.35	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	03/10/92	99.35	10.66	---	88.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	03/27/92	99.35	---	---	---	ND<50	ND<0.5	0.6	ND<0.5	ND<0.5	BCA
LF-4	06/19/92	99.35	12.22	---	87.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	09/09/92	99.35	12.88	---	86.47	---	---	---	---	---	---
LF-4	12/02/92	99.35	13.02	---	86.33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BCA
LF-4	06/28/93	99.35	11.87	---	87.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	AEN
LF-4	12/07/93	99.35	12.63	---	86.72	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	AEN
LF-4	08/19/94	99.35	12.47	---	86.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-4	03/06/95	99.35	10.16	---	89.19	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-4	12/13/95	99.35	12.66	---	86.69	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING AND SAMPLING
 KAISER MOSSWOOD BUILDING
 3505 BROADWAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-229

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	LAB
LF-5	03/01/91	97.53	15.98	0.29	81.77	---	---	---	---	---	---
LF-5	06/14/91	97.53	15.89	0.52	82.03	---	---	---	---	---	---
LF-5	08/13/91	97.53	16.17	1.04	82.14	---	---	---	---	---	---
LF-5 (c)	11/11/91	97.53	17.18	0.10	80.43	---	---	---	---	---	---
LF-5R	06/19/92	98.68	---	---	---	790	100	52	9	1	BCA
LF-5R (d)	06/19/92	98.68	---	---	---	800	110	53	9.2	110	BCA
LF-5R	09/09/92	98.68	15.13	---	83.55	---	---	---	---	---	---
LF-5R	12/02/92	98.68	14.68	---	84.00	244	30	18	5.1	28	BCA
LF-5R (d)	12/02/92	98.68	---	---	---	240	30	18	5.1	28	BCA
LF-5R	06/28/93	98.68	12.61	---	86.07	ND<50	0.5	ND<0.5	ND<0.5	ND<0.5	AEN
LF-5R (d)	06/28/93	98.68	---	---	---	ND<50	0.5	ND<0.5	ND<0.5	ND<0.5	AEN
LF-5R	12/07/93	98.68	13.86	---	84.82	100	11	5	3	7	AEN
LF-5R (d)	12/07/93	98.68	---	---	---	100	10	6	4	8	AEN
LF-5R	08/19/94	98.68	13.17	---	85.51	1800	45	32	43	3.8	MCA
QC-1 (e)	08/19/94	98.68	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-5R	03/06/95	98.68	10.52	---	88.16	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
QC-1 (e)	03/06/95	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
LF-5R	12/13/95	98.68	13.06	---	85.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
QC-2 (f)	08/19/94	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA
QC-2 (f)	03/06/95	---	---	---	---	ND<50	ND<0.5	0.75	ND<0.5	ND<0.5	MCA
QC-2 (f)	12/13/95	---	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	MCA

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
ND	Not detected above reported detection limit
---	Not analyzed/applicable/measured
ug/l	Micrograms per liter
BCA	BC Analytical Laboratory
AEN	American Environmental Network
MT	Med-Tox Associates Laboratory
MCA	McCampbell Analytical, Inc.

NOTES:

(a)	Casing elevations relative to an arbitrary datum of 100.00 feet at the foundation of an adjacent building.
(b)	Groundwater elevations in feet above mean sea level.
(c)	Well abandoned February 3, 1992.
(d)	Duplicate.
(e)	Blind duplicate.
(f)	Travel blank.

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TABLE 3 - SUMMARY OF PRODUCT THICKNESS/RECOVERY DATA
 KAISER MOSSWOOD BUILDING
 3505 BROADWAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-229

