DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

8801 Folsom Boulevard, Suite 200
Sacramento, California 95826
916 387 8800 Tel
916 387 0802 Fax

April 4, 1997

Mr. John Rusmisel
Alameda County Mosquito Abatement District
23187 Connecticut Street
Hayward, California 94545

Re: Summary of Remedial Actions
Former ACMAD Site
33611 10th Street
Union City, California
D&M Project No. 00747-040-044

Dear Mr. Rusmisel:

Since April 1995, Dames & Moore has been conducting assessment and closure activities at the former Alameda County Mosquito Abatement District (ACMAD) site located at 33611 10th Street, Union City, California (the Site) (Figure 1). With the exception of well abandonment, backfilling of excavated areas, and the shipment of a small quantity of stockpiled soil for off-site treatment and disposal, all on-site closure activities have been completed. We are providing this summary report for your records and to assist you in presenting closure information to the regulatory agencies. This report also identifies actions that are still necessary to be conducted to complete closure of the Site.

SITE USE HISTORY

Historic features at the Site are shown on Figure 2. The following site history is based on available records and antidotal information provided by current and former ACMAD employees.

From 1935 to 1985, the Site was used by ACMAD as a base for mosquito abatement activities. The property was acquired and developed in stages; the northern third of the Site was acquired first and used as a field office and for vehicle storage. The remainder of the Site was acquired in the 1940s. A Quonset hut approximately 35 feet by 85 feet was erected in the southwest corner of the Site in 1948. The Quonset hut was used primarily for equipment maintenance and storage, but some pesticides were stored in the southern portion of the building. The Quonset hut was dismantled and the slab for the Quonset hut was pressure washed and removed for landfill disposal in 1996.

During the early 1950s, a concrete pad was constructed along a portion of the east side of the Quonset hut. The northern end of the pad abutted a concrete wash pad that drained into a below-grade redwood sump on its eastern edge. The sump is reported to have been constructed in 1955. Washwater from truck washing was reportedly discharged into the redwood sump until 1985. The sump was removed in 1994, and the concrete pads were pressure washed and removed for landfill disposal in 1996.

In approximately 1957, two sheds were erected on the Site. One shed, measuring approximately 20 feet by 45 feet, was located at the north end of the property and was used for vehicle storage; the shed was open on the south and was not paved. The other shed, measuring approximately 20 feet by 40 feet, was located at the south end of the property, was open at the north end, and was used for equipment and pesticide storage. The pesticides were stored on a concrete slab located in the western portion of the shed. A pipe imbedded in the concrete slab was connected to a buried 55-gallon drum approximately 3 feet east of the slab; the pipe and drum were placed to collect spilled chemicals and were not intended for ongoing waste disposal or storage. The portion of the shed not used for chemical storage was not paved. Both sheds were dismantled and the foundations for the sheds were removed in 1996.

Two buildings were located at the northwestern corner of the Site. One, with a wood exterior, was approximately 12 feet by 14 feet and was reportedly used as an office. The other building, with a galvanized metal exterior, was approximately 18 feet square and was reportedly used as an employee lunch room and lounge. The lunch room and lounge building had water and sewer services supplied by the city; the office had no water supply or sewer connections. The buildings were removed in 1996.

Four underground storage tanks existed at the Site until 1985. The tanks consisted of a 285-gallon diesel tank and a 3,600-gallon unleaded gasoline tank, both installed in the 1930s; a 1,000-gallon regular gasoline tank; and a 5,000-gallon tank used for herbicide (weed oil) storage. The 1,000 and 5,000 gallon tanks were installed about 1957. All the tanks were removed in 1985 and reported to be in good condition at the time of removal.

Several pesticides were stored and mixed at the Site at various times. DDT was used from 1945 through 1963; use peaked in the early 1960s, and DDT may have been stored at the Site as late as 1970. Organophosphorus insecticides (chloropyrifos and malathion) were used in the 1960s and early 1970s. Phenoxy herbicides (2,4-D; 2,4,5-T; 2,4,5-TP; Mecoprop (MCPP); and Dichlorprop) and

Dalapon were used from the 1950s to approximately 1978. As previously stated, pesticides were stored in the southern portion of the Quonset hut and in the western portion of the southern shed. Pesticides are also reported to have been stored in the northwestern portion of the Site.

Soil samples were collected when the underground tanks were removed. The samples were collected from below the tanks, near the pesticide storage area in the southern shed, and below the sump. The samples from below the tanks had reported concentrations of petroleum hydrocarbon constituents that were interpreted as being below regulatory standards and guidelines (Safety Specialists, 1985). The pesticide DDT was reported in samples collected from surface soil near to the pesticide storage area at concentrations up to 8 mg/kg.

The property was sold in March of 1986; the Safety Specialists report referenced above was supplied to the purchaser at the time the property was sold. The new owner stockpiled approximately 430 cubic yards of soil on the concrete pad that was the floor of the former Quonset hut. The stockpiled soil is reported to have been removed from the Oakland Hills area that was damaged by fire in 1994. The stockpiled soil was subsequently found to be unsuitable for use as fill due to the presence of large cobbles and debris, and, after being sampled and analyzed to evaluate proper disposal, was removed from the Site and sent for landfill disposal in November 1996.

SITE INVESTIGATIONS AND SOIL REMOVAL CONDUCTED IN 1994

The new owner, with ACMAD's assistance, conducted a preliminary investigation at the Site in August 1994. During this investigation, a backhoe excavation encountered the sump. Soil at the base and sides of the sump had discolored soil. Soil samples were collected at the Site from 13 locations at depths ranging from the surface in soil stockpiles, to approximately 6 to 8 feet below ground surface (bgs) near the excavated drum and former 5,000-gallon underground tank, to approximately 16 feet bgs near the base of the excavation formed by removing visibly impacted soil from the redwood sump. Pesticide concentrations ranged from 0.110 mg/kg to 87,000 mg/kg. Relatively high concentrations of DDT were reported in soil samples collected from between 6 and 48 inches bgs in the area around the pesticide storage area in the southern shed. The soil with the highest levels came from the vicinity of the shed where there were reported spills; this soil was removed from the Site in 1995 and sent for incineration and disposal. The herbicides 2,4-D; 2,4,5-T; 2,4,5-TP (Silvex); and Dichlorprop were reported at 0.25 mg/kg, 0.24 mg/kg, 0.28, and 0.27 mg/kg, respectively, in one sample collected east of the pesticide storage area in the shed. Results reported from two samples collected and analyzed near the shed showed DDT at 0.87 mg/kg and the phenoxy herbicide MCPP

at 221 mg/kg. In the redwood sump area, DDT was reported at 120 mg/kg in the wood material that was removed. Benzene, toluene, ethylbenzene, and xylenes (BTE&X) were also reported in the wood material at 0.014 mg/kg, 0.17 mg/kg, 0.068 mg/kg, and 0.48 mg/kg, respectively. DDT and congeners were reported between 0.018 mg/kg and 0.087 mg/kg in the native soil 12 inches under the base of the excavation created when the sump materials were removed. A sample collected near the former 5000-gallon underground tank had a reported DDT concentration of 7.2 mg/kg.

In September 1994, ProTech collected a soil sample from approximately 6 inches bgs under the concrete pad in the pesticide storage area in the shed. This sample was reported to have DDT at 2,200 mg/kg, Dalapon at 310 mg/kg, and MCPP at 38,000 mg/kg. The laboratory subsequently revised the report to show that Dalapon and MCPP were not detected at reporting limits of 8 and 400 mg/kg, respectively.

During the 1994 investigation, approximately 100 cubic yards of soil was excavated from the redwood sump and the pesticide storage area and stored in covered piles on a concrete slab at the Site. The soil piles were removed from the Site in December 1994 and transported to appropriate disposal sites, according to state and federal regulations and with the concurrence of the Alameda County Department of Environmental Health (ADEH).

SITE INVESTIGATIONS CONDUCTED IN 1995

Starting in April 1995, Dames & Moore conducted soil and groundwater investigations to assess the extent of soil and groundwater impacts at the Site. These investigations are described below.

Soil and In-Situ Groundwater Sampling Conducted in April 1995

On April 12 and 13, 1995, Dames & Moore collected soil samples from five soil borings completed to 15 to 35 feet bgs in the vicinity of the former sump and the pesticide storage shed. The soil boring locations are shown on Figure 3. In-situ water samples were collected from two borings (SB-4 and SB-6) installed near the former sump. Reported analytical results are summarized in Table 1. The results indicate that organochlorine (OC) pesticides above Preliminary Remediation Goals (PRGs) established by Region IX, U.S. Environmental Protection Agency (US EPA) were present in soil samples collected at the surface and in one sample collected at 2.5 feet bgs, and that OC pesticides were present in some deeper soil samples at levels below the PRGs. Reported results for the in-situ

water samples show that organochlorine (OC) pesticides were present above water quality criteria. Petroleum hydrocarbons and herbicides were not reported in the soil or in-situ water samples.

Soil Sampling Conducted in September, October, and November 1995

On September 3, 1995, Dames & Moore collected a soil sample from the base of the sump excavation. The sample was extracted in the laboratory using the EPA's Synthetic Precipitation Leaching Potential (SPLP) procedure and analyzed for OC pesticides. No pesticides were reported in the extract.

On September 28 and October 9, 1995 Dames & Moore collected soil samples from 24 locations at the Site at depths ranging from 0.5 to 18 feet bgs. The sampling locations are shown as S-1 through S-13 on Figure 4 and D-1 through D-11 on Figures 4 and 5. Reported analytical results are summarized in Table 2. Reported results for soil samples collected over most of the Site show that OC pesticide concentrations generally exceed PRGs in samples from 0.5 feet bgs, and were below PRGs in samples collected from 1.5 feet bgs and deeper. However, some deeper samples in the vicinity of the former pesticide storage shed, were above PRGs at depths of up to 18 feet bgs.

On November 17, 1995, Dames & Moore collected soil samples from 0.5 feet bgs in areas of the Site that were not previously sampled. The sampling locations are shown on Figure 4 as S-14 through S-21. Reported analytical results are summarized in Table 3 and show that DDT was present at concentrations exceeding PRGs in all samples collected.

SITE INVESTIGATIONS CONDUCTED IN 1996/1997

The following paragraphs summarize site investigation activities conducted in 1996 and 1997.

Installation and Sampling of Groundwater Wells

Three groundwater monitoring wells were installed at the Site in May 1996; the well locations are shown on Figure 7. Monitoring Well MW-1 was installed below the former sump area, Monitoring Well MW-2 was installed below the former pesticide storage shed and handling area, and downgradient Monitoring Well MW-3 was installed along the western side of the cement slab that was the floor of the former Quonset hut. Groundwater samples were collected from the wells in April, September, and December 1996 and in March 1997. Measured groundwater elevations at the

time of sample collection are presented in Table 6. Interpreted groundwater gradients are shown on Figures 7 through 10 and are consistently in a southerly direction. Reported results for groundwater samples are summarized in Table 7 and show detectable concentrations of DDD in groundwater samples collected from monitoring well MW-2. The reported concentrations range from 0.1 to 0.2 μg/L.

The Bay Area Regional Water Quality Control Board staff established 0.2 μg/L of DDT in groundwater as a site-specific value for protection of water quality. As noted above, reported concentrations in MW-2 range from the detection limit of 0.1 to 0.2 μg/L. Groundwater samples collected from monitoring wells MW-1 and MW-3 had no reported detections over four quarters of monitoring. These results suggest very limited impact and distribution of DDD in groundwater at concentrations just above the detection limit. Based on these results, Dames & Moore recommends that ACMAD contact the regulatory agencies and propose discontinuing monitoring and properly abandon the monitoring wells.

