March 95

SUBSURFACE INVESTIGATION WORKPLAN
FOR
ARAMARK UNIFORM SERVICES, INC.
330 CHESTNUT STREET
OAKLAND, CA

PREPARED FOR
ARAMARK UNIFORM SERVICES, INC.
SCHAUMBURG, IL

PREPARED BY
RMT, INC.
MARINA DEL REY, CA

MARCH 1995

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INTRODUCTION

1.1 Background

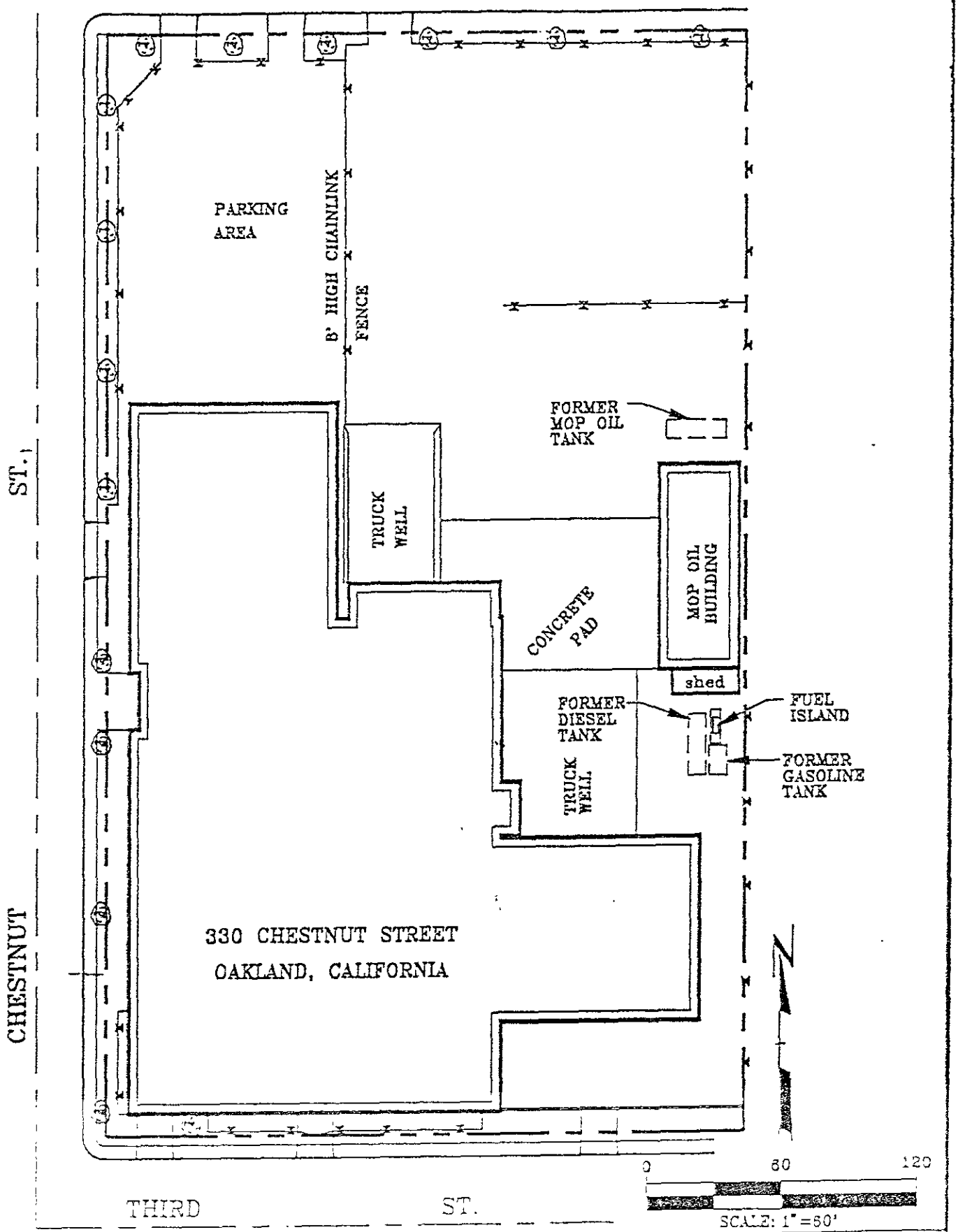
Aramark Uniform Services, Inc., (ARAMARK) formerly Aratex Services, Inc., owns and operates an industrial laundry facility located at 330 Chestnut Street in Oakland, California. Two single walled, steel, underground petroleum hydrocarbon storage tanks were maintained at this facility to supply fuel for the delivery vehicles. In addition, an underground mop oil storage tank was also maintained at the facility. RMT, Inc. (RMT) was retained by ARAMARK to document the removal and disposal of the underground storage tanks and perform soil sampling as required by the Alameda County Health Care Service Agency, Department of Environmental Health (ACHCSA). Tank removal activities were conducted during the period of September 1993 through January 1994 and are summarized below. A site plan showing the location of the former underground storage tanks is presented in Figure 1.