WELL ID	DATE OF MONITORING	PRODUCT THICKNESS (feet)	PRODUCT REMOVED (gallons)	CUMULATIV PRODUCT REMOVED (gallons)
LF-5	01/04/91	---	---	---
	01/11/91	0.09	0.5	0.50
	01/21/91	0.27	1.0	1.50
	02/11/91	0.10	1.5	3.00
	02/22/91	0.26	4.0	7.00
	03/01/91	0.04	2.5	9.50
	03/08/91	0.26	2.5	12.00
	03/15/91	0.26	2.5	14.50
	03/22/91	0.33	2.5	17.00
	03/29/91	0.28	2.5	19.50
	04/12/91	0.54		19.50
	04/19/91	0.40	3.5	23.00
	04/26/91	0.40	3.5	26.50
	06/14/91	0.52	3.5	30.00
	06/28/91	0.39	3.5	33.50
	07/05/91	0.45	3.5	37.00
	07/12/91	0.38	3.5	40.50
	07/19/91	0.24	3.5	44.00
	07/26/91	0.24	3.5	47.50
	08/02/91	0.21	3.5	51.00
	08/09/91	0.25	---	51.00
	08/16/91	0.22	3.5	54.50
	08/23/91	0.16	4.0	58.50
	09/06/91	0.23	4.0	62.50
	09/13/91	0.26	---	62.50
	09/20/91	0.20	---	62.50
	09/27/91	0.20	3.0	65.50
	10/11/91	0.23	2.5	68.00
	10/18/91	0.21	2.5	70.50
	10/25/91	0.20	---	70.50
11/01/91	0.12	1.50	72.00	
11/08/91	0.17	---	72.00	
11/15/91	0.15	---	72.00	
11/20/91	0.10	1.50	73.50	
11/29/91	0.13	4.00	77.50	
12/06/91	0.16	2.50	80.00	
12/13/91	0.22	2.00	82.00	
12/20/91	0.10	1.50	83.50	
12/27/91	0.13	4.00	87.50	

ABBREVIATION:

--- Not measured

F:\02\10-229\PRODUCT.WQ2

FIGURES



SOURCE:
 USGS MAP, OAKLAND EAST AND OAKLAND
 WEST QUADRANGLES. 7.5 MINUTE SERIES. 1959.
 PHOTOREVISED 1980.

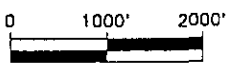
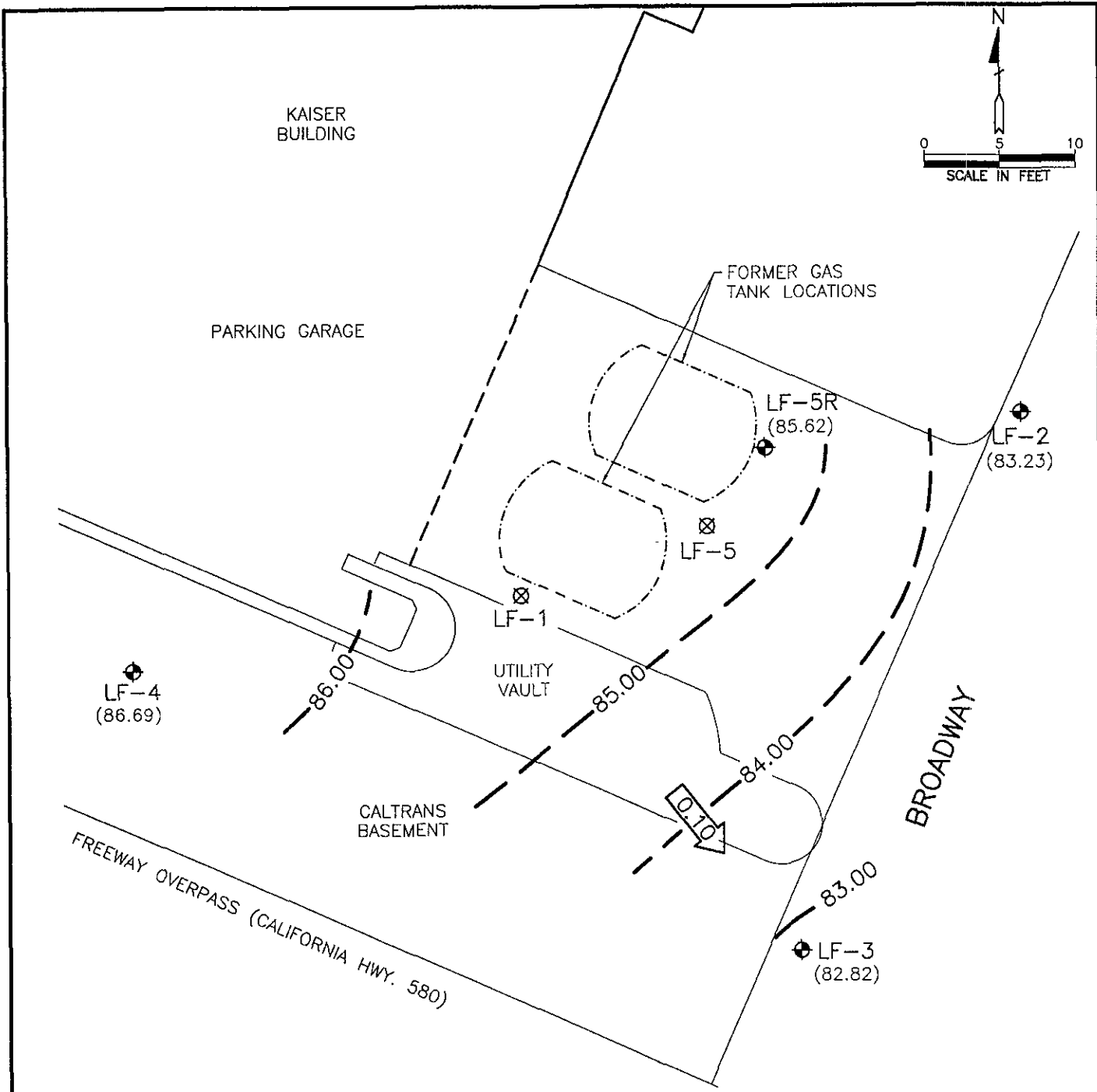


