Appendix D
Phase I Site Reconnaissance, Field Notes, Photographs, and Photo Logs
Part 1

- 3-4-10 Abandoned Service Station - S104869033
- 3-4-10 Trini's Beacon - U003971430
- 3-5-10 Calif Diesel Repair - S106953262
- 3-5-10 Chris Sorenson Facility - 1010082228 and S107736126
- 3-5-10 Former Caltrans Service Yard - 1010082232
- 3-5-10 Poverello House Property - 1010082229
- 3-5-10 Rumbley Property - S104816233
- 3-5-10 Sandoz Corporation, Inc (Certis USA) - S100873273
- 3-5-10 Santa Fe Railway Property - Wasco - S101480475
- 3-5-10 So Fresno Regional Groundwater Plume - S105628340
- 3-5-10 Vacant Lots - S107737517 and S107737518

- 3-9-10 Copeland Property - S106486160
- 3-9-10 KVS Transportation, Inc - 1000455676
- 3-10-10 Greyhound Bus Depot - S106175454
- 3-10-10 PG&E Gas Plant 325 3a (SQ-FK-FRS-2) - 1000196845
- 3-10-10 Texaco - Tosco - Big West - 100144861
- 3-10-10 VOPAK (Univar USA) - 1000136187
- 3-11-10 FMC Corporation - S106486061
- 3-11-10 Former BNSF Ice House - S105481911
- 3-11-10 Weir Floway - S104241813

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: ABANDONED SERVICE STATION

EDR ID Number: S104869033

Date of Inspection: 3/4/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEGUNDE

URS Office: FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

ABANDONED SERVICE STATION - VACANT LOT
655 G STREET
FRESNO, CA
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~ 0.37 AC

Site Buildings: NONE : OLD FOUNDATIONS, TANK PADS

Name	Number of stories	Dimensions	Square Footage	Year Built

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the (N) S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: No
Wetlands: No
Floodplains: No
Parklands: No
Sensitive habitats: No

5. Please list **current visible onsite activities**:

NONE

Is equipment washed onsite? No
Is maintenance conducted onsite? If so, what types?
Is fueling conducted onsite?

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North MONO ST ; VACANT LOT ; COMMERCIAL/INDUSTRIAL

South VACANT BUILDING (No NAME) 641 G STREET ; BECOM STATION

East G STREET ; VACANT LOT RAIL ROAD TRACKS (UNION PACIFIC)

West ALLEY ; RESIDENTIAL ; COMMERCIAL (TOFUJI TOFU)(S/E CORNER MONO/F ST.)

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

NONE

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS CO. (AREA)

Water Service by: FSO CITY

Wastewater Service by: FSO CITY

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

APPEARS THAT TANKS MAY HAVE BEEN REMOVED ALONG THE NORTH SIDE OF FORMER CANOPY/OFFICE

Are there any ASTs/USTs, active or inactive, present at the site currently? NO (EVIDENCE), formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed ? Closed or
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? UNK - REMOVED ?

11. Have there been any releases? YES - GASOLENE

To whom were the releases reported? RWQCB

What is status of release investigation? OPEN - SITE ASSESMENT

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by:_____

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? _____ if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
NONE					

17. **DRINKING WATER**

What is source of drinking water at the site? FSO CITY

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? FSO CITY

Are there any wells known to exist at the site? NONE, ~~Describe~~ OBSERVED

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)_____

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.?_____

if so, describe: _____

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate _____

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe: NONE

19. **STORMWATER**

Describe how stormwater is managed: SHEET RUNOFF TO THE NORTH

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

GASOLINE

Are there groundwater monitoring wells at this facility? NOT EVIDENT

Where are these wells located?

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program? OPEN ASSESMENT

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown** NONE REPORT; NO OBSERVED

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes No**	**Yes No**
_____	_____	_____	**Yes No**	**Yes No**

24. **USED OIL**

Does this facility generate used oil? No (NOT ANY LONGER)

Describe the types and sources of used oil generated: _____

_____

Are all containers of used oil labeled accordingly? _____

Describe how and where used oil is stored and handled:

_____

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

_____

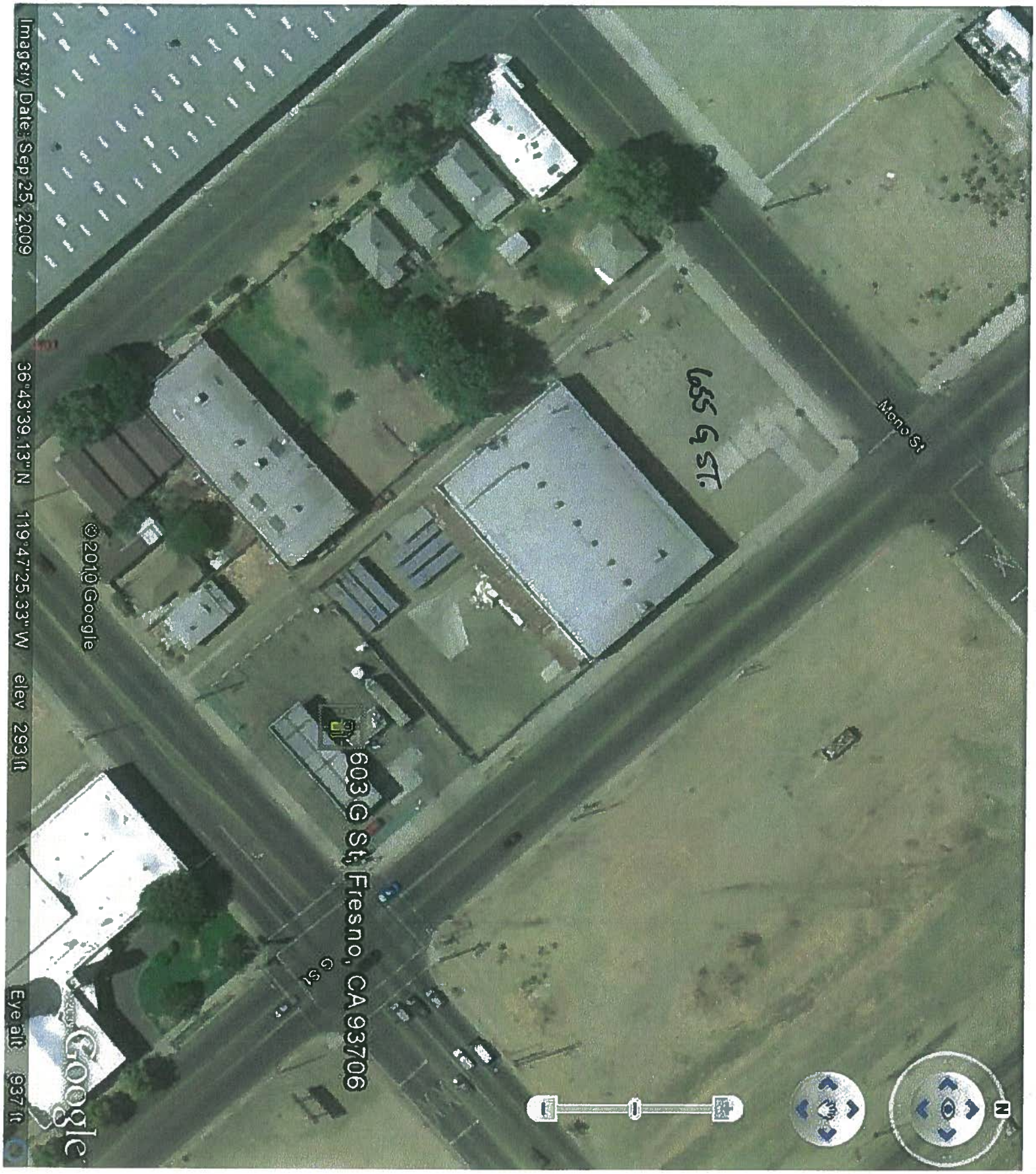
Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown** – MAYBE ABANDONED LIFT IN THE FORMER SHOP AREA



603 & 655 G STREET

FA02	ABANDONED GAS STATION	655	G	FRESNO	93706	FRESNO, UST REMOVAL/CLOSURE W/3 TANKS
FA02	ABANDONED GAS STATION	655	G	FRESNO	93706	FRESNO, CONTAMINATED UST SITE/RWQCB LEAD AGENCY

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Abandoned Service Station Site 655 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
1

Direction Photo Taken:

Looking south

Description:

Looking at the east side of the vacant site from the northeast corner (G Street and Mono Street) along G Street.

Photo No.
2

Direction Photo Taken:

Looking southwest

Description:

Looking at the vacant site from the northwest corner. Note the former service station foundation and dispenser island location.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Abandoned Service Station Site 655 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
3

Direction Photo Taken:

Looking east

Description:

Looking at the north side of the vacant site from the northwest corner, along Mono Street.

Photo No.
4

Direction Photo Taken:

Looking southeast

Description:

Looking across the vacant site from the northwest corner. The use of the concrete pillars is unknown.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Abandoned Service Station Site 655 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
5

Direction Photo Taken:

Looking south

Description:

Looking at the west side of the vacant site from the northwest corner, along the alley.

Photo No.
6

Direction Photo Taken:

Looking southwest

Description:

Looking at the south side of the vacant site from the southwest corner, along the adjacent building.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Abandoned Service Station Site 655 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
7

Direction Photo Taken:

Looking northeast

Description:

View of the vacant site from the southwest corner.

Photo No.
8

Direction Photo Taken:

Looking south

Description:

View of the vacant site and the former service station foundation. Note the in-ground hydraulic lift and the former UST location.

URS | HMM | ARUP CALIFORNIA HIGH-SPEED TRAIN	FLY CALIFORNIA Without ever leaving the ground.	**PHOTOGRAPHIC LOG**
California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Abandoned Service Station Site 655 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: TRINI'S BEACON (BEACON #460) **EDR ID Number:** U003971430

Date of Inspection: 3/4/10 **Requires Follow-up Site Visit:** Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEGUNDE **URS Office:** FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

TRINI'S BEACON (BEACON #460
603 G STREET
FRESNO, CA 93721
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~0.33 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
KIOSK	1	15' x 25'	375	?
OVERHEAD CANOPY	1	24' x 80'	1920	?

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N (S) E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: No
Wetlands: No
Floodplains: No
Parklands: No
Sensitive habitats: No

5. Please list **current visible onsite activities**:

GASOLINE STATION; 6 PUMPS (3 2x); SMALL MINI-MART

Is equipment washed onsite? No
Is maintenance conducted onsite? If so, what types? No
Is fueling conducted onsite? YES

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North VACANT BUILDING (641 G STREET)

South VENTURA AVE.; KERR RUG COMPANY - WAREHOUSE

East G STREET; VACANT LOT; RAIL ROAD TRACK (UNION PACIFIC)

West DERELICT HOUSES; COMMERCIAL STRUCTURE; ALLEY

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):
NONE

8. **Utilities-list all visable utility services (power lines, meters etc)**
Electric Service by: PG&E
Gas Service by: THE GAS COMPANY
Water Service by: FSO CITY
Wastewater Service by: FSO CITY
Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? YES, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
(U) / A	?	GASOLINE			Y (N)	(Y) / N	ACTIVE
(U) / A	?	GASOLINE			Y (N)	(Y) / N	ACTIVE
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? GOOD (TANKS WERE REPLACED)

11. Have there been any releases? UNKNOWN – UNDER INVESTIGATION

To whom were the releases reported? RWQCB

What is status of release investigation? SITE – ASSESSMENT UNDERWAY

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
GASOLINE	2	UST'S	GOOD	SOIL/GROUNDWATER

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: SMALL AMOUNTS OF PAPER REFUSE AND STATION GARBAGE

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: CITY OF FRESNO

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
NONE					

17. **DRINKING WATER**

What is source of drinking water at the site? FSO CITY

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? FSO CITY

Are there any wells known to exist at the site? NO, Describe

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **(No)** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.?

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

NONE OBSERVED

19. **STORMWATER**

Describe how stormwater is managed: SHEET RUNOFF TO THE SOUTH (CITY STORM DRAIN)

Does the stormwater flow to a combined sewer? No

Does water run-off from neighboring facilities and have potential to impact this facility? No

20. **WETLANDS**

Any known/delineated wetlands at the site? No, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

UNDER INVESTIGATION (RWQCB); GASOLINE

Are there groundwater monitoring wells at this facility? NONE OBSERVED

Where are these wells located?

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program?

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes No**	**Yes No**
_____	_____	_____	**Yes No**	**Yes No**

24. **USED OIL**

Does this facility generate used oil? NO

Describe the types and sources of used oil generated: _____

Are all containers of used oil labeled accordingly? _____

Describe how and where used oil is stored and handled:

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

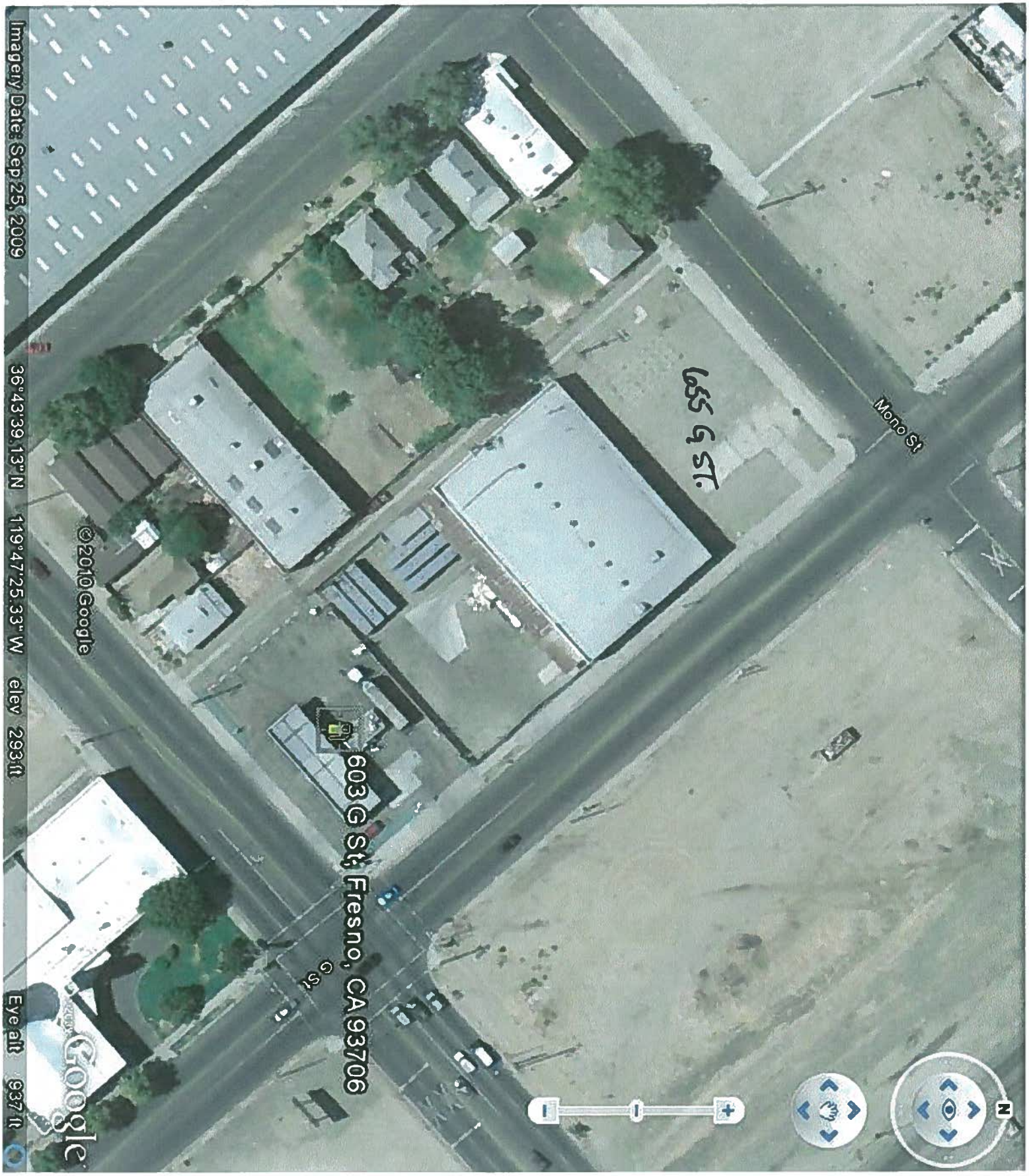
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

MINI MART HAS AN ICE STORAGE CONTAINER + 2 REFRIGERATORS (INSIDE)



603 & 655 G STREET

FA00 TRINI'S BEACON	603	G	FRESNO	93706	TORRES, CONTAMINATED UST SITE/RWQCB LEAD AGENCY
FA00 TRINI'S BEACON	603	G	FRESNO	93706	TORRES, UST REMOVAL/CLOSURE W/3 TANKS
FA00 TRINI'S BEACON	603	G	FRESNO	93706	TORRES, UST FACILITY WITH TWO TANKS
FA00 TRINI'S BEACON	603	G	FRESNO	93706	TORRES, MV FUEL/OIL/PROPANE ONLY IN AGST/UST MODEL I

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Trini's Beacon 603 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
1

Direction Photo Taken:

Looking southwest

Description:

View from the northeast corner of the site, along G Street.

Photo No.
2

Direction Photo Taken:

Looking south

Description:

View of the UST location on the east side of the site. It appears that the tanks have been replaced at some point.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Trini's Beacon 603 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
3

Direction Photo Taken:

Looking northwest

Description:

Another view of the UST location.

Photo No.
4

Direction Photo Taken:

Looking northwest

Description:

View from the southeast corner of the site at the east dispenser island and the Food Shop.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Trini's Beacon 603 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
5

Direction Photo Taken:

Looking northeast

Description:

View from the southwest corner along Ventura Street.

Photo No.
6

Direction Photo Taken:

Looking north

Description:

Looking along the west side of the site and the adjacent alley.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Trini's Beacon 603 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
7

Direction Photo Taken:

Looking west

Description:

Dumpster, recycle bins, and burned out compressor in the northwest corner of the site.

Photo No.
8

Direction Photo Taken:

Looking northeast

Description:

View of the water and air service area on the north side of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Trini's Beacon 603 G Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-4-10

Photo No.
9

Direction Photo Taken:

Looking southeast

Description:

View of the site from the northwest corner.

Photo No.
10

Direction Photo Taken:

Looking west

Description:

Looking at the north side of the Food Shop. Note the patched asphalt and the electric box. UST system appears to have been replaced at some point.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

FORMER ANDERSON CLAYTON SITE

S104403982

Name of Site: CALIFORNIA DIESEL REPAIR

EDR ID Number: S106953262 + 1010417092

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: FRANK CORGLIMORE

URS Office: FRESNO, CA

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

CALIFORNIA DIESEL REPAIR (FORMER ANDERSON CLAYTON SITE)
2396 S. RAILROAD AVE
FRESNO, CA 93721
County: FRESNO, CA

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~ 0.9 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
GARAGE	1		~ 4000	?

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S E (W)

4. Are the following located on or **adjacent to the subject site**?

Surface water: No
Wetlands: No
Floodplains: No
Parklands: No
Sensitive habitats: No

5. Please list **current visible onsite activities**:

DIESEL TRUCK REPAIR

Is equipment washed onsite? YES
Is maintenance conducted onsite? If so, what types? YES; DIESEL ENGINES AND SEMI-TRUCK/TRAILER REPAIR
Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North FIRELANDS CABINET SHOP - COMMERCIAL/RETAIL DEVELOPMENT

South CHURCH AVENUE; THERMOKING TRAILER REFRIGERATION REPAIRS, SALES, + SERVICE

East RAILROAD AVENUE; UNION PACIFIC RAILROAD TRACKS; RESIDENTIAL + VACANT LOTS

West CAFE 309; G STREET; GOLDEN STATE BOULEVARD

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or (remedial activities) abnormal odors, the presence of unnatural fill material or soil grading):

EVIDENCE OF SOIL BORINGS

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG+E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? YES, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
(U) / A	?	GASOLINE	?	STEEL	Y / (N)	(Y) / N	REMOVED
U / (A)	?	USED OIL	?	STEEL	(Y) / N	(Y) N	ACTIVE
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? GOOD

11. Have there been any releases? NO OBSERVED OR REPORT (USED OIL); FORMER ANDERSON CLAYTON SITE - GASOLINE RELEASE(S)

To whom were the releases reported? RWQCB

What is status of release investigation? UNDER ASSESSMENT - POLLUTION CHARACTERIZATION

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? NO

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
MOTOR OIL	-	SOLVENTS (WD-40)		
USED MOTOR OIL	-	(BRAKE-CLEAN)		
GEAR OIL	-			
ANTI-FREEZE	-			

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: PAPER / CARDBOARD BOXES

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: BSO CITY

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? STORAGE TANK - REMOVED FROM SITE BY A LICENSED CONTRACTOR - (AMBURY ENVIRONMENTAL)

USED FILTERS ; DRUMS REMOVED BY AUSBURY

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? _____ if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
NONE	(POLE-MOUNTED TRANSFORMERS OFF-SITE BY THE NORTHWEST CORNER)				

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? No, Describe _____

If wells are used for drinking water at the site, obtain water quality data _____

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? (Yes) **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) _____

SERVICED BY CITY OF FRESNO ; STEAM CLEANING = GROUND?

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? NONE

if so, describe: _____

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	(Yes)	No	Yes	No
Land application discharges	Yes	(No)	Yes	No
Deep well injection	Yes	(No)	Yes	No
Discharge to municipal system	(Yes)	No	Yes	No
Impoundments	Yes	(No)	Yes	No
Septic systems	Yes	(No)	Yes	No

describe as appropriate _____

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:
NO

19. **STORMWATER**

Describe how stormwater is managed: SHEET RUNOFF TO THE WEST

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? (Yes) **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

DIESEL TRUCKS + REFRIGERATION UNITS REPAIRED ON SITE; MOTORS RUN FOR TESTING - NO PERMITS

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

GASOLINE + GASOLINE COMPONENTS

Are there groundwater monitoring wells at this facility? NO

Where are these wells located?

Are regulatory agencies involved with monitoring? YES - RWQCB

Status of investigation/remediation program? UNDER INVESTIGATION - SITE ASSESSMENT

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes** **No**	**Yes** **No**
_____	_____	_____	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? YES

Describe the types and sources of used oil generated: DIESEL TRUCK SERVICE STORED IN ONSITE TANK FOR REMOVAL BY LICENSE CONTRACTOR

Are all containers of used oil labeled accordingly? YES

Describe how and where used oil is stored and handled:

INSIDE GARAGE BUILDING

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

CALIFORNIA DIESEL REPAIR IS A FULL-SERVICE TRUCK AND TRAILER SERVICE AND REPAIR FACILITY.

2396 S. Railroad Ave

FA02	CALIFORNIA DIESEL REPAI	2396	S	RAILROAD	FRESNO	93721	PINTO, O: HAZARDOUS WASTE GENERATOR (LQG)
FA02	CALIFORNIA DIESEL REPAI	2396	S	RAILROAD	FRESNO	93721	PINTO, O: AUTO REPAIR/MAINTENANCE MODEL PLAN
FA02	ANDERSON CLAYTON	2396	S	RAILROAD	FRESNO	93721	WIERMAN UST REMOVAL/CLOSURE W/5 TANKS
FA02	ANDERSON CLAYTON	2396	S	RAILROAD	FRESNO	93721	WIERMAN CONTAMINATED UST SITE/RWQCB LEAD AGENCY

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** California Diesel Repair (aka former Anderson Clayton) 2396 S. Railroad Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking south

Description:

View from the northeast corner of the site, along Railroad Avenue.

Photo No.
2

Direction Photo Taken:

Looking west

Description:

View of the east side of the shop.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** California Diesel Repair (aka former Anderson Clayton) 2396 S. Railroad Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking northeast

Description:

Diesel motors and used trucks stored on the southeast side of the shop.

Photo No.
4

Direction Photo Taken:

Looking east

Description:

View of the west side of the shop that faces Church Avenue.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** California Diesel Repair (aka former Anderson Clayton) 2396 S. Railroad Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking southeast

Description:

View from the southwest side of the site along Church Avenue.

Photo No.
6

Direction Photo Taken:

Looking east

Description:

Looking at the northern extent of the site mostly used for parking.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** California Diesel Repair (aka former Anderson Clayton) 2396 S. Railroad Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
7

Direction Photo Taken:

Looking southwest

Description:

View of the entire site across the Union Pacific tracks and Railroad Avenue.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: CHRIS SORENSEN FACILITY

EDR ID Number: 1010082228 S107736126

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: FRANK GEGUNDE

URS Office:

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

CHRIS SORENSEN FACILITY
2205 S. VAN NESS
FRESNO, CA 93721
County: FRESNO, CA

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~3.8 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
LG WAREHOUSE	1	~300 x 300	~92,400	?
SM SHOP (SOUTH)	1	~115 x 117	~13,200	?
SM SHOP (NORTH)	1	~60 x 122	~7,300	?

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N (S) E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

CHRIS SORENSEN (ART WELDING) STEEL SCULPTURE; KLESZEWSKI GLASS WORKS ART; ELECTRIC MOTOR SHOP + SUPPLY; MIKE'S BOA; MASCHETO;

Is equipment washed onsite? YES
Is maintenance conducted onsite? If so, what types? YES – ELECTRIC MOTOR SHOP
Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North E. LORENA AVE COMMERCIAL DEVELOPMENT (UNION PACIFIC)

South S.P. RAILROAD TRACKS; RAILROAD AVENUE COMMERCIAL DEVELOPMENT

East COMMERCIAL + LIGHT INDUSTRIAL DEVELOPMENT (VAN IRRIGATION - TUBING AND PARTS)

West S.P. RAILROAD TRACKS; S VAN NESS AVENUE (UNION PACIFIC)

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

NONE (GRAFFITI IS PEMENTED ON THE OUTSIDE OF THE STRUCTURE - PAINT CANS STREWN ABOUT THE OUTSIDE FENCE)

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG+E

Gas Service by: THE GAS COMPANY; PROPANE (VENDER UNKNOWN)

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any (ASTs)/USTs, active or inactive, present at the site currently? YES, formerly? UNKNOWN

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U (A)	500±	PROPANE	?	STEEL	Y (N)	(Y) N	ACTIVE
U (A)	OTHER UNUSED ASTS STORED				Y ~~N~~	Y ~~N~~	
U / A	ONSITE - OLDER - APPEAR TO BE SCRAP METAL				Y ~~N~~	Y ~~N~~	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? PROPANE - GOOD

11. Have there been any releases? NONE REPORTED OR OBSERVED

To whom were the releases reported? N/A

What is status of release investigation? N/A

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? N/A

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
ACETYLENE	12 BOTTLES (MORE LIKELY SOMEWHERE)	2205 BUILDING	GOOD	INHALATION

SEVERAL CANS OF CLEANING SOLVENTS (SPRAY CANS); 1-5 GAL CAN OF PAINT; 5-GAL CAN GASOLINE; 5-GALLON PROPANE TANKS FOR FORKLIFT FUEL (ELECTRIC MOTOR SHOP)

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: E-WASTE (ELECTRIC MOTOR SHOP)

Accumulated in: compactor? Dumpster? located: N S E W of the building. (2205)

Hauled off by: PRIVATE CONTRACTOR

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? N/A

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
3 - LARGE VINTAGE POLE-MOUNT TRANSFORMERS LOCATED ON THE NORTH END OF THE BUILDING (2205-					
1 - POLE-MOUNT TRANSFORMER - SOUTH END OF SITE					
5 - POLE-MOUNT TRANSFORMERS - EAST SIDE OF SITE (3 + 2)					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? NO, Describe —

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

RESTROOMS ONSITE

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? NO

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:
NONE

19. **STORMWATER**

Describe how stormwater is managed: INFILTRATION ; SHEET RUNOFF TO THE SOUTH

Does the stormwater flow to a combined sewer? No

Does water run-off from neighboring facilities and have potential to impact this facility? No

20. **WETLANDS**

Any known/delineated wetlands at the site? No, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **(No)** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? No

If yes, list the contaminants:

Are there groundwater monitoring wells at this facility? No

Where are these wells located?

Are regulatory agencies involved with monitoring? No

Status of investigation/remediation program?

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **(No)** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes No**	**Yes No**
_____	_____	_____	**Yes No**	**Yes No**

24. **USED OIL**

Does this facility generate used oil? NO

Describe the types and sources of used oil generated: N/A

Are all containers of used oil labeled accordingly? N/A

Describe how and where used oil is stored and handled: N/A

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **(No)** **Unknown**

Are lead acid batteries stored or used onsite? **(Yes)** **No** **Unknown**

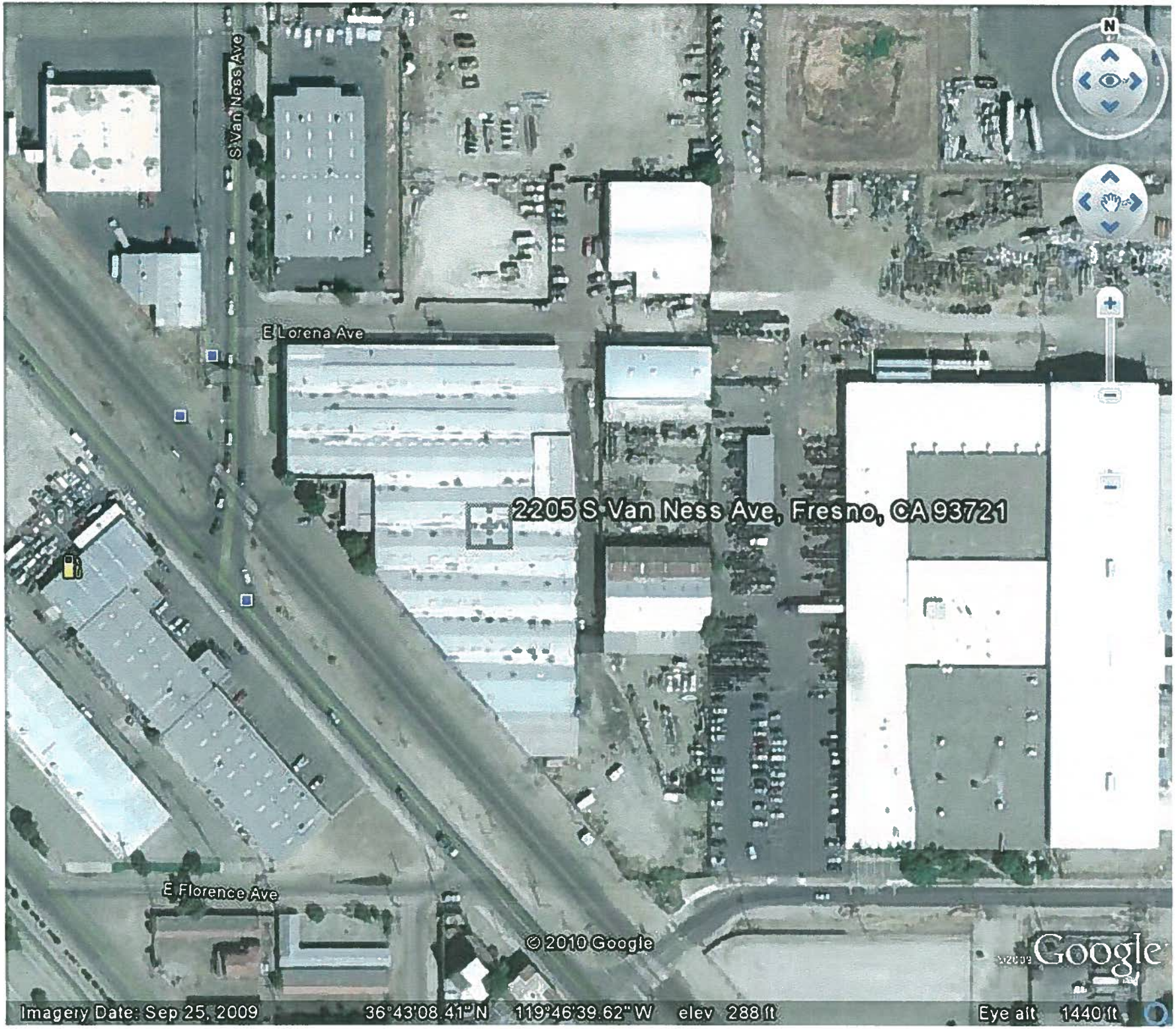
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **(No)** **Unknown**

Is it maintained by onsite personnel? **Yes** **(No)** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **(Yes)** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **(No)** **Unknown**

SITE GENERALLY CONSISTS OF WORK SHOPS & ART STUDIOS FOR STEEL SCULPTURE; ART GLASS AND OTHER ART DISCIPLINES. THE REAR (EAST SIDE) OF THE SITE & THE NORTH END OF THE LARGE WAREHOUSE IS USED BY THE ELECTRIC MOTOR SHOP FOR ELECTRIC MOTOR REPAIR AND REWINDING, & ELECTRICAL WIRING SUPPLY SALES. NO LARGE AMOUNTS OF HAZARDOUS MATERIAL WERE OBSERVED DURING THE SITE VISIT EXCEPT FOR COMPRESSED WELDING GAS; MINOR AMOUNTS OF SOLVENTS & PAINT WERE OBSERVED IN THE ELECTRIC MOTOR SHOP SHIP AREA; NO SPILLS OR LEAKS NOTED, HOWEVER OIL STAINING WAS OBSERVED ON CONCRETE NEAR MACHINING EQUIPMENT.



2205 S. VAN NESS

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking east

Description:

View of the entrance to the Chris Sorenson Facility from Van Ness Avenue.

Photo No.
2

Direction Photo Taken:

Looking south

Description:

View of the west side of the Facility along Van Ness Avenue.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking east

Description:

Looking at the north side of the Facility along Lorena Avenue. Note the vintage pole-mounted transformers in the left-center of the frame.

Photo No.
4

Direction Photo Taken:

Looking south

Description:

View of the central driveway between the art studios on the right (west) and the Electric Motor Shop on the left (east).

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking west

Description:

View from the south end of the site along Florence Avenue.

Photo No.
6

Direction Photo Taken:

Looking north

Description:

Looking at the west side of the Facility along the Union Pacific tracks.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
7

Direction Photo Taken:

Looking southeast

Description:

View of the storage yard at the south end of the property. Note the propane tank.

Photo No.
8

Direction Photo Taken:

Looking north

Description:

Another view of the storage yard at the south end of the property. Note unused ASTs.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
9

Direction Photo Taken:

Interior view

Description:

Chris Sorenson art welding studio.

Photo No.
10

Direction Photo Taken:

Interior view

Description:

One of several art studio showrooms.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
11

Direction Photo Taken:

Interior view

Description:

Another art studio showroom.

Photo No.
12

Direction Photo Taken:

Interior view

Description:

Glass art workshop.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
13

Direction Photo Taken:

Interior view

Description:

Glass art showroom.

Photo No.
14

Direction Photo Taken:

Interior view

Description:

Glass art workshop and furnaces.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Chris Sorenson Facility 2205 S. Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
15

Direction Photo Taken:

Interior view

Description:

View of Electric Motor Shop's warehouse.

Photo No.
16

Direction Photo Taken:

Interior view

Description:

Compressed gas cylinders used for forklift fuel in the Electric Motor Shop.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: FORMER CALTRANS SERVICE YARD

EDR ID Number: 1010082232

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: FRANK GREGURICH

URS Office: FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

FORMER CALTRANS SERVICE YARD (NOW ACE FENCE CO.)
2212 - 2365 S. TULP ST
FRESNO, CA 93721
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~1.5 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
FRONT OFFICE	1	50 x 38	~1950	?
BACK OFFICE	1	32 x 32	~1024	?
COVERED SHED	1	120 x 42	~5040	?
CONTAINED SHED	1	115 x 32	~3680	?

- 2 24' CARGO CONTAINERS
- 1 10 x 20 SHED/RECEIVING DOCK (200 sq ft) (BACK OF LOT)
- 1 9 x 12 SHED (108 sq ft) N/W CORNER

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the (N) S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

ACE FENCE COMPANY: FENCE MATERIAL STORAGE; EQUIPMENT TOOLS STORAGE

Is equipment washed onsite? UNKNOWN
Is maintenance conducted onsite? If so, what types? YES; PICKUPS & SERVICE TRUCKS ARE SERVICED AND STORED
Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) residential commercial light industrial heavy industrial rural
other

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North E FLORENCE AVE; COMMERCIAL mfg & WAREHOUSE

South ~~(UNION PACIFIC)~~ S.P. RAILROAD; RAILROAD AVE; COMMERCIAL DEVELOPMENT

East RESIDENTIAL AND COMMERCIAL (UNION PACIFIC)

West VACANT LOTS; S. PACIFIC RAILROAD TRACKS; COMMERCIAL DEVELOPMENT

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

YES; 1-GALLON CONTAINERS WITH USED OIL DUMPED ON EAST SIDE OF SHEDS IN ALLEY; OIL STAINS AND DEAD GRASS (SEE PHOTO); 1-2½ GALLON USED OIL CONTAINERS ON WEST SIDE OF PROPERTY; OIL STAINS AND DEAD GRASS (SEE PHOTO); MONITORING WELL ON NORTH SIDE OF FLORENCE AVE.

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch! NONE OBSERVED IN USE; NONE REPORTED IN USE

Are there any AST/USTs, active or inactive, present at the site currently? YES, formerly? UNKNOWN

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
2 U/A	?	EMPTY	?	STEEL	Y/N	Y/N	STORED ON SITE
U/A					Y/N	Y/N	(SOUTH END OF
U/A					Y/N	Y/N	SITE)

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? FAIR

11. Have there been any releases? UNKNOWN

To whom were the releases reported? N/A

What is status of release investigation? N/A

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? No

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
USED OIL ? (FROM FLEET OF SERVICE TRUCKS)				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: CONSTRUCTION DEBRIS

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: PRIVATE CONTRACTOR; ALSO IWS BINS FOR ROUTINE REFUSE

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown** USED OIL

Where are the wastes disposed? STORED ONSITE (DUMPED ONSITE?)

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? No if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
POLE-MOUNTED TRANS	FORMER	LOCATED	AT THE	N/E	CORNER OF
THE SITE (GOOD CONDITION)					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? No, Describe NONE OBSERVED

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

RESTROOMS IN THE OFFICE

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? No

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

NO

19. **STORMWATER**

Describe how stormwater is managed: FILTRATION OR SHEET RUNOFF NORTH

Does the stormwater flow to a combined sewer? NO - TO STORM DRAINS

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

REGIONAL PCE CONTAMINATION

Are there groundwater monitoring wells at this facility? NO

Where are these wells located?

1 GROUNDWATER MONITORING WELL LOCATED ACROSS FLORENCE AVENUE TO THE NORTH; SITE HAS NO GW MONITORING WELLS

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program? SITE HAS NOT BEEN SAMPLED

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
?	USED OIL	ALLEY EAST OF SITE	Yes No	Yes No
?	USED OIL	OUTSIDE FENCE ON THE WEST OF SITE	Yes No	Yes No

24. **USED OIL**

Does this facility generate used oil? YES

Describe the types and sources of used oil generated: FLEET VEHICLES

Are all containers of used oil labeled accordingly? NO

Describe how and where used oil is stored and handled: 1 – 2½ GALLON PLASTIC CONTAINERS DISPOSAL PRACTICES ARE UNKNOWN

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

PCE HAS BEEN DETECTED IN GROUND WATER SURROUNDING THE SITE; SAMPLING OF GROUNDWATER UP GRADIENT OF THE SITE INDICATES NO CONTAMINATION; THE SITE HAS NOT BEEN SAMPLED

2312 + 2365 S. Tulip St

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking west

Description:

Ace Fence Company currently occupies the former Caltrans Service Yard Site.

Photo No.
2

Direction Photo Taken:

Looking east

Description:

View of the north side of the site along Florence Avenue (under reconstruction).

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking west

Description:

Material stored in the north end of the site.

Photo No.
4

Direction Photo Taken:

Looking south

Description:

Looking down the alley on the east side of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking west

Description:

Trailers stored in the north end of the site.

Photo No.
6

Direction Photo Taken:

Looking west

Description:

Material stored in the north end of the site and the east side of the office building.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
7

Direction Photo Taken:

Looking southwest

Description:

Used motor oil dumped in the alley on the east site of the site.

Photo No.
8

Direction Photo Taken:

Looking southwest

Description:

Former Caltrans receiving shed. Note tar-covered loading dock.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
9

Direction Photo Taken:

Looking west

Description:

Unused ASTs stored at the south end of the site.

Photo No.
10

Direction Photo Taken:

Looking north

Description:

View of the south end of the site. Note the Union Pacific tracks in the left of the frame and the alley along the east side of the site on the right.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
11

Direction Photo Taken:

Looking northwest

Description:

Material stored in the south end of the site.

Photo No.
12

Direction Photo Taken:

Looking north

Description:

Former Caltrans business office located in the west-central part of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
13

Direction Photo Taken:

Looking north

Description:

View along the west side of the site. Roll-off dumpster and debris piles belong to Ace Fence Company.

Photo No.
14

Direction Photo Taken:

Looking north

Description:

Used motor oil stored on a pallet outside of the west side of the site fence.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former Caltrans Service Yard 2312 and 2365 S Tulip, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
15

Direction Photo Taken:

Looking east

Description:

View of the site parking garage in the east central part of the site.

Photo No.
16

Direction Photo Taken:

Looking southeast

Description:

Monitoring well located on the north side of Florence Avenue across from the site.

2368 + 2376 S GRACE ST
POVERELLO HOUSE PROPERTY – E BELGRAVIA

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: POVERELLO HOUSE PROPERTY

EDR ID Number: 1010082229

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEGUNDE

URS Office: FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

POVERELLO HOUSE PROPERTY (VACANT)
EAST BELGRAVIA ; EAST OF TULIP STREET
FRESNO, CA 93721

County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~2.5 AC

Site Buildings: NONE

Name	Number of stories	Dimensions	Square Footage	Year Built
N/A				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the (N) S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO

Wetlands: NO

Floodplains: NO

Parklands: NO

Sensitive habitats: NO

5. Please list **current visible onsite activities**:

NONE - VACANT

Is equipment washed onsite? NO

Is maintenance conducted onsite? If so, what types? NO

Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) residential commercial light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North E. BELGRAVIA AVE; RESIDENTIAL; N/W - COMMERCIAL

South UNION PACIFIC RAILROAD TRACKS; RAILROAD AVENUE; COMMERCIAL

East VACANT LOTS + RESIDENTIAL; S GRACE STREET COMMERCIAL

West UNION PACIFIC RAILROAD TRACKS; RAILROAD AVENUE; COMMERCIAL

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

1 GROUNDWATER MONITORING WELL LOCATED ACROSS BELGRAVIA AVE, NORTH OF THE SITE

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch! NONE

Are there any ASTs/USTs, active or inactive, present at the site currently? No, formerly? No

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A	N/A				Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? N/A

11. Have there been any releases? N/A

To whom were the releases reported? N/A

What is status of release investigation? N/A

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by:_____

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
POLE-MOUNT TRANSFORMER (LOCATED NEAR THE NORTHEAST CORNER OF THE SITE)	PG&E	GOOD	UNKNOWN		SOIL

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? No, Describe

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or N/A

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) N/A

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? N/A

if so, describe:

Where is wastewater discharged: N/A

			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

1 GROUNDWATER MONITORING WELL LOCATED ACROSS BELGRAVIA TO THE NORTH OF SITE

19. **STORMWATER**

Describe how stormwater is managed: INFILTRATION OR SHEET RUNOFF NORTH

Does the stormwater flow to a combined sewer? No

Does water run-off from neighboring facilities and have potential to impact this facility? No

20. **WETLANDS**

Any known/delineated wetlands at the site? No, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **(No)** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

PCE & TCE

Are there groundwater monitoring wells at this facility? YES

Where are these wells located?

1 GROUNDWATER MONITORING WELL LOCATED ACROSS BELGRAVIA AVE TO THE NORTH OF THE SITE

Are regulatory agencies involved with monitoring? USEPA - DTSC

Status of investigation/remediation program? SITE IS A KNOWN OR SUSPECTED ABANDONED, INACTIVE, OR UNCONTROLLED HAZ WASTE SITE. IMPACTS TO GROUNDWATER SUPPLIES INCLUDE PCE + TCE. USEPA COMPLETED A PRELIMINARY ASSESSMENT 9/9/09

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes** **No**	**Yes** **No**
_____	_____	_____	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? No

Describe the types and sources of used oil generated: _____

_____

Are all containers of used oil labeled accordingly?_____

Describe how and where used oil is stored and handled:

_____

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

_____

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

NOV 04 2009

Poverello House
P.O. Box 12225
Fresno, CA 93777

RE: Poverello House Property
EPA ID# CAN000908368

Dear Poverello House:

Enclosed is a Preliminary Assessment Report on the Poverello House Property Site. This report contains the results of an evaluation conducted by Weston Solutions, Inc for the U.S. Environmental Protection Agency (EPA) under Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended [42 U.S.C. 9404], commonly known as Superfund. The purpose of the Preliminary Assessment is to determine whether this site may qualify for placement on the National Priorities List (NPL).

Based on currently available information contained in the enclosed report, EPA has determined that no further assessment is warranted. Although EPA has determined that this site does not qualify for Superfund listing, the State of California may require further assessment or cleanup of this site under State law. You may wish to contact the Department of Toxic Substances Control (DTSC), Tim Miles at 916/255-3710, for information pertaining to State assessment and cleanup requirements.

Please forward any written comments on the enclosed report to:

Karen Jurist
Site Assessment Manager
U.S. Environmental Protection Agency
75 Hawthorne Street, SFD-6-1
San Francisco, CA 94105

If you have any questions, please call Karen Jurist at 415/972-3219.

Sincerely,

Deborah Schechter, Chief
States, Tribes, and Site Assessment Section
Superfund Division

Enclosure

cc: Tim Miles, Department of Toxic Substances Control

TRANSMITTAL LIST

Date: August 31, 2009
Site Name: Poverello House Property
EPA ID No.: CAN000908368

A copy of the Preliminary Assessment Report for the Poverello House Property site should be sent to the following people:

Tim Miles
California Environmental Protection Agency
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826

Poverello House
P.O. Box 12225
Fresno, CA 93777

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IX

EPA ID: CAN000908368 **Site Name:** POVERELLO HOUSE PROPERTY **State ID:**

Alias Site Names:

City: FRESNO

Refer to Report Dated: 8/31/2009 **County or Parrish:** FRESNO **State:** CA

Report Developed By: **Report Type:** PRELIMINARY ASSESSMENT 001

[X] **1. Further Remedial Site Assessment Under CERCLA (Superfund) is not required because:**

NFRAP: No further Remedial Action planned

[ ] **2. Further Assessment Needed Under CERCLA:**

Discussion/Rationale:

The U.S. Environmental Protection Agency (EPA) has determined that no further remedial action by the Federal Superfund program is warranted at the referenced site, at this time. The basis for the no further remedial action planned (NFRAP) determination is provided in the attached document.

The 1.1 acre site is located in an industrial and residential area in Fresno, CA. The site is currently vacant, unpaved and overgrown with grass and weeds. It is unclear if the property has ever been developed and there is no visible evidence of any structures ever existing at the site.

The site is located above a TCE and PCE groundwater contaminant plume identified as the Operable Unit #1 (OU1) area of the South Fresno PCE Plume by the California Department of Toxic Substances Control (DTSC). DTSC is currently overseeing assessment and remediation work at several sites in the South Fresno PCE Plume area, and has issued several Imminent and Substantial Endangerment Determination and Consent Orders to various respondents to contend with the South Fresno PCE Plume. In 2008, a work plan to collect passive soil gas samples, active soil gas samples and groundwater samples to investigate the OU1 PCE plume was prepared; however, to date the work plan has not been implemented.

Although PCE was detected at concentrations significantly greater than background concentrations down gradient of the site, there is no documentation that shows TCE, PCE or any other chemicals being used at the site.

A NFRAP designation means that no additional remedial steps under the Federal Superfund program will be taken at the site unless new information warranting further Superfund consideration or conditions not previously known to EPA regarding the site are disclosed. In accordance with EPA's decision regarding the tracking of NFRAP sites, the referenced site may be removed from the CERCLIS database and placed in a separate archival database as a historical record if no further Superfund interest is warranted. Archived sites may be returned to the CERCLIS site inventory if new information necessitating further Superfund consideration is discovered.

Site Decision Made by: K. JURIST

Signature: [signature] **Date:** 09/09/2009

EPA Form # 9100-3

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List of Appendices

Appendix A: Transmittal List
Appendix B: Site Reconnaissance Interview and Observation Report/Photo Documentation
Appendix C: Contact Log and Contact Reports
Appendix D: Latitude and Longitude Calculations Worksheet
Appendix E: References
Appendix F: EPA Quick Reference Fact Sheet
Appendix G: Sampling and Analysis Plan
Appendix H: Analytical Results
Appendix I: EPA Region 9 Remedial Site Assessment Decision Form

List of Figures

Figure 1: Site Location Map
Figure 2: Site Layout Map

List of Acronyms

AMEC	AMEC Geomatrix, Inc.
bgs	below ground surface
CDPH	California Department of Public Health
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CPT	Cone Penetration Test
DEH	Fresno County Division of Environmental Health
DTSC	State of California Department of Toxic Substances Control
EPA	United States Environmental Protection Agency
Floway	Weir Floway, Inc.
FMC	FMC Corporation
Fresno	City of Fresno
HRS	Hazard Ranking System
ISE	Imminent and Substantial Endangerment Determination
MCL	Maximum Contaminant Level
OU	Operable Unit
µg/L	micrograms per liter
NPL	National Priorities List
PA	Preliminary Assessment
PCE	tetrachloroethene
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
SARA	Superfund Amendments and Reauthorization Act
TCE	trichlorothene
URS	URS Corporation
Vendo	The Vendo Company
VOC	Volatile Organic Compound
WESTON	Weston Solutions, Inc.

Preliminary Assessment Report
Poverello House Property
Fresno, Fresno County, California

EPA ID No.: CAN000908368

USACE Contract Number: W91238-06-F-0083
Document Control Number: 12767.063.509.1482

August 2009

Prepared for:
United States Environmental Protection Agency
Region 9

Prepared by:
Alex Grubb
Weston Solutions, Inc.
1340 Treat Blvd., Suite 210
Walnut Creek, CA 94597

No pages 1 + 2

1.0 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), Weston Solutions, Inc. (WESTON) has been tasked to conduct a Preliminary Assessment (PA) of the Poverello House Property site (Site) in the city of Fresno, Fresno County, California.

The purpose of the PA is to review existing information on the site and its environs to assess the threat(s), if any, posed to public health, welfare, or the environment and to determine if further investigation under CERCLA/SARA is warranted. The scope of the PA includes the review of information available from federal, state, and local agencies and performance of an onsite reconnaissance.

Using these sources of existing information, the site is evaluated using the United States Environmental Protection Agency's (EPA's) Hazard Ranking System (HRS) criteria to assess the relative threat associated with actual or potential releases of hazardous substances at the site. The HRS has been adopted by the EPA to help set priorities for further evaluation and eventual remedial action at hazardous waste sites. The HRS is the primary method of determining a site's eligibility for placement on the National Priorities List (NPL). The NPL identifies sites at which the EPA may conduct remedial response actions. This report summarizes the findings of these preliminary investigative activities.

The Site was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) on March 14, 2007 (CAN000908368) (DTSC 2007).

More information about the Superfund program is available on the EPA web site at http://www.epa.gov/superfund. The attached fact sheet describes EPA's site assessment process (Appendix F).

1.1 Apparent Problem

The apparent problems at the Site, which contributed to the EPA's determination that a PA was necessary, are as follows:

- The City of Fresno operates drinking water wells that have PCE and TCE contamination. PCE was detected below the Maximum Contaminant Level (MCL) of 5 micrograms per liter (µg/L) in samples collected from Well 003A, located within 1 mile down gradient of the Site (CDPH, 2008; EPA, 2009b).

- The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issued an Imminent and Substantial Endangerment (ISE) Determination in 2002 stating that a contaminant plume consisting of TCE, PCE, and other contaminants underlies parts of southern Fresno, including beneath the Site (DTSC, 2002).

- Groundwater samples collected from monitoring well MW-43R, located down gradient from

the Site, contain PCE and TCE at concentrations significantly above background concentrations from monitoring wells MW-47 and MW-48 located up gradient of the site. No on-site subsurface investigations have been conducted to determine the source of PCE contamination (AMEC, 2008).

2.0 BACKGROUND

2.1 Location

The Site is located on East Belgravia Avenue, at the intersection with the Southern Pacific Railroad line, in Fresno, California. The geographic coordinates for the Site are 36° 42' 57" North latitude and 119° 46' 30" West longitude (Appendix D). The location of the Site is shown in Figure 1.

2.2 Site Description

The Site is on parcel APN 480-181-11 totaling 1.1 acres in an industrial and residential area. The Site is currently vacant with no buildings or structures on the property. The site is unpaved and overgrown with grass and weeds. The site is bordered to the north by East Belgravia Avenue Avenue; to the east by residences; and to the west and south by the Southern Pacific Railroad (Fresno, 2009; Appendix B).

2.3 Operational History

The Site has been owned by the Poverello House non-profit organization since 1998. The property was given to the owner as a donation from the previous owner, the St. Agnes Hospital. Previous owners of the property include Saint Agnes Hospital from 1984-1998, Caglia from 1980-1984, Singer from 1967-1980, Ibberson from 1958-1967, Claragas in 1958, Kent Equipment Company from 1956-1958, Simmons in 1956, Equipment Supply Company in1956, Fisk from 1952-1956, Racemassen in 1952, Fisk from 1948-1952, and Hal Engineering Company in 1948. It was unclear whether the site property has ever been developed. Currently there is no visible evidence of any structures ever existing at the site (DTSC, 2007).

2.4 Regulatory Involvement

2.4.1 United States Environmental Protection Agency

The Site is not listed in the Resource Conservation and Recovery Act Information (RCRAInfo) database, as of July 14, 2009 (EPA, 2009c).

In 2007, the DTSC conducted a Site Screening Assessment for the Site under a Cooperative Agreement with the EPA (DTSC, 2007).

2.4.2 Department of Toxic Substances Control

The DTSC has received orphan site funds to partially fund the South Fresno PCE Groundwater Plume, and is currently the active regulatory agency. In 2007, under an EPA Cooperative

Agreement, the DTSC conducted a Site Screening Assessment at the Site for the EPA (DTSC 2007, DTSC 2009).

In October 1999, the DTSC issued an Imminent and Substantial Endangerment Determination and Consent Order (ISE) for the Railroad Avenue Site and in November 2002, the DTSC issued another ISE for the South Fresno Regional Groundwater Plume to FMC Corporation (FMC), Weir Floway, Inc. (Floway), and The Vendo Company (Vendo). The order applies to the areal extent of the groundwater plume down gradient of the three sites which was divided into two Operable Units (OUs). Vendo and Floway are the primary respondents for OU#1 and FMC is the primary respondent for OU#2. In December 2003, the DTSC issued an ISE and Remedial Action Order for the South Fresno Regional Groundwater Plume to California Fresno Oil Company, which was designated as an additional respondent to OU#1 (DTSC, 2002; DTSC, 2003).

AMEC Geomartix (AMEC) conducts groundwater monitoring and remediation for the Railroad Avenue Site and OU#1 groundwater plume of over 40 groundwater monitoring or extraction wells. Three groundwater monitoring wells located within approximately 200 feet of the Site were sampled in March 2008. Well MW-43, located in the general down gradient direction of the site, contained PCE and TCE concentrations of 8 µg/L and 10 µg/L, respectively. Monitoring well MW-48, located up gradient of the site, contained PCE and TCE concentrations of <0.05 µg/L and 2.1 µg/L, respectively. Monitoring well MW-47, located up gradient of the site, contained PCE and TCE concentrations of <0.05 µg/L and <0.05 µg/L, respectively (AMEC, 2008).

The DTSC has been unable to identify potential source areas for the PCE for the South Fresno PCE Plume site and is using orphan site monies to fund the investigations. In 2008, URS Corporation (URS), contracted by DTSC, prepared an Investigative Work Plan for the South Fresno PCE Groundwater Plume. The work plan proposed collecting up to 140 passive soil gas samples. Up to 36 active soil gas samples would be collected from selected locations determined from the passive soil gas sampling data followed by the collection of up to 12 groundwater samples from Cone Penetration Test (CPT) borings at locations determined from after reviewing the soil gas data. The work plan had not been implemented at the time of this report (DTSC, 2009; URS, 2008).

2.4.3 County of Fresno Division of Environmental Health

The County of Fresno Division of Environmental Health (DEH) had no records of the Poverello House Property (Appendix C, C-4).

3.0 HAZARD RANKING SYSTEM FACTORS

3.1 Source of Contamination

For HRS purposes, a source is defined as an area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance.

No potential hazardous substance sources associated with the Site could be identified.

3.2 Groundwater Pathway

In determining a score for the groundwater migration pathway, the HRS evaluates: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to groundwater; (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, mobility, and quantity); and (3) the people (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on the number of people who regularly obtain their drinking water from wells that are located within 4 miles of the site. The HRS emphasizes drinking water usage over other uses of groundwater (e.g., food crop irrigation and livestock watering), because, as a screening tool, it is designed to give the greatest weight to the most direct and extensively studied exposure routes.

3.2.1 Hydrogeological Setting

The site is located on the southwestern border of the City of Fresno in the east central portion of the San Joaquin Valley. The San Joaquin Valley is a geomorphic province consisting predominantly of alluvial fans and plains, lacustrine and marsh deposits, flood basin deposits, and sand dunes. The Site lies within the San Joaquin Valley Groundwater Basin - Kings Subbasin (USGS, 1986; DWR, 2006).

The City of Fresno region of the San Joaquin Valley is underlain by a basement complex of metamorphic and igneous rocks. The complex lies between 2,000 and 2,500 feet below ground surface (bgs). In addition to the basement complex, consolidated marine and continental sedimentary rocks of Cretaceous and Tertiary age, consisting of sandstone, siltstone, and shale, overlie the basement complex. These formations occur in the Fresno area at depths below 1,000 feet bgs (USGS, 1986).

Unconsolidated deposits overlie the consolidated rocks in the San Joaquin Valley. In the City of Fresno area, these deposits are usually subdivided into an older, fine grained Tertiary to Quaternary series of deposits and a younger, near-surface Quaternary series. The younger Quaternary series consists of the following units: "older alluvial" sediments, deposited by streams, lacustrine and marsh deposits, flood-plain deposits, dunes of windblown deposits, and younger alluvium in active river channels. It is the "older alluvial" which consists of layers and lenses of variable-sized sediments that form the principal water supply aquifer for the City of Fresno area (USGS, 1986; DWR, 2006).

Generally, hydrogeologic conditions in the City of Fresno are that of an unconfined aquifer with

local variance caused by interbedded silt and clay horizons within the aquifer. A recent study has identified a laterally extensive clay layer at a depth of approximately 250 feet bgs (USGS 1986, Fresno 2008).

Regional groundwater flow direction is to the southwest. The approximate depth to water in the vicinity of the site is 85 feet bgs. Water supply wells in the City of Fresno have developed a large cone of depression in the upper and lower aquifers. The upper aquifer groundwater gradient beneath the site is towards the north. Groundwater extraction wells at the OU#1 and OU#2 groundwater plume have local influence to the groundwater flow (Fresno, 2009; AMEC, 2008)

The average annual precipitation values in the Kings Subbasin range from seven to 10 inches, increasing eastward (DWR, 2006).

3.2.2 Groundwater Targets

The City of Fresno (Fresno) operates a total of 250 groundwater wells that serve approximately 502,657 people, with 56 wells within a 4-mile radius of the Site. PCE has been detected in 14 wells within a 4-mile radius of the site, five of which exceed the MCL. (EPA, 2009c; Fresno, 2009; CDPH, 2008). The nearest active drinking water wells (Fresno Well 003A, Fresno Well 036, and Floway Middle Well) are located within 1 mile southwest of the Site.

The California Department of Public Health (CDPH) requires contaminant testing of drinking water for public water systems in California. The most recent available analytical data submitted to the CDPH was reviewed for nearby drinking water wells. Fresno Well 003A is located in the general down gradient direction and contains PCE at concentration of 1.4 µg/L. Fresno Wells 001A and Well 020 are located within 2 miles in the down gradient direction from the site and contain PCE at concentrations of 0.54 µg/L and 2.0 µg/L, respectively (CDPH, 2008).

3.2.3 Groundwater Pathway Conclusion

No release from the Site to groundwater is projected, based on the historical uses and lack of development at the site. However, PCE has been detected in 14 drinking water wells within a 4-mile radius of the Site (AMEC, 2008; CDPH, 2008).

3.3 Surface Water Pathway

In determining the score for the surface water pathway, the HRS evaluates: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to surface water (e.g., streams, rivers, lakes, and oceans); (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, persistence, bioaccumulation potential, and quantity); and (3) the people or sensitive environments (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on drinking water intakes, fisheries, and sensitive environments associated with surface water bodies within 15 miles downstream of the site.

On-site runoff flows into ditches and storm drain inlets, and through a network of pipes which lead to detention basin II-1 with an overflow to a larger terminal detention basin TT-1 located approximately three miles west of the Site. There is no outlet for detention basin TT-1, which

would overflow into adjacent fields during a severe flooding event. Water in the detention basins is designed to recharge groundwater. No evidence of a release from the Site to surface water was observed by WESTON. Groundwater is not a source of surface water recharge. Therefore, no surface water bodies located down gradient of the Site appear to be at risk for contamination attributable to the Site. There are no drinking water intakes, fisheries, or senstivie environments associated with the storm water system within the target distance limit (Appendix B).

3.4 Soil Exposure and Air Migration Pathways

In determining the score for the soil exposure pathway, the HRS evaluates: (1) the likelihood that surficial contamination is associated with the site (e.g., contaminated soil that is not covered by pavement or at least 2 feet of clean soil); (2) the characteristics of the hazardous substances in the surficial contamination (i.e., toxicity and quantity); and (3) the people or sensitive environments (targets) who actually have been, or potentially could be, exposed to the contamination. For the targets component of the evaluation, the HRS focuses on populations that are regularly and currently present on or within 200 feet of surficial contamination. The four populations that receive the most weight are residents, students, daycare attendees, and terrestrial sensitive environments.

In determining the score for the air migration pathway, the HRS evaluates: (1) the likelihood that sources at a site actually have released, or potentially could release, hazardous substances to ambient outdoor air; (2) the characteristics of the hazardous substances that are available for a release (i.e., toxicity, mobility, and quantity); and (3) the people or sensitive environments (targets) who actually have been, or potentially could be, impacted by the release. For the targets component of the evaluation, the HRS focuses on regularly occupied residences, schools, and workplaces within 200 feet of the Site. Transient populations, such as customers and travelers passing through the area, are not counted.

The site is currently unpaved and overgrown with grass and weeds. There are approximately eight residences located within 200 feet of the site along East Belgravia Avenue, South Orinda Street, and South Grace Street. There are no schools, daycares or sensitive environments onsite (Appendix B).

4.0 EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415 (b) (2)] authorizes the EPA to consider emergency response actions at those sites that pose an imminent threat to human health or the environment. For the following reasons, a referral to EPA Region 9's Emergency Response Office does not appear to be necessary:

- The nearest drinking water wells are treated to remove PCE prior to distribution and are routinely tested for VOCs.

- The site is currently vacant and undeveloped. There is no visual evidence that the site has ever been developed or contained any building structures.

- The DTSC is the active regulatory agency and continues to investigate other potential sources to the PCE plume in groundwater.

5.0 SUMMARY

The Poverello House Property is on parcel APNs 480-181-11 totaling 1.1 acres in an industrial and residential area in Fresno, Fresno County, California. The Site is currently vacant with no buildings or structures on the property. The site is unpaved with overgrown with grass and weeds. The site is bordered to the north by East Belgravia Avenue Avenue; to the east by residences; and to the west and south by the Southern Pacific Railroad.

The Site has been owned by the Poverello House non-profit organization since 1998. The property was given to the owner as a donation from the previous owner, the St. Agnes Hospital. Previous owners of the property include Saint Agnes Hospital, Kent Equipment Company, Equipment Supply Company, Hal Engineering Company, and eight individual property owners dating as far back as 1948. It was unclear if the site property has ever been developed. Currently there is no visible evidence of any structures ever existing at the site.

The site is currently unpaved and overgrown with grass and weeds. There are approximately eight residences located within 200 feet of the site along East Belgravia Avenue, South Orinda Street, and South Grace Street. There are no schools, daycares or sensitive environments onsite and within 200 feet of the site.

The Site is not listed in the Resource Conservation and Recovery Act Information (RCRAInfo) database, as of July 14, 2009.

In 2007, the DTSC conducted a Site Screening Assessment for the Site under a PA/SI Grant from the EPA.

The apparent problems at the Site, which contributed to the EPA's determination that a PA was necessary, are as follows:

- City of Fresno operates drinking water wells that have PCE and TCE contamination. PCE was detected below the Maximum Contamination Level (MCL) of 5 micrograms per liter (µg/L) in samples collected from Well 003A, located within 1 mile down gradient of the site.

- The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issued an Imminent and Substantial Endangerment (ISE) Determination in 2002 stating that a contaminant plume consisting of TCE, PCE, and other contaminants underlies parts of southern Fresno, including beneath the Site.

- Groundwater samples collected from monitoring well MW-43, located down gradient from the Site, contain PCE and TCE at concentrations significantly above background concentrations from monitoring wells MW-48 and MW-47 located up gradient of the site. No on-site subsurface investigations had been conducted to determine the source of PCE contamination.

The DTSC has received orphan site funds to partially fund the South Fresno PCE Plume and is currently the active regulatory agency. In 2007, under an EPA PA/SI cooperative agreement, the DTSC conducted a Site Screening Assessment at the Site for the EPA.

The DTSC has been unable to identify potential source areas for the PCE for the South Fresno

PCE Plume site and is using orphan fund monies investigations. In 2008, URS Corporation (URS), contracted by DTSC, prepared an Investigative Work Plan for the South Fresno PCE Groundwater Plume. The work plan proposed collecting up to 140 passive soil gas samples. Up to 36 active soil gas samples would be collected from selected locations determined from the passive soil gas sampling data followed by the collection of up to 12 groundwater samples from Cone Penetration Test (CPT) borings at locations determined from after reviewing the soil gas data. The work plan had not been implemented at the time of this report.

The California Department of Public Health (CDPH) requires contaminant testing of drinking water for public water systems in California. The most recent available analytical data submitted to the CDPH was reviewed for nearby drinking water wells. Fresno Wells 003A is located in the general down gradient direction and contains PCE at concentration of 1.4 µg/L. Fresno Wells 001A and Well 020 are located within 2 miles in the down gradient direction from the site and contain PCE at concentration of 0.54 µg/L and 2.0 µg/L, respectively.

The following pertinent Hazard Ranking System (HRS) factors are associated with the Site:

- No release from the Site to groundwater is projected, based on the historical uses and lack of development at the site. However, PCE has been detected in 14 drinking water wells within a 4-mile radius of the Site.

- No potential bazardous substance sources associated with the Site could be identified.

- On-site runoff flows into ditches and storm drain inlets, and through a network of pipes which lead to a large terminal detention basin located approximately three miles west of the Site. There is no outlet for the detention basin, which would overflow into adjacent fields during a severe flooding event. Water in the detention basins is designed to recharge groundwater. There are no drinking water intakes, fisheries, or senstivie environments associated with the storm water system within the target distance limit.

- There are approximately eight residences located within 200 feet of the site along East Belgravia Avenue, South Orinda Street, and South Grace Street. There are no schools, daycares or sensitive environments onsite.

6.0 REFERENCES

AMEC, 2008, AMEC Geomatrix, Inc., 2008 Semi-Annual Groundwater Monitoring Report – Railroad Avenue Site and Operable Unit #1, September, 2008.

CDPH, 2008, California Department of Public Health (CDPH), Drinking Water Monitoring Schedule – District No. 11 Merced, November 2008.

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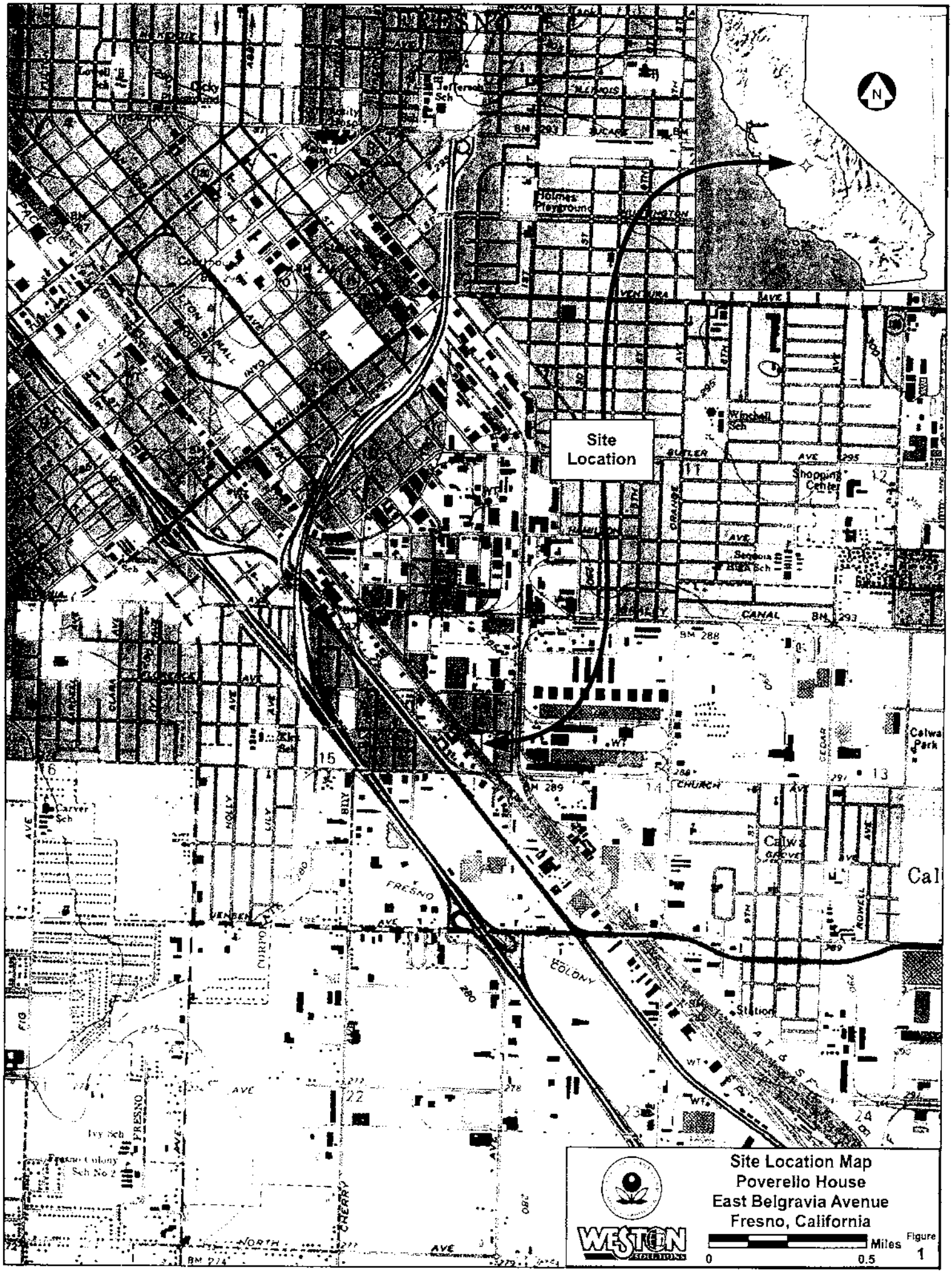
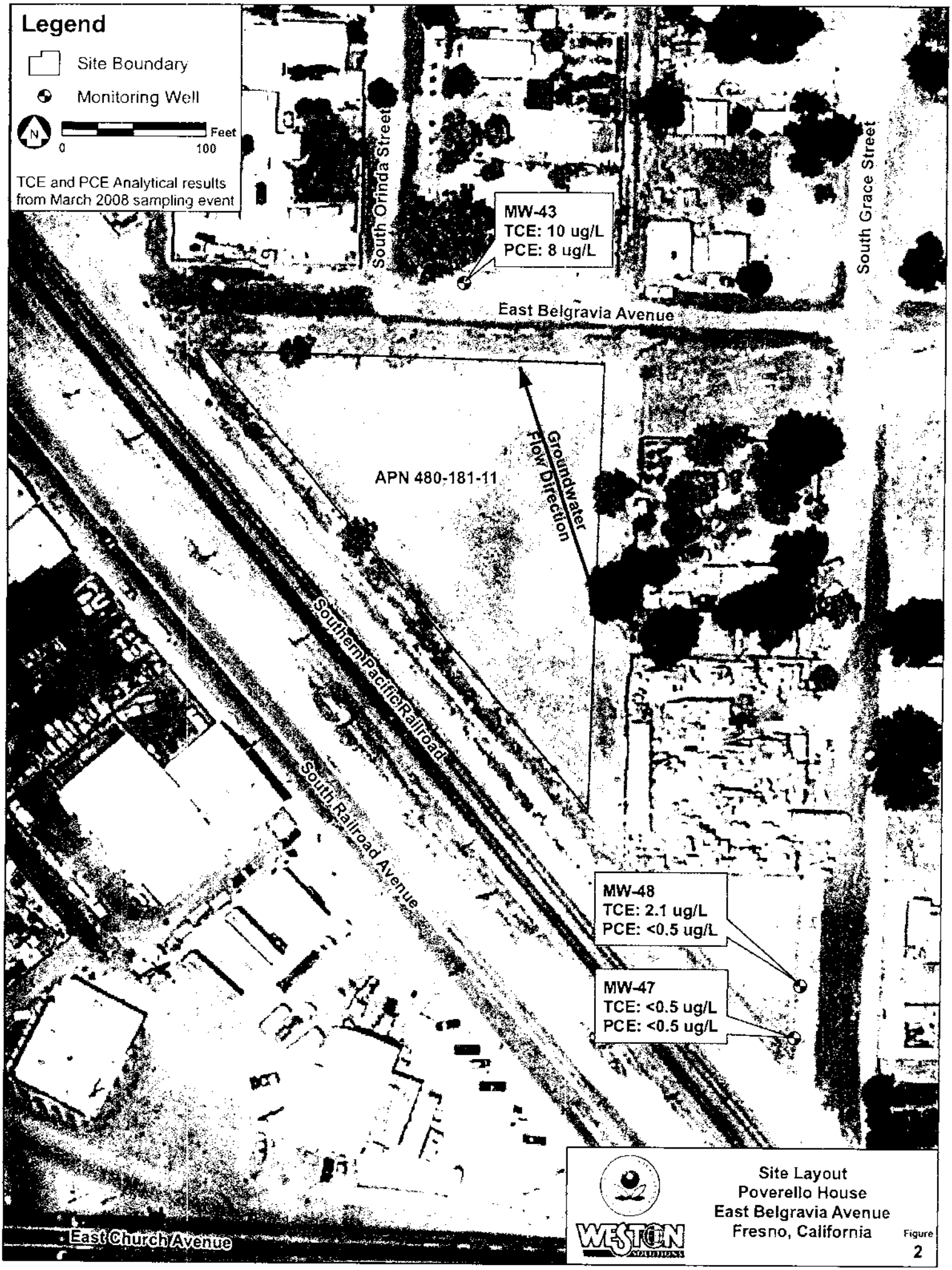
FIGURES



Site Location Map
Poverello House
East Belgravia Avenue
Fresno, California

Figure 1



Site Layout
Poverello House
East Belgravia Avenue
Fresno, California

Figure 2

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Poverello House Property E. Belgravia Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking west

Description:

View of the north end of the site along E Belgravia Avenue.

