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GEOMATRIX

June 4, 1999
Project 5333

Ms. Eva Chu
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Cal Rock Site
Former Maintenance Shop Area
Site ID 2084
501 East El Charro Road
Pleasanton, California

Dear Ms. Chu:

Vulcan Materials, CalMat Division (CalMat) has retained Geomatrix Consultants, Inc. (Geomatrix) to review environmental activities performed at the subject site and make recommendations for site closure. The Site is located south of Stanley Boulevard, north of Vineyard Avenue, and immediately west of Isabel Avenue in Pleasanton, California (Figure 1). A former maintenance shop and associated oil pit occupied a portion of the Site, and was located on the western edge of the property. An unresolved environmental issue at the Site is related to the former waste oil pit.

BACKGROUND

The former Cal Rock site sits within a parcel of land formerly owned by Jamieson Company and acquired by CalMat in 1992. Portions of the Site have been used for sand and gravel extraction since the 1930s, soil under lying the site consists of sandy gravel and sandy clayey gravel to a depth of at least 70 feet below ground surface (bgs). A summary of environmental investigation and remedition activities performed in the vicinity of the former waste oil pit is presented below. This information is based on reports prepared by Kleinfelder, Inc. (Kleinfelder) of Pleasanton, California.

Initial Trenching

In September 1992, Kleinfelder excavated a trench through the pit to a depth of approximately 15 feet bgs. The original waste oil pit appeared to be approximately 3 feet deep with a perimeter of 10 feet by 15 feet. Kleinfelder collected two soil samples (samples 71603 and 71604) from the trench and had the samples analyzed for Total Petroleum Hydrocarbons as diesel (TPHd) according to EPA Method 8015; Total Oil and Grease (Oil and Grease) according to Standard Method 5520-F; Halogenated Volatile Organic Chemicals (HVOCs) according to EPA Method 8010; and the 13 standard priority pollutant metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) according to EPA Method 6010. TPHd and Oil and Grease were detected

at concentrations of 16 milligrams per kilogram (mg/kg) and 840 mg/kg, respectively in sample 71603, and at concentrations of 440 mg/kg and 6200 mg/kg, respectively in sample 71604. In both cases, the laboratory noted that the chromatogram patterns observed were more typical of hydrocarbons heavier than diesel and is indicative of low mobility. HVOCs and elevated concentrations of metals were not reported in either sample. Table 1 summarizes the analytical results.

Soil Boring Program

In November 1992, Kleinfelder drilled four borings through and adjacent to the former waste oil pit (Figure 2). The borings were extended to depths ranging from 41 to 82 feet bgs. Kleinfelder collected three soil samples from each of the borings at depths ranging from 21 to 72 feet bgs. All 12 soil samples were analyzed for TPHd; Oil and Grease; TPH as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX) according to EPA Method 8020; and five metals - cadmium, chromium, lead, zinc, and total nickel. In addition, the shallow soil sample collected from Boring B-1, the boring drilled through the waste oil pit, was analyzed for HVOCs; Semi-Volatile Organic Chemicals (SVOCs) according to EPA Method 8270; and for polychlorinated biphenyls (PCBs) according to EPA Method 8080.

Two of the borings (B-3 and B-4) were completed as monitoring wells. B-3/MW-1 was completed in a perceived perched saturated zone above the water table; this well was subsequently found to be a dry well and therefore, no groundwater samples were taken. Boring B-4/MW-2 was drilled to a depth of 82 feet bgs; groundwater was encountered at a depth of approximately 68 feet bgs. Kleinfelder collected a groundwater water sample from this well and had the sample analyzed for TPHg, TPHd, BTEX, Oil and Grease, SVOCs, HVOCs, and the five metals.

TPHd and Oil & Grease were detected at concentrations of 64 mg/kg and 120 mg/kg in the shallow soil sample from Boring B-1, and at concentrations of 56 mg/kg and 120 mg/kg in the shallow soil sample from Boring B-2, respectively. TPHd and Oil and Grease were not detected in any other soil samples. The laboratory indicated that the pattern of chromatograms for diesel in both samples showed hydrocarbons heavier than diesel. Trace amounts of BTEX compounds were reported in five of the soil samples. TPHg and elevated concentrations of metals were not reported in any of the soil samples. HVOCs, SVOCs, and PCBs were not detected in the shallow sample from Boring B-1. Bis-(2-ethylhexyl)phthalate (40 micrograms per liter), a common laboratory artifact, and trace amounts of BTEX compounds (less than 1.0 micrograms per liter) were reported in the groundwater sample from MW-2; no other constituents were detected in the groundwater sample. The analytical results are summarized in Table 1.