FIGURE 1
SITE VICINITY MAP
 KAISER MOSSWOOD BUILDING
 3505 BROADWAY
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-229





LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ⊗ DESTROYED WELL
- (82.82) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 83.00 — GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL—1.00 FOOT)
- ← 0.10 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 2

POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

DECEMBER 13, 1995

**KAISER MOSSWOOD BUILDING
3505 BROADWAY
OAKLAND, CALIFORNIA**

PROJECT NO. 10-229



ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

APPENDIX A

**CASE CLOSURE SUMMARY FORM AND
SENSITIVE RECEPTOR SURVEY**

SITE CLOSURE SUMMARY

I. AGENCY INFORMATION

Date:

Agency Name: S.F.B.R.W.Q.C.B.	Address: 2101 Webster Street
City/State/Zip: Oakland, CA 94612	Phone: (510) 286-1255
Responsible Staff Person: Kevin Graves	Title:

II. SITE INFORMATION

Site Facility Name: Kaiser Mosswood Building				
Site Facility Address: 3505 Broadway Oakland				
RB LUSTIS Case No.:	Local or LOP Case No.:	Priority:		
URF Filing Date:	SWEEPS No.:			
Responsible Parties (include addresses and phone numbers)				
Kaiser Foundation Health Plan, Inc.				
1950 Franklin Street				
Oakland, California 94612-2998				
Tank No.	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	4000	Gasoline	Removed	2/92
2	7000	Gasoline	Removed	2/92

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Pumping Mechanism		
Site characterization complete? <input checked="" type="radio"/> Yes <input type="radio"/> No	Date Approved By Oversight Agency:	
Monitoring wells installed? <input checked="" type="radio"/> Yes <input type="radio"/> No	Number: 6	Proper screened interval? <input checked="" type="radio"/> Yes <input type="radio"/> No
Highest GW Depth Below Ground Surface: 11	Lowest Depth: 18	Flow Direction: SE
Most Sensitive Current Use: None		
Most Sensitive Potential Use and Probability of Use: None		
Are drinking water wells affected? Yes <input type="radio"/> No <input checked="" type="radio"/>	Aquifer Name: Shallow	
Is surface water affected? Yes <input type="radio"/> No <input checked="" type="radio"/>	Nearest/Affected SW Name: None	
Off-Site Beneficial Use Impacts (Addresses/Locations): None		
Report(s) on file? <input checked="" type="radio"/> Yes <input type="radio"/> No	Where is report(s) filed? Alameda County	