Photo No.
2

Direction Photo Taken:

Looking southwest

Description:

View of the site from the northeast corner. Structures in the distance are not on the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Poverello House Property E. Belgravia Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking south

Description:

View of the west side of the site along the Union Pacific tracks.

Photo No.
4

Direction Photo Taken:

Looking north

Description:

View of the site from the south end.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Poverello House Property E. Belgravia Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No. **5**	
Direction Photo Taken: Looking east	
Description: Monitoring well located on the north side of E Belgravia Avenue across from the site.	

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: Rumbley Property

EDR ID Number: S104816233

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: Frank Gregurich

URS Office: Fresno, CA

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

Rumbley Property (Hoosier Racing Tires)
2160 - 2180 S. Van Ness
Fresno, CA 93721
County: Fresno

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~10 AC

Site Buildings: THERE ARE NINE STRUCTURES ONSITE TOTALING ABOUT 90,000 SQUARE FEET OF SPACE, HOWEVER NONE OF THE STRUCTURES ARE LINKED TO THE CURRENT INVESTIGATION

Name	Number of stories	Dimensions	Square Footage	Year Built

No IMPACTS ARE REPORTED IN OR AROUND THE STRUCTURES (SEE ATTACHED SITE PLAN)

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S (E) W

4. Are the following located on or **adjacent to the subject site**?

Surface water: No
Wetlands: No
Floodplains: No
Parklands: No
Sensitive habitats: No

5. Please list **current visible onsite activities**:

STORAGE AND DISTRIBUTION OF HOOSIER TIRES

Is equipment washed onsite? No
Is maintenance conducted onsite? If so, what types? No
Is fueling conducted onsite? No - (POSSIBLY RACE FUEL FOR RACE CARS?)

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North E. CALIFORNIA AVENUE; COMMERCIAL DEVELOPMENT

South U. PACIFIC RAILROAD TRACKS; RAILROAD AVENUE; COMMERCIAL DEVELOPMENT

East S. VAN NESS AVENUE; COMMERCIAL DEVELOPMENT

West U. PACIFIC RAILROAD TRACKS; RAILROAD AVENUE; COMMERCIAL DEVELOPMENT

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of (groundwater monitoring wells) or (remedial activities), abnormal odors, the presence of unnatural fill material or soil grading):

SOIL VAPOR EXTRACTION UNIT + MONITORING WELL NETWORK; SYSTEM WAS ACTIVE AND RUNNING AT THE TIME OF THE SITE VISIT
(SEE ATTACHED SITE PLAN)

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? NO, formerly? YES

NO USTs CURRENTLY ONSITE

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? N/A

11. Have there been any releases? YES

To whom were the releases reported? RWQCB

What is status of release investigation? REMEDIATION UNDERWAY (SOIL + GROUNDWATER

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? NO

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
DIESEL FUEL IN SOIL + GROUNDWATER	ESTIMATED TO BE ~ 367,000 lbs (1-19-2007 ESTIMATE)			
PCE + TCE ALSO DETECTED UNIFORM ACROSS THE SITE				
55 GALLON DRUM OF METHANOL; 5-GALLON PROPANE TANKS FOR FORKLIFT FUEL				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: _____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: CITY OF FRESNO (TRASH + RECYCLING)

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
5 POLE-MOUNTED TRANSFORMERS LOCATED ON THE EAST SIDE OF SITE (3+2); 2 POLE-MOUNTED TRANSFORMERS LOCATED ON THE NORTH SIDE OF SITE; ALL IN GOOD CONDITION					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? NO, Describe

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? NO

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

YES; SEE ATTACHED SHEETS FOR SVE AND MONITORING WELL DETAILS AND LOCATIONS

19. **STORMWATER**

Describe how stormwater is managed: SHEET RUNOFF TO THE EAST

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

SVE CAT-OX SYSTEM

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

DIESEL FUEL; PCE + TCE

Are there groundwater monitoring wells at this facility? YES

Where are these wells located?

SEE ATTACHED SHEETS

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program? REMEDIATION UNDERWAY (SVE); FURTHER GROUNDWATER INVESTIGATION PENDING

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
	DIESEL FUEL	CENTER OF YARD	**Yes** **No**	**Yes** **No**
		IN PROGRESS	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? NO

Describe the types and sources of used oil generated: N/A

Are all containers of used oil labeled accordingly? N/A

Describe how and where used oil is stored and handled:

N/A

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown** — SEVERAL LISTED ONSITE (FOR FORKLIFTS)

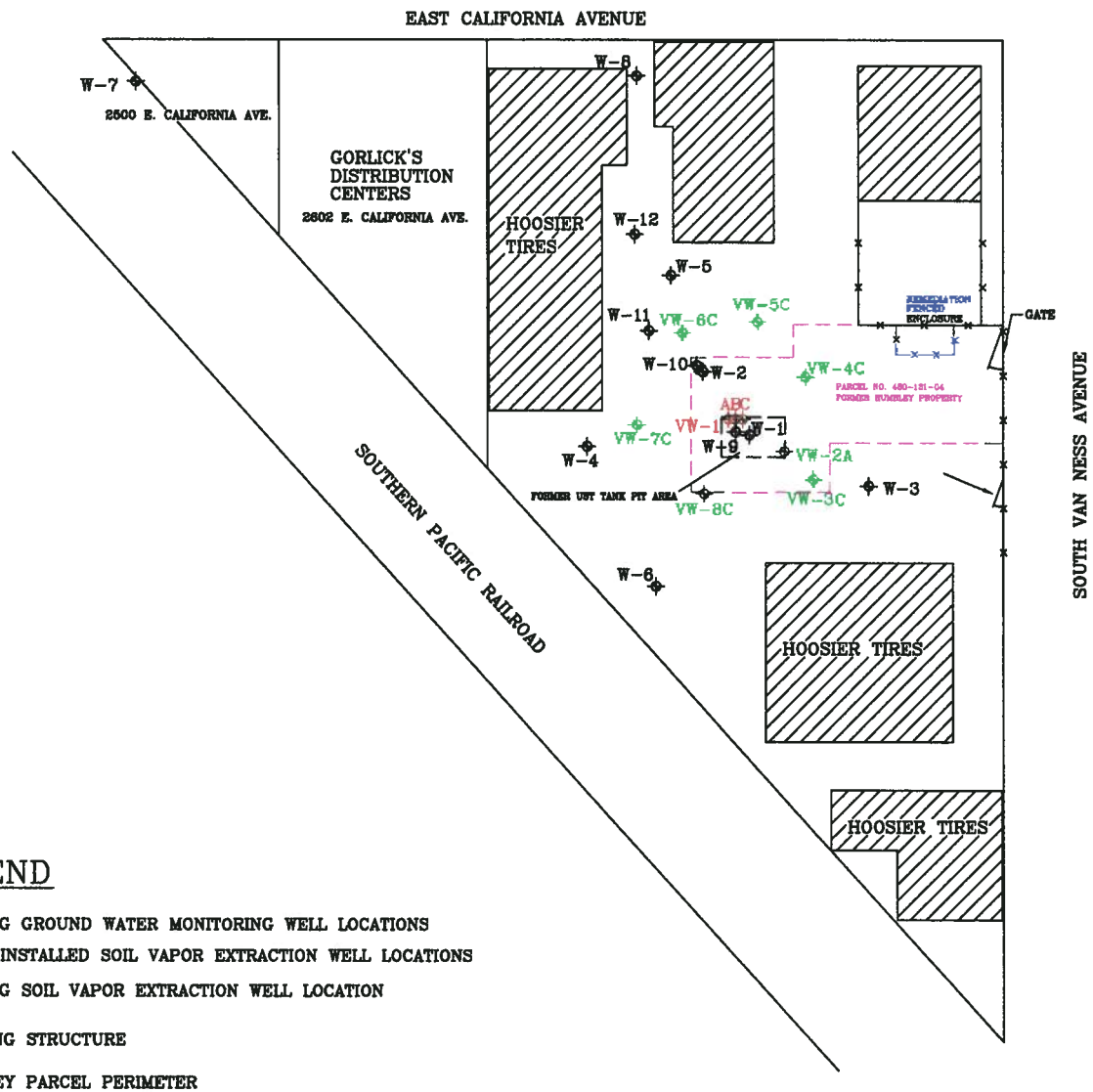
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

1995 - 2010 DOCUMENTS AVAILABLE ON ENVIROSTOR



LEGEND

W-1 EXISTING GROUND WATER MONITORING WELL LOCATIONS

VW-3C NEWLY INSTALLED SOIL VAPOR EXTRACTION WELL LOCATIONS

VW-1 EXISTING SOIL VAPOR EXTRACTION WELL LOCATION

BUILDING STRUCTURE

RUMBLEY PARCEL PERIMETER

N

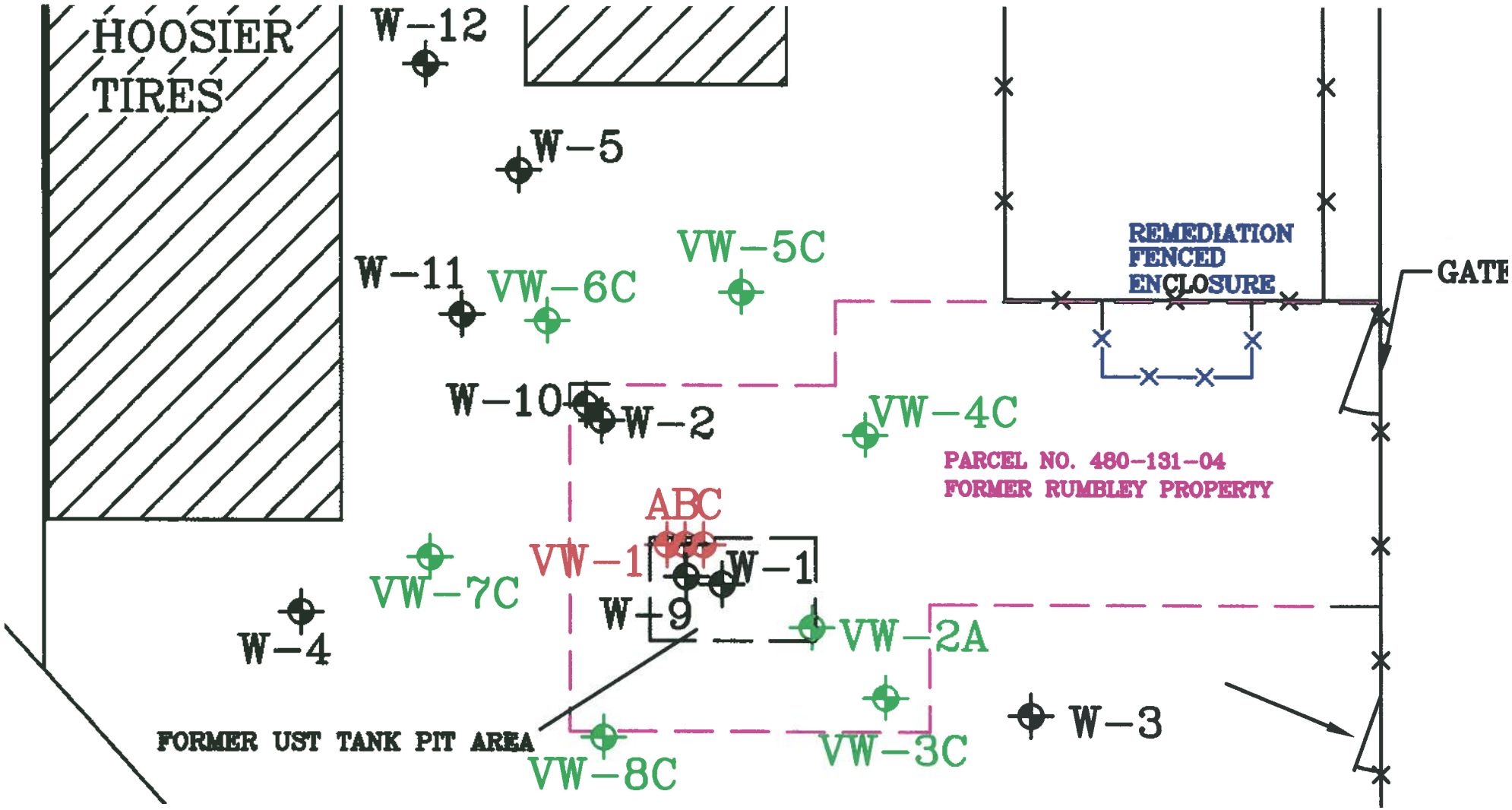
SCALE 0 80 160 FEET

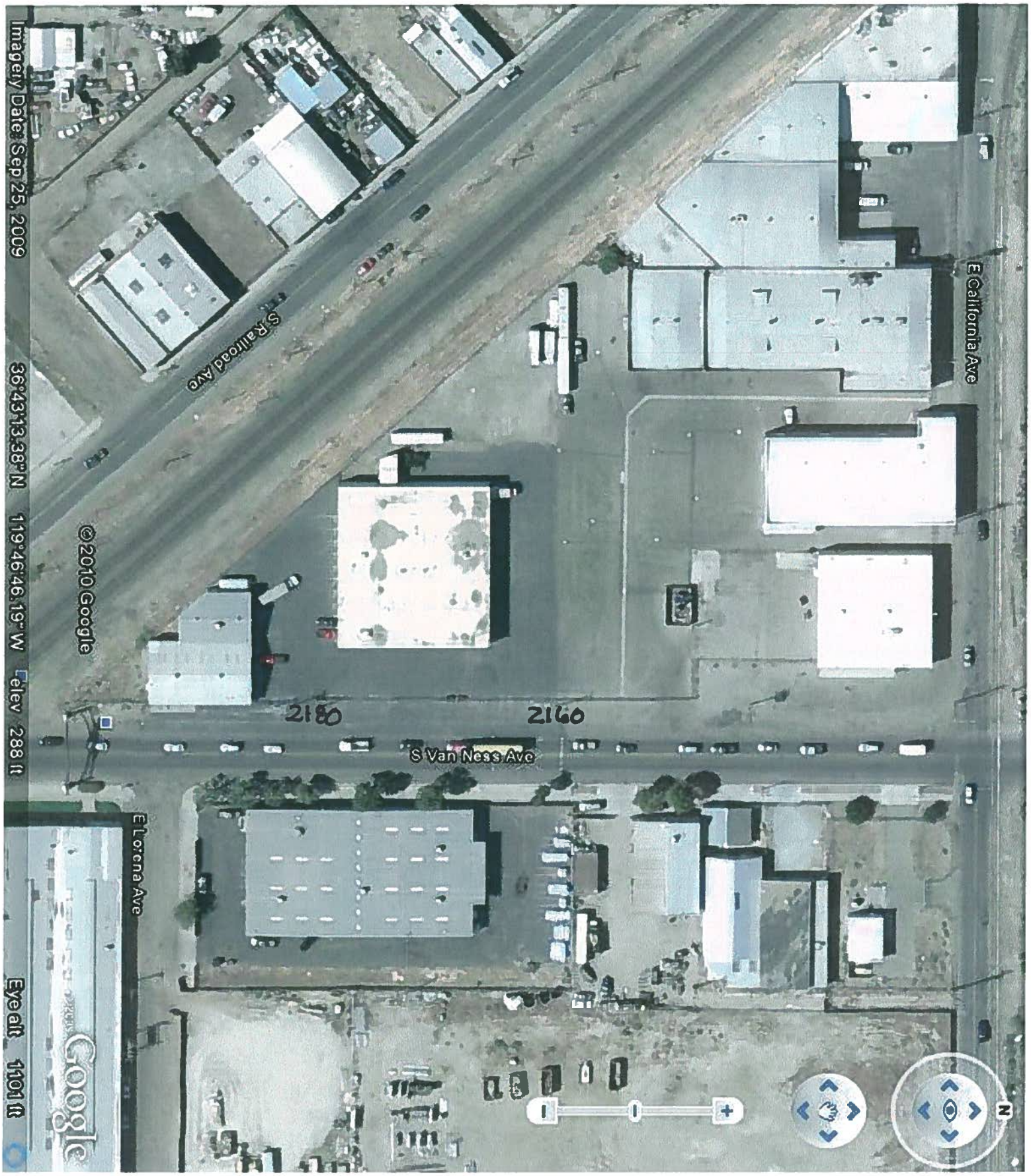
Advanced GeoEnvironmental, Inc. of Northern California

PROJECT NO. 02-0077 | FILE: RUMBLEY2A | FIGURE 2

DATE: 27 JANUARY 2010 | DRAWN BY: MAC

SITE PLAN
RUMBLEY PROPERTY
2160 SOUTH VAN NESS AVENUE
FRESNO, CALIFORNIA


HOOSIER TIRES
W-12
W-5
W-11
VW-6C
VW-5C
W-10
W-2
VW-4C
REMEDIATION FENCED ENCLOSURE
GATE
PARCEL NO. 480-131-04
FORMER RUMBLEY PROPERTY
ABC
VW-1
W-1
VW-7C
W-9
W-4
VW-2A
W-3
FORMER UST TANK PIT AREA
VW-8C
VW-3C



2160 - 2180 S. VAN NESS

FA02	RUMBLEY COMPANY PROF	2160 S	VAN NESS	FRESNO	93721	RUMBLEY CLOSED UST FACILITY/NO CLOSURE REPORT
FA02	RUMBLEY COMPANY PROF	2160 S	VAN NESS	FRESNO	93721	RUMBLEY CONTAMINATED UST SITE/RWQCB LEAD AGENCY
FA01	RUMBLEY PROPERTIES	2180 S	VAN NESS	FRESNO	93721	RUMBLEY UST REMOVAL/CLOSURE W/1 TANK

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Rumbley Property 2160 – 2180 S Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking west

Description:

View of the soil vapor extraction (SVE) remediation system compound.

Photo No.
2

Direction Photo Taken:

Looking northwest

Description:

View of the SVE well field and remediation system compound.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Rumbley Property 2160 – 2180 S Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking south

Description:

SVE system well field.

Photo No.
4

Direction Photo Taken:

Looking southeast

Description:

SVE system well field and compound (left-center of frame).

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Rumbley Property 2160 – 2180 S Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking south

Description:

Monitoring well cluster near the center of the site.

Photo No.
6

Direction Photo Taken:

Looking southwest

Description:

Monitoring well near the west side of the site. Note the Union Pacific tracks in the background.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Rumbley Property 2160 – 2180 S Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
7

Direction Photo Taken:

Looking south

Description:

SVE remediation system compound. Note the former tank pad, the source of the contamination.

Photo No.
8

Direction Photo Taken:

Looking west

Description:

Thermo-oxidizer in the SVE remediation system compound.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Rumbley Property 2160 – 2180 S Van Ness Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No. **9**	
Direction Photo Taken: Looking west	
Description: Waste drums in the SVE compound.	

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

1000191921

Name of Site: Sandoz Crop Protection, Inc (aka Certis USA, LLC) **EDR ID Number:** S100873273

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: Thomas Pender

URS Office: Fresno

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

Sandoz Crop Protection, Inc (aka Certis USA, LLC) ← Current
~~[illegible]~~ 720 5th Street, ✓
Wasco, CA 93280

County: Kern

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: 8.9 acres

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
Office Bldgs (3)				
Process Bldgs (3)				
Storage (8)				

3. The **general topography** of the site area is:

slightly (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S (E) W

4. Are the following located on or **adjacent to the subject site**?

Surface water: No

Wetlands: NO

Floodplains: NO

Parklands: NO

Sensitive habitats: NO

5. Please list **current visible onsite activities**:

Biological ~~[illegible]~~ Manufacturing - Operation (current) ~~extends beyond site~~ (Pesticides)

Is equipment washed onsite? ~~unknown~~ yes

Is maintenance conducted onsite? If so, what types? ~~unknown~~ Yes, Bldgs, equip

Is fueling conducted onsite? ~~unknown~~ Propane (fork lifts, etc)

6. **Site Area:**
General site area is (circle) residential commercial light industrial (heavy industrial) rural
other

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North 4th Street - Burts Dairy (entire plant 4th to 6th, Hwy 43 to RR ROW) Delivery, Residential

South 5th Street. More Certis Bldgs (main plant) - Commercial

East 6st, More Certis Property, RR

West Alley Way, more Certis Bldgs - Hwy 43

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):
None evident, Environmental Mgr doesn't know of any

8. **Utilities-list all visable utility services (power lines, meters etc)**
Electric Service by: PG&E
Gas Service by: The Gas Company
Water Service by: City of Wasco
Wastewater Service by: City of Wasco & inhouse
Steam by:

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? Yes, formerly? ____

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A	~30,000	~~Ammoil~~ Neem oil		Poly + Steel Totes	Y / N	Y / N	Active
U / A	500	propane		Steel	Y / N	Y / N	
U / A	1,000	Ammonia		Steel	Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? Good

11. Have there been any releases? unknown (violations noted in EDR)

To whom were the releases reported? DTSC,

What is status of release investigation? DTSC recommended Assessment + Corrective Action (multiple Violations)

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
Ammonia		Main Plant		
Acids		↓		
Caustics		↓		

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: _____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: ?

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** ~~**Unknown**~~

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
~~None evident~~					
a few	transformers				

17. **DRINKING WATER**

What is source of drinking water at the site? City

What is source of process water for the site? n/a or City

What is the source of drinking water for surrounding properties? City

Are there any wells known to exist at the site? NO, Describe

If wells are used for drinking water at the site, obtain water quality data /

Describe any onsite surface water resources: none or /

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

Process water

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? yes

if so, describe: pH Adjustment

Where is wastewater discharged:			Does a Permit Exist?		
Surface water discharges	**Yes**	**No**	**Yes**	**No**	– storm Sewer
Land application discharges	**Yes**	**No**	**Yes**	**No**	
Deep well injection	**Yes**	**No**	**Yes**	**No**	
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**	
Impoundments	**Yes**	**No**	**Yes**	**No**	
Septic systems	**Yes**	**No**	**Yes**	**No**	

describe as appropriate Impounded + treated onsite, discharge to municipal system

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

NO

19. **STORMWATER**

Describe how stormwater is managed: as above

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? ? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

Forklifts, Boilers, dryers, etc. (SJVAPCD)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? NO

If yes, list the contaminants:

Are there groundwater monitoring wells at this facility? NO

Where are these wells located?

Are regulatory agencies involved with monitoring? NO

Status of investigation/remediation program?

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes** **No**	**Yes** **No**
_____	_____	_____	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? Yes

Describe the types and sources of used oil generated: Gear oil

Are all containers of used oil labeled accordingly? Yes

Describe how and where used oil is stored and handled:

max 250 Gal tote, disposal by sub-contractor

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? ~~**Yes**~~ **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

Photo Log

Date: _____

Project: _____ **Project Number:** _____

Location / Site _____

URS Field Staff: _____

Photo Number	Direction of Photo	Location - Description

Page _____ **of** _____

720 5th St, Wasco, CA 93280
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PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Sandoz Crop Protection (aka Certis USA) 720 5th Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking east

Description:

View along 5th Street and the Main Gate.

Photo No.
2

Direction Photo Taken:

Interior views

Description:

Drums, totes, and other chemical storage containers are stored at several locations onsite.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Sandoz Crop Protection (aka Certis USA) 720 5th Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking south

Description:

View along G Street inside the complex. Note chemical storage containers and buildings where containers are stored.

Photo No.
4

Direction Photo Taken:

Looking east

Description:

View across F Street at process storage tanks located at the south end of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Sandoz Crop Protection (aka Certis USA) 720 5th Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking north

Description:

View across 6th Street. Chemical processing plant tanks and equipment at the south end of the site.

Photo No.
6

Direction Photo Taken:

Looking northwest

Description:

View from the corner of 6th and G Streets. Chemical processing facility and warehouses in the southeast corner of the site.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: Santa Fe Railway Property - Wasco

EDR ID Number: S101480475

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: Thomas Fender

URS Office: Fresno

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

Santa Fe Railway Property - Wasco (leased? to Savages Services Corp.)
9th & H Street
Wasco, CA 93280
County: Kern

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: 2 acres

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
Barn (Coal Loading)	1	80' x 30'	2400	?

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S (E) W

4. Are the following located on or **adjacent to the subject site**?

Surface water: No
Wetlands: No
Floodplains: No
Parklands: No
Sensitive habitats: No

5. Please list **current visible onsite activities**:

~~Locomotive Service/Wash~~ ?: Locomotive Parked onsite outside Barn, Coal Loading/unloading Station

Is equipment washed onsite? unknown
Is maintenance conducted onsite? If so, what types? unknown
Is fueling conducted onsite? unknown - no evidence of fuel

6. **Site Area:**
General site area is (circle) residential commercial (light industrial) heavy industrial rural
other

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North Fence - Asphalt Coatings Engineering, Many chemical storage tanks, operating Asphalt Materials Plant

South Fence, Vacant Lot, Railroad ROW, Railcar Storage, Savage Services Vehicles onsite, Leased?

East 'H' street, Savage Services Corporation, Wasco Coal Terminal (1010 H street, Wasco, Ca 93280)

West Railroad

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

None

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: ~~City~~ PG & E

Gas Service by: The Gas Company

Water Service by: City

Wastewater Service by: N/A

Steam by: N/A

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? no, formerly? unknown

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? N/A

11. Have there been any releases? Historical Release of DDT & Metabolites to soil

To whom were the releases reported? Kern County Dept of Env. Health

What is status of release investigation? Removal Action Completed (~7300 tons of DDT contaminated soil & Debris) Current Deed Restrictions on portions of property @ Kern County Recorders Office

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? No

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located: N S E W of the building. none evident

Hauled off by: ?

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? no if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
none					

17. **DRINKING WATER**

What is source of drinking water at the site? City

What is source of process water for the site? n/a or

What is the source of drinking water for surrounding properties? City

Are there any wells known to exist at the site? No, Describe

If wells are used for drinking water at the site, obtain water quality data

Describe any onsite surface water resources: none or

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.?

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

no

19. **STORMWATER**

Describe how stormwater is managed: Sheetflow to East

Does the stormwater flow to a combined sewer? no

Does water run-off from neighboring facilities and have potential to impact this facility? no

20. **WETLANDS**

Any known/delineated wetlands at the site? no, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? no

If yes, list the contaminants:

Are there groundwater monitoring wells at this facility? no

Where are these wells located?

no wells observed

Are regulatory agencies involved with monitoring? no

Status of investigation/remediation program?

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes** **No**	**Yes** **No**
_____	_____	_____	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? Unknown

Describe the types and sources of used oil generated: _____

Are all containers of used oil labeled accordingly? N/A

Describe how and where used oil is stored and handled:

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Previous Release of DDD, DDE, DDT, Metabolites, Contaminated Soils. Excavated & disposed.

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown** *

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

*Air conditioning unit visible

Photo Log

Date: _____

Project: _____ **Project Number:** _____

Location / Site _____

URS Field Staff: _____

Photo Number	Direction of Photo	Location - Description

Page _____ **of** _____

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Santa Fe Railway Property 7th and H Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking northwest

Description:

Coal delivery handling equipment at the north end of the site.

Photo No.
2

Direction Photo Taken:

Looking east

Description:

Coal is moved via conveyors beneath H Street to the storage yard.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Santa Fe Railway Property 7th and H Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking east

Description:

Coal storage silos east of H street are not on the subject property.

Photo No.
4

Direction Photo Taken:

Looking west

Description:

Locomotive used to shuttle coal-filled rail cars on the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Santa Fe Railway Property 7th and H Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking southwest

Description:

View from the north center of the site.

Photo No.
6

Direction Photo Taken:

Looking northwest

Description:

View from the southeast corner of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Santa Fe Railway Property 7th and H Street, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
7

Direction Photo Taken:

Looking east

Description:

Savage Services operates the Wasco Coal Terminal on the site.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: SOUTH FRESNO REGIONAL GROUNDWATER PLUME

EDR ID Number: S105628340

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEGUMAE

URS Office: FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

THE GROUNDWATER PLUME IS LOCATED IN THE INDUSTRIAL AREA OF SOUTH FRESNO AND APPEARS TO BE THE RESULT OF RELEASES FROM MULTIPLE SOURCE AREAS ALONG THE RAILROAD AVE CORRIDOR.

County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~ 300 ACRES

Site Buildings: PRP'S

Name	Number of stories	Dimensions	Square Footage	Year Built
WEIR FLOWAY INC. (OU-#1)				
FMC CORP (OU-#2)				
OTHER SITES NORTH OF CHURCH AVE - SEE ATTACHED DOCS.				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: No

Wetlands: No

Floodplains: No

Parklands: No

Sensitive habitats: No

5. Please list **current visible onsite activities**:

SEE ATTACHED REPORTS & SUMMARIES; "SITE" INCLUDES MULTIPLE INDUSTRIAL AND COMMERCIAL LOCATIONS WITH VARYING CHARACTERISTICS

Is equipment washed onsite?

Is maintenance conducted onsite? If so, what types?

Is fueling conducted onsite?

END OF FIELD CHECK LIST

SOUTH FRESNO PCE OU-1
SOUTH FRESNO PCE OU-2
FMC
WEIR
E Dwight Way
E California Ave
S 3rd St
S 4th St
E Lorena Ave
E Pitt Ave
S Orange Ave
S Rose Ave
E Florence Ave
S Tulip St
S Orinda St
S Grace St
S Anna St
S Taylor Ave
Golden State Blvd
Foundry Park Ave
E Eugenia Av
E Laurite Ave
S Cherry Ave
E Byrd Ave
S Nicholas Ave
E Grove Ave
S Kirk Ave
S Lily Ave
S Lotus Ave
S Sarah St
E Garrett Ave
99
41
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South Fresno Regional Groundwater Plume

CLEANUP STATUS

ACTIVE AS OF 11/26/2002

SITE TYPE: STATE RESPONSE OR NPL
NATIONAL PRIORITIES LIST: NO
ACRES: 300 ACRES
APN: NONE SPECIFIED
CLEANUP OVERSIGHT AGENCIES:
RWQCB 5F - CENTRAL VALLEY
DTSC - SITE CLEANUP PROGRAM - LEAD<B < FONT>

ENVIROSTOR ID:	10400005
SITE CODE:	101595
SPECIAL PROGRAM:	
FUNDING:	RESPONSIBLE PARTY
ASSEMBLY DISTRICT:	31
SENATE DISTRICT:	16

PAST USE(S) THAT CAUSED CONTAMINATION
MANUFACTURING - METAL, MANUFACTURING - PESTICIDES, METAL PLATING - CHROME, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE

POTENTIAL CONTAMINANTS OF CONCERN
TRICHLOROETHYLENE (TCE)
CHROMIUM VI
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)
1,2,3-TRICHLOROPROPANE<B < FONT>

The groundwater plume is located in the industrial area of South Fresno and appears to be the result of releases from multiple source areas. Many of the nearby facilities have been in operation since World War II and some properties have been used for industrial purposes since the early 1900's. There have been hundreds of large and small industrial facilities operating in the South Fresno area throughout the years. The Department of Toxic Substances Control (DTSC) has been working with several potential responsible parties (RPs) to investigate and remediate this co-mingled groundwater plume. Two source areas include a former pesticide manufacturing facility and a former vending machine company which are both conducting investigations and cleanup under separate DTSC Orders. Hazardous substances present in groundwater beneath the Site include certain volatile organic compounds (VOCs), metals and pesticides. These hazardous substances also appear to be present within a "co-mingled" contaminant plume in certain areas of the underlying groundwater. Since the early 1980's assessment work has been completed by the respondents for two nearby sites. In October of 2002 the respondents for the Floway Site and the FMC Fresno Site signed a Consent Order (Order) to investigate and remediate the regional co-mingled plume. The Order agrees to address the contaminant plume within western and eastern operable units (OU1 and OU2, respectively). Subsequent to the consent order, DTSC issued an I&SE Determination and Remedial Action Order to other respondents in December 2003. In June 2003, a pilot-scale groundwater extraction system began operating at the northern (down-gradient) end of the Regional Plume. The evaluation of contaminant capture and enhancement of the groundwater extraction systems within the is currently on-going along with remedial investigations within OU1 and OU2.

Geo

Department of Toxic Substances Control

Edwin F. Lowry, Director
1515 Tollhouse Road
Clovis, California 93611

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

November 26, 2002

Mr. Charles E. Epstein, CHMM
Remediation Project Manager
FMC Corporation
1735 Market Street
Philadelphia, Pennsylvania 19103

REC'D BY FMC
DEC 3 2002
REMEDIATION DEPT.

Mr. Nate Lincoln
Vice President, Manufacturing
Weir Floway, Inc.
2494 South Railroad Avenue
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Fresno, California 93707

Mr. John Mackenzie
Facilities and Maintenance Manager
The Vendo Company
7209 North Ingram Avenue
Fresno, California 93650

IMMINENT OR SUBSTANTIAL ENDANGERMENT DETERMINATION AND CONSENT ORDER, SOUTH FRESNO REGIONAL GROUNDWATER PLUME, DOCKET NO. HSA-CO 02/03-069, FRESNO, CALIFORNIA

Dear Messrs. Epstein, Lincoln and Mackenzie:

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) has enclosed an original signed copy of the Consent Order (Order) for the subject site. The written text for this Order has been revised to correct the minor typographical errors and the footer on the final Order. Please note that this does provide for a minor difference to the Signatories format (Page 44 signed by the parties) on the final Order. However, legal counsel for all the parties agreed on November 22, 2002 that the minor typographical difference did not affect the legal status of the Order.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.

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Please note that the effective date of this Order is November 26, 2002, which corresponds to the date the Order was signed by DTSC. All tasks and schedules associated with the subject site are summarized in Section 6.25 of the Order.

DTSC would like to thank you for your cooperation in preparing this Order. If you have any questions or wish to discuss the Order, please contact Mr. Thomas Kovac, Chief of the Fresno Responsible Party Unit, Northern California - Central Cleanup Operations Branch at (559) 297-3939.

Sincerely,

James L. Tjosvold, P.E., Chief
Northern California - Central
Cleanup Operations Branch

Enclosure

cc: Mr. Reed Sato
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TB:cm
TB01L.082

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TB:cm
TB01L.092

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of:	Docket No. HSA-CO 02/03-069
SOUTH FRESNO REGIONAL GROUNDWATER PLUME	IMMINENT OR SUBSTANTIAL ENDANGERMENT DETERMINATION AND CONSENT ORDER
Respondents:	
FMC CORPORATION, THE VENDO COMPANY AND WEIR FLOWAY, INC.	Health and Safety Code Sections 25355.5(a)(1)(B) and (C), and 25358.3(a)

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and (1) FMC Corporation ("FMC"); (2) The Vendo Company ("Vendo"); and (3) Weir Floway, Inc. ("Floway") ((1)-(3) herein collectively referred to as "Respondents") hereby enter into this Consent Order ("Order") and agree to its terms and conditions. DTSC and Respondents are referred to collectively herein as the Parties.

1.2 Property/Site. This Order applies generally to the areal extent of groundwater contamination (the "Site") resulting from certain hazardous substance releases, in that area which is generally North of Church Avenue and downgradient of the 2494 South Railroad Avenue property owned by Floway (the "Vendo/Floway Site"), and the 2501 South Sunland Avenue property owned by FMC (the "FMC Site"), and which for the purposes of this Order is divided into two (2) Operable Units, as follows:

1.2.1 Operable Unit #1. Operable Unit #1 ("OU1") is the area North of the intersection of Church Avenue and South East Avenue which is generally Northwest of the Vendo/Floway Site, West of the Eastern boundary of the Burlington Northern and Santa Fe Railway Company ("BNSF") railroad right-of-way which parallels East Avenue and South Sunland Avenue, East of Van Ness Avenue, North of the eastern boundary of Golden State Boulevard, and South of the Northern boundary of East Woodward Avenue, which parallels East California Avenue. Vendo and Floway shall be the primary respondents jointly and severally responsible for OU1 obligations imposed under this Order.

1.2.2 Operable Unit #2. Operable Unit #2 ("OU2") is the area North of the FMC Site, and East of the Eastern boundary of the BNSF railroad right-of-way, which parallels South East Avenue and South Sunland Avenue, West of the Western boundary of South Gearhart Street as projected to the North from the cul de sac immediately South of Church Avenue, and South of the Northern boundary of East Woodward Avenue, which parallels East California Avenue as projected to the East from the portion of East Woodward Avenue that is West of South East Avenue and that forms the Northern boundary of OU1. FMC shall be the primary respondent responsible for OU2 obligations under this Order.

1.2.3 Nothing herein shall constitute a limitation of any Respondent's liability or a determination that the Respondents are or are not jointly and severally liable for the entire areal extent of contamination.

1.2.4 Site and OU Locations. The Site approximate location is shown on Exhibit A. The full extent of contamination is not known at the time of this Order. The locations of OU1 and OU2 within the Site are likewise shown on Exhibit A. Except to the extent required to address groundwater contamination hereunder, remediation of soils on properties identified as possible sources of contamination is not covered by this Order and is or will be the subject of separate orders. The Site is in the Western portion of Section 14 and the eastern portion of Section 15, Township 14 South, Range 20 East Mount Diablo Baseline and Meridian.

1.2.5 Jurisdiction. This Order is entered into by the parties pursuant to Health and Safety Code sections 26358.3(a), and 25355.5(a)(1)(B) and (C).

Health and Safety Code section 25358.3(a) authorizes DTSC to take various actions, including Issuance of an Imminent or Substantial Endangerment Determination and Order, when DTSC determines that there may be an imminent or substantial endangerment to the public health or welfare or to the environment, because of a release or a threatened release of a hazardous substance.

Health and Safety Code section 25355.5(a)(1)(B) authorizes DTSC to issue an order establishing a schedule for removing or remedying a release of a hazardous substance at a site, or for correcting the conditions that threaten the release of a hazardous substance. The order may include, but is not limited to requiring specific dates by which the nature and extent of a release shall be determined and the site adequately characterized, a remedial action plan prepared and submitted to DTSC for approval, and a removal or remedial action completed.

Health and Safety Code section 25355.5(a)(1)(C) authorizes DTSC to enter into an enforceable agreement with a responsible party for the site which requires the party to take necessary corrective action to remove the threat of the release, or to determine the nature and extent of the release and adequately characterize the site, prepare a remedial action plan, and complete the necessary removal or remedial actions, as required in the approved remedial action plan.

II. DTSC FINDINGS OF FACT

DTSC hereby finds:

2.1 Liability of Respondents. Respondents are alleged to be responsible parties or liable persons as defined in Health and Safety Code section 25323.5. Through various soil and groundwater investigations required by oversight agencies, it appears that several facilities may have contributed to contamination of groundwater underlying the Site. These facilities include, but may not be limited to, the FMC Facility located at 2501 South Sunland Avenue and the Weir Floway Facility located at 2494 South Railroad Avenue. The Respondents are jointly and severally responsible for obligations imposed under this Order to the extent they would be liable for their respective contaminants under applicable law.

2.1.1 During various soil and groundwater investigations conducted under the oversight of public agencies, it was concluded that previous facility operations and current property conditions in the Site vicinity appear to have caused hazardous substances to impact groundwater. Additional facilities not addressed in this Order may be potential sources of additional contamination. Contaminants detected in soil and/or groundwater beneath the above noted facilities have also been detected in several monitoring and former supply wells downgradient of the facilities.

2.1.2 Contaminated groundwater contiguous and/or related to impacts from the above facilities has been defined by DTSC as the South Fresno Regional Groundwater Plume. DTSC believes that the full areal and vertical extent of the plume has not been defined.

2.1.3 Respondent FMC Corporation is the current owner and operator of property at or from which hazardous substances have been released into the environment.

2.1.4 Respondent Weir Floway, Inc. is the current owner and operator of property at or from which hazardous substances have been released into the environment.

2.1.5 Respondent The Vendo Company is allegedly the successor to one or more entities known as the Vendorlator Manufacturing Company, which operated at a portion of the Vendo/Floway Site from approximately 1938 to 1961. It is believed the original Vendorlator Manufacturing Company was an operator of a portion of the property at the time when hazardous substances were released into the environment at or from that portion of the property.

2.2 Physical Description of Site. The Site area is developed with predominately industrial and some residential areas. The area in the immediate vicinity of the Site is primarily industrial. The majority of the industrial areas are developed with structures and covered with either concrete or asphalt paving. The residential areas are primarily developed with single-family residences and minimum amounts of paving. There are vacant parcels of land interspersed within the Site area.

Groundwater in the vicinity of the Site has been used as a drinking water source, as an industrial water source, and as an agricultural source. City of Fresno supply wells are located North and East of the Site. The groundwater flow direction is approximately North-Northwest.

2.3 Site History. The Site is located in an industrialized area of south Fresno. Many of the facilities have been in operation since World War II and some properties have been used for industrial purposes since the early 1900s. There have been hundreds of large and small industrial facilities operating in the south Fresno area throughout the years.

The FMC Facility was owned and operated from 1931 to 1959 as the Sunland Sulfur Company and later in the period as Sunland Industries (collectively, "Sunland"). In approximately 1946, Sunland began to formulate fertilizers in both granular and liquid forms. In approximately 1946, Sunland also began to formulate dry pesticides. FMC Corporation has owned and operated the facility since 1959 and has formulated various fertilizers and pesticides in both liquid and granular form. FMC's production and storage of pesticides and fertilizers at the FMC Facility ceased by the end of 1992.

A number of different companies operated on the four parcels which comprise the 2494 South Railroad Avenue property now owned by Weir Floway, Inc. (the "2494 S. Railroad Avenue property"). California Fresno Oil Company ("Cal Fresno Oil") purchased all four parcels in the early 1900s and began operations on parcel 13. In 1946, Cal Fresno Oil sold parcel 12 to Atlantic Richfield Oil Company, which operated a retail gasoline station on the property. In 1948, Fiese and Firstenberger opened a sales operation on the northernmost parcel on the property, parcel 19. In 1958, Fiese and Firstenberger purchased that parcel from Cal Fresno Oil and began manufacturing pumps on the property using the trade name "Floway Pumps." In 1974, Fiese and Firstenberger purchased the parcel immediately to the south of its sales operation, parcel 12, from Atlantic Richfield Oil Company. The other two parcels, parcels 13 and 18, continued to be owned by Cal Fresno Oil; Cal Fresno Oil operated on parcel 13 and leased parcel 18 to the original Vendorlator Manufacturing Company on which that company conducted manufacturing operations from approximately 1938 to 1961. In 1975, Peabody International purchased the pump manufacturing business of Fiese and Firstenberger and named the company Peabody Floway. Shortly thereafter, to acquire more manufacturing space, Peabody Floway purchased parcels 13 and 18 from Cal Fresno Oil (which had changed its name to California-Fresno Realty Company). The shareholders of California-Fresno Realty Company reincorporated as Cal-Fresno, leased parcel 13 from Peabody Floway from 1976 to 1982, and conducted retail operations on the property. In 1993, PFI Acquisition Corp. purchased the pump manufacturing assets of Peabody Floway and then changed its name to Weir Floway, Inc. Weir Floway is the current owner of all four parcels of the 2494 South Railroad Avenue property.

2.4 Hazardous Substances Found at the Site. Hazardous substances present in groundwater beneath the Site include certain volatile organic compounds (VOCs), metals, and pesticides. These hazardous substances also appear to be present within a "commingled" contaminant plume in certain areas of the underlying groundwater. Additionally, other constituents which present a health risk will be considered a contaminant and may also require remedial actions under this Order. A list of hazardous substances found at the Site, and subject to investigation and potential cleanup under this Order, is provided below.

2.4.1 Trichloroethylene (TCE). TCE has primarily been detected in groundwater samples. TCE is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for TCE is 5 micrograms per liter (ug/L).

2.4.2 1,2,3-Trichloropropane (1,2,3 TCP). 1,2,3-TCP is mainly used to make other chemicals. It may be found as an impurity in certain pesticides and has been used as an industrial solvent, paint remover, and degreasing agent. 1,2,3-TCP has primarily been detected in groundwater. 1,2,3-TCP is a hazardous substance as set forth in Health and Safety Code section 25316. The California Department of Health Services action level for 1,2,3-TCP is 0.005 ug/L.

2.4.3 Tetrachloroethylene (PCE). PCE has been detected in groundwater and is a degreasing agent and has been associated with dry-cleaning chemicals. PCE is a hazardous substance as set forth in Health and Safety Code section 28316. The California Maximum Contaminant Level for PCE is 5 ug/L.

2.4.4 1,2-Dichloropropane (Propylene dichloride) (DCP). Propylene dichloride is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for DCP is 5 ug/L.

2.4.5 Chromium (Cr). Chromium occurs in oxidation states that range from two (2) to six (6). Chromium has been detected in soil and groundwater samples collected beneath the Site and at upgradient properties. Chromium is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for Chromium is 50 ug/L.

2.4.6 Arsenic (As). Arsenic is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for Arsenic is 50 ug/L.

2.4.7 Nitrate (NO3). Nitrate is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for NO3 is 45 milligrams per liter (mg/L).

2.4.8 Dibromochloropropane (DBCP). DBCP is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for DBCP is 0.2 ug/L.

2.4.9 Ethylene Dibromide (EDB). EDB is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for EDB is 0.05 ug/L.

2.4.10 Toxaphene. Toxaphene is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for Toxaphene is 3 ug/L.

2.4.11 Di(2-ethylhexyl)phthalate (DEHP). DEHP is a hazardous substance as set forth in Health and Safety Code section 25316. The California Maximum Contaminant Level for DEHP is 4 ug/L.

2.5 Health Effects.

2.5.1 Trichloroethylene (TCE). TCE is a carcinogen, an experimental teratogen, and equivocal tumorigenic agent, and a skin and eye irritant. Chronic exposure to TCE may cause damage to the liver and other organs.

2.5.2 1,2,3-Trichloropropane (1,2,3-TCP). 1,2,3-TCP is a confirmed carcinogen that is poisonous by ingestion and moderately toxic by inhalation and skin contact. Exposure to high levels of 1,2,3-TCP causes eye and throat irritation. The main health effect in both animals and humans is damage to the respiratory system via the inhalation route of exposure. Rats exposed to 1,2,3-TCP via the ingestion route of exposure developed-liver and kidney damage, blood disorders, and stomach irritation. Large amounts applied to the skin of rabbits caused severe irritation followed by injury to internal organs.

2.5.3 Tetrachloroethylene (PCE). Short-term exposure to PCE through ingestion and inhalation may cause nausea, vomiting, headache, dimness, drowsiness, and tremors. Skin contact with liquid causes irritation and blistering. Both liquid and vapor are irritating to the eyes. Liver and kidney toxicity are the long-term effects.

2.5.4 1,2-Dichloropropane (Propylene dichloride) (DCP). Experimental studies with rodents indicate that 1,2-dichloropropane is carcinogenic and is associated with an increased incidence of liver adenomas/carcinomas and mammary carcinomas. In humans, high concentrations of 1,2-dichloropropane may cause central nervous system depression and narcosis. Other symptoms include headache, vertigo, lacrimation and irritation of the mucous membranes. It is also a mild skin irritant. Chronic exposure to 1,2-dichloropropane in laboratory animals causes fatty degeneration of the liver and kidneys.

2.5.5 Chromium (Cr). Chromate salts are experimental human carcinogenic compounds of the lungs and sinus, and an experimental carcinogenic compound of the stomach and larynx. Chromium compounds in the trivalent (III) state are a low order of toxicity. In the hexavalent (VI) state, chromium compounds are irritants and corrosives. Human exposure to hexavalent chromium, particularly in the chrome production and chrome pigment industry, has been associated with cancer of the respiratory tract. The human health effects of the exposure to chromium are currently being evaluated.

2.5.6 Arsenic (As). Arsenic has been classified by EPA as a known human carcinogen. It is carcinogenic via the inhalation and ingestion routes of exposure. This classification is based on epidemiologic studies of exposed populations. Populations exposed to groundwater contaminated with arsenic showed increased mortality from bladder, liver, and lung cancer. Arsenic has also been found to be mutagenic.

2.5.7 Nitrate (NO3). Infants, particularly those under six months of age, are the most at risk of developing serious health problems from drinking water that contains elevated levels of nitrate or nitrite. Infants have relatively low acidity in their stomachs compared to adults. This allows for the growth of certain bacteria that readily convert nitrate to nitrite, which in turn causes ethemoglobinemia. In infants, this is commonly called Blue Baby Syndrome, because the lack of oxygen causes the baby's skin to turn a bluish color, particularly around the eyes and mouth. If untreated, infants can die from this condition. Nitrite is of particular health concern in the body because it causes the hemoglobin in the blood to change into methemoglobin. Methomeglobin reduces the amount of oxygen that can be carried in the blood. This results in cells throughout the body being deprived of sufficient oxygen to function property.

2.5.8 Dibromochloropropane (DBCP). DBCP has been found to be carcinogenic to animals via the oral, inhalation and dermal routes of exposure. When administered to rodents by various routes, it caused tumors of the mammary glands, forestomach, nasal passage, tongue and lung. DBCP is also a known human reproductive toxin, causing reduced sperm counts and infertility in male pesticide workers exposed by inhalation and by absorption through the skin. Liver and kidney effects have also been noted in animal studies.

2.5.9 Ethylene Dibromide (EDB). Experimental animal studies indicate that EDB is a carcinogen via the inhalation, ingestion and dermal routes of exposure. Based on these

studies, EDB is considered a probable human carcinogen by both the ingestion and inhalation routes of exposure. Exposure to EDB is also associated with a variety of noncarcinogenic effects. EDB is a human reproductive toxin, causing oligospermia and morphological abnormalities in sperm of men occupationally exposed. Although EDB induced developmental effects have not been reported in humans, fetotoxicity effects have been observed in rodents exposed to EDB in air. Although not definitive, the weight of evidence suggest that exposure to EDB poses a potential reproductive hazard to humans, especially to adult males. In humans, prolonged contact with skin may cause erythema, blistering, and skin ulcers. EDB vapor is irritating to the eyes and the mucous membranes of the respiratory tract. Inhalation of EDB vapors may result in severe, acute respiratory injury, central nervous system depression, and vomiting.

2.5.10 Toxaphene. Toxaphene is classified as a probable human carcinogen based on an increased incidence of liver tumors in mice and thyroid tumors in rats. It is considered carcinogenic by both oral and inhalation routes of exposure. There is also experimental evidence that Toxaphene is mutagenic. Toxaphene is considered extremely toxic, and the acute toxic effects are cyanosis followed by generalized convulsions.

2.5.11 Di(2-ethylhexyl)phthalate (DEHP). The EPA has determined that DEHP is a probable human carcinogen. Short-term exposures to high levels of DEHP interfered with sperm formation-in mice and rats. After long-term exposures to high doses, fertility of both male and female rats was decreased. Studies of pregnant mice and rats exposed to high levels of DEHP resulted in effects on the development of the fetus. Therefore, humans exposed to DEHP during pregnancy could possibly have babies with low birth weights and skeletal and/or nervous system problems. Exposure via inhalation does not appear to have serious harmful effects. Long-term exposure of rats to DEHP resulted in structural and functional changes in the kidney.

2.6 Routes of Exposure. The results of a previous risk assessment indicate that possible routes of exposure include the following: (1) ingestion of affected groundwater, and (2) dermal and inhalation contact with contaminants in groundwater during showering. Worker exposure may occur during field activities associated with interim Remedial Actions or the Remedial Investigation.

2.7 Public Health and/or Environmental Risk. The area in the vicinity of the Site includes commercial, industrial and residential land uses. Groundwater in the vicinity of the Site is used as a drinking water source and is also used for industrial purposes. Certain chemicals detected at the Site are above drinking water standards.

III. DTSC CONCLUSIONS OF LAW

3.1 Each of the Respondents is a responsible party as defined by Health and Safety Code section 25323.5.

3.2 Each of the substances listed in Section 2.4 is a "hazardous substance" as defined in Health and Safety Code section 25316.

3.3 There has been a "release" and/or there is a "threatened release" of hazardous substances listed in Section 2.4 at the Site, as defined in Health and Safety Code section 25320.

3.4 The actual and threatened release of hazardous substances at the Site may present an imminent or substantial endangerment to the public health or welfare or to the environment.

3.5 Response action is necessary to protect and preserve the public health.

IV. DTSC DETERMINATION

4.1 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that response action is necessary at the Site because there has been a release and/or there is a threatened release of a hazardous substance.

4.2 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that there may be an imminent or substantial endangerment to the public health or welfare or to the environment because of the release and/or the threatened release of the hazardous substances at the Site.

V. CONSENT ORDER

Based on the foregoing, IT IS HEREBY AGREED AND ORDERED THAT as to OU1 for Vendo and Floway (the "OU1 Parties"), and as to OU2 for FMC, Respondents shall conduct the following response actions in the manner specified herein, and in accordance with a schedule specified by DTSC, as follows:

5.A. Operable Unit #1

5.A.1 All response actions taken pursuant to this Order shall be consistent with the requirements of Chapter 6.8 (commencing with section 25300), Division 20 of the Health and Safety Code and any other applicable state or federal statutes and regulations.

5.A.1.1 Site Remediation Strategy. A purpose of this Order is to require for OU1: implementation of any appropriate removal actions, completion of a Remedial Investigation/Feasibility Study (RI/FS), preparation of a Remedial Action Plan (RAP), preparation of California Environmental Quality Act (CEQA) documents, and Design and Implementation of the remedial actions approved in the RAP. An overall OU1 investigation and remediation strategy shall be developed by the OU1 Parties in conjunction with DTSC, which reflects program goals, objectives, and requirements. Current knowledge of the OU1 contamination sources, exposure pathways, and receptors shall be used in developing this strategy.

An objective of the OU1 investigations shall be to identify immediate or potential risks to public health and the environment and prioritize and implement response actions using removal actions, if appropriate, based on the relative risks at OU1. The OU1 Parties and DTSC shall develop and possibly modify OU1 priorities throughout the course of the investigations. If necessary for the protection of public health and the environment, DTSC may require additional

response actions not specified in this Order to be performed as removal actions. Removal actions shall be implemented in accordance with a workplan and implementation schedule submitted by the OU1 Parties and approved by DTSC.

For operable unit remedial actions, DTSC will specify the separate and focused remedial phase activities to be conducted as RI/FS, RAP, Design, and Implementation. The focused activities shall be conducted in accordance with the corresponding remedial phase requirements specified in this Order, but shall only address the area or problem of the operable unit.

5.A.1.2 Remedial Action Objectives. DTSC has determined that the remedial action objectives for OU1 shall include the protection of existing and potential beneficial uses of groundwater. The Regional Water Quality Control Board Basin Plan identifies public water supply as a beneficial use of this aquifer. Drinking water standards or other appropriate values shall be remedial action objectives for this Site.

5.A.1.3 Site Remediation Strategy Meeting. The OU1 Parties and their Project Coordinator and Project Engineer/Geologist, shall meet with DTSC within 30 days from the effective date of this Order to discuss the OU1 remediation strategy. These discussions will include OU1 risks and priorities, project planning, phasing and scheduling, remedial action objectives, remedial technologies, data quality objectives, and an RI/FS workplan for final remedial actions at OU1. These discussions will also include consideration of the Respondents' prior submittals and deliverables to determine whether requirements under this Order have been fulfilled by such prior submittals or deliverables.

5.A.1.4 Focused Remedial Investigation (FRI). DTSC has determined that a commingled contaminant plume is present beneath OU1. However, the full areal and vertical extent of the plume has not been defined. Therefore, DTSC has decided that it is appropriate to characterize the plume to implement the removal action described in 5.A.1.6.

Within 60 days from the effective date of this Order, it is required that a focused groundwater remedial investigation work plan be provided. The main purpose of this work plan is to determine the lateral and vertical extent of contaminants in groundwater and define the "leading edge" of the contaminant plume to support the removal action to be implemented in OU1. The work plan should include a generalized scope of work that addresses how the focused remedial investigation findings will be applied to interim groundwater extraction activities. The FRI must be conducted in accordance with the guidelines presented in Section 5.2 of this Order. The results of the FRI will be presented in the RAP or Removal Action Work Plan (RAW) prepared for the action conducted under 5.A.1.6.

5.A.1.5 Alternative Water Supply. If required by DTSC, the OU1 Parties shall provide or arrange for the provision of an alternative water supply. If required by DTSC, the OU1 Parties shall develop and submit to DTSC for review and approval, criteria and remedial alternatives to mitigate the impact of hazardous substances in groundwater on supply wells determined by DTSC to be contaminated from the Site. Mitigation measures may include providing alternative water supplies and/or well head treatment systems.

5.A.1.6 Evaluation of Removal Action. The OU1 parties shall conduct the appropriate evaluation for a Removal Action at the approximate downgradient extent of the commingled groundwater contamination plume. The Removal Action Evaluation may be conducted at the conclusion or in conjunction with the appropriate remedial investigation activities to determine the effectiveness of the proposed removal action discussed in 5.A.1.4. Modeling will be conducted to ensure that no appreciable mass will migrate downgradient. The results of the Removal Action Evaluation will be presented in the RAP or RAW.

5.A.1.7 Groundwater Removal Action. The OU1 Parties shall establish hydraulic control of the contaminant plume within OU1. Within 30 days from DTSC's review and approval of the evaluation required under Section 5.A.1.6, the OU1 Parties will submit a RAP, or RAW as appropriate under Health and Safety Code section 25356.1, to DTSC for review and approval. The RAP or RAW will provide details of the remedial or removal action including conceptual design, the anticipated effectiveness and a schedule for implementation of the action. Upon approval by DTSC, the remedial or removal action shall be implemented by the OU1 Parties in accordance with the approved schedule.

5.A.1.8 Groundwater Monitoring. The OU1 Parties shall continue interim groundwater monitoring in accordance with plans for the regular sampling and gauging of monitoring wells within OU1, and in coordination with FMC. Subsequent monitoring shall be conducted until DTSC determines it is appropriate to terminate monitoring.

Within 60 days from the effective date of the Order, the OU1 Parties shall submit a sampling and analysis plan (SAP) specific to OU1, for the groundwater monitoring wells and supply wells. The SAP shall include the following as a minimum: 1) the location of monitoring and supply wells to be sampled; 2) proposed sampling frequencies; 3) groundwater level determination frequencies; 4) constituents to be analyzed; 5) analytical methodology; 6) schedule for implementation; and, 7) indication that reports presenting the results of the data will include interpretive data including contaminant isopleth maps and groundwater elevation contour maps. Upon approval by DTSC, the monitoring and supply well sampling program shall be implemented by the OU1 Parties in accordance with the schedule contained therein. As additional monitoring wells are constructed, or supply wells are added, amendments to the SAP shall be submitted to DTSC for review and approval and, following approval, implemented.

5.A.2 Remedial Investigation/Feasibility Study (RI/FS). If necessary, as determined by DTSC, additional RI/FS activities will be conducted for OU1. The RI/FS may be performed as a series of focused RI/FSs, if appropriate, based on Site and/or OU1 priorities. Any RI/FS shall be prepared consistent with the U.S. Environmental Protection Agency's "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," October 1988. The purpose of the RI/FS is to assess OU1 conditions and to evaluate alternatives to the extent necessary to select a remedy appropriate for OU1. RI and FS activities shall be conducted in such a manner so that the investigations can be completed expeditiously. The OU1 Parties shall fulfill any additional data and analysis needs identified by DTSC; these additional data and analysis requests will be consistent with the general scope and objectives of this Order.

The following elements of the RI/FS process shall be preliminarily defined in the initial OU1 scoping and refined and modified as additional information is gathered throughout the RI/FS process.

(a) Conceptual Site Model identifying contamination sources, exposure, pathways, and receptors;

(b) Federal, State and local remedial action objectives including applicable legal requirements or relevant and appropriate standards;

(c) Project phasing including the identification of removal actions;

(d) General response actions and associated remedial technology types; and

(e) The need for treatability studies.

5.A.2.1 RI/FS Objectives. The objectives of the RI/FS are to:

(a) The general objective will be to fully characterize the extent of groundwater contamination and evaluate and propose final remedial actions to complete remediation of the groundwater contamination. The final remedial actions will supplement or replace the action described in Section 5.A.1.7 above;

(b) Identify all actual and potential exposure pathways and routes through environmental media;

(c) Determine the magnitude and probability of actual or potential harm to public health, safety or welfare or to the environment posed by the threatened or actual release of hazardous substances at or from the Site;

(d) Identify and evaluate appropriate response actions to prevent or minimize future releases and mitigate any releases which have already occurred; and

(e) Collect and evaluate the information necessary to prepare a RAP.

5.A.2.2 RI/FS Workplan. Within 90 days after receipt of a DTSC request for additional activities under 5.A.2, the OU1 Parties shall prepare and submit to DTSC for review and approval a RI/FS Workplan, and implementation schedule which covers all the activities necessary to conduct a complete RI/FS of OU1.

The RI/FS Workplan shall include a detailed description of the tasks to be performed, information or data needed for each task, and the deliverables which will be submitted to DTSC. Either the OU1 Parties or DTSC may identify the need for additional work.

These RI/FS Workplan deliverables are discussed in the remainder of this Section, with a schedule for implementation, and quarterly reports. The RI/FS Workplan shall include all the sections and address each component listed below.

(a) Project Management Plan. The Project Management Plan shall define relationships and responsibilities for major tasks and project management items by the OU1 Parties, and their contractors, subcontractors, and consultants. The plan shall include an organization chart with the names and titles of key personnel and a description of their individual responsibilities.

(b) Scoping Document. The Scoping Document shall incorporate program goals, program management principles, and expectations contained in the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Part 300), as amended. It shall include:

(1) An analysis and summary of OU1 background and the physical setting. At a minimum, the following information is required:

(A) A map of OU1, and if they exist, aerial photographs and blueprints showing buildings and structures; and,

(B) A description of the characteristics and potential sources of the hazardous substances at OU1.

(2) An analysis and summary of previous response actions including a summary of all existing data including air, soil, surface water, and groundwater data and the Quality Assurance/Quality Control (QA/QC) procedures which were followed;

(3) Presentation of the Conceptual Site (OU1) Model;

(4) The scope and objectives of RI/FS activities;

(5) Preliminary identification of possible response actions and the data needed for the evaluation of alternatives. Removal actions shall be proposed, if needed, based on the initial evaluation of threats to public health and the environment. If remedial actions involving treatment can be identified, treatability studies shall be conducted during the characterization phase, unless the OU1 Parties and DTSC agree that such studies are unnecessary as set forth in Section 5.A.4; and

(6) If applicable, initial presentation of the Site Remediation Strategy for OU1.

(c) Field Sampling Plan. The Field Sampling Plan shall include:

(1) Sampling objectives, including a brief description of data gaps and how the field sampling plan will address these gaps;

(2) Sample locations, including a map showing these locations, and proposed frequency;

(3) Sample designation or numbering system;

(4) Detailed specification of sampling equipment and procedures;

(5) Sample handling and analysis including preservation methods, shipping requirements and holding times; and

(6) Management plan for wastes generated.

(d) Quality Assurance Project Plan. The plan shall include:

(1) Project organization and responsibilities with respect to sampling and analysis;

(2) Quality assurance objectives for measurement including accuracy, precision, and method detection limits. In selecting analytical methods, Respondents shall consider obtaining detection limits at or below potentially applicable legal requirements or relevant and appropriate standards, such as Maximum Contaminant Levels (MCLs) or Maximum Contaminant Level Goals (MCLGs);

(3) Sampling procedures;

(4) Sample custody procedures and documentation;

(5) Field and laboratory calibration procedures;

(6) Analytical procedures;

(7) Laboratory to be used certified pursuant to Health and Safety Code section 25198;

(8) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;

(9) Reporting procedure for measurement of system performance and data quality;

(10) Data management, data reduction, validation and reporting. Information shall be accessible to downloading into DTSC's system; and

(11) Internal quality control.

(e) Health and Safety Plan. A site-specific Health and Safety Plan shall be prepared in accordance with federal (29 CFR section 1910.120) and state (Title 8 CCR section 5192) regulations and shall describe the following:

(1) Field activities including work tasks, objectives, and personnel requirements and a description of hazardous substances on OU1;

(2) Key personnel and responsibilities;

(3) Potential hazards to workers including chemical hazards, physical hazards, confined spaces and climatic conditions;

(4) Potential risks arising from the work being performed including the impact to workers, the community and the environment;

(5) Exposure monitoring plan;

(6) Personal protective equipment and engineering controls;

(7) Site controls including work zones and security measures;

(8) Decontamination procedures;

(9) General safe work practices;

(10) Sanitation facilities;

(11) Standard operating procedures;

(12) Emergency response plan covering workers addressing potential hazardous material releases;

(13) Training requirements;

(14) Medical surveillance program; and

(15) Record keeping.

(f) Other Activities. A description of any other significant activities which are appropriate to complete the RI/FS shall be included.

(g) A schedule which provides specific time frames and dates for completion of each activity and report conducted or submitted under the RI/FS Workplan.

5.A.2.3 RI/FS Workplan Implementation. The OU1 Parties shall implement the approved RI/FS Workplan.

5.A.2.4 RI/FS Workplan Revisions. If the OU1 Parties propose to modify any methods or initiate new activities for which no Field Sampling Plan, Health and Safety Plan, Quality Assurance Project Plan or other necessary procedures/plans have been established, the OU1 Parties shall prepare an addendum to the approved plan(s) for DTSC review and approval prior to modifying the method or initiating new activities.

5.A.3 Interim Screening and Evaluation of Remedial Technologies. At the request of DTSC, the OU1 Parties shall submit an interim document which identifies and evaluates potentially suitable remedial technologies and includes recommendations for any treatability studies.

5.A.4 Treatability Studies. If necessary, as determined by DTSC, treatability testing may be performed by the OU1 Parties to develop data for the detailed remedial alternatives. Treatability testing is required to demonstrate the implementability and effectiveness of technologies, unless the OU1 Parties can show DTSC that similar data or documentation or information exists. The required deliverables are: a workplan, a sampling and analysis plan, and a treatability evaluation report. To the extent practicable, and if necessary, treatability studies will be proposed and implemented during the latter part of OU1 characterization.

5.A.5 Remedial Investigation (RI) Report. The additional RI activities will require an RI Report that shall be prepared and submitted by the OU1 Parties to DTSC for review and approval in accordance with an approved RI/FS workplan schedule. The purpose of the RI is to collect data necessary to adequately characterize OU1 for the purpose of defining risks to public health and the environment and developing and evaluating effective remedial alternatives. Site characterization may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation. The OU1 Parties shall identify the sources of contamination and define the nature, extent, and volume of the contamination. Using this information, the contaminant fate and transport shall be evaluated. The RI Report shall contain:

(a) Site Physical Characteristics. Data on the physical characteristics of OU1 and surrounding area shall be collected to the extent necessary to define potential transport pathways and receptor populations and to provide sufficient engineering data for development and screening of remedial action alternatives.

(b) Sources of Contamination. Contamination sources (including heavily contaminated media) shall be defined and evaluated. The data shall include the source locations, type of contaminant, waste characteristics, and OU1 features related to contaminant migration and human exposure.

(c) Nature and Extent of Contamination. Contaminants shall be identified and the horizontal and vertical extent of contamination shall be defined in groundwater. Spatial and temporal trends and the fate and transport of contamination shall be evaluated.

5.A.6 Baseline Health and Ecological Risk Assessment. The OU1 Parties shall perform health and ecological risk assessments for OU1 that meet the requirements of Health and Safety Code § 25356.1.5(b). The OU1 Parties shall submit a Baseline Health and Ecological Risk Assessment Report within 60 days from the submittal of the RI Report. The report shall be prepared consistent with U.S. EPA and DTSC guidance and regulations, including as a minimum: Risk Assessment Guidance for Superfund, Volume 1; Human Health Evaluation Manual, December 1989; Superfund Exposure Assessment Manual, April 1988; Risk Assessment Guidance for Superfund, Volume 2, Environmental Evaluation Manual, March 1989; and all other related or relevant policies, practices and guidelines of the California Environmental Protection Agency and policies, practices and guidelines developed by U.S. EPA

pursuant to 40 CFR 300.400 et seq. The Baseline Health and Ecological Risk Assessment Report shall include the following components:

(a) Contaminant Identification. Characterization data shall identify contaminants of concern for the risk assessment process.

(b) Environmental Evaluation. An ecological assessment consisting of:

(1) Identification of sensitive environments and rare, threatened, or endangered species and their habitats; and

(2) As appropriate, ecological investigations to assess the actual or potential effects on the environment and/or develop remediation criteria.

(c) Exposure Assessment. The objectives of an exposure assessment are to identify actual or potential exposure pathways, to characterize the potentially exposed populations, and to determine the extent of the exposure. Exposed populations may include industrial workers, residents, and subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations, that are identifiable as being at greater risk of adverse health effects due to exposure to hazardous substances than the general population.

(d) Toxicity Assessment. The OU1 Parties shall evaluate the types of adverse health or environmental effects associated with individual and multiple chemical exposures: the relationship between magnitude of exposures and adverse effects; and related uncertainties such as the weight of evidence for a chemical's potential carcinogenicity in humans.

(e) Risk Characterization. Risk characterization shall include the potential risks of adverse health or environmental effects for each of the exposure scenarios derived in the exposure assessment.

5.A.7 Feasibility Study (FS) Report. Within 90 days after receipt of a DTSC request, an FS Report shall be prepared and submitted by the OU1 Parties to DTSC for review and approval. The FS Report shall summarize the results of the FS including the following:

(a) Documentation of all treatability studies conducted.

(b) Development of medium specific or operable unit specific remedial action objectives, including legal requirements and other promulgated standards that are relevant.

(c) Identification and screening of general response actions, remedial technologies, and process options on a medium and/or operable unit specific basis.

(d) Evaluation of alternatives based on the criteria contained in the NCP including:

Threshold Criteria:

(1) Overall protection of human health and the environment.

(2) Compliance with legal requirements and other promulgated standards that are relevant.

Primary Balancing Criteria:

(1) Long-term effectiveness and permanence.

(2) Reduction of toxicity, mobility, or volume through treatment.

(3) Short-term effectiveness.

(4) Implementability based on technical and administrative feasibility:

(5) Cost.

Modifying Criteria:

(1) State and local agency acceptance.

(2) Community acceptance.

5.A.8 Public Participation Plan (Community Relations). The OU1 Parties shall work cooperatively with DTSC in providing an opportunity for meaningful public participation in response actions. Any such public participation activities shall be conducted in accordance with Health and Safety Code sections 25356.1 and 25358.7 and DTSC's most current Public Participation Policy and Guidance Manual, and shall be subject to DTSC's review and approval.

To the extent appropriate, data may be copied from previous public participation planning in the Site area and vicinity. In coordination with DTSC, the OU1 Parties shall conduct a baseline community survey. Within 90 days of the effective date of this Order, the OU1 Parties shall submit a Public Participation Plan (PPP) which will describe how, in this OU1, the public and adjoining community will be kept informed of activities conducted at OU1 and how the OU1 Parties will respond to inquiries from concerned citizens. Major steps in developing a PPP are as follows:

(a) Develop proposed list of interviewees;

(b) Schedule and conduct community interviews; and

(c) Analyze interview notes, and develop objectives.

The OU1 Parties shall implement any of the public participation support activities identified in the PPP, at the request of DTSC. DTSC retains the right to implement any of these

activities independently. These activities include, but are not limited to, development and distribution of fact sheets, public meeting preparations, and development and placement of public notices.

5.A.9 California Environmental Quality Act (CEQA). DTSC must comply with CEQA insofar as activities required by this Order are projects requiring CEQA compliance. Upon DTSC request, the OU1 Parties shall submit any information deemed necessary by DTSC to facilitate compliance with CEQA. The costs incurred by DTSC in complying with CEQA are response costs and the OU1 Parties shall reimburse DTSC for such costs pursuant to Section 6.19.

5.A.10 Remedial Action Plan (RAP). No later than 60 days after receipt of DTSC approval of the FS Report, the OU1 Parties shall prepare and submit to DTSC a draft RAP. The draft RAP shall be consistent with the NCP and Health and Safety Code section 25366.1. The draft RAP public review process may be combined with that of any other documents required by CEQA. The draft RAP shall be based on and summarize the approved RI/FS Reports, and shall clearly set forth:

(a) Health and safety risks posed by the conditions at OU1.

(b) The effect of contamination or pollution levels upon present, future, and probable beneficial uses of contaminated, polluted, or threatened resources.

(c) The effect of alternative remedial action measures on the reasonable availability of groundwater resources for present, future, and probable beneficial uses.

(d) OU1 specific characteristics, including the potential for offsite migration of hazardous substances, surface or subsurface soil and the hydrogeologic conditions, as well as preexisting background contamination levels.

(e) Cost-effectiveness of alternative remedial action measures. Land disposal shall not be deemed the most cost-effective measure merely on the basis of lower short-term cost.

(f) The potential environmental impacts of alternative remedial action measures, including, but not limited to, land disposal of the untreated hazardous substances as opposed to treatment of the hazardous substances to remove or reduce their volume, toxicity, or mobility prior to disposal.

(g) A statement of reasons setting forth the basis for the removal and remedial actions selected. The statement shall include an evaluation of each proposed alternative submitted and evaluate the consistency of the removal and remedial actions proposed by the plan with the NCP.

(h) A schedule for implementation of all proposed removal and remedial actions.

In conjunction with DTSC, the OU1 Parties shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual. Within 10 days of closure of the public comment period, DTSC, with the support of the OU1 Parties, shall prepare a written Responsiveness Summary of all written and oral comments presented and received during the public comment period.

Following DTSC's review and finalization of the Responsiveness Summary, DTSC will specify any changes to be made in the RAP. The OU1 Parties shall modify the document in accordance with DTSC's specifications and submit a final RAP within 30 days of receipt of DTSC's comments.

5.A.11 Remedial Design (RD). Within 60 days after receipt of DTSC approval of the final RAP, the OU1 Parties shall submit to DTSC for review and approval a RD describing in detail the technical and operational plans for implementation of the final RAP which includes the following elements, as applicable:

(a) Design criteria, process unit and pipe sizing calculations, process diagrams, and final plans and specifications for facilities to be constructed.

(b) Description of equipment used to excavate, handle, and transport contaminated material.

(c) A field sampling and laboratory analysis plan addressing sampling during implementation and to confirm achievement of the performance objectives of the RAP.

(d) A transportation plan identifying routes of travel and final destination of wastes generated and disposed.

(e) For groundwater extraction systems: aquifer test results, capture zone calculations, specifications for extraction and performance monitoring wells, and a plan to demonstrate that capture is achieved.

(f) An updated health and safety plan addressing the implementation activities.

(g) Identification of any necessary permits and agreements.

(h) An operation and maintenance plan including any required monitoring.

(i) A schedule for implementation of the remedial action consistent with the schedule contained in the approved RAP including procurement, mobilization, construction phasing, sampling, facility startup, and testing.

5.A.12 Deed Restrictions. If the approved remedy in the Final RAP includes deed restrictions, the current owner(s) of the affected property within OU1 shall sign and record deed restrictions approved by DTSC within 90 days of DTSC's approval of the final RAP. If the OU1 Parties do not own the property to be restricted, the OU1 Parties shall use best efforts to obtain the necessary signatures.

5.A.13 Implementation of Final RAP. Upon DTSC approval of the RD, the OU1 Parties shall implement the final RAP in accordance with the approved schedule in the RD. Within 60 days of completion of field activities, the OU1 Parties shall submit an Implementation Report documenting the implementation of the Final RAP and RD.

5.A.14 Operation and Maintenance (O&M). The OU1 Parties shall comply with all O&M requirements in accordance with the final RAP and approved RD. Within 30 days of the date of receipt of DTSC's request, the OU1 Parties shall prepare and submit to DTSC for approval an O&M workplan that includes an implementation schedule. The OU1 Parties shall implement the workplan in accordance with the approved schedule.

