

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

**STAFF SUMMARY REPORT (ALYX
KARPOWICZ)
MEETING DATE: July 14, 2010**

ITEM: 5E

SUBJECT: SFPP, L.P., AN OPERATING PARTNER OF KINDER MORGAN
ENERGY PARTNERS, L.P., for the SFPP, L.P. SAN JOSE TERMINAL,
SAN JOSE, SANTA CLARA COUNTY – Adoption of Updated Site Cleanup
Requirements

CHRONOLOGY: Site Cleanup Requirements adopted in 1992

DISCUSSION: The attached Tentative Site Cleanup Requirements Order is complimentary to
Agenda Item 5D, Negative Declaration pursuant to the California
Environmental Quality Act, for which the Board is the Lead Agency.

The Tentative Order specifies requirements for remediation of soil and
groundwater contaminated with petroleum fuel hydrocarbons caused by releases
from the terminal. A general project description can be found in the Staff
Summary Report for Item 5D.

Staff did not receive any comments related to the Tentative Order during the
comment period. The discharger has indicated acceptance of the Tentative
Order.

**RECOMMEN-
DATION:** Adoption of the Tentative Site Cleanup Requirements Order

FILE NO. 2189.8397 (AJK)

APPENDICES: A – Tentative Site Cleanup Requirements Order

Appendix A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE ORDER No. R2-2010-00XX

UPDATED SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER NO. 92-142 FOR:

**SFPP, L.P., AN OPERATING PARTNERSHIP OF
KINDER MORGAN ENERGY PARTNERS, L.P.**

For the

**SFPP, L.P. SAN JOSE TERMINAL
SAN JOSE, SANTA CLARA COUNTY**

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Board), finds that:

- 1. Site Location:** The SFPP, L.P. San Jose Terminal (herein referred to as the facility or the site) is located at 2150 Kruse Drive in the City of San Jose (Figure 1). The facility is located in an industrial-commercial area of San Jose and is bordered by Dado Street and an ARCO fueling station to the north and west, Coyote Creek to the east, and industrial properties to the south.
- 2. Site Description:** The facility is a bulk petroleum storage and distribution terminal that provides aviation fuel to the San Jose International Airport and Monterey and Fresno Municipal Airports, gasoline and diesel fuel to various retail stations, and Red Dye diesel to farmers throughout central and northern California. Gasoline, diesel, and aviation fuels are stored in 33 above-ground storage tanks (ASTs) and are pumped into tanker trucks via seven loading racks facilities for distribution (Figure 2).
- 3. Site Ownership and History:** The facility was constructed in the 1950s and is currently owned and operated by SFPP, L.P. (herein SFPP), which is an operating partnership of Kinder Morgan Energy Partners, L.P. Several investigations to evaluate soil and groundwater conditions at the facility have been conducted since the mid to late 1980s. The results of these investigations indicate that gasoline, diesel, and aviation fuels, including fuel additives - benzene, toluene, ethylbenzene, xylene (BTEX) and methyl-tertiary butyl ether (MTBE) - have been detected in groundwater beneath various portions of the facility. Contaminated groundwater has migrated just beyond the facility boundary toward Coyote Creek to the east and beneath Dado Street to the west.
- 4. Named Discharger:** SFPP is the sole landowner and facility operator and is herein named the discharger.

5. **Regulatory Status:** In November 1992, the Board adopted Site Cleanup Requirements (SCR) Order No. 92-142, which required investigation and remediation of on-site and potential off-site soil and groundwater contamination and required monitoring to demonstrate remediation performance.
6. **Purpose of Order:** SFPP has discharged petroleum fuel hydrocarbons, including MTBE, to soil and groundwater underlying the facility and off-site. The petroleum fuel hydrocarbons have exceeded applicable water quality objectives for groundwater and could potentially threaten surface water quality in the adjacent Coyote Creek. The purpose of this Order is to require remediation of soil and groundwater contamination caused by releases from the facility to a level protective of human and environmental health and beneficial uses of water resources, considering current and reasonable future land and water uses. This Order establishes appropriate cleanup standards and requires 1) performance monitoring to demonstrate remedial action effectiveness, 2) removal of separate-phase liquid hydrocarbons to the extent practicable, 3) trigger levels for potential off-site impacts, 4) completion of a contingency plan should additional remedial measures become necessary, and 5) a monitoring program to provide an ongoing assessment of groundwater conditions and impacts from potential new releases at the facility.
7. **Geology:** The site is located in the Santa Clara Valley between the Diablo Range to the east and the Santa Cruz Mountains to the west. The site vicinity is underlain by the Santa Clara Formation of Pliocene-to-Holocene age continental deposits comprised of unconsolidated to semi-consolidated gravel, sand, silt, and clay.

The lithology beneath the site generally consists of silt, sandy silt, clayey sand, and silty sand with occasional interbedded layers of silty clay between the ground surface and depths ranging from approximately 12 to 20 feet below ground surface (bgs). These sediments are generally underlain by silty clay and clay to depths of 30 to 50 feet bgs, the maximum depth investigated by the discharger (LFR, 2007).

8. **Hydrogeology:** The site is located within the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin. Regionally and locally, there are two primary aquifer systems within the Santa Clara Valley Subbasin. The shallow aquifer is unconfined and extends to a depth of approximately 200 feet. The deeper aquifer is generally confined and extends from approximately 250 feet bgs to several hundred feet bgs. Groundwater is present beneath the site at depths ranging from 12 to 21 feet bgs with the predominant groundwater flow direction to the north-northeast at gradients ranging from approximately 0.001 to 0.002 feet per foot.
9. **Hydrology:** The closest surface-water body is Coyote Creek, which borders the eastern portion of the site. Water within the Creek generally flows north towards the San Francisco Bay, approximately 10 miles to the northwest of the site. Water levels in the Creek typically range from 19 to 20.5 feet above mean sea level (msl).
10. **Storm Water Management:** Storm water at the facility is discharged at four locations around the facility perimeter designated as points A through D (Figure 3). Storm water discharged at points A, B, and C is collected from within the bermed tank farm area. Storm

water discharged at point D is collected from the paved, non-operational areas surrounding the bermed truck loading and unloading racks. Storm water collected from within the bermed area is routed through an oil-water separator, then to the onsite wastewater treatment system before being discharged to the San Jose/Santa Clara Water Pollution Control Plant. Storm water collected from outside the bermed area is collected in nine catch basins surrounding the loading rack areas, each of which is equipped with a Safe Drain that prevents the entry of storm water into subterranean piping by use of stainless steel pipe fittings and absorbent filters (TRC, 2003).

Discharges from points A, B, and C are controlled manually with block valves, which are only opened if storm water is visually free of petroleum hydrocarbon sheen or discoloration. Discharge point A is located within the southern tank farm area; Discharge point B is located within the middle of the tank farm area; Discharge point C is located within the northern part of the tank farm area; and Discharge point D encompasses the paved, non-operational areas surrounding the truck loading and unloading racks.

11. Storm Water Monitoring: In November 2008 and February 2009, storm water samples were collected pursuant to the Board's request. Samples were analyzed for oil and grease and MTBE. Samples were also analyzed for standard storm water quality parameters including total suspended solids (TSS), total organic carbon (TOC), pH, and specific conductance. Samples were collected at discharge points A-D as shown in Figure 3 while storm water was being discharged beyond the facility perimeter. Results of the sampling are summarized in Table 1 below.

Table 1: Results of Storm Water Sampling Conducted in 2008-09

	November 2008				February 2009			
	A	B	C	D	A	B	C	D
Oil and Grease (mg/L)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	5
MTBE (µg/L)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TOC (mg/L)	11	20	63	27	3.8	6.1	8.7	3.3
TSS (mg/L)	180	120	170	90	<50	<50	<50	190

12. Remedial Investigation: SFPP has conducted numerous subsurface assessments to evaluate soil and groundwater conditions at the site since 1986, some of which were in response to known spills and releases that occurred during tank filling or truck fueling operations. Assessment activities included the installation of 33 groundwater monitoring wells, 88 soil borings, aquifer and hydrogeological assessments, a bioremediation study, and installation of four nonaqueous-phase hydrocarbons (NAPH) and dissolved-phase petroleum hydrocarbon extraction wells. Tables 2 and 3 summarize the maximum contaminant concentrations in groundwater during the most recent three-year period (2007-2009) as measured in on-site and off-site wells, respectively. Figures 4a-d show the extent of gasoline, diesel, MTBE and benzene in groundwater in 1999 and 2009, respectively. Details of remedial investigation activities are presented the following reports: 1) *Remedial Action Plan, LFR, July 27, 2007 and Remedial Action Plan Addendum, LFR, October 8, 2009* and 2) *Monitored Natural Attenuation Evaluation in Support of the Remedial Action Plan, LFR, December 15, 2006*.

Table 2: Maximum Contaminant Concentrations in Groundwater Measured in On-Site Monitoring Wells^{1,2} (2007 through 2009)

Constituent	Contaminant Concentration (ug/l)	Basis
Gasoline (TPH-g) (C6-C12)	8,000	MW-5 (Nov-08); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Diesel Fuel (TPH-d) (C9-C25)	6,300	MW-13 (Oct-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Benzene	300	MW-5 (Apr-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Toluene	73	MW-23 (Apr-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Ethylbenzene	410	MW-6 (Apr-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Xylenes	694	MW-5 (Jan-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Methyl-tert Butyl Ether (MTBE)	270	MW-2 (May-09); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
tert-Butyl Alcohol (TBA)	3,600	MW-19 (Apr-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3

¹ On-site wells include MWs: 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 26, 27, 28, 29, 31, and 32.

² Includes MWs 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 15, and 23, which have historically contained separate-phase liquid hydrocarbon.