Hydropunch Assessment

In order to assess lateral groundwater impacts from the Site, three off-site and one on-site insitu groundwater samples were collected on February 13, 1997, using the Hydropunch technique. One off-site Cone Penetrometer Test (CPT) was also conducted to assess sub-surface soil conditions. A Work Plan for these assessments was submitted to the Alameda County Water District (ACWD) on February 4, 1997 for approval. Based on comments received, the Work Plan was modified on February 5, 1997. The Hydropunch and CPT locations are shown on Figure 11. Reported analytical results are summarized in Table 8 and show that no OC pesticides were reported in any of the samples analyzed.

Soil Investigation

On November 6, 1996, Dames & Moore collected soil samples from 0.5 feet bgs around the perimeter of the Site on the ACMAD side of the site fence. The sampling locations are shown on Figure 4 as S-22 through S-31. Reported analytical results are summarized in Table 4 and show that DDT was present in some samples, predominately those collected in the northwestern portion of the Site, at concentrations exceeding PRGs.

In November, 1996 Dames & Moore collected 42 soil samples from 0.5 feet and 1.5 feet bgs on properties adjacent to the perimeter of the Site. The sampling locations are shown on Figure 6 as SS-1 through SS-12. Reported analytical results are summarized in Table 5 and show that DDT is present in some samples at concentrations exceeding PRGs, predominately those collected near to the northwestern portion of the Site. In addition, chlordane was reported to be present at concentrations exceeding PRGs in samples collected on adjacent properties near the northern portion of the Site.

REMEDIATION OF ON-SITE SOIL

Review of the data produced by the investigations described above shows that concentrations of DDT and congeners exceeding the PRGs were distributed across most of the Site in shallow soils (less than two feet bgs), and that the highest concentrations occurred near the former pesticide and equipment storage areas. Based on this distribution and the potential for direct contact, excavation and off-site disposal of a 1 to 2 foot layer of soil across the entire Site, using the US EPA PRGs as a cleanup goal, was identified as an appropriate remedial action. In addition, excavation and disposal of additional soil from lower depths was identified as appropriate for the area around the former buried 55-gallon drum. The excavation depths around the former buried 55-gallon drum are shown on Figure 12.

Excavated soil from below the former buried 55-gallon drum and from around the former pesticide storage area in the northwestern portion of the Site has been stockpiled and will be sent for off-site incineration prior to disposal. All other excavated soil has been transported to a Class I disposal facility under hazardous waste manifests; the total volume of the manifested soil is approximately 1010 yards.

Confirmation Soil Sampling

Dames & Moore conducted confirmation soil sample collection to assess the effect of soil removal actions conducted in 1996 and 1997. After soil was excavated, soil samples were collected from the surface of soil left in place. Confirmation soil sampling over most of the Site was conducted based on a 25 x 25 foot grid; three samples from within each grid were composited in the laboratory for analysis for OC pesticides. The grid sample collection locations are shown on Figure 13; reported laboratory results are presented in Table 9.

Based on reported analytical results, additional excavation (two iterations) was conducted in some grids as shown on Figure 13 in blue and in orange. Following the additional excavation, soil samples were collected from the surface of soil left in place as shown on Figure 13. Reported laboratory results for the additional samples are presented in Table 9.

Samples were also collected from the deeper excavated area around the former pesticide storage shed at locations identified as H-36 to H-40 on Figure 12. Confirmation samples from the deeper excavation were collected from both the bottom of the excavation and the side walls of the excavation. Reported laboratory results for the samples collected from the deeper excavated area are presented in Table 9.

Review of reported results for all samples collected after completion of excavation activities indicates that all on-site soil exceeding PRGs has been excavated. Based on this finding, Dames & Moore recommends that the site be prepared for closure.

REMAINING SITE CLOSURE ACTIVITIES

Excavated soil that is currently stored on site will be sent for incineration and disposal. Based on all available reported analytical results, after the stockpiled soil is removed from the Site, no soil above PRGs will remain on-site.

Once the stockpiled soil is removed from the Site, the on-site excavated area can be backfilled with imported clean soil. The fill material should be placed, compacted, and graded as appropriate for anticipated site use. Other activities for completion of site closure are discussed below.

Well Abandonment

Based on the four quarters of groundwater monitoring data from the three on-site monitoring wells and on the results of the hydropunch sampling discussed above, groundwater impacts at the Site occur in a limited area around Monitoring Well MW-2 at the southern boundary of the Site, and do not exceed the site-specific protective water quality criteria established by regulatory agencies. Considering the extreme attenuation for downward movement of OC pesticides at the Site[1], the

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[1] DDT and other organochlorine pesticides at several thousand mg/kg were exposed to rainfall infiltration at the Site for over 30 years, and downward movement was limited to a few μg/kg at 2 feet below ground surface. This finding is consistent with data from other sites that indicate DDT will move through clay and loam soils

impacts likely resulted from either a spill or pesticides brought to depth by installation of the former buried 55-gallon drum that was adjacent to Monitoring Well MW-2. Soils with pesticide concentrations exceeding the PRGs in the pesticide storage shed and surrounding area have been removed; consequently, there should be no continued source of groundwater impacts. Likewise, residual pesticides at concentrations exceeding the PRGs have been removed from other portions of the Site.

Based on the demonstrated absence of any significant impacts to groundwater at the Site and on the removal of soil with significant residual pesticide concentrations, Dames & Moore recommends that ACMAD obtain regulatory agency concurrence for abandonment of the three monitoring wells.

Off-Site Soil Removal and Backfilling

As discussed above and shown in Table 5, DDT and its congeners and some chlordane are reported to be present at concentrations exceeding PRGs in soil samples collected outside the boundaries of the Site. Chlordane was historically registered for use as a residential termaticide and was also used as an herbicide for crabgrass control in lawns. Hence, its detected presence may originate from a source other than use as an insecticide in mosquito control activities. The DDT and congeners reported on the adjacent property may be the result of wind dispersion of spray from equipment washing at the Site or the result of wind or runoff dispersion of pesticide impacted soil at the Site. ACMAD intends to remove soil on adjacent property to levels below the PRGs as was done on the Site itself. The removed soil will be sent for landfill disposal. The excavated areas will be sampled to confirm that remediation goals are met and then backfilled with clean imported soil, compacted, and graded.

Submission of a Closure Report

After disposal of stockpiled soil, completion of on-site backfilling, well abandonment, and off-site excavation, confirmation sampling, and backfilling, Dames & Moore will update this report for submittal as a closure report for the Site. The closure report will present a summary of all assessment and remediation activities completed at the Site and on the adjacent properties. ACMAD can then submit copies of the closure report to the regulatory agencies and request written confirmation of closure of the Site.

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only when co-disposed with carriers and surfactants and subjected to almost constant saturated conditions.

If you have any questions concerning the information presented in this report, please contact me at (916) 387-8800.

Sincerely;
DAMES & MOORE

Joseph J. Niland, R.G.
Senior Geologist

TABLE 1
REPORTED ANALYTICAL RESULTS FOR SAMPLES COLLECTED APRIL 12 AND 13, 1995 ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY, UNION CITY

Sample Location	Depth[1] (feet)	Reported Results (Only Detected Compounds Listed)								
		β-BHC	Dieldrin	DDE	DDD	DDT	Endrin	Endosulfan I	TPH-IDQ	Herbicides
In-Situ Groundwater Samples, µg/l										
SB-4	40	ND	ND	ND	0.12	**0.39**	ND	ND	ND	ND
SB-6	40	0.069	**1.5**	**1.0**	**3.2**	**9.6**	0.050	0.076	ND	ND
WQ Criteria[2] →		0.3	0.05	0.1	0.15	0.1	0.2	0.93	NA	NA
Soil Samples, mg/kg										
SB-2	5	ND	**0.039**	0.0035	0.0071	0.180	ND	ND	—	ND
	10	ND	**0.034**	ND	0.0026	0.093	ND	ND	—	ND
	15	ND	**7.1**	0.770	**13**	**36**	0.120	ND	—	—
	20	ND	ND	ND	ND	0.015	ND	ND	—	—
SB-3	0	ND	**2.7**	**46**	**71**	**4,400**	ND	ND	—	ND
	2.5	ND	ND	0.017	0.092	0.290	ND	ND	—	ND
	5	ND	ND	ND	ND	0.063	ND	ND	—	ND
	10	ND	ND	ND	0.0061	0.029	ND	ND	—	ND
	15	ND	ND	ND	ND	0.063	ND	ND	—	—
SB-4	0	ND	**0.047**	**6.1**	**8.6**	**20**	0.0078	ND	—	—
	2.5	ND	ND	0.130	0.290	0.940	ND	ND	—	—
	10	ND	ND	ND	ND	0.003	ND	ND	ND	ND
	15	ND	ND	ND	ND	ND	ND	ND	ND	ND
	30	ND	ND	ND	ND	0.0045	ND	ND	—	—
	35	ND	ND	ND	ND	0.023	ND	ND	—	—
SB-5	0	ND	**2.5**	**14.0**	**220**	**27**	ND	ND	—	—
	2.5	ND	**0.45**	**27**	**24**	**100**	ND	ND	—	—
	10	ND	ND	ND	0.0023	0.016	ND	ND	ND	ND
	15	ND	ND	ND	ND	0.010	ND	ND	ND	ND
SB-6	0	ND	**0.160**	**8.3**	**4.7**	**16**	ND	0.390	—	—
	2.5	ND	ND	0.0066	0.0021	ND	ND	ND	—	—
	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
	15	ND	ND	ND	ND	ND	ND	ND	ND	ND
	30	ND	ND	ND	ND	0.013	ND	ND	—	—
	35	ND	ND	0.0099	0.0022	ND	ND	ND	—	—
PRG[3] →		NA	0.028	1.3	1.9	1.3	20	3.3	NA	NA

(1) Depth below ground surface.
(2) Water Quality Criteria (Federal or State Maximum Contaminant Level, State Action Level, etc.)
(3) Preliminary Remediation Goal for residential soil (February 1, 1995 version) established by U.S. EPA Region IX.

— = Test not run. ND = None detected at reporting limit. NA = Not applicable.

- Figure 3 -

Figure 4.

TABLE 2

REPORTED ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED SEPTEMBER 28 AND OCTOBER 9, 1995 FORMER ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY UNION CITY, CALIFORNIA

Sample Location	Depth[1] (feet)	Reported Results, mg/kg (Only Detected Compounds Listed)						
		Chlordane	Dieldrin	DDE	DDD	DDT	Heptachlor	Toxaphene
S-1	0.5			**11.0**	**27.0**	**77.0**		
	1.5			0.098	0.028	0.12		
S-2	0.5			**3.4**	**6.4**	**26.0**		
	1.5			**7.5**	**<6.7**	**37.0**		
S-3	0.5		**0.27**	**1.8**	**2.1**	**24.0**		
	1.5		0.0066	0.079	0.032	0.4		
S-4	0.5[3]			**18.0**	**23.0**	**140.0**	0.0045	
	1.5			0.35	0.039	0.17		
	5			0.0014	0.0038	0.009		
S-5	0.5	**12**		**9.9**	**4.7**	**34.0**		
	1.5	**1.3**		0.32	0.064	0.62		
	5			0.0067	0.012	0.17		
S-6	0.5			0.42	1.7	**3.8**		
	1.5			0.027	0.026	0.13		
S-7	0.5			**6.5**	**4.9**	**57.0**		
	1.5			0.13	0.037	0.14		**0.59**
S-8	0.5		**0.29**	**8.2**	**25.0**	**36.0**		
	1.5			0.0094	<0.0033	0.017		
S-9	0.5			**4.1**	1.7	**16.0**		
	1.5			0.024	0.0051	0.041		
S-10	0.5			**4.4**	0.81	**8.9**		
	1.5			0.024	0.0088	0.011		
S-11	0.5			**16.0**	1.1	**17.0**		
	1.5			0.015	<0.0033	0.005		
S-12	0.5			**7.1**	**3.5**	**34.0**		
	1.5			0.61	0.38	**1.7**		
S-13	0.5			**20.0**	**11.0**	**68.0**		
	1.5			0.062	0.0089	0.097		
PRG[2] →		0.34	0.028	1.3	1.9	1.3	0.099	0.40

(1) Depth below ground surface.
(2) Preliminary Remediation Goal for residential soil (February 1, 1995 version) established by U.S. EPA.
(3) ∃-BHC was reported to be present at 0.0040 mg/kg in the sample collected from 0.5 feet at Location S-4.