5.A.15 Five-Year Review. The OU1 Parties shall review and reevaluate the remedial action for OU1 after a period of 5 years from the completion of construction and startup, and every 5 year(s) thereafter until such obligation terminates based on agreement by DTSC that the remedial objectives have been met. The review and reevaluation shall be conducted to determine if human health and the environment are being protected by the remedial action. Within 30 days before the end of the time period approved by DTSC to review and reevaluate the remedial action, the OU1 Parties shall submit a remedial action review workplan to DTSC for review and approval. Within 60 days of receipt of DTSC's approval of the workplan, the OU1 Parties shall implement the workplan and shall submit a comprehensive report of the results of the remedial action review. The report shall describe the results of all sample analyses, tests and other data generated or received by the OU1 Parties and evaluate the adequacy of the implemented remedy in protecting public health, safety and the environment. As a result of any review performed under this Section, the OU1 Parties may be required to perform additional work or to modify work previously performed.

5.A.16 Changes During Implementation of the Final RAP. During the implementation of the final RAP and RD, DTSC may propose such additions, modifications, and revisions to the RD as DTSC deems necessary to protect public health and safety or the environment or to implement the RAP.

5.A.17 Stop Work Order. In the event that DTSC determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people in OU1 or in the surrounding area or to the environment, DTSC may order the OU1 Parties to stop further implementation of this Order for such period of time needed to abate the endangerment. If DTSC determines that any OU1 activities (whether or not pursued in compliance with this Order) are proceeding without DTSC authorization, DTSC may order the OU1 Parties to stop further implementation of this Order or activity for such period of time needed to obtain DTSC authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

5.A.18 Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances caused by the release or threatened release of a hazardous substance) during the course of this Order, the OU1 Parties shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify

the Project Manager. The OU1 Parties shall take such action in consultation with the Project Manager and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, the OU1 Parties shall furnish a report to DTSC, signed by the OU1 Parties Project Coordinator, setting forth the events which occurred and the measures taken in the response thereto. In the event that the OU1 Parties fail to take appropriate response and DTSC takes the action instead, the OU1 Parties shall be liable to DTSC for all costs of the response action. Nothing in this Section shall be deemed to limit any other notification requirement to which the OU1 Parties may be subject.

5.A.19 Discontinuation of Remedial Technology. Any remedial technology employed in implementation of the final RAP shall be left in place and operated by the OU1 Parties until and except to the extent that DTSC authorizes the OU1 Parties in writing to discontinue, move or modify some or all of the remedial technology because the OU1 Parties have met the criteria specified in the final RAP for its discontinuance, or because the modifications would better achieve the goals of the final RAP.

5.A.20 Financial Assurance. The OU1 Parties shall demonstrate to DTSC and maintain financial assurance for operation and maintenance and monitoring. The OU1 Parties may request a waiver of these requirements. If no waiver is sought or granted, the OU1 Parties shall demonstrate financial assurance prior to the time that operation and maintenance activities are initiated and shall maintain it throughout the period of time necessary to complete all required operation and maintenance activities. The financial assurance mechanisms shall meet the requirements of Health and Safety Code section 25355.2. All financial assurance mechanisms are subject to the review and approval of DTSC.

5.B. Operable Unit #2

5.B.1 All response actions taken pursuant to this Order shall be consistent with the requirements of Chapter 6.8 (commencing with section 25300), Division 20 of the Health and Safety Code and any other applicable state or federal statutes and regulations.

5.B.1.1 Site Remediation Strategy. A purpose of this Order is to require for OU2: implementation of any appropriate removal actions, completion of a Remedial Investigation/Feasibility Study (RI/FS), preparation of a Remedial Action Plan (RAP), preparation of California Environmental Quality Act (CEQA) documents, and Design and Implementation of the remedial actions approved in the RAP. An overall OU2 investigation and remediation strategy shall be developed by FMC in conjunction with DTSC, which reflects program goals, objectives, and requirements. Current knowledge of the OU2 contamination sources, exposure pathways, and receptors shall be used in developing this strategy.

An objective of the OU2 investigations shall be to identify immediate or potential risks to public health and the environment and prioritize and implement response actions using removal actions, if appropriate, based on the relative risks at OU2. FMC and DTSC shall develop and possibly modify OU2 priorities throughout the course of the investigations. If necessary for the protection of public health and the environment, DTSC may require additional response actions not specified in this Order to be performed as removal actions. Removal actions shall be implemented in accordance with a workplan and implementation schedule submitted by FMC and approved by DTSC.

For operable unit remedial actions, DTSC will specify the separate and focused remedial phase activities to be conducted as RI/FS, RAP, Design, and Implementation. The focused activities shall be conducted in accordance with the corresponding remedial phase requirements specified in this Order, but shall only address the area or problem of the operable unit.

5.B.1.2 Remedial Action Objectives. DTSC has determined that the remedial action objectives for OU2 shall include the protection of existing and potential beneficial uses of groundwater. The Regional Water Quality Control Board Basin Plan identifies public water supply as a beneficial use of this aquifer. Drinking water standards or other appropriate values shall be remedial objectives for this Site.

5.B.1.3 Site Remediation Strategy Meeting. FMC and its Project Coordinator and Project Engineer/Geologist, shall meet with DTSC within 30 days from the effective date of this order to discuss the OU2 remediation strategy. These discussions will include OU2 risks and priorities, project planning, phasing and scheduling, remedial action objectives, remedial technologies, data quality objectives, and an RI/FS workplan for final remedial actions at OU2. These discussions will also include consideration of the Respondents' prior submittals and deliverables to determine whether requirements under this Order may have been fulfilled by such prior submittals or deliverables.

5.B.1.4 Groundwater Removal Action. FMC shall establish hydraulic control of the contaminant plume within OU2. A removal action has been implemented by FMC in accordance with an approved Removal Action Workplan (RAW) and is operational in OU2. FMC will evaluate the effectiveness of the removal action, including any necessary analyses of data gaps to complete the definition of the extent of groundwater contamination, in consultation with DTSC, and determine whether additional actions are necessary.

5.B.1.5 Groundwater Monitoring. FMC shall continue groundwater monitoring in accordance with plans for the regular sampling and gauging of monitoring wells within OU2, and in coordination with the OU1 Parties. Subsequent monitoring shall be conducted until DTSC determines it is appropriate to terminate monitoring.

Within 60 days from the effective date of the Order, FMC shall submit a sampling and analysis plan (SAP) specific to OU2, for the groundwater monitoring wells and supply wells. The SAP shall include the following as a minimum: 1) the location of monitoring and supply wells to be sampled; 2) proposed sampling frequencies; 3) groundwater level determination frequencies; 4) constituents to be analyzed; 5) analytical methodology; 6) schedule for implementation; and 7) indication that reports presenting the results of the data will include interpretive data including contaminant isopleth maps and groundwater elevation contour maps. Upon approval by DTSC, the monitoring and supply well sampling program shall be implemented by FMC in accordance with the schedule contained therein. As additional monitoring wells are constructed, or supply wells are added, amendments to the SAP shall be submitted to DTSC for review and approval and, following approval, implemented.

5.B.2 Remedial Investigation/Feasibility Study (RI/FS). If necessary, as determined by DTSC, additional RI/FS activities will be conducted under DTSC oversight for OU2 consistent

with a "Data Gaps" evaluation performed pursuant to 5.B.1.4 above. Additional RI/FS activities may be performed as a series of focused RI/FSs, if appropriate, based on Site and/or OU2 priorities. Any additional RI/FS shall be prepared consistent with the U.S. Environmental Protection Agency's "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," October 1988. The purpose of the RI/FS is to assess OU2 conditions and to evaluate alternatives to the extent necessary to select a remedy appropriate for OU2. RI and FS activities shall be conducted in such a manner so that the investigations can be completed expeditiously. FMC shall fulfill any additional data and analysis needs identified by DTSC; these additional data and analysis requests will be consistent with the general scope and objectives of this Order.

The following elements of the RI/FS process shall be preliminarily defined in the initial OU2 scoping and refined and modified as additional information is gathered throughout the RI/FS process.

(a) Conceptual Site Model identifying contamination sources, exposure, pathways, and receptors;

(b) Federal, State and local remedial action objectives including applicable legal requirements or relevant and appropriate standards;

(c) Project phasing including the identification of removal actions;

(d) General response actions and associated remedial technology types; and

(e) The need for treatability studies.

5.B.2.1 RI/FS Objectives. The objectives of the RI/FS are to:

(a) The general objective will be to fully characterize the extent of groundwater contamination and evaluate and propose final remedial actions to complete remediation of the groundwater contamination. The final remedial actions will supplement or replace the interim action described in section B.5.1.4 above;

(b) Identify all actual and potential exposure pathways and routes through environmental media;

(c) Determine the magnitude and probability of actual or potential harm to public health, safety or welfare or to the environment posed by the threatened or actual release of hazardous substances at or from the Site;

(d) Identify and evaluate appropriate response actions to prevent or minimize future releases and mitigate any releases which have already occurred; and

(e) Collect and evaluate the information necessary to prepare a RAP.

5.B.2.2 RI/FS Workplan. Within 90 days after receipt of a DTSC request for additional activities under Section 5.B.2 above, FMC shall prepare and submit to DTSC for review and approval a RI/FS Workplan and implementation schedule which covers all the activities necessary to conduct a complete RI/FS of OU2.

The RI/FS Workplan shall include a detailed description of the tasks to be performed, information or data needed for each task, and the deliverables which will be submitted to DTSC. Either FMC or DTSC may identify the need for additional work.

These RI/FS Workplan deliverables are discussed in the remainder of this Section, with a schedule for implementation, and quarterly reports. The RI/FS Workplan shall include all the sections and address each component listed below.

(a) Project Management Plan. The Project Management Plan shall define relationships and responsibilities for major tasks and project management items by FMC, its contractors, subcontractors, and consultants. The plan shall include an

organization chart with the names and titles of key personnel and a description of their individual responsibilities.

(b) Scoping Document. The Scoping Document shall incorporate program goals, program management principles, and expectations contained in the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Part 300), as amended. It shall include:

(1) An analysis and summary of OU2 background and the physical setting. At a minimum, the following information is required:

(A) A map of OU2, and if they exist, aerial photographs and blueprints showing buildings and structures; and,

(B) A description of the characteristics and potential sources of the hazardous substances at OU2.

(2) An analysis and summary of previous response actions including a summary of all existing data including air, soil, surface water, and groundwater data and the Quality Assurance/Quality Control (QA/QC) procedures which were followed;

(3) Presentation of the Conceptual Site (OU2) Model;

(4) The scope and objectives of RI/FS activities;

(5) Preliminary identification of possible response actions and the data needed for the evaluation of alternatives. Removal actions shall be proposed, if needed based on the initial evaluation of threats to public health and the environment. If remedial actions involving treatment can be identified, treatability studies shall be conducted during the

characterization phase, unless FMC and DTSC agree that such studies are unnecessary as set forth in Section 5.B.4; and

(6) If applicable, initial presentation of the Site Remediation Strategy for OU2.

(c) Field Sampling Plan. The Field Sampling Plan shall include:

(1) Sampling objectives, including a brief description of data gaps and how the field sampling plan will address these gaps;

(2) Sample locations, including a map showing these locations, and proposed frequency;

(3) Sample designation or numbering system;

(4) Detailed specification of sampling equipment and procedures;

(5) Sample handling and analysis including preservation methods, shipping requirements and holding times; and

(6) Management plan for wastes generated.

(d) Quality Assurance Project Plan. The plan shall include:

(1) Project organization and responsibilities with respect to sampling and analysis;

(2) Quality assurance objectives for measurement including accuracy, precision, and method detection limits. In selecting analytical methods, Respondents shall consider obtaining detection limits at or below potentially applicable legal requirements or relevant and appropriate standards, such as Maximum Contaminant Levels (MCLs) or Maximum Contaminant Level Goals (MCLGs);

(3) Sampling procedures;

(4) Sample custody procedures and documentation;

(5) Field and laboratory calibration procedures;

(6) Analytical procedures;

(7) Laboratory to be used certified pursuant to Health and Safety Code section 25198;

(8) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;

(9) Reporting procedure for measurement of system performance and data quality;

(10) Data management, data reduction, validation and reporting. Information shall be accessible to downloading into DTSC's system; and

(11) Internal quality control.

(e) Health and Safety Plan. A site-specific Health and Safety Plan shall be prepared in accordance with federal (29 CFR section 910.120) and state (Title 8 CCR section 5192) regulations and shall describe the following:

(1) Field activities including work tasks, objectives, and personnel requirements and a description of hazardous substances on OU2;

(2) Key personnel and responsibilities;

(3) Potential hazards to workers including chemical hazards, physical hazards, confined spaces and climatic conditions;

(4) Potential risks arising from the work being performed including the impact to workers, the community and the environment;

(5) Exposure monitoring plan;

(6) Personal protective equipment and engineering controls;

(7) Site controls including work zones and security measures;

(8) Decontamination procedures;

(9) General safe work practices;

(10) Sanitation facilities;

(11) Standard operating procedures;

(12) Emergency response plan covering workers addressing potential hazardous material releases;

(13) Training requirements;

(14) Medical surveillance program; and.

(15) Record keeping.

(f) Other Activities. A description of any other significant activities which are appropriate to complete the RI/FS shall be included.

(g) A schedule which provides specific time frames and dates for completion of each activity and report conducted or submitted under the RI/FS Workplan.

5.B.2.3 RI/FS Workplan Implementation. FMC shall implement the approved RI/FS Workplan.

5.B.2.4 RI/FS Workplan Revisions. If FMC proposes to modify any methods or initiate new activities for which no Field Sampling Plan, Health and Safety Plan, Quality Assurance Project Plan or other necessary procedures/plans have been established, FMC shall prepare an addendum to the approved plan(s) for DTSC review and approval prior to modifying the method or initiating new activities.

5.B.3 Interim Screening and Evaluation of Remedial Technologies. At the request of DTSC, FMC shall submit an interim document which identifies and evaluates potentially suitable remedial technologies and includes recommendations for any treatability studies.

5.B.4 Treatability Studies. If necessary, as determined by DTSC, treatability testing may be performed by FMC to develop data for the detailed remedial alternatives. Treatability testing is required to demonstrate the implementability and effectiveness of technologies, unless FMC can show DTSC that similar data or documentation or information exists. The required deliverables are: a workplan, a sampling and analysis plan, and a treatability evaluation report. To the extent practicable, and if necessary, treatability studies will be proposed and implemented during the latter part of OU2 characterization.

5.B.5 Remedial Investigation (RI) Report. Any additional RI activities will require an RI Report, or supplemental RI Report, that shall be prepared and submitted by FMC to DTSC for review and approval in accordance with an approved RI/FS workplan schedule. The purpose of the RI is to collect data necessary to adequately characterize OU2 for the purpose of defining risks to public health and the environment and developing and evaluating effective remedial alternatives. Site characterization may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation. Respondents shall identify the sources of contamination and define the nature, extent, and volume of the contamination. Using this information, the contaminant fate and transport shall be evaluated. The RI Report shall contain:

(a) Site Physical Characteristics. Data on the physical characteristics of OU2 and surrounding area shall be collected to the extent necessary to define potential transport pathways and receptor populations and to provide sufficient engineering data for development and screening of remedial action alternatives.

(b) Sources of Contamination. Contamination sources (including heavily contaminated media) shall be defined and evaluated. The data shall include the source locations, type of contaminant, waste characteristics, and OU2 features related to contaminant migration and human exposure.

(c) Nature and Extent of Contamination. Contaminants shall be identified and the horizontal and vertical extent of contamination shall be defined in groundwater. Spatial and temporal trends and the fate and transport of contamination shall be evaluated.

5.B.6 Baseline Health and Ecological Risk Assessment. FMC shall perform health and ecological risk assessments for OU2 that meet the requirements of Health and Safety Code §25356.1.5(b). FMC shall submit a Baseline Health and Ecological Risk Assessment Report within 60 days from the submittal of the RI Report. The report shall be prepared consistent with U.S. EPA and DTSC guidance and regulations, including as a minimum: Risk Assessment Guidance for Superfund, Volume 1; Human Health Evaluation Manual, December 1989; Superfund Exposure Assessment Manual, April 1988; Risk Assessment Guidance for Superfund, Volume 2, Environmental Evaluation Manual, March 1989; and all other related or relevant policies, practices and guidelines of the California Environmental Protection Agency and policies, practices and guidelines developed by U.S. EPA pursuant to 40 CFR 300.400 et seq. The Baseline Health and Ecological Risk Assessment Report shall include the following components:

(a) Contaminant Identification. Characterization data shall identify contaminants of concern for the risk assessment process.

(b) Environmental Evaluation. An ecological assessment consisting of:

(1) Identification of sensitive environments and rare, threatened, or endangered species and their habitats; and

(2) As appropriate, ecological investigations to assess the actual or potential effects on the environment and/or develop remediation criteria.

(c) Exposure Assessment. The objectives of an exposure assessment are to identify actual or potential exposure pathways, to characterize the potentially exposed populations, and to determine the extent of the exposure. Exposed populations may include industrial workers, residents, and subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations, that are identifiable as being at greater risk of adverse health effects due to exposure to hazardous substances than the general population.

(d) Toxicity Assessment. FMC shall evaluate the types of adverse health or environmental effects associated with individual and multiple chemical exposures: the relationship between magnitude of exposures and adverse effects; and related uncertainties such as the weight of evidence for a chemical's potential carcinogenicity in humans.

(e) Risk Characterization. Risk characterization shall include the potential risks of adverse health or environmental effects for each of the exposure scenarios derived in the exposure assessment.

5.B.7 Feasibility Study (FS) Report. Within 90 days after receipt of a DTSC request, an FS Report, or supplemental FS Report, shall be prepared and submitted by FMC to DTSC for review and approval. The FS Report shall summarize the results of the FS including the following:

(a) Documentation of all treatability studies conducted.

(b) Development of medium specific or operable unit specific remedial action objectives, including legal requirements and other promulgated standards that are relevant.

(c) Identification and screening of general response actions, remedial technologies, and process options on a medium and/or operable unit specific basis.

(d) Evaluation of alternatives based on the criteria contained in the NCP including:

Threshold Criteria:

(1) Overall protection of human health and the environment.

(2) Compliance with legal requirements and other promulgated standards that are relevant.

Primary Balancing Criteria:

(1) Long-term effectiveness and permanence.

(2) Reduction of toxicity, mobility, or volume through treatment.

(3) Short-term effectiveness.

(4) Implementability based on technical and administrative feasibility:

(5) Cost.

Modifying Criteria:

(1) State and local agency acceptance.

(2) Community acceptance.

5.B.8 Public Participation Plan (Community Relations). FMC shall work cooperatively with DTSC in providing an opportunity for meaningful public participation in response actions. Any such public participation activities shall be conducted in accordance with Health and Safety Code sections 25356.1 and 25358.7 and DTSC's most current Public Participation Policy and Guidance Manual, and shall be subject to DTSC's review and approval.

To the extent appropriate, data may be copied from previous public participation planning in the Site area and vicinity, and in coordination with DTSC, FMC shall conduct a baseline community survey. Within 90 days of the effective date of this Order, FMC shall submit a Public Participation Plan (PPP) which describes how, in OU2, the public and adjoining community will be kept informed of activities conducted at OU2 and how FMC will respond to inquiries from concerned citizens. Major steps in developing a PPP are as follows:

(a) Develop proposed list of interviewees;

(b) Schedule and conduct community interviews; and

(c) Analyze interview notes, and develop objectives.

FMC shall implement any of the public participation support activities identified in the PPP, at the request of DTSC. DTSC retains the right to implement any of these activities independently. These activities include, but are not limited to, development and distribution of fact sheets, public meeting preparations, and development and placement of public notices.

5.B.9 California Environmental Quality Act (CEQA). DTSC must comply with CEQA insofar as activities required by this Order are projects requiring CEQA compliance. Upon DTSC request, FMC shall submit any information deemed necessary by DTSC to facilitate compliance with CEQA. The costs incurred by DTSC in complying with CEQA are response costs and FMC shall reimburse DTSC for such costs pursuant to Section 6.19.

5.B.10 Remedial Action Plan (RAP). No later than 60 days after receipt of DTSC approval of the FS Report, FMC shall prepare and submit to DTSC a draft RAP. The draft RAP shall be consistent with the NCP and Health and Safety Code section 25366.1. The draft RAP public review process may be combined with that of any other documents required by CEQA. The draft RAP shall be based on and summarize the approved RI/FS Reports, and shall clearly set forth:

(a) Health and safety risks posed by the conditions at OU2.

(b) The effect of contamination or pollution levels upon present, future, and probable beneficial uses of contaminated, polluted, or threatened resources.

(c) The effect of alternative remedial action measures on the reasonable availability of groundwater resources for present, future, and probable beneficial uses.

(d) OU2 specific characteristics, including the potential for offsite migration of hazardous substances, the surface or subsurface soil, and the hydrogeologic conditions, as well as preexisting background contamination levels.

(e) Cost-effectiveness of alternative remedial action measures. Land disposal shall not be deemed the most cost-effective measure merely on the basis of lower short-term cost.

(f) The potential environmental impacts of alternative remedial action measures, including, but not limited to, land disposal of the untreated hazardous substances as opposed to treatment of the hazardous substances to remove or reduce their volume, toxicity, or mobility prior to disposal.

(g) A statement of reasons setting forth the basis for the removal and remedial actions selected. The statement shall include an evaluation of each proposed

alternative submitted and evaluate the consistency of the removal and remedial actions proposed by the plan with the NCP.

(h) A schedule for implementation of all proposed removal and remedial actions.

In conjunction with DTSC, FMC shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual. Within 10 days of closure of the public comment period, DTSC, with the support of FMC, shall prepare a written Responsiveness Summary of all written and oral comments presented and received during the public comment period.

Following DTSC's review and finalization of the Responsiveness Summary, DTSC will specify any changes to be made in the RAP. FMC shall modify the document in accordance with DTSC's specifications and submit a final RAP within 30 days of receipt of DTSC's comments.

5.B.11 Remedial Design (RD). Within 60 days after receipt of DTSC approval of the final RAP, FMC shall submit to DTSC for review and approval a RD describing in detail the technical and operational plans for implementation of the final RAP which includes the following elements, as applicable:

(a) Design criteria, process unit and pipe sizing calculations, process diagrams, and final plans and specifications for facilities to be constructed.

(b) Description of equipment used to excavate, handle, and transport contaminated material.

(c) A field sampling and laboratory analysis plan addressing sampling during implementation and to confirm achievement of the performance objectives of the RAP.

(d) A transportation plan identifying routes of travel and final destination of wastes generated and disposed.

(e) For groundwater extraction systems: aquifer test results, capture zone calculations, specifications for extraction and performance monitoring wells, and a plan to demonstrate that capture is achieved.

(f) An updated health and safety plan addressing the implementation activities.

(g) Identification of any necessary permits and agreements.

(h) An operation and maintenance plan including any required monitoring.

(i) A schedule for implementation of the remedial action consistent with the schedule contained in the approved RAP including procurement, mobilization, construction phasing, sampling, facility startup, and testing.

5.B.12 Deed Restrictions. If the approved remedy in the Final RAP includes deed restrictions, the current owner(s) of the affected property within OU2 shall sign and record deed restrictions approved by DTSC within 90 days of receipt of DTSC's approval of the final RAP. If FMC does not own the property to be restricted, FMC shall use best efforts to obtain the necessary signatures.

5.B.13 Implementation of Final RAP. Upon DTSC approval of the RD, FMC shall implement the final RAP in accordance with the approved schedule in the RD. Within 60 days of completion of field activities, FMC shall submit an Implementation Report documenting the implementation of the Final RAP and RD.

5.B.14 Operation and Maintenance (O&M). FMC shall comply with all O&M requirements in accordance with the final RAP and approved RD. Within 30 days of the date of receipt of DTSC's request, FMC shall prepare and submit to DTSC for approval an O&M workplan that includes an implementation schedule. Respondents shall implement the workplan in accordance with the approved schedule.

5.B.15 Five-Year Review. FMC shall review and reevaluate the remedial action for OU2 after a period of 5 years from the completion of construction and startup, and every 5 year(s) thereafter until such obligation terminates based on agreement by DTSC that the remedial objectives have been met. The review and reevaluation shall be conducted to determine if human health and the environment are being protected by the remedial action. Within 30 days before the end of the time period approved by DTSC to review and reevaluate the remedial action, FMC shall submit a remedial action review workplan to DTSC for review and approval. Within 60 days of receipt of DTSC's approval of the workplan, FMC shall implement the workplan and shall submit a comprehensive report of the results of the remedial action review. The report shall describe the results of all sample analyses, tests and other data generated or received by FMC and evaluate the adequacy of the implemented remedy in protecting public health, safety and the environment. As a result of any review performed under this Section, FMC may be required to perform additional work or to modify work previously performed.

5.B.16 Changes During Implementation of the Final RAP. During the implementation of the final RAP and RD, DTSC may propose such additions, modifications, and revisions to the RD as DTSC deems necessary to protect public health and safety or the environment or to implement the RAP.

5.B.17 Stop Work Order. In the event that DTSC determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people in OU2 or in the surrounding area or to the

environment, DTSC may order FMC to stop further implementation of this Order for such period of time needed to abate the endangerment. If DTSC determines that any OU2 activities (whether or not pursued in compliance with this Order) are proceeding without DTSC authorization, DTSC may order FMC to stop further implementation of this Order or activity for such period of time needed to obtain DTSC authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

5.B.18 Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances caused by the release or threatened release of a hazardous substance) during the course of this Order, FMC shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Manager. FMC shall take such action in consultation with the Project Manager and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, FMC shall furnish a report to DTSC, signed by FMC's Project Coordinator, setting forth the events which occurred and the measures taken in the response thereto. In the event that FMC fails to take appropriate response and DTSC takes the action instead, FMC shall be liable to DTSC for all costs of the response action. Nothing in this Section shall be deemed to limit any other notification requirement to which FMC may be subject.

5.B.19 Discontinuation of Remedial Technology. Any remedial technology employed in implementation of the final RAP shall be left in place and operated by FMC until and except to the extent that DTSC authorizes FMC in writing to discontinue, move or modify some or all of the remedial technology because FMC have met the criteria specified in the final RAP for its discontinuance, or because the modifications would better achieve the goals of the final RAP.

5.B.20 Financial Assurance. FMC shall demonstrate to DTSC and maintain financial assurance for operation and maintenance and monitoring. FMC may request a waiver of these requirements. If no waiver is sought or granted, FMC shall demonstrate financial assurance prior to the time that operation and maintenance activities are initiated and shall maintain it throughout the period of time necessary to complete all required operation and maintenance activities. The financial assurance mechanisms shall meet the requirements of Health and Safety Code section 25355.2. All financial assurance mechanisms are subject to the review and approval of DTSC.

VI. GENERAL PROVISIONS

6.1 Project Coordinator. Within 15 days from the effective date of this Order, the OU1 Parties for OU1, and FMC for OU2, shall separately submit to DTSC in writing the name, address, and telephone number of a Project Coordinator for their respective OUs whose responsibilities will be to receive all notices, comments, approvals, and other communications from DTSC. Respondents shall promptly notify DTSC of any change in the identity of the Project Coordinator for their respective OUs. Respondents shall obtain approval from DTSC before any new Project Coordinator performs any work under this Order. DTSC shall promptly communicate with Respondents regarding such approval.

6.1.1 Communication and Coordination Plan (CCP). Within 30 days from the effective date of this Order, Respondents shall submit to DTSC for approval a CCP which specifies the requirements and procedures by which Respondents will communicate and coordinate with one another in carrying out the requirements of this Order. DTSC shall promptly communicate with Respondents regarding such approval.

6.2 Project Engineer/Geologist. Work performed pursuant to this Order shall be under the direction and supervision of a qualified professional engineer(s) or a registered geologist(s) in the State of California, with expertise in hazardous substance site cleanups. Within 15 days from the effective date of this Order, the OU1 Parties for OU1, and FMC for OU2, shall separately submit to DTSC: a) the name and address of the project engineer or geologist chosen for OU1, and OU2; and b) to demonstrate expertise in hazardous substance cleanup, the resume of the engineer(s) or geologist(s), and the statement of qualifications of the consulting firm(s) responsible for the work. Respondents shall promptly notify DTSC of any change in the identity of the Project Engineer/Geologist(s). Respondents shall obtain approval from DTSC before any new Project Engineer/Geologist performs work under this Order.

6.3 Quarterly Summary Reports. Within 60 days from the effective date of this Order, and on a quarterly basis thereafter, Respondents shall separately submit for their respective OUs a Quarterly Summary Report of activities under the provisions of this Order. The report shall be received by DTSC by the 15th day of each beginning calendar year quarter and shall describe, for each OU:

(a) Specific actions taken by or on behalf of Respondents during the previous quarter;

(b) Actions expected to be undertaken during the current quarter;

(c) All planned activities for the next quarter;

(d) Any requirements under this Order that were not completed;

(e) Any problems or anticipated problems in complying with this Order, and

(f) All results of sample analyses, tests, and other data generated under this Order during the previous quarter, and any significant findings from these data.

6.4 Quality Assurance/Quality Control (QA/QC). All sampling and analysis conducted by Respondents under this Order shall be performed in accordance with QA/QC procedures submitted by Respondents and approved by DTSC pursuant to this Order.

6.5 Submittals. All submittals and notifications from Respondents required by this Order shall be sent simultaneously to:

Mr. James Tjosvold, P.E., Chief
Northern California - Central
Cleanup Operations Branch
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826-3200

Mr. Thomas Kovac, P.E., Chief
Fresno Responsible Party Unit
Northern California - Central
Cleanup Operations Branch
Department of Toxic Substances Control
1515 Tollhouse Road
Clovis, CA 93611

Mr. Russell Walls, P.E.
Regional Water Quality Control Board
Central Valley Region
3614 East Ashlan Avenue
Fresno, CA 93726

6.6 Communications. All approvals and decisions of DTSC made regarding submittals and notifications will be communicated to Respondents in writing by the Central Cleanup Operations Branch Chief, DTSC, or his/her designee. No informal advice, guidance, suggestions or comments by DTSC regarding reports, plans, specifications, schedules or any other writings by Respondents shall be construed to relieve Respondents of the obligation to obtain such formal approvals as may be required.

6.7 DTSC Review and Approval.

(a) All response actions taken pursuant to this Order shall be subject to the approval of DTSC. Respondents shall submit all deliverables required by this Order to DTSC. Once the deliverables are approved by DTSC, they shall be deemed incorporated into, and where applicable, enforceable under this Order.

(b) If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Order fails to comply with this Order or fails to protect public health or safety or the environment, DTSC may:

(1) Modify the document as deemed necessary and approve the document as modified; or

(2) Return comments to Respondents with recommended changes and a date by which Respondents must submit to DTSC a revised document incorporating the recommended changes.

(c) Any modifications, comments or other directives issued pursuant to (a) above, are incorporated into this Order. Any noncompliance with these modifications or directives shall be deemed a failure or refusal to comply with this Order by the Party found to be in non-compliance.

6.8 Compliance with Applicable Laws. Nothing in this Order shall relieve Respondents from complying with all other applicable laws and regulations, including but not limited to compliance with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California Regional Water Quality Control Board. Respondents shall conform all actions required by this Order with all applicable federal, state and local laws and regulations.

6.9 Respondents' Liabilities. Nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current or future operations of Respondents. Nothing in this Order is intended or shall be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from the Site. Nothing in this Order is intended or shall be construed to limit or preclude DTSC from taking any action authorized by law to protect public health or safety or the environment and recovering the cost thereof. Notwithstanding compliance with the terms of this Order, Respondents may be required to take further actions as are necessary to protect public health and the environment. Nothing herein shall be construed as an admission of liability for the releases or threatened releases that are the subject of this Order. Respondents reserve their rights to contest the same as well as the allegations made in this Order. This Order shall not be admissible in evidence in any proceeding except in a proceeding by the Parties to enforce the terms of the Order.

6.10 Site Access. Access to the Operable Unit areas owned or otherwise controlled by Respondents shall be provided at all reasonable times to employees, contractors, and consultants of DTSC. Nothing in this Section is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of any law. DTSC and its authorized representatives shall have the authority to enter and move freely about all property at the Site at all reasonable times for purposes including, but not limited to: inspecting records, operating logs, sampling and analytic data, and contracts relating to this Site; reviewing the progress of Respondents in carrying out the terms of this Order, conducting such tests as DTSC may deem necessary; and verifying the data submitted to DTSC by Respondents.

To the extent the Site or any other property to which access is required for the implementation of this Order is owned or controlled by persons other than Respondents, Respondents shall use best efforts to secure from such persons access for Respondents, as well as DTSC, its representatives, and contractors, as necessary to effectuate this Order. To the extent that any portion of the Site is controlled by tenants of Respondents, Respondents shall use best efforts to secure from such tenants access for Respondents, as well as for DTSC, its representatives, and contractors, as necessary to effectuate this Order. For purposes of this Section, "best efforts" includes the payment of reasonable sums of money in consideration of access. If any access required to complete the work is not obtained within 45 days from the date Respondents receive DTSC notification in writing that access is necessary, Respondents shall promptly notify DTSC, and shall include in that notification a summary of the steps Respondents

have taken to attempt to obtain access. DTSC shall reasonably assist Respondents in obtaining access. DTSC may seek reasonable reimbursement in obtaining access, including, but not limited to, attorneys fees and such amount(s) reasonably required to compensate third parties.

6.11 Site Access for Respondents. The Site owner Respondents shall grant access to other Respondents for the purpose of conducting activities pursuant to this Order or for activities deemed necessary by DTSC to meet the objectives of this Order.

6.12 Sampling, Data and Document Availability. Respondents shall permit DTSC and its authorized representatives to inspect and copy all sampling, testing, monitoring or other data generated by Respondents or on Respondents behalf in any way pertaining to work undertaken pursuant to this Order. Respondents shall make available all such data upon the request of DTSC. Respondents shall inform DTSC at least seven (7) days in advance of all field sampling under this Order, and shall allow DTSC and its authorized representatives to take duplicates of any samples collected by Respondents pursuant to this Order. For their respective OUs, Respondents shall maintain a central depository of the data, reports, and other documents prepared pursuant to this Order.

6.13 Record Retention. All such data, reports and other documents shall be preserved by Respondents for a minimum of ten (10) years after the conclusion of all activities under this Order. If DTSC requests that some or all of these documents be preserved for a longer period of time Respondents shall either comply with that request or deliver the documents to DTSC, or permit DTSC to copy the documents prior to destruction. Respondents shall notify DTSC in writing, at least six months prior to destroying any documents prepared pursuant to this Order.

6.14 Government Liabilities. The State of California shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or related parties specified in Section 6.26, Parties Bound, in carrying out activities pursuant to this Order, nor shall the State of California be held as party to any contract entered into by Respondents or its agents in carrying out activities pursuant to this Order.

6.15 Additional Actions. By issuance of this Order, DTSC does not waive the right to take any further actions authorized by law.

6.16 Extension Requests. If Respondents are unable to perform any activity or submit any document within the time required under this Order, Respondents may, prior to expiration of the time, request an extension of the time in writing. The extension request shall include a justification for the delay. All such requests shall be in advance of the date on which the activity or document is due.

6.17 Extension Approvals. If DTSC determines that good cause exists for an extension, it will grant the request and specify a new schedule in writing. Respondents shall comply with the new schedule incorporated in this Order.

6.18 Liability for Costs. Respondents are liable for all of DTSC's costs that have been incurred in taking response actions at the Site (including costs of overseeing response actions

performed by Respondents and costs incurred in the future). DTSC may, to the extent practicable, allocate such requests for oversight costs between OU1 and OU2.

6.19 Payment of Costs. DTSC may bill Respondents for costs incurred in taking response actions at the Site prior to the effective date of this Order. As to each OU, DTSC may bill Respondents quarterly for their respective OU response costs incurred after the effective date of this Order. Nothing herein shall be construed as a determination by DTSC that the Respondents are not jointly and severally liable for the entirety of DTSC's costs. Respondents shall pay DTSC within sixty (60) days of receipt of any DTSC billing. Any billing not paid within sixty (60) days is subject to interest calculated from the date of the billing pursuant to Health and Safety Code section 25360.1. All payments made by Respondents pursuant to this Order shall be by check or wire transfer made payable to "DTSC," and shall bear on the face the project code of the Site (Site #101491-00), the Docket number of this Order, and OU1 or OU2, as appropriate. Payments shall be sent to:

Department of Toxic Substances Control
Accounting/Cashier
1001 I Street
P.O. Box 806
Sacramento, CA 95812-0806

A photocopy of all payment checks shall also be sent to the person designated by DTSC to receive submittals under this Order.

6.20 Severability. The requirements of this Order are severable and each Respondent shall comply with each and every provision hereof, notwithstanding the effectiveness of any other provision.

6.21 Incorporation of Plans, Schedules and Reports. All plans, schedules, reports, specifications and other documents that are submitted by Respondents pursuant to this Order are incorporated in this Order upon DTSC's approval or as modified pursuant to Section 6.7, DTSC Review and Approval, and shall be implemented by Respondents. Any noncompliance with the documents incorporated in this Order shall be deemed a failure or refusal to comply with this Order by the Party found to be in non-compliance.

6.22 Modifications. DTSC reserves the right to unilaterally modify this Order. DTSC shall provide seven (7) days written notice to Respondents regarding such modification. Any modification to this Order shall be effective upon the date the modification is received by each Respondent, and shall thereafter be deemed incorporated in this Order. Respondents reserve the right to challenge such modification.

6.23 Time Periods. Unless otherwise specified, time periods begin from the effective date of this Order and "days" means calendar days.

6.24 Termination; Satisfaction. Except for Respondents' obligations under Sections 5.A.14 and 5.B.14 Operation and Maintenance (O&M), 5.A.15 and 5.B.15 Five-Year Review, 5.A.20 and 5.B.20 Financial Assurance, 6.13 Record Retention, 6.18 Liability for Costs, and 6.19

Payment of Costs, Respondents' obligations under this Order shall terminate and be deemed satisfied upon Respondents' receipt of written notice from DTSC that Respondents have complied with all the terms of this Order.

6.25 Calendar of Tasks and Schedules. This Section is merely for the convenience of listing in one location the submittals required by this Order. If there is a conflict between the date for a scheduled submittal within this Section and the date within the Section describing the specific requirement, the latter shall govern.

Calendar of Tasks and Schedules Section 6, Both OUs		
1.	Identify Project Coordinator; Section 6.1. Submit Communication and Coordination Plan; Section 6.1.1.	Within 15 days from the effective data of this Order. Within 30 days from the effective date of this Order.
2.	Identify Project Engineer/ Geologist; Section 6.2.	Within 15 days from the effective date of this Order.
3.	Submit Quarterly Summary reports; Section 6.3.	Within 60 days from the effective date of this Order.
4.	Provide copies of sampling data and documentation; Section 6.12. Provide notice before conducting field sampling.	Within 7 days of receipt of DTSC's request. Inform DTSC 7 days in advance of sampling.
5.	Maintain a central depository of data, reports and documentation; Section 6.12. Provide prior written notice to DTSC before destroying and documentation prepared pursuant to the Consent Order; Section 6.13.	Maintain central depository for a minimum of 10 years after conclusion of all activities conducted pursuant to the Order. At least six months prior to destroying any documents.

Calendar of Tasks and Schedules Section 5.A – OU1		
1.	Site Remediation Strategy Meeting; Section 5.A.1.3.	Within 30 days from the date the Order is effective.
2.	Submit Focused Remedial Investigation Work plan; Section 5.A.1.4.	Within 60 days from the date the Order is effective.
3.	Submit RAP or RAW; Section 5.A.1.7.	Within 30 days from DTSC's review and approval of the evaluation required in 5.A.1.6.
4.	Submit groundwater monitoring SAP; Section 5.A.1.8.	Within 60 days from the effective date of the Order.
5.	Submit RI/FS Work Plan; Section 5.A.2.2.	Within 90 days after receipt of a DTSC request for additional activities.
6.	Submit RI Report; Section 5.A.5.	Per approved RI/FS Work plan schedule.
7.	Submit Baseline Risk Assessment Report; Section 5.A.6.	Within 60 days from the submittal of the RI report.
8.	Submit FS Report; Section 5.A.7.	Within 90 days after receipt of DTSC request.
9.	Submit Public Participation Plan; Section 5.A.8. Submit and distribute Fact Sheets.	Within 90 days of the effective date of this Order. For projected or completed key milestones or when requested by DTSC.
10.	Submit CEQA Initial Study related information; Section 5.A.9.	Within time frame requested by DTSC.
11.	Submit Draft RAP; Section 5.A.10. Submit Responsiveness Summary. Submit Final RAP.	Within 60 days after receipt of DTSC approval of the FS Report. Within 10 days of closure of public comment period. Within 30 days of receipt of DTSC comments.
12.	Submit Remedial Design; Section 5.A.11.	Within 60 days of receipt of DTSC approval of the final RAP.
13.	Deed Restrictions; Section 5.A.12.	Within 90 days after DTSC's approval of the final RAP.
14.	Submit Implementation Report; Section 5.A.13.	Within 60 days of completion of field activities.
15.	Submit Remedial Action Review Work plan; Section 5.A.15.	Within 30 days before the end of the time period approved by DTSC to review and reevaluate the remedial action.
16.	Submit Emergency Response Action Report; Section 5.A.18.	Within 7 days of an emergency response action.

Calendar of Tasks and Schedules Section 5.B – OU2		
1.	Site Remediation Strategy Meeting; Section 5.B.1.3.	Within 30 days from the date the Order is effective.
2.	Submit groundwater monitoring SAP; Section 5.B.1.5.	Within 60 days from the effective date of the Order.
3.	Submit RI/FS Work Plan; Section 5.B.2.2.	Within 90 days after receipt of a DTSC request for additional activities.
4.	Submit RI Report; Section 5.B.5.	Per approved RI/FS Work plan schedule.
5.	Submit Baseline Risk Assessment Report; Section 5.B.6.	Within 60 days from the submittal of the RI report.
6.	Submit FS Report; Sections 5.B.7.	Within 90 days after receipt of DTSC request.
7.	Submit Public Participation Plan; Section 5.B.8. Submit and distribute Fact Sheets.	Within 90 days of the effective date of this Order. For projected or completed key milestones or when requested by DTSC.
8.	Submit CEQA Initial Study related information; Section 5.B.9.	Within time frame requested by DTSC.
9.	Submit Draft RAP; Section 5.B.10. Submit Responsiveness Summary. Submit Final RAP.	Within 60 days after receipt of DTSC approval of the FS Report. Within 21 days of closure of public comment period. Within 30 days of receipt of DTSC comments.
10.	Submit Remedial Design; Section 5.B.11.	Within 60 days after receipt of DTSC approval of the final RAP.
11.	Deed Restrictions; Section 5.B.12.	Within 90 days of DTSC's approval of the final RAP.
12.	Submit Implementation Report; Section 5.B.13.	Within 60 days of completion of field activities.
13.	Submit Remedial Action Review Work plan; Section 5.B.15.	Within 30 days before the end of the time period approved by DTSC to review and evaluate the remedial action.
14.	Submit Emergency Response Action Report; Section 5.B.18.	Within 7 days of an emergency response action.

6.26 Parties Bound. This Order applies to and is binding upon Respondents and their successors and assigns. Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants which are retained by them to conduct any work

performed under this Order, within 30 days after the effective date of this Order or the date of retaining their services, whichever is later. Respondents shall condition any such contracts upon satisfactory compliance with this Order. Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that their respective officers, directors, agents, employees, contractors, successors and assigns comply with this Order.

6.27 Change in Ownership. No change in ownership or corporate or partnership status by a Respondent shall in any way alter that Respondents' responsibility under this Order. No conveyance of title, easement, or other interest in the Site, or a portion of the Site, shall affect Respondents' obligations under this Order. Unless DTSC agrees that such obligations may be transferred to a third party, Respondents shall be responsible for and liable for any failure to carry out all activities required of Respondents by the terms and conditions of this Order, regardless of Respondents' use of employees, agents, contractors, or consultants to perform any such tasks. Respondents shall provide a copy of this Order to any subsequent owners or successors before ownership rights or stock or assets in any corporate acquisition are transferred.

6.28 Resolution of Conflict Between Orders. DTSC realizes that due to the existence of multiple site-specific orders and investigations, which are in various stages of implementation, conflicts may arise between the requirements of this Order and the site-specific orders. If such a conflict is discovered, the Project Coordinator(s) shall immediately notify DTSC of such conflict. With notification to the Parties, DTSC may resolve any inconsistencies or conflicts by amending this Order or the site-specific orders, or by taking such other action as appropriate.

6.29 Dispute Resolution. The parties agree to use their best efforts to informally resolve any disputes regarding this Order. The parties agree to follow the procedures in this Section 6.29 to resolve disputes arising under this Order. Respondent(s) reserves its (their) legal rights to contest or defend against any final decision rendered by DTSC under this Section. Disputes regarding DTSC billings shall follow the procedures set forth in Section 6.29.3.

6.29.1 Respondent(s) shall first seek resolution with DTSC's assigned project manager and unit chief. If the issue is not resolved after review by the unit chief, Respondent(s) shall seek resolution with the DTSC branch chief by presenting in a letter the issues in dispute, the legal or other basis for Respondent(s) position, and the remedy sought. The branch chief shall issue a written decision with an explanation for the decision within thirty (30) business days after receipt of the letter from Respondent(s).

6.29.2 If Respondent(s) disagrees with the branch chief's decision, Respondent(s) may appeal to the Statewide Cleanup Operations Division Chief. To appeal to the division chief, Respondent(s) must prepare a letter stating the reasons why the branch chief's decision is not acceptable. Attached to the letter shall be (a) Respondent(s)'s original statement of dispute, (2) supporting documents, and (3) copies of any responses prepared by the project manager, unit chief, and branch chief. This letter and attachments shall be sent to the division chief within ten (10) business days from the date of Respondent(s) receipt of the

branch chief's response. The division chief or designee shall review Respondent(s') letter and supporting documents, consider the issues raised and render a written decision to Respondent(s) within thirty (30) business days of receipt of Respondent(s) letter. The decision of the division chief, or designee, shall constitute DTSC's administrative decision on the issues in dispute.

6.29.3 If Respondent(s) dispute a DTSC billing, or any part thereof, Respondent(s) shall notify DTSC's assigned project manager and attempt to informally resolve the dispute with DTSC's project manager and branch chief. If Respondent(s) desires to formally request dispute resolution with regard to the billing, Respondent(s) shall file a request for dispute resolution in writing within 45 days of the date of the billing in dispute. The written request shall describe all issues in dispute and shall set forth the reasons for the dispute, both factual and legal. If the dispute pertains only to a portion of the costs included in the invoice, Respondent(s) shall pay all costs which are undisputed in accordance with Section 6.19. The filing of a notice of dispute pursuant to this Section shall not stay the accrual of interest on any unpaid costs pending resolution of the dispute. The written request shall be sent to:

Special Assistant for Cost Recovery and Reimbursement Policy
Department of Toxic Substances Control
1001 I Street, 22nd Floor
P.O. Box 806
Sacramento, CA 95812-0806

A copy of the written request for dispute resolution shall also be sent to the person designated by DTSC to receive submittals under this Order. A decision on the billing dispute will be rendered by the Special Assistant for Cost Recovery and Reimbursement Policy or other DTSC designee.

6.29.4 Unless otherwise agreed, or required, the existence of a dispute shall not excuse, stay, or suspend any other compliance obligation or deadline required pursuant to this Order.

VII. EFFECTIVE DATE

The effective date of this Order shall be the last date on which this Order is signed by the Parties.

VIII. SIGNATORIES

Each undersigned representative of the parties to this Order certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to execute and legally bind the Parties to this Order.

This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

IT IS HEREBY AGREED AND ORDERED.

DATE: _____ _____
FMC Corporation

DATE: _____ _____
The Vendo Company

DATE: _____ _____
Weir Floway, Inc.

DATE: 11/26/02 _____
James L. Tjosvold, P.E., Chief
Northern California - Central
Cleanup Operations Branch
Department of Toxic Substances Control

cc: Site Mitigation Program
Headquarters, Planning & Policy
Office of Legal Counsel

VIII. SIGNATORIES

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This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

IT IS HEREBY AGREED AND ORDERED.

DATE: 10-30-02

Robert S. Fabes, Director, Environment
FMC Corporation

DATE: _____

_____
The Vendo Company

DATE: _____

_____
Weir Floway, Inc.

DATE: _____

_____
Mr. James Tjosvold, P.E., Chief
Northern California - Central Cleanup
Operations Branch
Department of Toxic Substances Control

cc: Site Mitigation Program
Headquarters, Planning & Policy
Office of Legal Counsel

20394084v6

VIII. SIGNATORIES

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This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

IT IS HEREBY AGREED AND ORDERED.

DATE: _____

FMC Corporation

DATE: 10/31/02

Michael Vartanian

The Vendo Company

DATE: _____

Weir Floway, Inc.

DATE: _____

Mr. James Tjosvold, P.E., Chief
Northern California - Central Cleanup
Operations Branch
Department of Toxic Substances Control

cc: Site Mitigation Program
Headquarters, Planning & Policy
Office of Legal Counsel

VIII. SIGNATORIES

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This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

IT IS HEREBY AGREED AND ORDERED.

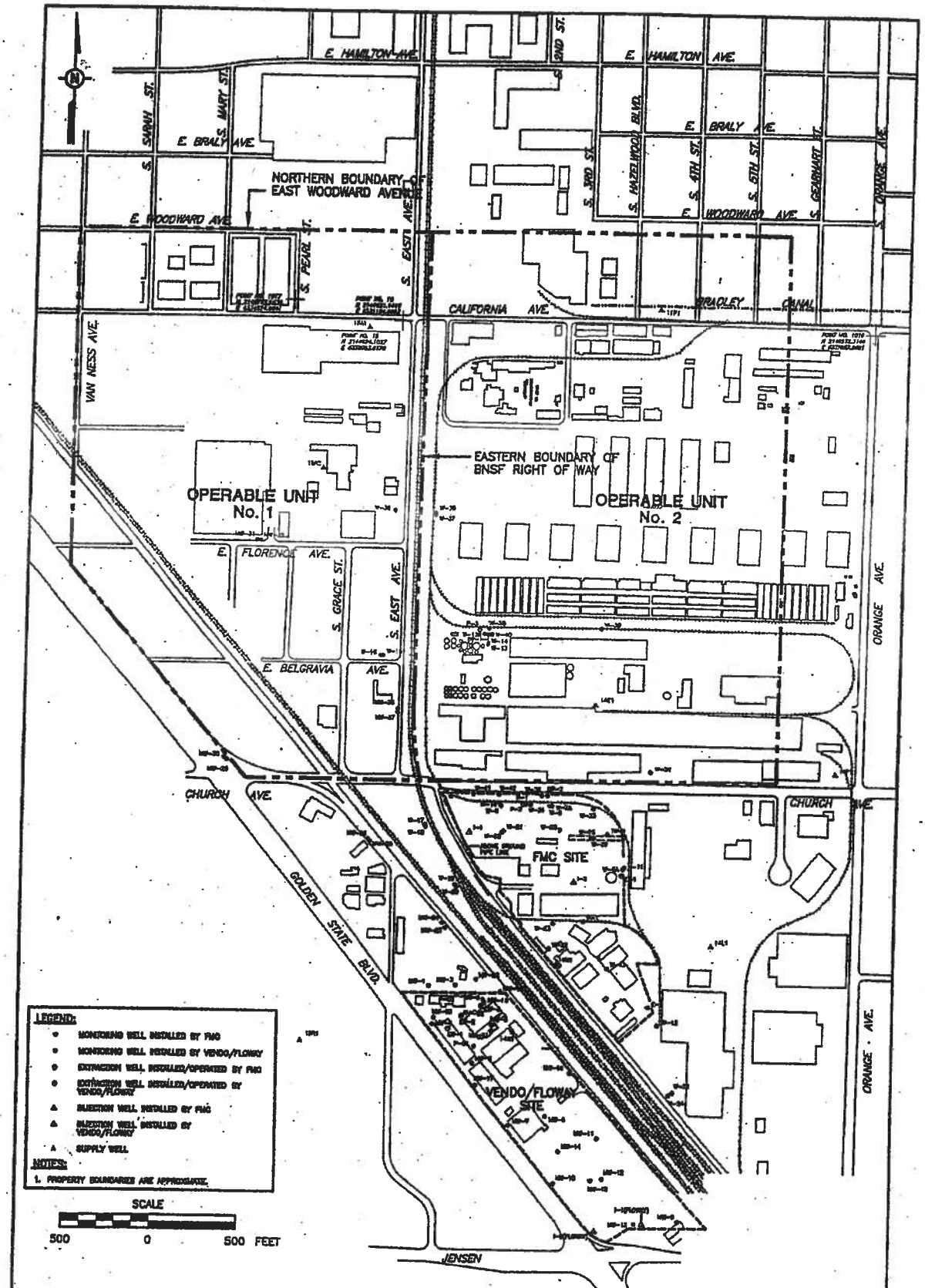
DATE: _____ _____
FMC Corporation

DATE: _____ _____
The Vendo Company

DATE: 10-29-02 _____
Weir Floway, Inc.

DATE: _____ _____
Mr. James Tjosvold, P.E., Chief
Northern California - Central Cleanup
Operations Branch
Department of Toxic Substances Control

cc: Site Mitigation Program
Headquarters, Planning & Policy
Office of Legal Counsel



OPERABLE UNIT BOUNDARIES
SOUTH FRESNO REGIONAL GROUNDWATER PLUME
FRESNO, CALIFORNIA

EXHIBIT A

Fact Sheet, February 2007

Department of Toxic Substances Control

Preventing environmental damage from hazardous waste, and restoring contaminated sites for all Californians.

State of California

California Environmental Protection Agency

GROUNDWATER CLEANUP PROPOSED FOR OPERABLE UNIT #1, SOUTH FRESNO REGIONAL GROUNDWATER PLUME, FRESNO, CA

DRAFT REMEDIAL ACTION PLAN AND PROPOSED NEGATIVE DECLARATION AVAILABLE FOR PUBLIC REVIEW

The Department of Toxic Substances Control (DTSC) is requesting public comment on the Draft Remedial Action Plan (RAP) for Operable Unit #1 (OU1) of the South Fresno Regional Groundwater Plume (SFRGP) (the Site) (see map on page 3). The Draft RAP proposes groundwater cleanup actions to address groundwater impacts for the Site. DTSC is also requesting public comment on the California Environmental Quality Act (CEQA) proposed Negative Declaration for the Draft RAP. This fact sheet provides information concerning the public comment period, site background, the Draft RAP, the proposed Negative Declaration, information repositories, information contacts and mailing list information. The South Fresno Regional Groundwater Plume is on the Cortese List, the Cortese list is a list of contaminated California Sites undergoing clean up.

Public Comment Period

We encourage you to review and comment on the *Draft RAP and the CEQA Negative Declaration* for Operable Unit #1 of the South Fresno Regional Groundwater Plume. DTSC will hold a 30-day public comment period beginning February 28, 2007 and ending March 29, 2007. All written comments must be postmarked by or sent via e-mail no later than 5:00 pm on March 29, 2007 to the following address:

Mr. Tomas Berg, DTSC Project Manager
1515 Tollhouse Road
Clovis, California 93611
or via email at Tberg@dtsc.ca.gov

For questions please call Tom Berg at (559) 297-3901

Public Hearing

DTSC will hold a Public Hearing on Wednesday, March 14, 2007, starting 6:00 PM at the gym facility at Calwa Elementary, 4303 E. Jensen Avenue, Fresno, CA (559) 457-2610. DTSC will respond to written and oral comments submitted at the public hearing as well as written comments received by mail or e-mail by the deadline discussed above.

Site History and Background

The Site is located within the Railroad Avenue corridor, which lies in a highly industrialized area of South Fresno. Many of the industrial facilities within the Railroad Avenue corridor and at the Site have been operating since before World War II, and some of the properties have been used for industrial purposes since the early 1900s. The remediation of the Site is the responsibility of Weir Floway, Inc. and The Vendo Company (Floway/Vendo). Floway/Vendo under DTSC oversight is working to extract groundwater at the Site that is impacted with several chemicals, including Trichloroethylene (TCE), Hexavalent Chromium and other constituents from various sources. Previous investigations to characterize the extent of impacts have shown that drinking water sources have not been affected.

Interim Measure

As an interim remedial measure, a removal action (RA) was initiated at the Site with the startup of two groundwater extraction wells (EWOS-01 and EWOS-02) as a pilot study in May 2003 and subsequently expanded with the startup of two additional wells (EWOS-03 and EWOS-04) in December 2005. The impacted groundwater is extracted and discharged to the sewer where the water is combined with residential and industrial wastewater and treated at the Fresno-Clovis Wastewater Treatment Plant in South Fresno. Groundwater monitoring confirms the presence of separate sources of TCE, Perchloroethylene (PCE) and other constituents of concern in groundwater that came from different sources than the Floway/Vendo Facility.

Draft Remedial Action Plan

The purpose of the Draft RAP is to identify possible alternatives for cleaning up the impacted groundwater, describing the remedial alternatives considered, and soliciting public review and comments on the selected remedy. Also presented in the Draft RAP are the significant findings from the Remedial Investigation (RI), the Health and Ecological Risk Assessment (HERA), and the Feasibility Study (FS). The Draft RAP clearly identifies the remedial action objectives (RAOs), including cleanup levels and timeframes for completion of the remedial actions. Floway/Vendo are not responsible for the cleanup of constituents from sources other then the Floway/Vendo Facility.

Remedial alternatives are screened and evaluated on the basis of nine criteria, as required by the U. S. Environmental Protection Agency, including overall protection of human health and the environment. Four possible alternatives were evaluated:

Alternative 1 – No Action. This evaluates the effects of leaving the Site in its current state.

Alternative 2 – Groundwater Extraction and Discharge to the Sanitary Sewer System.

Alternative 3 – Groundwater Extraction, Treatment and Discharge.

Alternative 4 – In-Situ Treatment.

Based on the evaluation process, the preferred method of cleanup is Alternative 2, groundwater extraction and discharge to the sanitary sewer. This consists of extracting groundwater by using four extraction wells and discharge of the extracted water to the sewer system for treatment at the Fresno-Clovis Wastewater Treatment Plant.

One to four times a year, groundwater monitoring wells (25 wells) will be used to collect groundwater samples to test for the presence and movement of constituents in the groundwater. Results of the groundwater testing will be summarized in groundwater monitoring reports that are available for public review at the information repositories listed in this fact sheet.

California Environmental Quality Act

In accordance with CEQA, an Initial Study was prepared to evaluate potential environmental impacts that may result from the implementation of the Draft RAP. DTSC has determined that because the focus of the Draft RAP is to clean up impacted groundwater, there will be no negative impacts to the environment; DTSC has proposed a Negative Declaration for the actions proposed in the South Fresno Regional Groundwater Plume, Operable Unit #1, and Draft RAP.

FOR MORE INFORMATION

For Draft RAP, please contact: Mr. Thomas Berg DTSC, Project Manager 1515 Tollhouse Road Clovis, California 93611 (559) 297-3978 or via email at Tberg@dtsc.ca.gov

For media questions, please contact, Ron Baker, DTSC Public Information Officer at (916) 324-3142.

For questions regarding the public participation process, please contact:

Jesus Cruz, DTSC Public Participation Specialist 8800 Cal Center Drive Sacramento, California 95826

1 (866) 495-5651 or via email at Jcruz@dtsc.ca.gov

Anuncio

Si prefiere hablar con alguien en español acerca de ésta información, favor de llamar a Jesús Cruz Especialista en Participacion Publica.
El número de teléfono es 1 (866) 495-5651

INFORMATION REPOSITORIES

Copies of the Draft RAP, the CEQA proposed Negative Declaration and other Site related documents are available at the information repositories located at:

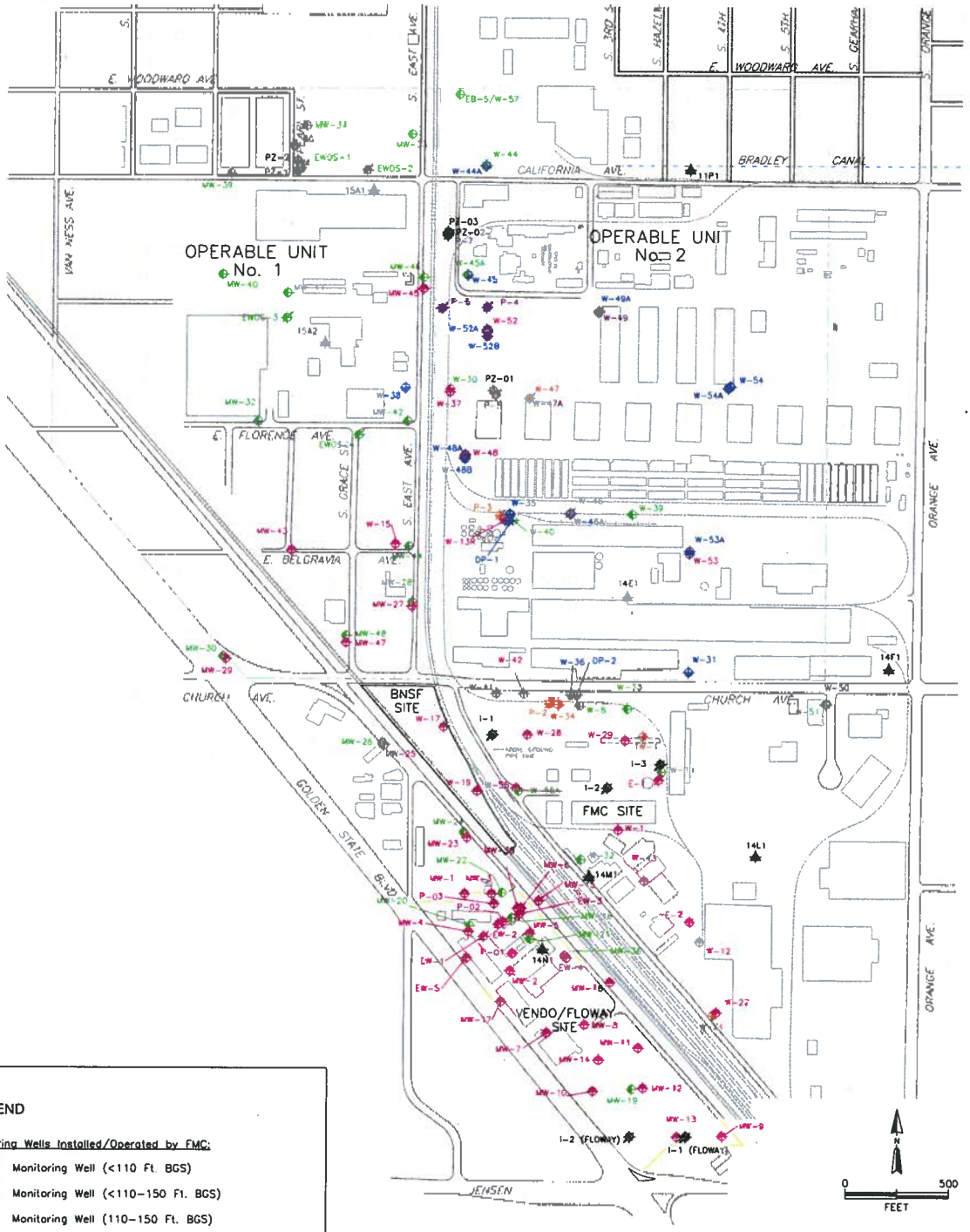
Fresno County Library, Central Branch
Government Documents Department
2420 Mariposa Street
Fresno, California 93721
(559) 488-3195

The full administrative record is available for review at:

Department of Toxic Substances Control
Clovis Office File Room
1515 Tollhouse Road
Clovis, California 93611
(559) 297-3901

NOTICE TO HEARING IMPAIRED INDIVIDUALS

TDD users can use the California Relay Service at 1-888-877-5378 and ask to speak to Jesus Cruz (916) 255-3315



LEGEND

Monitoring Wells Installed/Operated by FMC:

- Monitoring Well (<110 Ft. BGS)
- Monitoring Well (<110–150 Ft. BGS)
- Monitoring Well (110–150 Ft. BGS)
- Monitoring Well (>110–>150 Ft. BGS)
- Monitoring Well (>150 Ft. BGS)
- Extraction Well (<110–150 Ft. BGS)
- Extraction Well (>110–>150 Ft. BGS)

SITE PLAN

FMC CORPORATION
FRESNO, CALIFORNIA

PARSONS

CHECKED BY	Amy Gignac
DRAFTED BY	Jian Liu
FILE	WaterLevel.dwg
LAYER	
DATE	12/2/05

FIGURE 1

G:\Wanshare\ESOL\Jian Liu\FMC\Nov2005\SitePlan.dwg

DRAFT INVESTIGATION REPORT
South Fresno PCE Groundwater Plume
Fresno, California

Prepared for:
California Department of Toxic Substances Control

December 17, 2009

URS Corporation
Job No. 17325959

December 17, 2009

Michael Pfister, PG, CEG, CHg
California Department of Toxic Substances Control
1515 Tollhouse Road
Clovis, CA 93611

Subject: Draft Investigation Report
South Fresno PCE Groundwater Plume
Fresno, California
(URS Job No. 17325959)

Dear Mr. Pfister:

URS Corporation (URS) is pleased to submit the enclosed Draft Investigation Report for the South Fresno Tetrachloroethylene (PCE) Groundwater Plume. The Investigation Report was prepared in accordance with the scope of work set forth in the California Department of Toxic Substances Control (DTSC) Agreement No. 07-T3373.

This Investigation Report was prepared by URS for DTSC in a manner consistent with the level of care and skill ordinarily exercised by professional engineers, geologists, and environmental scientists in the geographic area of the above-referenced study area. URS provides no other warranties, either express or implied, concerning the contents of this Work Plan, which was prepared under the technical direction of the undersigned.

Please feel free to contact us if you have any questions or comments.

Sincerely,
URS Corporation

Frank L. Gegunde, PG
Senior Geologist

Stuart B. St. Clair, PE
Project Manager

Enclosure (1 bound original, 2 bound copies, 1 CD)

c: Scott Rice, URS, Sacramento (1 bound copy, 1 CD)
URS Fresno file (1 bound copy, 1 unbound copy)

IDENTIFICATION AND APPROVAL FORM

Document Title: **INVESTIGATION REPORT**
South Fresno PCE Groundwater Plume, Fresno, CA

Prepared for: Department of Toxic Substances Control
1515 Tollhouse Road
Clovis, California 93611

Prepared by: URS Corporation
2870 Gateway Oaks Drive, Suite 300
Sacramento, California 95833

Approved by: (final version only)

Signature: _____ Date: _____
Name: Stuart St. Clair, PE No. C60945
Title: URS Project Manager

Signature: _____ Date: _____
Name: Scott Rice, PG No. 6030
Title: URS Program Manager

This document has been prepared for the California Environmental Protection Agency (CalEPA), Department of Toxic Substances Control (DTSC) under Agreement No. 07-T3373. The material contained herein is not to be disclosed to, discussed with, or made available to any person or persons for any reason without prior express approval of a responsible officer of DTSC.

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DRAFT INVESTIGATION REPORT
South Fresno PCE Groundwater Plume
Fresno, California

1.0 INTRODUCTION

This Investigation Report was prepared by URS Corporation (URS) for the California Environmental Protection Agency (CalEPA), Department of Toxic Substances Control (DTSC) under Agreement No. 07-T3373. The investigation was performed in accordance with the Investigation Work Plan [URS, 2008} Information and direction from DTSC during the investigation was provided by the DTSC project manager, Michael Pfister, PG, CEG, CHg.

The study area for the investigation is in the southern portion of the City of Fresno, California, and is bounded on the east and west by East and Cherry Avenues, respectively, and on the north and south by Braly and Dorothy Avenues, respectively (Figure 1). Several potentially responsible private parties are currently conducting environmental investigation and/or remediation work related to potential unauthorized releases of chemicals and fuels at industrial/commercial sites within the study area. Tetrachloroethylene (PCE), which is a halogenated volatile organic compound (VOC) solvent, has been detected consistently in groundwater samples collected in the study area. The source of the PCE is unknown – PCE is not known to have been used in substantial quantities at any of the facilities involved with ongoing environmental investigation/remediation work in the study area. The scope of work performed under this contract included the collection of soil vapor and groundwater analytical data to assist in identifying the potential source of the PCE plume in groundwater.

This Investigation Report is organized as follows:

- Section 1.0 presents an introduction to the project.
- Section 2.0 presents the objective and scope of the project.
- Section 3.0 presents a description of the study area.
- Section 4.0 presents background information.
- Section 5.0 presents the environmental setting.
- Section 6.0 presents a summary of the field sampling and laboratory analyses that were performed for the investigation.
- Section 7.0 discusses field variances to the Work Plan that became necessary.
- Section 8.0 presents the findings of the investigation.
- Section 9.0 presents conclusions and recommendations.
- Section 10.0 presents limitations of this document.
- Section 11.0 presents relevant references.
- Figures, tables, and appendices are presented following Section 11.0.

2.0 OBJECTIVE AND SCOPE

The objective of the investigation was to locate the potential source area(s) of the PCE detected in study-area groundwater and to further assess the lateral and vertical extent of PCE in soil gas and groundwater. To meet this objective, the investigation included the following scope of work:

- Evaluating available monitoring well and investigative data regarding detections of PCE in groundwater within the study area.
- Preparing a Work Plan that summarized existing data and presented the proposed sampling and analysis plan, quality assurance procedures, and health and safety plan.
- Performing a passive soil gas survey (PSGS) in two phases that included sample collection at a total of 160 locations. The sampling modules were analyzed for adsorbed VOCs by an environmental laboratory. A separate report was prepared to present the procedures and results of the PSGS [URS, 2009b]. The report also included a City Directory abstract ordered by URS from a vendor. The abstract lists historical occupants for those properties within the study area that had the largest masses of adsorbed PCE on the sampling modules in the soil gas survey.
- Preparing an Addendum to the Work Plan that presented proposed locations for active soil gas sampling [URS, 2009a]. The locations were based upon the results of the PSGS.
- Performing an active soil gas survey (ASGS) that included sample collection at 34 locations. The soil gas samples were analyzed for VOCs immediately after collection by a mobile laboratory. At five of the locations, a second sample was collected in a Summa canister and delivered to a fixed laboratory for confirmation analysis. The survey commenced by performing direct-push continuous soil coring to a depth of approximately 20 feet below ground surface (bgs) at four pilot-hole locations to assess the lithology and select sampling depths for the ASGS. Additionally, four soil samples were collected from the continuous soil cores and submitted for geotechnical laboratory testing of porosity and moisture content.
- Performing lithologic profiling using a Cone Penetration Test (CPT) rig at 5 locations.
- Performing depth-discrete Hydropunch™ groundwater sampling using a CPT rig at 14 locations. Where possible, groundwater samples were collected at two separate depths to evaluate the vertical extent of contamination. The samples were analyzed for VOCs by an environmental laboratory.
- Preparing this Investigation Report summarizing the rationale, procedures, and findings of the investigation.

3.0 STUDY AREA DESCRIPTION

The study area is located in the southern portion of the City of Fresno, California (Figure 1). Land use within the study area primarily consists of industrial and commercial activities. Many of the industrial/commercial facilities in the study area have been operating since the 1940s, and some since the early 1900s [DTSC, 2007]. There is some residential use within the study area, primarily west of East Avenue and within about two blocks north of Church Avenue. No schools or other public areas are present within the study area.

Environmental investigation and/or remediation work related to potential unauthorized releases of chemicals and fuels is underway for four sites within the study area. Pertinent information regarding these sites is provided in Table 1. The locations of these sites are shown on Figure 2.

4.0 BACKGROUND INFORMATION

Environmental investigation and remediation work for the Railroad Avenue Site and the FMC Site have been ongoing for many years. Depth-discrete groundwater samples have been collected at many locations within the study area, and several groundwater monitoring wells have been installed. In 1997, PCE was first detected in groundwater samples collected for the investigation of the Railroad Avenue Site [DTSC, 2007]. Since then, PCE has been detected consistently in groundwater samples collected in the area bounded generally by Woodward Avenue to the north, East Avenue to the east, Church Avenue to the south, and Cherry Avenue to the west (Figure 3). The largest groundwater PCE concentration reported to date was 350 micrograms per liter (μg/L) at monitoring well MW-49 near California Avenue, north of the FMC, Railroad Avenue, and Valley Foundry sites and east of the Rumbley site.

Time-series graphs of PCE concentrations in groundwater monitoring wells are presented on Figure 3 (only wells that have had PCE concentrations larger than 5 μg/L are shown) – the wells with names beginning with the letters "MW" are associated with the Railroad Avenue Site (PCE data provided by the Weir Floway/Vendo consultant), and the wells with names beginning with the letter "W" are associated with the Rumbley Property (PCE data obtained from California's online GeoTracker data warehouse). PCE concentrations appear to be generally increasing at wells MW-31R, MW-39, MW-40, and MW-49. PCE concentrations are largest in the area between wells MW-31R and MW-39. Additional data from the Railroad Avenue Site investigation are provided in Appendix A, including groundwater elevation hydrographs and contour maps and PCE concentrations in depth-discrete groundwater samples.

DTSC has reviewed available historical information regarding industrial facilities within the study area. DTSC has also sent letters to owners and/or operators of several of these facilities, requesting information regarding PCE usage or detections in environmental samples. Evaluation of the combined groundwater analytical data to determine potential source areas for the PCE plume has been inconclusive – sites identified within the study area as likely sources of groundwater contaminants other than PCE are listed on Table 1.

5.0 ENVIRONMENTAL SETTING

This section summarizes available information on the topography, geology, hydrology, and climatology of the study area.

5.1 TOPOGRAPHY

The study area is located in the San Joaquin Valley of California at an average elevation of about 285 feet above mean sea level (amsl) [USGS, 1981]. The topography of the study area is relatively flat and level, sloping gently downward to the southwest at about 7 feet per mile.

5.2 GEOLOGY

The study area lies within the central part of the Great Valley Geomorphic Province of California. The valley is approximately 400 miles long and averages 50 miles wide. The valley has been filled with a thick sequence of marine and nonmarine sediments dating from the late Jurassic to the Holocene periods. The uppermost strata of the Great Valley represent, for the most part, the alluvial, flood, and delta plains of two major rivers (Sacramento and San Joaquin Rivers) and their tributaries.

The study area is located in an area of compound alluvial fans formed by intermittent streams and consisting of sediments derived from the Sierra Nevada mountain range to the east [USGS, 1969]. From ground surface to about 400 feet below ground surface (bgs), the sediments in the study area consist of unconsolidated deposits of Quaternary age. Based on data reported for the Railroad Avenue Site, the stratigraphy in the study area to a depth of about 250 feet bgs consists of predominantly interbedded fine-grained sediments composed of silty fine- to medium-grained sands interbedded with layers of silty- to clayey-sand, sandy- to clayey-silt and silt and minor clay [Geomatrix, 2007b]. Occasional poor to moderately sorted sand layers are present ranging in thickness from less than one foot to more than ten feet. Sand zones ranging in thickness from two to eight feet were consistently encountered at depths of approximately 60, 100, and 120 to 130 feet bgs.

5.3 HYDROLOGY

The nearest natural surface water body to the study area is the San Joaquin River, which is about 9 miles north-northwest of the study area.

The study area is located within the Kings groundwater sub-basin of the Tulare Lake groundwater basin [DWR, 1980]. The uppermost groundwater occurs in an unconfined aquifer in unconsolidated alluvium [USGS, 1969]. The water table in the study area occurs typically at about 70 to 80 feet bgs and fluctuates seasonally by about three feet [Geomatrix, 2007b]. The water table elevation decreased by about 10 feet between 2000 and 2006 [Geomatrix, 2007a]. Based on groundwater elevations in monitoring wells screened at various depths down to 150 feet bgs, the entire depth interval appears to be in relatively good hydraulic communication and to essentially be part of a single aquifer.