Table 3: Maximum Contaminant Concentrations in Groundwater Measured in Off-Site Monitoring Wells¹ (2007 through 2009)

Constituent	Contaminant Concentration (ug/l)	Basis
Gasoline (TPH-g) (C6-C12)	<50	Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Diesel Fuel (TPH-d) (C9-C25)	<50	Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Benzene	<0.5	Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Toluene	<0.5	Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Ethylbenzene	<0.5	Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Xylenes	<0.5	Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
Methyl-tert Butyl Ether (MTBE)	38	MW-33 (Apr-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3
tert-Butyl Alcohol (TBA)	11	MW-33 (Oct-07); Semi-Annual Monitoring Report Jan.1 to June 30, 2009, Table 3

¹ Off-site wells include MWs: 9, 10, 25, 30, and 33.

13. Risk Assessment: Human and ecological health risks from exposure to impacted soil, groundwater, or associated vapors were assessed by comparison of contaminant levels to the Board's November 2007 Environmental Screening Levels (ESLs) and California Maximum Contaminant Levels (MCLs) based on the current land use of the facility and surrounding properties. This risk evaluation is presented in the July 2007 Remedial Action Plan (RAP), and October 2009 RAP Addendum. This type of "tier 1" screening level risk assessment is appropriate for the facility because ESLs and MCLs are conservative indicators considered safe for human and environmental exposure. Specific potential exposure pathways and/or receptors considered include 1) groundwater contamination volatilizing and potentially affecting indoor air within the facility's control room, 2) direct facility worker contact with soil contamination, 3) leaching of contaminated soils into underlying groundwater, 4) groundwater ingestion, 5) potential contaminated groundwater discharge into Coyote Creek, and 6) potential risk to ecological receptors and wildlife habitat in the Coyote Creek area. Findings suggest that remedial action be implemented to address the presence of petroleum hydrocarbons and fuel oxygenates in soil (number 3 above) and shallow groundwater beneath the site (numbers 4 and 5 above). There are currently no unacceptable risks for the potential exposure pathways listed in numbers 1, 2 and 6 listed above, based on the current land use.

An updated and/or more detailed human and/or ecological health risk assessment will be required 1) if data indicate that reasonable potential human or ecological exposures exist as determined by the discharger or Board staff, 2) upon presentation of a credible, specific reuse/redevelopment plan to Board staff by the property owner for areas immediately adjacent to the site where potential offsite impacts exist, or 3) upon any actual or proposed

material change to the facility as determined by the discharger or Board staff. The purpose of the risk assessment would be to identify risks to potential human or ecological receptors posed by petroleum fuel hydrocarbons discharged from the facility both onsite and offsite, when applicable.

14. Corrective Action Plan: Several phases of remedial activities have been conducted at the site since 1986 in response to documented releases of petroleum fuel hydrocarbons to soil and groundwater and to address the presence of separate phase liquid hydrocarbons (SPLH) in specific portions of the site. Remedial actions have included SPLH recovery, soil excavation, groundwater extraction and treatment, and dual-phase soil vapor and/or groundwater extraction. Historically, SPLH has been detected at different times in ten monitoring wells; however, SPLH has been absent in all ten monitoring wells since 2005. When present, SPLH is removed using passive skimmers and hand bailing. Detailed discussion of remedial actions is presented in the July 2007 RAP (See Finding #15 below).

15. Remedial Action Plan and Monitored Natural Attenuation (MNA) Report: Board staff approved the RAP, RAP Addendum and MNA Report in a letter dated March 25, 2010. The RAP and RAP Addendum propose a comprehensive plan to continue cleanup and monitoring of petroleum fuel hydrocarbons in soil, groundwater, and surface water in Coyote Creek. The MNA Report proposes monitored natural attenuation as the preferred remedial alternative and provides lines of evidence to support its selection. This Order establishes appropriate cleanup standards and requires 1) performance monitoring to demonstrate MNA effectiveness (Task #1), 2) removal of SPLH to the extent practicable (Task #2), 3) trigger levels for potential off-site impacts (Task #5), 4) completion of a contingency plan should additional remedial measures become necessary (Task #6), and 5) a monitoring program to provide an ongoing assessment of groundwater conditions and impacts from potential new releases at the facility (Self-Monitoring Program, attached).

16. Basis for Cleanup Standards:

- a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background shall be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such waters, and not result in exceedance of applicable water quality objectives.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

- b. **Beneficial Uses:** The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water

quality objectives. The Basin Plan was duly adopted by the Board and approved by the State Board, U.S. EPA, and the Office of Administrative Law where required.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the site qualifies as a potential source of drinking water.

The site is located within the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin, as defined in the Basin Plan. The Basin Plan designates the following existing and potential beneficial uses of groundwater in this basin, including underlying and adjacent to the site:

- Municipal and domestic supply (MUN)
- Industrial process supply (PROC)
- Industrial service supply (IND)
- Agricultural supply (AGR)

Groundwater discharge to Coyote Creek occurs at different times of the year, based on measured shallow groundwater and surface water levels. Based on water quality measurements, the groundwater is considered freshwater. Therefore, the groundwater beneath the site has the following additional potential beneficial use as defined in the Basin Plan:

- Freshwater replenishment to surface waters (FRSH)

- c. **Basis for Groundwater Cleanup Standards:** The groundwater cleanup standards for the site are based on applicable water quality objectives. Although no current use of the shallow groundwater-bearing zone has been identified, there are 16 active water-producing wells within the deep water-bearing zone within a one-mile radius of the site. According to the Santa Clara Valley Water District (SCVWD), 10 of the wells are designated as municipal/industrial, two are designated as agricultural wells, and three are designated as domestic wells. Eight of these wells are located down-gradient from the site, four are located cross-gradient, and four are located up-gradient (LFR, 2007). The shallow groundwater contamination at the facility could potentially affect the current use of deeper groundwater for municipal/industrial, agricultural and domestic purposes. Therefore, applicable water quality objectives include drinking water standards, which are the more stringent of U.S. EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will protect all existing and potential future beneficial uses of groundwater.

- 17. Future Changes to Cleanup Standards:** The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the site. Results from other similar sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not technologically or economically achievable within a reasonable period of time, then the discharger may request modification to the cleanup standards or establishment of a

containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide that further cleanup actions should be taken.

- 18. Reuse or Disposal of Extracted Groundwater:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.
- 19. Basis for 13304 Order:** California Water Code Section 13304 authorizes the Board to issue orders requiring the discharger to cleanup and abate waste where the discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
- 20. Cost Recovery:** Pursuant to California Water Code Section 13304, the discharger is hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.
- 21. CEQA:** The Board, as the lead agency for this project, prepared an Initial Study and Negative Declaration which has been circulated for public review in compliance with CEQA and applicable regulations. The Board has considered the Negative Declaration, which reflects the independent judgment and analysis of the Board, and finds based on substantial evidence in the record that the project poses no significant environmental impacts. The Negative Declaration was adopted by the Board on July 14, 2010.
- 22. Notification:** The Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements and has provided them with an opportunity to submit their written views and recommendations.
- 23. Public Hearing:** The Board, in a public meeting, heard and considered all comments pertaining to the proposed waste discharge requirements for the site.

IT IS HEREBY ORDERED, pursuant to Section 13304 and Section 13267 of the California Water Code, that the discharger (and/or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. REMEDIAL ACTION PLAN AND CLEANUP STANDARDS

1. **Implement Corrective Action:** The discharger shall implement corrective action as necessary to comply with the requirements of this Order.
2. **Groundwater Cleanup Standards:** Groundwater, including on-site and off-site, that is impacted by petroleum fuel hydrocarbons attributable to releases at the site shall be cleaned up to the final standards identified by the Discharger in the RAP, as approved by the Board on March 25, 2010, presented below.

Constituent	Standard (ug/l)	Basis
Gasoline (TPH-g) (C ₆ -C ₁₂)	100	Drinking Water ESL ¹
Diesel Fuel (TPH-d) (C ₉ -C ₂₅)	100	Drinking Water ESL
Benzene	1	CA primary MCL ²
Toluene	150	CA primary MCL
Ethylbenzene	300	CA primary MCL
Xylenes	1,750	CA primary MCL
Methyl-tert Butyl Ether (MTBE)	5	CA secondary MCL
tert-Butyl Alcohol (TBA)	12	CA State notification level ³

¹ "ESL" means environmental screening levels, which are guidelines for chemicals where MCLs have not been established in this case; where MCLs are not established, Public Health Goals (PHGs) published by the California Office of Environmental Health Hazard Assessment (OEHHA) were used.

² "MCL" means maximum contaminant level, which is an enforceable promulgated drinking water standard. Primary MCLs consider protection of human health based on drinking the water. Secondary MCLs consider nuisance affects, such as taste and odor

and are typically applied whenever they are lower (i.e., more protective) than the primary MCL or if no promulgated primary MCL exists.

- ³ The State notification level is a health-based drinking water standard set at a level above which notification to drinking water consumers is required by the California Department of Public Health.

C. TASKS

1. **Implementation of Remedial Action Plan (RAP) and Self-Monitoring Program (SMP):** The discharger shall immediately implement the remedial actions proposed in the July 2007 RAP, and October 2009 RAP Addendum, although the remedial actions may be subsequently revised. At a minimum, implementation of remedial actions shall be demonstrated through compliance with the SMP attached to this Order, and as may be revised by the Executive Officer. The attached SMP is designed to collect information necessary to evaluate the potential migration of chemicals of concern (COCs) associated with known releases at the site and the effectiveness of remedial actions implemented to address those releases. The attached SMP may be revised at the discretion of the Executive Officer, as necessary to better evaluate site conditions, discharges, and remedial action effectiveness.