Excavation Activities

In June 1993, Kleinfelder excavated over of 1500 cubic yards of soil from the former waste oil pit area. During these excavation activities, Well MW-1 was over-excavated and Well MW-2 was pressure grouted and destroyed. After completing the excavation activities, Kleinfelder collected 10 confirmation soil samples from the excavation; seven of the samples were collected from the excavation sidewalls, three were collected from the excavation floor (Figure 3). All ten samples were analyzed for TPHd, Oil and Grease, and BTEX; one side wall sample was analyzed for SVOCs. No analytes were detected in any of the samples collected from the excavation floor. With the exception of the detection of Oil and Grease in three sidewall samples, no other analytes were detected in any of the excavation sidewall samples. The analytical results are summarized in Table 1.

Standard Method 5520, the analytical method used in measuring Oil and Grease, uses an infrared spectrophotometer (IR) to measure organic compounds. The IR works by measuring the infrared energy that is absorbed by the sample extract. The solvent extract removes petroleum hydrocarbons as well as most other organic compounds from the sample matrix. The IR method gives what might be considered to be a total measure of all of the carbon-hydrogen bonds present in the sample extract. There is no easy way to determine if energy was removed by petroleum hydrocarbons or by compounds from natural or biogenic sources. For this reason, Geomatrix considers the results of analyses for Oil and Grease utilizing SM 5520 (IR) unreliable and prefers to rely on gas chromatography methods, such as EPA Method 8015 for TPHg and TPHd, for identifying and quantifying petroleum analytes.

SUMMARY AND CONCLUSIONS

- Chemicals released from the waste oil pit appear to have been limited to petroleum analytes.

- Over 1500 cubic yards of soil was removed from the vicinity of the waste oil pit. Confirmation sampling indicates that all significantly impacted soil has been removed and incorporated into asphalt. Any residual petroleum analytes remaining at the Site would be highly immobile in natural and not able to migrate significantly from the former waste oil pit area. In addition, any residual petroleum would not contain constituents that are typically evaluated for human health effects and therefore, is not likely to pose a significant threat to human health.

- The Site has been used as a source of construction aggregate since the 1930s; the native material in the vicinity of the former waste oil pit is considered a sand and gravel resource and will be mined in the future for use as construction aggregate.

- Groundwater was encountered at approximately 68 feet bgs. Groundwater does not appear to be significantly impacted by the former waste oil pit. The presence of bis-(2-ethylhexyl)phthalate in the groundwater sample collected from MW-2 is most likely a laboratory artifact. Both groundwater wells installed at the site have been properly destroyed.

Based on the information described above, it is our opinion that all soil significantly impacted by the former waste oil pit has been removed; and, any residual petroleum analytes in Site soil would be highly immobile in nature and would not pose a threat to groundwater, surface water, or human health. In the event visibly stained material is encountered in the vicinity of the former waste oil pit during mining activities, it will be handled according to the attached Site Management Plan (Appendix A). Therefore, and as we discussed, we are requesting that the Alameda County Department of Environmental Health issue a letter stating that no further action is required regarding the former waste oil pit.

Please contact either of the undersigned if you have any questions or require additional regarding this matter.

Sincerely,
GEOMATRIX CONSULTANTS, INC.

Jeffrey C. Nelson, P.E.
Principal Engineer

cc: John Blythe, CalMat

Attachments

GEOMATRIX

REFERENCES

Kleinfelder, November 9, 1992, Third Preliminary Report of Findings, Jamieson Sand and Gravel, 501 E. El Charro Road, Pleasanton, California

Kleinfelder, November 13, 1992, Summary of Environmental Findings, Jamieson Company Acquisition, 501 E. El Charro Road, Pleasanton, California

Kleinfelder, December 3, 1992, Provide Environmental Services for On-Site Soil Remediation of Hydrocarbon Contamination Near the Abandoned Maintenance Shop at California Rock Plant, Pleasanton, California

Kleinfelder, January 7, 1993, Summary of Findings of Site Investigation Activities and Work Plan for Soil Remediation, Former California Rock Plant, Pleasanton, California

Kleinfelder, August 1993, Recommended Action For Hydrocarbon Impacted Soils Site, Former Cal Rock Plant, Pleasanton, California

Kleinfelder, September 1993, Additional Soil Excavation for Hydrocarbon Impacted Soils Site, Former Cal Rock Plant, Pleasanton, California

TABLE

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TABLE 1

SUMMARY OF ANALYTICAL RESULTS

Cal Rock Property Site,
Former Maintenance Shop Area
Pleasanton, California

All concentrations in milligrams per kilogram except the water sample from MW-2 which is in micrograms per liter.

