

October 11, 1990

Mr. Larry Seto
Alameda County Health Agency
80 Swan Way, Room 200
Oakland, CA 94621

Subject: Firestone Tire & Rubber Company, Albany Remediation Plan
Addendum

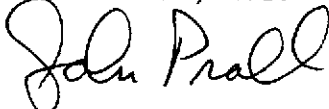
Dear Larry:

On behalf of Firestone Tire & Rubber Company and Ryan-Murphy, Inc., we are enclosing an addendum to the original workplan - remediation plan submitted August 13, 1990. The addendum is based on our meeting at the site on October 10, 1990 with you. After your review and approval, remediation work will begin.

If you have any questions or require further information, please call.

Sincerely,

ERM-WEST, INC.



John Prall, RG
Project Manager

JP/Imm/1135.00

Enclosure: Noted

cc: Pat Ryan, Ryan-Murphy, Inc.

REMEDATION ADDENDUM

An addendum to the original remediation plan (dated August 13, 1990) has been prepared as a result of new information available from a field investigation completed by ERM-West, Inc. and a meeting held at the site on October 10, 1990 with Larry Seto of Alameda County. Results from soil sampling (Table 1) has been used to estimate the lateral and depth extent of contaminated soil. Figure 1 depicts the projected lateral extent lying within an assumed oval shaped area that is partially covered by the northwest corner of a building. The shape and extent of the impacted soil is based on the analytical results, the clayey soils, and the potential migration paths. The highest chemical concentrations are within the immediate tank excavation. The projected depth extent is approximately ten feet.

Groundwater lies at a depth of approximately 9.5 to 10 feet within the tank area and appears to be slightly mounded (Figure 2). Sampling data (Table 2) indicates that the groundwater has been impacted by petroleum hydrocarbons, benzene and several chlorinated solvents.

Firestone proposes as discussed in the original plan to remediate the site by excavation with the following modifications:

- Remove contaminated material depicted in Figure 1 by the cross-hatched area to a depth of approximately 10 feet. Actual limits of the excavation may vary depending on the extent of visibly stained soil and the screening of the pit walls with a photoionization device. Groundwater encountered will be pumped from the excavation into a vacuum truck and removed from the site.
- Confirmatory soil samples will be collected from the final pit sidewalls and will be submitted and analyzed for:

Total Petroleum Hydrocarbons - Diesel, EPA Method 8015-M
Volatile Aromatic Hydrocarbons, EPA Method 8020
Volatile Halocarbons, EPA Method 8010
Oil & Grease, Method 503E.

- Remove any portion of Monitoring Well No. 1 that extends below the floor of the excavation and backfill with bentonite pellets.
- The pit floor of the excavation will be sloped away from the building then backfilled with clean gravel to a depth of approximately two feet above the water table. The top of the gravel will be covered with a suitable geotextile material then the remainder of the excavation will be filled with clean, compacted fill.
- As the gravel and fill material are placed, a monitoring well will be installed into the lowest point of the excavation. The well will be screened in the gravel layer. The well will be constructed of 4-inch diameter, flush-threaded, schedule 40 PVC casing and screen. At the surface the well will be covered with a steel traffic box with a removable steel lid.
- The remaining wells and the replacement well will be monitored on a quarterly basis for one year. Constituents analyzed for will be through the following tests:

Total petroleum Hydrocarbons - Diesel, EPA Method 8015-M
Volatile Aromatic Hydrocarbons, EPA Method 8020
Volatile Halocarbons, EPA Method 8010.

Excavated material and accumulated water will be removed from the site and disposed of as discussed in the original plan. Firestone intends to perform the work as soon as practically possible given that the former Firestone facility is currently being remodeled by the new owner.