COMPLIANCE DATE: Immediate

2. **Contingency Plan for Separate-Phase Liquid Hydrocarbon (SPLH) Removal:** The discharger shall submit a technical report, acceptable to the Executive Officer, which proposes appropriate measures for removal of SPLH, when present, to the extent practicable. Contingency SPLH removal measures shall consider all appropriate passive and active methods, including dual-phase extraction. The plan shall also include a strategy, with specific triggers and a time table, acceptable to the Executive Officer, for when and how SPLH removal measures will be implemented. The discharger shall install any monitoring devices and conduct any testing necessary to appropriately and adequately evaluate SPLH removal measures and ensure that SPLH removal is occurring to the extent that is economically and technologically practicable. Certification that contingency measures have been implemented and discussion of their performance and effectiveness shall be included in the self-monitoring reports submitted pursuant to Task No. 1.

COMPLIANCE DATE: August 30, 2010

3. **Evaluation of Storm Water Best Management Practices:** The discharger shall submit a technical report, acceptable to the Executive Officer, which evaluates the appropriateness and effectiveness of best management practices (BMPs) for storm water at the facility. At a minimum, the report shall include evaluation of containment, filtering, and other practical treatment methods to best minimize sediment and fuel hydrocarbon transport via storm water beyond secondary containment areas and the facility boundary. The report shall include recommended BMPs and a schedule for implementation, including installation of any necessary devices, facilities, or structures, prior to October 15, 2010.

COMPLIANCE DATE: September 30, 2010

4. **Evaluation of Monitoring Well Construction:** The discharger shall submit a technical report, acceptable to the Executive Officer, which evaluates the appropriateness and effectiveness of all monitoring wells. The evaluation shall consider total well depth, screen interval, and well location in terms of providing adequate monitoring data for plume monitoring and remediation effectiveness as required pursuant to the tasks specified in this Order. The report shall propose destruction, repair, and/or replacement of any deficient monitoring wells. The report shall also propose construction of any new wells as necessary to adequately provide any and all monitoring data needed to adequately perform the tasks specified in this Order.

COMPLIANCE DATE: October 30, 2010

5. **Trigger Levels for Potential Off-Site Impacts:** The discharger shall submit a technical report, acceptable to the Executive Officer, which proposes concentration limits for petroleum fuel hydrocarbons in groundwater, which will serve as triggers for additional remediation (Note- these are not the cleanup goals listed in section B.2 above). Trigger levels are meant to apply to groundwater impacts, at the property boundary (such as monitoring wells MW-5, MW-7, MW-8, MW-20, MW-26 and MW-32) and off-site (such as monitoring wells MW- 9, MW-10, and MW-33) near Coyote Creek, which are attributable to releases at the facility. At a minimum, trigger levels shall be based on the magnitude of contaminant concentrations in groundwater at the property boundary and off-site for the most recent three-year period. Trigger levels shall be set at a level, which when exceeded, is a strong indication of a new release or significant change in site conditions or plume behavior. Trigger levels shall be re-evaluated every three years as long as groundwater impacts, attributable to releases at the facility, exceed cleanup standards. The report shall identify specific monitoring wells where trigger levels will apply and shall propose procedures, such as immediate re-sampling, to be used to confirm a trigger level exceedance. A confirmed exceedance of a trigger level shall be followed by bi-monthly or more frequent sampling of the suspect monitoring well for at least one year, or until constituent concentrations drop below trigger levels for three consecutive bi-monthly sampling events.

COMPLIANCE DATE: January 30, 2011, then every three years thereafter

6. **Contingency Remediation Plan:** In the event that a trigger level is exceeded for any three of six consecutive bi-monthly sampling events, including the initial sample exceedance, the discharger shall submit a technical report, acceptable to the Executive Officer, which proposes a contingency remediation plan. The contingency remediation plan shall identify the source of the exceedance and shall propose a method for active source control and/or cleanup. The contingency remediation plan shall also propose a method to control and/or cleanup all impacts in excess of trigger levels at the property boundary and off-site for impacts attributable to the facility, regardless if a new source is identified.

COMPLIANCE DATE: 60 days after third confirmed exceedance

7. **Remedial Action Effectiveness Evaluation:** The discharger shall submit a technical report, acceptable to the Executive Officer, which evaluates the effectiveness of all remedies implemented at the site to contain and/or cleanup contamination or contaminated media such

as soil, soil-gas, separate-phase liquid product, and groundwater, addressed by this Order. At a minimum, demonstration of remedial action effectiveness shall be based on adequately measured soil, geologic, hydrologic, and water quality parameters, including contaminant concentrations and water levels, and on appropriately calculated hydraulic, pressure, and chemical gradients, as necessary. The remedial action effectiveness evaluation shall also address the following:

- a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
- b. Comparison of contaminant concentration trends with cleanup standards
- c. Remediation performance data (e.g., contaminant mass removed or destroyed, volume and mass of separate-phase product removed, volume of groundwater extracted, mass removed per million gallons extracted, mass flux reduction)
- d. Cost effectiveness data (e.g., total cost, cost per unit mass of contaminant removed or destroyed, cost per unit mass flux reduction)
- e. Summary of additional investigations (including results) and significant modifications to remediation systems
- f. Additional remedial actions proposed to meet cleanup standards (if applicable) including a time schedule for implementing such actions

The remedial action effectiveness evaluation shall include visual presentation of the full current extent of groundwater impacts, in excess of established cleanup standards, using posted contaminant concentrations next to each well or point where measured. For remediation by natural attenuation, which relies on intrinsic biodegradation, remedial action effectiveness shall be based on established spatial and temporal trends of contaminant concentrations and indicator parameters. At a minimum, indicator parameters for intrinsic biodegradation in groundwater (aerobic and anaerobic) shall include dissolved oxygen, nitrate, sulfate, ferrous iron, methane, carbon dioxide, oxygen-reduction (redox) potential, Total Kjeldahl Nitrogen (TKN), phosphate, and pH. The following data presentation methods shall be used to demonstrate spatial and temporal trends of contaminant concentrations and indicator parameters:

- a. Figures showing the current and historic extent of contamination
- b. Graphs showing current and historic contaminant concentrations and water levels versus time in the direction of groundwater flow and at plume boundaries
- c. Graphs showing current and historic contaminant concentrations versus distance in the direction of groundwater flow
- d. Figures showing the current and historic spatial distribution of indicator parameters for intrinsic biodegradation
- e. Graphs showing current and historic indicator parameter concentrations versus time in the direction of groundwater flow and at plume boundaries
- f. Graphs showing current and historic indicator parameter concentrations versus distance in the direction of groundwater flow

In addition, the remedial action effectiveness evaluation shall estimate the time to reach cleanup standards in groundwater, both on-site and off-site, using regression analysis of temporal contaminant concentration trends.

COMPLIANCE DATE: January 30, 2012

8. **Three-Year Remedial Action Effectiveness Evaluation:** Every three years, the discharger shall submit a technical report, acceptable to the Executive Officer, which contains a remedial action effectiveness evaluation as described in Task No. 7. Remedial action effectiveness evaluations shall be submitted every three years until the groundwater cleanup standards are achieved. Each three-year evaluation shall be tailored to the specific remediation type and/or system implemented at the site at that time, if it differs from what is currently proposed. A work plan shall be submitted at least six months prior to the three-year evaluation report due date, if changes to the methods described in Task No. 7 are proposed. The work plan shall describe the proposed evaluation methods. If cleanup standards have not been met and are not projected to be met within a reasonable time, the report shall assess the technical practicability of meeting cleanup standards and may propose an alternative cleanup strategy and schedule.

COMPLIANCE DATE: January 30, 2015, then every three years thereafter

9. **Risk Assessment:** When required, the discharger shall submit a technical report, acceptable to the Executive Officer, which contains a human and/or ecological health risk assessment (risk assessment). An updated and/or more detailed human and/or ecological health risk assessment will be required 1) if data indicate that reasonable potential human or ecological exposures exist as determined by the discharger or Board staff, 2) upon presentation by the property owner of a credible, specific reuse and/or redevelopment plan to Board staff and the discharger for areas immediately adjacent to the site where offsite impacts may exist, or 3) upon any actual or proposed material change to the facility as determined by the discharger or Board staff. The purpose of the risk assessment would be to identify risks to potential human or ecological receptors posed by petroleum fuel hydrocarbons discharged from the facility both onsite and offsite, when applicable.

COMPLIANCE DATE: 90 days after trigger

10. **Proposed Curtailment:** Submit a technical report acceptable to the Executive Officer containing a proposal to curtail remediation. Curtailment includes system closure (e.g., well abandonment), system suspension (e.g., cease extraction but wells retained), and significant system modification (e.g., major reduction in extraction rates, closure of individual extraction wells within extraction network). The report should include the rationale for curtailment. Proposals for final closure should demonstrate that cleanup standards have been met, contaminant concentrations are stable, and contaminant migration potential is minimal.

COMPLIANCE DATE: 60 days prior to proposed curtailment

11. **Implementation of Curtailment:** Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 10.

COMPLIANCE DATE: 60 days after Executive Officer approval

12. **Evaluation of New Health-Based Criteria:** Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved remedial action plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

COMPLIANCE DATE: 90 days after requested by Executive Officer

13. **Evaluation of New Technical Information:** Submit a technical report acceptable to the Executive Officer evaluating new technical information that bears on the approved remedial action plan and cleanup standards for this site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports will not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved remedial action plan or cleanup standards.

COMPLIANCE DATE: 90 days after requested by Executive Officer

14. **Delayed Compliance:** If the discharger is delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the discharger shall promptly notify the Executive Officer, and the Board or the Executive Officer may consider revision to this Order.

D. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Operations and Maintenance:** The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The discharger is liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** The discharger shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.