Gasoline and Diesel Fuel Tanks. No signs of impact damage, holes, pitting, or corrosion were apparent and the gasoline and diesel fuel storage tanks appeared structurally sound. No visible evidence of petroleum contamination was encountered in the soil surrounding the gasoline and diesel fuel storage tanks or product piping; however, evidence of a diesel fuel release was noted in the vicinity of the diesel fuel dispenser vaults and diesel fuel regulator. The results of chemical analyses performed on soil samples collected from the south and north end of the floor of both the gasoline tank excavation and the diesel fuel excavation did not identify the presence of TPH-G, TPH-D, BTEX, and organic lead.

Approximately 100 yd^3 of soil were removed from the gasoline and diesel fuel tank excavation areas during the tank removal activities. The results of chemical analyses performed on composite samples of the soil removed from the gasoline and diesel fuel storage tank excavation did not identify the presence of BTEX or TPH-G above method detection limits, therefore, the soil was returned to excavation as backfill.

Additional soil sampling activities were conducted in the vicinity of the diesel fuel dispenser vaults, diesel fuel regulator, and eastern section of the loading dock to determine the extent of diesel fuel-impacted soil. Based on the results of the soil sampling activities, soil excavation activities were conducted in January 1994. Soil excavation activities were conducted until all visibly stained soil was removed and no petroleum hydrocarbon odor was discernable. Approximately 30-yd^3 of soil was removed for the area surrounding the three diesel fuel dispenser vaults, the diesel fuel regulator, and the eastern section of the loading dock.

The results of the chemical analyses performed on the soil samples collected form the floor of the diesel fuel dispenser vault excavation, the diesel fuel regulator, and the eastern section of the loading dock did not identify the presence of TPH-D or BTEX at concentrations above the method detection limit.



SITE PLAN

RMT INC.

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FIGURE 1

The results of chemical analyses performed on soil samples collected from the floor of the diesel fuel dispenser vault excavations identified the presence of TPH-D at concentrations ranging between 38 and 150-mg/kg. The results of chemical analyses performed on soil samples collected from the eastern section of the loading dock identified the presence of TPH-K and TPH-MO at concentrations ranging from 670 to 1,100-mg/kg, respectively.

Mop Oil Tank. No signs of impact damage, or holes were apparent and although some pitting and corrosion were observed the mop oil storage tank appeared structurally sound. Visible evidence of a mop oil release was encountered in the soil surrounding the mop oil tank. The results of laboratory analyses performed on soil samples collected from the floor of the excavation did not reveal the presence of petroleum hydrocarbons above the method detection limit.

The results of chemical analyses performed on composite samples of the soil removed from the mop oil storage tank excavation identified the presence of TPH using EPA SW-846 Method 418.1 at concentrations of ranging from 110 to 290-mg/kg.

1.2 Purpose and Scope

In March 1995, the ACHCSA requested that ARAMARK install groundwater monitoring wells in the vicinity of the former diesel fuel dispenser vaults and underground mop oil storage tank to determine the quality of the underlying groundwater. The purpose of this report is to present the locations of the proposed groundwater monitoring wells and the methods and procedures to be utilized during the monitoring well installation and sampling activities.