TABLE 2 (continued)

REPORTED ANALYTICAL RESULTS FOR
SOIL SAMPLES COLLECTED SEPTEMBER 28 AND OCTOBER 9, 1995
FORMER ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY
UNION CITY, CALIFORNIA

Sample Location	Depth[1] (feet)	Reported Results, mg/kg (Only Detected Compounds Listed)						
		Chlordane	Dieldrin	DDE	DDD	DDT	Heptachlor	Toxaphene
D-1	6		0.014	0.12	0.24	**3.0**		
	12			0.025	0.058	0.61		
	15			<0.0013	<0.0034	0.0066		
	18			<0.0013	<0.0034	0.0078		
D-2	0.5			0.93	1.7	**16.0**		
	3		**0.058**	0.49	**3.2**	**21.0**		
D-3	1			0.054	0.031	0.52		
	3			0.012	0.023	0.31		
D-4	1			**1.6**	0.99	**16.0**		
	3			0.66	0.50	**3.4**		
D-5	1			0.005	<0.0033	0.018		
	3			0.0033	0.0064	0.070		
D-6	1			**8.2**	**4.2**	**87.0**		
	3			0.15	0.84	**8.6**		
	7			0.0034	0.21	**3.4**		
	12			0.014	0.083	**1.3**		
	15			<0.0013	0.0039	0.027		
	18			<0.0013	0.0087	0.17		
D-7	0.5			0.83	1.1	**20**		
	3		0.007	0.027	0.060	1.0		
D-8	0.5			0.36	0.63	**3.0**		
	3			0.0037	0.0071	0.037		
D-9	6			**1.6**	**22.0**	**85.0**		
	12			0.30	**2.6**	**15.0**		
	16			<0.0013	<0.0034	<0.004		
	18			0.26	**1.8**	**12.0**		
PRG[2] -		0.34	0.028	1.3	1.9	1.3	0.099	0.40

(1) Depth below ground surface.
(2) Preliminary Remediation Goal for residential soil (February 1, 1995 version) established by U.S. EPA.

TABLE 2 (continued)

REPORTED ANALYTICAL RESULTS FOR
SOIL SAMPLES COLLECTED SEPTEMBER 28 AND OCTOBER 9, 1995
FORMER ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY
UNION CITY, CALIFORNIA

Sample Location	Depth[1] (feet)	Reported Results, mg/kg (Only Detected Compounds Listed)						
		Chlordane	Dieldrin	DDE	DDD	DDT	Heptachlor	Toxaphene
D-10	6		**0.020**	<0.0013	0.12	**1.3**		
	12			0.030	0.072	0.68		
	15			<0.0013	0.0074	<0.004		
	18			<0.0013	0.019	0.019		
D-11	6			0.49	**3.6**	**41**		
	12			0.83	**<8.4**	**64.0**		
	15			<0.0013	0.0036	0.050		
	18			0.033	0.19	<0.40		
PRG[2] →		0.34	0.028	1.3	1.9	1.3	0.099	0.40

(1) Depth below ground surface.
(2) Preliminary Remediation Goal for residential soil (February 1, 1995 version) established by U.S. EPA.

TABLE 3

REPORTED ANALYTICAL RESULTS FOR
SOIL SAMPLES COLLECTED NOVEMBER 17, 1995
FORMER ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY
UNION CITY, CALIFORNIA

Sample ID	Depth[1] (feet)	Reported Results[2], mg/kg		
		DDE	DDD	DDT
S-14	0.5	<33	<33	**330**
S-15	0.5	<33	<33	**150**
S-16	0.5	<33	**370**	**5,400**
S-17	0.5	<33	<33	**110**
S-18	0.5	<33	<33	**91**
S-19	0.5	<33	<33	**150**
S-20	0.5	<33	<33	**360**
S-21	0.5	<33	<33	**170**
	PRG[3] →	1.3	1.9	1.3

(1) Depth below ground surface.
(2) All other organochlorine pesticides were below the reporting limit.
(3) Preliminary Remediation Goal for residential soil (February 1, 1995 version) established by U.S. EPA Region IX.

TABLE 4
REPORTED ANALYTICAL RESULTS FOR
SOIL SAMPLES COLLECTED NOVEMBER 6, 1996
ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY, UNION CITY

SAMPLE LOCATION	SAMPLING DATE	Depth[1]	Reported Results, mg/kg		
			4,4-DDD	4,4-DDE	4,4-DDT
S-22	11/06/96	0-0.5	**1500**	<500	**1300**
S-23	11/06/96	0-0.5	<25	<25	**120**
S-24	11/06/96	0-0.5	<20	<20	**48**
S-25	11/06/96	0-0.5	<100	<100	**190**
S-26	11/06/96	0-0.5	**7.8**	<2	**7.2**
S-26 Duplicate	11/06/96	0-0.5	**14**	**3.4**	**15**
S-27	11/06/96	0-0.5	<10	<10	**44**
S-28	11/06/96	0-0.5	<0.5	0.96	**4.2**
S-29	11/06/96	0-0.5	<0.5	<0.5	**1.3**
S-30	11/06/96	0-0.5	<1	**2.2**	**12**
S-31	11/06/96	0-0.5	<1	<1	**3.3**
S-32	11/06/96	0-0.5	<0.025	0.13	0.041
		PRG[2]	1.9	1.3	1.3

[1] Feet below ground surface.

[2] Preliminary Remediation Goal for residential soil (August 1, 1996) established by U.S EPA.

TABLE 5
REPORTED ANALYTICAL RESULTS FOR
SOIL SAMPLES COLLECTED FEBRUARY 6, 1997
ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT FACILITY, UNION CITY

SAMPLE LOCATION	SAMPLING DATE	Depth[1]	Reported Results, mg/kg			
			4,4-DDE	4,4-DDT	CHLORDANE	DIELDRIN
SS-01	02/06/97	0.5	<0.1	0.46	<0.2	<0.1
		1.5	<0.005	<0.005	<0.01	<0.005
SS-02	02/06/97	0.5	0.24	0.23	<0.2	<0.1
		1.5	0.028	<0.025	<0.05	<0.025
SS-03A	02/06/97	0.5	<0.1	0.45	<0.2	<0.1
		1.5	<0.005	<0.005	<0.01	<0.005
SS-03B	02/06/97	0.5	0.028	0.081	<0.05	<0.025
		1.5	<0.005	<0.005	<0.01	<0.005
SS-04	02/06/97	0.5	0.18	0.21	<0.2	<0.1
		1.5	<0.005	0.011	<0.01	<0.005
SS-05A	02/06/97	0.5	<0.5	**1.8**	<1	<0.5
		1.5	<0.25	0.3	<0.5	<0.25
SS-05B	02/06/97	0.5	0.13	0.26	<0.2	<0.1
		1.5	<0.005	<0.005	<0.01	<0.005
SS-06A	02/06/97	0.5	<2.5	**16**	<5	<2.5
		1.5	<2	**4.6**	<4	<2
SS-06B	02/06/97	0.5	1.2	**4.4**	<2	<1
		1.5	0.51	**2.5**	<1	<0.5
SS-07A	02/06/97	0.5	<2.5	**10**	<5	<2.5
		1.5	0.48	0.93	<0.5	<0.25
SS-07B	02/06/97	0.5	**2.8**	**8.1**	<5	<2.5
		1.5	0.27	0.45	<0.2	<0.1
SS-08A	02/06/97	0.5	**2.2**	**5.3**	<4	<2
		1.5	<0.005	0.006	<0.01	<0.005
SS-08B	02/06/97	0.5	0.79	1.1	<0.5	<0.25
		1.5	<0.005	<0.005	<0.01	<0.005
SS-09A	02/06/97	0.5	**4.1**	**16**	<5	<2.5
		1.5	0.017	0.011	<0.01	<0.005
SS-09B	02/06/97	0.5	0.61	0.81	**1.2**	<0.2
SS-10A	02/06/97	0.5	<5	**16**	<10	<5
		1.5	<0.005	<0.005	<0.01	<0.005
SS-10B	02/06/97	0.5	0.46	0.82	**2.9**	<0.25
SS-11A	02/06/97	0.5	<2	**6.1**	<4	**1.9**
		1.5	<0.05	0.085	<0.1	<0.05
SS-11B	02/06/97	0.5	0.042	0.026	**0.48**	<0.02
		1.5	<0.01	0.031	0.091	<0.01
SS-12A	02/06/97	0.5	<2.5	**11**	<5	<2.5
		1.5	0.15	0.25	**0.71**	<0.05
SS-12B	02/06/97	0.5	0.5	1	**6.8**	<0.25
		1.5	<0.05	0.26	<0.1	<0.05
		PRG[2]	1.9	1.3	0.34	0.028

[1] Feet below ground surface.

[2] Preliminary Remediation Goal for residential soil (August 1, 1996) established by U.S EPA.

Table 6

Summary of Groundwater Elevation Data
Alameda County Mosquito Abatement District
Former Facility
Union City, California

Well ID	Well Elevation (MSLD)	Date	Depth to Water (feet)	Groundwater Elevation (MSLD)
MW-1	64.45	04/10/96	39.38	25.07
		09/23/96	43.70	20.75
		12/19/96	45.27	19.18
		3/26/97	40.74	23.71
MW-2	65.18	04/10/96	40.67	24.51
		09/23/96	45.05	20.13
		12/19/96	46.56	18.62
		3/26/97	42.07	23.11
MW-3	65.10	04/10/96	41.92	23.18
		09/23/96	45.22	19.88
		12/19/96	46.67	18.43
		3/26/97	42.19	22.91

MSLD = mean sea level datum, feet.