Based on historical contour maps published by the California Department of Water Resources (DWR), the unconfined-aquifer groundwater flow direction was toward the west or west-northwest from the 1920s to early 1940s. Thereafter, the flow direction has been consistently

shifting northward, apparently due to a cone of depression under the City caused by groundwater withdrawal via municipal water supply wells. In recent years, the groundwater flow direction in the study area has been toward the northwest at about 30 to 40 degrees west of north [Geomatrix, 2007b].

5.4 CLIMATOLOGY

The climate at the Site is characterized by cool, moist winters and hot, dry summers. Winter low temperatures at the Site are occasionally below 30° Fahrenheit, and summer high temperatures often exceed 100° Fahrenheit. Prevailing winds are typically from the northwest. The mean annual precipitation in the City of Fresno is about 11 inches [WRCC, 2008]. Evaporation amounts in the region significantly exceed precipitation amounts over the course of a typical year.

6.0 SAMPLING AND ANALYSIS SUMMARY

The following subsections describe the sampling and analysis summary for the investigation, including the strategy and approach for sampling (Section 6.1) and details on specific sampling and analysis methods (Section 6.2).

6.1 STRATEGY AND APPROACH

Field sampling was conducted in three distinct stages. The first stage was a PSGS. The second stage was an ASGS. The third stage was lithologic profiling and depth-discrete groundwater sampling using a CPT rig. Sampling locations for the second and third stages were selected based on data collected during previous stages.

Passive soil gas samples were collected in two phases at 160 locations within the study area and submitted to an environmental laboratory for analysis of VOCs adsorbed on the sampling modules. In the first phase, samples were collected at 140 locations across the study area (Figure 4). In the second phase, samples were collected at 20 locations in the area that had the largest masses of adsorbed PCE in the first-phase samples (Figure 5). Many of the sampling locations were within the right of way of public streets. Some of the locations were on private property.

After the laboratory analyses were completed, a Passive Soil Gas Survey Report was prepared to present the procedures and findings of the survey [URS, 2009b]. The report also included a City Directory abstract ordered by URS from a vendor. The abstract lists historical occupants of properties in the area that had the largest masses of adsorbed PCE on the sampling modules. Then, an Addendum to the Work Plan was prepared to present planned sampling locations for the ASGS [URS, 2009a].

At the beginning of the ASGS, four continuously-cored direct push pilot holes were advanced to approximately 20 feet bgs to collect soil matrix samples for evaluating the lithology and selecting the depths of active soil gas sampling. Four soil matrix samples from the continuously-cored direct push pilot holes were submitted for geotechnical laboratory testing of porosity and moisture content. Then, active soil gas samples were collected at 34 locations and analyzed for VOCs immediately after collection by a mobile laboratory (Figures 6 and 7). At each location, a sample was collected at a depth of approximately 6 feet bgs. At two of the locations, a deeper sample was also collected at approximately 15 feet bgs. In addition, at five of the locations, a second soil gas sample was collected in a Summa canister and delivered to an independent, fixed laboratory for confirmation analysis.

CPT probing and/or depth-discrete groundwater sampling was performed at 14 locations (Figure 8). CPT probing was used to evaluate lithologic conditions at five locations (Table 2). Depth-discrete groundwater sampling using Hydropunch™ equipment was attempted at 14 locations and was successful at five locations – refusal was met at the other 9 locations (Table 3). At three of the five successful locations, samples were collected at two different depths in the interval between 94 and 125 feet bgs. At the other two successful locations, refusal was met slightly below the first sampling depth, so that a second, deeper sample was not possible. The groundwater samples were submitted to a California-accredited environmental laboratory for analysis of VOCs.

In all three stages of field sampling, the sampling locations were recorded using Global Positioning System (GPS) equipment, as well as by pacing or rough measurements from nearby landmarks, such as building corners, as documented in the written field records.

6.2 SAMPLING AND ANALYSIS METHODS

This subsection describes the sampling and analysis methods that were used during this investigation. Sample collection procedures are discussed in Section 6.2.1. Sample handling and documentation procedures are discussed in Section 6.2.2. Sample analytical procedures are discussed in Section 6.2.3. Decontamination procedures are discussed in Section 6.2.4. Investigative waste management procedures are discussed in Section 6.2.5.

6.2.1 Sample Collection

The subsections below describe the sample collection methods and procedures.

6.2.1.1 Legal Access, Permits, and Utility Clearance

Prior to field sampling, legal access, necessary permits, and utility clearance were obtained. DTSC obtained legal access from private property owners. A permit was obtained from the City of Fresno for sampling within the right of way of public City streets. A permit was obtained from the California Department of Transportation for the three passive soil gas samples completed within the right of way of State Route 99, immediately north of Jensen Avenue (Figure 4). Copies of permits obtained for this investigation are presented in Appendix B. Underground Services Alert was contacted to mark underground utilities at least 2 working days prior to the initiation of intrusive field tasks. A private utility locator checked for underground utilities in selected planned sampling locations.

6.2.1.2 Passive Soil Gas Sampling

GORE™ modules obtained from W.L. Gore & Associates, Inc. (Gore Associates) were used for the passive soil gas survey. Each of the GORE modules was installed as follows:

- An approximately ¾-inch diameter test hole was advanced to a depth of 2 to 3 feet bgs using a hand drill. If drilling through an asphalt pavement surface layer was required, a separate drill bit was used to penetrate the asphalt to prevent smearing of the asphalt into the test hole.
- The GORE module was removed from its shipping container, and the module serial number and sample location name were recorded, along with the date and time of module insertion.
- A stainless steel insertion rod was used to insert the GORE module into the test hole.
- The GORE module was suspended in the test hole on a cord attached to a cork that sealed the top of the hole. The sample location was flagged for later module retrieval, but the flag was placed several feet away from the cork to avoid drawing attention to the cork.

The GORE modules were left in the test holes for a period of 11 to 15 days for Phase 1 and a period of 12 days for Phase 2. The period length was selected in consultation with Gore

Associates after reviewing the study area conditions with their personnel. At the end of the selected sampling period, each of the GORE modules was retrieved as follows:

- The GORE module was removed from the test hole and placed in its shipping container. The date and time of module retrieval was recorded, along with the condition of the cork and module (e.g., evidence of tampering during sampling period).
- The pilot hole was fully sealed with hydrated bentonite chips. Surface pavement, if present, was patched.

Six of the 140 modules were not retrieved in Phase 1 – five that had cords break (due to downhole blockage) when retrieval was attempted, and one that could not be found. Each of the 20 modules were retrieved in Phase 2. The GORE modules were shipped to Gore Associates for laboratory analysis, as discussed in Section 6.2.3.

6.2.1.3 Active Soil Gas Sampling

A California C57-licensed drilling company collected active soil gas samples using a direct push Geoprobe-type rig and analyzed the samples in a mobile laboratory within 30 minutes after sample collection. The ASGS was conducted in accordance with the current DTSC *Advisory - Active Soil Gas Investigations* [DTSC, 2003] that incorporates the Regional Water Quality Control Board, Los Angeles Region (LARWQCB) *Interim Guidance for Active Soil Gas Investigation* [LARWQCB, 1997]. In accordance with DTSC, 2003, active soil gas sampling did not occur during any rainfall or within seven days after a heavy rain event. Probe installation and soil gas sampling were performed as follows:

<u>Probe Installation</u>

- The temporary soil gas probe emplacement method described in Section 2.2.5.B of DTSC, 2003 was used.
- A decontaminated, dual-sleeve, hollow steel drive rod was hydraulically pushed to the desired sampling depth.
- The outer sleeve of the drive rod was retracted to allow soil gas to enter the drive rod at the bottom.
- Hydrated bentonite was used to seal around the drive rod at the ground surface to prevent ambient air intrusion.
- New silicone tubing was attached to the top of the drive rod at ground surface.
- Leak tests were conducted with tracer gas (isopropyl alcohol, also known as 2-propanol) placed near and around the sample train to check for intrusion of ambient air. In the event the leak-check compound was detected in the sample, the hydrated bentonite seal around the drive rod was reset and retested until no tracer gas was detected.

<u>Soil Gas Sampling</u>

- Prior to collecting the soil gas samples, site-specific purging tests were conducted to determine the appropriate purging volume. Based on these tests, it was concluded that

three purge volumes should be evacuated from the sampling train prior to sample collection, and this procedure was used for each sample.

- The soil gas probes were left undisturbed for a minimum of 20 minutes prior to sampling to allow the soil gas to equilibrate.
- The tubing exiting the surface of the ground was connected to an electric vacuum pump, which pumped the appropriate purge volume prior to sampling. The soil gas sample was collected in a gas-tight syringe by puncturing the tubing that connects the sampling probe to the pump. The air flow rate during soil gas purging and sampling was limited to less than 200 milliters per minute, in accordance with DTSC, 2003.
- The soil gas samples were immediately transferred to the mobile lab for direct injection into a gas chromatography/mass spectroscopy (GC/MS) instrument, as discussed in Section 6.2.3.
- At the locations selected for confirmation sampling using Summa canisters, the tubing was cut prior to where the syringe-puncture occurred, and the tubing was attached to the regulator on the Summa canister. The regulator was fitted previously with a restrictor to prevent the canister from filling at a flow rate of larger than 200 milliliters per minute. The canister was evacuated to more than 25 inches of mercury gauge pressure by the laboratory prior to sampling. The vacuum pressure was recorded prior to opening the regulator valve. The valve was left open until the vacuum gauge pressure approximately 4 inches of mercury. Then, the valve was closed and the tubing removed from the regulator. The Summa canisters were shipped to a qualified environmental laboratory for analysis, as discussed in Section 6.2.3.
- At the locations selected for deeper samples, the steel drive rod was removed from the hole, and a second decontaminated, dual-sleeve, hollow steel drive rod was hydraulically pushed to the deeper desired sampling depth. Then, the above procedure was repeated to collect the deeper active soil gas sample.
- After sampling was completed, the steel drive rod was removed from the hole, and the hole was fully sealed with hydrated bentonite chips.

6.2.1.4 Soil Matrix Sampling

At the beginning of the ASGS, a California C57-licensed drilling company advanced test holes for collecting soil matrix samples using a direct push Geoprobe-type rig. Continuous-core soil matrix samples were collected to depths of approximately 20 feet bgs at locations AG03, AG18, AG21, and AG26 (Figures 6 and 7). Continuous-core, soil matrix samples were collected using 1.75-inch diameter core barrel samplers with new acetate liners. The sampler was driven by hydraulic pressure and a vibrating hammer. As the sampler was advanced, soil was pushed into the inner acetate liner. After being driven approximately 4 feet, the rods were removed from the borehole. The liner containing the soil was then removed from the sample barrel and the lithology noted on a test-hole log. Selected 6-inch-long sections were cut off, capped on both ends with Teflon film and plastic caps, labeled for analysis, placed in a ziplock bag, and stored in a protective container. Four samples were shipped to a geotechnical engineering laboratory for analysis, as discussed in Section 6.2.3.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** South Fresno Regional Groundwater Plume Area North of Church Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking north

Description:

View of the Union Pacific Railroad and Railroad Avenue, the dividing line between plume operational unit one (UO-1) and OU-2 north of Church Avenue.

Photo No.
2

Direction Photo Taken:

Looking northwest

Description:

Long-established businesses along Railroad Avenue in the commercial OU-1 area. Proposed alignments lay within the plume area.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** South Fresno Regional Groundwater Plume Area North of Church Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking north

Description:

Commercial area within the plume north of Church.

Photo No.
4

Direction Photo Taken:

Looking northwest

Description:

Weir/Floway (formerly Vendo) – source area for the OU-1 plume.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** South Fresno Regional Groundwater Plume Area North of Church Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking northwest

Description:

Monitoring wells and remediation well field in the Weir/Floway south yard.

Photo No.
6

Direction Photo Taken:

Looking east

Description:

FMC is the source area for the plume in OU-2.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** South Fresno Regional Groundwater Plume Area North of Church Avenue, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
7

Direction Photo Taken:

Looking east

Description:

FMC warehouse and chemical formulation buildings. Note the concrete “berm” in the lower front of the frame installed to keep stormwater runoff onsite.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: VACANT LOTS (2) APN 48018107 APN 48018108

EDR ID Number: S107737517 S107737518

Date of Inspection: 3/5/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: FRANK CEGUNDE

URS Office: FRESNO, CA

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

VACANT LOTS (2)
2368 S. GRACE + 2376 S GRACE
FRESNO, CA 93721
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: 2 ~0.2 AC LOTS

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
NONE				
(1 SEA TRAIN CARGO BOX - LOCKED); CONTENTS UNKNOWN				

3. The **general topography** of the site area is:

slightly (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S (E) W

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

NONE - VACANT

Is equipment washed onsite? NO
Is maintenance conducted onsite? If so, what types? NO
Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) (residential) commercial light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North RESIDENTIAL

South SMALL LOT USED TO STORE SEVERAL NON-RUNNING CARS; UNION PACIFIC RAILROAD TRACKS; CHURCH AVE.

East GRACE STREET; RESIDENTIAL / COMMERCIAL DEVELOPMENT

West VACANT LOT; UNION PACIFIC RAILROAD TRACKS; RAILROAD AVENUE; COMMERCIAL DEVELOPMENT

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

2 GROUNDWATER MONITORING WELLS LOCATED SOUTHEAST OF THE SITE ALONG GRACE STREET; NOTHING VISIBLE ONSITE

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch! NONE

Are there any ASTs/USTs, active or inactive, present at the site currently? N/O, formerly? UNKNOWN

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? N/A

11. Have there been any releases? N/A

To whom were the releases reported? N/A

What is status of release investigation? N/A

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **(No)** **Unknown**

Was an asbestos survey conducted and what were the results? NO

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **(No)** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **(No)** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: PALLETS AND OTHER WOOD DEBRIS; SCRAP STEEL, PIPE ETC.

Accumulated in: compactor? Dumpster? located: N S E W of the building. N/W CORNER OF SITE

Hauled off by: NOT HAULED AWAY

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **(No)** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
NONE OBSERVED OR REPORTED					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? NO, Describe

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** (No) **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) NONE

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.?

if so, describe: N/A

Where is wastewater discharged: N/A

			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe: NONE ONSITE THERE ARE TWO GW MONITORING WELLS LOCATED ~ 80 AND ~ 120 FEET SOUTH OF THE SITES, ALONG GRACE STREET

19. **STORMWATER**

Describe how stormwater is managed: INFILTRATION OR SHEET RUNOFF TO THE EAST

Does the stormwater flow to a combined sewer? No

Does water run-off from neighboring facilities and have potential to impact this facility? No

20. **WETLANDS**

Any known/delineated wetlands at the site? No, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** (No) **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

PCE + TCE

Are there groundwater monitoring wells at this facility? No

Where are these wells located?

TWO GW MONITORING WELLS LOCATED ~ 80 AND ~ 120 FEET SOUTH OF THE SITES, ALONG GRACE STREET

Are regulatory agencies involved with monitoring? USEPA + DTSC

Status of investigation/remediation program? USEPA - PASI INACTIVE - NEEDS EVALUATION (3/20/06); PCE AND TCE WERE DETECTED IN GROUNDWATER AT A LOCATION ~450 FEET DOWN GRADIENT OF THE PROPERTIES. A USEPA DISCOVERY DOCUMENT WAS COMPLETED 3/8/06.

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes No**	**Yes No**
_____	_____	_____	**Yes No**	**Yes No**

24. **USED OIL**

Does this facility generate used oil? No

Describe the types and sources of used oil generated: _____

_____

Are all containers of used oil labeled accordingly? _____

Describe how and where used oil is stored and handled:

_____

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

_____

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

2368 + 2376 S Grace ST
POVERELLO HOUSE PROPERTY - FRESNO, CA

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Vacant Lots 2368 and 2376 S Grace Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
1

Direction Photo Taken:

Looking northwest

Description:

View of the two vacant lots from near the southeast corner.

Photo No.
2

Direction Photo Taken:

Looking southwest

Description:

View across the two lots from the northeast corner. Note the locked cargo container in the southwest corner of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Vacant Lots 2368 and 2376 S Grace Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
3

Direction Photo Taken:

Looking north

Description:

View of the west side of the site, along the Union Pacific tracks.

Photo No.
4

Direction Photo Taken:

Looking north

Description:

Looking across the west side of the site. Scrap metal and some concrete and wooden pallet debris are hidden by the tall grass.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Vacant Lots 2368 and 2376 S Grace Street, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-5-10

Photo No.
5

Direction Photo Taken:

Looking east

Description:

View of the site from the southwest corner. The pickup and semi-trailer in the frame are parked on Grace Street on the east side of the site.

Photo No.
6

Direction Photo Taken:

Looking south

Description:

Two monitoring wells located on Grace Street approximately 150 feet south of the site. Note the Union Pacific tracks in the background.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: Copeland Property
Date of Inspection: 3/9/10
Site Inspector: Thomas Pender

EDR ID Number: S106486160
Requires Follow-up Site Visit: Yes (No)
Requires Agency File Review: (Yes) No
URS Office: Fresno

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

Copeland Property
541 Hwy 46
Wasco, Ca 93280
County: Kern

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: 2.4 acres

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
abandoned Scale Bldg	1	~20x20'	400	unk.
abandoned Clothing Store	1	~40'x60'	2400	unk.

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S (E) W

4. Are the following located on or **adjacent to the subject site**?

Surface water: no
Wetlands: no
Floodplains: no
Parklands: no
Sensitive habitats: no

5. Please list **current visible onsite activities**:

none; abandoned Scale + abandoned Clothing Store, ~~Possibly~~ former ~~service station~~ Ag Chemical Distribution facility

Is equipment washed onsite? no
Is maintenance conducted onsite? If so, what types? no
Is fueling conducted onsite? no

6. **Site Area:**
General site area is (circle) residential commercial light industrial heavy industrial rural
other

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North Hwy 46, vacant lots, various light Industrial Properties

South Caltrans Maintenance Station-Wasco (AST-Diesel + Gas), Empty lots

East J Street, Chevron Gas Station (new), Circle K Store, Ag land (orchard seedlings)

West Recycling Facilities (several Businesses), Junkyards

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):
Groundwater Monitoring Wells and or SVE Wells (10 or more), for Soil Vapor Sampling + VOC analysis, Borings for metals/pesticide analysis

8. **Utilities-list all visable utility services (power lines, meters etc)**
Electric Service by: PG&E
Gas Service by: Gas Company
Water Service by: City of Wasco
Wastewater Service by: unknown
Steam by: N/A

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? no, formerly? unknown

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A	~~unknown~~	~~Gas or Diesel~~	~~unknown~~	unknown	Y / N	Y / N	~~Removed~~
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? n/a

11. Have there been any releases? ~~[illegible]~~ yes, specifics unknown, possible VOCs, Pesticides, metals

To whom were the releases reported? ~~[illegible]~~ Vern County Enviro Health Dept.

What is status of release investigation? Ongoing Remediation, monitoring, SVE Remediation System Being Installed, Soil Samples Collected in Various Borings

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by:_____

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? Possible Contaminated Soil from Borings unknown - disposal location

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
Pole Mounted	Transformer - PG&E	ok	unknown	unknown	

17. **DRINKING WATER**

What is source of drinking water at the site? City of Wasco or Onsite Well?

What is source of process water for the site? n/a or n/a

What is the source of drinking water for surrounding properties? City of Wasco

Are there any wells known to exist at the site? Yes, Describe Soil Vapor Extraction Wells, Geomatrix Site Map shows groundwater well

If wells are used for drinking water at the site, obtain water quality data n/a

Describe any onsite surface water resources: none or

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) Possible Purge Water from Monitoring Wells

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.?

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:
None Evident, neighboring property has Septic (Cal Trans yard)
Site plan (Geomatrix) shows Groundwater well

19. **STORMWATER**

Describe how stormwater is managed: Street flow Runoff

Does the stormwater flow to a combined sewer? no

Does water run-off from neighboring facilities and have potential to impact this facility? no

20. **WETLANDS**

Any known/delineated wetlands at the site? no, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **(No)** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? unknown

If yes, list the contaminants:
Possible Hydrocarbons, VOC's,

Are there groundwater monitoring wells at this facility? unknown

Where are these wells located?
SVE wells present, primarily along Western property line, possible Monitoring wells

Are regulatory agencies involved with monitoring? Yes

Status of investigation/remediation program? RWQCB, DTSC?

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes** **No**	**Yes** **No**
_____	_____	_____	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? no

Describe the types and sources of used oil generated: n/a

Are all containers of used oil labeled accordingly? n/a

Describe how and where used oil is stored and handled:

n/a

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

Photo Log

Date: _____

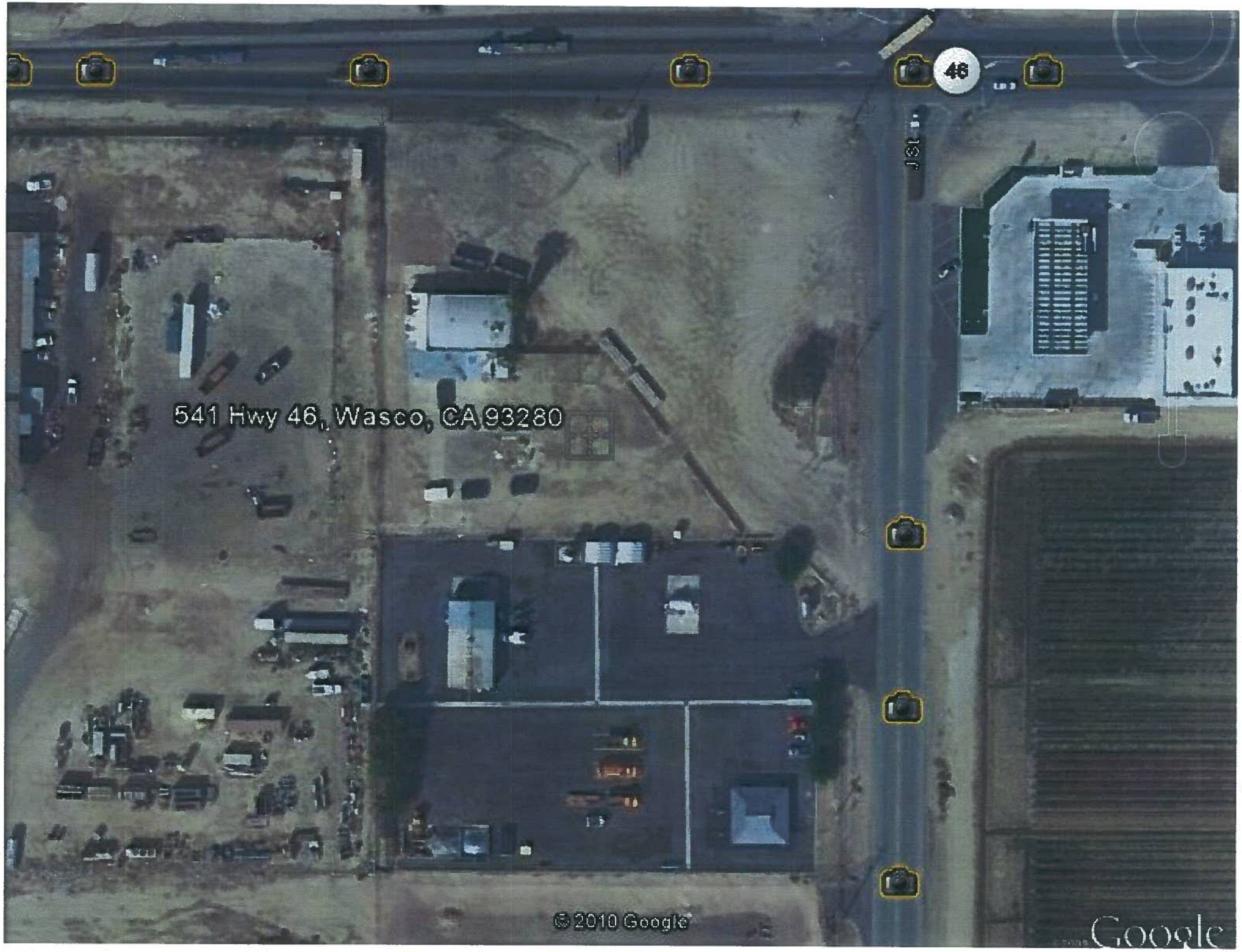
Project: _____ **Project Number:** _____

Location / Site _____

URS Field Staff: _____

Photo Number	Direction of Photo	Location - Description

Page _____ **of** _____


46
1st
541 Hwy 46, Wasco, CA 93280
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PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Copeland Property 541 Highway 46, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
1

Direction Photo Taken:

Looking west

Description:

View near the southwest corner of the site. Note soil vapor extraction (SVE) system. Structures in the background are not onsite. Brick and steel-sided structure in the right of the frame is the only building on the site.

Photo No.
2

Direction Photo Taken:

Looking southwest

Description:

View of brick and steel-sided structure located near the western edge of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Copeland Property 541 Highway 46, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
3

Direction Photo Taken:

Looking south

Description:

View of the west side of the site and the west side of the steel-sided structure. Note the SVE well.

Photo No.
4

Direction Photo Taken:

Looking southwest

Description:

Hazardous materials sign on the exterior of the steel-sided structure.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Copeland Property 541 Highway 46, Wasco, CA 93280	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
5

Direction Photo Taken:

Looking south

Description:

View of the site from the northwest corner.

Photo No.
6

Direction Photo Taken:

Looking southwest

Description:

View of the site from the northeast corner.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: KVS Transportation, Inc.

EDR ID Number: 1000455676

Date of Inspection: 3/9/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: Thomas Fender

URS Office: Fresno

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

KVS Transportation, Inc
3752 Allen Road
Bakersfield, CA 93312
County: Kern

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: 16.8 acres

Site Buildings: 8

Name	Number of stories	Dimensions	Square Footage	Year Built
office (3)	1			
(4) Maintenance Shops	1			
(1) Storage Bldg	1			

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S (E) W

4. Are the following located on or **adjacent to the subject site**?

Surface water: no

Wetlands: no

Floodplains: no

Parklands: no

Sensitive habitats: no

5. Please list **current visible onsite activities**:

Transportation Facility, Maintenance yard, Dispatch Center for Trucks, fuel tanks vacuum trucks & other fluid storage containers, mostly in support of Oilfield activities

Is equipment washed onsite? Yes

Is maintenance conducted onsite? If so, what types? yes, Routine Tractor + Trailer Maintenance & Repair

Is fueling conducted onsite? Yes

6. **Site Area:**
General site area is (circle) residential commercial light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North Access Road

South Various Commercial & light Industrial Businesses/Warehouses – American Kids Sports Center, Bakersfield Pool plastering, Advanced Gunite, Gold Coast Electric + (2) unmarked Bldgs.

East ~~Santa Fe~~ BNSF Railroad, Vacant Lots, Residential.

West Allen Road, Vacant Lots, Residential

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

NO

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: The Gas Company

Water Service by: Vonn Water Company

Wastewater Service by: Ø

Steam by: Ø

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? yes, formerly? yes

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U/A	1000 gal	Waste Oil			Y/N	Y/N	
U/A	(3) 500 gal	Lube Oil			Y/N	Y/N	
U/A	(2) 1000	Diesel/Gas			Y/N	Y/N	Removed

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? Good, Minor Leaks, Secondary Containment on All tanks

11. Have there been any releases? Former LUST Site, Minor Release, contained by Liner, Investigation & Removal of affected Soil

To whom were the releases reported? Kern County Dept of EH

What is status of release investigation? LUST Case Closed 10/30/02 - Clean

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
Compressed Gasses				
Lube Oils/other Petroleum				
Anti freeze/Waste Antifreeze				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: _____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: City

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? Waste Oil, etc, disposed by Recycler

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? no if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
none					

17. **DRINKING WATER**

What is source of drinking water at the site? Vonn Water

What is source of process water for the site? n/a or

What is the source of drinking water for surrounding properties? Same

Are there any wells known to exist at the site? No, Describe possible abandoned supply well

If wells are used for drinking water at the site, obtain water quality data

Describe any onsite surface water resources: none or

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) n/a

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? n/a

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:
none visible

19. **STORMWATER**

Describe how stormwater is managed: Sheetflow runoff (~~generally to west~~) impounds on East

Does the stormwater flow to a combined sewer? no

Does water run-off from neighboring facilities and have potential to impact this facility? no

20. **WETLANDS**

Any known/delineated wetlands at the site? no, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? (Yes) **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)
~250 trucks (not all here) Diesel

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? no
If yes, list the contaminants:

Are there groundwater monitoring wells at this facility? no

Where are these wells located?

Are regulatory agencies involved with monitoring? no

Status of investigation/remediation program?

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
	Diesel	old Dispensers	**Yes** **No**	**Yes** **No**
			Yes **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? yes

Describe the types and sources of used oil generated: Lube oil / Motor Oils, other petroleum product.

Are all containers of used oil labeled accordingly? yes

Describe how and where used oil is stored and handled:
Ast 9 drums, disposed to Recycler

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

Photo Log

Date: _____

Project: _____ **Project Number:** _____

Location / Site _____

URS Field Staff: _____

Photo Number	Direction of Photo	Location - Description

Page _____ **of** _____

Allen Rd
3752 Allen Rd, Bakersfield, CA 93312
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PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** KVS Transportation, Inc. 135 Commercial Drive, Shafter, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
1

Direction Photo Taken:

Looking west

Description:

KVS yard. Tractors, tanker trailers, and mobile 21,000-gallon "frac" tanks are stored here.

Photo No.
2

Direction Photo Taken:

Looking northwest

Description:

Truck and equipment maintenance shop. Note above-ground storage tanks.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** KVS Transportation, Inc. 135 Commercial Drive, Shafter, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
3

Direction Photo Taken:

Looking west

Description:

Another view of the truck and equipment maintenance shop.

Photo No.
4

Direction Photo Taken:

Interior view

Description:

Used oil storage tank in secondary containment in the shop area.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** KVS Transportation, Inc. 135 Commercial Drive, Shafter, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
5

Direction Photo Taken:

Interior view

Description:

Used antifreeze tank in secondary containment in the shop area.

Photo No.
6

Direction Photo Taken:

Looking west

Description:

View of stored parts and equipment in the KVS Transportation yard.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** KVS Transportation, Inc. 135 Commercial Drive, Shafter, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-9-10

Photo No.
7

Direction Photo Taken:

Looking north

Description:

Storm water impoundment on the east end of the site, along the BNSF tracks.

Photo No.
8

Direction Photo Taken:

Looking south

Description:

Storm water impoundment on the east end of the site, along the BNSF tracks.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: GREYHOUND BUS DEPOT

EDR ID Number: S106175454

Date of Inspection: 3/10/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEGUNDE

URS Office: FRESNO, CA

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

GREYHOUND BUS DEPOT
1033 BROADWAY (1033 H STREET)
FRESNO, CA 93721
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

VINCE HERNANDEZ - MAINT. SUPERVISOR (TANKS REMOVED 8-10 YEARS AGO)

Site Acreage: ~1.5 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
TERMINAL/DEPOT	1	~370 x 77	~28,400	?

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the (N) S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

BUS TERMINAL/DEPOT

Is equipment washed onsite? YES
Is maintenance conducted onsite? If so, what types? YES; MINOR BUS MAINTENANCE
Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North MARIPOSA STREET; FRESNO COUNTY EMPLOYEES RETIREMENT ASSOCIATION; COMMERCIAL DEVELOPMENT

South TULARE STREET; FRESNO FIRE DEPARTMENT; S/E - CHUKCHANSI PARK (BASEBALL STADIUM)

East H STREET; PARKING; EXECUTIVE PLAZA (PROFFESIONAL OFFICE SPACE

West FRESNO STATION (PROFFESIONAL OFFICES - FORMER S.P. TRAIN DEPOT); S.P. RAILROAD TRACKS (UNION PACIFIC RAILROAD)

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or (remedial activities), abnormal odors, the presence of unnatural fill material or soil grading):

SOIL BORINGS IN THE AREA OF THE FORMER USTs

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG+E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? NO, formerly? YES

USTs REMOVED ~ 8 TO 10 YEARS AGO

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	~~Active~~ Removed ~~Closed or~~
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.?_____

11. Have there been any releases? YES

To whom were the releases reported? RWQCB

What is status of release investigation? CORRECTIVE ACTION PLAN (CAP) BEING REVIEWED; PILOT STUDY WORK PLAN BEING DEVELOPED

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
MOTOR OIL; GREASE; MINOR AMOUNTS OF CLEANING SOLVENTS STORED IN SHOP AREA				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located N S E W of the building.

Hauled off by: IWS

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? MINOR AMOUNTS OF USED OIL; FILTERS

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
3 pole-mounted transformers located at the south end of the depot structure - Good condition					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or NA

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? No, Describe

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

HEAT-EXCHANGE COOLING UNIT LOCATED AT THE SOUTH END OF THE STRUCTURE; REST ROOMS IN STORE TERMINAL BUILDING

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? NO

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

NO

19. **STORMWATER**

Describe how stormwater is managed: SHEET RUNOFF TO MUNICIPAL STORM DRAIN

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? (Yes) **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

GREYHOUND BUSES

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? UNKNOWN; SOIL CONTAMINATION MAY HAVE MIGRATED TO GROUND WATER VIA A GRAY WATER PIPE LEAK FROM THE DEPOT SEWER LINE

If yes, list the contaminants:

NAPHTHALENE

2-METHYLNAPTHALENE

TPH-d ; TPH-o

Are there groundwater monitoring wells at this facility? NO

Where are these wells located?

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program? CAP BEING EVALUATED; PILOT STUDY BEING DEVELOPED

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** (**No**) **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes No**	**Yes No**
_____	_____	_____	**Yes No**	**Yes No**

24. **USED OIL**

Does this facility generate used oil? YES

Describe the types and sources of used oil generated: MOTOR OIL FROM BUSES

Are all containers of used oil labeled accordingly? YES

Describe how and where used oil is stored and handled:

STORED IN DRUMS IN SECONDARY CONTAINMENT; REMOVED BY LICENSED CONTRACTOR (ASBURY ENVIRONMENTAL)

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** (**No**) **Unknown**

Are lead acid batteries stored or used onsite? (**Yes**) **No** **Unknown** (NEW BATTERIES)

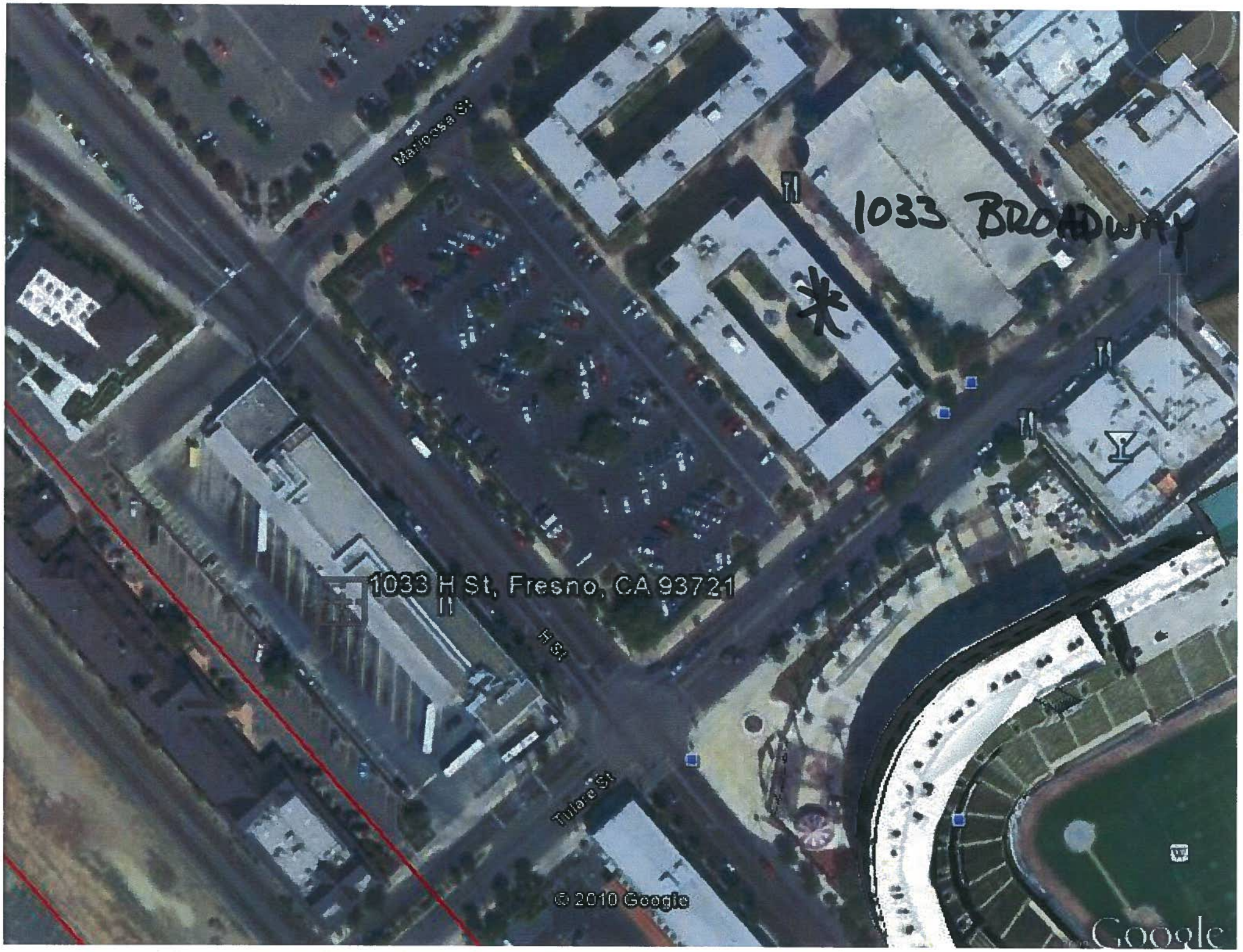
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? (**Yes**) **No** **Unknown**

Is it maintained by onsite personnel? (**Yes**) **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** (**No**) **Unknown**

Are there any hydraulic lifts onsite? **Yes** (**No**) **Unknown**

VENCE HERNANDEZ - MAINTENANCE SUPERVISOR


1033 BROADWAY
Mariposa St
1033 H St, Fresno, CA 93721
H St
Tulare St
© 2010 Google
Google

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E., Chair

1685 E Street, Fresno, California 93706
(559) 445-5116 • Fax (559) 445-5910
http://www.waterboards.ca.gov/centralvalley

Arnold Schwarzenegger
Governor

1 December 2009

Ms. Stephanie Colman
Environmental Compliance Administrator
Greyhound Lines, Inc.
MS 0084
350 North St. Paul Street
Dallas, TX 5201

UNDERGROUND STORAGE TANK RELEASE, GREYHOUND BUS DEPOT, 1033 BROADWAY, FRESNO, FRESNO COUNTY

You submitted *Corrective Action Plan* (CAP) dated 28 September 2009 and prepared in your behalf by Green Star Environmental, L.L.C., Lewisville, Texas (Green Star). The CAP evaluates remedial options at the subject underground storage tank (UST) release site. This letter contains a summary of CAP elements, identifies concerns, notes concurrence or non-concurrence with recommendations, and sets dates for the next phase of tasks.

CAP Summary

The CAP was developed to address the chemicals naphthalene and 2-methylnapthalene, which were detected in soil samples at concentrations exceeding San Francisco Bay Water Board Environmental Screening Levels (ESLs) as wells as diesel- and motor oil-range total petroleum hydrocarbons (TPH-d and TPH-mo). Green Star evaluated soil excavation, soil vapor extraction (SVE), and natural attenuation (no further action) as remedial options for impacted soil.

The high cost of soil excavation, including engineering controls, construction, and disruption of Greyhound's operating terminal make excavation infeasible. Impacted soil was found to extend to 60 feet below ground surface (boring 9a) and extensive shoring and other engineering controls would be necessary to preserve the nearby terminal building. The canopy on the building wall would also need to be removed and replaced.

SVE is not a feasible option, as chemicals of concern are semi-volatile or non-volatile, while SVE effectively remediates gasoline and solvent releases. Limited source area mass would be removed. EPA guidance indicates that SVE is not effective to remove chemicals with less than 1 millimeter of mercury (mm Hg) vapor pressure. The vapor pressure of naphthalene and 2-methylnapthalene is less than 0.1 mm Hg.

Green Star recommends natural attenuation as the remedial option for the subject UST release site. The site has been a bus depot for 50 years and commercial site use is not

expected to change in the future. Adjacent and vicinity properties are zoned commercial and include parking lots, railroad right-of-way, commercial buildings, warehouses, retail businesses, and a minor league baseball stadium.

Sensitive receptors were not discovered within 500 feet of the subject site. Green Star identified water wells within a 0.5-mile radius of the site based on California Department of Water Resources records. Most wells were municipal wells and the closest well was 0.16-mile from the site. Municipal wells were screened below 100 feet bgs and are not considered a complete exposure pathway. Impacted soil does not extend beneath the terminal building. A sanitary sewer and non-potable water lines are in the vicinity of the impacted soil. There is no direct exposure to impacted soil due to concrete paving, but future construction might cause worker exposure to shallow impacted soil.

Green Star recommends case closure.

Comments

Central Valley Water Board staff concurs with Green Star that soil excavation does not appear to be a feasible remedial option, due to the expected cost, the need for engineering controls to prevent damage to the nearby terminal building, and disruption of the operating bus terminal. However, staff does not concur that natural attenuation (no further action) is the most feasible remedial alternative and we do not concur that case closure is appropriate. You have not demonstrated that bioventing or other in-situ remedial methods are not feasible to reduce source area hydrocarbon mass. Further, limited mass reduction, including naphthalene concentration reduction, is also possible with SVE, in staff's experience.

We may concur that naturally attenuation is a feasible remedial option if some hydrocarbon mass is removed and if naphthalene and 2-methylnapthalene concentrations are reduced. We will also consider no further action if in-situ remediation is shown to be infeasible by pilot testing. In any event, case closure may be appropriate if remaining hydrocarbon mass does not pose a significant health risk. It will be necessary to conduct a health risk evaluation, including shallow soil gas sampling, prior to case closure.

Leakage from the sanitary sewer and non-potable water lines may have contributed to the relatively deep vertical migration of hydrocarbon constituents (particularly in the vicinity of boring 9a). This is also supported by increased napthalene concentrations detected in deeper soil samples.

At present we request that you submit a work plan for pilot testing to evaluate the effectiveness of an in-situ remedial technology. Pilot test data are to be incorporated into a revised CAP. Please submit the work plan by **2 March 2010**.

Please notify Mr. John Whiting at least five days in advance of fieldwork. You may call (559) 445-5504 or email at *jwhiting@waterboards.ca*.gov if you have questions concerning this letter.

Original signed by:

JOHN D. WHITING, PG No. 5951
Engineering Geologist
Underground Storage Tanks Section

Original signed by:

JOHN M. NOONAN, RCE No. 35206
Senior WRC Engineer
Underground Storage Tanks Section

cc: Ms. Barbara Rempel, UST Cleanup Fund, Sacramento
Mr. Steven T. Rhodes, Fresno County Environmental Health Division
Ms. Debra M. Boopsingh, Green Star Environmental, Lewisville, Texas

Linda S. Adams
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

30 July 2009

Ms. Stephanie Colman
Environmental Compliance Administrator
Greyhound Lines, Inc.
MS 0084
350 North St. Paul Street
Dallas, Texas 75201

EXTENSION REQUEST - UNDERGROUND STORAGE TANK RELEASE, GREYHOUND BUS DEPOT, 1033 BROADWAY, FRESNO, FRESNO COUNTY

Regional Water Board staff (staff) grants an extension for submittal of a Corrective Action Plan (CAP) for the subject underground storage tank (UST) release site. Ms. Debra Boopsingh of Green Star Environmental, Arlington, Texas (Green Star) requested the extension in your behalf by a letter of 2 July 2009 (Request).

By letter of 5 May 2009 staff provided an extension until 1 June 2009 for an additional site assessment report and until 6 July 2009 for the CAP. You conducted site assessment fieldwork during March 2009 and summarized the investigation in Green Star's *Preliminary Investigation and Evaluation Report* dated 29 May 2009.

The Request indicates that you need a 60-day extension for CAP submittal, as the CAP could not be prepared until the assessment was completed.

Your request for an extension is granted. Please submit the CAP by **8 September 2009.**

Please notify me at least five days in advance of fieldwork. You may call (559) 445-5504 or email at *jwhiting@waterboards.ca.*gov if you have questions concerning this letter.

Original signed by:

JOHN D. WHITING, P.G. No. 5951
Engineering Geologist
Underground Storage Tanks Section

cc: Ms. Barbara Rempel, SWRCB, UST Cleanup Fund, Sacramento
Mr. Steven T. Rhodes, Fresno County Environmental Health Division, Fresno
Ms. Debra M. Boopsingh, Green Star Environmental, L.L.C., Arlington, Texas

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, PE, Chair

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1685 E Street, Fresno, California 93706
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Arnold Schwarzenegger
Governor

27 February 2008 Regional Board Case No. 5T10000365

Mr. Robert Richardson
Greyhound Lines, Inc.
350 North St. Paul Street, MS0084
Dallas, Texas 75201

UNDERGROUND STORAGE TANK RELEASE, GREYHOUND BUS DEPOT, 1033 BROADWAY, FRESNO, FRESNO COUNTY

The Fresno County Department Of Community Health, Environmental Health Division (FCEHD), in a letter dated 11 October 2007, referred the subject site to this office for regulatory oversight in relation to a release of petroleum hydrocarbons from the former underground storage tank (UST) system. The documents submitted indicate that concentrations of diesel-range petroleum hydrocarbons up to 8,000 milligrams per kilogram (mg/kg) were detected in soil samples collected from beneath the remote fill pipes during January 1993 UST system removals. TPH-d was also detected at low concentrations in the UST excavation. Approximately 175 cubic yards of visibly impacted soil was excavated and transported to a recycling facility. Site assessment conducted during November 1994 defined the vertical and lateral extent of remaining hydrocarbon impacts. Petroleum hydrocarbons were present from approximately 5 to 25 feet below ground surface near the remote fill pipes. During April 1995, the FCDEH reportedly did not grant case closure until residual contamination was removed, but allowed contamination to remain in place until a later time due to the presence of supporting structures for the building canopy.

Prior to consideration of remedial options or case closure, you will need to further characterize chemicals of concern (COCs) in the residual contamination, as previous soil sample analytical programs were limited to analysis for total petroleum hydrocarbons as diesel (TPH-d). Please submit a workplan to characterize chemicals of concern by **29 May 2008**. The workplan, in general, must comply with *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Storage Tank Sites* and *Appendix A-Reports Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Storage Tank Sites,* available at the following web site: *http://www.swrcb.ca.gov/rwqcb5/available_documents/index.html#anchor617894.*

The workplan must include a sampling and analysis plan for soil, including at a minimum, rational for sampling and analysis frequency, sample preservation methods, laboratory quality assurance/quality control procedures, proposed detection limits, analytical methods and a list of analytes for those methods. All potential COCs identified by previous site assessment or associated with petroleum release sites will be included in the initial analysis. The potential

COCs for soil are to initially include, at a minimum, TPHg, total petroleum hydrocarbons as referenced to diesel (TPHd), total petroleum hydrocarbons as referenced to motor oil (TPHmo), benzene, toluene, ethylbenzene, and xylenes (BTEX), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), total lead, methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), and tertiary butyl alcohol (TBA). As diesel fuel was released, analysis for semivolatile organic compounds, including naphthalene and polynuclear aromatic hydrocarbon compounds should also be proposed. The sampling frequency does not necessarily need to include analysis of all samples for all COCs. However, the sampling and analysis frequency must be adequate to define the vertical and lateral extent of the COCs beneath the site and off-site such that remedial options can be assessed. In addition, the sampling plan may propose that future analyses for the COCs be performed by different methods than the initial analyses, once the presence or absence of potential COCs have been confirmed. The initial sampling is to include analytical methods that clearly demonstrate the presence or absence of potential COCs.

The workplan must include a time schedule to implement the plan and submit reports. All technical submittals must contain the signature and seal of a California registered engineer, certified engineering geologist, or registered geologist who is responsible for the content of the submittal.

You will also need to evaluate the feasibility of removing the supporting structures and overhead awning to allow excavation of residual contaminated soil based on current site operations. Please submit a letter report evaluating feasibility by **29 May 2008**.

If you have evidence to support identification of other potentially responsible parties for the soil contamination at this site, please identify them now by providing such evidence so they may be notified of the potential responsibility. Evidence should include the beginning and ending dates and type of involvement, the names and current addresses of all potentially responsible parties, and copies of any documents that would verify the terms and conditions of involvement.

Our records indicate that you are the "primary or active" responsible party for the subject site. Under the "landowner notification" of Health and Safety Code, Section 25299.37.2, all current record owners of fee title to the site are required to be notified of your proposed actions relating to investigation, cleanup, and closure of this site. Prior to **29 May 2008,** please provide a complete mailing list of all record fee title owners. You are to certify in writing that the list is complete and contains the names and address of all record fee title owners. If you are the only record fee title owner, please so state in your certified list of record fee title owners. You shall copy all future correspondence to us regarding this site to the record fee title owners and they shall be encouraged to comment on your proposed actions to cleanup and close this site. Also, if ownership of fee title to the site changes prior to closure, you shall within 30 days of recording a change in ownership provide us with a complete mailing list of all new record fee title owners and certify that it is complete.

California Water Code Sections 13195-13195.7 requires that you submit analytical and site data electronically. On January 1, 2005, the State Water Board adopted regulations that require electronic submittal of information (including reports) for soil and groundwater of

underground storage tank (UST) cases. Details are available on the following web page: *http://www.waterboards.ca.gov/ust/cleanup/electronic_reporting/index.html*

Lastly, you should be aware of legislation to assist owners and operators of underground tanks. Senator Keene's Senate Bill 2004 (Cleanup Fund Program) offers several forms of assistance for investigation and cleanup of underground tank discharges. You may want to contact the State Water Resources Control Board at (800) 813-3863 about the Cleanup Fund Program. If you have not already applied for the Cleanup Fund Program, we strongly urge that you do. An application form for and information on the Cleanup Fund Program are available at the following web address:
http://www.waterboards.ca.gov/cwphome/ustcf/index.html

Should you have questions regarding this matter please contact me at (559) 445-5504.

Original signed by:

JOHN D. WHITING
Engineering Geologist
PG No. 5951

cc: Ms. Barbara Rempel, SWRCB, UST Cleanup Fund, Sacramento
Mr. Steven T. Rhodes, Fresno County Environmental Health Division
Ms. June Weirich, Greyhound Lines, Inc., Dallas Texas
Mr. Leonard C. Albright, Green Star Environmental, Lewisville, Texas

File: UST/Fresno/Greyhound Bus Depot, 1031 Broadway, Fresno/5T10000457
R:\Reg\UGT\Projects\JDW_files\2008 Correspondence\Fresno CityCounty Cases\Greyhound Bus Depot 1stLtr1-08.doc

FA01	GREYHOUND BUS DEPOT	1033	BROADW/	FRESNO	93721	GREYHOI CONTAMINATED UST SITE/RWQCB LEAD AGENCY
FA01	GREYHOUND BUS DEPOT	1033	BROADW/	FRESNO	93721	GREYHOI HAZARDOUS WASTE GENERATOR (CESQG)
FA01	GREYHOUND BUS DEPOT	1033	BROADW/	FRESNO	93721	GREYHOI UST REMOVAL/CLOSURE W/2 TANKS
FA01	GREYHOUND BUS DEPOT	1033	BROADW/	FRESNO	93721	GREYHOI AUTO REPAIR/MAINTENANCE MODEL PLAN

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Greyhound Bus Depot 1033 Broadway (1033 H Street), Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
1

Direction Photo Taken:

Looking southwest

Description:

East side of the Greyhound Bus Depot along H Street.

Photo No.
2

Direction Photo Taken:

Looking east

Description:

View of the south end of the Depot along Tulare Street.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Greyhound Bus Depot 1033 Broadway (1033 H Street), Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
3

Direction Photo Taken:

Looking north

Description:

View of the bus terminal driveway and loading area on the west side of the Depot.

Photo No.
4

Direction Photo Taken:

Looking south

Description:

View of the bus terminal driveway and loading area on the west side of the Depot. Note the historic Southern Pacific Railroad Depot beyond the block wall on the right-center of the frame.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Greyhound Bus Depot 1033 Broadway (1033 H Street), Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
5

Direction Photo Taken:

Looking west

Description:

View from the north end of the Depot across H Street and along Mariposa Street.

Photo No.
6

Direction Photo Taken:

Looking north

Description:

Former location of USTs beneath the bus loading area.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Greyhound Bus Depot 1033 Broadway (1033 H Street), Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
7

Direction Photo Taken:

Looking north

Description:

Evidence of soil borings in the former UST location.

Photo No.
8

Direction Photo Taken:

Looking southeast

Description:

Drums for soil cuttings and other waste from the soil borings in the bus loading area.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: PG&E Mfg Gas Plant - Fresno **EDR ID Number:** 1000196845

Date of Inspection: 3/10/10 **Requires Follow-up Site Visit:** Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: Frank Geguhaie **URS Office:** Fresno

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

PG&E Mfg Gas Plant - Fresno; AKA Gas Plant SQ-FK-FRS-2
Block of F Street, Btwn AKA Fresno-2
Mariposa & Fresno Street and
~~County~~ Block of F Street & G Street Btwn Tulare & Fresno Streets
Fresno County (see attached map from DTSC)

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~1.16 ac (total)

Site Buildings: Site consists of locations on 5 APN parcels in 3 different City Blocks

Name	Number of stories	Dimensions	Square Footage	~~Year Built~~
2 vacant buildings at 1042 F Street	1		(Gutted)	APN 467-063-33/34
Basque Hotel	2	70 x 150	~18,000	APN 467-062-08
Office trailer for car dealer/parking facility				467-062-09
J&P storage building	1	38 x 60	~2,250	467-062-06
J&P shop area	1	30 x 50	~1,500	

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S E (W)

4. Are the following located on or **adjacent to the subject site**?

Surface water: No
Wetlands: No
Floodplains: No
Parklands: No
Sensitive habitats: No

5. Please list **current visible onsite activities**:

Basque Hotel (restaurant); vehicle storage; Jensen & Delegand storage building (feed + seed); parking lot

Is equipment washed onsite? No.
Is maintenance conducted onsite? If so, what types? YES
Is fueling conducted onsite? YES - propane for J&P forklifts

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other RETAIL

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North COMMERCIAL (INTER CALIFORNIAS - CHARTER BUSES); FRESNO STREET

South VACANT; RETAIL;

East G STREET; COMMERCIAL (SENSIBM + PILEGARD FEEDS); VACANT PARCELS; UNION PACIFIC TRACKS

West F STREET; RETAIL / COMMERCIAL; VACANT PARCELS

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):
NONE

8. **Utilities-list all visable utility services (power lines, meters etc)**
Electric Service by: PG+E
Gas Service by: THE GAS COMPANY
Water Service by: CITY OF FRESNO
Wastewater Service by: CITY OF FRESNO
Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!
NO USTs OBSERVED OR REPORTED
Are there any ASTs/USTs, active or inactive, present at the site currently? YES, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U (A)	~320	PROPANE	?	STEEL	Y / N	Y / N	ACTIVE
U / A	(J+P FEED)				Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? GOOD

11. Have there been any releases? UNKNOWN

To whom were the releases reported? N/A

What is status of release investigation? N/A

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? No

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located: N S E W of the building. LOCATED IN THE ALLEY BTWN F & G STREET

Hauled off by: CITY OF FRESNO

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
2 POLE-MOUNTED TRANSFORMERS LOCATED IN THE ALLEY BETWEEN F AND G STREET EAST OF PARCEL 467-063-33/34					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? NO, Describe

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

HOTEL RESTROOMS; J+P RESTROOM

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? N/A

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

No

19. **STORMWATER**

Describe how stormwater is managed: INFILTRATION ; RUNOFF TO CITY STORM DRAINS

Does the stormwater flow to a combined sewer? No

Does water run-off from neighboring facilities and have potential to impact this facility? No

20. **WETLANDS**

Any known/delineated wetlands at the site? No, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? UNKNOWN - POSSIBLE BASED ON ADJACENT SITE CHARACTERIZATION AND PAST HISTORY OF THE SITE - SEE ATTACHED PA REPORT SUMMARY

If yes, list the contaminants:

Are there groundwater monitoring wells at this facility? No

Where are these wells located?

Are regulatory agencies involved with monitoring? USEPA & DTSC

Status of investigation/remediation program?

23. **SPILLS**

Has this site or facility had spills ~~or leaks~~ of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
_____	_____	_____	**Yes** **No**	**Yes** **No**
_____	_____	_____	**Yes** **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? No

Describe the types and sources of used oil generated: _____

Are all containers of used oil labeled accordingly? _____

Describe how and where used oil is stored and handled:

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown** N/A

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

SEE THE ATTACHED PA REPORT SUMMARY FOR DETAILS OF THE CURRENT STATUS OF THE SITE (c. 2001 + 2007)

325-3A
PG+E GAS PLANT - FRESNO
(AKA FRESNO-2) SQ-FK-FRS-2
PARKING
VACANT + GUTTED BUILDING
VACANT BUILDING
BASQUE HOTEL
J+P FEED
J+P FEED
JENSEN + PILEGARD FEED
INTER CALIFORNIAS
FORMER PG+E SUBSTATION
G St
F St
Mariposa St
Tulare St
Fagan Alley
© 2010 Google
Google

PRELIMINARY ASSESSMENT

PG&E MGP,Fresno 2
Block of F, G, Fresno and Tulare Streets
Fresno, CA 93706

EPA ID #:CAD981415912

Cooperative
Agreement Number: *V-999-252-03*

Submitted To: Ms. Rachel Loftin
Site Assessment Manager
U.S. EPA, Region IX

Report Date: May 30, 2001

Prepared by: *Jerry Lile*
Hazardous Substance Scientist
Cal/EPA - DTSC

Review &
Concurrence: *Megan Cambridge*
Expedited Remedial Action Program, Unit Chief
Cal/EPA - DTSC

with the former MGP are accessible to the public.

3.4.2 Soil and Air Targets

Thomas Berg, DTSC employee in Clovis, CA, conducted a driveby of the currently and previously owned PG&E parcels on May 23 and 29, 2001. No school or daycare facilities are located within 200-feet of these parcels.

3.4.3 Soil Exposure and Air Pathway Conclusions

The previously contaminated soil at the G Street Substation was removed in 1992. Potential for soil and air health risks is unknown.

4 Summary

The only known contamination at the currently owned parcel has been removed. However, several parcels that may have been impacted have never been sampled. It is unknown what contamination may still exist. Depth to groundwater is approximately 80 ft-bgs. Groundwater contamination is not suspected. Surface water is negligible because the site is not within the target range for surface water drinking intakes. Potential soil and air health risks are unknown, but people are not living on the sites, nor are there schools or daycare facilities, within 200 feet of these parcels. The site is not an immediate threat to the public or environment but assessment of the current and former parcels may be necessary.

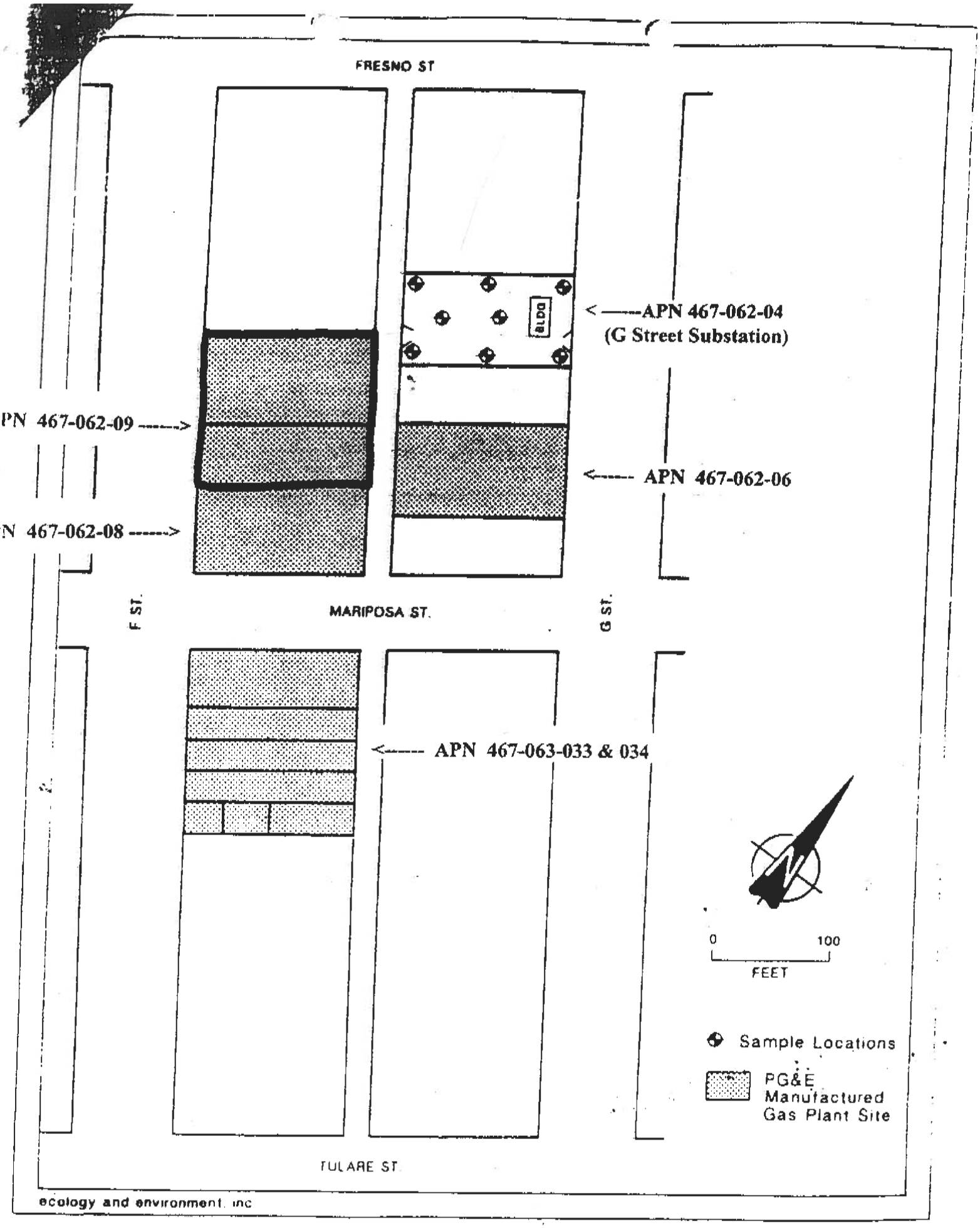

Figure 1 PG&E GAS PLANT #2

TRIAGE RECOMMENDATION

☐ Draft ☒ Final

Date of Triage: Date of EPA Approval of SSA:

Core Locational and Status Information:

This information should be obtained from either the Site Screening Assessment (SSA) form or CERCLIS):

Site Name:	PG&E Gas Plant Fresno 325 3A
Other Names:	PG&E Manufactured Gas Plant SQ-FK-FRS-2 (DTSC Name)
Site Street Address:	Block of Fresno, Tulare, F, and G Streets
City, County, State:	Fresno, Fresno County, California
Zip Code:	93706
Primary EPA ID Number:	CAD981415912

Secondary EPA ID #s:

In Calsites Database? ☒ Yes ☐ No If, yes, specify ID number 10490095

CA DTSC REGION Name: Sacramento

CA RWQCB REGION: Central Valley CA RWQCB REGION #: 5

Latitude: 36.73194 Longitude: -119.79416

MAD Code:

Note: Latitude and Longitude coordinates will be generated by the USEPA GIS Office along with an accompanying "Site Evaluation" map and metadata backup (Attachment B) of this document.

Check One	SITE STATUS	Date of completion: (MM/DD/YYYY)
☐	Post Discovery	
☐	Post Preliminary Assessment	
☒	Post Site Investigation	09/08/1989

Check One	REMEDIATION LEAD: STATE OR FEDERAL (per concurrence on original SSA document)
☐	No further action under CERCLA – State Lead
☐	CERCLA eligible – EPA Lead – go to # 1
☒	CERCLA eligible – State-Lead or Follow Up – go to #2 or # 3
☐	CERCLA eligible – Emergency Response – go to # 4
☐	CERCLA eligible – Local Agency Lead – go to #3
☐	No Further Action CERCLA or State Authority

1. Referral to USEPA (REFOA/PASI): Site Assessment – Federal Lead

Check one	ACTION	High	Medium	Low
☐	Preliminary Assessment	☐	☐	☐
☐	Site Investigation	☐	☐	☐
☐	Preliminary Assessment/Site Investigation	☐	☐	☐
☐	Reassessment	☐	☐	☐
☐	NPL Consideration	☐	☐	☐
☐	Removal	☐	☐	☐

2. Referral to DTSC (REFRC/OCA): Site Mitigation – DTSC Lead or Follow Up

Check one	Action	Actual	Potential
☒	Needs Further Evaluation	☐	☐
	Enforcement	☐	☐
	Voluntary Cleanup Agreement Program	☐	☒
	128a Grant	☐	☐
	Brownfields	☐	☐
☐	No Further Action		

3. Referral to Regional Water Board, Brownfields, or Local Agency (REFRW/REFOA/OCA):

Check One	Program	High Priority	Medium Priority	Low Priority
☐	Brownfields	☐	☐	☐
☐	Regional Water Board - Specify Region:	☐	☐	☐
	Regional Board Name:			
	Regional Board Number:			
☐	Local Agency – Specify Agency and Contact			
	Agency:			
	Contact			
	Phone Number:			
☐	Other: Specify			

4. Referral to Emergency Response:

Check One	Program
☐	EPA Emergency Response Office
☐	DTSC Emergency Response Office

State Approval: Signature — James L. Tjosvold, Type Name — 04/23/2007, Date: (MM/DD/YYYY)

EPA Concurrence: Signature — Karen Jurist, Type Name — 05/15/2007, Date: (MM/DD/YYYY)

Note: EPA Concurrence approves Triage Recommendation

EPA ONLY:	
Archive and Date:	Spec Initiative:
ERS Exclusion and Date:	Non-NPL Status: OCA State Lead.
FAD and Date:	Site Assessment Action: OCA SCA (dated 2000)
NFFA and Date:	Action Start and Complete Date:

3.0 REGULATORY AND ENFORCEMENT HISTORY

Provide information regarding past and present regulatory and enforcement activity associated with the site. Citations and reference documentation should be included *for **initiation, status, and certification*** documents used for substantiating site status. Web links may be used when accompanying a short narrative regarding what the document in the link states about the site. *Sections 3.1 through 3.4 are limited to 1800 characters (approximately two paragraphs). Responses requiring more space should be included as a reference to this report and identified below with the statement "See Attachment F".*

This section, along with section 1 required for Other Cleanup Activity (OCA sites ("G4 sites"))

Primary Regulatory Agency Involved ☒ Federal ☐ State ☐ Local ☐ None

Note: This recommendation should be included on Executive Summary Page

3.1 Regulatory Agencies: Federal

A review of the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) database on the United States Environmental Protection Agency's (USEPA's) website indicates that a Preliminary Assessment (PA) was completed in 1987 and a Site Inspection was completed in 1989 for the PG&E Gas Plant Fresno 325 3A site. Based upon information in the Department of Toxic Substances Control files, the PA was completed by PG&E and the SI was completed by Ecology and Environment. The information indicates that the SI was completed with regard to the PG&E Fresno 2 (DTSC name: PG&E G Street Substation) located next to the old manufactured gas plant site.

The Department of Toxic Substances Control (DTSC) completed a site screen in 1998 and a PA in 2001 for USEPA under a Preliminary Assessment/Site Inspection (PA/SI) grant. The site screen and the PA utilized information from the PA completed in 1987 and from a Preliminary Endangerment Assessment (PEA) completed by PG&E in 1991 under a Voluntary Cleanup Agreement with DTSC. The PEA was conducted for the PG&E Fresno 2 site which is an electrical substation.

To date, no investigations are known to have occurred at the PG&E Gas Plant Fresno 325 3A site. CERCLIS lists this site has having a status of Other Cleanup Activity: State-Lead Cleanup. No state agencies are known to be currently involved with this site.

3.2 Regulatory Agencies: State

DTSC has completed a site screen and PA for USEPA as described above. DTSC has recently met with PG&E to address known PG&E sites that are of concern. This site has a status of Inactive-Needs Evaluation in DTSC's EnviroStor database. The status date is March 18, 1992. DTSC is working with PG&E to develop a priority list of sites to address. This site will be one of the sites that DTSC will request that PG&E investigate and remediate, as necessary.

3.3 Regulatory Agencies: Local

The Fresno County Community Health Department's Environmental Health Division's web site does not show any sites listed at within the area of the old manufactured gas plant. DTSC contacted the Division in 2001 while completing the PA and learned that the county knew of the G Street Substation site but had no information regarding the manufactured gas plant.

3.4 PRP Viability

No evaluation of PRPs or their viability has been conducted.

California Environmental Protection Agency
Department of Toxic Substances Control
Site Mitigation and Brownfields Reuse Program

Thomas E. Berg, PG, CEG, CHG
Engineering Geologist

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TBerg@dtsc.ca.gov

phone 559.297.3978
fax 559.297.3904

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** PG&E Gas Plant Fresno 325 3A (aka Fresno #2) Between F, G, Tulare, and Fresno Streets, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
1

Direction Photo Taken:

Looking southwest

Description:

Generally the south end of the site. The Basque Hotel parking lot, vacant structures, and vacant area east of subject property parcels APN 467-063-033 & 034.

Photo No.
2

Direction Photo Taken:

Looking northwest

Description:

View of the Jensen and Pilegard Feed and Seed tool storage building and shop building on subject property parcel APN 467-062-06 (across G Street west of the main feed mill and storage facility).

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** PG&E Gas Plant Fresno 325 3A (aka Fresno #2) Between F, G, Tulare, and Fresno Streets, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
3

Direction Photo Taken:

Looking west

Description:

View of the Jensen and Pilegard shop building on subject property parcel APN 467-062-06.

Photo No.
4

Direction Photo Taken:

Looking north

Description:

View of the Jensen and Pilegard tool storage building (right) and shop building (left) on subject property parcel APN 467-062-06.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** PG&E Gas Plant Fresno 325 3A (aka Fresno #2) Between F, G, Tulare, and Fresno Streets, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
5

Direction Photo Taken:

Looking north

Description:

China Alley between the Jensen and Pilegard property (right) and the Basque Hotel (left).

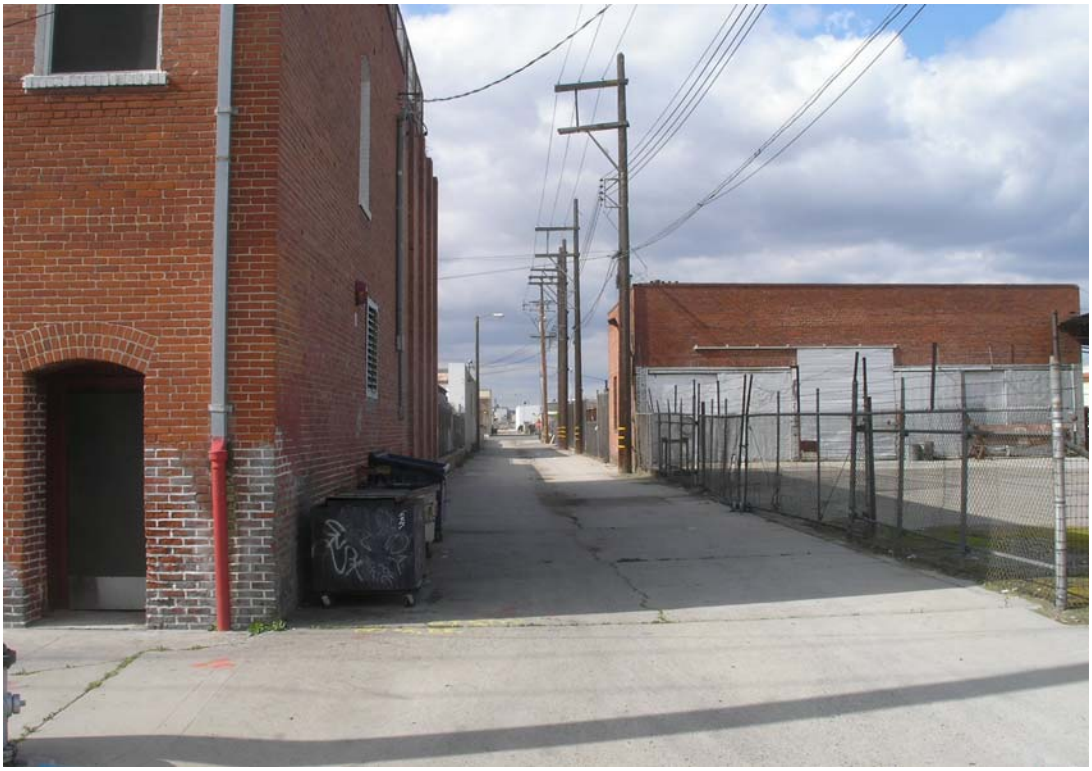


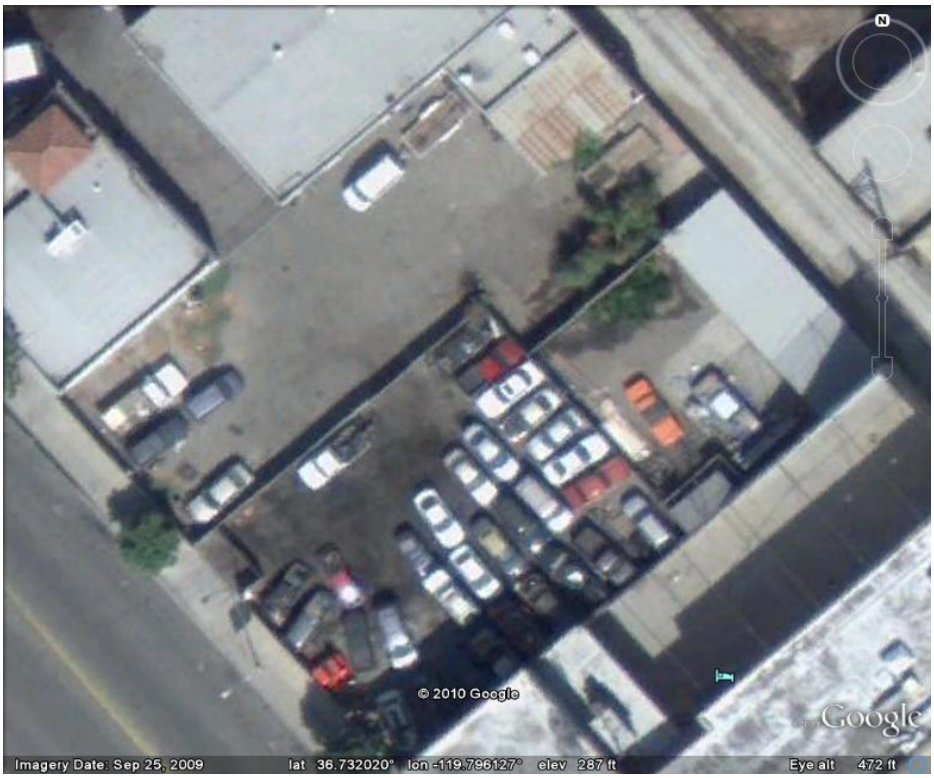
Photo No.
6

Direction Photo Taken:

Aerial view, north to the top

Description:

View of the vehicle storage and rental lot north of the Basque Hotel, subject property parcel APN 467-062-09.



PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** PG&E Gas Plant Fresno 325 3A (aka Fresno #2) Between F, G, Tulare, and Fresno Streets, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
7

Direction Photo Taken:

Looking northeast

Description:

The Basque Hotel on the northeast corner of F and Mariposa Streets, subject property parcel APN 467-062-08.

Photo No.
8

Direction Photo Taken:

Looking east

Description:

View across F Street at Mariposa Street, which bisects the subject property. The Hotel is on the left and the parking area is on the right.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** PG&E Gas Plant Fresno 325 3A (aka Fresno #2) Between F, G, Tulare, and Fresno Streets, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
9

Direction Photo Taken:

Looking southeast

Description:

View across F Street (and Mariposa Street) at the Basque Hotel parking area on subject property parcels APN 467-063-033 & 034.

Photo No.
10

Direction Photo Taken:

Looking east

Description:

View of the vacant and gutted structures at the south end of the site along F Street on subject property parcels APN 467-063-033 & 034.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: Texaco Refining & Marketing / Tosco Corporation Bksfd Refinery **EDR ID Number:** S100833498 / 1000144861

Date of Inspection: 3/10/10 **Requires Follow-up Site Visit:** Yes ~~No~~

Requires Agency File Review: (Yes) No

Site Inspector: Thomas Pender **URS Office:** Fresno

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

Texaco Refining & Marketing (aka Big West, Flying J)
6451 Rosedale Hwy
Bakersfield, CA 93308

Tosco Corporation - Bksfd Refinery
6500 Refinery Ave
Bakersfield, CA 93308

County: Kern

EDR ENVID: S100833498

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: 350 acres

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
Office Bldgs (12)				
Shops (5)				
Storage (5)				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) rolling / hilly – Berms surrounding many Tanks

with surface drainage appearing to flow to the N S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: ~1/2 South of Property Line (Kern River), Cross Valley Canal

Wetlands: associated with River

Floodplains: "

Parklands: NO

Sensitive habitats: " River

5. Please list **current visible onsite activities**:

Petroleum Refinery

Is equipment washed onsite? Yes, Contained

Is maintenance conducted onsite? If so, what types? Yes, Routine Equipment Maintenance

Is fueling conducted onsite? Yes, (Area 2 Maintenance Shop)

6. **Site Area:**
General site area is (circle) residential commercial light industrial (heavy industrial) rural
other _____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North Rosedale Hwy, commercial development, Oilfields

South Cross Valley Canal, Vacant Lots, Kern River (½ mile)

East Lanbely Road, vacant lots, Scrap Yards, Commercial Development

West Fruitvale Ave, Wedding Lane, Commercial & Light Industrial Developments, Many Warehouses, Vacant Lots, Former Sunland Refinery ~1 mi to West.

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):
Monitoring Wells & remediation, Vapor Extraction wells, sparge system

8. **Utilities-list all visable utility services (power lines, meters etc)**
Electric Service by: PG&E
Gas Service by: The Gas Company
Water Service by: Potable Water - City (CalWater) - Onsite Production wells for process
Wastewater Service by: Site WWTP - Inj Wells
Steam by: Ø

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? Yes, formerly? UST - ~~Ø~~ Removed

~200

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A	~200 Tanks	Petroleum Hydrocarbons			Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? Varies, Regularly Inspected & Maintenanced

11. Have there been any releases? Hydrocarbons, metals, sulfides, Oxygenates, etc mostly in 1950's + 1960s, Some Recent Releases – See Geotracker

To whom were the releases reported? RWQCB, KC EHH

What is status of release investigation? ongoing, Extensive work performed, completing Contamination Assessment.

12. **ASBESTOS**

Is there known asbestos onsite? (Yes) No Unknown

Was an asbestos survey conducted and what were the results? Yes, Primary location on Tosco prop. Being abated as ~~encountered~~ work progresses

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? (Yes) No Unknown

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
Petroleums				
Process Chemicals				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? (Yes) No Unknown

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: Filters, Sludges, Soils, Rags, debris → Disposed of as Haz Waste

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: City

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? (Yes) No Unknown

Where are the wastes disposed? Button Willow, Beatty, Nev.

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
No – Removed					

17. **DRINKING WATER**

What is source of drinking water at the site? Cal Water

What is source of process water for the site? n/a or Onsite Groundwater Wells

What is the source of drinking water for surrounding properties? Cal Water

Are there any wells known to exist at the site? yes, Describe 4 production wells

If wells are used for drinking water at the site, obtain water quality data NO

Describe any onsite surface water resources: (none) or

18. **WASTEWATER**

Does the site or facility currently generate wastewater? (Yes) No Unknown

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) Process,

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? pH adjusment, if so, describe: Oil Separation, Solids Removal

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	(No)	Yes	No
Land application discharges	Yes	(No)	Yes	No
Deep well injection	(Yes)	No	(Yes)	No
Discharge to municipal system	Yes	(No)	Yes	No
Impoundments	(Yes)	(No)	Yes	No
Septic systems	Yes	(No)	Yes	No

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:
4 groundwater supply wells for process

19. **STORMWATER**

Describe how stormwater is managed: Stormwater segregated, clean to impoundment most to WWTP,

Does the stormwater flow to a combined sewer? no

Does water run-off from neighboring facilities and have potential to impact this facility? no

20. **WETLANDS**

Any known/delineated wetlands at the site? no, Indicate size, location (indicate on sketch), and description. none onsite

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

Refinery

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? yes

If yes, list the contaminants:

See Geotracker → Hydrocarbons, oxygenates

Are there groundwater monitoring wells at this facility? yes

Where are these wells located?

~700 (incl. MW's, Sparge +)

Are regulatory agencies involved with monitoring? yes

Status of investigation/remediation program? RWQCB, ongoing

onsite + downgradient

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
No details			**Yes No**	**Yes No**
			Yes No	**Yes No**

24. **USED OIL**

Does this facility generate used oil? Yes

Describe the types and sources of used oil generated: Maintenance

Are all containers of used oil labeled accordingly? yes

Describe how and where used oil is stored and handled:
Maintenance Facilities

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**
→ Weed Control - approved by USFWS

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown** - Autos

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

other EDR ENVID Numbers associated with this property: 1000175628
S100833497
Getty Refining - U1001584623
TRMI West Plant - S101620579

Photo Log

Date: _____

Project: _____ **Project Number:** _____

Location / Site _____

URS Field Staff: _____

Photo Number	Direction of Photo	Location - Description

Page _____ **of** _____

Blue Star Memorial Hwy
58
Charity Ave
6451 Rosedale Hwy, Bakersfield, CA 93308
Fruitvale Ave
Mohawk St
Langley Rd
©2010 Google

Wedding Ln
Fruitvale
Refinery Ave
Langley Rd
Cross Valley Canal

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Texaco Refining & Marketing; Tosco Corporation (Big West CA) 6451 Rosedale Hwy & 6500 Refinery Ave, Bakersfield, CA	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
1

Direction Photo Taken:

Looking south

Description:

View of the former Texaco refinery entrance from across Rosedale Highway on the north. The site is currently operated by Big West of California – Flying J.

Photo No.
2

Direction Photo Taken:

Looking south

Description:

View of the former Texaco refinery from across Rosedale Highway on the north.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Texaco Refining & Marketing; Tosco Corporation (Big West CA) 6451 Rosedale Hwy & 6500 Refinery Ave, Bakersfield, CA	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
3

Direction Photo Taken:

Looking southeast

Description:

View of the tank farm from the BNSF tracks that bisect the site from east to west.

Photo No.
4

Direction Photo Taken:

Looking southeast

Description:

View of the former Tosco refinery from the BNSF tracks that bisect the site from east to west.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Texaco Refining & Marketing; Tosco Corporation (Big West CA) 6451 Rosedale Hwy & 6500 Refinery Ave, Bakersfield, CA	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
5

Direction Photo Taken:

Looking east

Description:

Typical view of storage tanks along Fruitvale Avenue that bisects the site from north to south.

Photo No.
6

Direction Photo Taken:

Looking south

Description:

View along Fruitvale Avenue near the center of the former Texaco site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Texaco Refining & Marketing; Tosco Corporation (Big West CA) 6451 Rosedale Hwy & 6500 Refinery Ave, Bakersfield, CA	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
7

Direction Photo Taken:

Looking west

Description:

View of crude oil storage tanks at a (former?) oil well location near the center of the site. The location is in a storage yard south of Charity Avenue.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: VOPAK USA (AKA UNIVAR, VAN WATERS + ROGERS, INC) **EDR ID Number:** 1000136187 S103624220

Date of Inspection: 3/10/10 **Requires Follow-up Site Visit:** Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEQUINDE **URS Office:** FRESNO, CA

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

VOPAK USA (AKA UNIVAR, AKA VAN WATERS + ROGERS, INC.)
1152 G STREET
FRESNO, CA
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~1.0 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
MULTI USE: OFFICE,	1	115 x 45	17,940	?
WARE HOUSE, CLASSROOM				
COLD ROOM				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S E (W)

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

NONE; SITE IS ABANDONED; PARKING AREA CONTAINS WOODEN PALLETS, PLASTIC DRUMS AND OTHER DEBRIS; SITE IS LOCKED UP

Is equipment washed onsite? UNKNOWN
Is maintenance conducted onsite? If so, what types? NO
Is fueling conducted onsite? FORMERLY, YES; UST REMOVED, DISPENSER REMOVED

6. **Site Area:**
General site area is (circle) residential (commercial) light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North FRESNO STREET; PROFESSIONAL OFFICES

South JENSEN & PELLIGARD FEED MILL & SALES OFFICE; VACANT LOT (FORMER DEL MONTE SITE)

East UNION PACIFIC RAILROAD TRACKS; FORMER SOUTHERN PACIFIC DEPOT; PROFESSIONAL OFFICES

West G-STREET; COSMOPOLITAN TAVERN; FORMER PG&E G STREET SUB-STATION, J&P STORAGE YARD; COMMERCIAL DEVELOPMENT

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of (groundwater monitoring wells) or (remedial activities), abnormal odors, the presence of unnatural fill material or soil grading):

SEE ATTACHED REPORT

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? NO, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
(U) / A	UST REMOVED NEAR N. SIDE OF				Y / (N)	Y / N	REMOVED
U / A	BUILDING				Y / N	Y / N	
U / (A)	PCE STORAGE AST REMOVED N/E CORNER OF SITE			FROM	Y / N	Y / N	REMOVED

(MAY BE ADDITIONAL ASTS INSIDE THE STRUCTURE?)

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? N/A

11. Have there been any releases? YES; PCE

To whom were the releases reported? RWQCB

What is status of release investigation? FURTHER DELINEATION OF THE LATERAL AND VERTICAL EXTENT OF PCE IS REQUIRED (12-11-2008)

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? No

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
SEVERAL DRUMS NOTED ONSITE - CONTENTS UNKNOWN; SOME MAY CONTAIN USED OIL. FORMERLY SITE STORED PCE IN AN AST (LEAKED) AND DIESEL FUEL IN A UST				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: WOODEN PALLETS AND OTHER DEBRIS STAGED ONSITE; ACCESS TO THE BUILDING WAS NOT AVAILABLE - POSSIBLE DEBRIS INSIDE

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: ?

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
UNKNOWN					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? NO, Describe NO WATER PRODUCTION WELLS; MULTIPLE GW MONITORING WELLS NOTED

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary non-contact, process, etc.)

FORMERLY

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? NO

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:
YES - SEE ATTACHED REPORTS FOR DETAILS

19. **STORMWATER**

Describe how stormwater is managed: SHEET RUNOFF TO THE WEST (MAKE STORM DRAIN)

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

PCE

Are there groundwater monitoring wells at this facility? YES

Where are these wells located?

SEE ATTACHED REPORT FOR DETAILS

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program? SVE SYSTEM HAS BEEN REMOVED; PCE STILL IN GROUNDWATER; LATERAL AND VERTICAL EXTENT OF PCE IS NOT FULLY KNOWN; FURTHER CHARACTERIZATION IS REQUIRED (12-11-2008)

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
	PCE		Yes No	Yes No
(SEE ATTACHED	SUMMARY	REPORT)	Yes No	Yes No

24. **USED OIL**

Does this facility generate used oil? NO LONGER - PREVIOUSLY, YES!

Describe the types and sources of used oil generated: UNKNOWN

Are all containers of used oil labeled accordingly? NO

Describe how and where used oil is stored and handled:

UNKNOWN - STILL APPEARS TO BE DRUMS ONSITE

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

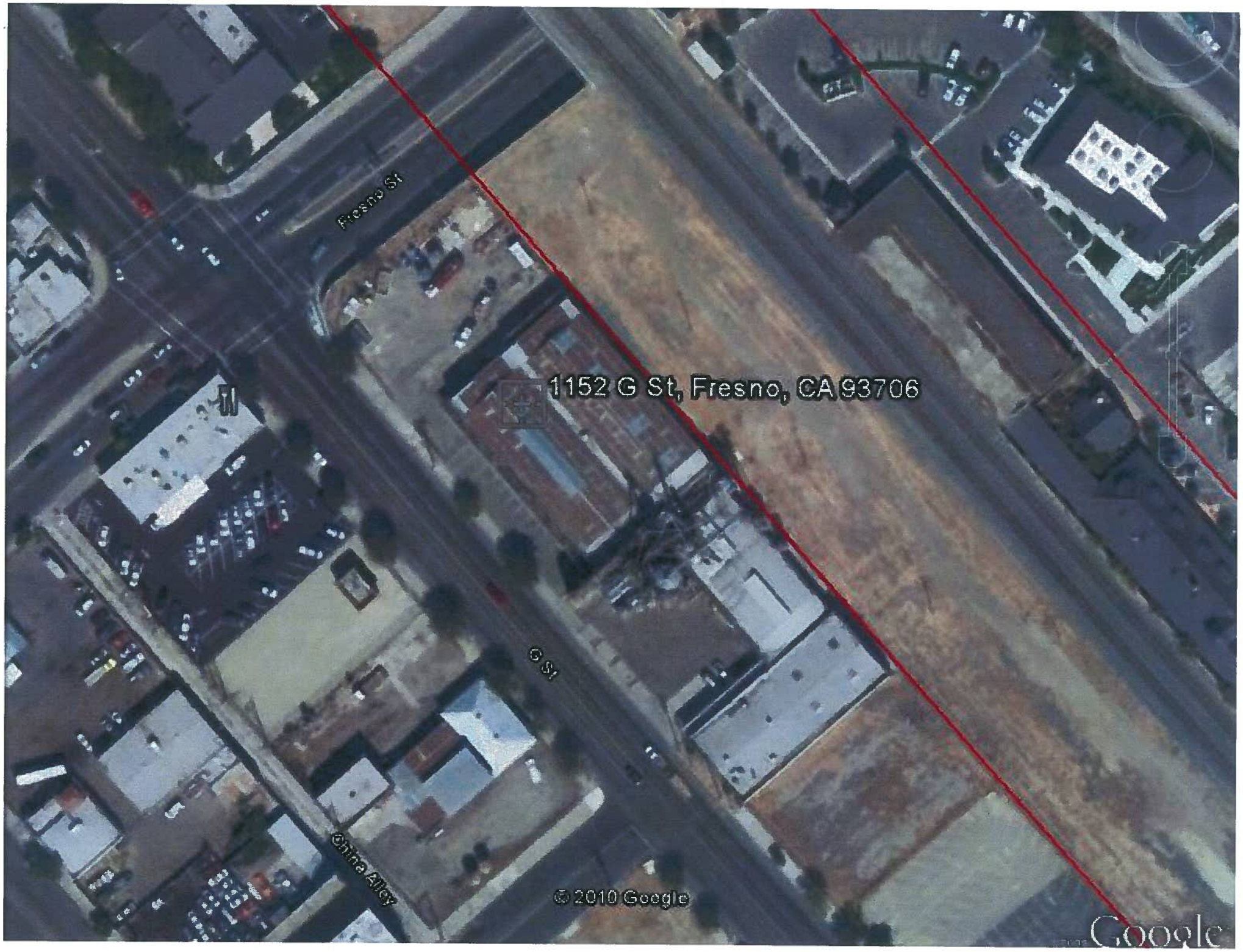
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

FROM APPROXIMATELY 1965 TO 1986 VAN WATERS & ROGERS (NOW UNIVAR) LEASED THE SITE AND UTILIZED THE N/E CORNER OF THE SITE TO STORE PCE IN AN AST (SINCE REMOVED). THE SITE WAS OCCUPIED BY A CHEMICAL SUPPLY COMPANY (UNITED AGRI PRODUCTS (UAP)/OR UAP SPECIAL PRODUCTS FROM 1987 - 1989. THE SITE WAS UTILIZED PRIMARILY AS AN OFFICE AND WAREHOUSE FOR UAP'S WHOLESALE AGRICULTURE/CHEMICAL BUSINESS. FROM 1989 to 2007 THE SITE WAS LEASED BY GOOD GUYS TIRE CENTER FOR USE AS A WAREHOUSE TO STORE TIRES. THE SITE IS CURRENTLY VACANT


1152 G St, Fresno, CA 93706
Fresno St
G St
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NICHOLS CONSULTING ENGINEERS, Chtd.
Engineering and Environmental Services

8795 Folsom Blvd., Suite103 • Sacramento, CA 95826 • 916.388.5655 • FAX 916.388.5676

December 11, 2008

A400.27.35

Mr. Jan Alfson
California Regional Water Quality Control Board
Central Valley Region
1685 E Street
Fresno, California 93706

Summary Report
Groundwater Investigations
Former VW&R Inc. Facility
1152 G Street
Fresno, California

Dear Mr. Alfson:

Nichols Consulting Engineers (NCE) is pleased to submit one copy of the attached *Summary Report, Groundwater Investigation* conducted at the former Van Waters & Rogers Inc. facility, 1152 G Street, Fresno, California (Plates 1 and 2). The groundwater investigation being conducted at the Site is to assess the nature and extent of perchloroethylene (PCE) in groundwater at the Site. The purpose of this report is to provide a brief summary of previous investigations conducted at the Site, provide a description and results of the current investigation activities, present a Site Conceptual Model and provide a conclusions and recommendations for future work.

If you have any comments or concerns regarding this report or the project, please call either of the undersigned at (916) 388-5655.

Yours very truly,

NICHOLS CONSULTING ENGINEERS, Chtd.

Frank Drewes
Project Geologist

Michael J. Leacox, P.G., CEG
Principal

Enclosure

Summary Report
Groundwater Investigations
Former VW&R Inc. Facility
1152 G Street
Fresno, California

Prepared on behalf of

Univar USA Inc.
1804 N. 20th Street
Nampa, Idaho 83687

NCE Project No.: A400.27.35

Frank Drewes
Project Geologist

Michael J. Leacox, P.G., CEG
Principal

December 11, 2008

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DISTRIBUTION

1.0 INTRODUCTION

This report has been prepared on behalf of Univar USA Inc. (Univar) by Nichols Consulting Engineers Chtd. (NCE) and presents a summary of historical and recent investigations in association with the former Univar facility located at 1152 G Street in Fresno, California (Site). The purpose of the previous and recent investigative activities is to evaluate groundwater at the Site and in the vicinity of the Site for the presence of tetrachloroethene (PCE) due to historical activities by Univar at the Site. Previous investigations have detected PCE in groundwater beneath the Site and downgradient of the Site. The purpose of this report is to provide a site history, describe the regional hydrology and stratigraphy, identify potential offsite sources of PCE, summarize and provide results for the investigations recently completed, produce a Site Conceptual Model and provide conclusions and recommendations for future work.

The Site is located at the northeast corner of the intersection of Fresno and G Streets in Fresno, California (Plates 1 and 2). The Site is bounded to the northeast by the Union Pacific Railroad Yard and tracks, Fresno Street to the northwest, G Street to the southwest and commercial structures to the southeast (Plate 3). Investigation activities completed to date are briefly described in the background section of this Summary Report.

2.0 BACKGROUND

2.1 History

2.1.1 Site Use

From approximately 1965 to 1986, VW&R (now Univar) leased the Site and utilized the northeast corner of Site to store PCE in an above ground storage tank (AST) that has since been removed. The Site was occupied by a chemical supply company known as United Agri-Products or UAP Special Products (UAP) from 1987 to 1989. The Site was reportedly utilized primarily as an office and warehouse for UAP's wholesale agricultural/chemical business. From 1989 to 2007 the Site was leased by Good Guys Tire Center for use as a warehouse for the storage of tires. The Site is currently vacant.

2.1.2 Investigation History

Investigation activities at the Site have been conducted since 1994 and have included a Phase I investigation that revealed the presence of PCE in soil near a former above ground storage tank (AST) located near the northeast portion of the Site. PCE was consistently detected during a subsequent soil gas survey at the Site with the highest concentrations detected near the tank. A soil vapor extraction system was installed at the Site which, during its operational period, successfully remediated the vadose zone and, to some degree, groundwater, near the tank. To date, a total of five onsite groundwater monitoring wells including MW-1 through MW-3, OB-7 and OB-8, and 14 offsite monitoring wells (MW-4 through MW-13) and vapor wells (VW-1 through VW-4) have been installed to characterize the distribution of PCE in groundwater in the study area. The highest concentrations of PCE in the onsite wells have been recorded in well MW-1 (the well closest to the former tank). Since investigative activities began at the Site, PCE in MW-1 has decreased significantly with PCE reported at a concentration of 14,000 micrograms per liter (ug/L) in September 1998 to 180 ug/L reported in May 2007. The highest concentrations of PCE in offsite wells have historically been reported in well MW-4 ranging from 5,120 ug/L (August 2003) to 2,700 ug/L (May 2007). A table summarizing the previous investigations conducted at the Site since 1994 is included in Appendix A. Univar has recently completed a SVE pilot test in the vicinity of Well MW-4 and is currently designing and permitting a SVE system to be operated in this area.

2.1.3 Regional Hydrogeology

The Fresno area lies west of the foothills of the Sierra Nevada and east of the trough of the San Joaquin Valley. Alluvial fans are the dominant geomorphic features in the area. Small alluvial fans have been formed near the foothills by deposits from the numerous intermittent streams that lie both north and south of the Kings River. Thicker and much more extensive alluvial fans have been formed under most of the area by deposits from the San Joaquin and Kings Rivers.

Geologic units in the area consist of consolidated and unconsolidated deposits. In turn, consolidated units consist of a basement complex of pre-Tertiary age and marine sediments, and non-marine continental sedimentary rocks of Cretaceous and Tertiary age. Unconsolidated deposits are both Tertiary and Quaternary age. Most of the geologic units dip gently southwestward approximately paralleling the back slope of the Sierra Nevada. Although some of

these geologic units are faulted, especially in the deep subsurface, faulting has not affected the occurrence and movement of fresh groundwater (Page, 1969).

The unconsolidated deposits are divided into an older series of Tertiary and Quaternary age, and a younger series of Quaternary age. The continental deposits of Tertiary and Quaternary age occur only in the extreme southeastern part of the Fresno area and are not considered important water-bearing units. The deposits of Quaternary age crop out over most of the Fresno area and yield more than 90 percent of the water pumped from wells. The Quaternary age deposits are divided into older alluvium, lacustrine and marsh deposits, younger alluvium, flood-basin deposits, and sand dunes.

The older alluvium is the most important aquifer in the Fresno area. In the Site vicinity, the older alluvium occurs from the ground surface to a depth of between 1,400 and 1,600 feet below ground surface (bgs). The older alluvium consists of intercalated lenses of clay, silt, silty and sandy clay, clayey and silty sand, sand, gravel, cobbles, and boulders. In general, it is fine grained near the trough of the valley and beneath the alluvial fans of intermittent streams. In the older alluvium, well yields range from less than 20 gallons per minute (gpm) to more than 3,000 gpm (Page, 1969).

The lacustrine and marsh deposits occur only in the subsurface in the western part of the Fresno area. Consisting mostly of silt and clay, they exhibit a very low permeability and thus inhibit the vertical movement of water. These deposits from oldest to youngest are designated the E-clay, the C-clay, and the A-clay. The E-clay is the thickest and most extensive of the lacustrine and marsh deposits. These clay layers pinch-out towards the south and west and do not appear to be present beneath the Site (USGS, 1969).

Because the clays tend to confine groundwater in the Fresno area, five water bodies are recognized. These are the unconfined water body, the shallow water body, the confined water body below the A-clay, the confined water body below the C-clay , and the confined water body below the E-clay. The unconfined water body underlies most of the Fresno area and appears to be unconfined beneath the Site. The shallow and confined water bodies underlie parts of the extreme western part of the area. Head pressures in successively underlying water bodies are less than those in overlying water bodies, indicating that some groundwater moves slowly downward through the clays.

2.2 Results of Previous Site Investigations

2.2.2 Stratigraphy

As shown in the boring logs for wells MW-1 through MW-11, Hydropunch™ borings HP-1, HP-3, HP-4, HP-6 and HP-7 and borings VB-1 through VB-3, (Appendix B), the stratigraphy in the vicinity of the Site consists predominantly of alternating layers of silts, clays and sands. A fence diagram is presented on Plate A-4 (Appendix A) which illustrates the soil types observed in borings HP-1, HP-3, HP-4, HP-6 and HP-7 and borings VB-1 through VB-3. As shown in the fence diagram, no substantial laterally continuous clay units are present. An assessment of the hydrology in the site vicinity was conducted utilizing available boring logs for City owned water wells. Plate 2 shows the locations of the City Wells and the cross section shown on Plate A-5 (Appendix A) illustrates the soil types observed in borings for City Wells 9A, 22A and 21A. Boring logs for the City wells are included in Appendix B. Generally, soils observed in the cross section consist predominantly of alternating layers of silts, clays, and sands. However, what appear to be two laterally continuous

clay units, approximately 36 to 77 feet thick were logged between City Wells 9A and 22A in the interval between approximately 176 feet bgs and 410 feet bgs. The two clay units are separated by approximately 60 to 90 feet of alternating layers of sands, silts, and clays. In addition, what appears to be a laterally continuous clay unit ranging from 59 up to 156 feet thick was logged between City Wells 22A and 21A in the interval from 439 feet bgs and 553 feet bgs (MACTEC, 2003). Although there appears to be a continuous clay layer between City Wells 9A and 22A, beginning at 176 feet bgs and between City Wells 22A and 21A beginning at 439 feet bgs, no laterally continuous clay layer was logged between all three City Wells.

Based on the above, the stratigraphy in borings HP-1, HP-3, HP-4, HP-6 and HP-7 and borings VB-1 through VB-3 and City Wells 9A, 22A, and 21A suggests that the groundwater beneath the study area is predominantly representative of an unconfined water body.

2.2.3 Occurrence and Groundwater Flow

Data collected from the previous investigations show groundwater flow near the Site is predominantly to the northwest while further north of the Site the groundwater flow appears to shift more westerly. The apparent westerly shift in the groundwater flow direction north of the Site appeared to be influenced by the operation of City Well 22A located northwest of the Site. Depth to groundwater at the time of the previous investigations ranged from 82 to 92 feet bgs.

2.2.4 Distribution of VOCs in Groundwater

The distribution of PCE in groundwater based on data collected from previous investigative activities suggested two other potential sources of PCE in the area; a dry cleaner to the northwest and an unknown source west (cross-gradient) of the former Univar facility. PCE was detected in groundwater collected from Boring HP-7, located northwest of Lamoures Dry Cleaners; however it was not known if the PCE detected was associated with the former Univar facility, the dry cleaner, or a PCE source west of the former facility. The above conclusion is further supported by the presence of PCE detected in wells MW-8 and MW-9 reported in subsequent groundwater monitoring events. Assuming a predominantly northwest groundwater flow, the source of PCE at Boring HP-7 and in wells MW-8 and MW-9, would likely be from an area west of the former Univar facility. The above data suggests the presence of at least two comingling north-south trending plumes of PCE. One of these plumes, the most easterly one, appeared to originate at or near the former Univar facility. The origin of the second plume was most likely from somewhere south and west of the Site (cross and upgradient of the Site), as identified by the presence of higher concentrations of PCE in well MW-10. A discussion of potential alternate sources is included in the following section. A summary of historical analytical results is presented in Table 1.

3.0 POTENTIAL OFFSITE SOURCES

3.1 EDR Review

In 1996 Harding Lawson Associates (HLA, 1996) performed an assessment of offsite land uses which focused on properties within the site vicinity that were known to have environmental concerns. The assessment included an area within a half-mile radius of the Site and revealed the existence of several properties that were under investigation for the release of hazardous materials or properties where use or storage of hazardous materials occurred. At that time, an investigation for hydrocarbon contamination was being conducted at Del Monte USA, 1625 Tulare Street, located approximately 370 feet southeast of the Site which, at the time, was the only facility within a half-mile radius that included groundwater monitoring. HLA's site assessment also included evaluating the locations of operating dry cleaning facilities in the vicinity. The assessment revealed the existence of Lamoures Cleaner at 1304 G Street, located approximately 1,100 feet northwest of the Site (Plate 3). At that time no investigation had been conducted at Lamoures.

To update the HLA regulatory findings, NCE completed a search to assess potential sources for groundwater impacts in the vicinity of the Site. To conduct the assessment, NCE reviewed information provided in an Environmental Data Resources (EDR) Radius Map Report (EDR 2008). Review of the EDR report was used as a guide to identify potential contaminant sources not previously identified by HLA. The EDR report cited the previously mentioned Del Monte site as having a "case closed" status. According to the EDR report, no investigation has been conducted at the Lamoures Cleaner and potential impacts to groundwater in association with this facility are currently unknown. The EDR report listed several historical dry cleaners in the vicinity of the Site that may be of potential concern. The historical dry cleaners are shown on Plate 3 and are listed in the table below.

Historical Dry Cleaner	Address	Date of Operation
Aram M H	1925 Broadway Street	1937
Fresno Hat Factory	1129 Broadway Street	1927
Kaspar Levon	1127 Broadway Street	1927
Papa George	1151 Broadway Street	1927
Orchid Cleaners	1530 Fresno Street	1937-1962
Reyes J R	1460 Fresno Street	1937-1942
Top Hat Cleaners	1331 Fresno Street	1958-1965

4.0 RECENT TRANSECT INVESTIGATIONS

4.1 Summary of Investigations

To further evaluate the lateral and vertical distribution of PCE in groundwater downgradient of the Site, an investigation has been implemented to assess groundwater quality conditions along two transects. The transect investigation has been conducted in general accordance with California Regional Water Quality Control Board approved work plan entitled *Revised Delineation Work Plan, Former Univar USA Inc. Facility, 1152 G Street, Fresno, Fresno County,* June, 2006. Investigation activities performed to date include the collection of in-situ groundwater samples and the installation of monitoring wells along Transect 1 and Transect 2 (Plate 3). Investigation activities include the following:

Transect 1

- Collect in-situ groundwater samples to a maximum depth of 150 feet at boring locations T1-1, T1-2 and T1-3 on Transect 1 and at locations HST-1 and HST-2 (Plate 3).
- Complete shallow monitoring wells at boring locations T1-1, T1-2, and T1-3 on Transect T-1.

Transect 2

- Collect in-situ groundwater samples to a maximum depth of 150 feet at boring locations T2-1, T2-2 and T2-3 on Transect 2.
- Complete shallow monitoring wells at boring locations T2-1, T1-2 and T2-3 on Transect T-2.

As part of the initial investigation it was intended to install boring and monitoring well T1-3 at a location approximately 350 feet northeast of boring T1-2 during the Transect 1 field effort. However, this well was not installed at that location because, at the time of field activities, representatives of the Fresno Redevelopment Agency indicated that the boring location was on Redevelopment Agency property and that drilling on the property would be prohibited. Due to the prohibition of drilling on the Redevelopment Agency property, and based on the findings of the Transect 1 investigation activities, the boring and well installation for T1-3 was installed at the location shown on Plate 3 during the Transect 2 field effort.

4.1.1 Borehole Drilling and Groundwater Sampling

NCE prepared a site specific health and safety plan that was used and followed for all site activities. In addition to notifying Underground Service Alert (USA) and prior to any site activities, NCE retained a private utility locator to mark identified underground utilities at the Site. NCE also secured the required drilling permits from the City of Fresno.

Transect 1 boring and well installation activities were conducted between February 28, 2007 and March 6, 2007. Transect 2 boring and well installation activities were conducted between May 7, 2008 and May 14, 2008 and on August 13, 2008 and August 14, 2008. A total of 8 boreholes including T1-1, T1-2 and T1-3 (Transect 1), HST-1, HST-2, and T2-1, T2-2 and T2-3 (Transect 2) were installed. Drilling and monitoring well installation operations were performed by WDC

Exploration and Wells of Zamora, California using a CME 85 hollow-stem-auger (HSA) drill rig with 8-inch augers. Soils were logged in the field by an NCE field geologist based on visual observations of soil cuttings and on soil samples collected in a split spoon sampler. Based on the performance of the drilling equipment as well as the presence of heaving sands, the maximum depth that HSA is capable of drilling is approximately 155 feet. In-situ groundwater samples were collected at various depths from each boring utilizing a Hydropunch™ sampling device. Groundwater samples were collected in laboratory prepared HCl preserved containers, labeled and placed on ice. Groundwater samples were shipped to Columbia Analytical Services of Kelso, Washington and SPL Laboratories of Houston Texas for VOC analyses. At the completion of the sampling efforts, borings HST-1 and HST-2 were abandoned using a cement/bentonite grout that was pumped to the bottom of the borehole from ground surface. Borings T1-1, T1-2, T1-3, T2-1, T2-2 and T2-3 were converted to 2-inch diameter monitoring wells. Boring logs and well construction details are presented in Appendix B.

Transect 1

A total of five borings (HST-1, HST-2, T1-1, T1-2 and T1-3) were advanced to a maximum depth of approximately 155 feet bgs along Transect 1 at the locations shown on Plate 3. The following table shows the depths where groundwater samples were collected in each boring:

Boring Identification	Depth of groundwater samples
HST-1	100, 135 and 149 feet bgs
HST-2	105, 138 and 158 feet bgs
T1-1	105, 135 and 150 feet bgs
T1-2	90, 120, 135 and 150 feet bgs
T1-3	112 and 136 feet bgs

Transect 2

A total of four borings (T2-1, T2-2 and T2-3) were advanced to a maximum depth of approximately 155 feet bgs along Transect 2 at the locations shown on Plate 3. The following table shows the depths where groundwater samples were collected in each boring:

Boring Identification	Depth of groundwater samples
T2-1	112, 132 and 150 feet bgs
T2-2	111 feet bgs
T2-3	111 and 137 feet bgs

4.1.2 Monitoring Well Construction

Transect Monitoring Wells

The elevations of the borings for monitoring wells T1-1, T1-2, T1-3, T2-1 T2-2 and T2-3 are 192, 192, 160, 152, 155 and 154 feet mean sea level (msl), respectively. Well T1-1 and T1-2 are screened in the interval between 192 and 172 feet msl. Well T1-3 is screened in the interval between 160 and 140 feet msl. Well T2-1 is screened in the interval between 152 and 137 feet msl. Well T2-2 is screened in the interval between 155 and 140 feet msl and Well T2-3 is screened in the interval between 154 and 139 feet msl. All of the wells are constructed of 2-inch diameter, Schedule 40, flush-threaded, PVC blank and factory-slotted 0.020-inch PVC screen. A filter pack consisting of No. 3 Lonestar sand extends approximately 2-feet above the top of the

screened interval. A 1- to 2-foot thick bentonite plug is set above the filter pack, with the remainder of the annular space grouted to the surface. The monitoring wells are completed with traffic-rated boxes and are set slightly above grade to prevent surface water from ponding. A locking expansion plug was installed in each well.

After installation, the newly installed wells were developed by surging, bailing, and pumping. The groundwater level in the well was measured and the minimum purge volume of the well calculated. Approximately four to five well volumes were purged from the well. Purge volume was estimated using a stopwatch and a container of known volume to estimate flow rate. Purge water was placed in on-Site 55-gallon drums. Field indicator parameters, including pH, temperature and electrical conductivity were monitored during purging to verify stabilization. The field parameter results were recorded on the groundwater sampling forms.

Additional Monitoring Well Installations

Monitoring wells MW-12 and MW-13 were installed in July 2008 as part of Univar's ongoing investigation to evaluate the lateral extent of PCE in groundwater (Appendix B). The wells are located east of the Site at the locations shown on Plate 3. Wells MW-12 and MW-13 are screened in the interval between approximately 183 msl to 163 feet msl. As part of Univar's SVE pilot test investigation, further described in Section 6, four well pairs including wells VW-1 through VW-4 (Appendix B) were installed north of the Site at the locations shown on Plate 3. Each of the well pairs includes a vapor well screened in the unsaturated zone and a groundwater well screened in the saturated zone. The groundwater well at VW-1 is screened in the interval between 198 and 163 feet bgs. The groundwater wells at VW-2, VW-3 and VW-4 are screened in the interval between 197 and 162 feet msl. Monitoring well construction details for all study area wells is included on Table 2.

4.2 Transect Investigation Results

4.2.1 Soils Encountered

Transect 1

Soils encountered in boring HST-1 consisted predominantly of silty sand and sand in the interval between 80 feet bgs and the bottom of the boring at 150 feet bgs. An approximate 10-foot thick horizon of clay was encountered between approximately 128 feet bgs and 138 feet bgs in boring HST-1. Soils encountered in boring HST-2 were logged as silt in the interval between the surface and 21 feet bgs. Silty sand and sand was encountered in the interval between 21 feet bgs and 51 feet bgs. Alternating 10- to 20-foot thick horizons of silts and sands were encountered in the interval between 51 feet bgs and the bottom of the boring at 158 feet bgs. With the exception of an approximate 10-foot thick horizon of silty sand in the interval between 14 and 24 feet bgs, soils encountered in boring T1-1 consisted predominantly of silts and clays from the ground surface to a depth of 108 feet bgs. Alternating horizons of sand, silts and clays were logged in the interval between 108 feet bgs and the bottom of the boring at 150 feet bgs. From the surface to the bottom of the boring at 150 feet bgs, soils encountered in boring T1-2 consisted of alternating 10-to 25-foot thick layers of silt, clay and sand. Soils encountered in boring T1-3 consisted of silt from the surface to a depth of approximately 33 feet bgs. Alternating layers of sand, silty sand and silt are present from 33 feet bgs to 93 feet bgs. With the exception of a 5-foot layer of silt at 122 feet bgs, sand and silty sand was logged in the interval between 93 feet bgs and the bottom of the boring at 155 feet bgs in boring T1-3. Boring logs are included in Appendix B.

Transect 2

Soils encountered in boring T2-1 consisted predominantly of silty sand in the interval between the surface and 18 feet bgs. Approximately 10-foot thick alternating layers of silt and sand are present in the interval between 18 feet bgs and 38 feet bgs. With exc eption of an approximate 5-foot layer of sand at a depth of 64 fee t bgs, the interval between approximately 38 feet bgs and 83 feet bgs consists of silt. With the exception of an approximate 5-foot layer of silt at approximately 117 feet bgs the interval between 83 feet bgs and the bottom of the boring at 155 feet bgs consists of sand. From the surface to a depth of approximately 63 feet bgs alternating layers of silt, silty clay, clay, sand and silty sand are present in boring T2-2. With the exception of an approximate 5-foot thick horizon of silty sand at a depth of approximately 83 feet bgs, silt was present in the interval between 63 bgs and 102 feet bgs. T he remainder of boring T2-2, from a depth of 102 feet bgs to the bottom of the boring at 160 feet bgs, consisted predominantly of sand. Approximate 4- to 5-foot horizons of silt were logged at depths of 112 and 13 4 feet bgs in boring T2-2. Soils encountered in boring T2-3 consisted of alternating 5- to 10-foot thick layers of sand, silty sand and silt from the surface to a depth of 98 feet bgs. Silt was logged in the interval between 98 feet bgs to a depth of 118 feet bgs. Sand was encountered from 118 feet bgs to the bottom of the boring at 155 feet bgs.

4.2.2 Groundwater Quality Conditions

During the February and March 2007 Transect 1 investigation activities groundwater was encountered in the offsite borings between 90 and 95 feet bgs. An exception to this was in T1-2 which was drilled at a surface elevation approximately 20 feet lower than the other borings. Groundwater in boring T1-2 was encountered at a depth of approximately 87 feet bgs during drilling. Groundwater was encountered at a depth of approximately 105 feet bgs during the May and August 2008 Transect 2 investigation activities. September 10, 2008 groundwater data indicated the depth to groundwater ranged from 102.87 feet bgs in MW-9 to 109.13 feet bgs in MW-5 and that groundwater flow was generally westerly at an approximate gradient of 0.00089 feet per foot (Plate 5).

4.2.3 Analytical Results

The laboratory analytical report is included in Appendix C. A summary of Hydropunch™ analytical results for detected constituents in groundwater samples collected in each of the 8 boreholes is included in the table below:

Transect 1					
Boring Identification	**Depth (Feet bgs)**	**TCE (ug/L)**	**PCE (ug/L)**	**1,2-DCA (ug/L)**	**Acetone (ug/L)**
HST-1-100	100	ND	**1.7**	**1.1**	ND
HST-1-135	135	**0.9**	**32**	ND	ND
HST-1-149	149	ND	**12**	ND	ND
HST-2-105	105	ND	**1.5**	ND	ND
HST-2-138	138	ND	**28**	ND	ND
HST-2-158	158	ND	**10**	ND	ND
T1-1-105	105	**2.9**	ND	ND	ND
T1-1-135	135	ND	ND	ND	ND
T1-1-150	150	ND	ND	ND	ND
T1-2-90	90	ND	ND	**35**	**31**
T1-2-120	120	ND	**2.3**	**1.5**	ND
T1-2-135	135	**1.1**	**10**	**3.1**	ND
T1-2-150	150	ND	ND	ND	ND
T1-3-112	112	ND	ND	**4.0**	ND
T1-3-136	136	ND	ND	**0.72**	ND

Transect 2					
Boring Identification	**Depth (Feet bgs)**	**TCE (ug/L)**	**PCE (ug/L)**	**1,2-DCA (ug/L)**	**Acetone (ug/L)**
T2-1-112	112	ND	ND	ND	ND
T2-1-132	132	ND	ND	ND	ND
T2-1-150	150	ND	ND	ND	ND
T2-2-111	111	ND	**1.1**	ND	**22**
T2-3-111	111	ND	**1.5**	ND	**13**
T2-3-137	137	ND	**13**	ND	**14**
T2-1-112	112	ND	ND	ND	ND
T2-1-132	132	ND	ND	ND	ND
T2-1-150	150	ND	ND	ND	ND

Notes
ND= not detected above laboratory reporting limit
ug/L = micrograms per liter
TCE = Trichloroethylene
PCE = Tetrachloroethylene
1,2-DCA = 1,2-dichloroethane

On June 9, 2008, groundwater samples were collected from all study area wells installed to date. Upon completion of wells T2-3, wells VW-1 through VW-4 and the wells MW-12 and MW-13, another round of groundwater sampling was conducted on September 10, 2008, which included the sampling of wells T2-1 through T2-3, VW-1 through VW-4 and wells MW-12 and MW-13. A groundwater contour map showing the distribution of PCE in study area wells is shown on Plate 5. The contour map shows the June 9, 2008 data for all wells with the exception of wells T2-1 through T2-3, VW-1 through VW-4, and wells MW-12 and MW-13, where the more recent September 10, 2008 data is shown. The Hydropunch™ data shown for HP-1 through HP-7 were also used to guide the preparation of the concentrations contours, however, it is noted that the data are from a previous field investigation conducted in 1997. The Hydropunch™ data shown for HP-8 are from 2002 field investigation effort. The distribution of PCE in groundwater is shown on cross sections A-A', B-B,' C-C' and D-D' (Plates 6 through 9, respectively). Historical analytical results are shown on Table 1.

5.0 PILOT TEST INVESTIGATION

5.1 Summary of Investigation

5.1.1 Background

Univar initiated remediation at the Site in 1998 utilizing a soil vapor extraction/treatment (SVET) system. The SVET system utilized three nested vapor well pairs, which had perforations from 20 to 50 feet bgs and 70 to 90 feet bgs. A blower extracted vapors from each well and operated at approximately 109 cubic feet per minute (cfm). Two, 2,500-pound granular activated carbon (GAC) vessels, connected in series, treated the extracted vapors prior to discharge to the atmosphere. Univar submitted a letter to the RWQCB in February 2004 concluding that the SVET system had successfully remediated the vadose zone, and to some degree, groundwater near the former AST. With the onsite vadose zone remediated, the source of PCE entering the ground water has effectively been removed as evidenced by a decrease in PCE concentration in well MW-1. Recently, the highest PCE concentrations in ground water occurred in well MW-4, located approximately 200 feet to the north of the site. The RWQCB has expressed concern that PCE may be present in the vadose zone near well MW-4 and may be acting as a source to ground water. Conversely, the PCE detected in ground water near well MW-4 may act as a source for the overlying vadose zone. In past decades, the elevation of ground water table been declining. The RWQCB's concern is that as water levels declined, residual PCE contamination as DNAPL, or in the dissolved phase, were left in the former saturated zone (Rubicon, 2008).

In response to the concerns of RWQCB Univar implemented a soil vapor extraction (SVE) pilot test. The SVE pilot test was conducted by Rubicon Engineering Corporation (Rubicon) of Irvine, California on the railroad property north of the Site. The SVE pilot test was performed in accordance with the Soil Vapor Extraction Pilot Test Work Plan (Rubicon, July 19, 2006) and Work Plan Addendum 1 (Rubicon, August 25, 2006). The results of the investigation are included Rubicon's November 19, 2008 report entitled *Soil Vapor Extraction Pilot Test Report*, *Former Univar USA Inc. Facility, 1152 G Street, Fresno, California.*

The objectives of SVE pilot test were as follows:

- The primary objective of the vapor extraction pilot test was to assess the suitability of SVE for reduction of PCE in the vadose zone near off-site well MW-4.
- Identify potential offsite areas of contamination in the vadose zone which may be acting as a continuing source to ground water.
- Provide data for design of a full-scale offsite vapor extraction and treatment system.

To address the offsite vadose zone areas, 4 soil-vapor wells, wells VW-1, VW-2, VW-3 and VW-4 were installed. These four vapor wells were installed as cluster wells, with dual well casings. In referring to the individual well casings, the suffix "A" is used for the shallow well screen and "B" used for the deeper screen (e.g. VW-1A and VW-1B). The deeper well screens (VW-1B, VW-2B, VW-3B, and VW-4B) extend below the water table so that they may be also utilized as ground water monitoring wells. The locations of the soil vapor wells are shown in Plate 3.

5.1.2 Investigation Results

Two soil vapor extraction tests were conducted, one three step test, and one eight hour constant vacuum test. These tests were conducted in both the upper vadose zone wells VW-1A (extraction well), VW-2A (observation well), VW-3A (observation well), and VW-4A (observation well), as well as the lower vadose zone wells VW-1B, VW-2B, VW-3B, and VW-4B. Wells MW-12 and MW-13 acted as vacuum observation wells for the lower vadose zone although no soil vapor samples were collected from these two wells.

Vapor samples collected from both the extraction well and the observation wells were composed primarily of PCE. Some of the vapors also contained acetone, carbon disulfide, cyclohexane, dichlorodifluoromethane, ethanol, and hexane.

Univar is currently designing and permitting a SVE system remediate the vadose zone and, to the degree possible, groundwater in the vicinity of Well MW-4.

6.0 SITE CONCEPTUAL MODEL

The development of this Site Conceptual Model is based on an assessment of the results of investigations conducted since 1994 to evaluate the lateral extent of PCE in groundwater downgradient of the Site. Collectively, the assessment relies on Hydropunch™ groundwater analytical data, groundwater analytical and flow data derived from groundwater monitoring wells and lithologic data recorded from soil borings during Hydropunch™ boring and monitoring well installations.

6.1 Soil

The general soil profile encountered is shown on Cross Sections A-A', B-B', C-C' and D-D' (Plates 6 through 9, respectively). The assessment indicates that the stratigraphy in the vicinity of the Site consists predominantly of alternating layers of silts, clays, and sands with no substantial laterally continuous clay units present; suggesting that groundwater beneath the study area is representative of an unconfined water body. The cross section shown on Plate A-5 Illustrates the soil types observed in borings for City Wells 9A, 22A and 21A. Generally soils observed in the cross section consist predominantly of alternating layers of silts, clays and sands. However, what appear to be two laterally continuous, approximately 36 to 77 foot thick, clay units were logged between City Wells 9A and 22A in the interval between approximately 176 feet bgs and 410 feet bgs. The two clay units are separated by approximately 60 to 90 feet of alternating layers of sands, silts and clays. In addition, what appears to be a laterally continuous clay unit approximately 59 to at least 156 feet thick was logged between City Wells 22A and 21A in the interval between 439 feet bgs and 533 feet bgs. No laterally continuous clay units were observed in the stratigraphy between all three wells suggesting that the groundwater beneath the study area is predominantly representative of an unconfined water body (MACTEC, 2003). Further evaluation of the stratigraphy in the study area is required to confirm the presence of a competent clay layer beneath the study area.

6.2 Groundwater

6.2.1 Groundwater Flow

Groundwater records from as early as 1997 show groundwater in the study area flowing from a northwestern to northeastern direction. An apparent pumping depression created by City Well 22A located approximately 1,900 feet northwest of the Site appears to have an affect on groundwater flow in the vicinity of the Site.

6.2.2 PCE Distribution

The distribution of PCE in groundwater is shown in map view on Plates 4 and 5 and on cross sections A-A', B-B' and C-C' (Plates 6 through 9, respectively). As shown on Plate 4, PCE was reported in T1-3 at concentrations 0.71 ug/L during the most recent sampling event. These data and other existing data suggest that the eastern boundary of the plume in the study area is now approximately defined.

PCE concentrations are highest in vicinity of the recently installed groundwater monitoring/SVE wells VW-1 through VW-4. These wells were developed and sampled in September 2008 and at that time the groundwater samples contained PCE at concentrations ranging from 1,100 ug/L to 3,500 ug/L with the highest concentration reported in well VW-1. Groundwater quality data from Hydropunch™ samples collected during vapor well installation activities show PCE concentrations

in well VE-1 at 1,900 ug/L and 44 ug/L at depths of 115 feet bgs and 150 feet bgs, respectively. Hydropunch™ samples collected during well installation activities show PCE concentrations in well VE-2 at 990 ug/L, 95 ug/L and non detect at depths of 110 feet bgs, 135 feet bgs and 150 feet bgs, respectively (Plates 5 and 6). These data indicate that, PCE concentrations decrease with depth, however, the vertical extent of PCE impacts are not yet established to the 5ug/L limit in the vicinity of monitoring wells VW-1 through VW-4. Attempts were made to collect Hydropunch™ samples from approximately 110 feet bgs, 135 feet bgs, and 150 feet bgs in each boring. However, due to the presence of low permeability materials, the 135 foot bgs samples in wells VW-1, VW-3, and VW-4 were not be collected because of insufficient water yield.

Further downgradient, the data indicate that higher concentrations of PCE is present in the sand zones encountered between 120 and 150 feet suggesting that there is some vertical migration of the PCE as it moves downgradient (Plate 6). A groundwater contour map showing the distribution of PCE in groundwater from a depth interval of between 135 feet bgs and 155 feet bgs is shown on Plate 5. As shown on Plate 5 the PCE concentrations were highest in the vicinity of HST-1 and HST-2. PCE was also reported at a concentration of 8.6 ug/L in the groundwater sample from well T2-2 located along Transect 2. These data suggest the lateral and vertical extent of PCE impacts are not established to the 5ug/L limit on the downgradient portion of the plume. As shown on Plate 5, no PCE data has been recorded from the interval between 135 feet bgs to 155 feet bgs on the western portion of the study area. The lack of data from this interval indicates that the vertical extent of PCE impacts to the 5ug/L are not established on the western portion of the study area. In addition, the lateral extent of PCE impacts is not completely established between the Site and City Well 22A. The suspected influence of the pumping of City Well 22A on local groundwater flow suggests the need for additional shallow data to further evaluate the distribution of PCE in groundwater south of well MW-9.

The downgradient extent of elevated PCE concentrations in the vicinity of wells VW-1 through VW-4 needs further definition. As indicated previously, PCE concentrations in wells VW-1 through VW-4 ranged from 1,100 ug/L to 3,500 ug/L with PCE reported at a concentration of 1,100 ug/L in downgradient well VW-4.

It also appears that on the western margin there are two plumes with the boundary of the Univar related PCE located near sampling location T1-1 along the western end of Transect 1. The boundary also appears to be located along a north-south orientation with well MW-6 and sampling location T1-1. Hydropunch™ data from T1-1 showed PCE at a concentration below detection limits (from a depth of 105 feet bgs). The most recent round of groundwater monitoring data (September 2008) showed PCE at a concentration of 1.1 ug/L in well T1-1. Other data that supports this are the previously collected data from HP-6 where VOCs were not detected. HP-6 data and T1-1 data also support separation of the Univar plume from the unknown plume near MW-10.

Collectively, the data show groundwater flow is mostly towards the northwest and that there are at least two narrow and commingling north-south trending plumes of PCE (Plate 4). One of these plumes, the most easterly one, appears to originate at or near the former Univar facility. The origin of the second plume is unknown but it originates from somewhere south and west of the Site (cross and upgradient of the Site), as identified by the presence of higher concentrations of PCE in well MW-10. A possible third source is present near well MW-8 and, if present, commingles with both of the other two plumes. The source of PCE found in the sample collected from well MW-8 may represent an unknown source of PCE, as the concentration of PCE is greater at MW-8 (66 ug/L) than that at MW-6 (34 ug/L). Assuming groundwater flow is predominantly to the northwest, the source of PCE at MW-8 would likely be from an area west of the former Univar facility.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of these investigations, it appears that further delineation of the lateral and vertical extent of PCE is required. As shown on Plate 4, the lateral extent of PCE needs further definition downgradient of the Site, in the western portion of the study area and in the vicinity of monitoring wells VW-1 through VW-4. Further definition of the vertical extent is also required downgradient of the Site, in the vicinity of wells VW-1 through VW-4 and between the Site and City Well 22A (Plate 5). In addition, a further evaluation of the stratigraphy in the study area is recommended to confirm the presence of a competent clay layer that appears to be approximately 175 feet bgs. NCE proposes a two phased approach consisting of an investigation to assess the vertical extent of PCE impacts in the study area and evaluate the presence of a competent clay layer (Phase I). Phase II of the investigation includes a follow-on investigation to further assess the lateral extent of PCE impacts in the study area (Phase II). Concurrent with these investigative activities, Univar will be obtaining the necessary permits to construct and operate a SVE system in the vicinity of wells MW-4 and VW-1 through VW-4.

Proposed work activities for the Phase I work include the following:

- Advance exploratory borings to evaluate the presence of a competent clay (low permeability zone) layer at a depth of approximately 175 feet bgs at boring locations T2-2D, MW-5D, MW-14D, and MW-15D (Plates 4 and 5, Table 3)

- Collect in-situ groundwater samples at boring locations T2-2D, MW-5D, MW-14D, and MW-15D (Plates 5 and 6, Table 3).

- Complete deep monitoring wells at boring locations T2-2D, MW-5D, MW-14D and MW-15D. The wells will be constructed with screen placed in the interval determined by the in-situ groundwater sample results and the lithology encountered.

Phase I Exploratory Borehole Drilling and Well Installations

Four deep exploratory borings and deep monitoring wells (T2-2D, MW-5D, MW-14D and MW-15D) will be installed at the locations shown on Plate 5. The purpose of the borings is to establish the presence of a competent clay layer anticipated to occur at approximately 175 feet bgs and to evaluate the vertical extent of PCE in groundwater at these locations. The borings are anticipated to be advanced utilizing sonic drilling techniques. Beginning at the water table in-situ Hydropunch™ groundwater samples will be collected in borings T2-2D, MW-14D and MW-15D at approximate 20-foot intervals, or when coarse grained soil horizons are encountered. Hydropunch™ samples will be collected in a similar fashion in boring MW-5D beginning at a depth of 112 feet bgs (the bottom of well MW-5). To collect the sample, the boring will be drilled to a depth immediately above the desired sampling interval and the Hydropunch™ sampler will be pushed approximately 2 to 4 feet into the undisturbed water-bearing zone. The sampler will be retracted slightly allowing groundwater to flow into the tool's sample collection chamber. The groundwater sample will be retrieved and transferred to appropriate containers and analyzed for VOCs. An on-site mobile laboratory will be utilized to provide reel time groundwater analytical data to assist in the determination of well construction criterion. The borings will be terminated when the lithology indicates that approximately 10 to 15 feet of clay is present beginning at the target depth of approximately 175 feet bgs. If clay is not encountered at the target depth the boring will be terminated where the analytical results for two consecutive Hydropunch™ samples show PCE detections at concentrations below 5 ug/L. At the completion of sonic drilling activities, the borings

will be converted to groundwater monitoring wells. The wells will be constructed with screen placed in the interval directly above the clay or in the interval determined by the Hydropunch™ analytical data. The estimated screen lengths will be approximately 10 to 25 feet in length and will be established in the field based on the lithology encountered and by the Hydropunch™ analytical data. The monitoring wells will be constructed of 2-inch diameter, Schedule 40, flush-threaded, PVC blank and 10 to 25 feet of factory-slotted 0.020-inch PVC screen. Filter pack consisting of No. 3 Lonestar sand will extend approximately 2 feet above the top of the screened interval. A 1-foot thick bentonite plug will be set above the filter pack, with the remainder of the annular space grouted to the surface. The monitoring wells will be completed with a traffic-rated box. The well boxes will be set slightly above grade to prevent surface water from ponding. A locking expansion plug was installed in the wells

Phase II Well Installations

Shallow zone wells MW-14, MW-15 and T3-1 will be installed at the locations shown on Plate 5. The purpose of the borings is to further evaluate the lateral extent of PCE in groundwater at these locations (Plate 5). The borings are to be advanced utilizing drilling techniques. Beginning at the water table in-situ Hydropunch™ groundwater samples will be collected in all borings at approximate 20-foot intervals, or when coarse grained soil horizons are encountered. To collect the sample, the boring will be drilled to a depth immediately above the desired sampling interval and the Hydropunch™ sampler will be pushed approximately 2 to 4 feet into the undisturbed water-bearing zone. The sampler will be retracted slightly allowing groundwater to flow into the tool's sample collection chamber. The groundwater sample will be retrieved and transferred to appropriate containers and shipped to a California certified laboratory for VOCs analyses. The borings will be terminated at the target depth of approximately 150 feet bgs. At the completion of drilling activities the borings will be converted to 2-inch diameter groundwater monitoring wells. Monitoring wells MW-14 and MW-15 will be screened in the interval between 90 and 125 feet. Monitoring well T3-1 will be screened in the interval between 135 and 150 feet bgs. The monitoring wells will be constructed of 2-inch diameter, Schedule 40, flush-threaded, PVC blank and factory-slotted 0.020-inch PVC screen. Filter pack consisting of No. 3 Lonestar sand will extend approximately 2 feet above the top of the screened interval. A 1-foot thick bentonite plug will be set above the filter pack, with the remainder of the annular space grouted to the surface. The monitoring wells will be completed with a traffic-rated box. The well boxes will be set slightly above grade to prevent surface water from ponding. A locking expansion plug was installed in the wells.

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TABLES

Table 1

Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
MW-1	04-Sep-96	<5 U	<0.5 U	<0.5 U	<0.5 U	5100 D	3.7
	17-Dec-97	<1 U	<0.5 U	<0.5 U	<0.5 U	9600 D	6.6
	20-Mar-98	<1 U	<0.5 U	<0.5 U	<0.5 U	5900	<1 U
	22-Jun-98	<250 U	<500 U	<0.5 U	<0.5 U	13000	<250 U
	23-Sep-98	<2 U	<5 U	<0.5 U	<0.5 U	14000	<2 U
	30-Dec-98	<12 U	<0.5 U	<12 U	<12 U	11000	<12 U
	27-Mar-99	<10 U	20	<10 U	<10 U	13000	12
	25-Jun-99	<0.5 U	<0.5 U	1.2	1	12000	51
	20-Sep-99	<5 U	<0.5 U	<5 U	<5 U	6200	22
	17-Dec-99	<5 U	<0.5 U	<5 U	<5 U	6500	21
	28-Mar-00	<10 U	<0.5 U	<10 U	<10 U	8100	<10 U
MW-1 (Dup) *	28-Mar-00	<10 U	<0.5 U	<10 U	<10 U	7800	<10 U
MW-1	25-May-00	<0.5 U	<0.3 U	<0.4 U	<0.4 U	7200	20
	25-Sep-00	<50 U	<50 U	<50 U	<50 U	7000	58
	07-Dec-00	<0.5 U	<1 U	<0.5 U	<0.5 U	4400	46
	27-Feb-01	<0.5 U	<1 U	<0.5 U	<0.5 U	1300	12
	10-May-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1000	16
	18-Sep-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2400	63
	08-Nov-01	<0.5 U	<0.5 U	0.57	<0.5 U	2140	40
	04-Mar-02	<0.5 U	<0.5 U	0.93	<0.5 U	2900	25.3
	31-May-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2030	21.8
	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1800	11.6
	20-Nov-02	<0.5 U	<0.5 U	1.66	<0.5 U	128	0.51
	28-Feb-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	904	13.2
	13-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	863	6.66
	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1040	10.2
	31-Dec-03	<1.3 U	<1.3 U	<1.3 U	<1.3 U	680	6.1
	17-Mar-04	<1.3 U	<1.3 U	<1.3 U	<1.3 U	560	4.6
	19-May-04	<1 U	<1 U	<1 U	<1 U	480	4.5
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	400	3
	17-Nov-04	<1 u	<1 u	<1 u	<1 u	380	2.6
	13-May-05	<0.5 U	<0.5 U	1.2	<0.5 U	320	5
	23-Nov-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	280	2.1
	06-Jun-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	380	2.2
	07-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	270	1.5
	23-May-07	<0.5 U	<0.5 U	0.74	<0.5 U	180	1.6
MW-2	04-Sep-96	<10 U	<0.5 U	<0.5 U	<0.5 U	620 D	<5 U
	17-Dec-97	<1 U	<0.5 U	<0.5 U	<0.5 U	640 D	<1 U
MW-2 (Dup) *	17-Dec-97	<1 U	<0.5 U	<0.5 U	<0.5 U	490 D	<1 U
MW-2	20-Mar-98	<1 U	<0.5 U	<0.5 U	<0.5 U	610	<1 U
	22-Jun-98	<5 U	<10 U	<0.5 U	<0.5 U	470	<5 U
MW-2 (Dup) *	22-Jun-98	<5 U	<10 U	<0.5 U	<0.5 U	570	<5 U
MW-2	23-Sep-98	<1 U	<2 U	<0.5 U	<0.5 U	670	<1 U
MW-2 (Dup) *	23-Sep-98	<2 U	<5 U	<0.5 U	<0.5 U	640	<2 U
MW-2	30-Dec-98	<0.5 U	<0.5 U	<0.5 U	<0.5 U	250	<0.5 U

See Last Page For Footnotes

Table 1

Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
MW-2 (Dup) *	30-Dec-98	<0.5 U	<0.5 U	<0.5 U	<0.5 U	240	<0.5 U
MW-2	27-Mar-99	<1 U	<1 U	<1 U	<1 U	170	<1 U
	25-Jun-99	<0.5 U	<0.5 U	0.7	<0.5 U	310	0.6
	20-Sep-99	<0.5 U	<0.5 U	1.2	<0.5 U	350	0.8
	17-Dec-99	<0.5 U	<0.5 U	<0.5 U	<0.5 U	220	<0.5 U
MW-2 (Dup) *	17-Dec-99	<0.5 U	<0.5 U	<0.5 U	<0.5 U	250	<0.5 U
MW-2	28-Mar-00	<2 U	<0.5 U	<2 U	<2 U	130	<2 U
	25-May-00	<0.5 U	<0.3 U	<0.4 U	<0.4 U	140	<0.4 U
	25-Sep-00	<0.5 U	<0.5 U	<0.5 U	<0.5 U	440	0.62
	07-Dec-00	<5 U	<10 U	<5 U	<5 U	350	<5 U
MW-2 (Dup) *	07-Dec-00	<5 U	<10 U	<5 U	<5 U	310	<5 U
MW-2	27-Feb-01	<0.5 U	<1 U	<0.5 U	<0.5 U	160	<0.5 U
	10-May-01	<0.5 U	<0.5 U	2.5	<0.5 U	71	0.5
MW-2 (Dup) *	10-May-01	<0.5 U	<0.5 U	4	<0.5 U	60	0.7
MW-2	18-Sep-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	223	<0.5 U
MW-2 (Dup) *	18-Sep-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	223	<0.5 U
MW-2	08-Nov-01	<0.5 U	<0.5 U	2.72	<0.5 U	372	0.79
MW-2 (Dup) *	08-Nov-01	<0.5 U	<0.5 U	2.49	<0.5 U	382	0.83
MW-2	04-Mar-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	110	<0.5 U
MW-2 (Dup) *	04-Mar-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	98.8	<0.5 U
MW-2	31-May-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	118	0.54
	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	219	<0.5 U
	20-Nov-02	<0.5 U	<0.5 U	2.06	<0.5 U	86.4	<0.5 U
	28-Feb-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	162	<0.5 U
	13-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	137	<0.5 U
	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	150	<0.5 U
	31-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	130	0.63
	17-Mar-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	72	<0.5 U
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	68	<0.5 U
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	24	0.54
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	55	<0.5 u
	13-May-05	<0.5 U	<0.5 U	30	<0.5 U	79	5
	23-Nov-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	31	<0.5 U
	06-Jun-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	38	<0.5 U
MW-3	04-Sep-96	<1 U	<0.5 U	<0.5 U	<0.5 U	1.1	<0.5 U
	17-Dec-97	<1 U	<0.5 U	<0.5 U	<0.5 U	1.6	<1 U
	20-Mar-98	<1 U	<0.5 U	<0.5 U	<0.5 U	1.8	<1 U
MW-3 (Dup) *	20-Mar-98	<1 U	<0.5 U	<0.5 U	<0.5 U	1.9	<1 U
MW-3	22-Jun-98	<0.5 U	<1 U	<0.5 U	<0.5 U	5.2	<0.5 U
	23-Sep-98	<0.5 U	<1 U	<0.5 U	<0.5 U	1	<0.5 U
	30-Dec-98	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	27-Mar-99	<1 U	<1 U	<1 U	<1 U	5.4	<1 U
MW-3 (Dup) *	27-Mar-99	<1 U	<1 U	<1 U	<1 U	5.4	<1 U
MW-3	25-Jun-99	<0.5 U	<0.5 U	1.4	<0.5 U	4.5	<0.5 U
MW-3 (Dup) *	25-Jun-99	<0.5 U	<0.5 U	1.4	<0.5 U	4.7	<0.5 U

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Table 1

Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
MW-3	20-Sep-99	<0.5 U	<0.5 U	1.8	<0.5 U	3.1	0.2 J
	17-Dec-99	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.6	<0.5 U
	28-Mar-00	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2.8	<0.5 U
	25-May-00	<0.5 U	<0.3 U	<0.4 U	<0.4 U	1	<0.4 U
MW-3 (Dup) *	25-May-00	<0.5 U	<0.3 U	<0.4 U	<0.4 U	1	<0.4 U
MW-3	25-Sep-00	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.72	<0.5 U
MW-3 (Dup) *	25-Sep-00	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.74	<0.5 U
MW-3	07-Dec-00	<0.5 U	<1 U	<0.5 U	<0.5 U	1.9	<0.5 U
	27-Feb-01	<0.5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
MW-3 (Dup) *	27-Feb-01	<0.5 U	<1 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
MW-3	10-May-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	18-Sep-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	08-Nov-01	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.63	<0.5 U
	04-Mar-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	31-May-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.87	<0.5 U
	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.75	<0.5 U
	20-Nov-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	28-Feb-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	13-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	11.2	<0.5 U
	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	6.76	<0.5 U
	31-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	42	<0.5 U
	17-Mar-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	5.8	<0.5 U
	19-May-04	<0.5 U	<0.5 U	0.52	<0.5 U	5.3	<0.5 U
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.87	<0.5 U
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	4.9	<0.5 u
	12-May-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.4	<0.5 U
	22-Nov-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	06-Jun-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.93	<0.5 U
	07-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	23-May-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
MW-4	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2830	20.3
	20-Nov-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	3450	20.1
	28-Feb-03	<125 U	<0.5 U	<125 U	<125 U	3970	<125 U
	06-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2990	26
	21-Aug-03	<0.5 U	<0.5 U	0.5	0.5	5120	46.9
	30-Dec-03	<10 U	<10 U	<10 U	<10 U	4300	40
	18-Mar-04	<10 U	<10 U	<10 U	<10 U	3900	33
MW-4 (Dup) *	18-Mar-04	<10 U	<10 U	<10 U	<10 U	3800	34
MW-4	19-May-04	<5 U	<5 U	<5 U	<5 U	2500	27
	26-Aug-04	<5 U	<5 U	<5 U	<5 U	4000	30
MW-4 (Dup) *	26-Aug-04	<5 U	<5 U	<5 U	<5 U	3900	30
MW-4	17-Nov-04	<10 u	<10 u	<10 u	<10 u	3600	26
	13-May-05	<5 U	<5 U	<5 U	<5 U	2700	23
MW-4 (Dup) *	13-May-05	<5 U	<5 U	<5 U	<5 U	2700	22
	22-Nov-05	<10 U	<10 U	<10 U	<10 U	4300	33

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Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
MW-4	23-Nov-05	<10 U	<10 U	<10 U	<10 U	4200	34
	06-Jun-06	<5 U	<5 U	<5 U	<5 U	3600	25
MW-4 (Dup) *	06-Jun-06	<5 U	<5 U	<5 U	<5 U	3200	23
MW-4	07-Nov-06	<5 U	<5 U	<5 U	<5 U	3900	25
MW-4 (Dup) *	07-Nov-06	<5 U	<5 U	6.1	<5 U	4000	27
MW-4	23-May-07	<5 U	<5 U	<5 U	<5 U	2800	20
MW-4 (Dup) *	23-May-07	<5 U	<5 U	<5 U	<5 U	2700	19
MW-5	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	5.01	2.69
	20-Nov-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	7.48	<0.5 U
	28-Feb-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	41.7	2.28
	06-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	173	<0.5 U
	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	34.3	2.21
	30-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	55	2
	17-Mar-04	<0.5 U	<0.5 U	0.95	<0.5 U	38	2
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	24	2.4
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	9.4	0.9
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	32	2
	12-May-05	<1 U	<1 U	<1 U	<1 U	560	1.6
	03-Aug-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	47	2.2
	22-Nov-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	60	2.8
	06-Jun-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	110	3
	07-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	69	3.1
	23-May-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	210	2.7
	28-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	210	2.7
	09-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	230	1.8
MW-6	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	3.96	<0.5 U
	20-Nov-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	8.45	<0.5 U
	28-Feb-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	6.72	0.65
	06-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	8	<0.5 U
	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	17.2	0.87
	30-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	4.9	0.72
	17-Mar-04	<0.5 U	<0.5 U	0.86	<0.5 U	12	0.52
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	15	0.78
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	8.3	<0.5 U
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	5.5	0.96
	12-May-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	35	0.59
	23-Nov-05	<0.5 U	<0.5 U	<0.5 U	<0.5 U	13	1
	06-Jun-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	24	0.64
	07-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	22	0.93
	23-May-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	11	0.59
	28-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	97	0.51
	09-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	34	0.81
MW-7	02-Oct-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	23.5	1.31

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Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
MW-7	20-Nov-02	<0.5 U	<0.5 U	<0.5 U	<0.5 U	12.8	<0.5 U
	28-Feb-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	15	<0.5 U
	06-Jun-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	9.53	<0.5 U
	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	37	<0.5 U
MW-7 (Dup) *	21-Aug-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	39	<0.5 U
MW-7	30-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	29	0.59
	17-Mar-04	<0.5 U	<0.5 U	0.85	<0.5 U	26	<0.5 U
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	26	<0.5 U
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	27	<0.5 U
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	28	0.56
	12-Sep-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	22	<0.5 U
	06-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	39	0.59
	06-Jun-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	22	<0.5 U
	29-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	14	<0.5 U
	10-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	27	<0.5 U
MW-8	12-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	110	<0.5 U
	17-Mar-04	<0.5 U	<0.5 U	0.55	<0.5 U	180	1.3
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	180	1.2
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	25	<0.5 U
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	170	1.1
	12-Sep-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	110	0.9
	06-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	210	1.2
	06-Jun-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	98 D	0.68
	28-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	62	<0.5 U
	09-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	66	<0.5 U
MW-9	12-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	17-Mar-04	<0.5 U	<0.5 U	0.52	<0.5 U	8.2	<0.5 U
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	10	<0.5 U
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	3.8	<0.5 U
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	3.8	<0.5 u
	12-Sep-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	06-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.55	<0.5 U
	06-Jun-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.79	<0.5 U
	28-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.8	<0.5 U
DUP-1 (MW- *	09-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.4	<0.5 U
MW-9	09-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1.4	<0.5 U
MW-10	12-Dec-03	<0.5 U	<0.5 U	<0.5 U	<0.5 U	240	2.1
	17-Mar-04	0.5	<0.5 U	<0.5 U	<0.5 U	160	2.4
	19-May-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	170	2.6
	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	120	2.8
	17-Nov-04	<0.5 u	<0.5 u	<0.5 u	<0.5 u	73	1.5
	06-Nov-06	<0.5 U	<0.5 U	<0.5 U	<0.5 U	80	<0.5 U
	06-Jun-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	51	0.74

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Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
MW-10	28-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	12	<0.5 U
	10-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2.9	<0.5 U
MW-11	12-Dec-03	0.79	<0.5 U	<0.5 U	<0.5 U	260	4.8
	17-Mar-04	1.1	<0.5 U	0.61	<0.5 U	150	6.7
	19-May-04	1.2	<0.5 U	<0.5 U	<0.5 U	83	6
	26-Aug-04	1.1	<0.5 U	<0.5 U	<0.5 U	100	5.8
	17-Nov-04	1.2	<0.5 u	<0.5 u	<0.5 u	170	7.1
	13-May-05	0.85	<0.5 U	<0.5 U	<0.5 U	200	4.6
	22-Nov-05	1.3	<0.5 U	<0.5 U	<0.5 U	170	9.2
	06-Jun-06	0.77	<0.5 U	<0.5 U	<0.5 U	130	6.5
	07-Nov-06	0.57	<0.5 U	<0.5 U	<0.5 U	170	7.8
	23-May-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	78	3.9
	28-Nov-07	<0.5 U	<0.5 U	<0.5 U	<0.5 U	53	3.5
	09-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	52	3
MW-12	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	31	<0.5 U
MW-13	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	250	14
T1-1	23-May-07	0.7	<0.5 U	<0.5 U	<0.5 U	0.52	2.8
	29-Nov-07	0.5	<0.5 U	<0.5 U	<0.5 U	1.1	7.8
T1-1 DUP-1 *	29-Nov-07	0.5	<0.5 U	<0.5 U	<0.5 U	1.1	8.1
T1-1	10-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	0.69	5.4
	10-Sep-08	0.54	<0.5 U	<0.5 U	<0.5 U	1.1	5.3
T1-2	23-May-07	30	<0.5 U	<0.5 U	<0.5 U	63	7
	28-Nov-07	35	<0.5 U	<0.5 U	<0.5 U	54	7.2
	10-Jun-08	39	<0.5 U	6.5	<0.5 U	21	8.2
	10-Sep-08	50	<0.5 U	3.6	<0.5 U	31	5.1
T1-3	10-Jun-08	9.6	0.5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	10-Sep-08	12	<0.5 U	<0.5 U	<0.5 U	0.71	<0.5 U
T2-1	10-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U
T2-2	10-Jun-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	12	<0.5 U
	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	8.6	<0.5 U
T2-3	10-Sep-08	<0.5 U	0.5	<0.5 U	<0.5 U	1.5	<0.5 U
VW-1B	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	3500	24
VW-2B	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	2300	6.7
DUP-1 (VW- *	11-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1400	17
VW-3B	11-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	1500	17

See Last Page For Footnotes

Table 1

Summary of Historical Analytical Results for Selected Compounds

9/4/1996 to 9/11/2008

Univar USA Inc. Fresno, CA

		1,2-DCA (ug/L)	DCDFM (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	PCE (ug/L)	TCE (ug/L)
VW-4B	11-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**1100**	**7.9**
Bio 1	26-Aug-04	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**140**	**2.3**
OB-7	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**13**	<0.5 U
OB-8	10-Sep-08	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**8.2**	<0.5 U

Detections in bold

* - Indicates a Duplicate sample

DCDFM=Dichlorodifluoromethane

Standard Qualifiers

U - Undetected at or below MDL

D - Result is from analysis of a diluted sample

E - Estimated value

- Corrected Value

TABLE 2. GROUNDWATER MONITORING WELL NETWORK
Univar USA Inc.
Fresno, California

Well ID	Top of Casing Elevation	Screen Interval Elevation	Borehole	Casing	Total Depth	Screen Opening	Screened Interval	Sand Pack Interval	Bentonite Interval
			Diameter	Diameter	(ft, bgs)	(inches)	(ft, bgs)	(ft, bgs)	(ft, bgs)
	(MSL)	(MSL)	(inches)	(inches)					
Univar Wells									
MW-1	287.45	201-181	10	4	106	0.020	86-106	83-106	78-83
MW-2	286.26	201-181	10	4	105	0.020	85-105	82-105	77-82
MW-3	288.43	201-181	10	4	107	0.020	87-107	84-107	79-84
MW-4	288.32	201-176	8	2	112	0.020	87-112	84-112	79-84
MW-5	285.79	199-174	8	2	112	0.020	87-112	84-112	79-84
MW-6	286.54	200-175	8	2	112	0.020	87-112	84-112	79-84
MW-7	287.58	199-174	8	2	114	0.020	89-114	86-114	81-86
MW-8	286.03	198-173	8	2	113	0.020	88-113	85-113	80-85
MW-9	284.54	195-170	8	2	115	0.020	90-115	87-115	82-87
MW-10	284.61	195-170	8	2	115	0.020	90-115	87-115	82-87
MW-11	288.60	199-174	8	2	115	0.020	90-115	87-115	82-87
MW-12	287.64	183-163	10	2	150	0.020	105-125	103-105	101-103
MW-13	287.86	183-163	10	2	150	0.020	105-125	103-105	101-103
T1-1	286.04	192-172	8	2	114	0.020	94-114	92-114	91-90
T1-2	273.62	192-172	8	2	102	0.020	82-102	80-107	79-80
T1-3	288.40	160-140	8	2	150	0.020	128-148	126-148	124-126
T2-1	287.23	152-137	8	2	155	0.020	135-150	133-150	131-133
T2-2	290.05	155-140	8	2	160	0.020	135-150	133-150	131-133
T2-3	288.93	154-139	8	2	155	0.020	135-150	133-150	131-133
OB-7			8	2	147	0.020	142-147	140-147	3-140*
OB-8	286.65	197-156	12	6	135	0.040	90-130	85-135	83-85
VW-1B	287.93	198-163	10	2	150	0.020	90-125	90-125	80-90
VW-2B	287.28	197-162	10	2	150	0.020	90-125	90-125	80-90
VW-3B	287.41	197-162	10	2	150	0.020	90-125	90-125	80-90
VW-4B	286.91	197-162	10	2	150	0.020	90-125	90-125	80-90

Table 3
Summary of Proposed Investigation

Boring/Well No.		Purpose	Drilling Tech.	Phase I	Phase II	Well Installation Sequence	City Access	Estimated Screened Interval	In-Situ Sampling Interval
Exploratory Boring-1 (MW-14D)	Deep Well	Investigate the presence of clay layer-assess the vertical extent of PCE.	Sonic	x		1	x	140 to 175	Collect in-situ sample at 20 foot intervals or in coarse grained unit
Exploratory Boring-2 (MW-5D)	Deep Well	Investigate the presence of clay layer-assess the vertical extent of PCE.	Sonic	x		2	x	140 to 175	Collect in-situ sample at 20 foot intervals or in coarse grained unit
Exploratory Boring-3 (MW-15D)	Deep Well	Investigate the presence of clay layer-assess the vertical extent of PCE.	Sonic	x		3	x	140 to 175	Collect in-situ sample at 20 foot intervals or in coarse grained unit.
Exploratory Boring-4 (T2-2D)	Deep Well	Investigate the presence of clay layer-assess the vertical extent of PCE.	Sonic	x		4	x	140 to 175	Collect in-situ sample at 20 foot intervals or in coarse grained unit.
MW-14	Shallow Well	Assess laterl extent of PCE	Hollow Stem		x		x	90 to 125	Collect in-situ sample at 20 foot intervals or in coarse grained unit.
MW-15	Shallow Well	Assess laterl extent of PCE	Hollow Stem		x		x	90 to 125	Collect in-situ sample at 20 foot intervals or in coarse grained unit.
T3-1	Shallow Well	Assess laterl extent of PCE	Hollow Stem		x		x	135-150	Collect in-situ sample at 20 foot intervals or in coarse grained unit.