- c. Inspection of any monitoring or remediation facilities installed in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
- 5. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
- 6. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g., temperature).
- 7. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies. The Executive Officer may modify this list as needed.
 - a. The Board
 - b. City of San Jose
 - c. Santa Clara County Department of Environmental Health
- 8. **Electronic Reporting:** All reports submitted pursuant to this Order shall be submitted as electronic files in PDF format. The Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures & tables.

Upon request by Board staff, monitoring results, including water level measurements, sample analytical results, coordinates, elevations, etc., shall be provided electronically in Microsoft Excel[®] or similar spreadsheet format. This format facilitates data computations and/or plotting that Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be included in the case file for public review as long as a PDF version is included.

All electronic files shall be submitted via the Board's Geotracker website, email (only if the file size is less than 3 MB) or on CD. CD submittals may be included with a print report. Email notification should be provided to Board staff whenever a file is uploaded to Geotracker.

- 9. **Reporting of Changed Owner or Operator:** The discharger shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.

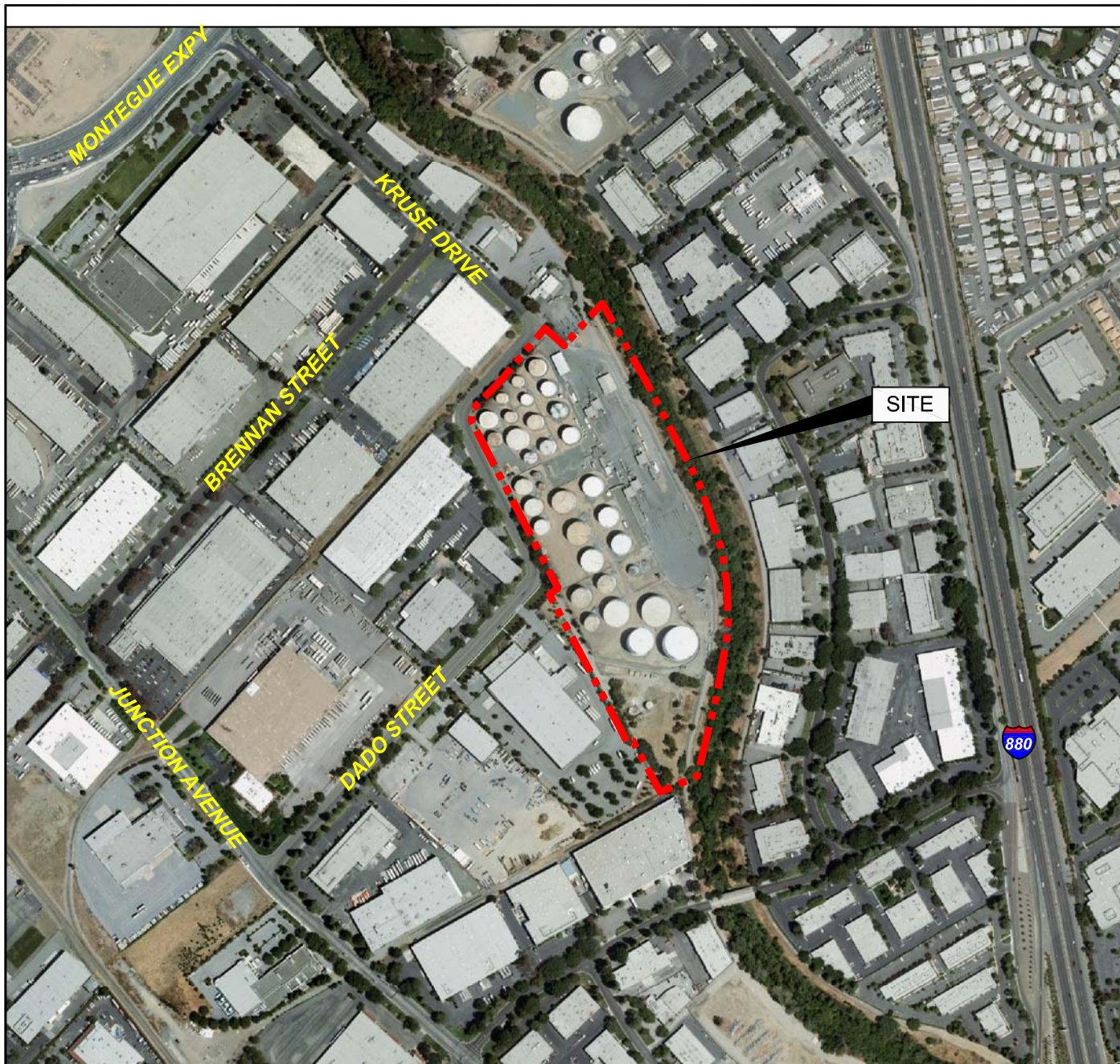
13. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on XXXX.

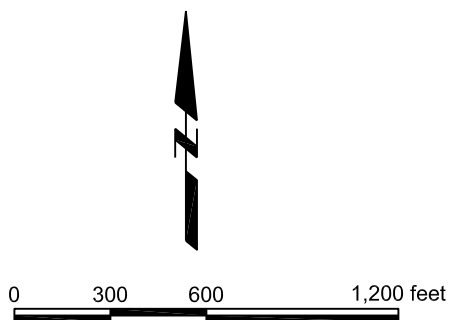
Bruce H. Wolfe
Executive Officer

- Attachments: Figure 1: Site Location Map
Figure 2: Groundwater Monitoring Locations
Figure 3: Storm Water Monitoring Locations
Figure 4A-D: Groundwater Plume Isoconcentration Maps for TPHg, TPHd, MTBE and Benzene
Self-Monitoring Program

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MAP SOURCE: Google Earth Pro™ 2009, 37°23'23.59"N, 121°54'41.78"W

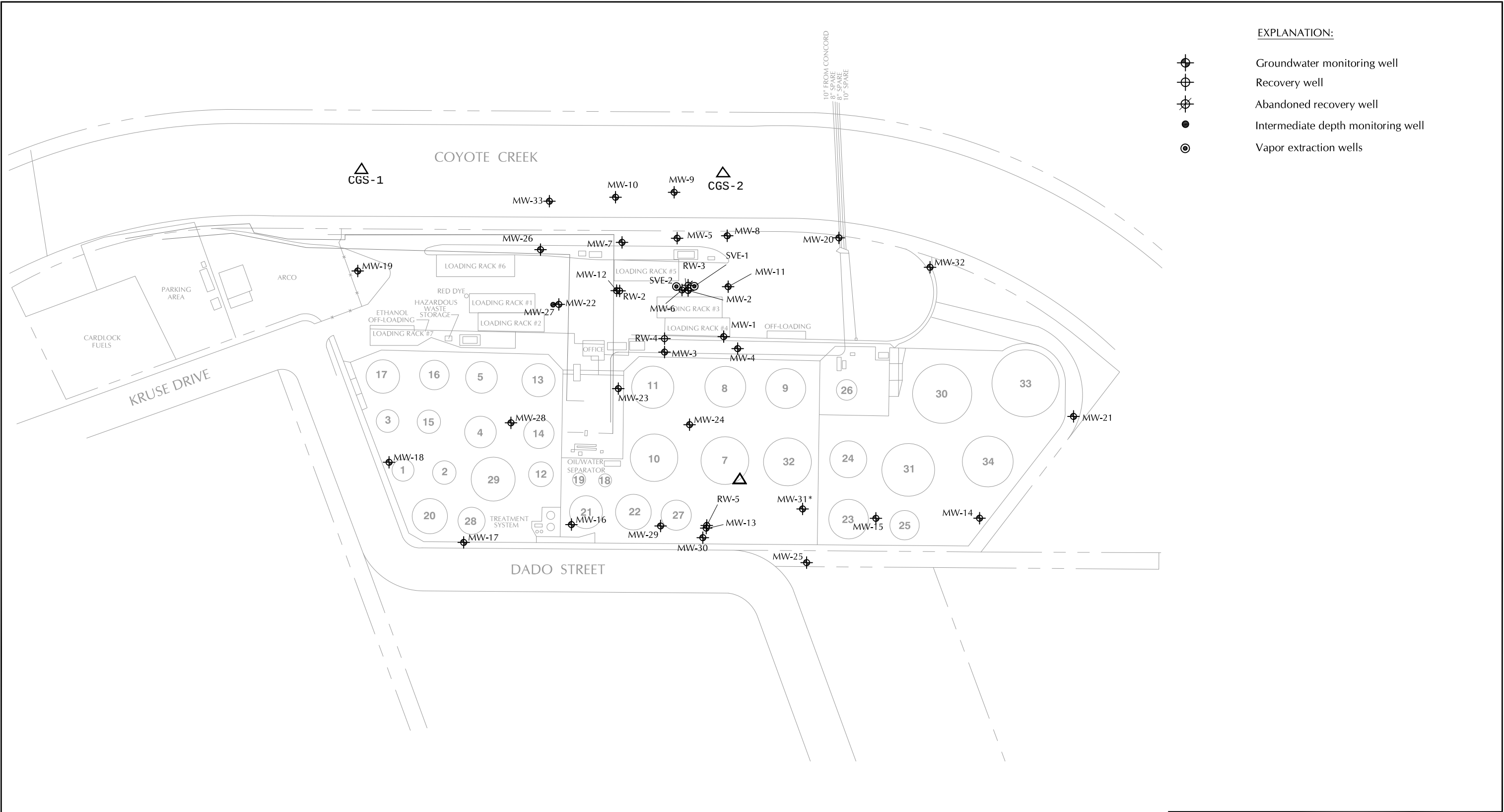


Site Location Map

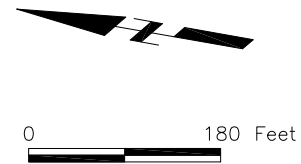
2150 Kruse Drive, San Jose, California - 028-07838-12