Table 7

Summary of Reported Analytical Results
Groundwater Monitoring Samples
Alameda County Mosquito Abatement District
Former Facility
Union City, California

Well ID	Date	Reported Detections (μg/L)	
		4,4'-DDD	Other Pesticides
MW-1	04/10/96 09/23/96 12/19/96 3/26/97	none detected	none detected
MW-2	04/10/96 09/23/96 12/19/96 3/26/97	0.18 0.12 0.1 0.2	none detected
MW-3	04/10/96 09/23/96 12/19/96 3/26/97	none detected	none detected

TABLE 8

REPORTED ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED BY HYDROPUNCH ON FEBRUARY 13, 1997 FORMER ACMAD SITE UNION CITY, CALIFORNIA

Sample ID	Reported Results(1), µg/l		
	DDE	DDD	DDT
HP-1	<0.1	<0.1	<0.1
HP-2	<0.1	<0.1	<0.1
HP-3	<0.1	<0.1	<0.1
HP-4	<0.1	<0.1	<0.1

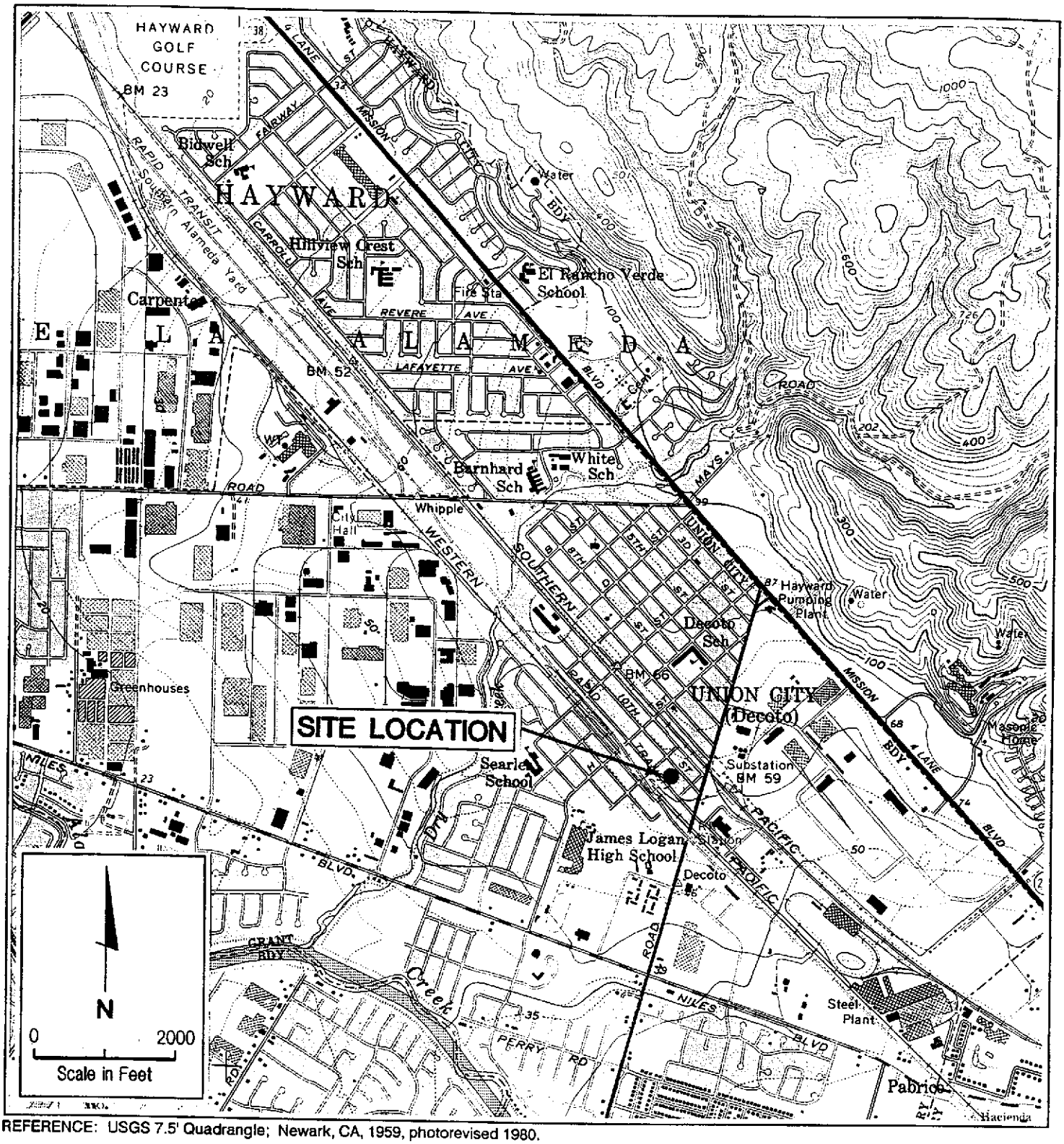
TABLE 9
REPORTED ANALYTICAL RESULTS FOR
SOIL SAMPLES COLLECTED DECEMBER 3, 1995 AND MARCH 13, 1997
ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT SITE, UNION CITY

SAMPLE LOCATION	SAMPLING DATE	Depth[1]	Reported Results, mg/kg		
			4,4-DDD	4,4-DDE	4,4-DDT
H-01 A,B,C	11/06/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-02 A,B,C	11/06/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-03 A,B,C	11/08/96	BOE, 1.5' BOG	<0.01	0.023	0.025
H-04 A,B,C	12/03/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-05 A,B,C	12/03/96	BOE, 1.5' BOG	<0.005	<0.005	0.007
H-06 A,B,C	12/03/96	BOE, 1.5' BOG	<0.005	0.025	0.055
H-07 A,B,C	12/03/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-08 A,B,C	12/03/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-09 A,B,C	12/19/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-10 A,B,C	12/19/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-11 A,B,C	12/19/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-12 A,B,C	12/19/96	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-13A,B,C	02/07/97	BOE, 1.5' BOG	<0.05	0.25	0.69
H-14A,B,C	02/07/97	BOE, 1.5' BOG	<0.005	<0.005	0.029
H-15A,B,C	02/07/97	BOE, 1.5' BOG	<0.005	0.013	0.016
H-15A,B,C Duplicate	02/07/97	BOE, 1.5' BOG	0.041	0.023	0.04
H-16A,B,C	02/07/97	BOE, 1.5' BOG	**200**	<50	**120**
H-17 A,B,C	02/28/97	BOE, 1.5' BOG	**15**	<5	**5.1**
H-17 A,B,C Duplicate	02/28/97	BOE, 1.5' BOG	**12**	<5	<5
H-18 A,B,C	02/28/97	BOE, 1.5' BOG	0.029	0.033	0.044
H-19 A,B,C	02/28/97	BOE, 1.5' BOG	<0.5	<0.5	0.64
H-20 A,B,C	02/28/97	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-21 A,B,C	03/06/97	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-21 A,B,C Duplicate	03/06/97	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-22 A,B,C	03/06/97	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-23 A,B,C	03/06/97	BOE, 1.5' BOG	<0.2	0.23	1
H-23 A,B,C Duplicate	03/06/97	BOE, 1.5' BOG	<0.2	0.25	1
H-24 A,B,C	03/06/97	BOE, 1.5' BOG	<0.005	<0.005	<0.005
H-26 A,B,C	02/28/97	BOE, 2' BOG	<0.5	<0.5	0.93
H-26 A,B,C Duplicate	02/28/97	BOE, 2' BOG	<0.1	0.15	0.41
H-31 A,B,C	03/06/97	BOE, 2' BOG	<5	<5	**28**
H-32 A,B,C	03/06/97	BOE, 2.5' BOG	<0.025	0.051	0.14
H-33 A,B,C	03/06/97	BOE, 3' BOG	<0.005	<0.005	<0.005
H-34 A,B,C	03/13/97	BOE, 2.5' BOG	<0.005	<0.005	<0.005
H-35 A,B,C	03/13/97	BOE, 2.5' BOG	<0.005	<0.005	0.011
H-36A	03/13/97	BOE, 3' BOG	<0.005	0.014	0.005
H-36B		BOE,4.5 BOG			
H-37 A	03/13/97	BOE, 3' BOG	<0.005	<0.005	<0.005
H-37 B		BOE,4.5 BOG			
H-38	03/13/97	BOE, 19' BOG	<0.005	<0.005	<0.005
H-39	03/13/97	SW, 15.5' BOG	<0.005	<0.005	<0.005
H-40	03/13/97	SW, 12.5' BOG	<0.025	<0.025	0.12
		PRG[2]	1.9	1.3	1.3

ABC's are composited Samples from each grid

[1] In feet, BOE = Base of Excavation, BOG = Below Original Grade, SW = Sidewalk of Excavation.

[2] Preliminary Remediation Goal for residential soil established by U.S EPA.



REFERENCE: USGS 7.5' Quadrangle; Newark, CA, 1959, photorevised 1980.