FW = First water estimated to be at 110 feet

PLATES

4002635105.ppt

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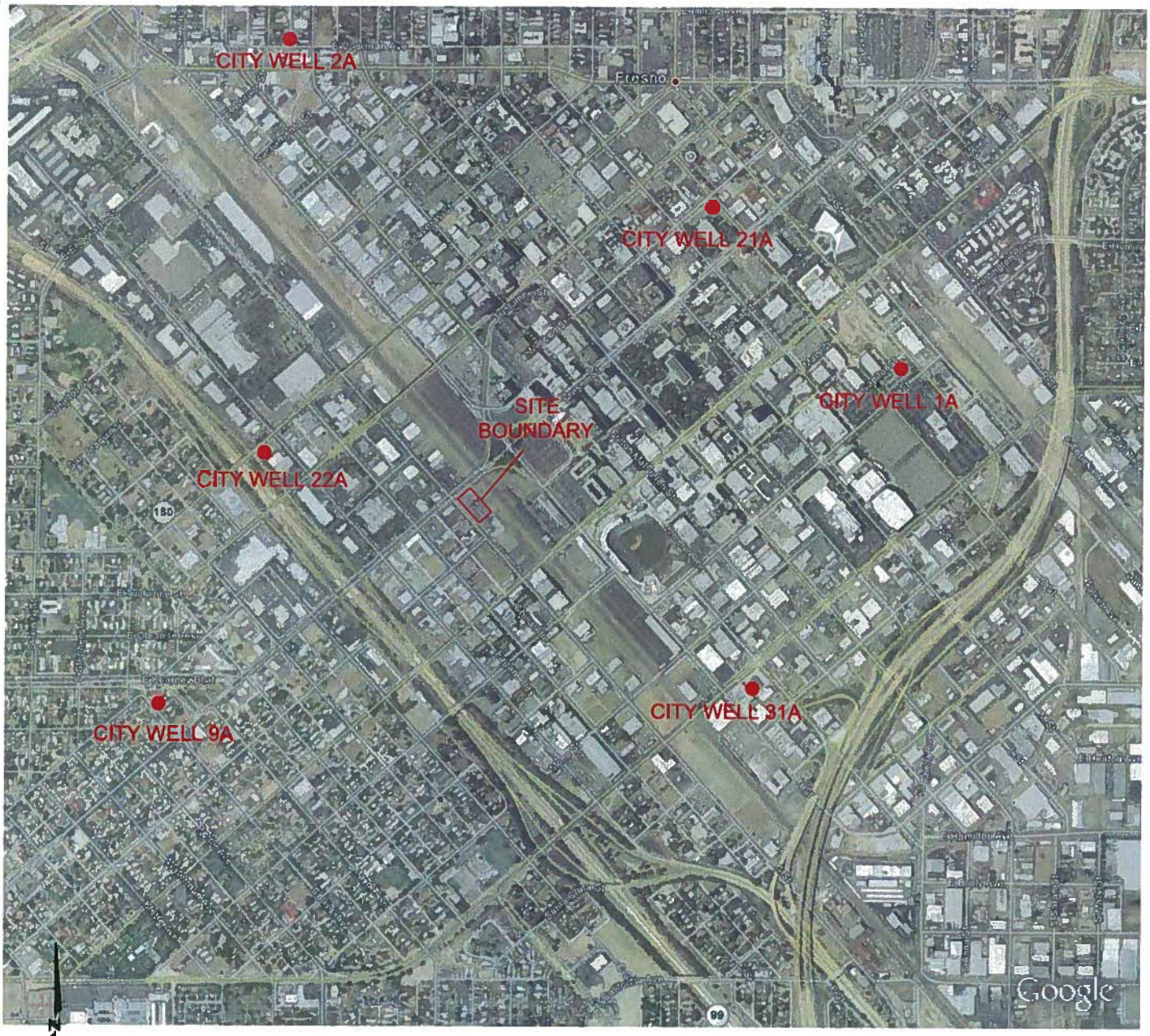
Site Location Map
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, California

PLATE
1

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	A487.26.35		11/08	



0 1300
SCALE: 1 INCH = 1300 FEET

Reference: Aerial Photograph (2007) – Google Earth Pro

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Vicinity Map
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, CA

PLATE **2**

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YG	4002635101.dwg	A400.26.35		11/08	

T3-1 PROPOSED SHALLOW WELL LOCATION

T2-2D PROPOSED DEEP WELL LOCATION

HISTORICAL DRY CLEANERS

FORMER HYDROCARBON INVESTIGATION

MONITORING WELL LOCATION

HYDROPUNCH LOCATION

VAPOR WELL LOCATION

0 150 300
SCALE IN FEET

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Site Plan
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, CA

PLATE 3

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
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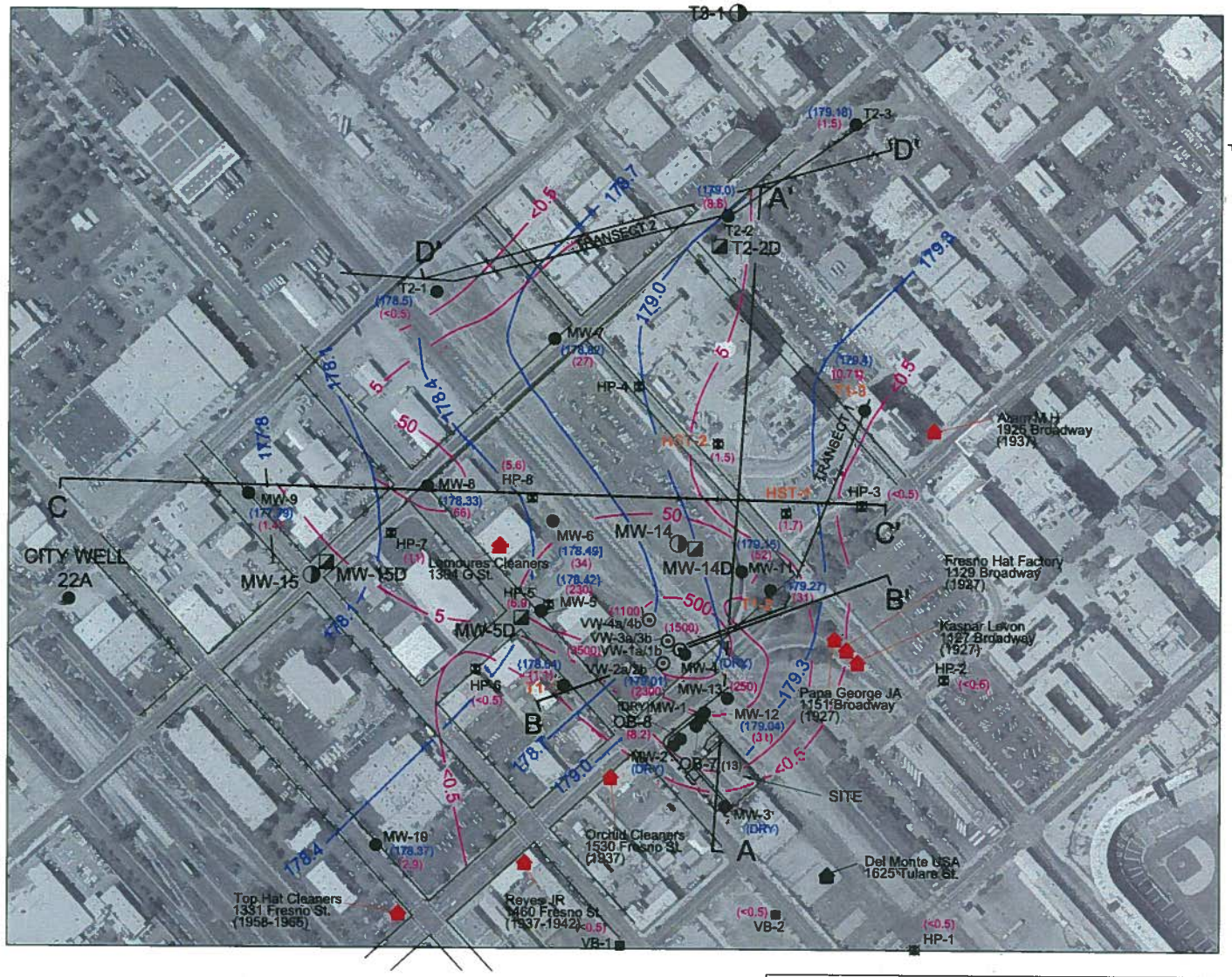

T3-1 PROPOSED SHALLOW WELL LOCATION

T2-2D PROPOSED DEEP WELL LOCATION

HISTORICAL DRY CLEANERS

FORMER HYDROCARBON INVESTIGATION

MONITORING WELL LOCATION

HYDROPUNCH LOCATION

VAPOR WELL LOCATION

179.0 GROUNDWATER ELEVATION (FL. AMSL) (9/10/08)

(0.71) PCE CONCENTRATION IN ug/L

0 150 300
SCALE IN FEET

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Groundwater Contour and Distribution of PCE in Shallow Groundwater
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, CA

PLATE 4

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
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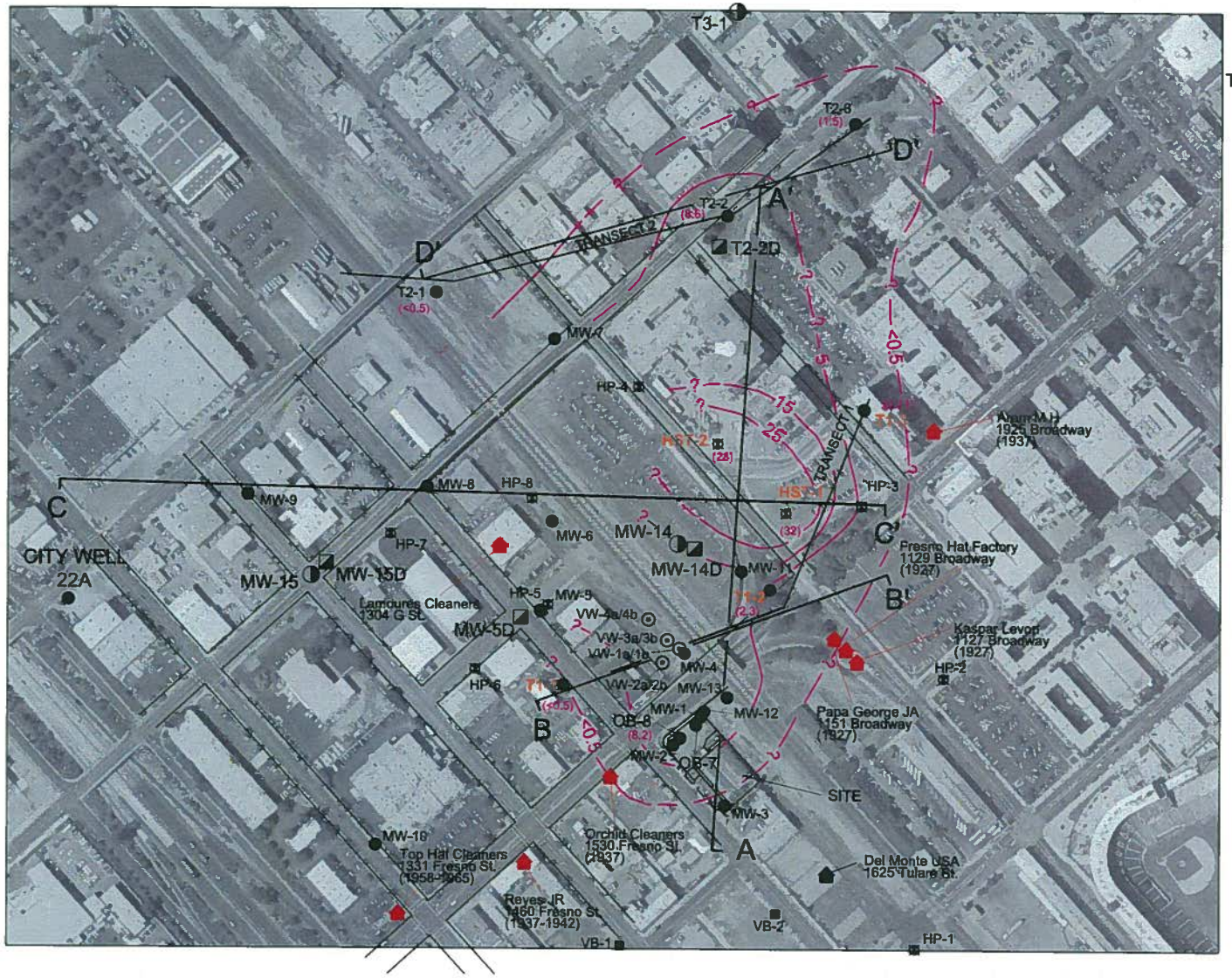

T3-1 PROPOSED SHALLOW WELL LOCATION

T2-2D PROPOSED DEEP WELL LOCATION

HISTORICAL DRY CLEANERS

FORMER HYDROCARBON INVESTIGATION

MONITORING WELL LOCATION

HYDROPUNCH LOCATION

VAPOR WELL LOCATION

(8.6) PCE CONCENTRATION IN ug/L

0 150 300
SCALE IN FEET

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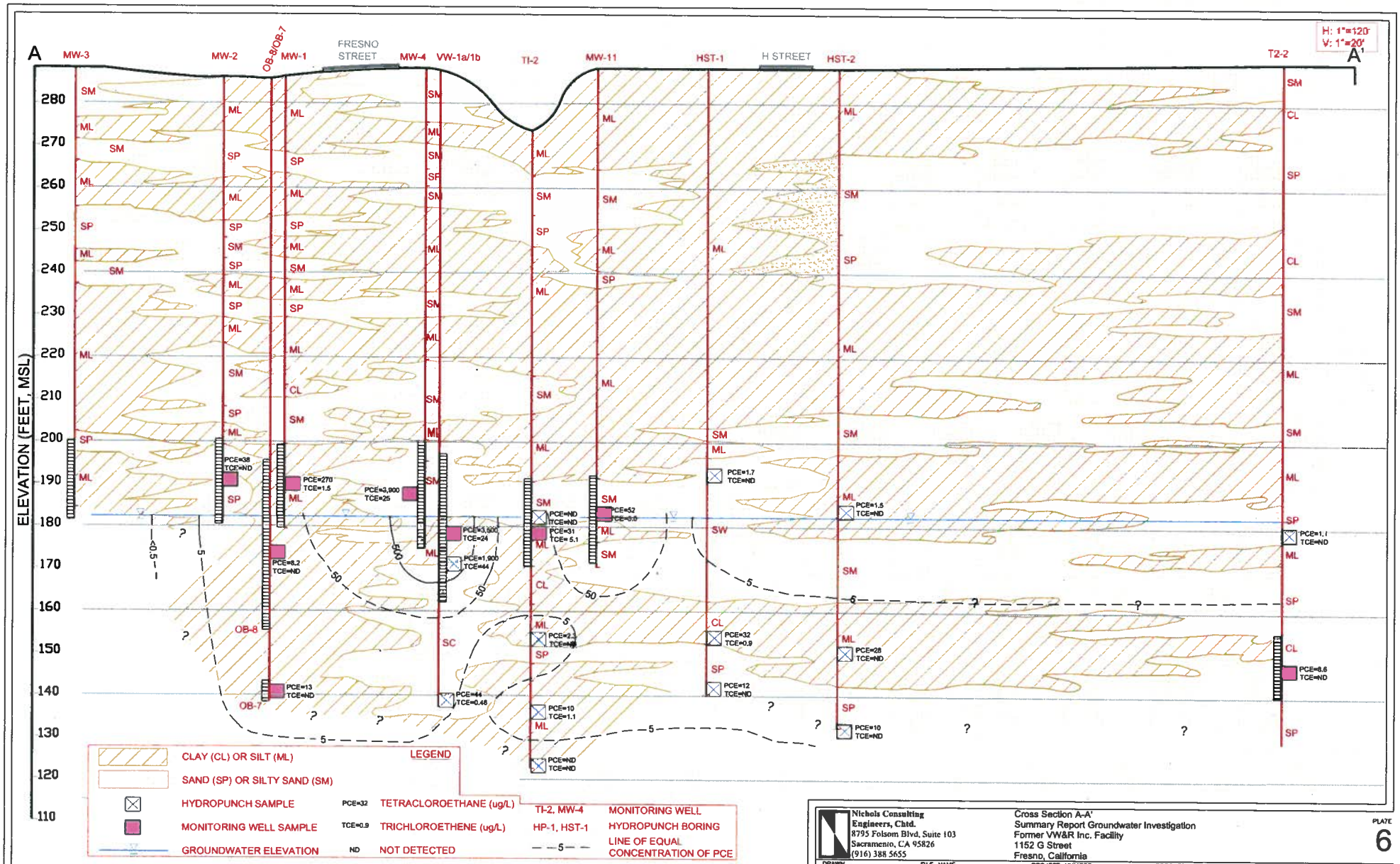
Distribution of PCE in Deeper Zone
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, CA

PLATE 5

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	4002635104.dwg			11/08	



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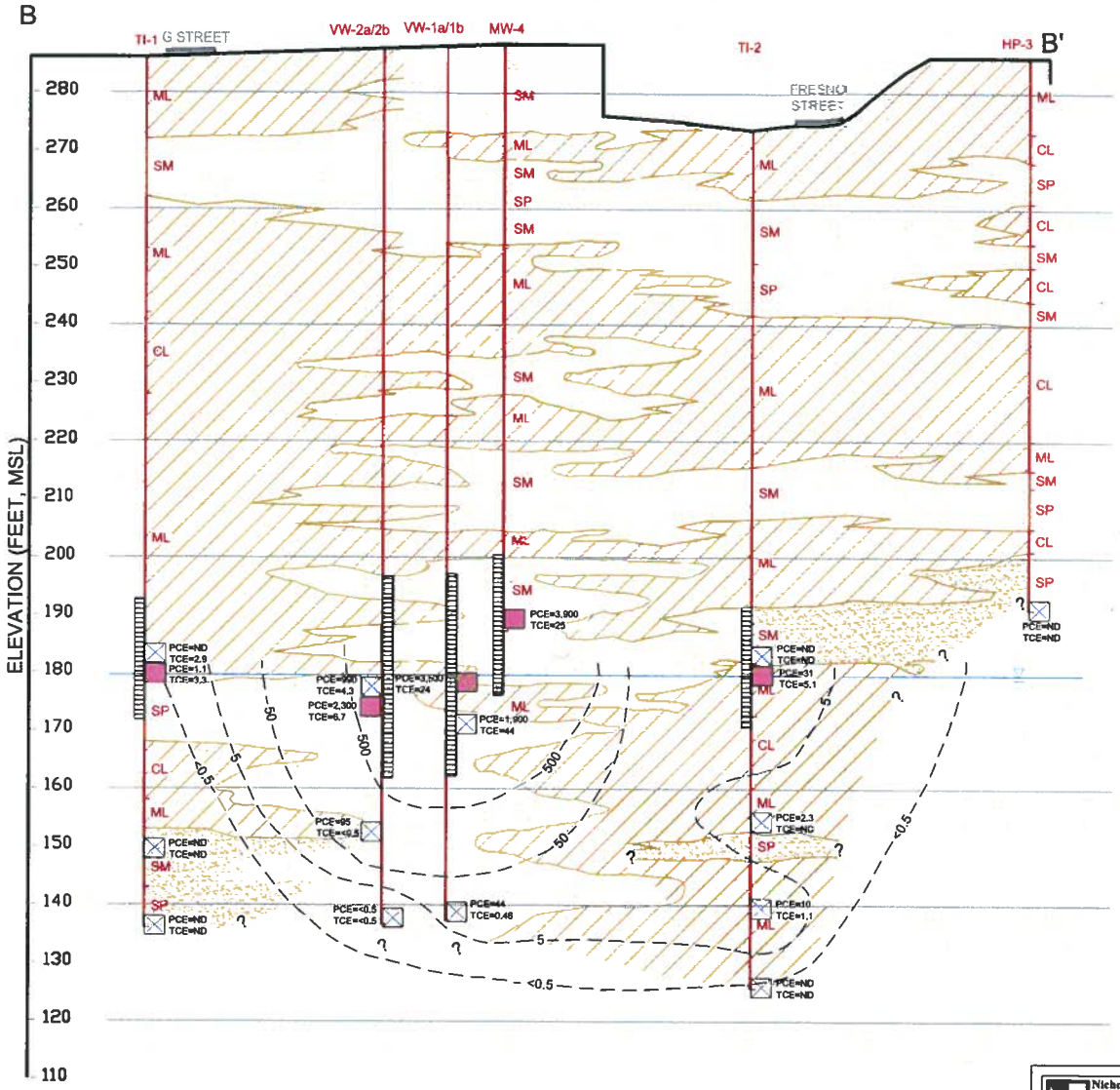
Cross Section A-A'
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, California

PLATE 6

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	4002535326.dwg	A400.08.35.043.2		2/08	



LEGEND

	CLAY (CL) OR SILT (ML)
	SAND (SP) OR SILTY SAND (SM)
	HYDROPUNCH SAMPLE
	MONITORING WELL SAMPLE
PCE=32	TETRACLOROETHANE (ug/L)
TCE=0.9	TRICHLOROETHENE (ug/L)
	GROUNDWATER ELEVATION
TI-2, MW-4	MONITORING WELL
HP-1, HST-1	HYDROPUNCH BORING
— —5— —	LINE OF EQUAL CONCENTRATION OF PCE
ND	NOT DETECTED

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Cross Section B-B'
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, California

PLATE 7

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
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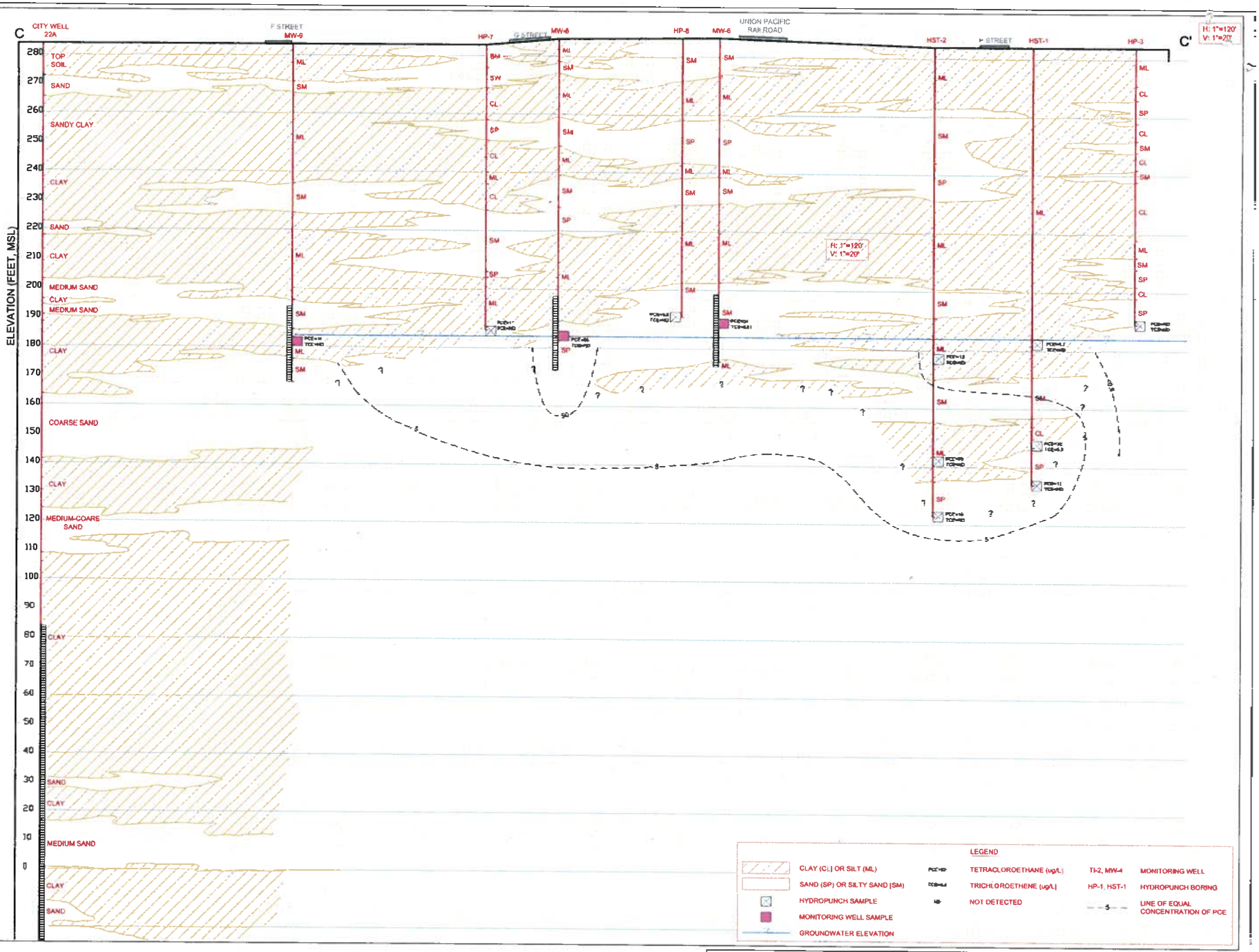

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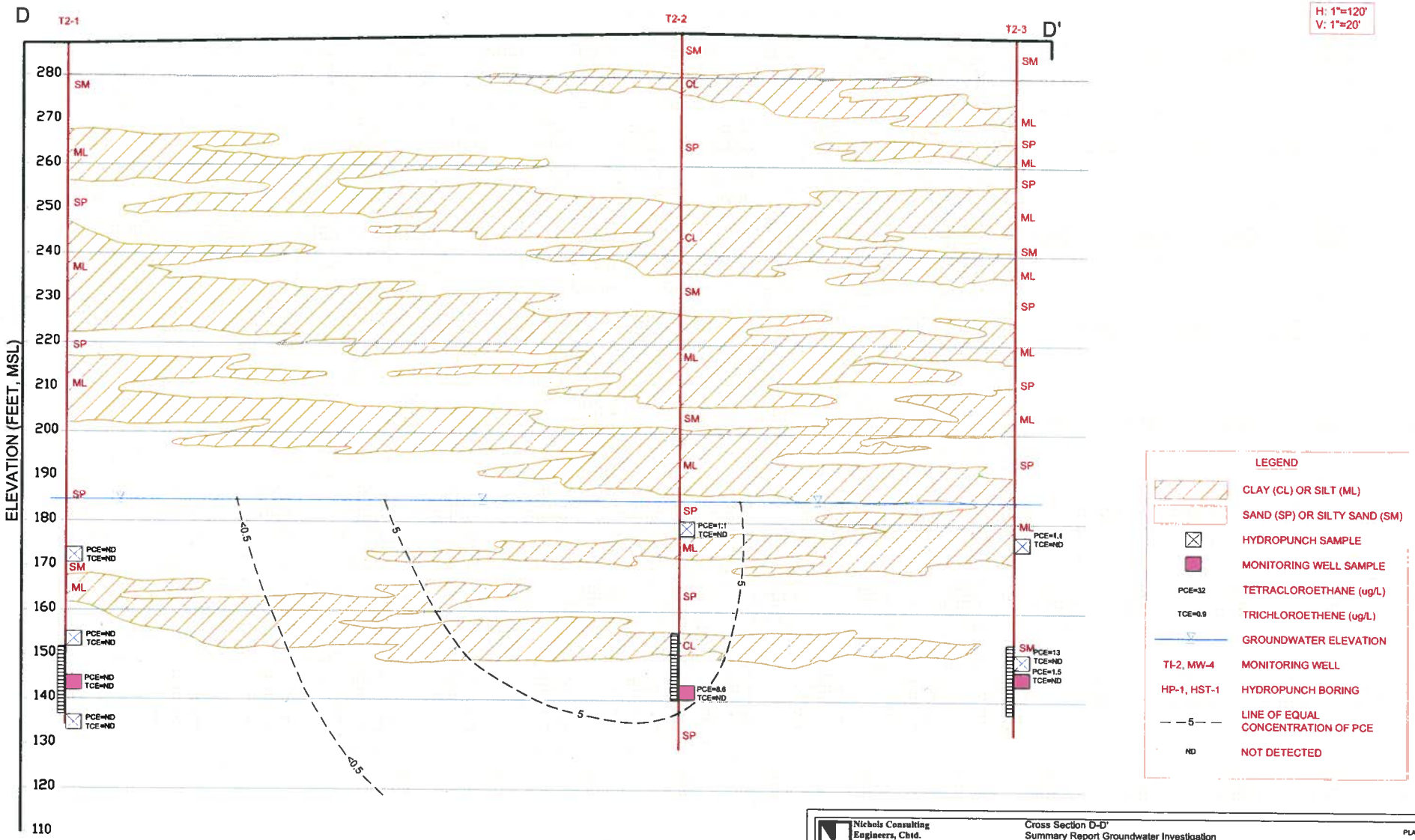
Cross Section C-C'
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, California

PLATE 8

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	4002535326.dwg	A400.08.35.043.2		2/08	



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Cross Section D-D'
Summary Report Groundwater Investigation
Former VW&R Inc. Facility
1152 G Street
Fresno, California

PLATE 9

DRAWN	FILE NAME	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YVG	4002535326.dwg	A400.08.35.043.2		2/08	

APPENDIX A

PREVIOUS INVESTIGATIONS

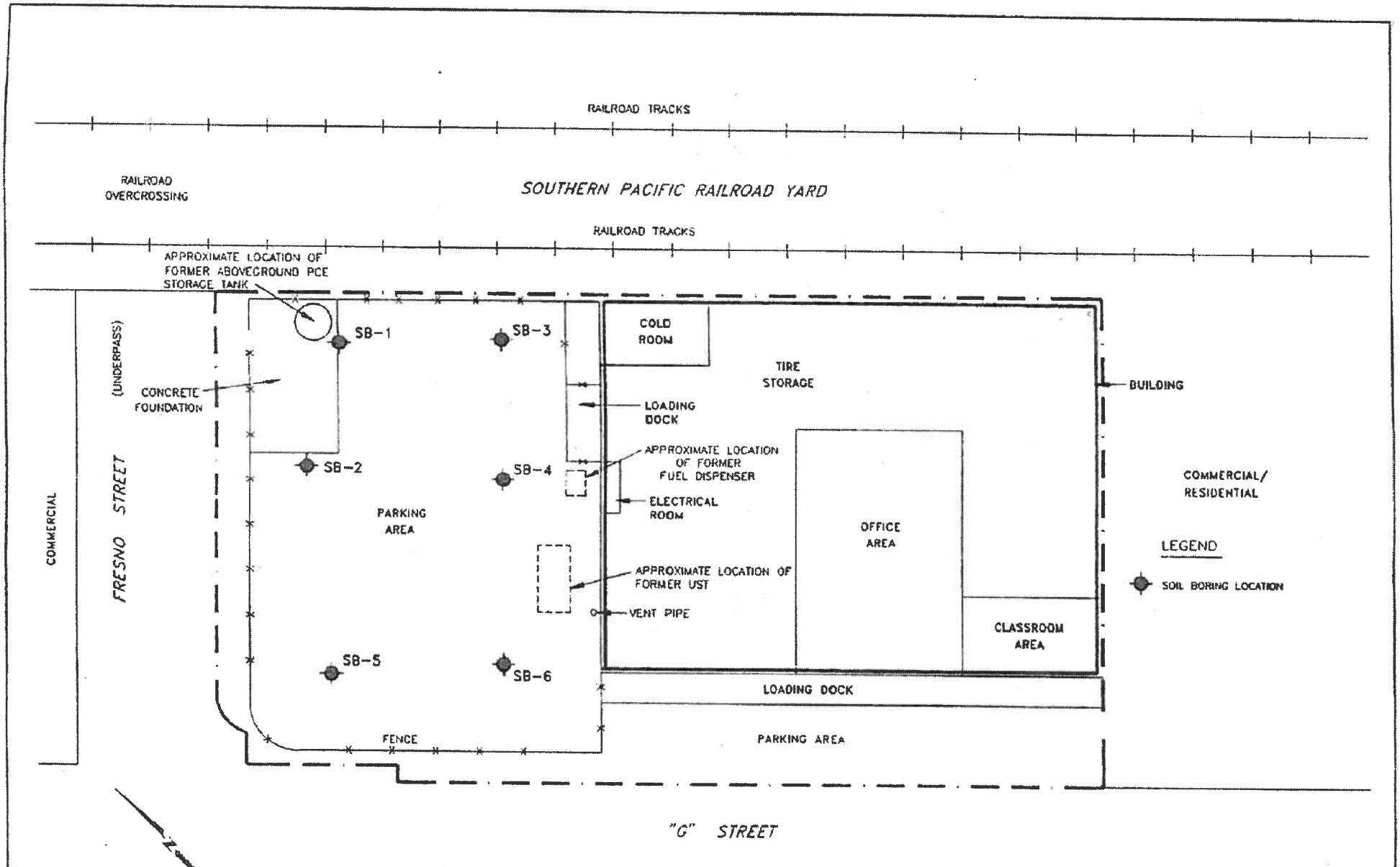
1152 G STREET
VOPAK AKA UNIVAR
(FORMER VAN WATERS & ROGERS, INC.)

TABLE 1
SUMMARY OF SITE INVESTIGATIONS

September 1994 and February 1995	As part of a September 1994 and subsequent February 1995 Phase I and soil quality investigation, PCE was reported in soil samples collected near the former AST at concentrations of 0.2 to 13 milligrams per kilogram (mg/Kg) at 2 feet below ground surface (bgs) to 13 mg/Kg at a depth of 9 feet bgs (Twinning 1994 and 1995).
August 1995 and January 1996	In August 1995 a soil gas survey was conducted (HLA, 1995) and, in January 1996, another soil quality investigation was completed (HLA, 1996). Boreholes were drilled to a maximum depth of 70 feet bgs (Appendix A, Plate A-1). PCE was the only volatile organic compound (VOC) consistently detected and was reported in 34 of the 36 soil samples. PCE concentrations ranged from 0.0059 to 14 mg/Kg and were highest in boring SB-1 located in the vicinity of the former AST.
August 1996	In August 1996 a follow-up investigation was conducted and included the drilling and installation of two soil vapor extraction (SVE) wells, four soil vapor observation wells and three groundwater monitoring wells (Plate A-2). Groundwater analyses yielded results similar to the soil gas data; PCE levels in groundwater were greater nearest the former tank location (HLA, 1997). Concentrations of PCE in groundwater ranged from 1.1 micrograms per liter (ug/L) in the upgradient well (MW-3) to 9,000 to 14,000 ug/L in the well located adjacent to the former tank location (MW-1).
November and December 1997	During November and December 1997, Phase I of an offsite investigation was completed (HLA, 1998). This investigation consisted of the collection groundwater samples from seven boreholes (HP-1 through HP-7) and three deeper boreholes (VB-1 through VB-3) [Plate A-3]. Results of the investigation indicated that PCE was not present in groundwater at sampling locations VB-1, VB-2, HP-3, HP-4 and HP-6. Data collected from VB-3, HP-5 and HP-7 suggested that the lateral extent of PCE in groundwater extended north and northwest of the Site. Boring VB-3, located approximately 300 feet north of the Site, appeared to be located downgradient of the Site. PCE was not detected in Borring HP-4, located approximately 600 feet north-northwest of Boring VB-3.
June 1998	Univar implemented remedial actions at the Site in June 1998 with the installation of a soil vapor extraction (SVE) system. The SVE system consisted of three extraction well pairs, and a carbon system for vapor treatment. Each well pair included a shallow well screened from approximately 20 feet bgs to 50 feet bgs and a deeper well screened from 70 feet to 90 feet bgs.
August 2002	To further evaluate the lateral distribution of VOCs downgradient of the Site, a Phase II groundwater investigation was conducted and included the collection of one in-situ groundwater sample and installation and sampling of four shallow groundwater monitoring wells including wells MW-4, MW-5, MW-6, and MW-7 (Plate 3). Since these wells were installed, PCE has been reported in MW-4 at concentrations ranging from 2,500 ug/L to 5,120 ug/L. PCE has been reported in wells MW-5, MW-6, and MW-7 at concentrations ranging from 3.96 ug/L to 560 ug/L. In addition to the above, as part of the Phase II investigation an assessment of the hydrology in the site vicinity was conducted utilizing boring logs for the

TABLE 1 (CONT.)
SUMMARY OF SITE INVESTIGATIONS

	City owned water wells in conjunction with the existing investigation data. The assessment indicated that the stratigraphy in the vicinity of the Site consists predominantly of alternating layers of silts, clays and sands with no substantial laterally continuous clay units present, suggesting that groundwater beneath the study area is representative of an unconfined water body.
June 2003	Univar and the Regional Water Quality Control Board (RWQCB) met to discuss the investigation results and an approach to evaluate further the presence of PCE downgradient of the facility. The meeting resulted in a scope of work to conduct a Phase III groundwater investigation. The purpose of the Phase III investigation was to install monitoring wells to provide water level data to further refine the groundwater flow direction and to provide water quality data between the Site and a nearby water supply well.
December 2003	The initial portion of the Phase III groundwater investigation was completed and included the installation and sampling of four monitoring wells (MW-8 through MW-11) [Plate 3].
April 2006	Additional onsite investigations included the drilling of two borings, the collection of Hydropunch™ in-situ groundwater samples utilizing mud-rotary drilling techniques, evaluation of a data collection technique utilizing a Membrane Interface Probe (MIP) with Geoprobe push equipment and cone penetrometer test (CPT). The investigation also included the installation of one temporary groundwater monitoring well (OB-7) and one groundwater extraction well (OB-8) on the Site. MIP as an investigative technique was attempted because of it's ability to provide cost effective, real time assessment stratigraphy and data on the presence of VOCs in soil and groundwater both onsite and offsite of the former Univar Facility. Based on the Site conditions encountered, it was concluded that in-situ sampling of groundwater utilizing mud rotary drilling techniques and MIP with Geoprobe and CPT are not appropriate methods to assess the vertical distribution of PCE in groundwater.
June 2006	Due to the unsuccessful attempts of the MIP technique to assess the vertical distribution of PCE in groundwater, an alternate scope of work to perform the assessment was presented in NCE's May 2006 Revised Delineation Work Plan (NCE 2006). The overall objective was to assess the downgradient lateral and vertical extent of PCE in groundwater that is associated with the former Univar facility terminating where PCE is not detected at a concentration greater that 5 ug/L.



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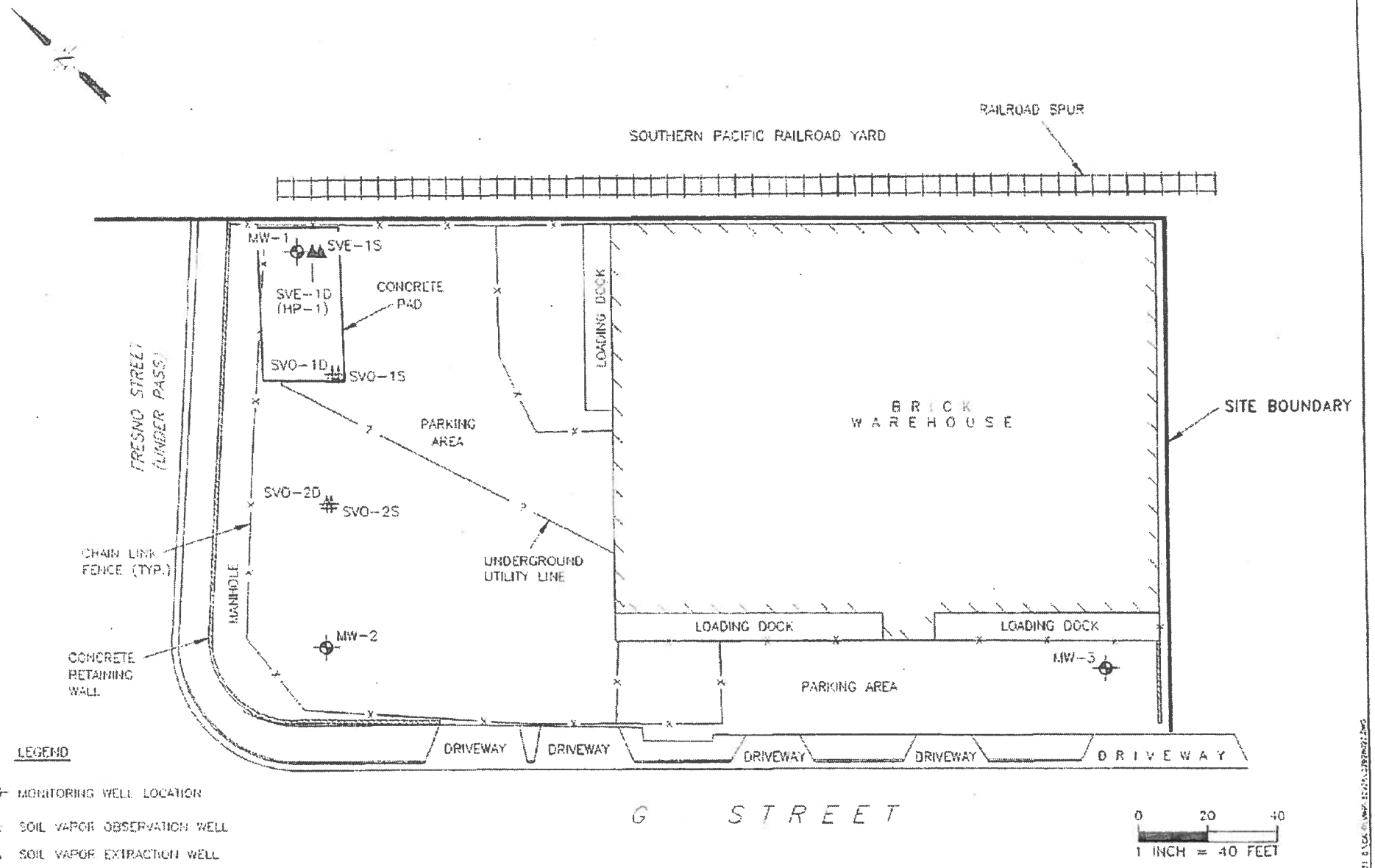
Soil Boring Locations

Soil Boring Investigation
Former VW&R Facility
Fresno, California

PLATE **A-1**

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YG	32928.001.2		9/95	



LEGEND

- MONITORING WELL LOCATION
- SOIL VAPOR OBSERVATION WELL
- SOIL VAPOR EXTRACTION WELL

SVE-1S = SHALLOW SOIL VAPOR EXTRACTION WELL
SVE-1D = DEEP SOIL VAPOR EXTRACTION WELL

SVO-1S = SHALLOW SOIL VAPOR OBSERVATION WELL
SVO-1D = DEEP SOIL VAPOR OBSERVATION WELL

HP-1 = HYDROPUNCH SAMPLE LOCATION

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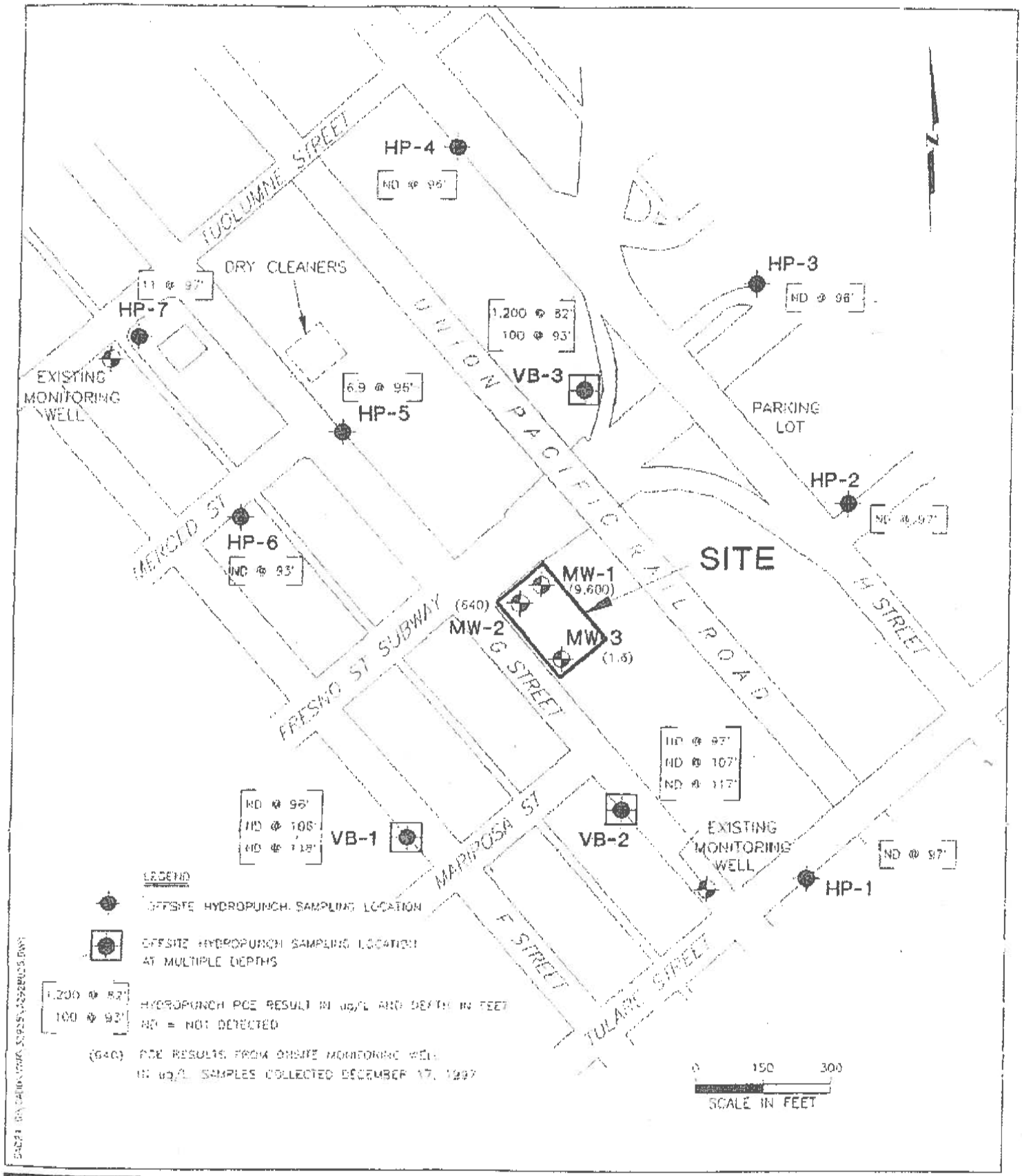
Monitoring Well and Soil Vapor Extraction Well Location Map
Onsite Monitoring Well Installation
Former VW&R Inc. Facility
Fresno, California

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
YG	32928.004.6	CB	11/96	

PLATE
A-2



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Distribution of PCE in Groundwater
Former VW&R Inc. Facility
1152 G Street
Fresno, California

PLATE
A-3

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED DATE
TG	32823.006.3	CMS	1/98	

FA01	VAN WATERS & ROGERS	1152	G	FRESNO	93709	MARKARI UST REMOVAL/CLOSURE W/1 TANK
FA01	VAN WATERS & ROGERS	1152	G	FRESNO	93709	MARKARI CONTAMINATED SITE - MISC/RWQCB LEAD

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** VOPAK USA Inc. (aka UNIVAR USA) 1152 G Street, Fresno, CA 93706	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
1

Direction Photo Taken:

Looking north

Description:

View of the F Street entrance to the abandoned site.

Photo No.
2

Direction Photo Taken:

Looking south

Description:

View from the northwest corner of the site. The gray tanks and works in the background are the Jensen and Pilegard Feed Mill.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** VOPAK USA Inc. (aka UNIVAR USA) 1152 G Street, Fresno, CA 93706	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
3

Direction Photo Taken:

Looking east

Description:

View of the north end of the site and the former treatment system. Note the groundwater monitoring wells.

Photo No.
4

Direction Photo Taken:

Looking southeast

Description:

Drums used for the former treatment system located at the north end of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** VOPAK USA Inc. (aka UNIVAR USA) 1152 G Street, Fresno, CA 93706	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
5

Direction Photo Taken:

Looking west

Description:

View of the north end of the site along Fresno Street.

Photo No.
6

Direction Photo Taken:

Looking south

Description:

View from the northeast corner of the site. The gray tanks and works in the background are the Jensen and Pilegard Feed Mill. Note the Union Pacific tracks on the left and the historic Southern Pacific Railroad Depot beyond.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** VOPAK USA Inc. (aka UNIVAR USA) 1152 G Street, Fresno, CA 93706	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
7

Direction Photo Taken:

Looking west

Description:

Pallets, drums and other debris; remnants of the former treatment system on the north side of the site.

Photo No.
8

Direction Photo Taken:

Looking north

Description:

View of the east side of the site structure.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** VOPAK USA Inc. (aka UNIVAR USA) 1152 G Street, Fresno, CA 93706	**URS Project No.** 27560811.53090100 **Date:** 3-10-10

Photo No.
9

Direction Photo Taken:

Looking north

Description:

One of several groundwater monitoring wells located on site.

Photo No.
10

Direction Photo Taken:

Looking east

Description:

Groundwater monitoring well located at the northeast corner of the site. Note the Union Pacific tracks in the background.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

S106486061
S100833392

Name of Site: FMC CORPORATION

EDR ID Number: S100676286

Date of Inspection: 3/11/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: FRANK GEGUNDE

URS Office:

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

FMC CORPORATION
2501 S. SUNLAND
FRESNO, CA
County: FRESNO, CA

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~17 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
THE SITE IS PRIMARILY OCCUPIED BY FORMER PESTICIDE FORMULATION BUILDINGS, WAREHOUSES, AND OFFICES. MOST OF THE SITE IS PAVED.				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N S E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: RETENTION POND
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

A MAKE-SHIFT TEMPORARY BERM HAS BEEN PLACED AROUND THE PERIMETER OF THE SITE TO CONTAIN RUNOFF WITHIN THE SITE BOUNDARY; SITE STORM DRAIN SYSTEM CONVEYS RUNOFF TO AN ONSITE RETENTION POND IN THE N/W CORNER OF THE SITE

5. Please list **current visible onsite activities**:

UNKNOWN – NO ACTIVITIES WERE OBSERVED; THERE IS A GUARD SHACK AT THE ENTRANCE W/ 1 SECURITY GUARD; GROUNDWATER MONITORING WAS UNDERWAY DURING THE URS SITE VISIT

Is equipment washed onsite? UNKNOWN
Is maintenance conducted onsite? If so, what types? UNKNOWN
Is fueling conducted onsite? UNKNOWN – UST REMOVAL 1991 + 1992

6. **Site Area:**
General site area is (circle) residential (commercial) (light industrial) heavy industrial rural
other

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North CHURCH AVE; COMMERCIAL & VACANT PARCELS

South SUNLAND AVE; BNSF RAIL ROAD

East COMMERCIAL (EFCO); KRAFT FOODS; RR SPURLINE

West SUNLAND AVE; BNSF RAILROAD TRACKS

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of (groundwater monitoring wells) or (remedial activities), abnormal odors, the presence of unnatural fill material or soil grading):

STORAGE DRUMS (GROUNDWATER SAMPLING PURGE WATER, SOIL CUTTINGS)

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO - (ONSITE WELL?)

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? YES, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
(U) A	?	DIESEL	?		Y / (N)	Y / N	REMOVED c. 1991/92
U (A)	BIG	?	?	STEEL	Y / (N)	Y / N	UNKNOWN
U / A	(VACCINE FROM OFFSITE)				Y / N	Y / N	

(SEE SITE PHOTOS)

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? FAIR – GOOD

11. Have there been any releases? UNKNOWN –

To whom were the releases reported? RWQCB + DTSC HAVE FILES ON THE SITE – SEE ATTACHED REPORTS

What is status of release investigation? ON GOING REMEDIATION & MONITORING

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? No

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
SITE WAS NOT ACCESSED DURING THE SITE VISIT; NO MATERIALS WERE OBSERVED FROM THE PUBLIC ROW OR REPORTED; SITE APPEARS TO BE CLEANED OUT				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: DUMPSTERS OBSERVED ONSITE – CONTENTS UNKNOWN

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: CITY OF FRESNO

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? No if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
PAD-MOUNT TRANSFORMER	LOCATED ON THE S/W SIDE OF SITE				

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or WATER SUPPLY WELL ON THE S/W SIDE OF SITE

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? YES, Describe WATER SUPPLY WELL LOCATED ON THE S/W SIDE OF THE SITE (SEE ATTACHED MAP)

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NO OTHER RESOURCES IDENTIFIED

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.) SANITARY SEWER

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? UNKNOWN

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate RETENTION BASIN LOCATED IN THE N/W CORNER OF THE SITE

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

SEE ATTACHED REPORTS

19. **STORMWATER**

Describe how stormwater is managed: ALL RUNOFF IS CAPTURED ONSITE AND CONVEYED

Does the stormwater flow to a combined sewer? TO THE RETENTION POND (N/W CORNER)

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

SEE ATTACHED REPORTS

Are there groundwater monitoring wells at this facility? YES

Where are these wells located?

SEE ATTACHED MAP + REPORTS

Are regulatory agencies involved with monitoring? RWQCB

Status of investigation/remediation program? ONGOING MONITORING AND REMEDIATION

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
SEE ATTACHED REPORTS			**Yes No**	**Yes No**
			Yes No	**Yes No**

24. **USED OIL**

Does this facility generate used oil? NO

Describe the types and sources of used oil generated: _____

Are all containers of used oil labeled accordingly? _____

Describe how and where used oil is stored and handled:

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

SITE WAS A FORMER AG CHEM MFG + STORAGE SITE (SEE REPORTS)

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

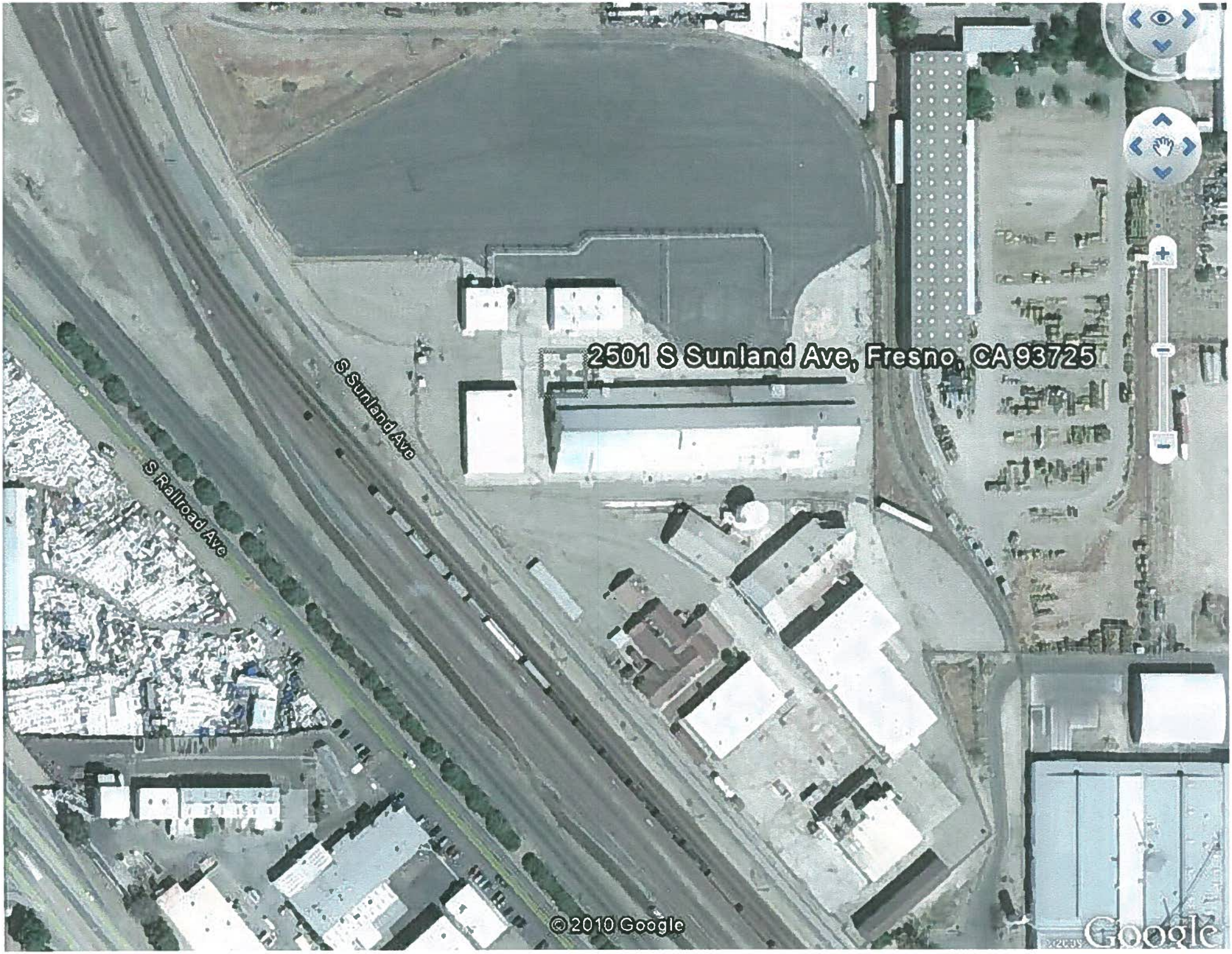
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

SEE ATTACHED DOCUMENTS FOR SITE BACKGROUND + ENVIRONMENTAL IMPACTS


2501 S Sunland Ave, Fresno, CA 93725
S Sunland Ave
S Railroad Ave
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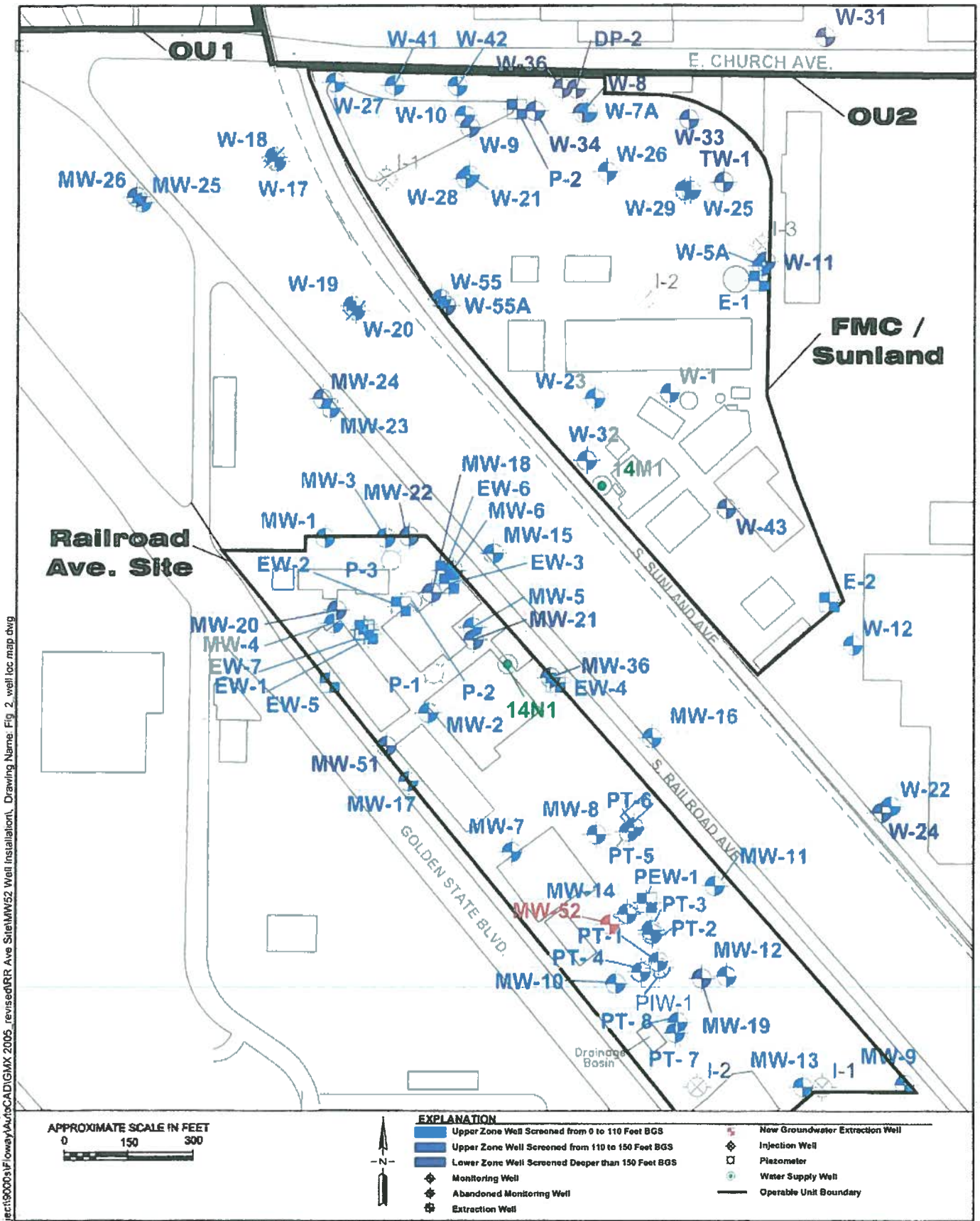

APPROXIMATE SCALE IN FEET
0 150 300

N

EXPLANATION

- Upper Zone Well Screened from 0 to 110 Feet BGS
- Upper Zone Well Screened from 110 to 150 Feet BGS
- Lower Zone Well Screened Deeper than 150 Feet BGS
- Monitoring Well
- Abandoned Monitoring Well
- Extraction Well
- New Groundwater Extraction Well
- Injection Well
- Piezometer
- Water Supply Well
- Operable Unit Boundary

Geomatrix

WELL LOCATION MAP
Monitoring Well Installation Work Plan
Railroad Avenue Site
Fresno, California

Figure By	Project No.
DPV	9662.005
Map No.	Figure
Date 06/09/08	2

Plot Date: 06/09/08 - 11:31am, Plotted by: dvalasek
Drawing Path: I:\Project\9000s\Floway\AutoCAD\GMX 2005_revised\RR Ave Site\MW52 Well Installation\, Drawing Name: Fig 2, well loc map.dwg

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E., Chair

1685 E Street, Fresno, California 93706
(559) 445-5116 • Fax (559) 445-5910
http://www.waterboards.ca.gov/centralvalley

Arnold Schwarzenegger
Governor

22 July 2009

Mr. Shawn Tollin
Environmental Compliance Manager
Food Machinery & Chemical Corporation (FMC)
1735 Market Street
Philadelphia, Pennsylvania 19103

WORK PLAN COMMENTS - UNDERGROUND STORAGE TANK RELEASE, FMC CORPORATION, 2501 SOUTH SUNLAND AVENUE, FRESNO, FRESNO COUNTY

You submitted *Soil Investigation near Former Underground Storage Tank...* (Work Plan) dated 16 June 2009 and prepared in your behalf by Environmental Resources Management., Clovis (ERM). This letter contains a summary of the Work Plan, identifies concerns, notes concurrence or non-concurrence, and sets dates for the next phase of tasks.

Work Plan Summary

Gasoline was discovered in subsurface soil samples collected during 1991 and 1992 underground storage tank (UST) system removal. ERM will investigate the remaining effects of the UST release by sampling two direct-push soil borings to a maximum depth of approximately 15 feet below ground surface (bgs). One boring will be drilled at the location of former dispenser sample D-1, where total petroleum hydrocarbons as gasoline (TPH-g) was detected at 57 milligrams per kilogram (mg/kg) at 5 feet below ground surface (bgs). The second boring will be drilled at piping sample P-3, where TPH-g was detected at 50 mg/kg at 3.5 feet bgs.

The borings will be continuously cored beginning at the depth of D-1 and P-3. Primary soil samples will be collected based on field evidence of petroleum hydrocarbons or at a maximum of 5 feet below the depth of D-1 and P-3. Contingency samples will be collected at 5 and 10 feet below primary samples and stored by the laboratory for analysis, based on primary sample results.

Soil samples will be analyzed in the laboratory for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX), the fuel oxygenates methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), and tertiary butyl alcohol (TBA), the lead scavengers 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB), and total lead. Primary samples will be analyzed with a 72-hour turnaround time, and contingency samples will then be analyzed, if warranted, beginning with the shallowest samples.

Decontamination rinsate and drill cuttings with field evidence of petroleum will be contained on-site in sealed drums pending off-site disposal. If volatile organic compounds (VOCs) are not detected in soil cuttings or rinsate water, the cuttings will be spread on-site and rinsate will be allowed to evaporate in the drums.

ERM will prepare a letter report of findings for the investigation. ERM estimates that the report of findings will be completed approximately four weeks after receipt of laboratory analytical data. Fieldwork is tentatively scheduled for late July 2009.

Comments

Regional Water Board staff concurs with the investigation proposed by the Work Plan provided that you incorporate the following comments.

- The vertical extent of petroleum impact should be defined in each boring by laboratory analysis of two consecutive soil samples lacking field evidence of petroleum impact.
- Analysis for total petroleum hydrocarbons as diesel and motor oil (TPH-d and TPH-mo) should be included for at least one sample per boring to demonstrate that the release has been characterized. These analyses should be concentrated on samples displaying field evidence of petroleum impact, if encountered.
- Additional investigation to determine the extent of impacted soil might become necessary if significant petroleum impact is detected in the borings.
- Staff concurs with the proposed disposal of soil cuttings and rinsate water on-site if VOCs are not detected and provided that the site owner and any tenants also concur.

Please submit a site-specific Health and Safety Plan **at least one week prior to fieldwork** and submit a report of findings for the investigation by **2 November 2009**.

Please notify Mr. John Whiting at least five days in advance of fieldwork. You may call (559) 445-5504 or email at *jwhiting@waterboards.ca.*gov if you have questions concerning this letter.

Original signed by JMN for:

JOHN D. WHITING, PG No. 5951
Engineering Geologist
Underground Storage Tanks Section

Original signed by:

JOHN M. NOONAN, RCE No. 35206
Senior WRC Engineer
Underground Storage Tanks Section

cc: Ms. Barbara Rempel, SWRCB, UST Cleanup Fund, Sacramento
Mr. Steven T. Rhodes, Fresno County Environmental Health Division
Mr. Jeffrey Hamilton, ERM, Clovis

FMC Corporation

Soil Operable Unit Operation & Maintenance Semi-Annual Report 2008

FMC - Fresno, California

Project No. 444192.10000

June 9, 2008

PARSONS

2121 N. California Blvd. Suite 500 • Walnut Creek, California 94596 • (925) 941-3700 • Fax (925) 979-9781 • www.parsons.com

June 6, 2008

Mr. Thomas W. Kovac, PE, Chief
Fresno Responsible Party Unit
State of California
Department of Toxic Substances Control
1515 Tollhouse Road
Clovis, CA 93612

RE: Soil Operable Unit Operation &
Maintenance Semi-Annual Report 2008
FMC Fresno, California Site
Consent Order Docket No. I&/S 92-93-001

Dear Mr. Kovac:

On behalf of FMC Corporation, Parsons is submitting the enclosed *Soil Operable Unit Operation and Maintenance Semi-Annual 2008 Report* for the soil operable unit at the FMC Site in Fresno, California.

If you have any questions regarding this report, please contact me at (831) 421-2077.

Sincerely,

PARSONS

Rowland Keith
Principal Scientist

Enclosure

cc: R. Walls, RWQCB Fresno
T. Casagrande, Fresno County Environmental Health Services
L. Martin, Fresno City Water Division
N. Lincoln, Weir Floway
J. MacKenzie, Vendo
J. Hamilton, ERM
San Joaquin Unified Air Pollution Control District

Soil Operable Unit Operation & Maintenance Semi-Annual Report 2008 FMC - Fresno, California

Prepared by:

Rowland Keith, C.H.M.M.

Approved by:

Fred Kintzer, PG

PROFESSIONAL GEOLOGIST
FREDERICK C. KINTZER
Exp. 8-31-08
No. EG 1077
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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TABLE 1 SVE SYSTEM ANALYTICAL SUMMARY
TABLE 2 CUMULATIVE VOC MASS REMOVED

FIGURE

FIGURE 1 SOIL VAPOR EXTRACTION WELL LOCATIONS

APPENDIX

APPENDIX A LABORATORY ANALYTICAL DATA

1. INTRODUCTION

This report provides the results of the inspections and monitoring of the Soil Vapor Extraction (SVE) system and the asphalt cap (collectively, the Soil Operable Unit) for the first half of calendar year 2008 (January 1st through June 3rd) at the FMC Corporation site in Fresno, California (Site). The Soil Operable Unit was installed in 1998 under the Remedial Action Plan approved on June 19, 1997 by the California Department of Toxic Substances Control (DTSC) for the Soil Operable Unit at the FMC Fresno Site. In accordance with the Operation and Maintenance Plan, provided as part of the *Final Remedial Design Report* for the Soil Operable Unit (Sunland Remediators, 1998), FMC submitted quarterly progress reports on the Soil Operable Unit through 2001. With notice to and approval from DTSC, FMC began submitting semi-annual reports starting in January 2002.

On July 8, 2003, FMC submitted the *Notice of Proposed SVE System Upgrade.* The outlined modifications were approved by the DTSC and implemented in October 2003. On November 28, 2006, Parsons, on behalf of FMC, submitted the *Soil Vapor Extraction Unit Rebound Test Report and Curtailment Request* to the DTSC. On September 18, 2007 the DTSC responded with a letter and attached memorandum from the DTSC Fresno Responsible Party Unit (FRPU). The DTSC submitted questions and called for a response to the comments in the FRPU memorandum. Parsons, on behalf of FMC, is currently preparing a report addressing these comments.

2. SOIL VAPOR EXTRACTION SYSTEM OPERATION AND MAINTENANCE

The SVE system consists of seven vapor extraction wells, vacuum piping, and a vapor treatment system. The extraction wells are identified as follows: AE-5, AE-6, AE-7, AE-8, AE-9 (formerly AE-3), AE-10 (formerly SAI/S-9), and AE-11 (formerly SAI/S-1). Each well is 4 inches in diameter, 26 feet deep and screened from 14 to 24 feet below ground surface. The well locations are illustrated on Figure 1. The wells are connected to the treatment system by underground and aboveground vacuum piping. The vacuum piping is plumbed from each wellhead to a manifold at the SVE system. The manifold combines the flow from the wells to a common influent collector pipe, which conveys the commingled soil vapor stream into the treatment system. Soil vapor is currently being extracted from all seven wells.