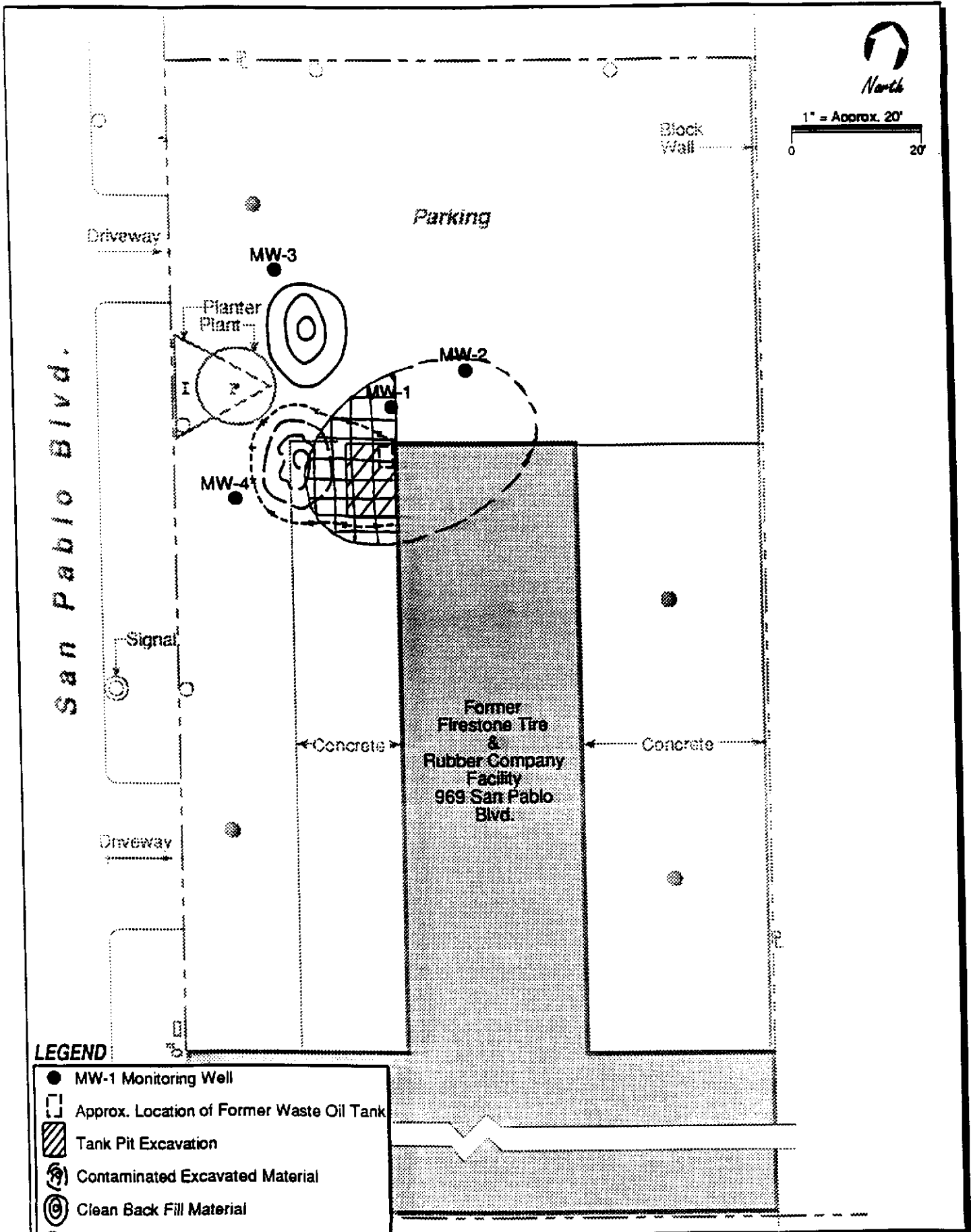


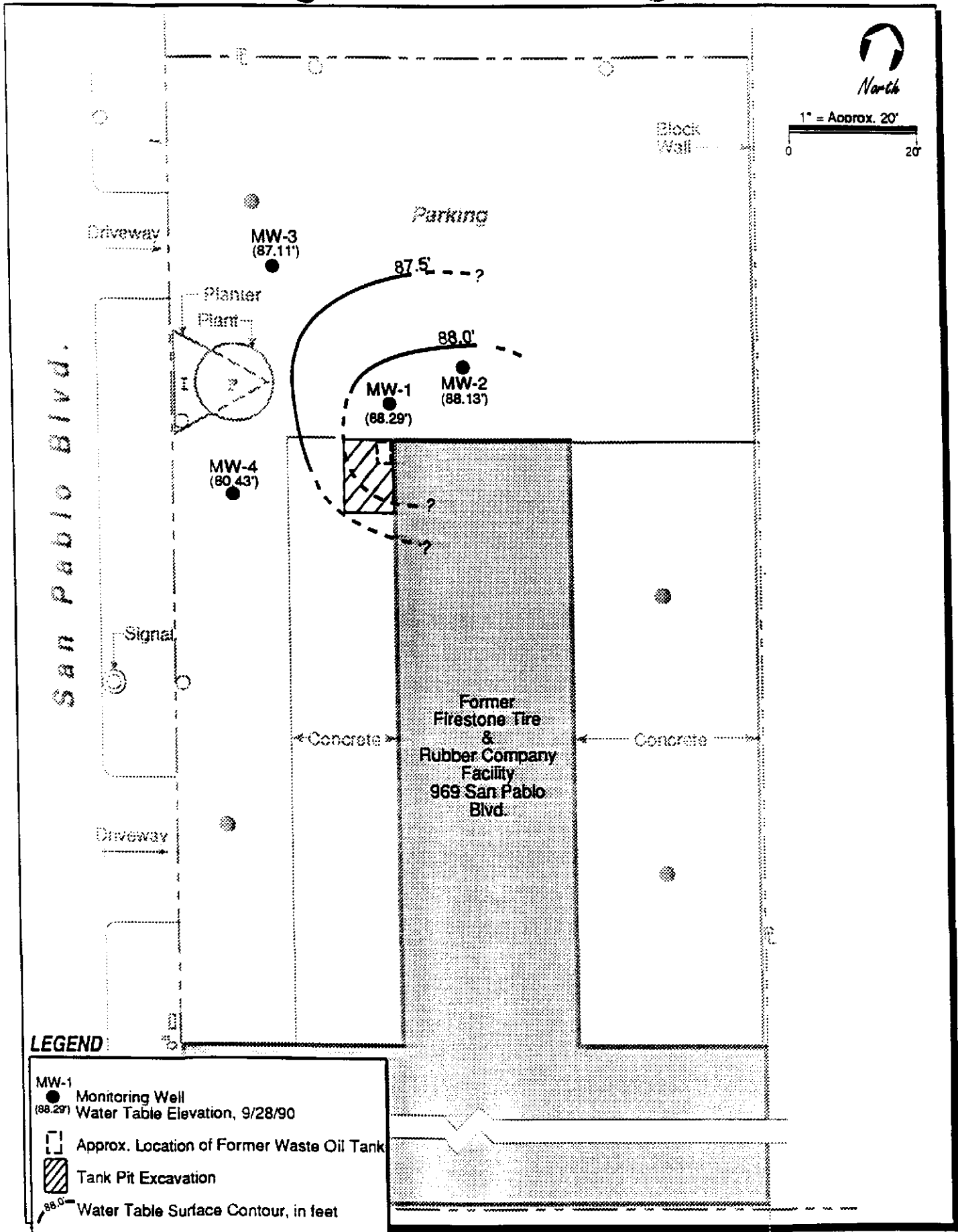
Figure 1
Site Plan and Sample Locations
Firestone, Albany, CA

TABLE 4
Hydrocarbons and Organic Lead in Soil Samples

Sample No.	Depth (feet)	Extractable Petrol. Hydrocarbons (mg/kg)		Volatile Aromatic Hydrocarbons					Volatile Halocarbons					Organic Lead (mg/kg)	
		Kerosene Range	Diesel Range	Benzene	Toluene	(mg/kg) Xylenes (total)	Chloro-benzene	Ethyl-benzenes (total)	1,1-dichloro-ethane	1,1-dichloro-ethane	(mg/kg) Trichloro-ethylene	1,1,1-trichloro-ethane	tetrachloro-ethene		
Monitoring Well No. 1															
B-1-1	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1-2	5.5	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1-3	8.2	ND	3.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-1-4	10.5	ND	72	0.043	ND	0.51	ND	ND	0.27	0.026	ND	0.47	0.97	ND	ND
B-1-5	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Monitoring Well No. 2															
B-2-4	16	ND	ND	ND	ND	0.0051	ND	0.0059	ND	ND		ND	ND	ND	ND
Monitoring Well No. 3															
B-3-4	11	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND
Monitoring Well No. 4															
B-4-5	15.5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND

Notes: "ND" = Not Detected

Analyses were performed by Curtis & Tomkins, Berkeley, California.



LEGEND:

- MW-1 ● Monitoring Well
Water Table Elevation, 9/28/90
- Approx. Location of Former Waste Oil Tank
- ▨ Tank Pit Excavation
- 88.0' Water Table Surface Contour, in feet
- Storm Drain
- Light Standard

ERM-West, Inc. 10/90
1099/AMR/7.25.90

Figure 2
Water Table Map
Firestone, Albany, CA

TABLE 2

Hydrocarbons and Organic Lead in Groundwater Samples

Well No.	Sample No.*	Extractable Petrol. Hydrocarbons (mg/l)		Volatile Aromatic Hydrocarbons					Volatile Halocarbons (mg/l)				Organic Lead (mg/l)	
		Kerosene Range	Diesel Range	Benzene	Toluene	Xylenes (total)	Chloro-benzene	Ethyl-benzenes (total)	1,1-dichloro-ethane	1,1-dichloro-ethane	1,1,1-trichloro-ethane	Trichloro-ethylene		Tetrachloro-ethene
MW-1	WS-2	ND	ND	0.01	ND	ND	ND	ND	0.012	0.094	0.20	0.0025	0.071	ND
MW-2	WS-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	WS-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0018	ND	ND
MW-4	WS-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes: "ND" - Not Detected

* = Samples were consecutively numbered in the order collected.

Analyses were performed by Curtis & Tompkins, Berkeley, California.