Sample Location:	Trench	Trench	Boring B-1	Boring B-1	Boring B-1	Boring B-2	Boring B-2	Boring B-2
Sample Type:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Number:	71603	71604	60138	60117	55992	48111	55994	48111
Sample Date:	10/21/92	10/21/92	11/5/92	11/5/92	11/5/92	11/5/92	11/5/92	11/5/92
Sample Depth (feet):	<15 ft, bgs	<15 ft, bgs	21.5-22	40.5-41	61.5-62	21-21.5	31.5-32	40.5-41
Constituents (Method)								
TPH-d (EPA 3550/8015)	16 [3]	440 [3]	64 [3]	ND	ND	56 [3]	ND	ND
Oil & Grease (SM 5520 E/F)	840	6200	120	ND	ND	120	ND	ND
TPH-g (EPA 5030/8015)	1	--	ND2	ND	ND	ND	ND	ND
Benzene (EPA 8020)	ND	ND	ND	ND	ND	ND	ND	ND
Toluene (EPA 8020)	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene (EPA 8020)	ND	ND	ND	0.011	ND	ND	ND	ND
Xylenes (EPA 8020)	ND	ND	0.01	0.041	ND	ND	0.005	ND
SVOCs (EPA 8270)	--	--	ND	--	--	--	--	--
PCBs (EPA 8080)	--	--	ND	--	--	--	--	--
HVOCs (EPA 8010)	ND	ND	ND	--	--	--	--	--
Antimony (EPA 6010)	7	6	--	--	--	--	--	--
Arsenic (EPA 6010)	8	3	--	--	--	--	--	--
Beryllium (EPA 6010)	ND	ND	--	--	--	--	--	--
Cadmium (EPA 6010)	6	ND	ND	ND	1	ND	ND	ND
Chromium (EPA 6010)	40	40	35	47	39	56	38	34
Copper (EPA 6010)	50	30	--	--	--	--	--	--
Lead (EPA 6010)	100	27	6	6	ND	ND	ND	ND
Mercury (EPA 6010)	ND	ND	--	--	--	--	--	--
Nickel (EPA 6010)	50	50	50	80	60	100	50	50
Selenium (EPA 6010)	ND	ND	--	--	--	--	--	--
Silver (EPA 6010)	ND	ND	--	--	--	--	--	--
Thallium (EPA 6010)	ND	ND	--	--	--	--	--	--
Zinc (EPA 6010)	270	240	50	50	30	30	40	40

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TABLE 1

SUMMARY OF ANALYTICAL RESULTS

All concentrations in milligrams per kilogram except the water sample from MW-2 which is in micrograms per liter.

Sample Location:	B-3/MW-1	B-3/MW-1	B-3/MW-1	B-4/MW-2	B-4/MW-2	B-4/MW-2	MW-2
Sample Type:	Soil	Soil	Soil	Soil	Soil	Soil	Groundwater
Sample Number:	48108	55996	55997	55998	55962	45278	
Sample Date:	11/6/92	11/6/92	11/6/92	11/6/92	11/6/92	11/6/92	11/17/92
Sample Depth (feet):	21-21.5	35-35.5	41.5-42	21.5-22	41-41.5	71.5-72	82+
Constituents (Method)							
TPH-d (EPA 3550/8015)	ND	ND	ND	ND	ND	ND	ND
Oil & Grease (SM 5520 E/F)	ND	ND	ND	ND	ND	ND	ND
TPH-g (EPA 5030/8015)	ND	ND	ND	ND	ND	ND	ND
Benzene (EPA 8020)	0.011	ND	ND	ND	ND	ND	0.4
Toluene (EPA 8020)	ND	ND	ND	ND	ND	ND	0.7
Ethylbenzene (EPA 8020)	ND	ND	ND	0.005	ND	ND	ND 40-Bis
Xylenes (EPA 8020)	0.005	ND	ND	0.017	ND	ND	1
SVOCs (EPA 8270)	--	--	--	--	--	--	40-Bis (2 ethylhexyl) phthalate[4]
PCBs (EPA 8080)	--	--	--	--	--	--	--
HVOCs (EPA 8010)	--	--	--	--	--	--	ND
Antimony (EPA 6010)	--	--	--	--	--	--	--
Arsenic (EPA 6010)	--	--	--	--	--	--	--
Beryllium (EPA 6010)	--	--	--	--	--	--	--
Cadmium (EPA 6010)	ND	ND	ND	ND	ND	ND	--
Chromium (EPA 6010)	44	25	37	34	49	48	--
Copper (EPA 6010)	--	--	--	--	--	--	--
Lead (EPA 6010)	5	ND	ND	ND	6	ND	ND
Mercury (EPA 6010)	--	--	--	--	--	--	--
Nickel (EPA 6010)	100	50	60	50	80	90	ND
Selenium (EPA 6010)	--	--	--	--	--	--	--
Silver (EPA 6010)	--	--	--	--	--	--	--
Thallium (EPA 6010)	--	--	--	--	--	--	--
Zinc (EPA 6010)	40	30	40	30	50	40	ND