Prior to October 2003 the treatment system consisted of a vacuum blower, moisture knockout drum, thermal oxidizing unit, and control system. On October 15, 2003 the treatment system was modified to replace the thermal oxidizing unit and associated control systems with a set of three 2,000 pound vapor carbon vessels. The system modification was made pursuant to notification and approval from DTSC. An Authority to Construct was issued by the San Joaquin Valley Air Pollution Control District (SJVAPCD) on August 13, 2003. The system is currently operated under a Permit to Operate issued by the SJVAPCD. Operations and maintenance (O&M) activities for the SVE system are performed in compliance with the terms of the Permit to Operate.

O&M field activities during the first half of 2008 consisted of periodic collection of influent and effluent vapor samples for laboratory analysis, SVE system influent and effluent vapor sampling for total Volatile Organic Compounds (VOCs) using a RAE Systems Mini RAE Plus™ photoionization detector (PID), inspecting the SVE system piping, and performing necessary system maintenance work and repairs. Influent samples were collected from a sampling port at the manifold collector and effluent samples were collected from a sampling port in the secondary vapor carbon vessel outlet pipe.

2.1. Sampling Procedure

During start-up of the system in August 1998, baseline vapor samples were obtained for each of the SVE wells. The startup vapor samples were analyzed for total VOCs by Method TO-15 and for semi-volatile organic compounds (SVOCs) and pesticides using laboratory Method TO-4/TO-10. Since no SVOCs or pesticides were present in baseline samples, TO-4/TO-10 analyses were discontinued following startup.

During the reporting period, influent and effluent air samples were collected from the treatment system for laboratory analysis during normal system operation in order to evaluate VOC concentrations. Vapor sample analyses for VOCs were performed by Method TO-15 (Gas Chromatograph/Mass Spectrometer full scan). Vapor sample analysis for total petroleum hydrocarbons – gasoline range organics (TPHg) were performed by Method TO-3 (TPHg). Laboratory analytical results for the reporting period are presented in Appendix A.

PID monitoring of the SVE system influent and effluent was performed to provide additional data. General system parameters were also monitored to ensure proper system operation. SVE system inspection logs are available upon request.

2.2. Mass Removal Results

Table 1 provides a summary of the air sample laboratory analysis collected during the first half of 2008. Mass removal calculations for this monitoring period are based on laboratory and PID data. Destruction/removal efficiencies have been less than 95-percent during this monitoring period. However, the mass of VOCs emitted did not exceed the 2 pound per day limit set forth in the unit requirements in the SJVAPCD permit to operate.

In the first half of 2008, the total influent VOC concentration was analyzed to be 272 parts per billion volume. The total VOC mass removed during this monitoring period was approximately 4 pounds. The cumulative total VOC mass removed is 27,400 lb. Table 2 provides a cumulative total of the VOCs removed from soil since operation of the SVE system began in August 1998.

2.3. Piping Inspection

The SVE system conveyance piping inspection is performed during normal system operation to determine whether the pipelines or associated equipment require repairs or maintenance. All piping, pipe connections, wellheads, sampling port fittings, the extraction manifold, the main header and the SVE trailer were inspected for damage or deterioration. Any observed deficiencies in the piping or items requiring repairs and/or maintenance were recorded on the inspection logs.

The inspection logs for the first half of 2008 indicate that there was no deterioration or damage to the piping system components, and no water was present at the wellheads. Minor repairs or replacements of system components were made, as described in Sections 2.4 and 2.5.

2.4. System Maintenance and Repairs

Any deficiencies in the system that required maintenance or repair were recorded on the inspection logs. Minor maintenance tasks, such as lubricating the equipment and replacing filters, were completed during the first half of 2008. The system carbon was replaced in January 2008.

2.5. System Shutdowns

The system operated continuously during the first half of 2008 with the exception of shutdowns during regular maintenance and power failures. The system was shutdown for a total of 22 days during the first half of 2008, mostly due to power failures.

2.6. Asphaltic Concrete Cover

The annual inspection of the asphaltic concrete cover was performed on November 7, 2007. Records of this inspection revealed the cover to be in good condition, with the exception of a few cracks less than 1/16-inch wide.

3. CONCLUSIONS AND RECOMMENDATIONS

The total VOC mass removed in the first half of 2008 was lower than in 2007. The data indicate a continuation of the previously observed decreasing trend in soil vapor concentrations observed in the 2006 SVE curtailment request (Parsons, 2006). The cumulative VOC mass removed totals based on PID readings and laboratory data indicate that although the SVE system and cap are functioning adequately, the effectiveness of the remediation system to remove VOCs from the site soils has strongly diminished over the last three years. A separate report is being prepared to address comments of the DTSC in the FRPU memorandum dated September 18, 2007.

In 2008 Parsons will continue to monitor and operate the SVE system and asphalt cap components of the soil operable unit.

4. REFERENCES

Parsons, 2006. *Soil Vapor Extraction Unit Rebound Test Report and Curtailment Request*, FMC Fresno, California. November 28.

Smith Technologies Corp (Smith), 1997, *Final Soil Remedial Action Plan*, prepared for FMC Corporation.

Smith, 1996a, Soil Remedial Action Plan Response to DTSC Comments Letter Dated 27 June 1996, prepared for FMC Corporation.

Smith, 1996b, Soil Vapor Extraction System Phase 1 Evaluation, prepared for FMC Corporation.

Sunland Remediators, 1998, *Final Remedial Design Report*, FMC Fresno Site, Soil Operable Unit, Fresno, California, Revision A, prepared for FMC Corporation, February, 1998.

TABLES

Table 1

SVE System Analytical Summary

FMC - Fresno, California

Sample ID	Influent (ppbv)	Effluent (ppbv)
Date	04/22/08	04/22/08
Compound (Method TO-15)		
Freon 12	**0.61**	<4.0
Freon 114	<0.50	<4.0
Chloromethane	<2.0	<16
Vinyl Chloride	<0.50	<4.0
1,3-Butadiene	<0.50	<4.0
Bromomethane	<0.50	<4.0
Chloroethane	**29**	**9.2**
Freon 11	**1.9**	<4.0
Ethanol	**6.5**	**32**
Freon 113	<0.50	<4.0
1,1-Dichloroethene	**0.51**	<4.0
Acetone	**24**	**38**
2-Propanol	**17**	**16**
Carbon disulfide	**4.6**	**4.1**
3-Chloropropene	<2.0	<16
Methylene chloride	**1.1**	<4.0
MTBE	<0.50	<4.0
trans-1,2-Dichloroethene	<0.50	<4.0
Hexane	**9.7**	**26**
1,1-Dichloroethane	<0.50	<4.0
2-Butanone	**1.8**	**4.1**
cis-1,2-Dichloroethene	<0.50	<4.0
Tetrahydrofuran	<0.50	<4.0
Chloroform	**41**	<4.0
1,1,1-Trichloroethane	<0.50	<4.0
Cyclohexane	<0.50	<4.0
Carbon tetrachloride	**0.63**	<4.0
2,2,4-Trimethylpentane	**250 E**	**770**
Benzene	**1.1**	<4.0
1,2-Dichloroethane	<0.50	<4.0
Heptane	<0.50	<4.0
Trichloroethene	**0.65**	<4.0
1,2-Dichloropropane	**120**	<4.0
1,4-Dioxane	<2.0	<16
Bromodichloromethane	<0.50	<4.0
cis-1,3-Dichloropropene	<0.50	<4.0
4-Methyl-2-pentanone	**2.4**	**7.1**
Toluene	**2.6**	<4.0
trans-1,3-Dichloropropene	<0.50	<4.0
1,1,2-Trichloroethane	<0.50	<4.0
Tetrachloroethene	**0.58**	<4.0
2-Hexanone	<2.0	<16
Dibromochloromethane	<0.50	<4.0
1,2-Dibromoethane	**3.9**	<4.0
Chlorobenzene	<0.50	<4.0

Table 1
SVE System Analytical Summary
FMC - Fresno, California

Sample ID	Influent (ppbv)	Effluent (ppbv)
Date	04/22/08	04/22/08
Compound (Method TO-15)		
Ethyl benzene	<0.50	<4.0
m,p-Xylene	**0.56**	<4.0
o-Xylene	**0.68**	<4.0
Styrene	<0.50	<4.0
Bromoform	<0.50	<4.0
Cumene	<0.50	<4.0
1,1,2,2-Tetrachloroethane	<0.50	<4.0
Propylbenzene	<0.50	<4.0
4-Ethyltoluene	<0.50	<4.0
1,3,5-Trimethylbenzene	**1.3**	<4.0
1,2,4-Trimethylbenzene	<0.50	<4.0
1,3-Dichlorobenzene	<0.50	<4.0
1,4-Dichlorobenzene	<0.50	<4.0
alpha-Chlorotoluene	<0.50	<4.0
1,2-Dichlorbenzene	<0.50	<4.0
1,2,4-Trichlorobenzene	<2.0	<16
Hexachlorobutadiene	<2.0	<16
TPH-g (Method TO-3)	**540**	**3500**
Total VOCs	272	907

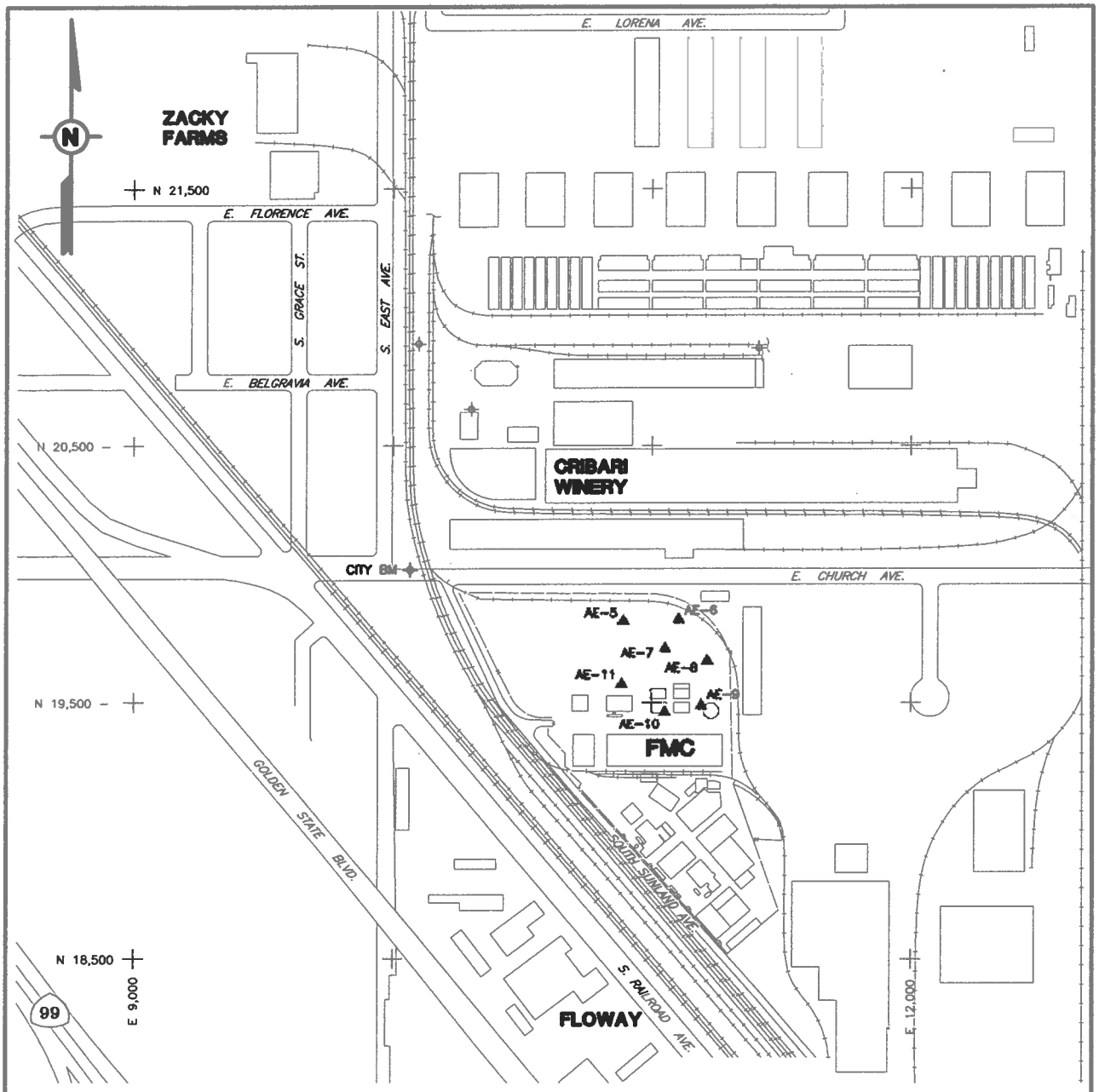
Notes:
1) "<" indicates the compound was not detected at or above the method detection limit indicated.
2) NS = not sampled
3) Total VOC value does not include TPH-g concentration.
4) E = exceeds instrument calibration range

Table 2
Cumulative VOC Mass Removed
FMC - Fresno, California

Period	Extraction Well in Operation	VOC Mass Removed by SVE (lbs)	Cumulative Mass of VOC Removed (lbs)
3rd Quarter 1998	--	291	291
4th Quarter 1998	--	596	887
1st Quarter 1999	--	126	1,014
2nd Quarter 1999	--	2,758	3,772
3rd Quarter 1999	--	4,712	8,484
4th Quarter 1999	--	4,996	13,479
1st Quarter 2000	AE11 & AE6/AE10	665	14,145
2nd Quarter 2000	AE6 / AE10	711	14,856
3rd Quarter 2000	AE-11	271	15,127
4th Quarter 2000	AE-11	447	15,574
1st Quarter 2001	AE-11	335	15,908
2nd Quarter 2001	AE11 & AE5/AE10	427	16,335
3rd Quarter 2001	AE11 & AE5/AE10	2,439	18,774
4th Quarter 2001	AE-11	857	19,631
1st Half 2002	AE-11	2,331	21,963
2nd Half 2002	AE-11	1,230	23,193
1st Half 2003	AE-11/AE-9	744	23,937
2nd Half 2003	AE-3 & AE-3/7/8/10/11	2,525	26,461
1st Half 2004	AE-7/8/9/10/11	104	26,566
2nd Half 2004	AE-5/6/7/8/9/10/11	104	26,566
2005	AE-5/6/7/8/9/10/11	669	27,235
2006	AE-5/6/7/8/9/10/12	26	27,261
2007	AE-5/6/7/8/9/10/13	135	27,396
1st Half 2008	AE-5/6/7/8/9/10/13	4	27,400

Notes:
--: data not available.
VOC: volatile organic compound.
lbs: pounds.
Extraction well AE-9 was formerly labelled AE-3.
All VOC mass calculations are based on influent concentrations measured with PID

FIGURE



LEGEND:

▲ SOIL VAPOR EXTRACTION WELL

SCALE

600 0 600 FEET

NOTES:

1. AE-9 WAS FORMERLY KNOWN AS AE-3
   AE-10 WAS FORMERLY KNOWN AS SAI/S-9
   AE-11 WAS FORMERLY KNOWN AS SAI/S-1

SOIL VAPOR EXTRACTION WELL LOCATIONS
FMC FRESNO SITE
FRESNO, CALIFORNIA

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
9	08/23/04	ISSUED FOR REPORT	JCD	AEG	TBA

PARSONS

SCALE: AS SHOWN

FIGURE 1

FMC FRESNO
2008 ANNUAL GROUNDWATER MONITORING REPORT

Prepared for:

FMC Corporation

June 2008

Prepared by

PARSONS

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FMC Fresno
2008 Annual Groundwater Monitoring Report

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2008 ANNUAL GROUNDWATER MONITORING REPORT FMC CORPORATION FRESNO, CALIFORNIA

1. INTRODUCTION

This report summarizes groundwater and treatment system sampling activities performed by Parsons on behalf of FMC Corporation (FMC) at the FMC site in Fresno, California, during the semi-annual period spanning October 1, 2007 through March 31, 2008 (2008 annual monitoring period). This report has been prepared in accordance with the requirements set forth in Section 18.3 of the Consent Order (Docket No. I&/S 92/93-001; FMC Fresno Site, 2501 South Sunland Avenue) between FMC and the DTSC, effective August 17, 1992 (Consent Order or CO). This report also satisfies the monitoring and reporting requirements of the Regional Consent Order (Docket No. HSA-CO 02/03-069, South Fresno Regional Groundwater Plume) issued November 26, 2002 (RCO). Sampling and reporting activities were conducted in accordance with the *Revised Sampling and Analysis Plan* (RSAP; Locus, 2003), which was revised to eliminate analysis for total arsenic as proposed in FMC's August 15, 2003 letter to DTSC transmitted with the 2003 Annual Groundwater Monitoring Report. The RSAP was developed to satisfy monitoring requirements for both the CO and the RCO. The RSAP was verbally approved for use by Tom Berg of DTSC at a January 15, 2003 meeting with FMC.

Since approval of the RSAP, FMC installed an additional 25 monitoring wells and seven extraction wells. These 32 wells were sampled quarterly for one year in accordance with the schedule outlined in the RSAP. Groundwater elevation data and water quality data for these 32 wells are included in this report.

As prescribed in the RSAP, samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8021B (or equivalent Method 8260B); special pesticides ethylene dibromide (EDB), 1,2-dibromo-3-chloropropane (DBCP) and 1,2,3-trichloropropane (1,2,3-TCP) by Department of Health Services (DOHS) Method #1; dissolved chromium by EPA Method 6010B; and organochlorine pesticides

(OCPs) by EPA Method 8081A. Samples are analyzed annually for carbamate pesticides by EPA Method 8321A, herbicides by EPA Method 8151A, and nitrate/nitrite by Method 353.2, and are included in this report.

2. GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

Field activities for the groundwater monitoring program conducted by Parsons' field personnel during the annual monitoring events consisted of (1) recording water level measurements; and (2) collecting groundwater samples from on- and off-site monitoring wells, supply wells, and extraction wells. The locations of these wells are illustrated on Figure 1.

2.1. Water Levels

Static water level measurements in monitoring wells were collected with an electric water level probe. The water levels in extraction wells were measured by dedicated probes, and recorded electronically by the site extraction and treatment system. Water levels recorded at on- and off-site wells during the last four quarters are presented in Table 1. Table 1 also presents the calculated groundwater elevations. Groundwater level measurements are consistent with historic observations. Groundwater elevation data collected from extraction wells are not indicative of regional groundwater elevations, but rather represent local groundwater elevations under the current pumping conditions.

Water level measurement data were used to calculate groundwater elevations for potentiometric surface maps of the site and surrounding area. December 2007 groundwater elevation contours for the upper and lower groundwater bearing zones are presented in Figures 2 and 3, respectively. March 2008 groundwater elevation contours for the upper and lower groundwater bearing zones are presented in Figures 4 and 5, respectively. Groundwater elevation contours mapped for the upper and lower water bearing zones, for both December 2007 and March 2008, illustrate the groundwater flow direction at and in the vicinity of the site is to the north-northwest. Figures 2, 3, 4, and 5 also include posted groundwater elevation data at locations used for contouring.

2.2. Sampling

Annual groundwater samples were collected for chemical analyses from on- and off-site monitoring, extraction, and supply wells. Monitoring wells were purged a minimum of three well volumes, or until the well was dewatered. Extraction wells were sampled from a sampling port where available. Sampling personnel completed water sampling logs to document field measurements (pH, temperature, electrical conductivity, and turbidity).

As prescribed in the RSAP, samples were analyzed for VOCs by EPA Method 8260B (equivalent to Method 8021B); special pesticides EDB, DBCP, and 1,2,3-TCP by DOHS Method #1; dissolved chromium by EPA Method 6010B; and OCPs by EPA Method 8081A.

Samples were collected in the appropriate laboratory-supplied containers, labeled, placed in chilled coolers, and delivered under proper chain-of-custody protocol to Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Fresno, California and to TestAmerica (TA) in Pleasanton, California. APPL performed the DOHS special pesticides analyses; the remaining analyses were performed by TA. Summaries of analytical methods, associated cleanup levels, and analytical results are presented in Tables 2 and 3.

2.3. Analytical Results

Analytical results for groundwater monitoring and supply wells are presented in Table 2. Analytical results from the groundwater treatment system extraction wells are presented in Table 3. Field sampling logs, analytical data, and chain-of-custody documentation are kept on file and are available for review upon request. A discussion of the analytical results for monitoring and supply wells, and groundwater treatment system samples is presented below.

2.3.1. Monitoring and Supply Wells

Analytical results for the groundwater samples collected from monitoring and supply wells are summarized in Table 2. Consistent with the *Groundwater Extraction Augmentation Pilot Study Technical Memorandum* (Technical Memorandum) (ERM 2004), 1,2,3-trichloropropane (1,2,3-TCP), 1,2-dibromo-3-chloropropane (DBCP), chromium, nitrate as nitrogen, and trichloroethene (TCE) are the primary constituents of concern detected in groundwater samples at concentrations above their respective cleanup levels. Additional constituents detected during the recent annual sampling event at concentrations at or above cleanup levels include 1,2-dichloroethane at wells W-1 and W-43; dieldrin at wells W-1, W-13R, W-41, and W-43; endosulfan sulfate at W-33; and carbon tetrachloride at wells W-45B, W-49, and W-49A.

Concentrations of DBCP in groundwater samples collected from wells during the annual 2008 monitoring event are presented on Figure 6. Concentrations of 1,2,3-TCP observed in wells included in the annual 2008 monitoring period, are presented on Figure 7.

2.3.2. Groundwater Extraction System Extraction Wells

Groundwater treatment system sampling was performed during the annual 2008 monitoring period in accordance with the monitoring program prescribed in the RSAP. Extraction well P-5 ran dry on both sample attempts. Therefore, there is no analysis available for P-5 during the 2008 annual period. Treatment system analytical results are summarized in Table 3. Consistent with historical results, nitrate was detected at all extraction wells. 1,2,3-TCP was detected above its selected cleanup level in all wells with the exception of W-46 and W-47.

Additional constituents detected at or above their respective cleanup levels during the 2008 annual sampling event include DBCP (detected at P-2, P-4, W-47A) and carbon tetrachloride (detected at P-4, P-7, and W-47).

Other constituents detected in extraction well samples did not exceed the selected cleanup standards as presented in the Technical Memorandum. Analytical results are summarized in Table 3.

2.4. Groundwater Extraction System Operation

The groundwater extraction system consists of a series of nine extraction wells located both on- and off-site, associated conveyance piping, and a sewer discharge point.

On January 25, 2005, FMC began extracting water from new extraction wells P-4, P-5, W-46, W-47, and W-47A in accordance with the *Pilot Study Startup Report and Workplan for System Expansion, Operable Unit 2* (Workplan) (ERM, June 2005). The Workplan described system modifications including the bypass of the granular activated carbon (GAC) treatment unit and discharging directly to the sewer. In January 2005, the GAC units were bypassed and the system was modified to discharge directly to the sewer. The extraction system effluent meter was also replaced and put into service on January 25, 2005. On September 30, 2005, FMC began extracting water from new extraction wells P-6, and P-7.

With the exception of brief shutdowns of the groundwater treatment system for maintenance, the extraction system operated normally during the annual 2008 monitoring period.

The groundwater extraction system is currently configured to operate at approximately 400 gallons per minute (gpm). Extraction wells P-2 and P-3 operated at about approximately 106 gpm, and 28 gpm, respectively, during the 2008 annual period. Extraction wells P-5, P-6, and P-7 operated at approximately 36 gpm, 45 gpm and 76 gpm, respectively. Extraction wells W-46, W-47, and W-47A operated at approximately 19 gpm, 34 gpm, and 32 gpm, respectively, during the 2008 annual period. Groundwater extraction system logs are kept on file and available for review upon request.

During the recent sampling event, 1,2,3-TCP was the only constituent detected in the combined effluent at a concentration above its cleanup level. The effluent detections did not exceed permitted discharge limits.

3. QUALITY ASSURANCE/QUALITY CONTROL

Quality assurance/quality control (QA/QC) samples were collected to evaluate the accuracy of field and laboratory procedures. A summary of sampling QA/QC is presented in Table 4. Field QA/QC involved collecting duplicate samples from wells W-44, W-54, W-55A, and W-57, and collecting trip blanks on each day that samples were collected. Analytical results of the primary and duplicate analysis and the relative percent difference (RPD) between the concentrations detected in the primary and duplicate samples are presented in Table 5. The RPD for sample duplicates ranged from 0.0 to 8.8 percent for detected constituents. The average RPD for all detected constituents for samples collected during the 2008 annual monitoring period was 3.3 percent. There were no detections of constituents in the 20 trip blanks.

Table 6 provides a summary of the laboratory analytical QA/QC. Laboratory QA/QC samples were prepared to determine whether internal laboratory QA/QC procedures were followed during routine operations. Laboratory QA/QC also consisted of analyzing method blanks, surrogate recoveries, and matrix spike and matrix spike duplicates (MS/MSD) for each analytical method requested. Method blanks were analyzed to determine that proper laboratory procedures were followed, and indicate that no apparent laboratory contamination exists in the glassware or instruments at the laboratory. MS/MSD samples were analyzed to assess accuracy and precision by means of percent recovery for accuracy and RPD for precision. Accuracy and precision values were assessed against laboratory-derived data control limits. There were several instances laboratory QA/QC measures not meeting acceptance criteria.

However, cases in which surrogate, spike, or spike duplicate recoveries were outside of control limits were evaluated individually. The analyzing laboratories have deemed the data from the 2008 annual monitoring period acceptable. Analytical data and chain-of-custody documentation are kept on file and available for review upon request.

4. SUMMARY

Results of the 2008 annual groundwater monitoring were generally consistent with historical results. The overall groundwater flow direction during October 2007 and March 2008 was to the north-northwest in the upper and lower water bearing zones.

Consistent with historical results, 1,2,3-TCP, DBCP, chromium, nitrate, and trichloroethene (TCE) were the primary constituents of concern detected in groundwater samples at concentrations above their respective cleanup levels during 2008 annual sampling event. Additional constituents detected at concentrations at or above cleanup levels include 1,2-dichloroethane at wells W-1 and W-43, dieldrin at wells W-1, W-13R, W-41, and W-43, endosulfan sulfate at W-33 and carbon tetrachloride at wells W45B, W-49, and W-49A.

Consistent with historical results, 1,2,3-TCP and DBCP were detected in groundwater samples collected from some extraction wells during the 2008 annual monitoring period at concentrations exceeding their respective selected cleanup levels. Other constituents detected at concentrations above their respective cleanup levels during the 2008 annual monitoring event include carbon tetrachloride, chromium and nitrate. Several other constituents were detected at concentrations above the reporting limit in samples collected in monitoring wells, supply wells, and extraction wells, however, the detections were below their respective cleanup standards. Concentrations observed in combined effluent samples were below permitted discharge levels.

With the exception of periods of brief shutdown of the groundwater treatment system for maintenance, the extraction system operated normally during the 2008 annual monitoring period. Extraction wells P-2 and P-3 operated at about approximately 106 gpm, and 28 gpm, respectively, during the 2008 annual period. Extraction wells P-5, P-6, and P-7 operated at approximately 36 gpm, 45 gpm and 76 gpm, respectively. Extraction wells W-46, W-47, and W-47A operated at approximately 19 gpm, 34 gpm, and 32 gpm, respectively, during the 2008 annual period.

TABLES

TABLE 1

GROUNDWATER ELEVATIONS
June 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL ID	GROUNDWATER ZONE	CASING ELEVATION (FT MSL)	MEASUREMENT DATE	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION (FT MSL)
DP-1	Lower	285.59	6/19/2007	87.39	198.20
			9/17/2007	88.91	196.68
			12/3/2007	88.33	197.26
			3/10/2008	87.51	198.08
DP-2	Lower	287.08	6/19/2007	86.18	200.90
			9/17/2007	87.16	199.92
			12/3/2007	87.81	199.27
			3/10/2008	87.12	199.96
E-2	Upper	285.68	6/19/2007	80.39	205.29
			9/17/2007	82.01	203.67
			12/3/2007	82.72	202.96
			3/10/2008	82.24	203.44
I-1	Upper	286.05	6/19/2007	85.53	200.52
			9/17/2007	86.60	199.45
			12/3/2007	87.10	198.95
			3/10/2008	86.49	199.56
I-2	Upper	285.47	12/3/2007	84.69	200.78
			3/10/2008	84.20	201.27
I-3	Upper	286.28	12/3/2007	85.28	201.00
			3/10/2008	83.18	203.10
P-2*	Upper	285.81	6/19/2007	92.00	193.81
			9/17/2007	92.07	193.74
			12/3/2007	103.52	182.29
			3/10/2008	92.00	193.81
P-3*	Upper	285.16	6/19/2007	112.00	173.16
			9/17/2007	115.08	170.08
			12/3/2007	111.17	173.99
			3/10/2008	107.00	178.16
P-4*	Upper/Lower	286.78	6/19/2007	161.00	125.78
			9/17/2007	156.76	130.02
			12/3/2007	75.10	211.68
			3/10/2008	94.00	192.78
P-5*	Upper/Lower	283.93	6/19/2007	91.00	192.93
			9/17/2007	94.08	189.85
			12/3/2007	93.62	190.31
			3/10/2008	99.00	184.93
P-6*	Upper/Lower	286.77	6/19/2007	100.01	186.76
			9/17/2007	101.00	185.77
			12/3/2007	104.44	182.33
			3/10/2008	105.00	181.77
P-7*	Upper/Lower	287.33	6/19/2007	116.09	171.24
			9/17/2007	116.87	170.46
			12/3/2007	103.97	183.36
			3/10/2008	130.00	157.33
PZ-01	Upper	284.99	12/3/2007	92.63	192.36
			3/10/2008	90.49	194.50
PZ-02	Upper	288.21	12/3/2007	96.46	188.53
			3/10/2008	93.87	194.34
PZ-03	Lower	288.15	12/3/2007	97.13	191.02
			3/10/2008	94.97	193.18

TABLE 1

GROUNDWATER ELEVATIONS
June 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL ID	GROUNDWATER ZONE	CASING ELEVATION (FT MSL)	MEASUREMENT DATE	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION (FT MSL)
TW-1	Upper	286.69	6/19/2007	NM	NM
			9/17/2007	84.61	202.08
			12/3/2007	86.19	200.50
			3/10/2008	85.51	201.18
W-1	Upper	287.19	6/19/2007	80.77	206.42
			9/17/2007	84.79	202.40
			12/3/2007	85.79	201.40
			3/10/2008	85.36	201.83
W-8	Upper	284.35	6/19/2007	83.31	201.04
			9/17/2007	84.75	199.60
			12/3/2007	86.08	198.27
			3/10/2008	84.53	199.82
W-11	Upper	287.20	6/19/2007	83.90	203.30
			9/17/2007	85.65	201.55
			12/3/2007	86.08	201.12
			3/10/2008	85.37	201.83
W-13R	Upper	285.82	6/19/2007	87.77	198.05
			9/17/2007	89.14	196.68
			12/3/2007	89.37	196.45
			3/10/2008	88.54	197.28
W-15	Lower	283.37	12/3/2007	87.06	196.31
			3/10/2008	86.32	197.05
W-24	Upper	284.27	6/19/2007	79.23	205.04
			9/17/2007	79.01	205.26
			12/3/2007	79.67	204.60
			3/10/2008	79.52	204.75
W-28	Upper	286.38	6/19/2007	85.38	201.00
			9/17/2007	86.90	199.48
			12/3/2007	87.34	199.04
			3/19/2007	86.73	199.65
W-29	Upper	288.71	6/19/2007	85.38	203.33
			9/17/2007	87.56	201.15
			12/3/2007	88.41	200.30
			3/10/2008	87.70	201.01
W-30	Upper	284.91	6/19/2007	80.64	204.27
			9/17/2007	90.76	194.15
			12/3/2007	90.71	194.20
			3/10/2008	89.67	195.24
W-31	Lower	286.22	6/19/2007	83.10	203.12
			9/17/2007	85.19	201.03
			12/3/2007	85.61	200.61
			3/10/2008	84.82	201.40
W-32	Upper	283.94	6/19/2007	80.64	203.30
			9/17/2007	81.91	202.03
			12/3/2007	82.42	201.52
			3/10/2008	82.09	201.85
W-33	Upper	284.74	6/19/2007	111.49	173.25
			9/17/2007	112.21	172.53
			12/3/2007	84.79	199.95
			3/10/2008	113.80	170.94
W-34	Upper	283.63	6/19/2007	83.61	200.02
			9/17/2007	84.63	199.00
			12/3/2007	85.45	198.18
			3/10/2008	84.81	198.82
W-35	Lower	285.50	6/19/2007	87.36	198.14
			9/17/2007	89.00	196.50
			12/3/2007	89.03	196.47
			3/10/2008	88.12	197.38

TABLE 1

GROUNDWATER ELEVATIONS
June 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL ID	GROUNDWATER ZONE	CASING ELEVATION (FT MSL)	MEASUREMENT DATE	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION (FT MSL)
W-36	Lower	286.97	6/19/2007	86.18	200.79
			9/17/2007	87.15	199.82
			12/3/2007	88.05	198.92
			3/10/2008	87.35	199.62
W-37	Upper	284.69	6/19/2007	88.61	196.08
			9/17/2007	90.46	194.23
			12/3/2007	90.45	194.24
			3/10/2008	89.40	195.29
W-39	Upper	287.51	6/19/2007	88.09	199.42
			9/17/2007	89.37	198.14
			12/3/2007	89.37	198.14
			3/10/2008	88.42	199.09
W-40	Upper	285.43	6/19/2007	87.21	198.22
			9/17/2007	88.68	196.75
			12/3/2007	88.80	196.63
			3/10/2008	87.98	197.45
W-41	Upper	285.81	6/19/2007	85.42	200.39
			9/17/2007	86.61	199.20
			12/3/2007	87.25	198.56
			3/10/2008	86.57	199.24
W-42	Upper	285.92	6/19/2007	85.53	200.39
			9/17/2007	87.30	198.62
			12/3/2007	87.45	198.47
			3/10/2008	86.74	199.18
W-43	Upper	287.10	6/19/2007	83.05	204.05
			9/17/2007	80.49	206.61
			12/3/2007	85.12	201.98
			3/10/2008	84.70	202.40
W-44	Upper	288.00	6/19/2007	94.27	193.73
			9/17/2007	95.30	192.70
			12/3/2007	94.88	193.12
			3/10/2008	93.61	194.39
W-44A	Lower	287.96	6/19/2007	44.24	243.72
			9/17/2007	95.22	192.74
			12/3/2007	94.86	193.10
			3/10/2008	93.60	194.36
W-45	Lower	288.75	6/19/2007	95.76	192.99
			9/17/2007	95.64	193.11
			12/3/2007	95.45	193.30
			3/10/2008	94.30	194.45
W-45A	Upper	288.75	6/19/2007	94.72	194.03
			9/17/2007	95.07	193.68
			12/3/2007	95.70	193.05
			3/10/2008	94.38	194.37
W-46*	Upper	284.65	6/19/2007	110.01	174.64
			9/17/2007	110.76	173.89
			12/3/2007	108.99	175.66
			3/10/2008	106.00	178.65
W-46A	Lower	285.63	6/19/2007	86.94	198.69
			9/17/2007	88.30	197.33
			12/3/2007	88.29	197.34
			3/10/2008	87.33	198.30
W-47*	Upper	284.37	6/19/2007	115.00	169.37
			9/17/2007	115.00	169.37
			12/3/2007	112.98	171.39
			3/10/2008	118.00	166.37

TABLE 1

GROUNDWATER ELEVATIONS
June 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL ID	GROUNDWATER ZONE	CASING ELEVATION (FT MSL)	MEASUREMENT DATE	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION (FT MSL)
W-47A*	Lower	284.35	6/19/2007	98.00	186.35
			9/17/2007	98.33	186.02
			12/3/2007	160.61	123.74
			3/10/2008	167.00	117.35
W-48	Upper	284.36	6/19/2007	87.87	196.49
			9/17/2007	88.95	195.41
			12/3/2007	89.04	195.32
			3/10/2008	88.05	196.31
W-48A	Lower	284.34	6/19/2007	84.90	199.44
			9/17/2007	88.90	195.44
			12/3/2007	88.98	195.36
			3/10/2008	88.05	196.29
W-48B	Lower	284.48	6/19/2007	87.67	196.81
			9/17/2007	88.40	196.08
			12/3/2007	88.21	196.27
			3/10/2008	87.38	197.10
W-49	Upper/Lower	287.25	6/19/2007	94.56	192.69
			9/17/2007	92.09	195.16
			12/3/2007	91.66	195.59
			3/10/2008	90.52	196.73
W-49A	Lower	287.13	6/19/2007	92.32	194.81
			9/17/2007	91.90	195.23
			12/3/2007	91.48	195.65
			3/10/2008	90.89	196.24
W-50	Lower	287.03	6/19/2007	82.88	204.15
			9/17/2007	84.72	202.31
			12/3/2007	85.97	201.06
			3/10/2008	84.02	203.01
W-51	Upper	286.86	6/19/2007	82.03	204.83
			9/17/2007	83.90	202.96
			12/3/2007	84.63	202.23
			3/10/2008	83.53	203.33
W-52	Upper	289.06	6/19/2007	94.24	194.82
			9/17/2007	95.60	193.46
			12/3/2007	95.04	194.02
			3/10/2008	93.88	195.18
W-52A	Lower	289.15	6/19/2007	94.21	194.94
			9/17/2007	95.30	193.85
			12/3/2007	95.34	193.81
			3/10/2008	94.19	194.96
W-52B	Lower	289.26	6/19/2007	94.32	194.94
			9/17/2007	96.90	192.36
			12/3/2007	95.43	193.83
			3/10/2008	84.27	204.99
W-53	Upper	285.33	6/19/2007	84.43	200.90
			9/17/2007	85.68	199.65
			12/3/2007	85.96	199.37
			3/10/2008	84.98	200.35
W-53A	Lower	285.34	6/19/2007	84.40	200.94
			9/17/2007	84.01	201.33
			12/3/2007	86.06	199.28
			3/10/2008	85.09	200.25

TABLE 1

GROUNDWATER ELEVATIONS
June 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL ID	GROUNDWATER ZONE	CASING ELEVATION (FT MSL)	MEASUREMENT DATE	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION (FT MSL)
W-54	Lower	286.17	6/19/2007	87.93	198.24
			9/17/2007	88.70	197.47
			12/3/2007	88.22	197.95
			3/10/2008	87.11	199.06
W-54A	Lower	285.99	6/19/2007	88.12	197.87
			9/17/2007	90.59	195.40
			12/3/2007	88.18	197.81
			3/10/2008	86.80	199.19
W-55	Upper	283.68	6/19/2007	81.55	202.13
			9/17/2007	83.64	200.04
			12/3/2007	83.66	200.02
			3/10/2008	83.19	200.49
W-55A	Upper	283.86	6/19/2007	81.90	201.96
			9/17/2007	79.07	204.79
			12/3/2007	83.82	200.04
			3/10/2008	83.12	200.74
W-57	Upper	289.19	6/19/2007	NM	NM
			9/17/2007	96.49	192.70
			12/3/2007	96.55	192.64
			3/10/2008	95.33	193.86

Notes:
* : Active extraction well.
FT MSL: Elevation in feet relative to mean sea level.
NM: Water level not measured.
Depth to water measured in feet below top of casing.

TABLE 2

SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
MARCH 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL NUMBER	SAMPLE DATE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	BROMODICHLOROMETHANE	CARBON TETRACHLORIDE	CHLOROFORM	TETRACHLOROETHENE	TRICHLOROETHENE	CHROMIUM	4,4'-DDD	DIELDRIN	ENDOSULFAN SULFATE	TOXAPHENE	DINOSEB	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	MONURON	NITRATE (as nitrogen)	NITRITE (as nitrogen)
Analytical Method		Volatile Organic Compounds (8260B) (µg/L)									6010B (µg/L)	Organochlorine Pesticides (8081A) (µg/L)				Herbicides (8151A) (µg/L)	Special Pesticides (DOHS Method #1) (µg/L)		Carbamate Pesticides (8321A) (µg/L)	Nitrates (353.2) (mg/L)	
Selected Cleanup Level		32	5	0.5	5	100 [a]	0.05	100 [a]	5	5	50	0.0645	0.05	0.05	3	7	0.3	0.2	5	10	-
11P1	3/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.1	<0.27	<0.01	<0.01	<1	**21**	<1.0
	3/30/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	**4.8**	<1.0
	10/2/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0		<0.01	<0.01	-	-	-
	3/25/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**25**	<0.50
14F1	3/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.27	<0.01	**0.64**	<1	**34**	<1.0
14M1	3/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	<0.01	<1	**17**	<1.0
	3/28/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**20**	<0.5
DP-1	3/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	6	<0.063	<0.063	<0.063	<1.0	<0.26	<0.01	0.011	<1	**19**	<1.0
	9/12/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<0.063	<0.063	<0.063	<1.0		<0.01	<0.01	-	-	-
	2/29/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.55	5.8	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**17**	<1.0
DP-2	3/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0	<0.25	<0.01	0.016	<1	3.6	<0.1
	9/19/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<0.063	<0.063	<0.063	<1.0		<0.01	<0.01	-	-	-
	3/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.8	<0.5	<5.0	<0.060	<0.060	<0.060	<1.0		<0.01	<0.01	<1	**18**	<1.0
E-2	3/15/07	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<1.0	<0.11	<0.5	14	<0.063	<0.063	<0.063	<1.0	<0.26	<0.01	**0.32**	<2	**170 H**	<1.0
	9/18/07	<0.50	<0.50	<0.50	<0.50	1.1	<0.50	<1.0	<0.50	<0.50	17	<0.067	<0.067	<0.067	<1.1		<0.01	<0.01	<1	-	-
	3/3/08	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<1.0	<0.13	<0.5	7.8	<0.068	<0.068	<0.068	1.1		<0.01	<0.01	-	**130**	<1.0
I-1	3/29/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.16	**18**	**88**	<0.063	<0.063	<0.063	<1.0	<0.25	**0.35**	0.008 J	<1	**54**	<1.0
	10/2/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	**14**	**69**	<0.064	<0.064	<0.064	<1.1		0.21	0.15	-	-	-
	3/25/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	**17**	**54**	<0.061	<0.061	<0.061	<1.0		0.16	<0.01	<1	**50**	<0.50
TW-1	3/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.20	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	0.035	<1	9.7	<1.0
	9/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.70	<5	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	-	-	-
	3/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.23	1.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**11**	<1.0
W-1	3/15/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.26	<0.5	<5	<0.063	<0.063	<0.063	<1.0	**9.5**	<0.01	**1.7**	<1	**2500 H**	<1.0
	9/6/07	<0.5	<0.5	**0.89**	<0.5	1.8	<0.5	3.2	<0.5	<0.5	<5	<0.063	**0.90**	<0.063	<1.1		<0.01	**5.0**	-	-	-
	3/27/08	<0.5	<0.5	**0.98**	<0.5	2.2	<0.5	2.7	<0.5	<0.5	<5	<0.061	**0.39**	<0.061	<1.0		0.069 Y	**5.9**	<1	**420**	<0.5
W-8	3/29/07	<0.5	0.53	**0.68**	<0.5	1.3	<0.5	2.3	<0.32	1.7	8	<0.062	<0.062	<0.062	1.7	<0.25	**0.35**	**4.4**	<1.0	<1.0	<1.0
	10/2/07	<0.5	<0.5	**0.55**	<0.5	0.95	<0.5	1.4	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0		0.15	**4.7**	-	-	-
	3/27/08	<0.5	<0.5	<0.5	<0.5	0.73	<0.5	1.2	<0.5	0.55	<5	<0.063	<0.063	<0.063	<1.0		0.07 Y	**3.1**	0.59 J	**57**	<0.5
W-11	3/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.37	<0.5	<5	<0.08	<0.08	<0.08	<1.3	<0.26	<0.01	0.031	<1.0	**12**	<1.0
	9/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.52	<5	<0.062	<0.062	<0.062	<1.0		<0.01	0.010	-	-	-
	3/11/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**16**	<1.0

TABLE 2

SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
MARCH 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL NUMBER	SAMPLE DATE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	BROMODICHLOROMETHANE	CARBON TETRACHLORIDE	CHLOROFORM	TETRACHLOROETHENE	TRICHLOROETHENE	CHROMIUM	4,4'-DDD	DIELDRIN	ENDOSULFAN SULFATE	TOXAPHENE	DINOSEB	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	MONURON	NITRATE (as nitrogen)	NITRITE (as nitrogen)
Analytical Method		Volatile Organic Compounds (8260B) (µg/L)									6010B (µg/L)	Organochlorine Pesticides (8081A) (µg/L)				Herbicides (8151A) (µg/L)	Special Pesticides (DOHS Method #1) (µg/L)		Carbamate Pesticides (8321A) (µg/L)	Nitrates (353.2) (mg/L)	
Selected Cleanup Level		32	5	0.5	5	100 [a]	0.05	100 [a]	5	5	50	0.0645	0.05	0.05	3	7	0.3	0.2	5	10	-
W-13R	3/29/07	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	2.3	<0.42	<0.5	7.1	<0.062	**0.085**	<0.062	<1.0	<0.25	**1.6**	0.150	2.2	**72**	<1.0
	10/1/07	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	1.9	<0.5	<0.5	5.4	<0.062	**0.10**	<0.062	<1.0		**1.5**	0.10	-	-	-
	3/19/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	10	<0.061	**0.092**	<0.061	<1.0		**1.2**	0.16	1.5	**78**	<10
W-24	3/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.47	<0.5	13	<0.061	<0.061	<0.061	<1.0	<0.27	<0.01	0.022	<1.0	**78 H**	<1.0
	9/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	14	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	-	-	-
	3/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	46	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**81**	<1.0
W-28	3/20/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.52	1.7	13	<0.062	<0.062	<0.062	<1.0	<0.26	<0.01	0.013	<1.0	**95**	<1.0
	9/17/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.2	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	-	-	-
	3/11/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1	8	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	<1	**86**	<1.0
W-29	3/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.57	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	**0.39**	0.97 J	**120**	<1.0
	9/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	8.9	<0.062	<0.062	<0.062	<1.0		0.012	0.082	-	-	-
	3/20/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	0.55	<5	<6	<6	<6	<100		0.012	0.026	0.62 J	**56 H**	<1.0
W-30	3/29/07	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	3.8	<0.63	4.0	26	<0.063	<0.063	<0.063	<1.0	<0.25	**0.43**	0.130	<1	<1.0	<1.0
	10/1/07	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	2.7	<0.5	3.7	**52**	<0.062	<0.062	<0.062	<1.0		**0.37**	0.017	-	-	-
	3/20/08	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	2.5	<0.5	4	**59**	<6	<6	<6	<100		**0.34**	0.015	<1	**37 H**	<10
W-31	3/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.68	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	0.037	<1	**44**	<1.0
	9/18/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.99	<5	<0.065	<0.065	<0.065	<1.1		<0.01	<0.01	-	-	-
	3/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.71	1.1	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**59**	<1.0
W-32	3/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.74	<0.5	5.8	<0.064	<0.064	<0.064	<1.1	<0.26	<0.01	0.10	<1	**21**	<1.0
	9/17/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	-	-	-
	3/4/08	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	5.5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**20**	<1.0
W-33	3/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<5	<0.062	<0.062	**0.089**	<1.0	<0.26	0.051	0.059	<1.0	**75**	<1.0
	9/20/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<5	<0.062	<0.062	**0.19**	<1.0		0.047	0.026	-	-	-
	3/20/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<5	<6	<6	**15**	<100		0.053	0.012	<1	**41 H**	<1.0
W-34	3/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	5.6	<0.064	<0.064	<0.064	<1.1	<0.26	<0.01	0.13	<1	**52**	<1
	9/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	5.8	<0.061	<0.061	<0.061	<1.0		<0.01	0.018	-	-	-
	3/11/2008	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	5.8	<0.061	<0.061	<0.061	<1.0		<0.01	0.049	<1	**50**	<1.0
W-35	3/21/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0	<0.25	0.032	0.059	<1	**27**	<1.0
	9/20/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	-	-	-	-		0.012	0.022	-	-	-
	3/11/2008	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		0.027	0.051	<1	**29**	<1.0
W-36	3/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0	<0.26	<0.01	0.160	<1	**27**	<1.0
	9/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	-	-	-	-		<0.01	<0.01	-	-	-
	3/5/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.1	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**24 H**	<1.0

TABLE 2

SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
MARCH 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL NUMBER	SAMPLE DATE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	BROMODICHLOROMETHANE	CARBON TETRACHLORIDE	CHLOROFORM	TETRACHLOROETHENE	TRICHLOROETHENE	CHROMIUM	4,4'-DDD	DIELDRIN	ENDOSULFAN SULFATE	TOXAPHENE	DINOSEB	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	IMONURON	NITRATE (as nitrogen)	NITRITE (as nitrogen)
Analytical Method		Volatile Organic Compounds (8260B) (µg/L)									6010B (µg/L)	Organochlorine Pesticides (8081A) (µg/L)				Herbicides (8151A) (µg/L)	Special Pesticides (DOHS Method #1) (µg/L)		Carbamate Pesticides (8321A) (µg/L)	Nitrates (353.2) (mg/L)	
Selected Cleanup Level		32	5	0.5	5	100 [a]	0.05	100 [a]	5	5	50	0.0645	0.05	0.05	3	7	0.3	0.2	5	10	-
W-37	3/28/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	4.5	46	<0.067	<0.067	<0.067	<1.1	<0.26	**0.41**	0.007 J	<1	**46**	<1.0
	9/27/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	2.5	27	<0.062	<0.062	<0.062	<1.0		**0.36**	<0.01	-	-	-
	3/21/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	3.8	43	<6	<6	<6	<100		**0.43**	<0.01	<1	**52 H**	<1.0
W-39	3/15/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	5	<0.062	<0.062	<0.062	<1.0	<0.26	<0.01	0.067	<1.0	**32 H**	<1.0
	9/13/07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<5.0	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	-	-	-
	3/5/08	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	0.59	<5.0	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**34 H**	<1.0
W-40	3/29/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	7.3	<0.061	<0.061	<0.061	<1.0	<0.25	0.2	0.070	<1.0	**50**	<1.0
	9/27/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	8.1	<0.063	<0.063	<0.063	<1.0		0.16	0.049	-	-	-
	3/12/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	9.1	<0.061	<0.061	<0.061	<1.0		0.14	0.044	<1	**48**	<1.0
W-41	3/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	49	<0.062	<0.062	<0.062	<1.0	<0.27	0.02	**0.68**	<1.0	**25 H**	<1.0
	9/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	4.1	43	<0.061	**0.087**	<0.061	<1.0		0.062	0.027	-	-	-
	3/12/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	4.4	42	<0.061	**0.072**	<0.061	<1.0		0.14	<0.01	<1	**27**	<1.0
W-42	3/20/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	3.7	36	<0.062	<0.062	<0.062	<1.0	<0.26	0.015	<0.01	<1.0	**28**	<1.0
	9/18/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	2.6	30	<0.061	<0.061	<0.061	<1.0		0.017	<0.01	-	-	-
	3/12/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	2.7	26	<0.061	<0.061	<0.061	<1.0		0.02	<0.01	<1	**26**	<1.0
W-43	3/10/07	2.6	<0.5	**2.7**	<0.5	5.4	<0.5	2.4	<0.5	<0.5	<5	<0.063	**0.17**	<0.063	<1.0	<0.27	<0.01	**21**	0.55 J	**46 H**	<1
	9/7/07	<0.5	<0.5	**2.3**	<0.5	4.8	<0.5	1.5	<0.5	<0.5	13	<0.067	**0.15**	<0.067	<1.1		<0.01	**19**	-	-	-
	3/28/08	2.2	<0.5	**3**	<0.5	5.7	<0.5	2	<0.5	<0.5	8.5	<0.065	**0.16**	<0.065	<1.1				-	**50**	<0.5
W-44	3/26/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	2.9	<5	<0.063	<0.063	<0.063	<1.1	<0.26	0.17	0.011	<1.0	**43**	<1.0
	9/25/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	2.1	<5	<0.064	<0.064	<0.064	<1.1		0.14	<0.01	-	-	-
	3/13/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.5	<5	<0.061	<0.061	<0.061	<1.0		0.08	<0.01	<1	**48**	<1.0
W-44A	3/26/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1	5.9	<0.063	<0.063	<0.063	<1.0	<0.26	0.22	0.016	<1.0	**37**	<1.0
	9/25/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.1	23	<0.063	<0.063	<0.063	<1.0		-	-	-	-	-
	3/13/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.3	<5	<0.061	<0.061	<0.061	<1.0		0.15	<0.01	<1	**38**	<1.0
W-45	3/30/07	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<1.0	<0.5	0.5	12	<0.077	<0.077	<0.077	<1.2	<0.29	**0.41 †**	0.027 Y†	<1.0	5.4 †	<0.1 †
	10/2/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.65	8.8	-	-	-	-		**0.37**	0.070	-	-	-
	3/26/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.53	6.8	<0.062	<0.062	<0.062	<1.0		**0.33**	0.043	<1	**25**	<0.50
W-45B	3/30/07	<0.5	<0.5	<0.5	1.3	1.3	<0.5	6.3	<0.5	2.6	23	<0.063	<0.063	<0.063	<1.0	<0.25	**1.7 †**	0.046 †	<1.0	**12 †**	<0.1 †
	10/3/07	<0.5	<0.5	<0.5	1.3	1.1	<0.5	6.1	<0.5	3.4	14	-	-	-	-		**1.7**	0.042	-	-	-
	3/27/08	<0.5	<0.5	<0.5	1.3	0.77	**0.53**	6.2	<0.5	3.2	10	<0.061	<0.061	<0.061	<1.0		**1.2**	0.067	<1	**56**	<0.5
W-46A	3/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	5.5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	0.032	<1	**29**	<1.0
	9/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	0.037	-	-	-
	3/5/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	5.8	<0.062	<0.062	<0.062	<1.0		<0.01	0.041	<1	**32 H**	<1.0

TABLE 2

SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
MARCH 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL NUMBER	SAMPLE DATE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	BROMODICHLOROMETHANE	CARBON TETRACHLORIDE	CHLOROFORM	TETRACHLOROETHENE	TRICHLOROETHENE	CHROMIUM	4,4'-DDD	DIELDRIN	ENDOSULFAN SULFATE	TOXAPHENE	DINOSEB	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	MONURON	NITRATE (as nitrogen)	NITRITE (as nitrogen)
Analytical Method		Volatile Organic Compounds (8260B) (µg/L)									6010B (µg/L)	Organochlorine Pesticides (8081A) (µg/L)				Herbicides (8151A) (µg/L)	Special Pesticides (DOHS Method #1) (µg/L)		Carbamate Pesticides (8321A) (µg/L)	Nitrates (353.2) (mg/L)	
Selected Cleanup Level		32	5	0.5	5	100 [a]	0.05	100 [a]	5	5	50	0.0645	0.05	0.05	3	7	0.3	0.2	5	10	-
W-48	3/21/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.074	0.010	-	-	-
	3/29/07	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	2.5	<0.5	**11**	**110**	<0.063	<0.063	<0.063	<1.0	<0.26	**0.73**	0.008 J	<1.0	**59**	<1.0
	9/27/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	**7.1**	**110**	<0.063	<0.063	<0.063	<1.1		**0.55**	<0.01	-	-	-
	3/21/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	**7**	**80**	<6	<6	<6	<100		**0.35**	<0.01	<1	**55 H**	<1.0
W-48A	3/28/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	21	<0.065	<0.065	<0.065	<1.0	<0.27	0.075	<0.01	<1.0	**18**	<1.0
	9/26/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	5.6	<0.062	<0.062	<0.062	<1.0		0.051	<0.01	-	-	-
	3/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	16	<0.061	<0.061	<0.061	<1.0		0.05	<0.01	<1	**18**	<1.0
W-48B	3/21/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	18	<0.062	<0.062	<0.062	<1.0	<0.25	0.074	0.010	<1.0	**17**	<1.0
	9/19/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	17	<0.063	<0.063	<0.063	<1.0		0.059	<0.01	-	-	-
	3/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	17	<0.061	<0.061	<0.061	<1.0		0.06	<0.01	<1	**18**	<1.0
W-49	3/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.078	<0.078	<0.078	<1.3	<0.25	0.087	0.026	<1.0	**7**	0.22
	9/21/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0		<0.01	0.023	-	-	-
	3/18/08	<0.5	<0.5	<0.5	<0.5	<0.5	**0.54**	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		0.054	0.01	<1	**47**	<1.0
W-49A	3/28/07	<0.5	<0.5	<0.5	<0.5	<0.5	**0.74**	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0	<0.26	0.25	0.048	<1.0	**41**	<1.0
	9/26/07	<0.5	<0.5	<0.5	<0.5	<0.5	**0.52**	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0		0.16	0.032	-	-	-
	3/17/08	<0.5	<0.5	<0.5	<0.5	<0.5	**0.6**	<1.0	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0		0.13	0.029	<1	**45**	<1.0
W-50	3/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<4.7	<0.077	<0.077	<0.077	<1.3	<0.26	<0.01	0.016 Y	<1.0	**19**	<1.0
	9/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0		<0.01	0.059	-	-	-
	3/18/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	0.06	<1	**20**	<1.0
W-51	3/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	0.95	0.83	<4.7	<0.061	<0.061	<0.061	<1.0	<0.27	<0.01	0.042	<1.0	**72**	<1.0
	9/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	0.95	<0.5	<5	<0.063	<0.063	<0.063	<1.0		<0.01	0.048	-	-	-
	3/18/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	1.1	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	0.078	<1	**75**	<1.0
W-52	3/30/07	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	1.4	<0.5	1.1	31	<0.063	<0.063	<0.063	<1.1	<0.25	**1.4**	0.071	<1.0	7.4	<0.1
	10/3/07	<0.5	<0.5	<0.5	0.87	1.2	<0.5	5.6	<0.5	0.80	16	<0.062	<0.062	<0.062	<1.0		**2.0**	**0.28**	-	-	-
	3/26/08	<0.5	<0.5	<0.5	<0.5	1	<0.5	1.3	<0.5	1	28	<0.061	<0.061	<0.061	<1.0		**0.77**	0.019	<1	**31**	<0.50
W-52A	3/30/07	<0.5	<0.5	<0.5	0.94	1.4	<0.5	6.1	<0.5	0.97	15	<0.063	<0.063	<0.063	<1.0	<0.25	**2**	**0.42**	<1	**11.4**	<0.1
	10/3/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0		**1.5**	0.033	-	-	-
	3/26/08	<0.5	<0.5	<0.5	1.0	0.80	<0.5	6.1	<0.5	0.84	9.5	<0.061	<0.061	<0.061	<1.0		**1.3**	**0.37**	<1	**51**	<0.50
W-52B	3/23/07	<0.5	<0.5	<0.5	<0.5	-	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0	<0.26	0.062	0.02	-	2.7	<0.1
	9/20/07	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	1.1	0.89	<0.5	30	<0.062	<0.062	<0.062	<1.0		0.14	<0.01	-	-	-
	3/24/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	2.3	<5	<0.063	<0.063	<0.063	<1.0		**0.48**	0.018	<1	**34**	<0.50
W-53	3/20/07	<0.5	<0.5	<0.5	<0.5	0.93	<0.5	1.6	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	0.025	<1.0	**29**	<1.0
	9/13/07	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	1.2	<0.5	<0.5	5.4	<0.063	<0.063	<0.063	<1.0		<0.01	0.015	-	-	-
	3/18/08	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	2	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**75**	<1.0

TABLE 2

SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
MARCH 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL NUMBER	SAMPLE DATE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	BROMODICHLOROMETHANE	CARBON TETRACHLORIDE	CHLOROFORM	TETRACHLOROETHENE	TRICHLOROETHENE	CHROMIUM	4,4'-DDD	DIELDRIN	ENDOSULFAN SULFATE	TOXAPHENE	DINOSEB	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	MONURON	NITRATE (as nitrogen)	NITRITE (as nitrogen)
Analytical Method		Volatile Organic Compounds (8260B) (µg/L)									6010B (µg/L)	Organochlorine Pesticides (8081A) (µg/L)				Herbicides (8151A) (µg/L)	Special Pesticides (DOHS Method #1) (µg/L)		Carbamate Pesticides (8321A) (µg/L)	Nitrates (353.2) (mg/L)	
Selected Cleanup Level		32	5	0.5	5	100 [a]	0.05	100 [a]	5	5	50	0.0645	0.05	0.05	3	7	0.3	0.2	5	10	-
W-53A	3/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	5.6	<0.061	<0.061	<0.061	<1.3	<0.32	0.018	**0.59**	<1.0	**26 H**	<1.0
	9/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0		<0.01	0.010	-	-	-
	3/19/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	0.028	<1	**33**	<10
W-54	3/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.075	<0.075	<0.075	<1.0	<0.26	<0.01	<0.01	<1.0	8.3	<1.0
	9/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.063	<0.063	<0.063	<1.0		<0.01	0.010	-	-	-
	3/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	6.9	<1.0
W-54A	3/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0	<0.26	<0.01	<0.01	<1.0	**13.5**	<1.0
	9/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	-	-	-
	3/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**11**	<1.0
W-55	3/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.2	5	<0.061	**0.068**	<0.061	<1.0	1.4	<0.01	0.096	<1.0	**360 H**	<1.0
	9/18/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	3.5	10	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	-	-	-
	3/24/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	4.2	11	<0.062	<0.062	<0.062	<1.0		<0.01	<0.01	<1	**56**	<0.50
W-55A	3/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	**5**	7	<0.062	<0.062	<0.062	<1.0	<0.26	<0.01	0.017	<1.0	**47 H**	<1.0
	9/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	2.3	<5	<0.063	<0.063	<0.063	<1.1		<0.01	0.032	-	-	-
	3/25/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	2.6	5.5	<0.061	<0.061	<0.061	<1.0		<0.01	<0.01	<1	**49**	<0.50
W-57	3/26/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	0.84	<5	<0.062	<0.062	<0.062	<1.0	<0.26	0.025	0.024	<1.0	**37**	<1.0
	9/24/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1.2	<5	<0.062	<0.062	<0.062	<1.0		0.028	<0.01	-	-	-
	3/19/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	1	<5	<0.062	<0.062	<0.062	<1.0		0.037	<0.01	<1	**24**	<10

Notes: Only detected compounds are shown.
Concentrations for all compounds, other than Nitrates, are presented in micrograms per liter.
Bold type indicates result ≥ cleanup level.
B: Compound was detected in a method blank and in the sample.
E: Value exceeded linear range.
J: Estimated value; analyte detected below reporting limits.
H: Sample was prepared or analyzed beyond the specified holding time
X: A surrogate exceeded the control limits.
Y: Percent difference between primary and confirmation column is >40%.
* denotes the recovery of the LCS is half. See laboratory analytical results for further information.
† Samples W-45 and W-45A were inadvertently mislabeled as W-54 and W-54A
[a] Cleanup standard is for total trihalomethanes.
- Not analyzed

TABLE 3

SUMMARY OF CONSTITUENTS DETECTED IN EXTRACTION SYSTEM SAMPLES
MARCH 2007 - MARCH 2008
FMC CORPORATION
FRESNO, CALIFORNIA

WELL NUMBER	SAMPLE DATE	1,2-DICHLOROPROPANE	BROMODICHLOROMETHANE	CARBON TETRACHLORIDE	CHLOROFORM	TRICHLOROETHENE	CHROMIUM, DISSOLVED	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	NITRATE as N
Analytical Method		Volatile Organic Compounds (8260B) (µg/L)					(6010B) (µg/L)	Special Pesticides (DOHS Method #1) (µg/L)		Nitrates (353.2) (mg/L)
Selected Cleanup Level		5	100	0.05	100	5	50	0.27	0.2	10
P-2	3/23/07	0.61	<0.5	<0.5	1.1	1.8	13	**0.73**	**0.82**	67
	9/27/07	<0.5	<0.5	<0.5	<1.0	1.0	10	**0.48**	**0.83**	-
	3/27/08	<0.5	<0.5	<0.5	<1.0	1.3	8.9	**0.33**	**0.84**	64
P-3	3/15/07	<0.5	<0.5	<0.5	1	0.84	19	**0.33**	0.053	46 H
	9/27/07	<0.5	<0.5	<0.5	<1.0	0.63	18	**0.30**	0.045	-
	3/19/2008	<0.5	<0.5	<0.5	<1.0	<0.5	1.4	**0.30**	0.05	47
P-4	3/27/07	1.3	1.1	<0.5	7.7	2.1	13	**1.3**	**0.20**	53
	10/3/07	1.0	0.73	<0.5	5.9	2.5	11	**1.40**	0.19	-
	3/28/08	0.92	0.69	**0.58**	5.2	1.9	7.5	**1.3**	**0.21**	50
P-5 [D]	3/27/07	0.79	<0.5	<0.5	3.8	3.2	15	**1.2**	0.19	47.0
	9/27/07	0.57	<0.5	<0.5	2.6	1.9	14	**1.3**	0.18	-
	3/28/08	-	-	-	-	-	-	-	-	-
	3/31/08	-	-	-	-	-	-	-	-	-
P-6	3/27/2007	0.68	1.7	<0.5	2.8	2.9	46	**0.84**	0.069	42
	9/27/2007	0.56	1.2	<0.5	2.5	2.9	56	**1.3**	0.083	-
	3/28/2008	0.82	1.3	<0.5	4	4.6	9.8	**1.1**	0.096	47
P-7	3/27/2006	0.77	1.3	<0.5	2.8	3.4	15	**0.85**	0.030	42
	9/27/2007	0.61	1	<0.5	2.1	2.5	18	**0.46**	0.015	-
	3/25/2008	0.68	0.7	**0.52**	2.4	3.6	12	**0.67**	0.026	48
W-46	3/16/2007	<0.5	<0.5	<0.5	1.9	1.5	9.1	0.095	0.061	48 H
	9/19/2007	<0.5	<0.5	<0.5	1.7	1.1	7.9	0.057	0.047	-
	3/19/2008	<0.5	<0.5	<0.5	1.3	0.78	7.4	0.028	0.028	45
W-47	3/14/2007	0.66	<0.5	**0.88**	2.2	2.4	<5	**0.68**	**0.21**	46
	9/27/2007	<0.5	<0.5	<0.5	1.5	1.4	<5	**0.41**	0.12	-
	3/25/2008	<0.5	<0.5	**0.87**	1.3	1.2	<5	0.22	0.082	46
W-47A	3/14/07	0.69	<0.5	<0.5	2.5	<0.5	6.3	**1.1**	**0.34**	31
	9/27/07	<0.5	<0.5	<0.5	1.8	<0.5	5.1	**0.73**	**0.23**	-
	3/27/08	<0.5	<0.5	<0.5	1.4	<0.5	<5	**0.54**	**0.20**	31

Notes: Only detected compounds are shown.
Bold type indicates result ≥ cleanup level.
The annual duplicate samples were submitted to TA for analysis with the exception of the DOHS samples
H: Sample was prepared or analyzed beyond the specified holding time
J: Estimated value; analyte detected below reporting limits.
Y: Percent difference between primary and confirmation column is >40%.
-: Result is not available
[D]: Well ran dry on both attempts to sample. No sample was produced during this report.

TABLE 4

SUMMARY OF SAMPLING QA/QC
2008 ANNUAL GROUNDWATER MONITORING EVENT
FMC CORPORATION
FRESNO, CALIFORNIA

Sampling performed by

Firm Name:	PARSONS
Address:	2121 North California Boulevard, Suite 500 Walnut Creek, CA 94596
Contact:	Roland Kith
Phone/Fax:	(831) 421-2077 / (925) 979-9781

Chain of custody form completed for all samples?	[X] Yes	[ ] No
Field parameters stabilized prior to taking sample?	[X] Yes	[ ] No
Zero head space in sample containers (VOCs only)	[X] Yes	[ ] No
Samples preserved according to analytical method?	[X] Yes	[ ] No
Required field QA/QC samples taken?	[X] Yes	[ ] No

TABLE 5

FIELD DUPLICATE RESULTS AND RELATIVE PERCENT DIFFERENCES
2008 ANNUAL GROUNDWATER MONITORING EVENT
FMC CORPORATION
FRESNO, CALIFORNIA

WELL ID	SAMPLE DATE	CONSTITUENT	SAMPLE RESULT	DUPLICATE RESULT	UNITS	RPD (%)
W-44	3/13/2008	Nitrate	48	46	mg/L	2.1
		Trichloroethene	1.5	1.6	ug/L	3.2
		1,2,3-Trichloropropane	0.075	0.084	ug/L	5.7
W-54	3/6/08	Nitrate	6.9	6.9	mg/L	0.0
W-55A	3/25/08	Trichloroethene	2.6	3.1	ug/L	8.8
		Chromium	0.0055	0.0052	mg/L	2.8
W-57	3/19/08	Nitrate	24	25	mg/L	2.0
		Trichloroethene	1	0.96	ug/L	2.0
		1,2,3-Trichloropropane	0.037	0.034	ug/L	4.2

Notes:

RPD denotes relative percent difference.

Maximum:	8.8
Minimum:	0.0
Average:	3.3

TABLE 6

SUMMARY OF ANALYTICAL QA/QC
2008 ANNUAL GROUNDWATER MONITORING EVENT
FMC CORPORATION
FRESNO, CALIFORNIA

Analysis performed by:

Primary Laboratory:	Test America (STL)	Other Laboratory:	Agriculture and Priority Pollutants Laboratories, Inc. (APPL)
Address:	1220 Quarry Lane, Pleasanton, CA 94566	Address:	4203 West Swift Fresno, California 93722
Contact:	Afsaneh Salimpour	Contact:	Leonard Fong
Phone/Fax:	(925) 484-1919 / (925) 484-1096	Phone/Fax:	(559) 275-2175 / (559) 275-4422

Analytical methods used (by method number and chemical category):

by TA:		by APPL:	
EPA 8260B	Volatile Organic Compounds	EPA 8321	Carbamate Pesticides
EPA 8081	Organochlorine Pesticides	DOHS #1	Special Pesticides
EPA 6010	Total Chromium	EPA 353.2	Nitrate and Nitrite as nitrogen
EPA 8151	Chlorinated Herbicides		
EPA 353.2	Nitrate and Nitrite as nitrogen		

Are the labs state-certified for the above analytical methods? [X] Yes [ ] No

Analysis performed according to standard methods? [X] Yes [ ] No

Sample holding times met? [X] Yes [ ] No
* Some samples were submitted to the lab within the holding times, but required dilution for the second round analysis, which exceeded the holding times. These result were labeled with a qualifer "H".

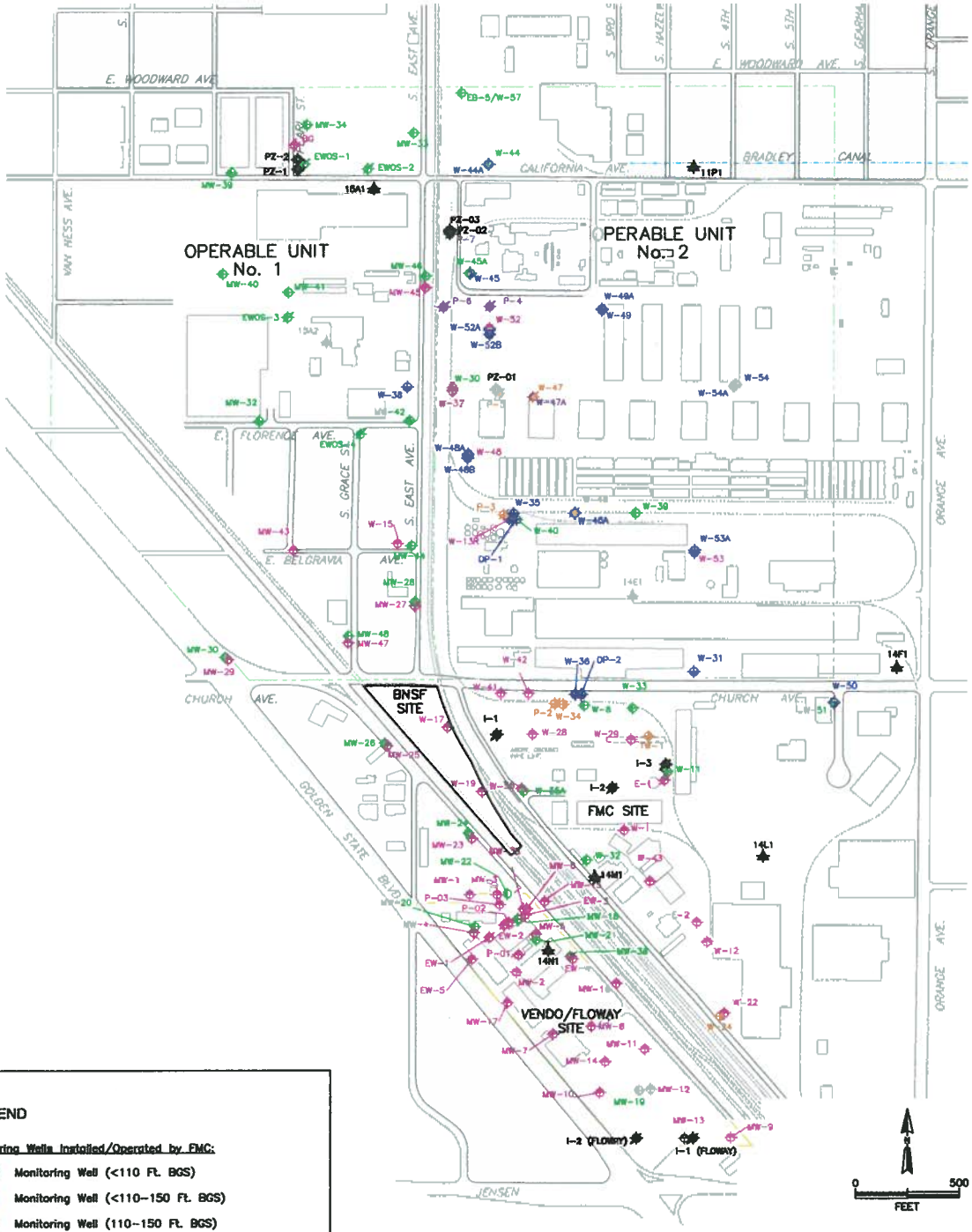
Analytical results reported for all values above MDL? [X] Yes [ ] No

QA/QC analyses run consistent with analytical methods? [X] Yes [ ] No
(Includes blanks [field/travel/method], field replicates, spikes [MS/MSD], and surrogates)

QA/QC results meet all acceptance criteria? [X] Yes [ ] No
- The data was deemed acceptable by the analyzing laboratory.