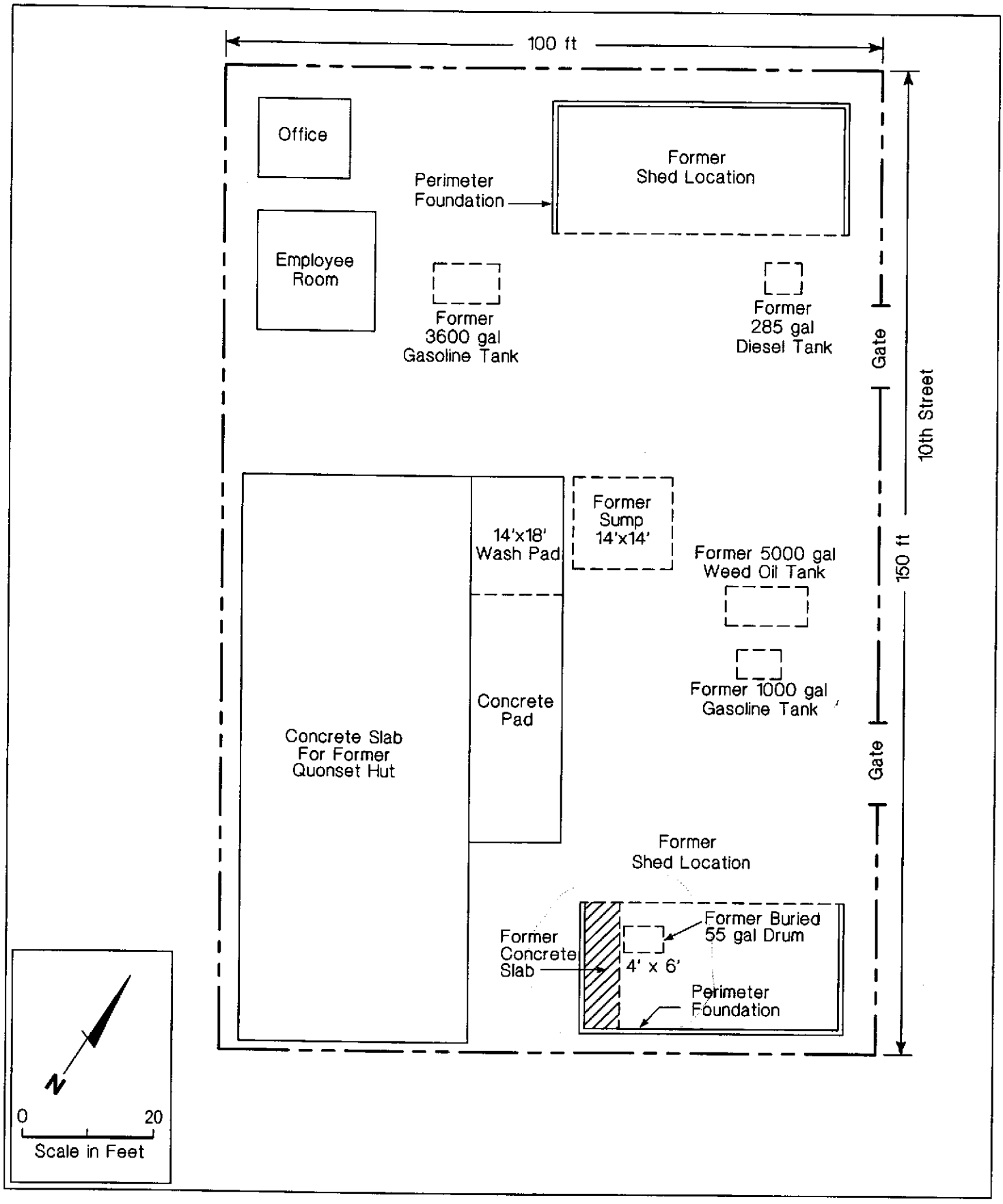
SITE VICINITY MAP

Former Alameda County Mosquito Abatement District Site
Union City, California

FIGURE 1

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 ah 5005svm 3/28/97



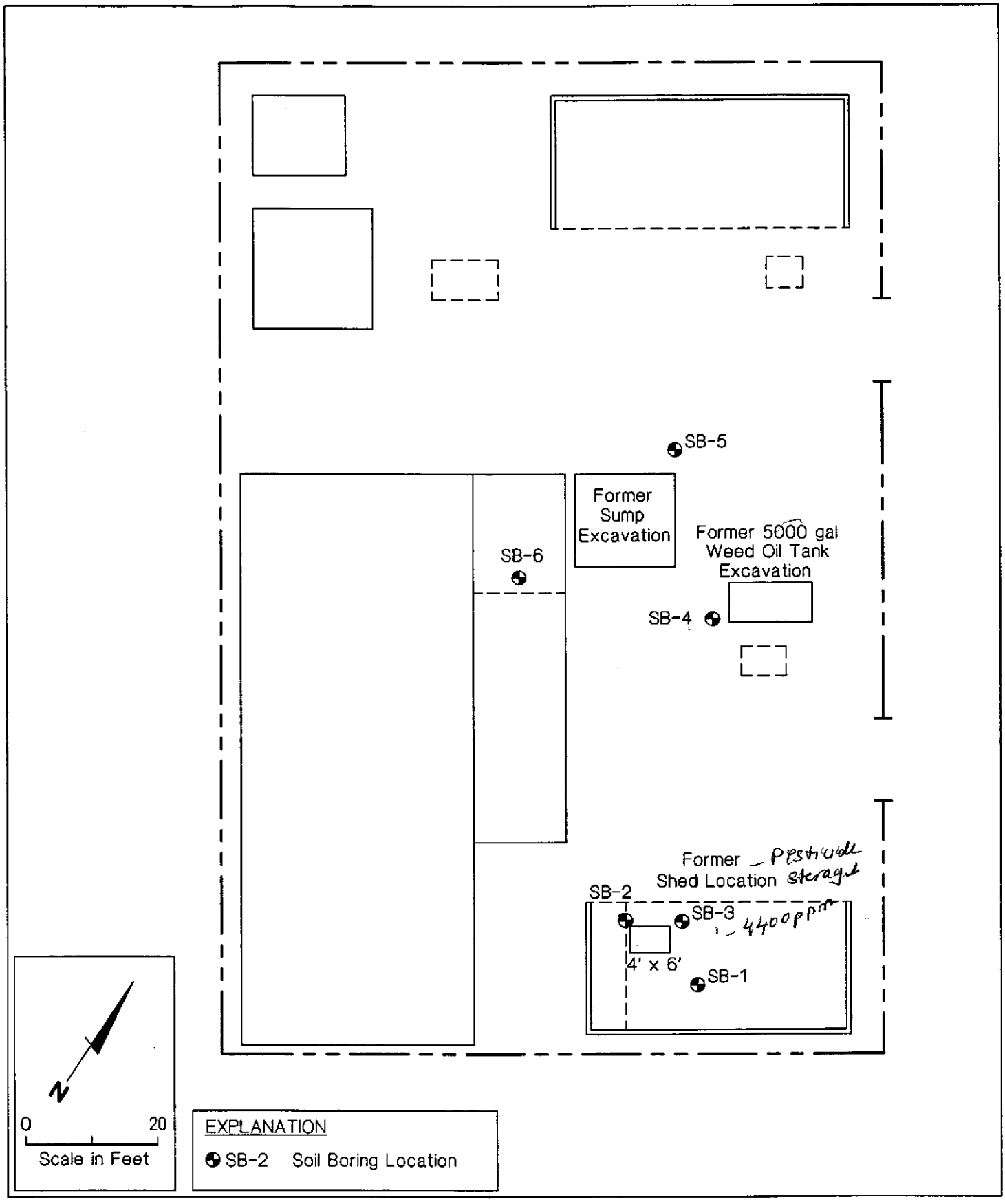
DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 ah 5005J 4/1/97

PLOT PLAN

Former Alameda County Mosquito Abatement District Site
Union City, California

FIGURE 2



SOIL BORING LOCATIONS

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 ah 5005K 4/1/97

FIGURE 3

SS-9B	0.5' bgs	1.5' bgs
DDE	0.61	NS
DDD	<0.2	NS
DDT	0.81	NS
Chlordane	1.2	NS

SS-9A	0.5' bgs	1.5' bgs
DDE	4.1 (<0.005)	0.017
DDD	<2.5 (<0.005)	<0.005
DDT	16.0 (0.01)	0.011

SS-8B	0.5' bgs	1.5' bgs
DDE	0.79	<0.005
DDD	<0.25	<0.005
DDT	1.1	<0.005

SS-8A	0.5' bgs	1.5' bgs
DDE	2.2	<0.005
DDD	<2.0	<0.005
DDT	5.3	0.006

SS-7B	0.5' bgs	1.5' bgs
DDE	2.8	0.27
DDD	<2.5	<0.1
DDT	8.1	<0.45

SS-6B	0.5' bgs	1.5' bgs
DDE	1.2	0.51
DDD	<1.0	<0.5
DDT	4.4	2.5

SS-3B	0.5' bgs	1.5' bgs
DDE	0.028	<0.005
DDD	<0.025	<0.005
DDT	0.081	<0.005

SS-3A	0.5' bgs	1.5' bgs
DDE	<0.1	<0.005
DDD	<0.1	<0.005
DDT	0.45	<0.005

SS-4	0.5' bgs	1.5' bgs
DDE	0.18	<0.005
DDD	<0.1	<0.005
DDT	0.21	0.011

SS-10B	0.5' bgs	1.5' bgs
DDE	0.46	NS
DDD	<0.25	NS
DDT	0.82	NS
Chlordane	2.9	NS

SS-10A	0.5' bgs	1.5' bgs
DDE	<5.0 (<10.0)	<0.005
DDD	<5.0 (<10.0)	<0.005
DDT	16.0 (44.0)	<0.005

SS-12B	0.5' bgs	1.5' bgs
DDE	0.5	<0.05
DDD	<0.25	<0.05
DDT	1.0	0.26
Chlordane	6.8	<0.1

SS-12A	0.5' bgs	1.5' bgs
DDE	<2.5	0.15
DDD	<2.5	<0.05
DDT	11.0	0.25
Chlordane	<5.0	0.71

SS-7A	0.5' bgs	1.5' bgs
DDE	<2.5	0.48
DDD	<2.5	<0.25
DDT	10	0.93

SS-6A	0.5' bgs	1.5' bgs
DDE	<2.5	<2.0
DDD	<2.5	<2.0
DDT	16.0	4.6

SS-5A	0.5' bgs	1.5' bgs
DDE	<0.5	<0.25
DDD	<0.5	<0.25
DDT	1.8	0.3

SS-5B	0.5' bgs	1.5' bgs
DDE	0.13	<0.005
DDD	<0.1	<0.005
DDT	0.26	<0.005

SS-11B	0.5' bgs	1.5' bgs
DDE	0.042	<0.01
DDD	<0.02	<0.01
DDT	0.026	0.031
Chlordane	0.48	0.091

SS-11A	0.5' bgs	1.5' bgs
DDE	<2.0	<0.05
DDD	<2.0	<0.05
DDT	6.1	0.85
Dieldrin	1.9	<0.05

SS-2	0.5' bgs	1.5' bgs
DDE	0.24	0.028
DDD	<0.1	<0.025
DDT	0.23	<0.025

SS-1	0.5' bgs	1.5' bgs
DDE	0.23	<0.005
DDD	<0.1	<0.005
DDT	0.46	<0.005

F Street

1004

House

33604

33612

Garage

Garage

Asphalt

33620

MW-3

Concrete

33628

33636

SITE

33611

MW-1

MW-2

Driveway

33635

House

10th Street

11 th Street

0 30

Approximate Scale in Feet

EXPLANATION

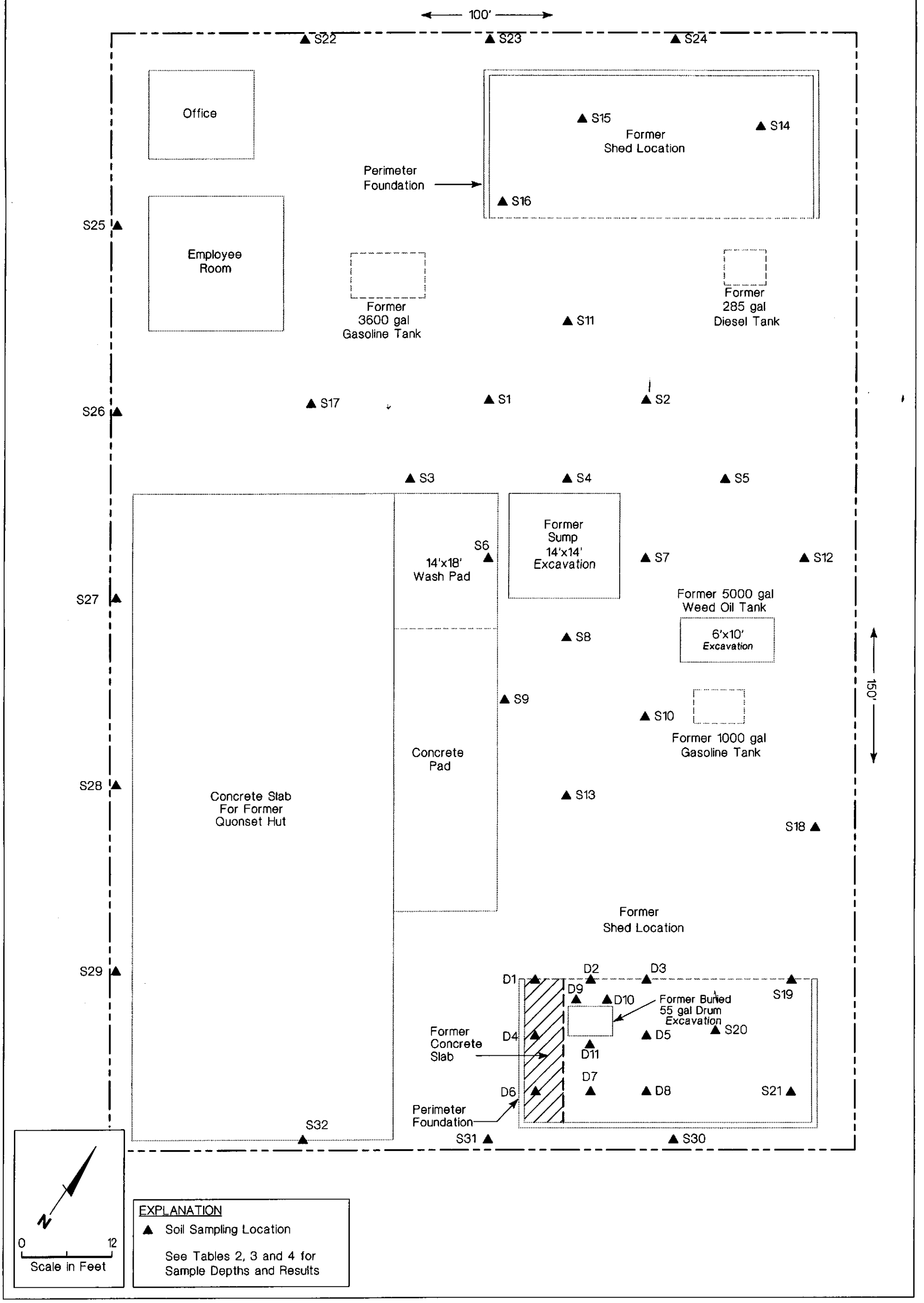
- ▲ SS-11B Soil Sampling Location
- MW-1 Monitoring Well Location
- (<10.0) Duplicate Sample
- bgs Below Ground Surface
- NS Not Sampled
- All Results in mg/kg.