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TABLE 1

SUMMARY OF ANALYTICAL RESULTS

All concentrations in milligrams per kilogram except the water sample from MW-2 which is in micrograms per liter.

Sample Location:	Excavation	Excavation	Excavation	Excavation	Excavation	Excavation	Excavation	Excavation	Excavation	Excavation
Sample Type:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Sample Number:	64043	64030	64042	64041	64028	64040	64053	64031	64049	58844
Sample Date:	7/1/93	7/1/93	7/1/93	7/1/93	7/1/93	7/1/93	7/1/93	7/1/93	7/1/93	6/17/93
Sample Depth (feet):	Sidewall	Sidewall	Sidewall	Sidewall	Floor	Floor	Floor	Sidewall	Sidewall	Sidewall
Constituents (Method)										
TPH-d (EPA 3550/8015)	ND	10	ND	ND	ND	ND	ND	ND	9	ND
Oil & Grease (SM 5520 E/F)	20	690	230	180	30	ND	ND	ND	1,200	40
TPH-g (EPA 5030/8015)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene (EPA 8020)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene (EPA 8020)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene (EPA 8020)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (EPA 8020)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs (EPA 8270)	--	--	ND	--	--	--	--	--	--	--
PCBs (EPA 8080)	--		--	--	--	--	--	--	--	--
HVOCs (EPA 8010)	--	--	--	--	--	--	--	--	--	--
Antimony (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Arsenic (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Beryllium (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Cadmium (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Chromium (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Copper (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Lead (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Mercury (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Nickel (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Selenium (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Silver (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Thallium (EPA 6010)	--	--	--	--	--	--	--	--	--	--
Zinc (EPA 6010)	--	--	--	--	--	--	--	--	--	--

Notes:

1 -- Not Analyzed

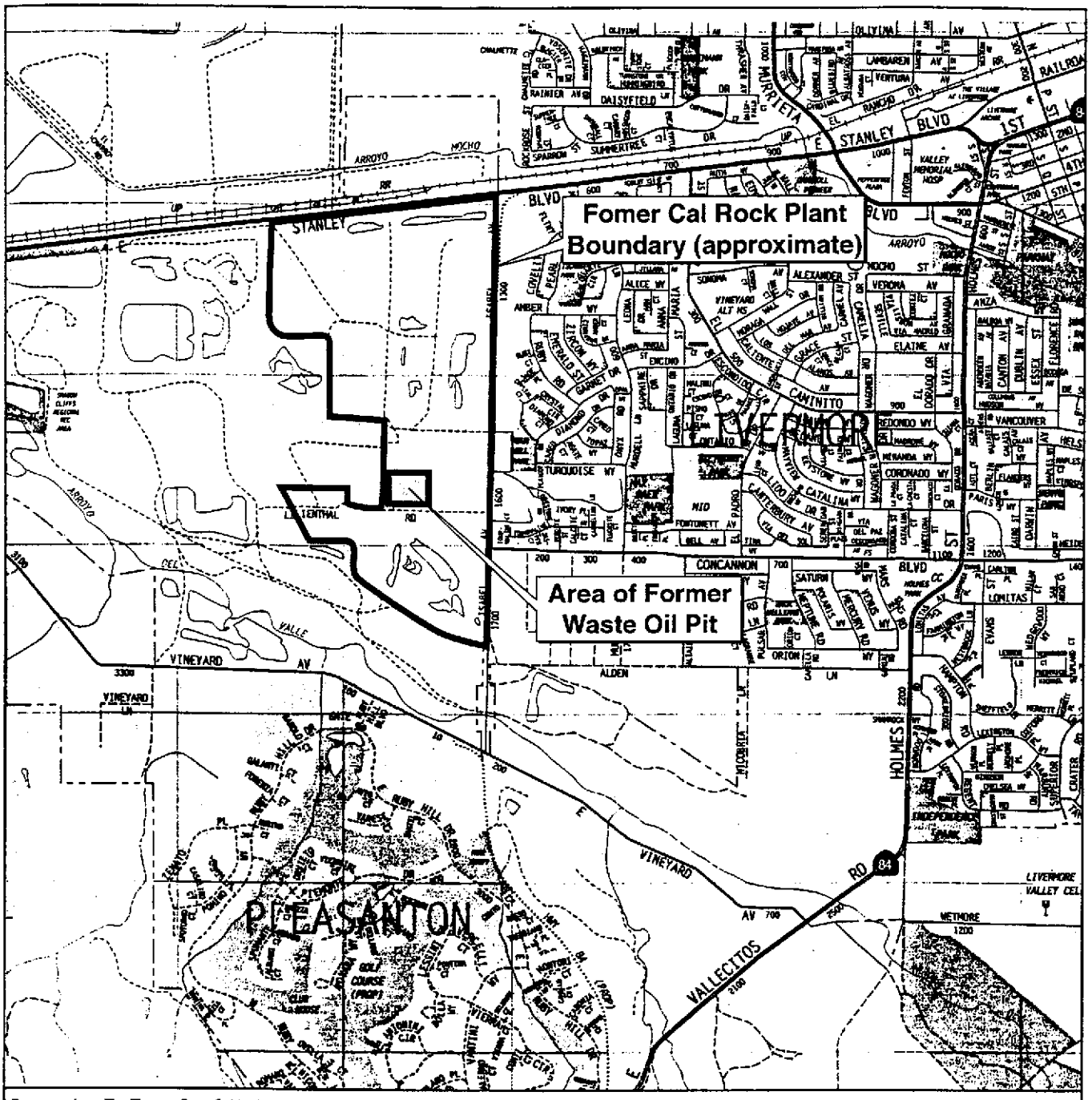
2 ND - None detected.

3 Laboratory noted that chromatogram pattern observed was more typical of hydrocarbons heavier than diesel.

4 Only compound detected.

I:\Doc_Safe\5000s\5333\table 1.xls

FIGURES



N

0 1/2 Mile

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SITE LOCATION MAP
Former California Rock Plant Site
Livermore, California