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	2	Disposal	2/92
Piping	Approx. 70ft	Disposal	2/92
Free Product	Approx. 200g.	Disposal	11/89to2/92.
Soil	Unknown	Unknown	---
Groundwater	Unknown	Disposal-Seaport Environment	up tp 12/95
Barrels	---	---	---

MAXIMUM DOCUMENTED POLLUTANT CONCENTRATIONS BEFORE AND AFTER CLEANUP									
POLLUTANT	Soil (ppm)		Water (ppb)		POLLUTANT	Soil (ppm)		Water (ppb)	
	Before	After	Before	After		Before	After	Before	After
TPH (Gas)	8	---	1200	ND	Xylene	0.67	---	420	0.91
TPH (Diesel)	---	---	---	---	Ethylbenzene	0.077	---	43	ND
Benzene	0.31	---	320	ND	Oil & Grease	---	---	---	---
Toluene	0.77	---	53	ND	Heavy Metals	---	---	---	---
Other					Other				

Comments (Depth of Remediation, etc.):

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? <input checked="" type="radio"/> Yes <input type="radio"/> No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? <input checked="" type="radio"/> Yes <input type="radio"/> No		
Does corrective action protect public health for current land use? <input checked="" type="radio"/> Yes <input type="radio"/> No		
Site Management Requirements: ---		
Monitoring Wells Decommissioned: Yes <input checked="" type="radio"/> No <input type="radio"/>	Number Decommissioned: 0	Number Retained: 4
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. TECHNICAL REPORTS, CORRESPONDENCE ETC., THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON

Title: See attached reference section.	Date:

VI. ADDITIONAL COMMENTS, DATA, ETC.

PLEASE INCLUDE/ATTACH THE FOLLOWING AS APPROPRIATE:

- 1) SITE MAP INDICATING TANK PIT LOCATION, MONITORING WELL LOCATION, GROUNDWATER GRADIENT, ETC.; AND,
- 2) SITE COMMENTS WORTHY OF NOTICE (E.G., AREA OF RESIDUAL POLLUTION LEFT IN PLACE, DEED NOTICES ETC.)

See attached figures.

SENSITIVE RECEPTORS SURVEY
Site Survey and Literature Research

Site:
-Store No: Mosswood Building
Location: 3505 Broadway
City/State Oakland, California

I. Provide answers to the following questions:

- a. Is a public water supply well within 2500 ft? (y/n)
If yes, Distance (ft) _____
- b. Is a private water supply well within 1000 ft? (y/n)
If yes, Distance (ft) _____
- c. Is a subway within 1000 ft? (y/n)
If yes, Distance (ft) _____
- d. Is a basement within 1000 ft? (y/n)
If yes, Distance (ft) 50
- e. Is a School within 1000 ft? (y/n)
If yes, Distance (ft) _____
- f. Is a surface body of water within 1000 ft? (y/n)
If yes, Distance (ft) _____

II. Describe type of local water supply:

Public
*Supplier's Name EBMUD
*Supplier's Source Mokulumne River
*Distance to Site Approx. 200 mi.
Private _____

III. Aquifer Classification, if available:

- _____ Class I: Special Ground Waters
Irreplaceable Drinking Water Sources
Ecologically Vital
- _____ Class II: Current and Potential Drinking Water
- X Class III: Not Potential Source of Drinking Water