OFF-SITE SOIL SAMPLING
REPORTED ANALYTICAL RESULTS, mg/kg
Former Alameda County Mosquito Abatement District Site
Union City, California

FIGURE 6

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 maj 5005H 4/3/97



PRE-EXCAVATION SOIL SAMPLING LOCATIONS 1995-1996

Former Alameda County Mosquito Abatement District Site
Union City, California

FIGURE 4

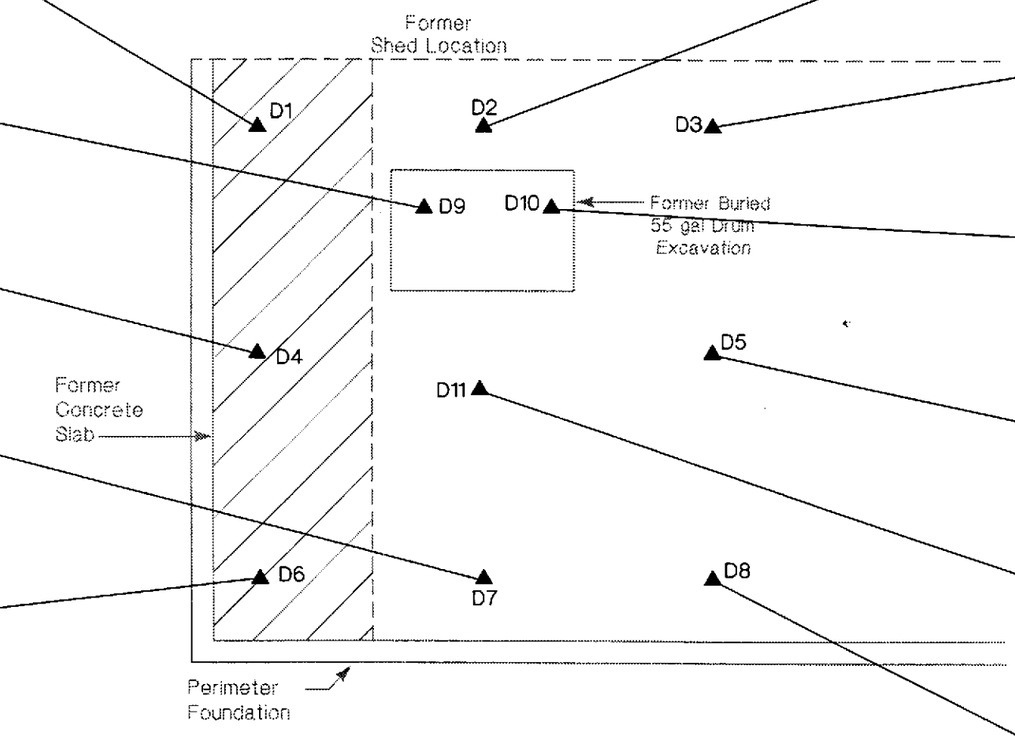
D1	Depth			
Analyte	6	12	15	18
Dieldrin	0.014	ND	ND	ND
DDE	0.12	0.025	ND	ND
DDD	0.24	0.058	ND	ND
DDT	3.0	0.61	0.0066	0.0078

D9	Depth			
Analyte	6	12	16	18
DDE	1.6	0.30	ND	0.26
DDD	22.0	2.6	ND	1.8
DDT	85.0	15.0	ND	12.0

D4	Depth	
Analyte	1	3
DDE	1.6	0.66
DDD	0.99	0.50
DDT	16.0	3.4

D7	Depth	
Analyte	0.5	3
Dieldrin	ND	0.007
DDE	0.83	0.027
DDD	1.1	0.06
DDT	20	1.0

D6	Depth					
Analyte	1	3	7	12	15	18
DDE	8.2	0.015	0.0034	0.014	ND	ND
DDD	4.2	0.084	0.21	0.083	0.0039	0.0087
DDT	87.0	8.6	3.4	1.3	0.027	0.17



D2	Depth	
Analyte	0.5	3
DDE	0.93	0.49
DDD	1.7	3.2
DDT	16.0	21.0

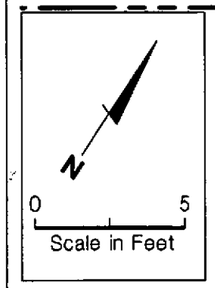
D3	Depth	
Analyte	1	3
DDE	0.054	0.012
DDD	0.031	0.023
DDT	0.52	0.31

D10	Depth			
Analyte	6	12	15	18
Dieldrin	0.002	ND	ND	ND
DDE	ND	0.03	ND	ND
DDD	0.12	0.072	0.0074	0.0019
DDT	1.3	0.68	ND	0.0019

D5	Depth	
Analyte	1	3
DDE	0.005	0.0033
DDD	ND	0.0064
DDT	0.018	0.070

D11	Depth			
Analyte	6	12	15	18
DDE	0.49	0.83	ND	0.033
DDD	3.6	ND	0.0036	0.19
DDT	41	64.0	0.050	ND

D8	Depth	
Analyte	0.5	3
DDE	0.36	0.0037
DDD	0.63	0.0071
DDT	3.0	0.037



EXPLANATION

▲ D8 Soil Sampling Location

All results in mg/kg.

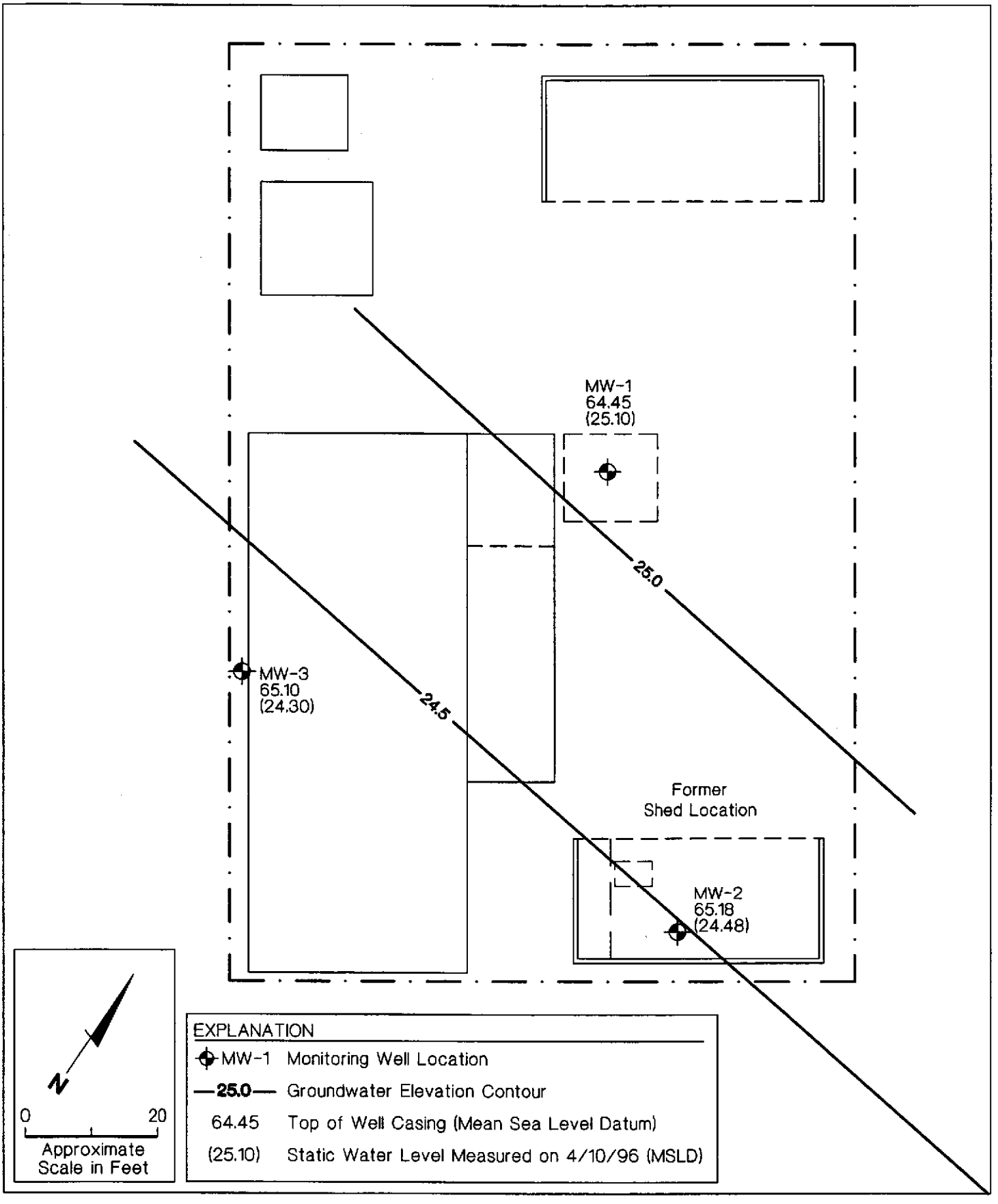
All depths below ground surface.