Project No.
5333

Figure
1

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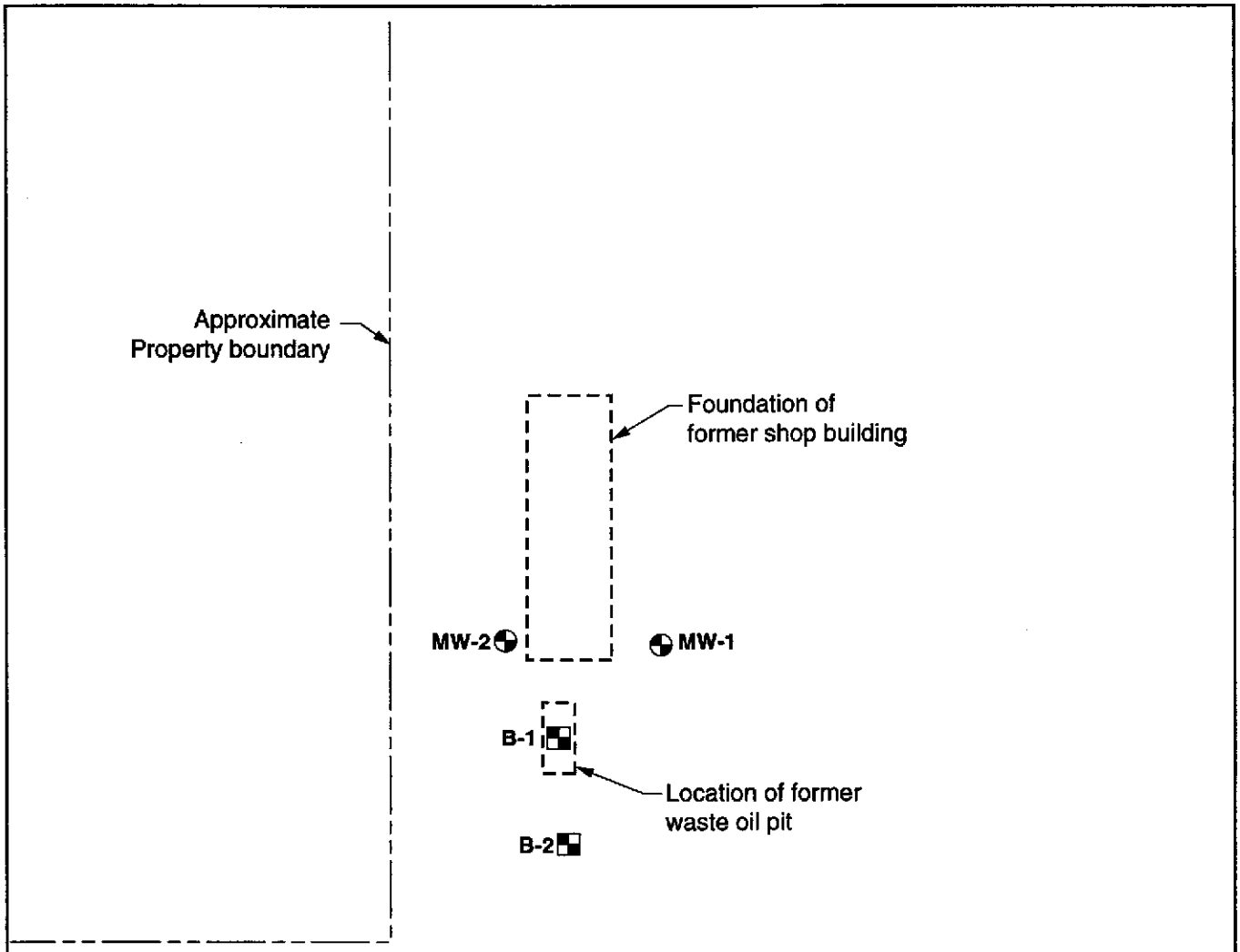

EXPLANATION

Monitoring well

Soil boring

N

0 50 Feet

Scale Approximate

Note: All locations are approximate.

from Kleinfelder, Inc., 1992

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FORMER WASTE OIL PIT AREA
Former California Rock Plant Site
Livermore, California