Figure 1

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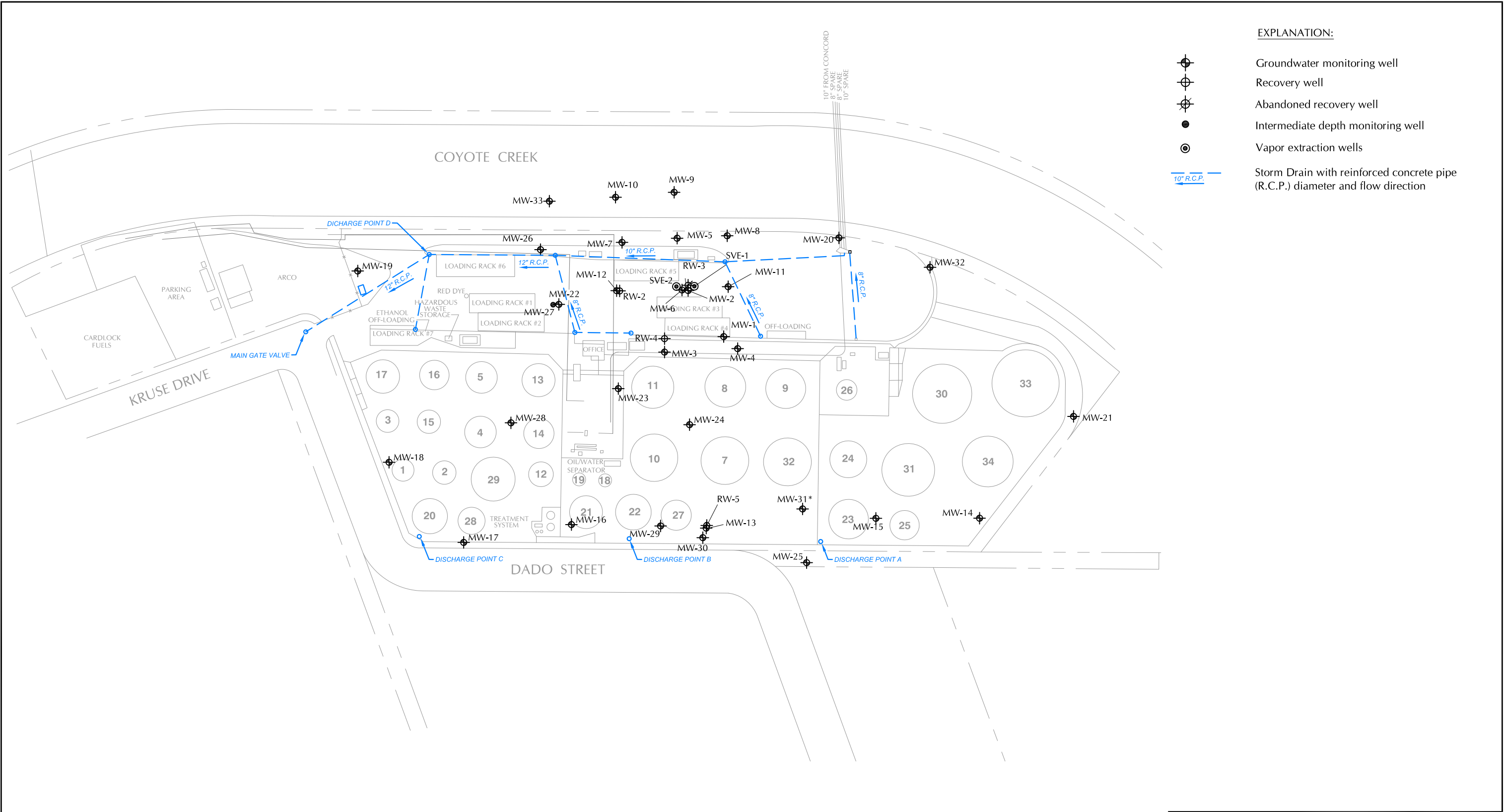
Groundwater Monitoring Locations

2150 Kruse Drive, San Jose, California - 028-07838-12



Figure 2

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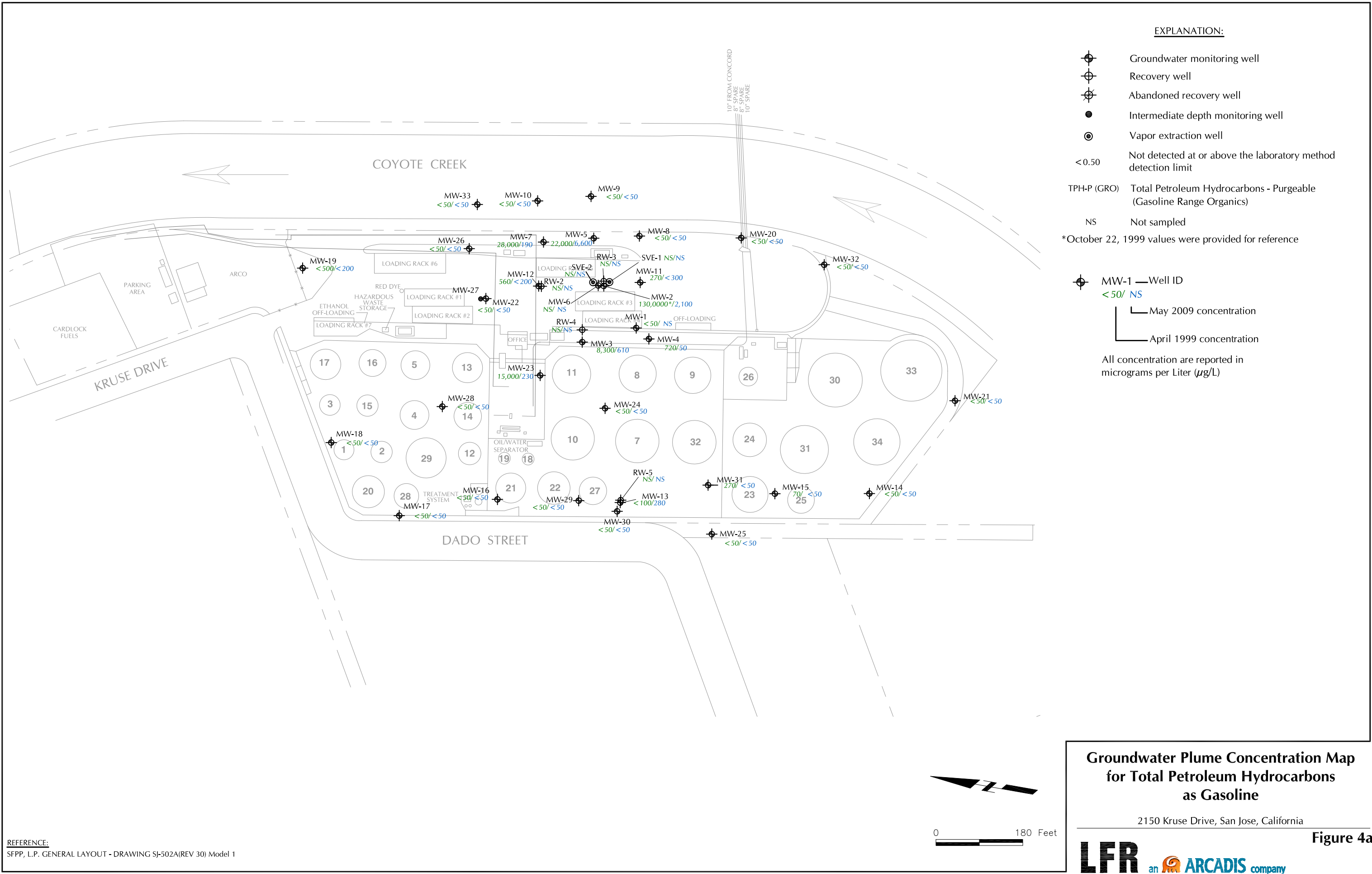
Storm Water Monitoring Locations