PRE EXCAVATION SOIL SAMPLING REPORTED ANALYTICAL RESULTS, mg/kg SEPTEMBER 1995

Former Alameda County Mosquito Abatement District Site
Union City, California

FIGURE 5

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY



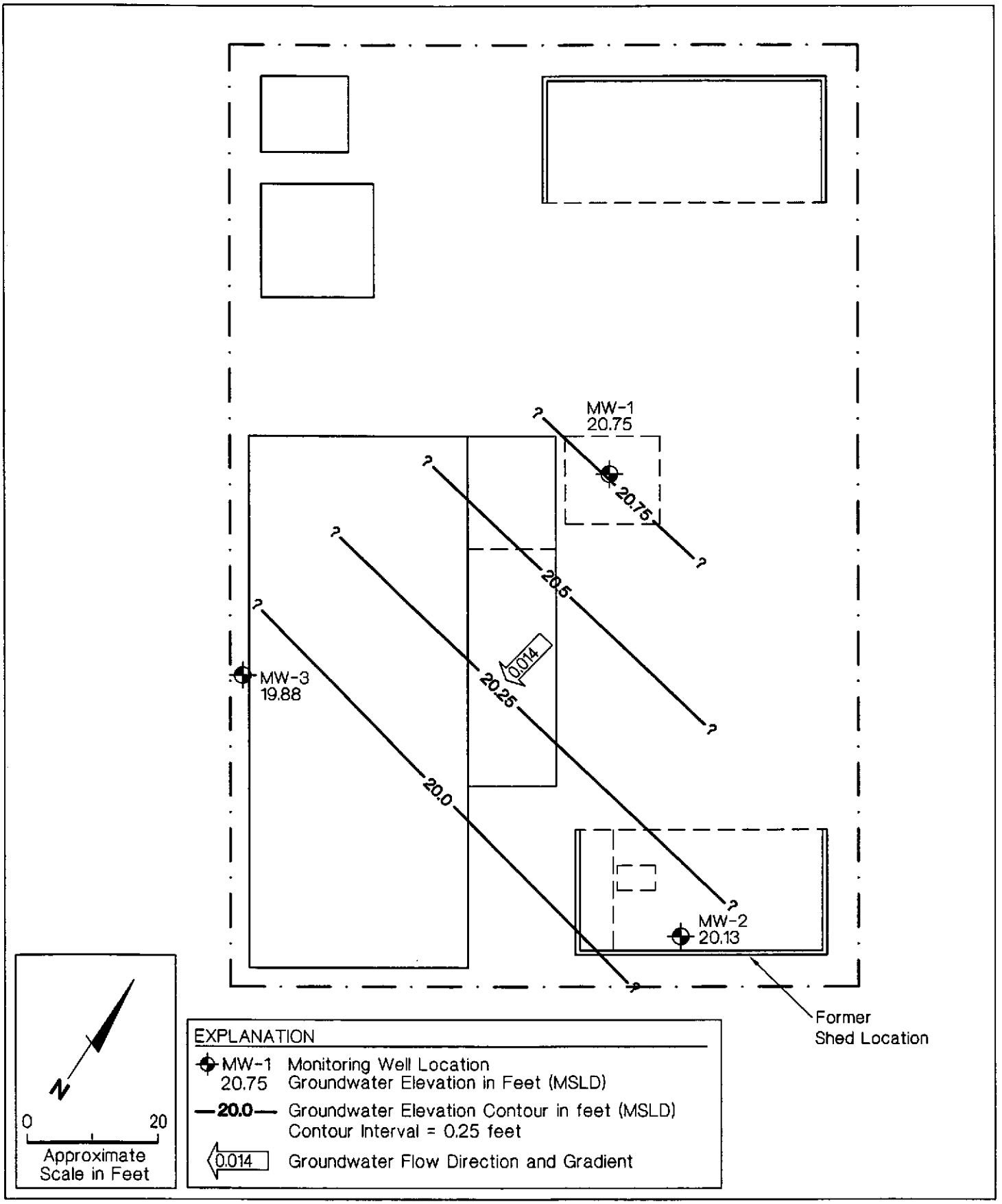
GROUNDWATER ELEVATION MAP
APRIL 10, 1996

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 ah 5005G 4/1/97

FIGURE 7



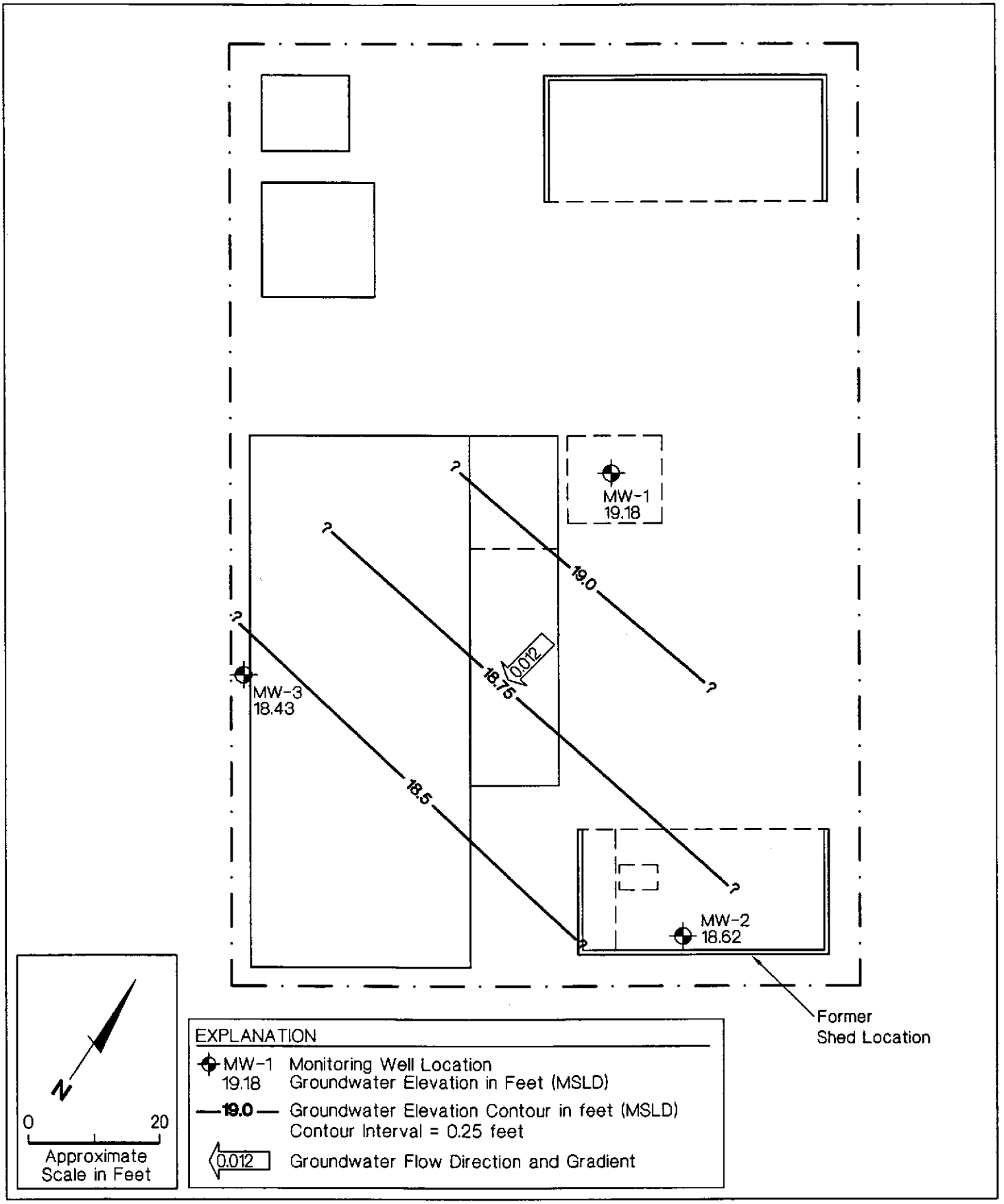
REVISED GROUNDWATER ELEVATION MAP
SEPTEMBER 23, 1996

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-024-5105-044 maj 5105A 12/27/96

FIGURE 8



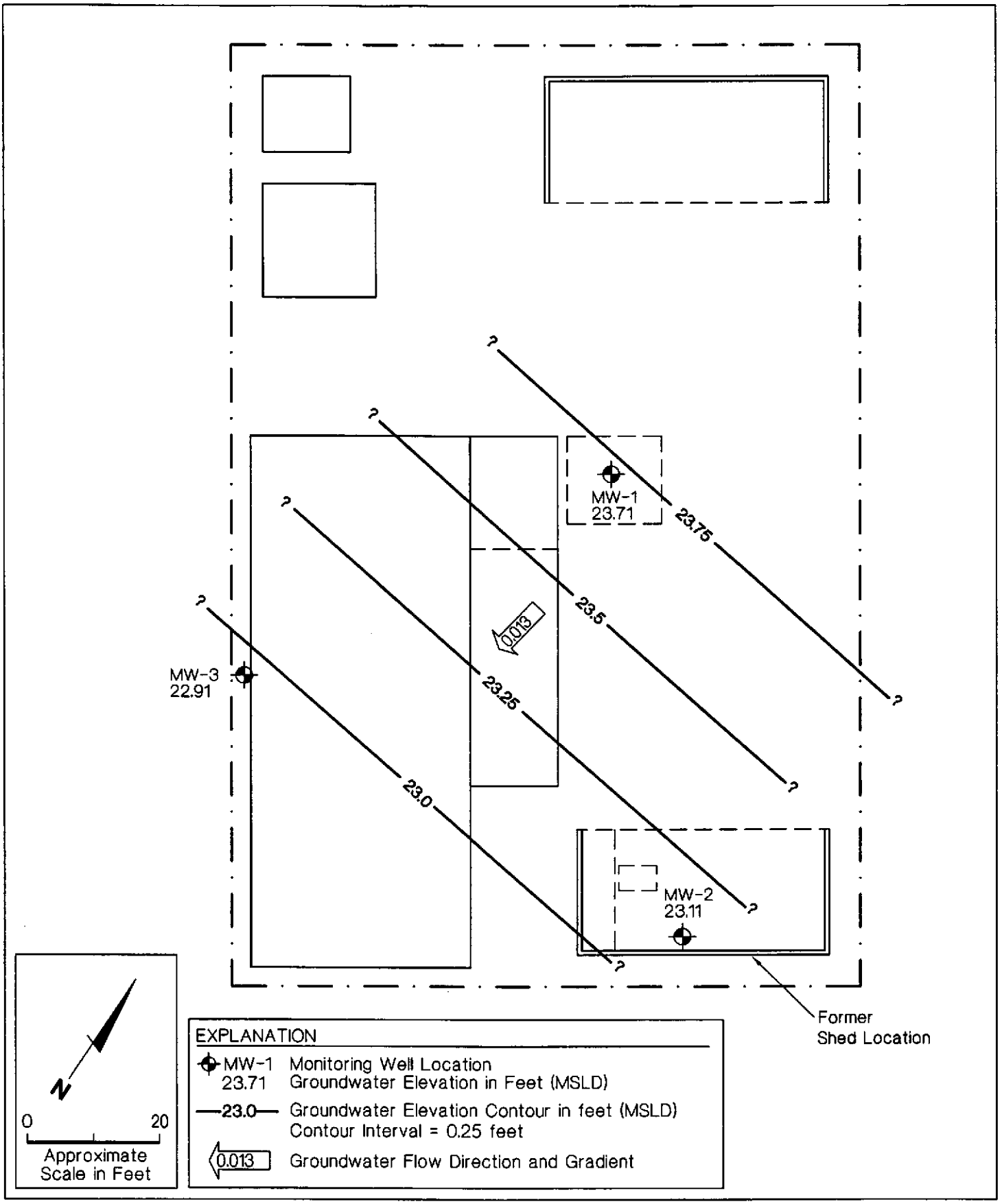
GROUNDWATER ELEVATION MAP
DECEMBER 19, 1996

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-024-5105-044 maj 5105B 12/27/96