Project No.
5333

Figure
2

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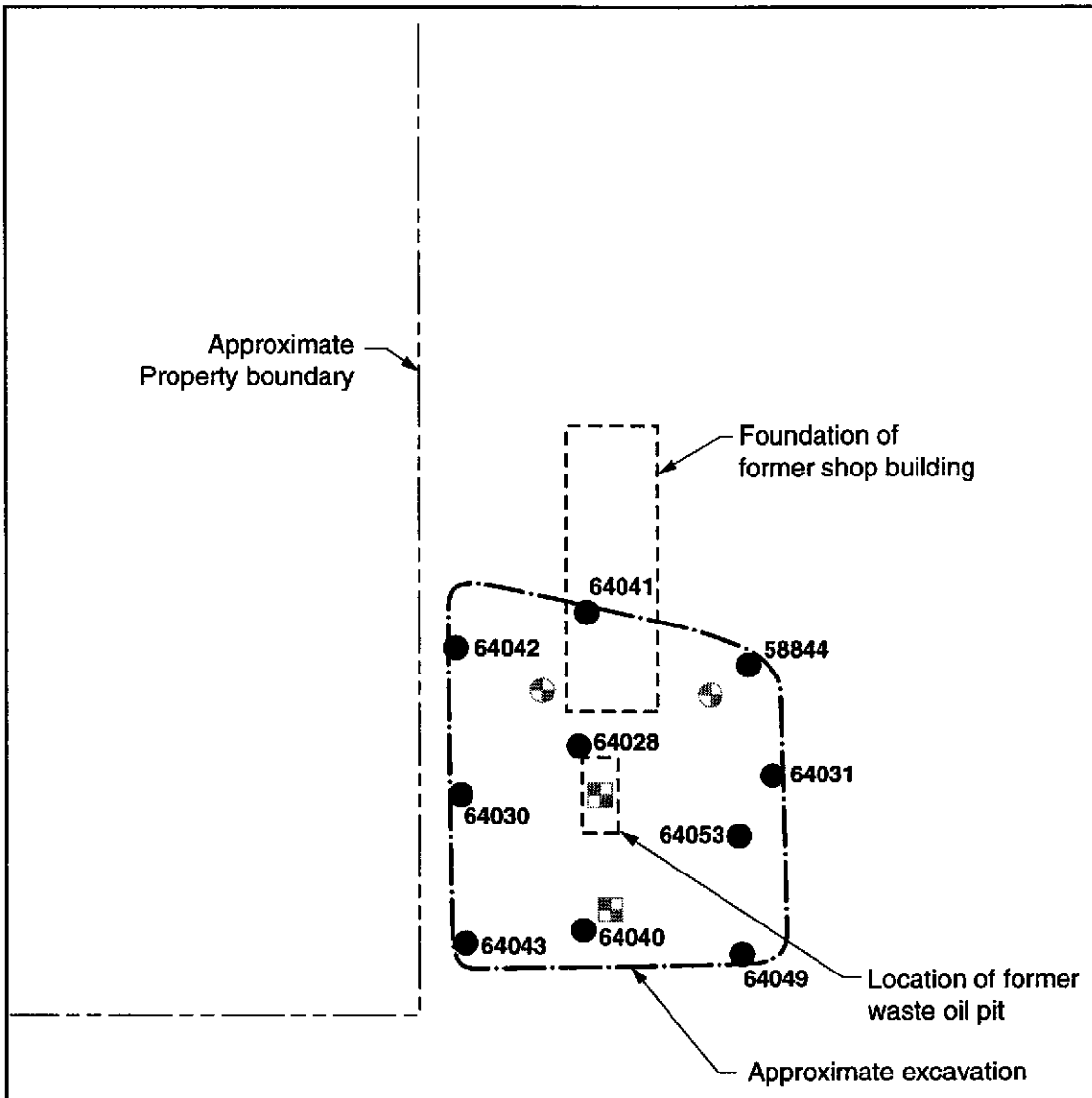

EXPLANATION

- Former monitoring well
- Former soil boring
- 64042 ● Approximate soil sample location and sample number

N

0 50 Feet

Scale Approximate

Note: All locations are approximate.

from Kleinfelder, Inc., 1992 and 1993

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FORMER WASTE OIL PIT AREA
Former California Rock Plant Site
Livermore, California

Project No.
5333

Figure
3

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APPENDIX A

GEOMATRIX

SITE MANAGEMENT PLAN

This site management plan (SMP) has been prepared on behalf of Vulcan Materials (CalMat) by Geomatrix Consultants, Inc. (Geomatrix) at the request of Ms. Eva Chu of the Alameda County Department of Environmental Health (ACDEH). This SMP addresses soil that may contain residual petroleum hydrocarbons in the vicinity of a former waste oil pit that was located at the western edge of the subject site (also referred to as the Cal Rock site).

BACKGROUND

The former Cal Rock site lies within a parcel of land formerly owned by Jamieson Company and acquired by CalMat in 1992. Portions of the Site have been used for sand and gravel extraction since the 1930s. Soil underlying the site consists of sandy gravel and sandy clayey gravel to a depth of at least 70 feet below ground surface (bgs). Groundwater is generally encountered at depths greater than 80 feet bgs and has not been significantly impacted by the former waste oil pit. A summary of environmental investigation and remediation activities performed in the vicinity of the former waste oil pit is presented in a 30 April 1999 letter entitled "Cal Rock Site, Former Maintenance Shop Area, Site ID 2084, 501 East El Charro Road, Pleasanton, California" by Geomatrix submitted to ACDEH.

SITE MANAGEMENT PLAN

The native material in the vicinity of the former waste oil pit is considered a sand and gravel resource and will be mined in the future for use as construction aggregate. CalMat anticipates that the mining operations will extend to a depth of at least 80 feet bgs.

Based on the information described in our 30 April 1999 letter, it is our opinion that all soil significantly impacted by the former waste oil pit has been removed. However, it is possible that soil containing residual petroleum hydrocarbons may be present in shallow soil in the vicinity of the former waste oil pit. If visibly stained soil is encountered in the vicinity of the former waste oil pit during mining operations, this material will be segregated for use as asphalt.