Section 2
METHODS AND PROCEDURES

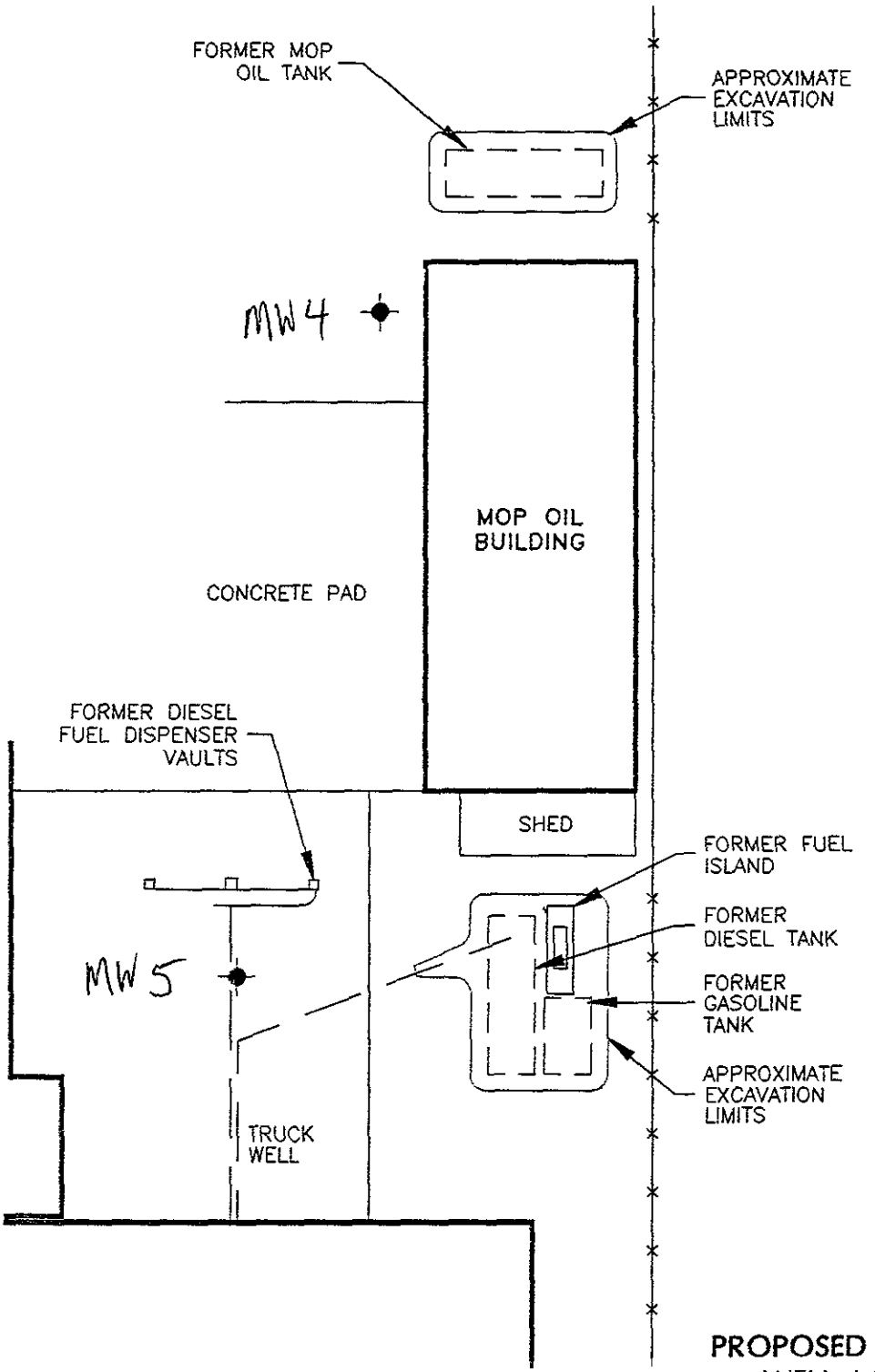
In response to the request from the ACHCSA, two groundwater monitoring wells will be installed at the ARAMARK facility; one in the vicinity of the former diesel fuel dispenser vaults and one in the vicinity of the former underground mop oil storage tank. A site plan showing the proposed location of the monitoring wells is presented in Figure 2.