2150 Kruse Drive, San Jose, California - 028-07838-12

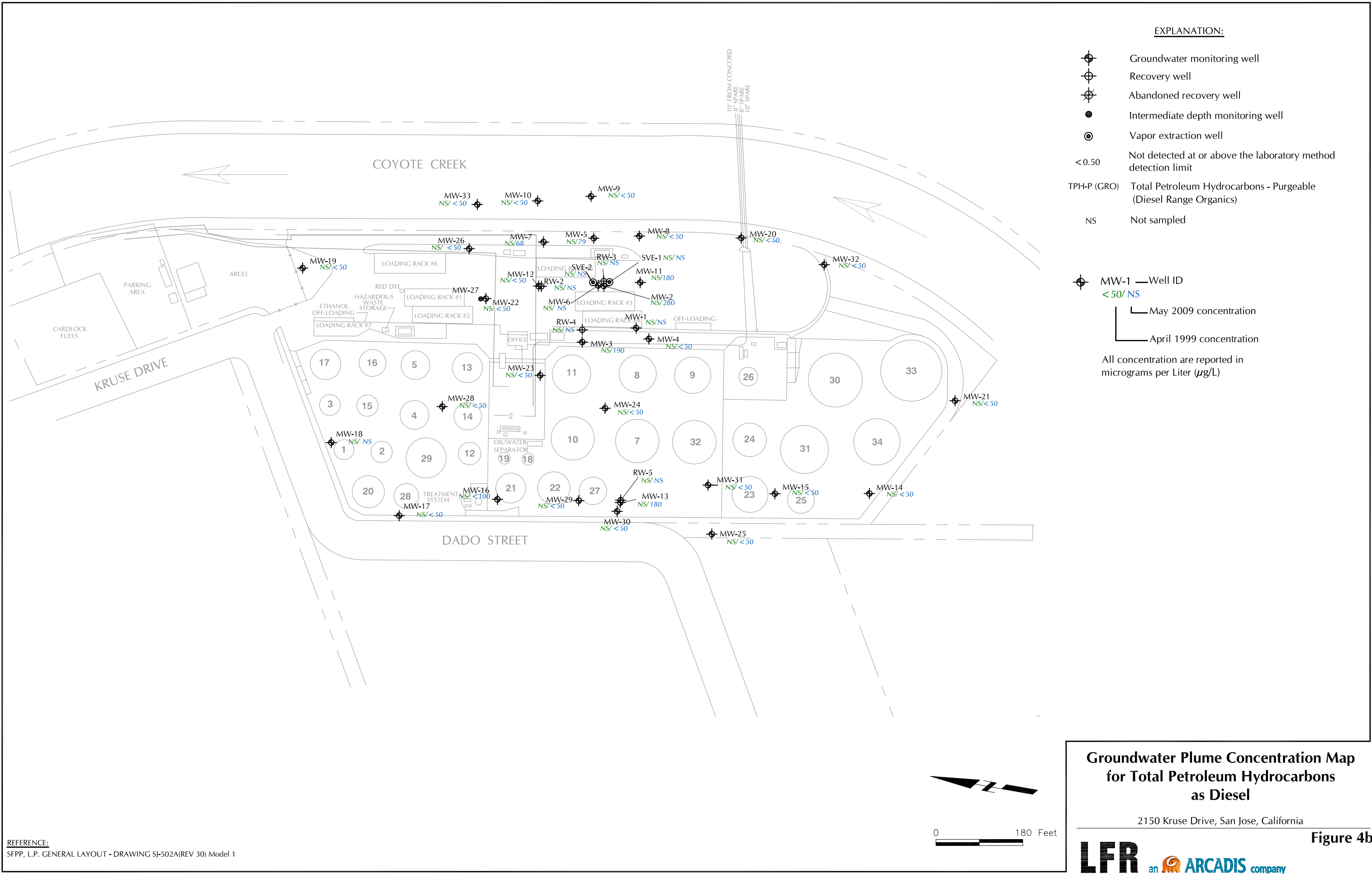


Figure 3

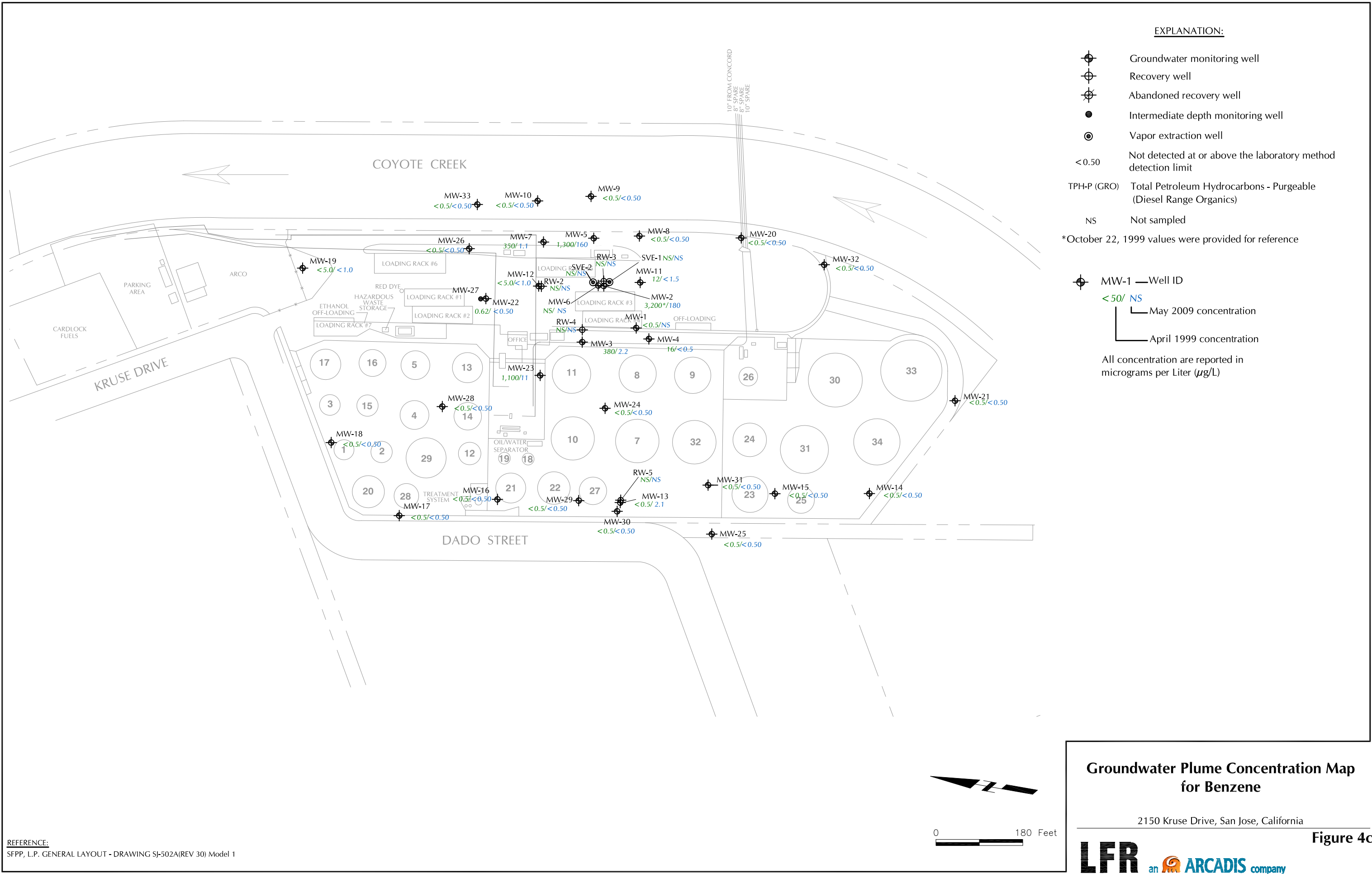
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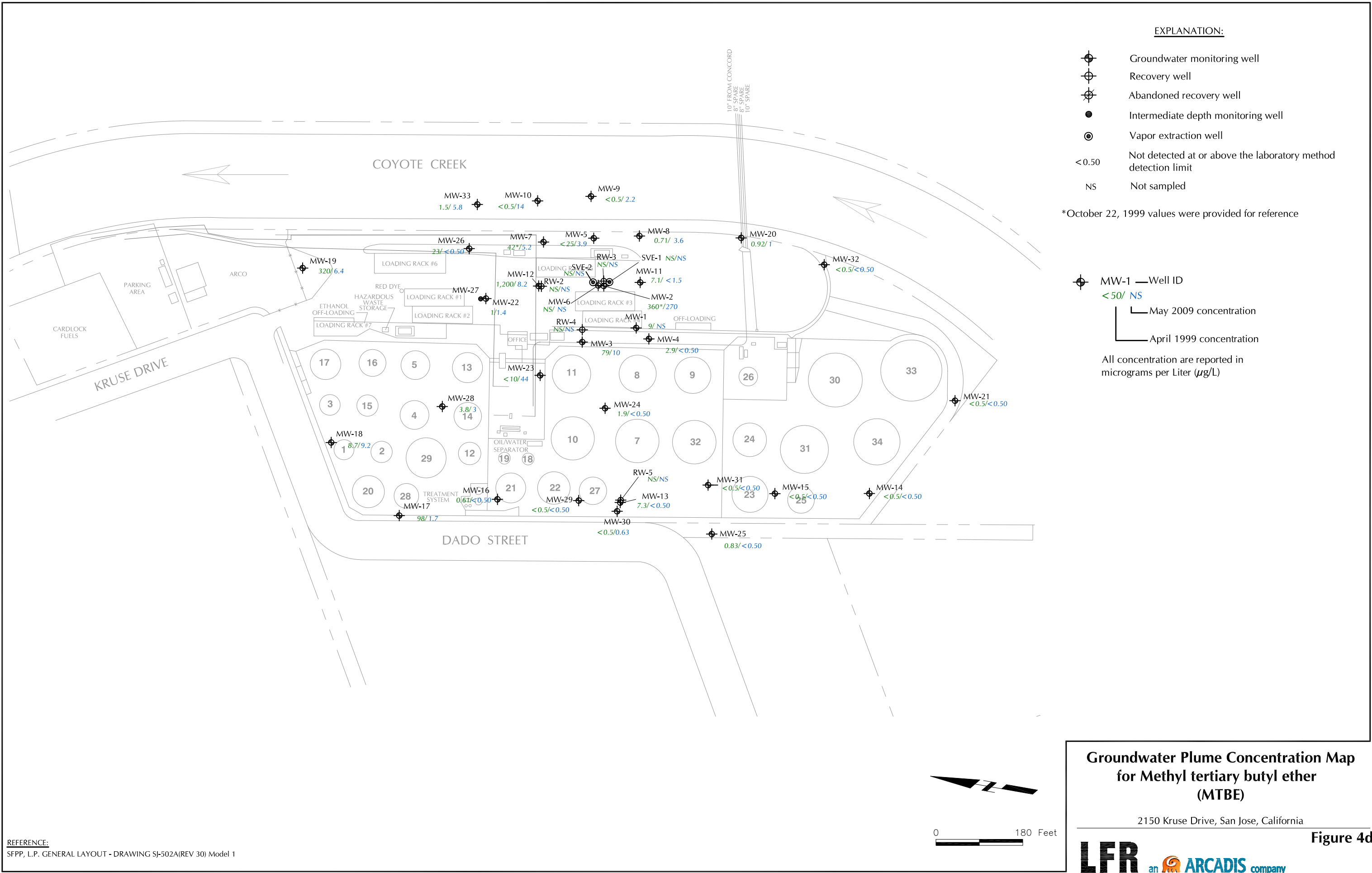
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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR
SITE CLEANUP REQUIREMENTS ORDER No. R2-2010-00XX
ADOPTED XXXX FOR

SFPP, L.P., AN OPERATING PARTNERSHIP OF
KINDER MORGAN ENERGY PARTNERS, L.P.