IV. Describe observation wells, if any:

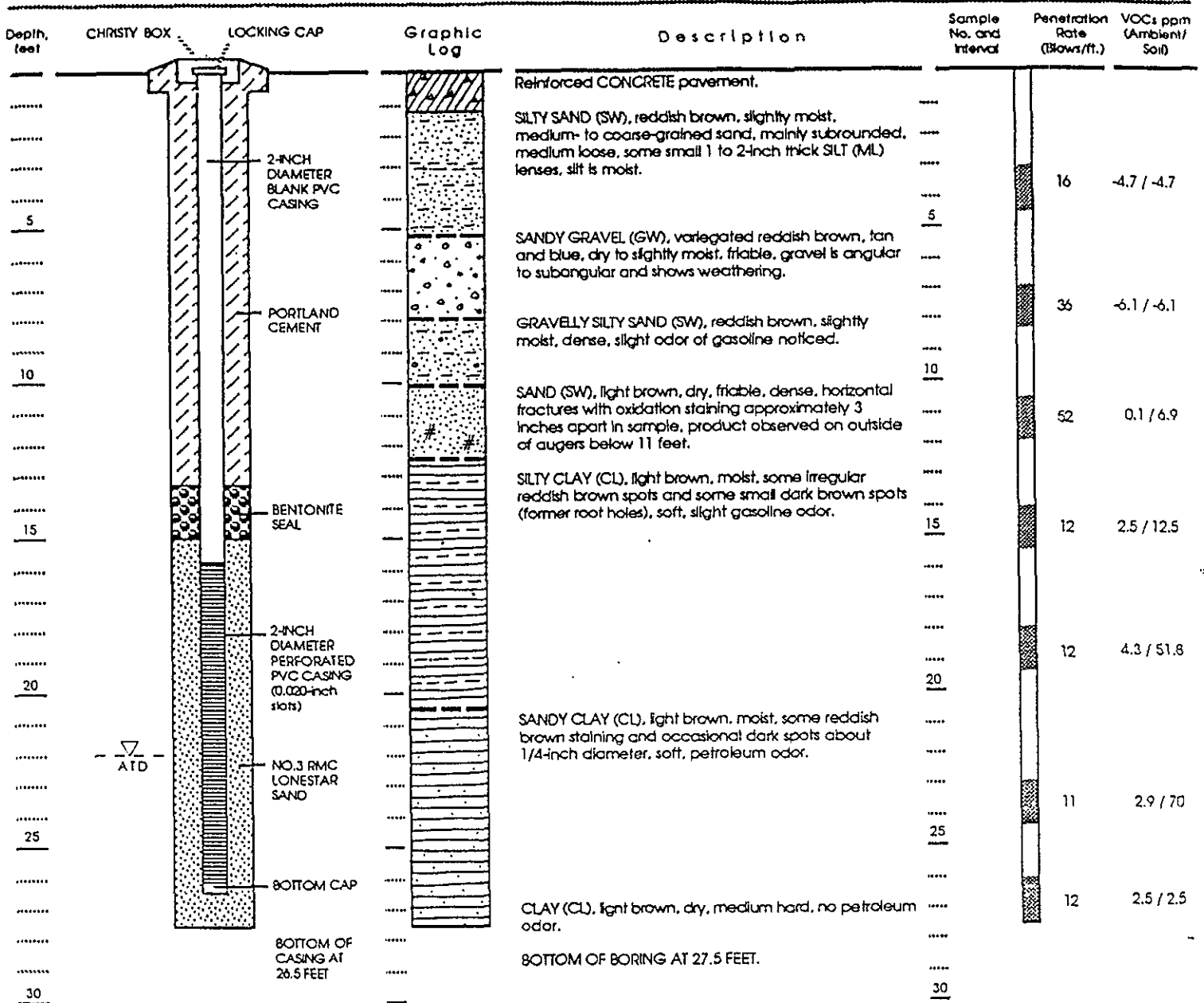
Number _____
Free Product _____ (y/n)

V. Signature of Preparer [Signature] Date 9/3/97

APPENDIX C
BORING LOGS

WELL CONSTRUCTION

LITHOLOGY



Well Permit No. 89505

Date well drilled: 30 September 1989

Date water level measured:

Well elevation: 98.405 feet

LF Geologist: John Sturman

EXPLANATION

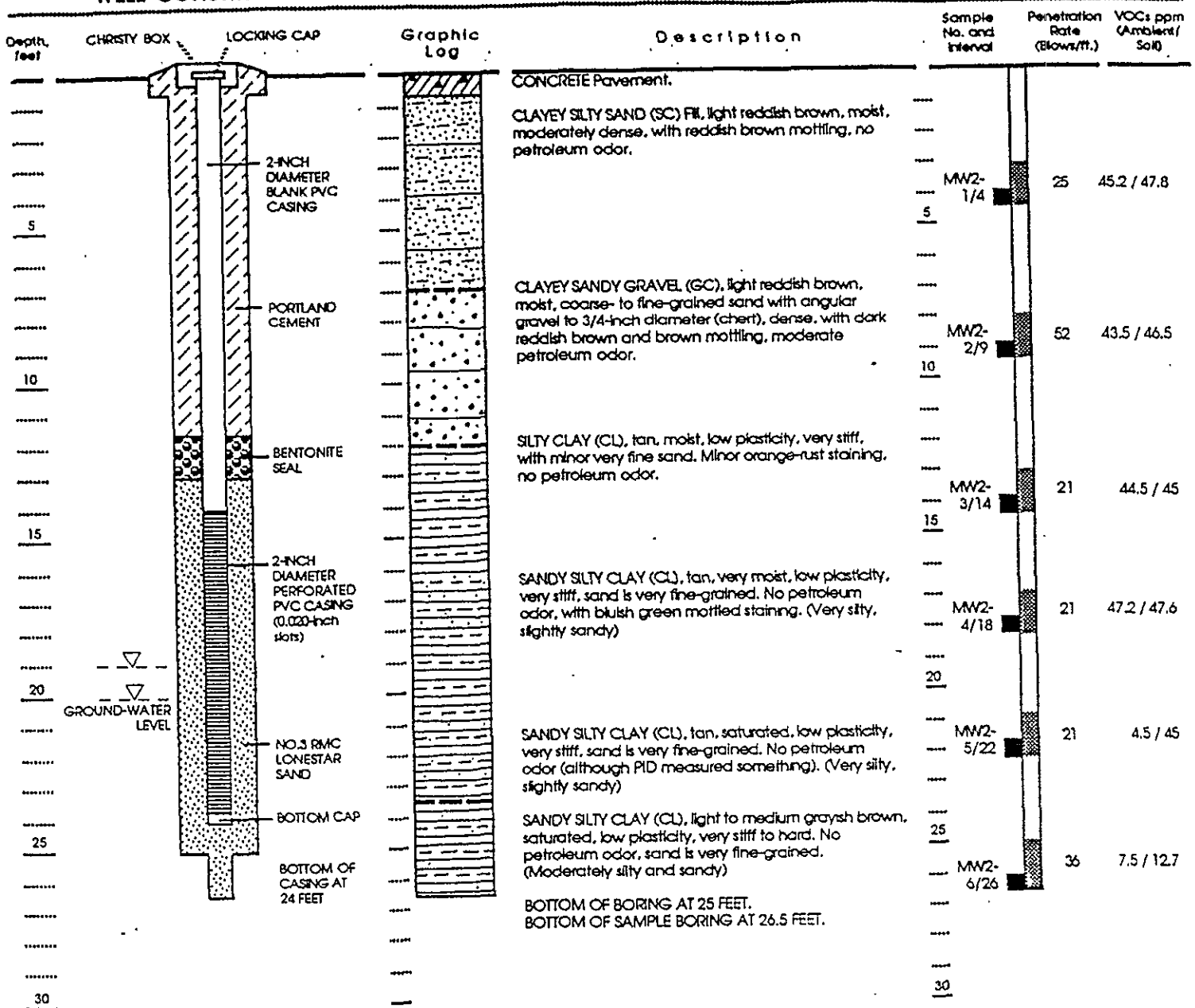
- Clay
- Silt
- Sand
- Gravel
- Modified California Sampler
- ATD At Time of Drilling

Approved by: *[Signature]* RG 4605

Figure : WELL CONSTRUCTION AND LITHOLOGY FOR WELL LF-1

WELL CONSTRUCTION

LITHOLOGY



Well Permit No. 89505

Date well drilled: 6 November 1989

Date water level measured:

Well elevation: 96.875 feet

LF Geologist: Julie Sharp

EXPLANATION

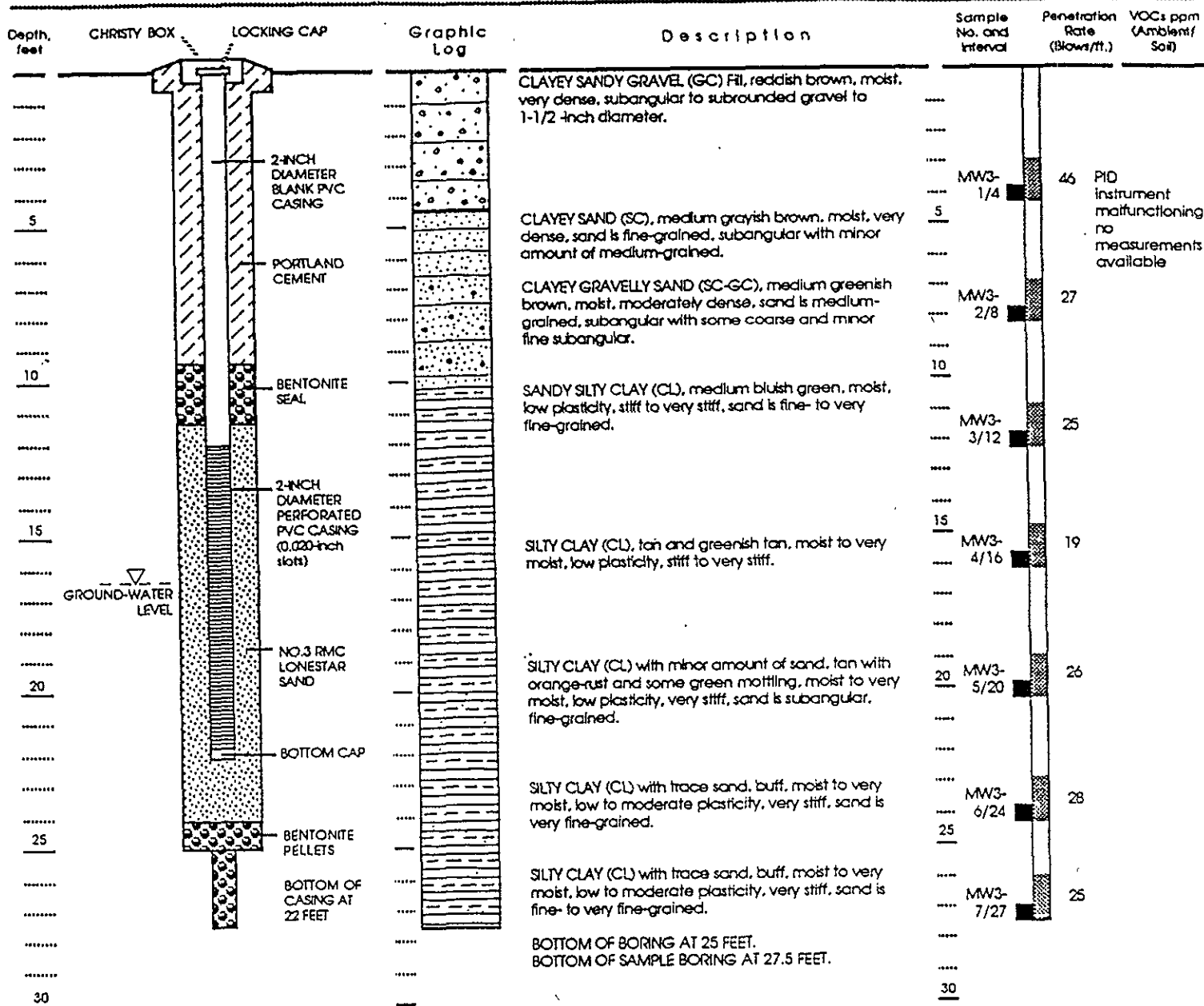
- Clay
- Silt
- Sand
- Gravel
- Modified California Sampler
- Sample retained for analysis

Approved by: *[Signature]*
R.S. 4605

Figure : WELL CONSTRUCTION AND LITHOLOGY FOR WELL LF-2

WELL CONSTRUCTION

LITHOLOGY



Well Permit No. 89505

Date well drilled: 6 November 1989

Date water level measured:

Well elevation: 95.980 feet

LF Geologist: Julie Sharp

EXPLANATION

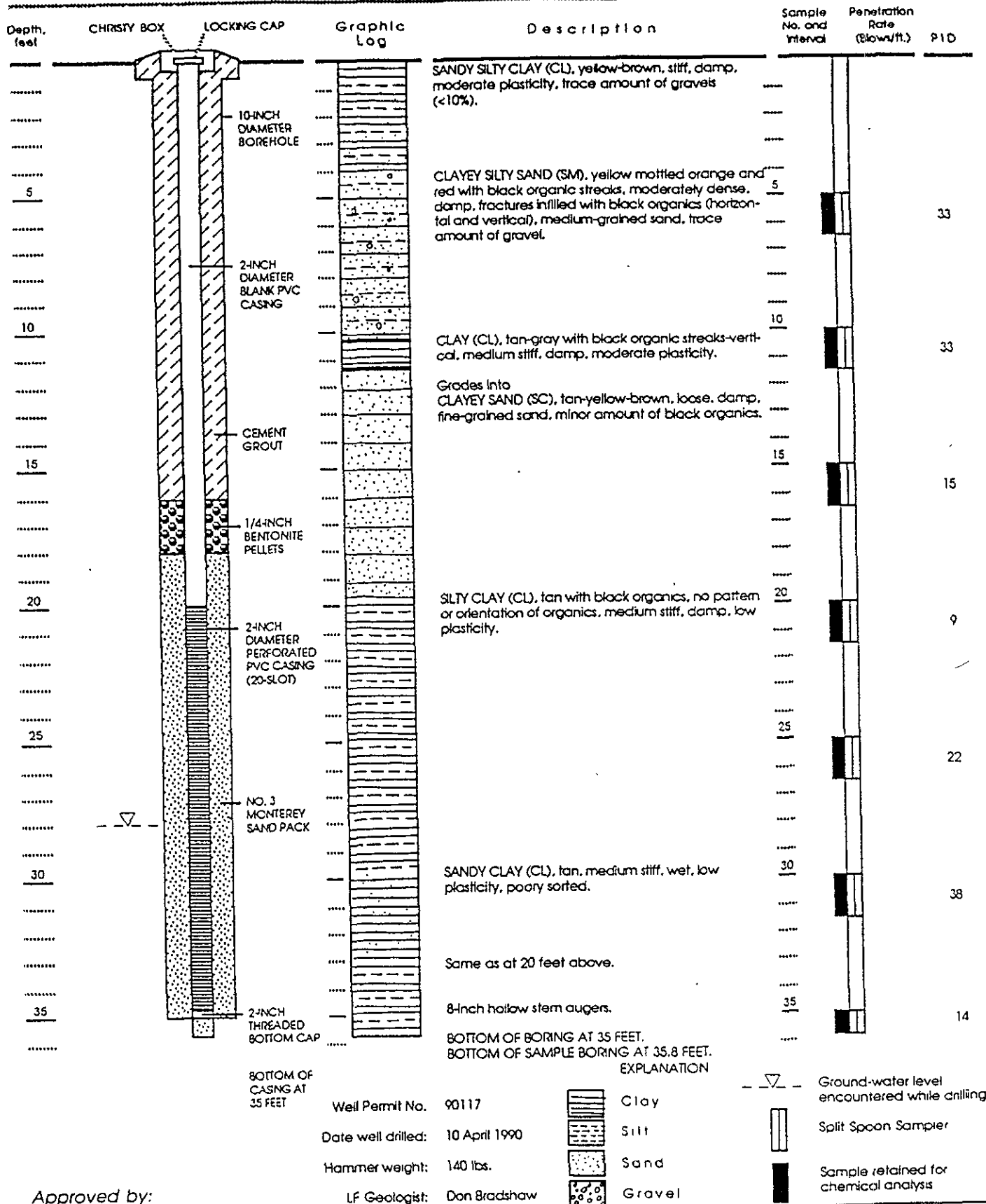
- Clay
- Silt
- Sand
- Gravel
- Modified California Sampler
- Sample retained for analysis

Approved by: *[Signature]* RG 4605

Figure : WELL CONSTRUCTION AND LITHOLOGY FOR WELL LF-3

WELL CONSTRUCTION

LITHOLOGY



Approved by:

Figure : WELL CONSTRUCTION AND LITHOLOGY FOR WELL LF-4

APPENDIX B
SITE PHOTOGRAPHS