FIGURE 9



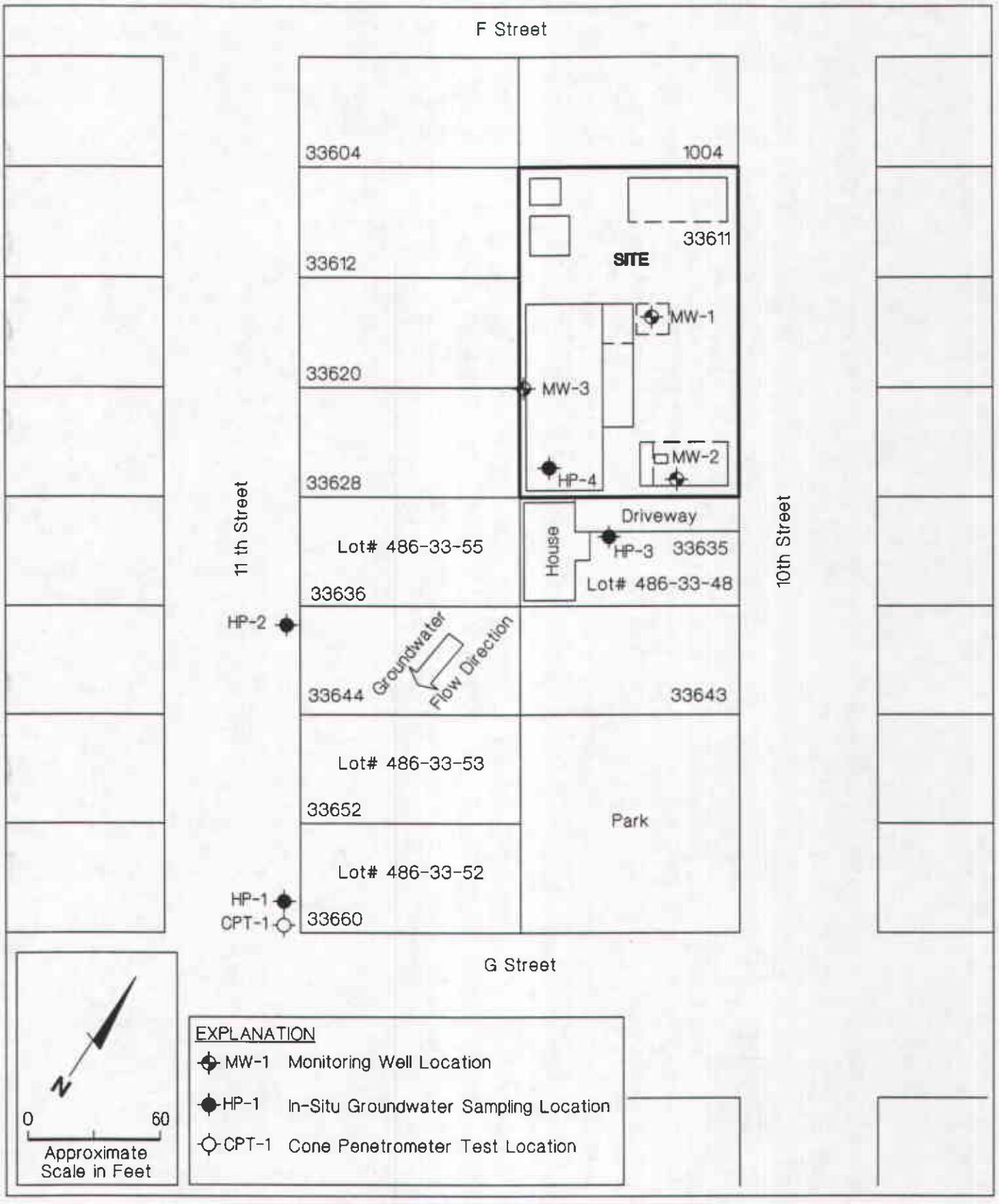
GROUNDWATER ELEVATION MAP
MARCH 26, 1997

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-024-5105-044 maj 5005B 3/28/97

FIGURE 10



IN-SITU GROUNDWATER SAMPLING LOCATIONS
FEBRUARY 13, 1997

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

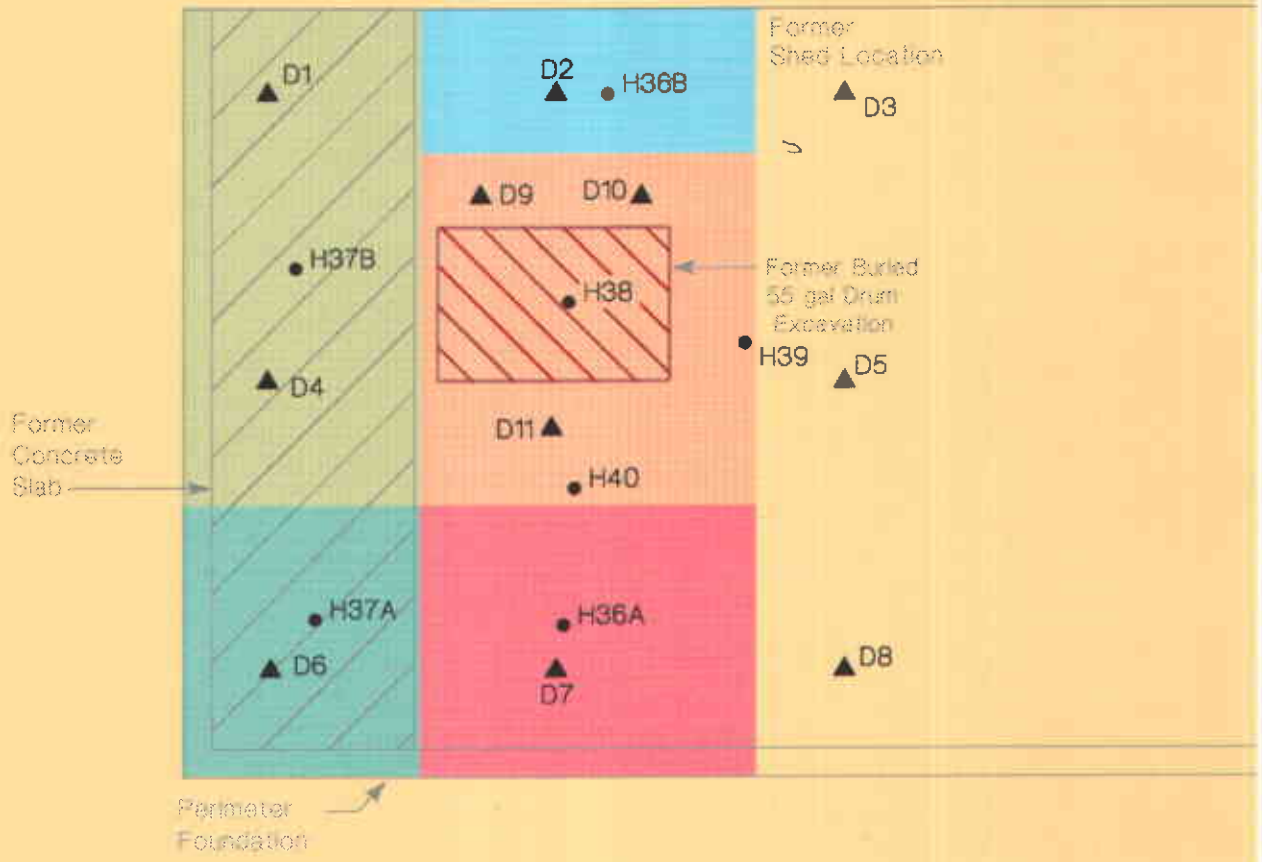
00747-040-5005-044 AH 5005C 4/3/97

FIGURE 11

Location	Depth*	Reported Values, µg/kg		
		DDT	DOD	DDE
H36A	3	.005	ND	ND
H36B	4.5			
H37A	12	ND	ND	ND
H37B	6			
H38	19	ND	ND	ND
H39	15.5	ND	ND	ND
H40	12.5	.120	ND	ND

*Feet Below Original Grade
ND = Not Detected

BOE = Base of Excavation
SW = Sidewall



N

0 5

Scale in Feet

EXPLANATION

- Excavate to 1.5 to 2 feet BOG
- Excavate to 3 feet BOG
- Excavate to 4.5 feet BOG
- Excavate to 6 feet BOG
- ▲ Original Sample Location
- ● Confirmation Sample Location
- Excavate to 12 feet BOG
- Excavate to 19 feet BOG
- Excavate to 19 feet BOG and Stockpile Soil for Incineration

BOG = Below Original Grade

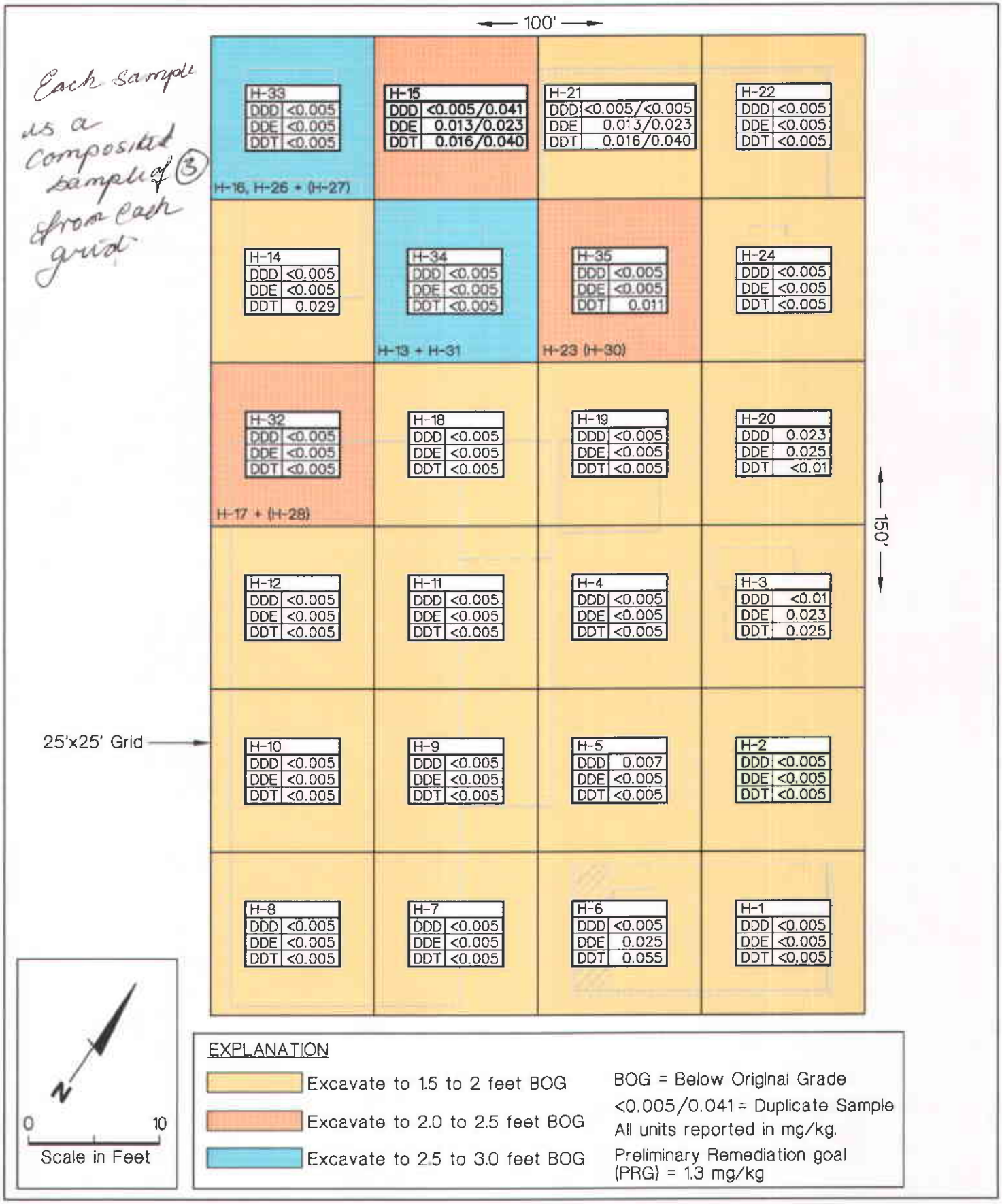
POST EXCAVATION SOIL SAMPLING LOCATIONS MARCH 13, 1997

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 ah 5005F 3/31/97

FIGURE 12



POST-EXCAVATION SOIL SAMPLE RESULTS
SOIL REMOVAL ACTION

Former Alameda County Mosquito Abatement District Site
Union City, California

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

00747-040-5005-044 maj 5005A 4/1/97

FIGURE 13