For the

SFPP, L.P. SAN JOSE TERMINAL
SAN JOSE, SANTA CLARA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. R2-2010-00XX (site cleanup requirements).
2. **Monitoring Requirements:** The discharger shall perform monitoring (water level measurement, observations, and analytical sampling) according to Table SMP-1, which specifies monitoring location ID, frequencies, parameters, and analytes. Monitoring locations are shown in Figures SMP-1 and SMP-2. The discharger shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in Table SMP-1. The discharger may propose changes in the above table; any proposed changes are subject to Executive Officer approval.
3. **Reporting Requirements:** The discharger shall submit self-monitoring reports (SMRs) to Board staff in accordance with the following schedule. Reports due at the same time may be combined into one report for convenience, as long as monitoring activities and results pertaining to each monitoring period are clearly distinguishable.

Reporting Frequency	Report Due Dates
Semi-Annual	February 15, August 15

At a minimum, each SMR shall include the following information:

- a. **Transmittal Letter:** A cover letter transmitting the essential points shall be included with each monitoring report. The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall also certify the completion of all monitoring requirements. The letter shall be signed by the

dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

b. **Graphic Presentation:** The following maps, figures, and graphs (if applicable) shall be included in each SMR to visually present data collected pursuant to this SMP:

- (1) Plan-view maps showing all monitoring and sampling locations, surface water bodies, and site/property boundaries
- (2) Groundwater level/piezometric surface contour maps for each groundwater-bearing zone of interest showing calculated groundwater gradients and flow directions under/around the site, based upon the past and present water level elevations and pertinent visual observations
- (3) Post-plot maps with analyte concentration posted adjacent to each sampling location and/or iso-concentration contour maps displaying analyte concentrations and sample locations
- (4) Concentration vs. time graphs for key sampling parameters for select sampling locations
- (5) Any other maps, figures, photographs, cross-sections, graphs, and charts necessary to visually demonstrate the appropriateness and effectiveness of sampling, monitoring, characterization, investigation, or remediation activities relative to the goals of this SMP

c. **Tabular Presentation:** The following data (if applicable) shall be presented in tabular form and included in each SMR to show a chronological history and allow quick and easy reference:

- (1) Well designations
- (2) Well location coordinates (latitude and longitude)
- (3) Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation)
- (4) Groundwater depths
- (5) Groundwater elevations
- (6) Horizontal groundwater gradients
- (7) Vertical groundwater gradients (including comparison wells from different zones), when appropriate
- (8) Phase-separated product elevations
- (9) Phase-separated product thicknesses
- (10) Current analytical results (including analytical method and detection limits for each constituent)
- (11) Historical analytical results (including at least the past five years unless otherwise requested)
- (12) Measurement dates
- (13) Groundwater extraction, including:
 - (a) Average daily extraction rate
 - (b) Total volume extracted for monitoring period
 - (c) Cumulative total volume extracted since system inception

- (14) Contaminant mass removal, including:
 - (a) Average daily removal rate
 - (b) Total mass removed for monitoring period
 - (c) Cumulative total mass removed since system inception
 - d. **Discussion:** Discussion of the following information, based on field and laboratory data results, shall be provided in each SMR:
 - (1) Data Interpretations
 - (2) Conclusions
 - (3) Recommendations
 - (4) Newly implemented or planned investigations & remedial measures
 - (5) Data anomalies
 - (6) Variations from protocols
 - (7) Condition of wells
 - (8) Explanation why monitoring could not be performed at any required location
 - e. **Appendices:** The following information shall be provided as appendices in electronic format (PDF format). Hard copies of the following information should be submitted only if requested by Board staff.
 - (1) New boring and well logs
 - (2) Method and time of water level measurements (field data sheets)
 - (3) Purging methods and results including the type of pump used, pump placement in the well, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity, calibration of the field equipment, pH, temperature, conductivity, and turbidity measurements, and method of disposing of the purge water
 - (4) Sampling procedures, field and travel blanks, number and description of duplicate samples, type of sample containers and preservatives used, the date and time of sampling, the name of the person actually taking the samples, and any other relevant observations
 - (5) Documentation of laboratory results, analytical methods, detection limits, and Quality Assurance/Quality Control (QA/QC) procedures for the required sampling.
4. **Violation Reports:** If the discharger violates requirements in the Site Cleanup Requirements, then the discharger shall notify the Board office by telephone as soon as practicable once the discharger has knowledge of the violation. Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five working days of telephone notification.
5. **Other Reports:** The discharger shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.

6. **Record Keeping:** The discharger or its agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
7. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.
8. **Electronic Reporting:** All SMRs submitted pursuant to this SMP shall be submitted as electronic files in PDF format. The Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures and tables.

Upon request by Board staff, monitoring results, including water level measurements, sample analytical results, coordinates, elevations, etc., shall be provided electronically in Microsoft Excel® or similar spreadsheet format. This format facilitates data computations and/or plotting that Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be included in the case file for public review as long as a PDF version is included.

All electronic files shall be submitted via the Board's Geotracker website (<http://geotracker.waterboards.ca.gov>). Files may additionally be sent via email (only if the file size is less than 3 MB) or on CD. CD submittals may be included with a print report. Email notification should be provided to Board staff whenever a file is uploaded to Geotracker.

9. **Maintenance of Written Records:** The discharger shall maintain information required pursuant to this SMP for at least five years. The five-year period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board.

Attachments: Table SMP-1
Figures SMP-1 & SMP-2

Table SMP-1
SFPP, L.P. San Jose Terminal, Self-Monitoring Program

Well ID	Well Construction Details				Monitoring Parameters and Frequency						
	date installed	well depth	well elevation	screen interval	Water Level	TPH-g ⁽¹⁾	TPH-d ⁽²⁾	BTEX ⁽³⁾	MtBE ⁽⁴⁾	Field ⁽⁵⁾	IPs ⁽⁶⁾
		fbgs	ft, MSL	fbgs							
GROUNDWATER											
MW-1	Sep-86	15	41.67	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-2	Sep-86	30	41.41	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
MW-3	Sep-86	30	41.84	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
MW-4	Sep-86	30	41.69	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-5	Sep-86	25	41.95	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-6	Oct-86	15	41.43	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
MW-7	Oct-86	33	41.63	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
MW-8	Oct-86	33	41.85	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-9	Oct-86	10.5	26.45	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-10	Oct-86	10	30.51	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-11	Jan-87	30	41.22	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-12	Jan-87	30	41.42	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-13	Jan-87	26.5	40.10	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-14	Oct-87	35	41.21	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-15	Oct-87	35	39.59	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-16	Oct-87	35	39.98	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-17	Oct-87	35	39.40	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-18	Oct-87	40	42.21	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-19	Oct-87	35	42.16	--	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-20	Oct-87	35	42.06	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-21	Oct-87	35	41.37	--	Q	A-4	A-4	A-4	A-4	A-4	
MW-22	Nov-89	30	40.28	14.5-30	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
MW-23	Nov-89	30	40.82	14.5-30	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-24	Nov-89	30	39.25	14.5-30	Q	A-4	A-4	A-4	A-4	A-4	
MW-25	Nov-89	29	40.77	14.5-29	Q	A-4	A-4	A-4	A-4	A-4	
MW-26	Sep-90	28	41.02	13-18	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-27	Sep-90	50	40.73	40-50	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
MW-28	Mar-93	30	42.24	9-29	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4
MW-29	Mar-93	30	41.54	10-29	Q	A-4	A-4	A-4	A-4	A-4	
MW-30	Mar-93	31	41.08	10-30	Q	A-4	A-4	A-4	A-4	A-4	
MW-31	Mar-93	31	42.25	10-30	Q	A-4	A-4	A-4	A-4	A-4	
MW-32	Apr-93	31	43.26	10-30	Q	A-4	A-4	A-4	A-4	A-4	
MW-33	May-94	18	27.69	3-18	Q	SA-2,4	SA-2,4	SA-2,4	SA-2,4	SA-2,4	
Soil Vapor Extraction Wells											
SVE-1	Jul-95	15	--	5-15	--	--	--	--	--	--	--
SVE-2	Jul-95	15	--	5-15	--	--	--	--	--	--	--
Recovery Wells											
RW-2	Apr-90	30.5	--	15-30	--	--	--	--	--	--	--
RW-3*	Apr-90	29.5	--	15-29	--	--	--	--	--	--	--
RW-4	Apr-90	30.5	--	15-30	--	--	--	--	--	--	--
RW-5	Apr-90	26	--	11-25.5	--	--	--	--	--	--	--
STORM WATER											
A						TA	TA	TA	TA		
B						TA	TA	TA	TA		
C						TA	TA	TA	TA		
D						TA	TA	TA	TA		
SURFACE WATER											
CGS-1						S-2,4	S-2,4	S-2,4	S-2,4		

Footnotes:

⁽¹⁾ Total Petroleum Hydrocarbons as Gasoline by EPA Method 8015B.

⁽²⁾ Total Petroleum Hydrocarbons as Diesel by EPA Method 8015B.

⁽³⁾ Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) by EPA Method 8260B.

⁽⁴⁾ Fuel Oxygenates, including MtBE and TBA, by EPA Method 8260B.