2.1 Soil Boring and Sampling

Each soil boring will be advanced to a depth of approximately 15-ft below ground surface (bgs) using a 10-inch diameter continuous-flight truck-mounted, hollow-stem auger equipment. Soil samples will be collected at 5-foot intervals through-the-auger using a California modified split-spoon sampler. Each sample will be described visually in the field by the on-site engineer for the following characteristics: soil name (based on the Unified Soil Classification System), grain size, color, and plasticity. Soil samples collected at depths of approximately 5 and 10-ft bgs in the vicinity of the former diesel fuel dispenser vaults will be analyzed for the presence of total petroleum hydrocarbons as gasoline (TPH-G) and diesel (TPH-D), benzene, toluene, ethylbenzene, and xylenes (BTEX), and organic lead using a California modified EPA SW-846 Method 8015, Method 8020, and Flame Atomic Absorption, respectively. Soil samples collected at depths of approximately 5 and 10-ft bgs in the vicinity of the former mop oil storage tank will be analyzed for the presence of total recoverable petroleum hydrocarbons (TRPH), and TPH-G, TPH-D, TPH as mineral spirits (TPH-MS), TPH as kerosene (TPH-K), and TPH as motor oil (TPH-MO), using a EPA SW-846 Method 418.1 and Method 8015M, respectively. All samples will be stored on ice pending transport to a California-certified laboratory according to USEPA protocol, including chain-of-custody procedures. All soil boring and soil sampling equipment will be decontaminated between borings using power washing and steam cleaning.

2.2 Groundwater Monitoring Well Installation

Each monitoring well will be installed to a depth of approximately 15-ft bgs and constructed of flush-joint threaded 2-inch inside-diameter Schedule 40 PVC riser pipes, and factory-slotted Schedule 40 PVC screens with 0.010-inch slots. The monitoring well screen interval will be extended from 5 to 15-ft bgs. Washed silica sand will be used as a filter pack around the monitoring well screen and will be extended approximately 2-ft above the top of the screen to prevent infiltration of bentonite into the screened zone and a 3-ft thick bentonite pellet seal will be placed on top of the sand to prevent the infiltration of the overlying cement/bentonite grout into the filter pack



PROPOSED MONITORING WELL LOCATIONS

LEGEND

PROPOSED MONITORING WELL LOCATION

0 30 60

APPROXIMATE SCALE IN FEET

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FIGURE 2

Each monitoring well will be fitted with a locking cap and a protective casing that will be cemented into the grout below the ground surface. Once monitoring well installation activities have been completed, the monitoring well will be developed by bailing ten well casing volumes.

2.3 Monitoring Well Purging and Sampling

Prior to sampling, each monitoring well will be purged using a disposable teflon bailer. A minimum of three well casing volumes (casing and sand pack volume) will be extracted from each monitoring well before collecting groundwater samples. The temperature, pH, conductivity, and turbidity of the extracted groundwater will be measured and recorded at least once per well casing volume. After the monitoring well has recharged to within 80 percent of its pre-purge volume groundwater samples will be collected utilizing a disposable Teflon bailer equipped with a teflon stopcock, and dispensed directly into 40-mL borosilicate vials with teflon septa and screw caps. Groundwater samples collected from the monitoring well located in the vicinity of the former diesel fuel dispenser vaults will be analyzed for the presence of TPH-G and TPH-D and BTEX using EPA SW-846 Method 8015 and Method 8020, respectively. Groundwater samples collected from the monitoring well located in the vicinity of the former mop oil storage tank will be analyzed for the presence of TRPH and TPH-G/D/MS/K/MO using a EPA SW-846 Method 418.1 and Method 8015M, respectively. All samples will be preserved using hydrochloric acid and stored on ice pending transport to a California-certified laboratory according to USEPA protocol, including chain-of-custody procedures. Sampling equipment in contact with the soil will be decontaminated by scrubbing with warm water to soften and remove large solids, followed by an Alconox detergent wash to remove remaining solids and disperse hydrocarbons or other contaminants, and a final rinse with deionized water to remove detergents and any remaining contaminants.

2.4 Report Preparation

Following the field investigation, a report will be prepared for submittal to the ACHCSA. The report will provide a summary of field activities and observations, and soil sampling methods and procedures, monitoring well installation and sampling procedures, soil boring logs, monitoring well construction details, and the results of the chemical analyses performed on soil and groundwater samples.

2.5 Investigation Derived Waste

All soil cuttings and decontamination water will be containerized in 17-H DOT Approved 55-gallon drums, labeled (site name, borehole location, and date), and stored on-site in a secure location pending chemical analyses, characterization, and disposal.