⁽⁵⁾ Field parameters including pH, conductivity, temperature, turbidity, oxygen-reduction potential (ORP), dissolved oxygen (DO), and ferrous iron

⁽⁶⁾ Indicator parameters for intrinsic bioremediation including: alkalinity (310.1), methane (RSK-175 GC/FID), sulfate (300.0/SW 9056), nitrate as N (300.0/SW 9056), carbon dioxide (RSK-175), total Kjeldahl nitrogen (350.4), ortho-phosphate (300/SW 9056), total organic carbon (SW9060/415.1/SM-5310C), biological oxygen demand (5210B), chemical oxygen demand (410.4/SSM 5220D)

KEY

Q = quarterly monitoring according to the following schedule:

1st quarter = Jan thru Mar

2nd quarter = Apr thru Jun

3rd quarter = Jul thru Sep

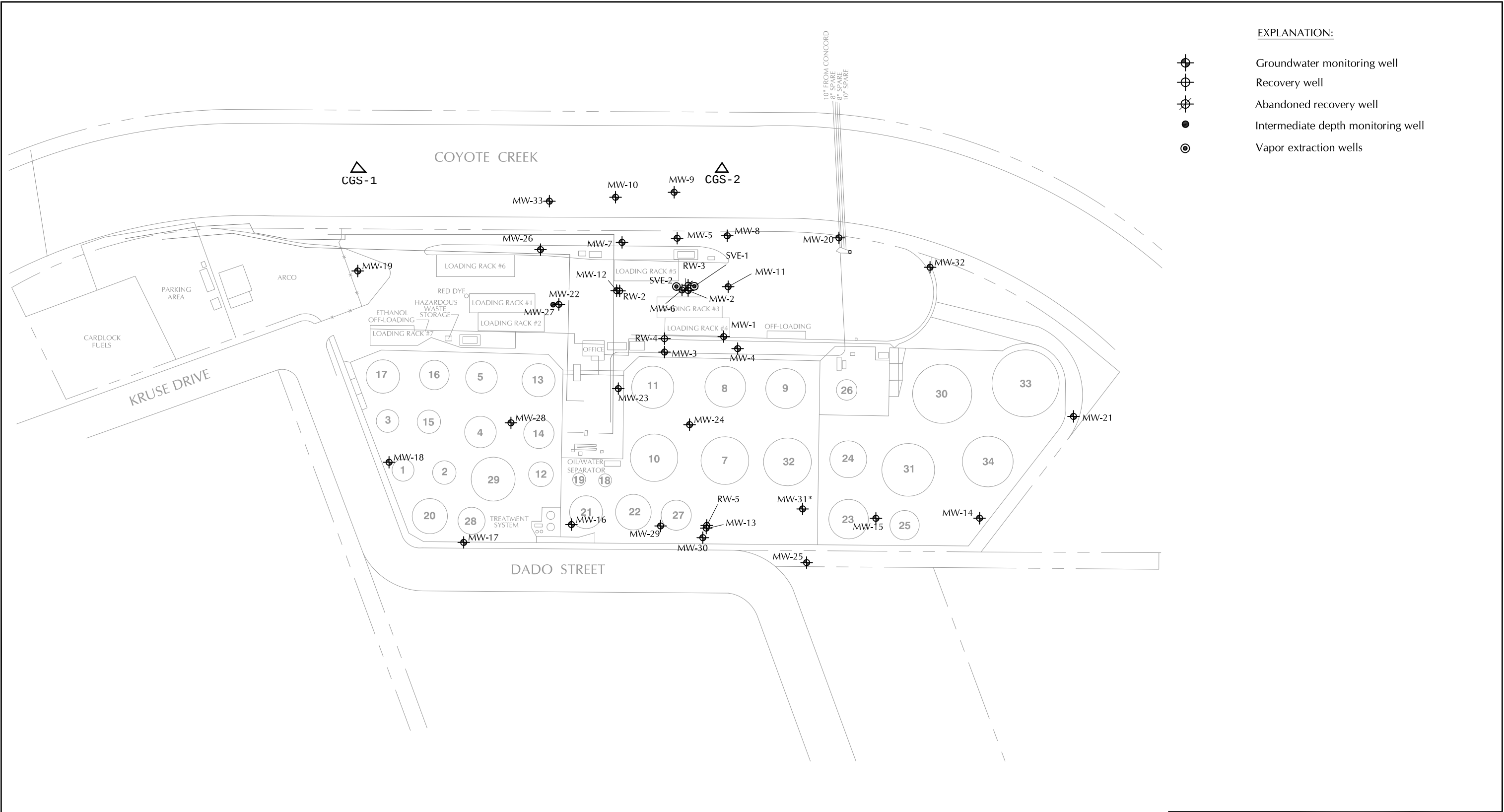
4th quarter = Oct thru Dec

SA-2,4 = semi-annual monitoring during second and fourth quarters

A-4 = annual monitoring during fourth quarter

TA = Twice annually during the wet season. Storm water sampling should be conducted during the first storm event of the wet season, which produces runoff, and during one other storm event during the same wet season.

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- EXPLANATION:
- Groundwater monitoring well
 - Recovery well
 - Abandoned recovery well
 - Intermediate depth monitoring well
 - Vapor extraction wells

REFERENCE:
SFPP, L.P. GENERAL LAYOUT - DRAWING SJ-502A(REV 30) Model 1

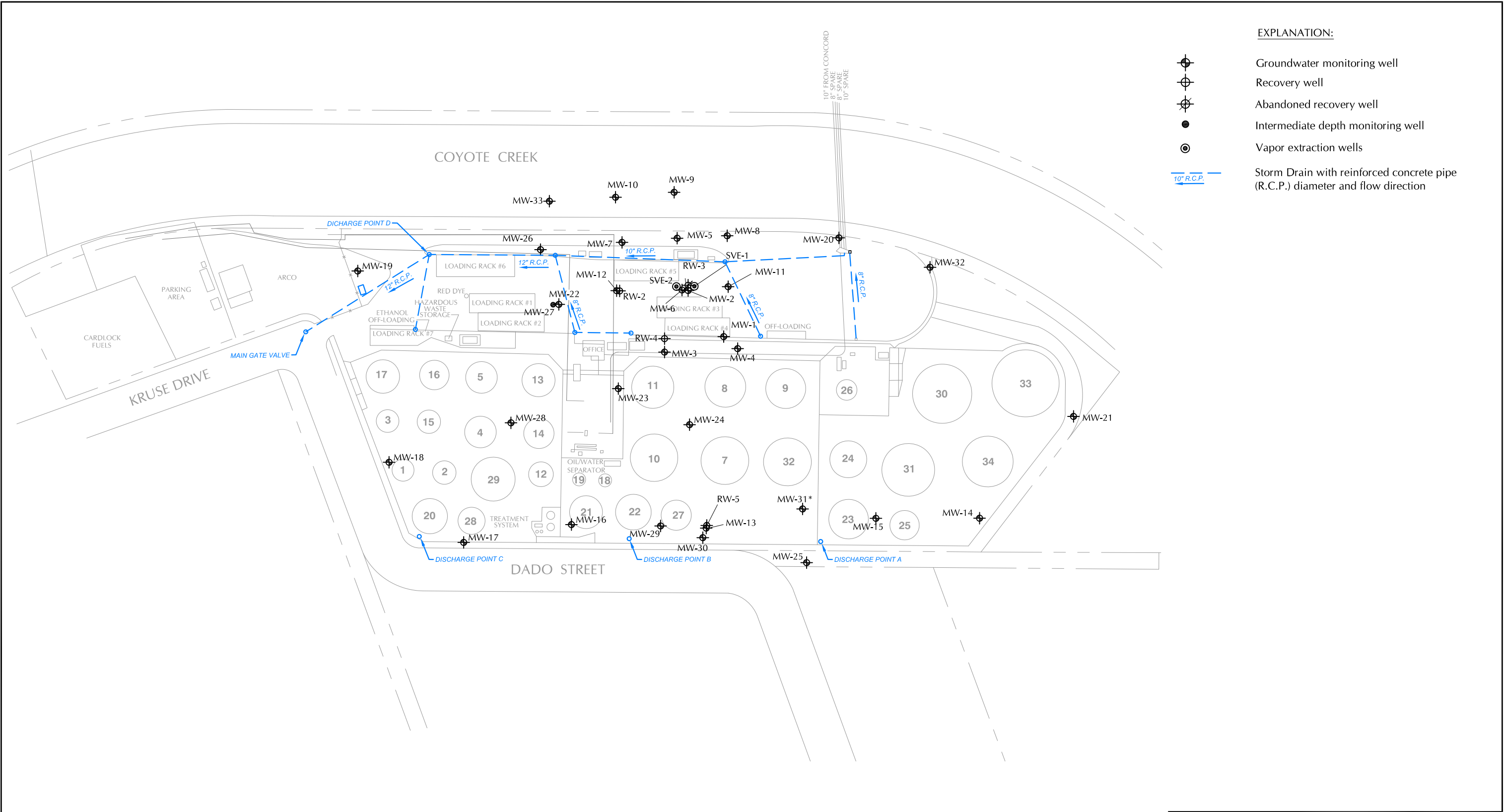
Groundwater Monitoring Locations

2150 Kruse Drive, San Jose, California - 028-07838-12



SMP-1

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- EXPLANATION:
- Groundwater monitoring well
 - Recovery well
 - Abandoned recovery well
 - Intermediate depth monitoring well
 - Vapor extraction wells
 - Storm Drain with reinforced concrete pipe (R.C.P.) diameter and flow direction

REFERENCE:
SFPP, L.P. GENERAL LAYOUT - DRAWING SJ-502A(REV 30) Model 1

Storm Water Monitoring Locations

2150 Kruse Drive, San Jose, California - 028-07838-12