QA/QC results and acceptance criteria on file? [X] Yes [ ] No

FIGURES



LEGEND

Monitoring Wells Installed/Operated by FMC:

- Monitoring Well (<110 Ft. BGS)
- Monitoring Well (<110–150 Ft. BGS)
- Monitoring Well (110–150 Ft. BGS)
- Monitoring Well (>110–>150 Ft. BGS)
- Monitoring Well (>150 Ft. BGS)
- Extraction Well (<110–150 Ft. BGS)
- Extraction Well (>110–>150 Ft. BGS)

SITE PLAN

FMC CORPORATION
FRESNO, CALIFORNIA

PARSONS

CHECKED BY	Amy Gignac	FIGURE
DRAFTED BY	Jian Liu	1
FILE	WaterLevel.dwg	
LAYER		
DATE	12/2/05	

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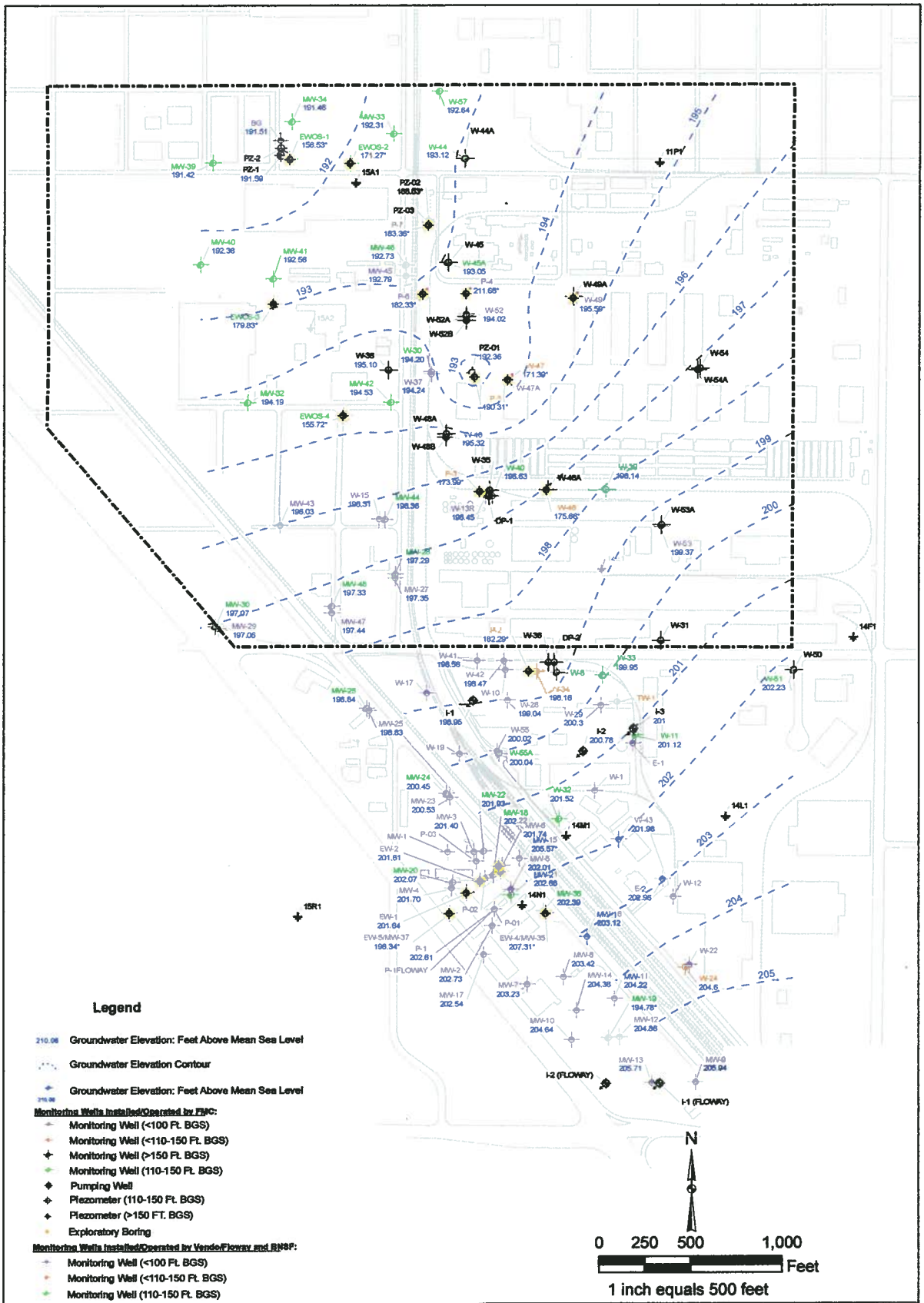

Pumping well water levels were not included for determining groundwater contours.
* Water levels were not included for determining groundwater contours.

POTENTIOMETRIC SURFACE MAP UPPER GROUNDWATER ZONE DECEMBER 2007			
FMC CORPORATION FRESNO, CALIFORNIA			
PARSONS	CHECKED BY	Fred Kintzer	Figure
	DRAFTED BY	Gregory Moran	2
	FILE	Figure 2.pdf	
	DATE	06/09/08	

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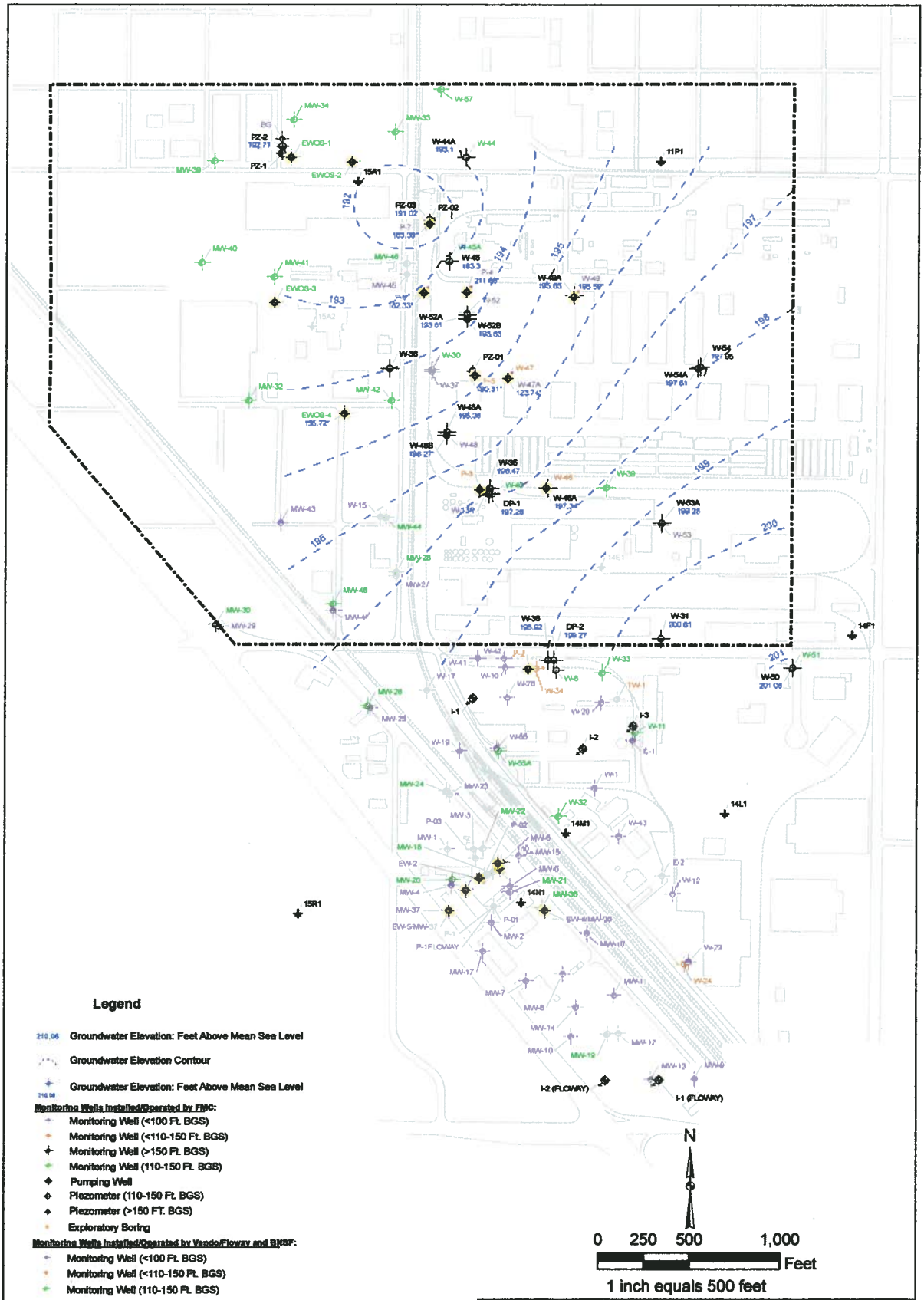

POTENTIOMETRIC SURFACE MAP
LOWER GROUNDWATER ZONE
DECEMBER 2007

FMC CORPORATION
FRESNO, CALIFORNIA

PARSONS			Figure
	CHECKED BY	Fred Kintzer	3
	DRAFTED BY	Gregory Moran	
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	DATE	05/19/08	

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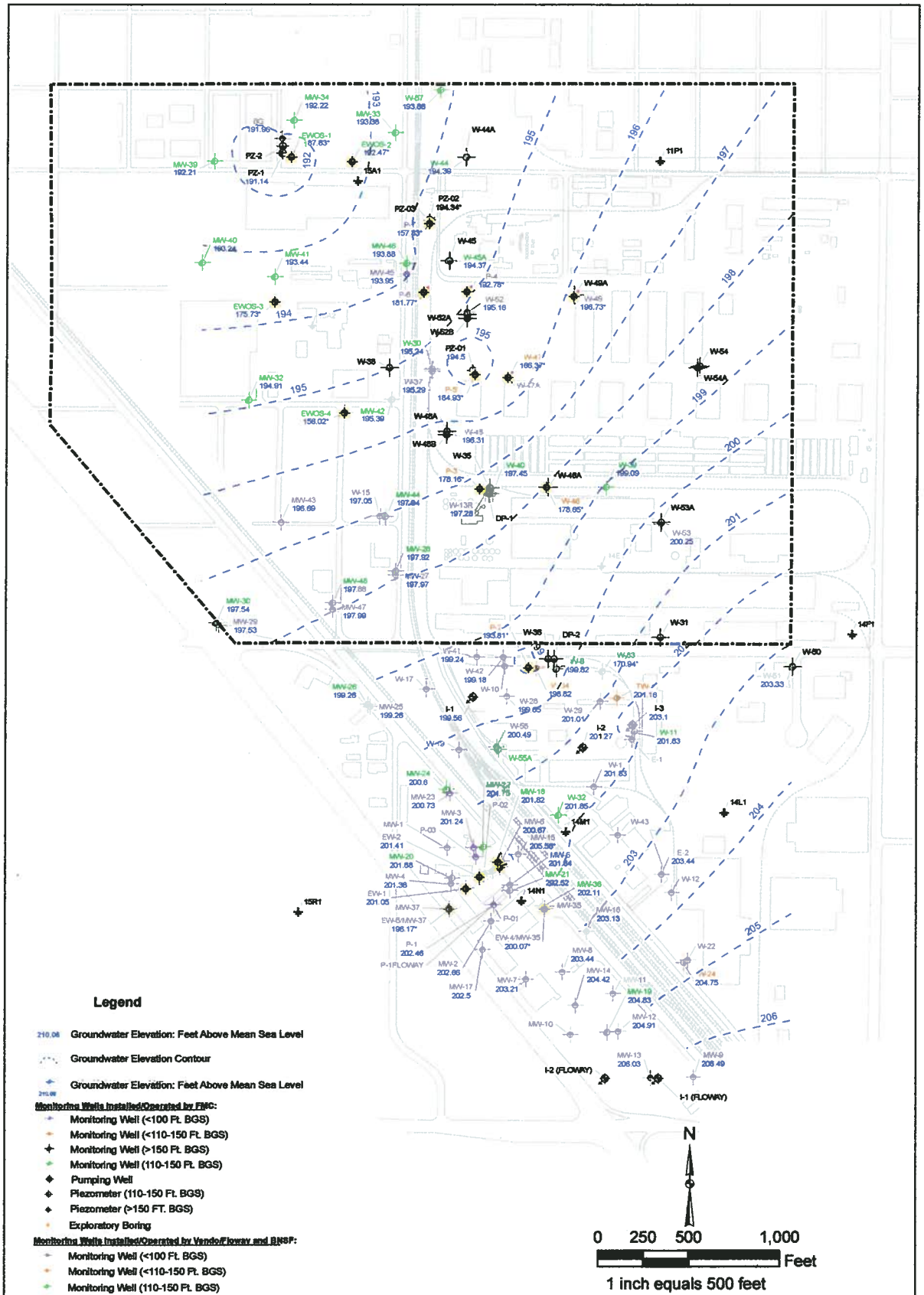

Legend

- 210.08 Groundwater Elevation: Feet Above Mean Sea Level
- Groundwater Elevation Contour
- 210.08 Groundwater Elevation: Feet Above Mean Sea Level

Monitoring Wells Installed/Operated by FMC:

- Monitoring Well (<100 Ft. BGS)
- Monitoring Well (<110-150 Ft. BGS)
- Monitoring Well (>150 Ft. BGS)
- Monitoring Well (110-150 Ft. BGS)
- Pumping Well
- Piezometer (110-150 Ft. BGS)
- Piezometer (>150 FT. BGS)
- Exploratory Boring

Monitoring Wells Installed/Operated by Vendo/Floway and BNSF:

- Monitoring Well (<100 Ft. BGS)
- Monitoring Well (<110-150 Ft. BGS)
- Monitoring Well (110-150 Ft. BGS)
- Pumping Well
- Piezometer (110-150 Ft. BGS)
- Piezometer (>150 FT. BGS)
- Injection Well
- Supply Well
- Destroyed Supply Well

Pumping well water levels were not included for determining groundwater contours.
* Water levels were not included for determining groundwater contours.

POTENTIOMETRIC SURFACE MAP
UPPER GROUNDWATER ZONE
MARCH 2008

FMC CORPORATION
FRESNO, CALIFORNIA

PARSONS	CHECKED BY	Fred Kintzer	Figure
	DRAFTED BY	Gregory Moran	4
	FILE	Figure 4.pdf	
	DATE	06/09/08	

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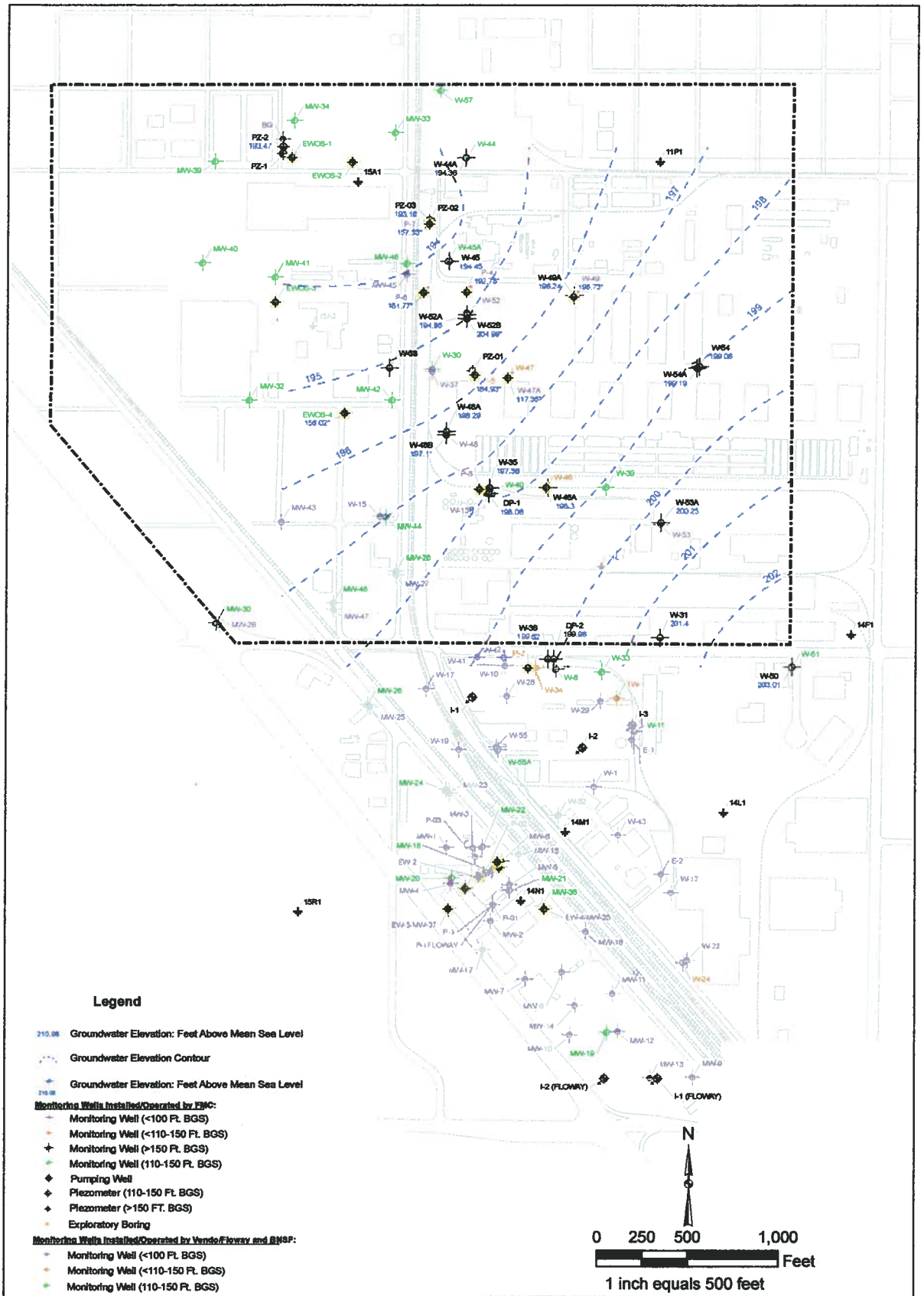

1 inch equals 500 feet

Legend

210.08 Groundwater Elevation: Feet Above Mean Sea Level

Groundwater Elevation Contour

210.08 Groundwater Elevation: Feet Above Mean Sea Level

Monitoring Wells Installed/Operated by FMC:

- Monitoring Well (<100 Ft. BGS)
- Monitoring Well (<110-150 Ft. BGS)
- Monitoring Well (>150 Ft. BGS)
- Monitoring Well (110-150 Ft. BGS)
- Pumping Well
- Piezometer (110-150 Ft. BGS)
- Piezometer (>150 FT. BGS)
- Exploratory Boring

Monitoring Wells Installed/Operated by Vendo/Floway and BNSF:

- Monitoring Well (<100 Ft. BGS)
- Monitoring Well (<110-150 Ft. BGS)
- Monitoring Well (110-150 Ft. BGS)
- Pumping Well
- Piezometer (110-150 Ft. BGS)
- Piezometer (>150 FT. BGS)
- Injection Well
- Supply Well
- Destroyed Supply Well

Pumping well water levels were not included for determining groundwater contours.
* Water levels were not included for determining groundwater contours.

POTENTIOMETRIC SURFACE MAP
LOWER GROUNDWATER ZONE
MARCH 2008

FMC CORPORATION
FRESNO, CALIFORNIA

PARSONS			Figure
	CHECKED BY	Fred Kintzer	5
	DRAFTED BY	Gregory Moran	
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	DATE	05/20/08	

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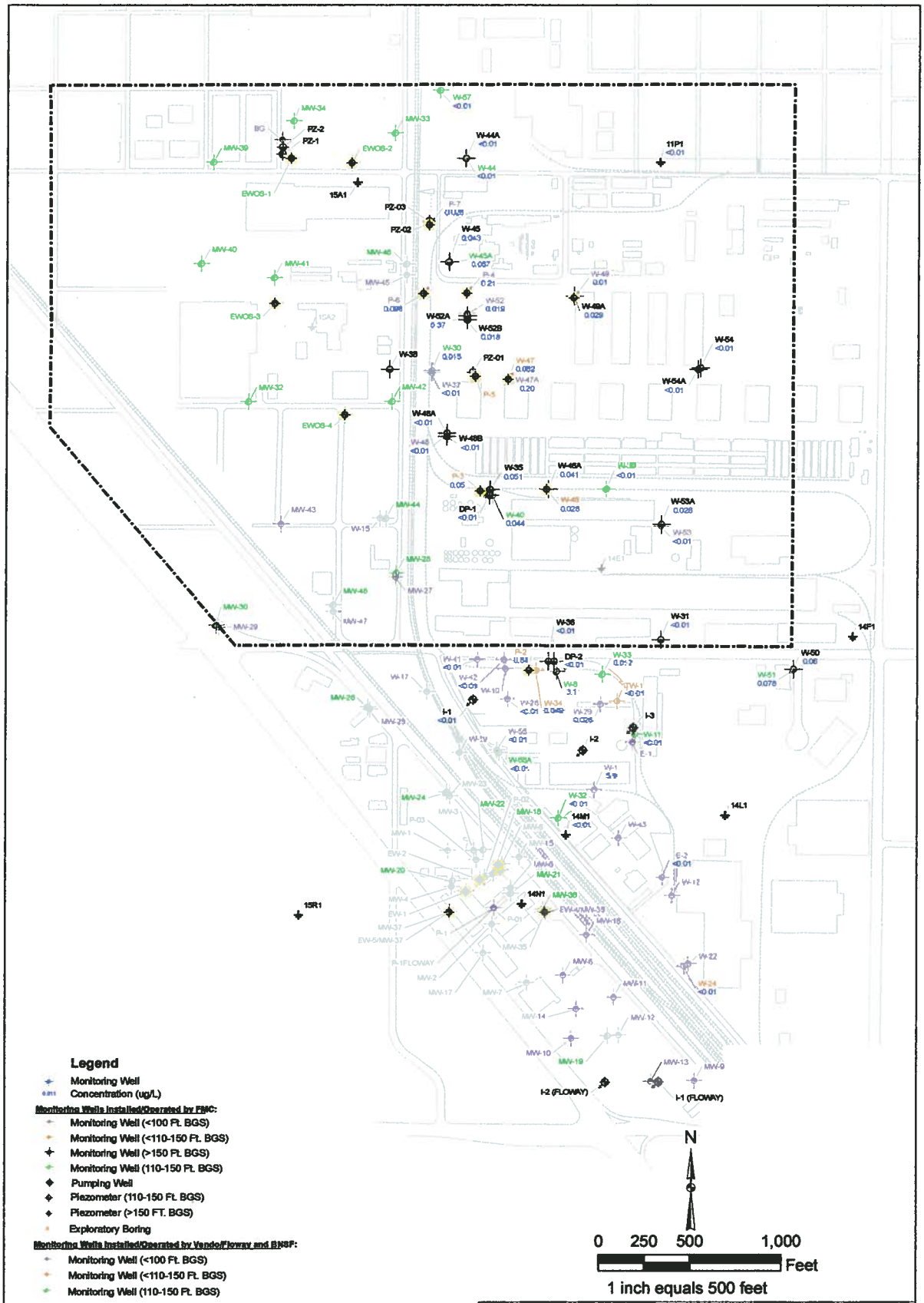

DBCP CONCENTRATION
MARCH 2008

FMC CORPORATION
FRESNO, CALIFORNIA

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	DRAFTED BY	Gregory Moran	6
	FILE	Figure 6.pdf	
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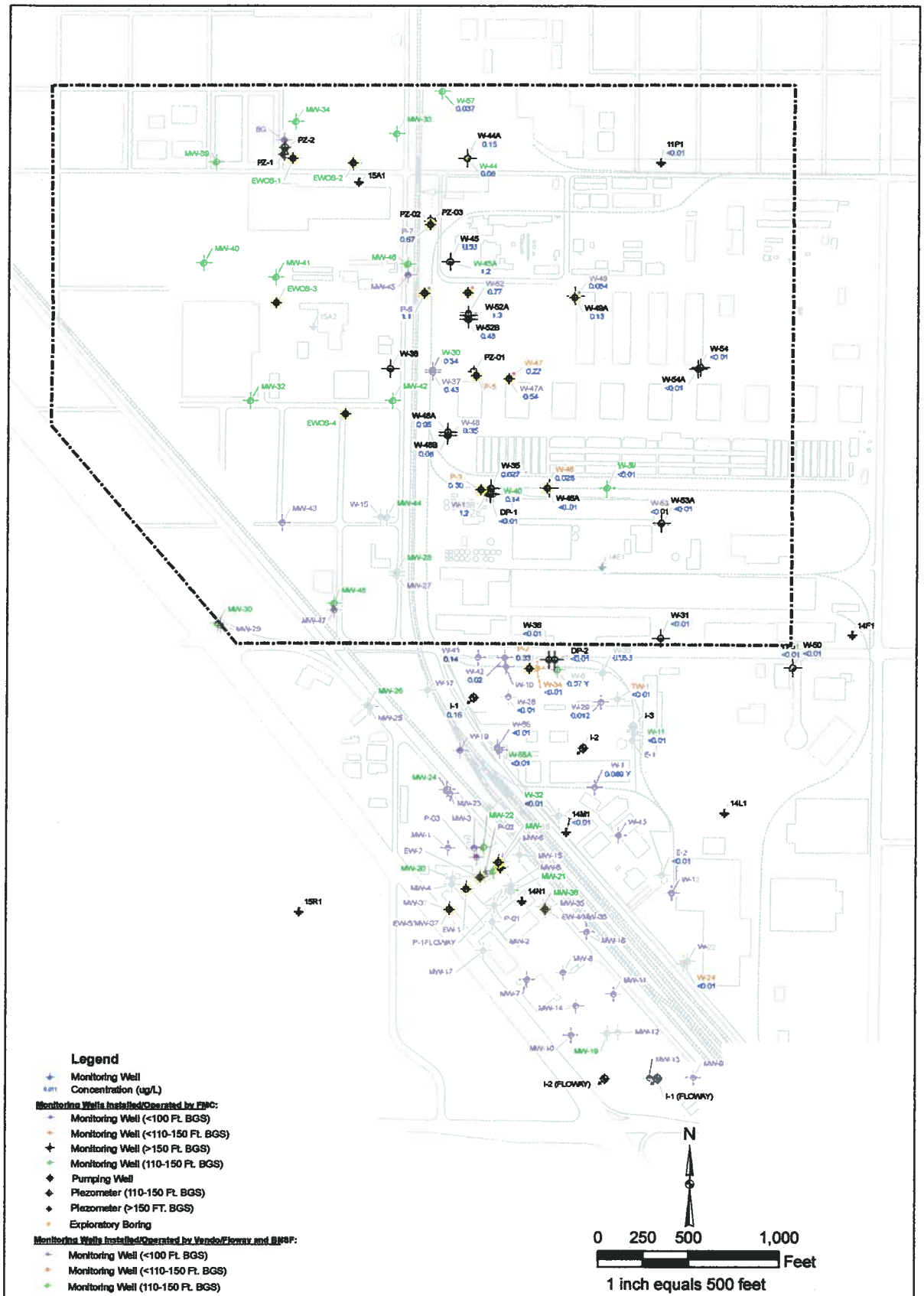

Legend

- Monitoring Well
- 0.011 Concentration (ug/L)

Monitoring Wells Installed/Operated by FMC:

- Monitoring Well (<100 Ft. BGS)
- Monitoring Well (<110-150 Ft. BGS)
- Monitoring Well (>150 Ft. BGS)
- Monitoring Well (110-150 Ft. BGS)
- Pumping Well
- Piezometer (110-150 Ft. BGS)
- Piezometer (>150 FT. BGS)
- Exploratory Boring

Monitoring Wells Installed/Operated by Vendo/Floway and BNSF:

- Monitoring Well (<100 Ft. BGS)
- Monitoring Well (<110-150 Ft. BGS)
- Monitoring Well (110-150 Ft. BGS)
- Pumping Well
- Piezometer (110-150 Ft. BGS)
- Piezometer (>150 FT. BGS)
- Injection Well
- Supply Well
- Destroyed Supply Well

N

0 250 500 1,000 Feet

1 inch equals 500 feet

1,2,3-TRICHLOROPROPANE CONCENTRATION
MARCH 2008

FMC CORPORATION
FRESNO, CALIFORNIA

PARSONS			Figure
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	DRAFTED BY	Gregory Moran	
	FILE	Figure 7.pdf	
	DATE	05/05/08	

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CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY,
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

FMC CORPORATION
FRESNO, CALIFORNIA FACILITY

Fact Sheet August 2000

Public Comment Period
For Draft Removal Action Workplan and Proposed Negative Declaration

Introduction

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) is requesting public comment on the Draft Removal Action Workplan (Draft RAW) dated January 2000, which proposes groundwater extraction, treatment, and reinjection as the interim remedy to address off-site groundwater pesticide contamination associated with the FMC Corporation (FMC) site in Fresno, California. DTSC is also requesting public comment on the California Environmental Quality Act (CEQA) proposed Negative Declaration for the FMC site. This fact sheet includes information concerning the site description and background, site investigations, the remedial action proposed in the Draft RAW, the public comment period, contacts, document repositories, and mailing list inclusion.

Site Description

The FMC Fresno facility is located on a triangular section of land on the south side of Fresno, California, at the corner

PUBLIC COMMENT PERIOD BEGINS

DTSC is accepting public comment on the Draft Removal Action Workplan and the CEQA proposed Negative Declaration. **The public comment period begins 28 August 2000, and ends on 26 September 2000.** Written comments mailed to DTSC must be postmarked by 26 September 2000, and sent to:

Thomas Berg, Project Manager
DTSC, Clovis Office
1515 Tollhouse Road
Clovis, CA 93611

RESPONSE TO COMMENTS

Before finalizing the Draft RAP and making a determination on the proposed Negative Declaration, DTSC will review and respond in writing to submitted comments. Those who submit comments and those who submit a written request will receive a copy of DTSC's Response to Comments. A copy will also be placed in the information repositories.

of East Church and South Sunland Avenues. The site is bounded on the north by East Church Avenue, on the west and south by South Sunland Avenue, and on the east by a railroad spur (Figure 1). The site covers about 17 acres.

The site is primarily occupied by former pesticide formulation buildings, warehouses, and offices. Most of the site area is paved. The area surrounding the site is generally industrial; however there are residential areas to the north and east approximately 0.5 miles from the site.

The Draft RAW addresses groundwater impacted by FMC site-related contaminants found in the off-site area that will be within the range of influence ("capture zone") of extraction well P-3. The off-site area is generally within a region bounded to the south by the northern edge of the FMC property, to the east by Orange Avenue, and to the west by Railroad Avenue, and corresponds with the footprint of the pesticide plume. Although other organic chemicals, nitrates and metals have been detected in the groundwater above cleanup levels established by the United States Environmental Protection Agency (USEPA) and DTSC, the two chemicals detected most frequently and used as indicators to delineate the plume are 1-2 dichloropropane (DCP) and 1,2-dibromo-3-chloropropane (DBCP). The off-site area does not included groundwater underlying the area to the west of Railroad Avenue, which is impacted by chromium and trichloroethylene (TCE) from an off-site source or sources. DTSC has proceeded under separate administrative enforcement order to require investigation and remediation of these conditions. However, chromium and TCE in the capture zone of well P-3 will be remediated under the Draft RAW.

Under the terms of a 1992 Consent Order (No. I&/S 92/93-001) issued by DTSC, FMC is currently remediating groundwater beneath the FMC site by means of an on-site extraction, treatment and re-injection system. This system consists of extraction well P-2 and three injection wells, and is designed to capture on-site groundwater, remove pesticides, and restrict the migration of contaminants off-site, and has been in operation since December 1994.

Site Background

The site was first developed for industrial purposes by the Sunland Sulfur Company in 1931 for sulfur processing. Sunland started formulating fertilizers and dry pesticides in 1946. FMC acquired Sunland and the facility in 1959 and added liquid pesticide formulation operations. Pesticide products were formulated at the Fresno facility by mixing, blending, and packaging ingredients that had been manufactured elsewhere. In the spring of 1992, FMC concluded processing and formulating activities, and now uses the site for office-related work and for maintaining the site facilities. FMC also operates a soil vapor extraction system related to soil remediation that was implemented in 1998, under a DTSC-approved Remedial Action Plan.

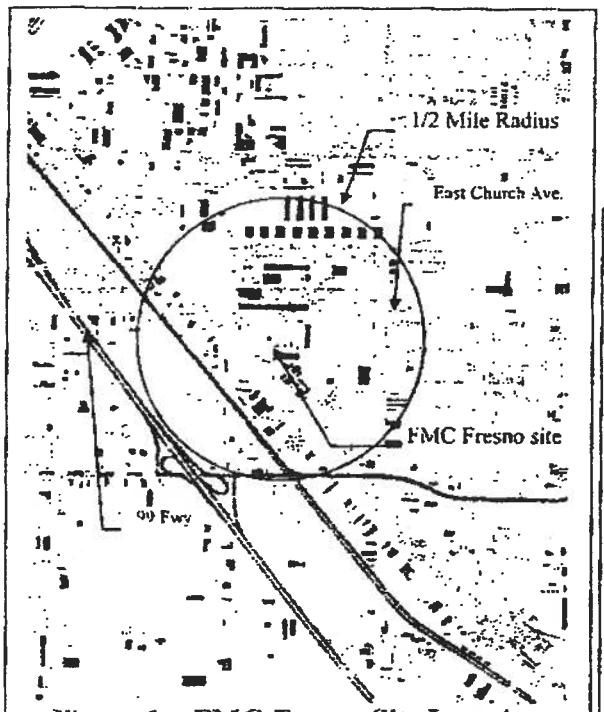


Figure 1 – FMC-Fresno Site Location

Site Investigations

FMC has conducted groundwater investigations since 1979. In response to requests from the Regional Water Quality Control Board (RWQCB), FMC installed monitoring wells and performed initial groundwater investigations in 1979 and 1982. Phase I and Phase II groundwater investigations took place between 1987 and 1989 under an Administrative Order on Consent entered into with the USEPA. This work included installing and sampling 14 on-site and 10 off-site wells, sampling supply wells in the area, and performing aquifer tests. From 1993 to 1994, FMC conducted additional groundwater investigations under the 1992 Consent Order with the DTSC. This work involved installing and sampling additional wells and investigating background groundwater quality. Since 1994, further investigation work has been performed to define the off-site extent of pesticides and to determine groundwater flow conditions.

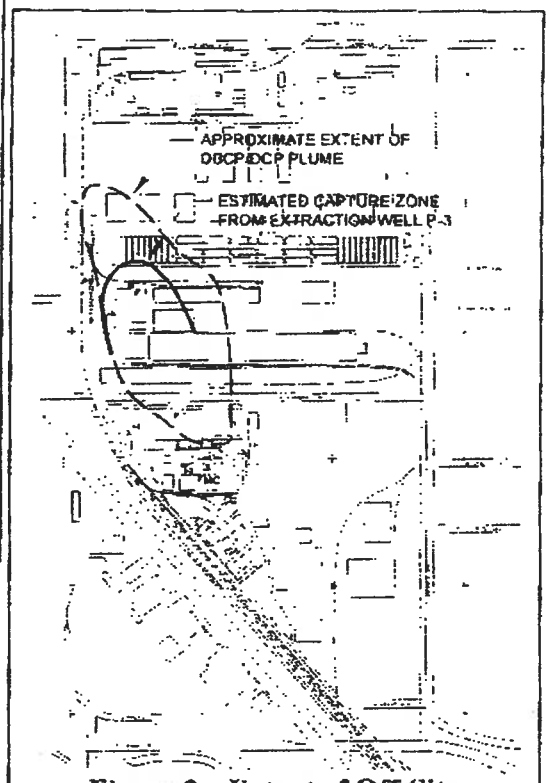


Figure 2 – Extent of Off-Site DBCP/DCP Plume and Estimated Capture Zone

FMC has operated a groundwater pump and treat system since December 1994 to remediate pesticides in groundwater underlying the site and to prevent the migration of pesticides off-site to the north. Groundwater is extracted from a well at the northern property boundary and is treated in an above-ground treatment system using granular activated carbon. Treated water is returned to the aquifer via three injection wells located on-site.

Draft Removal Action Workplan

The Draft RAW is proposed as an interim measure to expedite implementation of groundwater remediation activities in the off-site area. These activities comprise removal of the majority of pesticide contaminants associated with the FMC site in the off-site area to concentrations below cleanup levels and control of migration of these contaminants.

The removal action consists of extracting groundwater from extraction well P-3, located on the Cribari Winery property north of the FMC site. Extracted water will be piped back to the FMC site where it will be treated using the existing granular activated carbon treatment system. As with the on-site groundwater remediation, treated water will be returned to the aquifer using on-site injection wells in accordance with waste discharge requirements if and as established by RWQCB. Figure 2 is a schematic diagram showing the pesticide plume, the capture zone location of extraction well P-3, and the location of existing injection wells.

California Environmental Quality Act

In accordance with CEQA, an Initial Study was prepared to evaluate potential environmental impacts that may result from the implementation of the Draft RAW. DTSC has determined that the Draft RAW is unlikely to produce any significant impacts on the environment, making an Environmental Impact Report unnecessary. Therefore, DTSC has proposed a Negative Declaration for the FMC Fresno site off-site groundwater Draft RAW.

Information Repositories

Copies of the Draft RAW, the CEQA proposed Negative Declaration and other FMC Fresno site related documents are available at the information repositories located at:

Fresno County Central Library
2420 Mariposa Street
Fresno, California 93721
(Government Documents Department)

DTSC, Clovis Office, File Room
1515 Tollhouse Road
Clovis, California 93611
(559) 297-3901

DTSC Contacts

If you have any questions or would like more information, please contact:

Mr. Thomas Berg, Project Manager
DTSC, Clovis Office
1515 Tollhouse Road
Clovis, California 93611
(559) 297-3978

Mr. Randy Sturgeon, Public Participation Specialist
DTSC, Sacramento Office
10151 Croyden Way, Suite 3
Sacramento, California 95827-2106
(916) 255-3649

NOTICE TO
HEARING IMPAIRED INDIVIDUALS

TDD users can obtain additional information by using the California State Relay Services at 1-888-877-5378 to reach Randy Sturgeon at (916) 255-3649.

MAILING LIST

IF YOU DID NOT RECEIVE THIS FACT SHEET IN THE MAIL AND WISH TO BE ON THE FMC FRESNO SITE MAILING LIST, PLEASE COMPLETE THE FOLLOWING COUPON AND RETURN IT TO RANDY STURGEON, PUBLIC PARTICIPATION SPECIALIST, AT 10151 CROYDON WAY, SUITE 3, SACRAMENTO, CA 95827.

DTSC mailing lists are solely for the purpose of keeping persons informed of DTSC activities. Mailing lists are not routinely released to outside parties. However, they are considered public records and, if requested, may be subject to release.

I WOULD LIKE TO BE INCLUDED ON THE FMC FRESNO SITE MAILING LIST.

Name_____
Address_____
City_____**State**_____**Zip**_____

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

FMC-FRESNO SITE
DRAFT REMOVAL ACTION WORKPLAN
AND
PROPOSED NEGATIVE DECLARATION

Public Notice of the Public Comment Period

The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) is requesting public comment on the draft Removal Action Workplan (RAW) submitted by FMC Corporation on 31 January 2000 to address pesticide contamination in off-site groundwater associated with the FMC-Fresno site in Fresno, California. The draft RAW contains plans to extract and treat pesticide-impacted groundwater. DTSC is also requesting public comment on the California Environmental Quality Act (CEQA) proposed Negative Declaration regarding this removal action.

The recommended removal action consists of extracting pesticide-impacted groundwater from an extraction well located north of the FMC site. Extracted water will be conveyed by above-ground and underground piping south to the existing groundwater treatment system operating on the FMC property. Groundwater will be combined with the groundwater currently extracted at the site and treated by granular activated carbon. The treated water will be re-injected into the groundwater aquifer underlying the site pursuant to any waste discharge requirements that may be established by the Regional Water Quality Control Board. A detailed description of the removal action is included in the draft RAW.

Comments will be accepted during the public comment period that begins 28 August 2000 and ends 26 September 2000. Written comments must be postmarked by 26 September 2000 and sent to:

Mr. Thomas Berg
Hazardous Substances Engineering Geologist
FMC-Fresno Site
DTSC, Region 1 District Office
1515 Tollhouse Road
Clovis, CA 93611

The draft RAW and proposed Negative Declaration are available for public review at repositories located at:

Fresno County Central Library
2420 Mariposa Street
Fresno, CA 93721
(Government Documents Department)

DTSC, Region 1 District Office
1515 Tollhouse Road
Clovis, CA 93611
(559) 297-3901

If you have technical questions, please contact Thomas Berg, Hazardous Substances Engineering Geologist, DTSC, Region 1 District Office, 1515 Tollhouse Road, Clovis, CA 93611, (559) 297-3978. If you have questions concerning public involvement, please contact Mr. Randy Sturgeon, Public Participation Specialist, DTSC, Region 1, 10151 Croydon Way, Suite 3, Sacramento, CA 95827, (916) 255-3649.

FA00	FMC CORPORATION	2501 S	SUNLAND	FRESNO	93725	FMC COR	FORMER CONTAMINATED SITE/CLEANUP COMPLET
FA00	FMC CORPORATION	2501 S	SUNLAND	FRESNO	93725	FMC COR	CONTAMINATED SITE - MISC/DTSC LEAD
FA00	FMC CORPORATION	2501 S	SUNLAND	FRESNO	93725	FMC COR	INDUSTRIAL WASTE DISCHARGER
FA00	FMC CORPORATION	2501 S	SUNLAND	FRESNO	93725	FMC COR	UST REMOVAL/CLOSURE W/2 TANKS
FA02	WILBUR-ELLIS COMPANY	2501 S	SUNLAND	FRESNO	93725	WILBUR-I	HAZ MAT DISCLOSURE/CLOSED SITE

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
1

Direction Photo Taken:

Looking east

Description:

FMC is the reported source for extensive groundwater contamination. The site has been identified as the source area for the South Fresno Regional Groundwater Plume operational unit #2 (OU-2).

Photo No.
2

Direction Photo Taken:

Looking southeast

Description:

Stormwater retention basin located near the northwest corner of the site. Berms have been installed so that no runoff leaves the site. Stormwater is piped to the retention basin via a series of pumps and pipelines.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
3

Direction Photo Taken:

Looking east

Description:

Railroad spur on the north end of the site.

Photo No.
4

Direction Photo Taken:

Looking west

Description:

North end of the site along Church Avenue.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
5

Direction Photo Taken:

Looking northeast

Description:

View across the north lot. Pipeline is used to transport stormwater from various locations to the retention basin.

Photo No.
6

Direction Photo Taken:

Looking east

Description:

Railroad spur into the main facility; a former agricultural chemical manufacturing and storage plant.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
7

Direction Photo Taken:

Looking east

Description:

Chemical storage and transport.

Photo No.
8

Direction Photo Taken:

Looking southeast

Description:

Onsite water supply well near Sunland Avenue. Note the hazardous materials warning sign and pad-mounted transformer.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
9

Direction Photo Taken:

Looking south

Description:

View of the west side of the facility along Sunland Avenue. Note the proximity to the BNSF Railroad main line.

Photo No.
10

Direction Photo Taken:

Looking southeast

Description:

Water (chemical?) storage tank near Sunland Avenue. Note the hazardous materials warning sign.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
11

Direction Photo Taken:

Looking east

Description:

Chemical formulation and storage.

Photo No.
12

Direction Photo Taken:

Looking southeast

Description:

A temporary, makeshift berm has been installed around most of the facility to keep stormwater runoff onsite.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** FMC Corporation 2501 S Sunland, Fresno, CA 93725	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
13

Direction Photo Taken:

Looking north

Description:

Multiple groundwater monitoring wells were observed onsite.

Photo No.
14

Direction Photo Taken:

Looking east

Description:

Purgewater storage drums used by technicians performing groundwater monitoring onsite.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: FORMER BNSF ICE HOUSE

EDR ID Number: S105481911 S106483535

Date of Inspection: 3/11/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: Yes (No)

Site Inspector: FRANK GEGUNDE

URS Office: FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

FORMER BNSF / ATSF ICE HOUSE; FORMER CALWA ICE PLANT (OTHERS)
3090 CHURCH AVE
FRESNO, CA 93721
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~4.0 AC

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
NONE - VACANT EXCEPT FOR ADJACENT BNSF RAILROAD TRACKS (EAST) + S.P. (UNION PACIFIC) TRACKS (WEST) - AND A COUPLE OF UTILITY POLES				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the N (S) E W

4. Are the following located on or **adjacent to the subject site**?

Surface water: NO
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

NONE - BNSF TRACKS (EAST) S.P./UP TRACKS WEST

Is equipment washed onsite? NO
Is maintenance conducted onsite? If so, what types? NO
Is fueling conducted onsite? NO

6. **Site Area:**
General site area is (circle) residential commercial light industrial heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North CHURCH AVE; COMMERCIAL + RESIDENTIAL

South UNION PACIFIC RAILROAD TRACKS; RAILROAD AVE.; COMMERCIAL/ LIGHT INDUSTRIAL

East BNSF TRACKS; SUNLAND AVE; FORMER FMC PLANT

West UNION PACIFIC TRACKS; RAILROAD AVE; COMMERCIAL

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of groundwater monitoring wells or remedial activities, abnormal odors, the presence of unnatural fill material or soil grading):

SEE ATTACHED REPORT

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: P.G+E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? No, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U / A	SEE ATTACHED REPORT AND RAP				Y / N	Y / N	
U / A					Y / N	Y / N	
U / A					Y / N	Y / N	

U / A _____ _____ _____ _____ Y / N Y / N _____

10. What is the condition of the tanks as indicated by visual inspection etc.? N/A

11. Have there been any releases? YES

To whom were the releases reported? DTSC

What is status of release investigation? SEE ATTACHED REPORT AND REMEDIAL ACTION PLAN (RAP)

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results? _____

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other:_____

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by:_____

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? _____

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? NO if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
NONE					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or N/A

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? No, Describe NO WATER SUPPLY WELLS 2 GW MONITORING WELLS LOCATED ONSITE (SEE ATTACHED MAPS)

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.?

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	**Yes**	**No**	**Yes**	**No**
Land application discharges	**Yes**	**No**	**Yes**	**No**
Deep well injection	**Yes**	**No**	**Yes**	**No**
Discharge to municipal system	**Yes**	**No**	**Yes**	**No**
Impoundments	**Yes**	**No**	**Yes**	**No**
Septic systems	**Yes**	**No**	**Yes**	**No**

describe as appropriate

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

2 GROUNDWATER MONITORING WELLS - SEE ATTACHMENTS FOR MAPS OF THE SITE

19. **STORMWATER**

Describe how stormwater is managed: INFILTRATION - SHEET RUNOFF TO THE SO.

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? YES - BNSF TRACKS TO THE EAST

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

METALS; TCE; 1,2-DCB

Are there groundwater monitoring wells at this facility? YES

Where are these wells located?

SEE ATTACHED REPORT

Are regulatory agencies involved with monitoring? DTSC

Status of investigation/remediation program? THE SUBMITTED DRAFT RAP PROPOSES IMPLEMENTING INSTITUTIONAL CONTROLS FOR SITE SOILS AND NO FURTHER ACTION FOR GROUNDWATER; THE INSTITUTIONAL CONTROLS WOULD INCLUDE DEED RESTRICTION TO NOTIFY POTENTIAL REDEVELOPERS OF THE SITE AND REQUIRE A RISK MANAGEMENT PLAN

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
SEE ATTACHED REPORT & RAP			Yes No	Yes No
			Yes No	Yes No

24. **USED OIL**

Does this facility generate used oil? No

Describe the types and sources of used oil generated: _____

Are all containers of used oil labeled accordingly? _____

Describe how and where used oil is stored and handled:

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown** N/A

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

RAP - 7/9/2007

GW MONITORING REPORT - 3RD QTR 2009

3090 E Church Ave, Fresno, CA 93721
E Church Ave
S Railroad Ave
Southeast Ave
Golden State Blvd
S Sunland Ave
© 2010 Google
Google

BNSF RAILWAY

MATTHEW P. GRAHAM
Manager Environmental Remediation

BNSF Railway Company

740 East Carnegie Drive
San Bernardino, CA 92408-3571
Telephone: (909) 386-4081
Fax: (909) 386-4087
E-mail: Matt.Graham2@BNSF.com

October 19, 2009
05002393

Thomas E. Berg
Fresno Responsible Party Unit
Northern California-Central Cleanup Operations Branch
Department of Toxic Substances Control
1515 Tollhouse Road
Clovis, CA 93611

Dear Mr. Berg:

Reference is made to ISE Order Docket No. 02-006 covering the site formerly occupied by the BNSF Railway's Calwa Ice House in Fresno, California.

Enclosed for your review is copy of the *Third Quarter 2009 Groundwater Monitoring Report*. This report also covers the gauging and sampling of Wells W-17 and W-19.

If questions arise during your review, please contact me at the above telephone number.

Sincerely,

Matt Graham

Enc.

Cc: Matt Eaton (no att.)
TRC Inc.
21 Technology Drive
Irvine, CA 92618

TRC

21 Technology Drive
Irvine, CA 92618

949.727.9336 PHONE
949.727.7399 FAX

www.TRCsolutions.com

October 14, 2009

Project No. 166002

Mr. Matt Graham
BNSF Railway Company
Manager Environmental Remediation
740 East Carnegie Drive
San Bernardino, California 92408

Ground Water Monitoring Report
Third Quarter 2009
Former Calwa Ice House
Fresno, California

Dear Mr. Graham:

Enclosed are two copies of the Third Quarter 2009 Monitoring Report for the Former Calwa Ice House located in Fresno, California. One copy should be forwarded to Tom Berg at DTSC Clovis office and one copy is for your file.

Two onsite monitoring wells, Wells W-17 and W-19, were purged and sampled on September 9, 2009. Figure 1 is a site plan showing the location of the wells.

Both wells were gauged, purged and sampled as follows. Field data sheets are included in Attachment A:

- **Gauging:** Both wells were gauged using an electric well sounder. Depth to water measurements are summarized in Table 1.

  Note that the groundwater elevations have declined by approximately 15 feet since monitoring began in 2001.

- **Purge:** Approximately three well casing volumes were purged from each well using an electric submersible pump. Approximately 45 gallons of water were pumped from Well W-17 and approximately 30 gallons were pumped from W-19. The water was contained in 55 gallon drums and temporarily stored in a secure area at the BNSF Fresno Railyard. The drums were transported by a licensed waste hauler to a disposal facility.

- **Sampling:** After purging, water samples were collected using a bailer.

The water samples were labeled, logged on a chain-of-custody and shipped via overnight courier to a state-certified laboratory for analysis for dissolved metals, chloride, hexavalent chromium, and volatile organic compounds (VOCs). The laboratory analysis results are summarized in Table 2. The laboratory report is included in Attachment B.

The wells will be re-sampled in December 2009.

If you have any questions, please call.

Sincerely,

Matthew R. Eaton

Matthew R. Eaton, P.G.
Project Manager

Attachments
MRE/sr

cc: Earl James, EKI

TRC

TABLE 1
GROUNDWATER ELEVATION DATA
FORMER CALWA ICE HOUSE
FRESNO, CALIFORNIA

MONITORING WELL ID	TOP OF CASING ELEVATION (feet) [1]	DATE	DEPTH TO GROUNDWATER (feet)	ELEVATION OF GROUNDWATER (feet MSL)
W-17	285.80	9/9/09	90.84	194.96
		6/8/09	88.95	196.85
		3/9/09	88.31	197.49
		12/8/08	89.18	196.62
		9/8/08	89.64	196.16
		6/9/08	87.39	198.41
		3/10/08	86.38	199.42
		12/10/07	86.88	198.92
		9/24/07	86.11	199.69
		6/14/07	84.75	201.05
		3/12/07	82.25	203.55
		12/11/06	83.03	202.77
		9/11/06	83.97	201.83
		6/13/06	81.22	204.58
		3/13/06	82.16	203.64
		12/19/05	82.94	202.86
		9/19/05	81.74	204.06
		6/23/05	79.02	206.78
		3/21/05	77.92	207.88
		12/13/04	79.47	206.33
		9/16/04	80.72	205.08
		6/17/04	79.79	206.01
		3/17/04	76.97	208.83
		12/23/03	78.02	207.78
		9/23/03	79.02	206.78
		6/26/03	78.80	207.00
		3/6/03	74.32	211.48
		12/12/02	76.84	208.96
		9/20/02	78.19	207.61
		6/13/02	74.70	211.10
		12/12/01	74.50	211.30

TABLE 1
GROUNDWATER ELEVATION DATA
FORMER CALWA ICE HOUSE
FRESNO, CALIFORNIA

MONITORING WELL ID	TOP OF CASING ELEVATION (feet) [1]	DATE	DEPTH TO GROUNDWATER (feet)	ELEVATION OF GROUNDWATER (feet MSL)
W-19	285.18	9/9/09	89.30	195.88
		6/8/09	87.53	197.65
		3/9/09	86.93	198.25
		12/8/08	87.64	197.54
		9/8/08	88.09	197.09
		6/9/08	85.93	199.25
		3/10/08	84.92	200.26
		12/10/07	85.30	199.88
		9/24/07	84.48	200.70
		6/14/07	83.15	202.03
		3/12/07	80.79	204.39
		12/11/06	81.49	203.69
		9/11/06	82.40	202.78
		6/13/06	79.69	205.49
		3/13/06	80.59	204.59
		12/19/05	81.34	203.84
		9/19/05	80.16	205.02
		6/23/05	77.61	207.57
		3/21/05	76.58	208.60
		12/13/04	78.09	207.09
		9/16/04	79.14	206.04
		6/17/04	78.23	206.95
		3/17/04	75.69	209.49
		12/23/03	76.69	208.49
		9/23/03	77.56	207.62
		6/26/03	77.59	207.59
		3/6/03	72.94	212.24
		12/12/02	75.60	209.58
		9/20/02	76.95	208.23
		6/13/02	73.41	211.77
		12/12/01	73.26	211.92

ME:(9/25/09)

(1) Top of casing elevations provided by Locus Technologies, Inc.

TABLE 2
LABORATORY ANALYSIS RESULTS
FORMER CALWA ICE HOUSE
FRESNO, CALIFORNIA

WELL	DATE	ANALYSIS RESULTS - MICROGRAMS PER LITER (Ug/L) (1)																									
		Sb	As	Ba	Be	Ca mg/L	Cd	Cl- mg/L	Cr Tot	Cr^{+6}	Co	Cu	K mg/L	Pb	Mg mg/L	Hg	Mo	Ni	Se	Ag	Na mg/L	Tl	V	Zn	TCE (4)	1,2 DCB (4)
W-17	9/9/09	5.5	<2.0	140	<2.0	NT	<2.0	96	11	<10	<2.0	<5.0	NT	<2.0	NT	<0.2	4.3	94	4.6	<2.0	NT	<4.0	21	7.6	2.4	<1.0
	6/8/09	<3.0 (<3.0)	2.19 (2.31)	137 (141)	<1.0 (<1.0)	NT	<1.0 (<1.0)	134 (134)	4.70 (4.85)	<10 (<10)	<1.0 (1.0)	1.45 (1.47)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	113 (124)	3.49 (4.07)	<1.0 (<1.0)	NT	<1.0 (<1.0)	15.6 (15.9)	<10 (<10)	2.03 (2.09)	<1.0 (<1.0)
	3/9/09	<3.0	2.17	122	<1.0	NT	<1.0	59.4	6.53	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	58.3	1.26	<1.0	NT	<1.0	18.8	<10	2.14	<1.0
	12/8/08	<3.0 (<3.0)	2.12 (2.20)	116 (116)	<1.0 (<1.0)	NT	<1.0 (<1.0)	60.6 (61.2)	6.09 (6.35)	<10 (<10)	<1.0 (<1.0)	<1.0 (<1.0)	NT	1.64 (1.87)	NT	<0.2 (<0.2)	<5.0 (<5.0)	57.6 (58.7)	1.26 (1.29)	<1.0 (<1.0)	NT	<1.0 (<1.0)	19.3 (19.4)	<10 (<10)	2.46 (2.45)	<1.0 (<1.0)
	9/8/08	<3.0	1.90	123	<1.0	NT	<1.0	52.5	3.63	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	77.2	<1.0	<1.0	NT	<1.0	19.6	<10	3.25	<1.0
	6/9/08	<3.0	2.16	119	<1.0	NT	<1.0	55.4	3.49	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	136	1.12	<1.0	NT	<1.0	21.5	<10	4.83	<1.0
	3/10/08	<3.0 <3.0	2.77 2.77	121 113	<1.0 <1.0	NT	<1.0 <1.0	103 109	4.47 4.16	<10 <10	<1.0 <1.0	1.18 1.15	NT	<1.0 <1.0	NT	<0.2 <0.2	<5.0 <5.0	57.5 59.8	4.52 4.85	<1.0 <1.0	NT	<1.0 <1.0	17.0 15.2	<10 <10	5.71 5.52	<1.0 <1.0
	12/10/07	<3.0 (<3.0)	5.64 (5.68)	119 (106)	<1.0 (<1.0)	NT	<1.0 (<1.0)	480 (454)	4.84 (4.81)	<10 (<10)	1.11 (<1.0)	2.52 (2.09)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	112 (103)	15.2 (15.3)	<1.0 (<1.0)	NT	<1.0 (<1.0)	18.1 (17.2)	<10 (<10)	6.73 (6.62)	<1.0 (<1.0)
	9/24/07	<3.0 (<3.0)	2.85 (2.97)	122 (126)	<1.0 (<1.0)	NT	<1.0 (<1.0)	166 (202)	6.51 (6.44)	<10 (<10)	7.79 (11.5)	1.2 (1.40)	NT	<1.0 (<1.0)	NT	1.15 (<0.2)	<5.0 (<5.0)	676 (947)	7.84 (9.48)	<1.0 (<1.0)	NT	<1.0 (<1.0)	10.6 (8.58)	<10 (<10)	6.41 (6.53)	<1.0 (<1.0)
	6/14/07	<3.0 (<3.0)	2.07 (2.12)	109 (113)	<1.0 (<1.0)	NT	<1.0 (<1.0)	29.9 (30.5)	5.87 (6.79)	<10 (<10)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	44.9 (59.8)	<1.0 (<1.0)	<1.0 (<1.8)	NT	<1.0 (<1.0)	22.7 (20.6)	<10 (<10)	7.06 (7.13)	<1.0 (<1.0)
	3/12/07	<3.0 <3.0	2.13 2.05	97.3 96.7	<1.0 <1.0	NT	<1.0 <1.0	27.6 27.4	4.60 4.43	<10 <10	<1.0 <1.0	<1.0 <1.0	NT	<1.0 <1.0	NT	<0.2 <0.2	<5.0 <5.0	46.7 49.6	<1.0 <1.0	<1.0 <1.0	NT	<1.0 <1.0	23.6 23.1	<10 <10	7.83 7.91	<1.0 <1.0
	12/11/06	<3.0 (<3.0)	2.39 (2.48)	105 (107)	<1.0 (<1.0)	NT	<1.0 (<1.0)	31.7 (32.4)	4.80 (4.77)	<10 (<10)	<1.0 (<1.0)	1.73 (1.80)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	49.3 (48.8)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	23.8 (24.6)	<10 (<10)	8.47 (8.67)	<1.0 (<1.0)
	9/11/06	<3.0 (<3.0)	2.53 (2.47)	150 (146)	<1.0 (<1.0)	NT	<1.0 (<1.0)	47 (46)	7.02 (7.43)	<10 (<10)	<1.0 (<1.0)	1.13 (1.12)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	5.12 (<5.0)	120 (116)	1.3 (1.2)	<1.0 (<1.0)	NT	<1.0 (<1.0)	15.3 (15.4)	<10 (<10)	5.84 (5.96)	<1.0 (<1.0)
	6/13/06	<3.0	4.93	98.8	<1.0	NT	<1.0	66.1	83.1	<10	14.4	13.5	NT	7.35	NT	<0.2	<5.0	296	<1.0	<1.0	NT	<1.0	9.00	41.4	<1.0	<1.0
	3/13/06	<3.0 (<3.0)	1.54 (1.60)	101 (95.7)	<1.0 (<1.0)	NT	<1.0 (<1.0)	42.2 (44.1)	12.8 (13.4)	<5 (<5)	1.71 (2.57)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	175 (167)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	8.2 (8.61)	<10 (<10)	7.92 (8.28)	<1.0 (<1.0)
	12/19/05	<3.0	4.48	98.4	<1.0	NT	<1.0	3.10	6.57	<2.0	<1.0	5.14	NT	<1.0	NT	<0.2	<5.0	75.1	<1.0	<1.0	NT	<1.0	10.0	10.9	3.16	<1.0
	9/19/05	<3.0	2.14	112	<1.0	NT	<1.0	46.5	13.2	14	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	36.3	<1.0	<1.0	NT	<1.0	21.8	<10	4.02	<1.0
	6/23/05	<3.0 (<3.0)	4.97 (<5.03)	105 (105)	<1.0 (<1.0)	NT	<1.0 (<1.0)	62.6 (59.5)	22.8 (22.4)	24 (26)	<1.0 (<1.0)	3.30 (3.32)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	46.4 (46.2)	<1.0 (<1.0)	<1.0 (>1.0)	NT	<1.0 (<1.0)	8.76 (8.68)	<10.0 (<10.0)	1.05 (1.06)	<1.0 (<1.0)
	3/21/05	<3.0	6.97	82.2	<1.0	NT	<1.0	40.8	20.4	<10	2.46	10.6	NT	15.3	NT	<0.2	<5.0	80.9	<1.0	<1.0	NT	<1.0	9.75	54.8	<1.0	<1.0
	12/13/04	<3.0 (<3.0)	2.43 (2.89)	61.8 (57.8)	<1.0 (<1.0)	NT	<1.0 (<1.0)	38.9 (39.6)	33.7 (<1.0)	<10 (<10)	3.13 (<1.0)	3.72 (3.56)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	5.09 (<5.0)	223 (34.4)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	<1.0 (3.78)	14.2 (<10.0)	<1.0 (<1.0)	<1.0 (1.02)
	9/16/04	<3.0	1.97	107	<1.0	NT	<1.0	49.6	14.5	15	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	61.7	<1.0	<1.0	NT	<1.0	21.8	<10.0	6.45	<1.0
	6/17/04	<3.0 <3.0	1.45 (1.70)	118 (118)	<1.0 (<1.0)	NT	<1.0 (<1.0)	52.8 (52.1)	22.4 (26.7)	27 (26)	<1.0 (<1.0)	2.83 (2.08)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	105 (83.7)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	18.2 (20.0)	24.8 (21.2)	6.85 (7.46)	<1.0 (<1.0)
	3/17/04	<3.0	1.87	122	<1.0	NT	<1.0	60.9	33.5	17	<1.0	2.21	NT	<1.0	NT	<0.2	<5.0	110	<1.0	<1.0	NT	<1.0	15.0	<10	6.52	8.84
	12/23/03	<3.0 (<3.0)	2.89 (2.76)	122 (128)	<1.0 (<1.0)	NT	<1.0 (<1.0)	60.3 (49.7)	51.9 (57.4)	44 (55)	<1.0 (<1.0)	5.03 (4.44)	NT	3.35 (3.19)	NT	<0.2 (<0.2)	<5.0 (<5.0)	126 (93.7)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	15.1 (16.7)	23.6 (19.5)	8.06 (7.35)	<1.0 (<1.0)

TABLE 2
LABORATORY ANALYSIS RESULTS
FORMER CALWA ICE HOUSE
FRESNO, CALIFORNIA

WELL	DATE	ANALYSIS RESULTS - MICROGRAMS PER LITER (Ug/L) (1)																									
		Sb	As	Ba	Be	Ca mg/L	Cd	Cl- mg/L	Cr Tot	Cr^{+6}	Co	Cu	K mg/L	Pb	Mg mg/L	Hg	Mo	Ni	Se	Ag	Na mg/L	Tl	V	Zn	TCE (4)	1,2 DCB (4)
W-17	9/23/03	<3.0	2.19	152	<1.0	NT	<1.0	85.8	73.5	86	<1.0	<1.0	NT	<1.0	NT	<1.0	<5.0	38.6	1.14	<1.0	NT	<1.0	20.5	<10	3.81	<1.0
	6/26/03	<3.0 (<3.0)	2.72 (2.84)	111 (117)	<1.0 (<1.0)	NT	<1.0 (<1.0)	48.6 (49.9)	55.7 (53.2)	56 (54)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<1.0 (<1.0)	<5.0 (<5.0)	127 (130)	<1.0 (<1.08)	<1.0 (<1.0)	NT	<1.0 (<1.0)	18.1 (18.6)	<10 (<10)	4.89 (4.81)	<1.0 (<1.0)
	3/6/03	<3.0	2.71	67.3	<1.0	NT	<1.0	35.7	9.87	15	1.15	25.9	NT	<1.0	NT	<1.0	<5.0	79.2	<1.0	<1.0	NT	<1.0	5.94	34.7	2.72	2.55
	12/12/02	<1.0	4.74	55.3	<1.0	NT	<1.0	33.9	33.40	26	<1.0	2.17	NT	<1.0	NT	<0.2	2.43	24.4	<1.0	<1.0	NT	1.06	16.8	<1.0	2.03	<0.5
	11/4/02	-	-	-	-	-	-	-	39 (3)	31 (3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9/20/02	<1.0	2.02	104	<1.0	NT	<1.0	37.1	65.3	NT (3)	<1.0	1.52	NT	<1.0	NT	<0.2	2.25	26.4	<1.0	<1.0	NT	<1.0	30.9	12.1	11.7	<0.5
	6/13/02	<1.0	3.29	107	<1.0	NT	<1.0	47.0	88.7	80	<1.0	1.13	NT	<1.0	NT	<0.2	4.48	57.4	<1.0	<1.0	NT	<1.0	22.2	10.2	15.9	<0.5
	12/12/01	<1.0	2.57	182	<1.0	40.6	<1.0	40.7	15.8	10	1.85	3.46	3.48	<1.0	8.98	<0.2	4.59	194	<1.0	<1.0	22.6	<1.0	2.12	24.4	8.55	<0.5
	12/12/01 (2)	1.1	1.83	67.9	<1.0	39.0	<1.0	NT	21.2	NT	5.56	4.22	4.16	<1.0	6.47	<0.2	3.61	300	<1.0	<1.0	19.5	<1.0	2.62	4.17	NT	<0.5
W-19	9/9/09	<2.0 (4.1)	<2.0 (<2.0)	130 (150)	<2.0 (<2.0)	NT	<2.0 (<2.0)	68 (71)	19 (23)	<10 (<10)	<2.0 (<2.0)	<5.0 (<5.0)	NT	<2.0 (<2.0)	NT	<0.2 (<0.2)	<4.0 (<4.0)	110 (130)	<2.0 (<2.0)	<2.0 (<2.0)	NT	<4.0 (<4.0)	25 (38)	7.3 (<7.0)	4.0 (3.9)	<1.0 (<1.0)
	6/8/09	<3.0	1.90	140	<1.0	NT	<1.0	87.2	19.8	22	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	122	1.01	<1.0	NT	<1.0	21.5	<10	8.26	<1.0
	3/9/09	<3.0 (<3.0)	1.37 (1.26)	156 (145)	<1.0 (<1.0)	NT	<1.0 (<1.0)	110 (111)	5.36 (5.95)	<10 (<10)	1.53 (1.55)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	555 (550)	1.37 (1.32)	<1.0 (<1.0)	NT	<1.0 (<1.0)	15.2 (14.0)	<10 (<10)	8.81 (8.48)	<1.0 (<1.0)
	12/8/08	<3.0	2.10	174	<1.0	NT	<1.0	96.6	17.1	23	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	144	1.40	<1.0	NT	<1.0	23.3	<10	12.5	<1.0
	9/8/08	<3.0 <3.0	2.10 2.03	161 160	<1.0 <1.0	NT	<1.0 <1.0	122 118	23.0 21.9	23 25	<1.0 <1.0	<1.0 <1.0	NT	<1.0 <1.0	NT	<0.2 <0.2	<5.0 <5.0	134 131	1.42 1.33	<1.0 <1.0	NT	<1.0 <1.0	21.6 22.5	<10 <10	11.0 10.8	<1.0 <1.0
	6/9/08	<3.0 (<3.0)	1.43 (1.27)	169 (169)	<1.0 (<1.0)	NT	<1.0 (<1.0)	118 (123)	4.57 (2.51)	<10 (<10)	5.11 (6.99)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	420 (486)	1.32 (1.13)	<1.0 (<1.0)	NT	<1.0 (<1.0)	16.8 (14.6)	<10 (<10)	12.7 (12.3)	<1.0 (<1.0)
	3/10/08	<3.0	1.76	130	<1.0	NT	<1.0	78.8	11.4	<10	1.48	<1.0	NT	<1.0	NT	<0.2	<5.0	190	1.48	<1.0	NT	<1.0	17.7	<10	9.96	<1.0
	12/10/07	<3.0	1.92	106	<1.0	NT	<1.0	93.8	12.7	12	1.91	<1.0	NT	<1.0	NT	<0.2	<5.0	154	2.22	<1.0	NT	<1.0	16.6	<10	8.6	<1.0
	9/24/07	<3.0	1.9	115	<1.0	NT	<1.0	100	10.6	<10	13.6	<1.0	NT	<1.0	NT	<0.2	5.53	411	3.67	<1.0	NT	<1.0	11.7	<10	13.5	<1.0
	6/14/07	<3.0	1.40	92.4	<1.0	NT	<1.0	65.9	6.89	<10	2.46	<1.0	NT	<1.0	NT	<0.2	<5.0	358	<1.0	<1.0	NT	<1.0	17.0	<10	5.94	<1.0
	3/12/07	<3.0	3.40	98.5		NT	<1.0	55.6	25.4	30	1.08	2.12	NT	<1.0	NT	<0.2	7.48	246	<1.0	<1.0	NT	<1.0	15.8	<10	1.24	<1.0
	12/11/06	<3.0	1.75	117	<1.0	NT	<1.0	64.6	27.4	33	1.16	<1.0	NT	<1.0	NT	<0.2	<5.0	166	<1.0	<1.0	NT	<1.0	21.9	<10	2.34	<1.0
	9/11/06	<3.0	<1.0	142	<1.0	NT	<1.0	110	5.54	<10	4.02	1.0	NT	<1.0	NT	<0.2	7.37	636	1.19	<1.0	NT	<1.0	4.73	<10	1.86	<1.0
	06/13/06	<3.0 (<3.0)	10.3 (4.55)	137 (99.4)	<1.0 (<1.0)	NT	<1.0 (<1.0)	64.0 (46.2)	73.7 (68.3)	18 (25)	11.5 (13.0)	39.6 (11.9)	NT	53 (6.22)	NT	<0.2 (<0.2)	<5.0 (<5.0)	385 (265)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	14.9 (7.85)	168 (32.9)	<1.0 (<1.0)	<1.0 (<1.0)
	3/13/06	<3.0	2.15	106	<1.0	NT	<1.0	59.8	34.8	28	1.12	2.07	NT	<1.0	NT	<0.2	5.24	215	<1.0	<1.0	NT	<1.0	13.0	<10	3.48	<1.0
	12/19/05	<3.0 (<3.0)	2.63 (2.53)	94.6 (94.0)	<1.0 (<1.0)	NT	<1.0 (>1.0)	57.6 (57.3)	39.4 (35.7)	31 (25)	<1.0 (<1.0)	1.56 (1.38)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	187 (192)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	17.4 (16.7)	<10 (<10)	8.11 (8.04)	<1.0 (<1.0)
	9/19/05	<3.0 (<3.0)	1.67 (1.74)	105 (102)	<1.0 (<1.0)	NT	<1.0 (<1.0)	57.2 (58.8)	68.4 (77.2)	76 (66)	<1.0 (<1.0)	2.16 (2.72)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	8.34 (9.31)	212 (226)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	8.89 (7.29)	14.9 (<10)	7.03 (7.08)	<1.0 (<1.0)
	6/23/05	<3.0	2.08	90.7	<1.0	NT	<1.0	43.0	51.8	53	<1.0	3.47	NT	<1.0	NT	<0.2	10.4	266	<1.0	<1.0	NT	<1.0	4.68	<10.0	1.55	<1.0

TABLE 2
LABORATORY ANALYSIS RESULTS
FORMER CALWA ICE HOUSE
FRESNO, CALIFORNIA

WELL	DATE	ANALYSIS RESULTS - MICROGRAMS PER LITER (Ug/L) [1]																									
		Sb	As	Ba	Be	Ca mg/L	Cd	Cl- mg/L	Cr Tot	Cr^{+6}	Co	Cu	K mg/L	Pb	Mg mg/L	Hg	Mo	Ni	Se	Ag	Na mg/L	Tl	V	Zn	TCE [4]	1,2 DCB [4]
W-19	3/17/05	<3.0 (<3.0)	6.15 (6.49)	132 (133)	<1.0 (<1.0)	NT	<1.0 (<1.0)	37.4 (37.6)	253 (234)	<10 (<10)	46.8 (46.9)	30.6 (28.9)	NT	20.0 (19.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	958 (910)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	22.0 (21.8)	87.8 (82.1)	2.50 (2.70)	<1.0 (<1.0)
	12/13/04	<3.0	2.48	61.2	<1.0	NT	<1.0	23.1	33.4	40	3.09	3.73	NT	<1.0	NT	<0.2	<5.0	220	<1.0	<1.0	NT	<1.0	4.39	19.1	2.43	<1.0
	9/16/04	<3.0 (<3.0)	1.57 (1.72)	96.4 (95.3)	<1.0 (<1.0)	NT	<1.0 (<1.0)	49.0 (48.4)	14.1 (13.2)	13 (12)	3.05 (3.19)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	358 (367)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	18.8 (18.8)	<10.0 (<10.0)	13.6 (13.5)	<1.0 (<1.0)
	6/17/04	<3.0	1.63	106	<1.0	NT	<1.0	59.6	33.9	27	<1.0	1.39	NT	<1.0	NT	<0.2	<5.0	23.2	<1.0	<1.0	NT	<1.0	22.2	27.9	9.44	<1.0
	03/17/04	<3.0 (<3.0)	2.06 (2.13)	86.6 (89.1)	<1.0 (<1.0)	NT	<1.0 (<1.0)	43.8 (45.0)	25.4 (34.5)	32 (39)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<0.2 (<0.2)	<5.0 (<5.0)	137 (109)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	27.3 (26.7)	<10 (<10)	3.72 (3.89)	<1.0 (<1.0)
	12/23/03	<3.0	1.83	109	<1.0	NT	<1.0	52.2	22.4	28	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	121	<1.0	<1.0	NT	<1.0	28.6	<10	4.54	<1.0
	09/23/03	<3.0 (<3.0)	2.52 (2.49)	129 (132)	<1.0 (<1.0)	NT	<1.0 (<1.0)	64.6 (64.5)	66.0 (67.4)	78 (70)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<1.0 (<1.0)	<5.0 (<5.0)	41.1 (40.4)	1.19 (1.19)	<1.0 (<1.0)	NT	<1.0 (<1.0)	25.4 (25.2)	<10 (<10)	7.63 (7.28)	<1.0 (<1.0)
	06/26/03	<3.0	<1.0	122	<1.0	NT	<1.0	131	5.82	<0.2	<1.0	<1.0	NT	<1.0	NT	<1.0	9.76	1.06	1.33	<1.0	NT	<1.0	6.48	<10	3.97	<1.0
	03/06/03	<3.0 (<3.0)	1.97 (2.01)	118 (111)	<1.0 (<1.0)	NT	<1.0 (<1.0)	62.6 (62.2)	32.9 (23.6)	37 (26)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	NT	<1.0 (<1.0)	<5.0 (<5.0)	71.9 (94.5)	<1.0 (<1.0)	<1.0 (<1.0)	NT	<1.0 (<1.0)	26.1 (25.2)	<10 (<10)	3.95 (3.60)	<1.0 (<1.0)
	12/12/02	<1.0	2.24	92.9	<1.0	NT	<1.0	54.1	22.1	15	<1.0	<1.0	NT	<1.0	NT	<0.2	2.44	123	<1.0	<1.0	NT	2.45	23.9	5.57	3.18	<0.5
	11/04/02	-	-	-	-	-	-	-	15 [3]	<10 [3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	09/20/02	<1.0	2.03	106	<1.0	NT	<1.0	53	190	NT [3]	3.26	4.14	NT	<1.0	NT	<0.2	3.62	402	<1.0	<1.0	NT	<1.0	33.5	8.25	4.03	<0.5
	06/13/02	<1.0	<1.0	113	<1.0	NT	<1.0	82.4	11.2	<10	9.75	1.34	NT	<1.0	NT	<0.2	4.35	559	<1.0	<1.0	NT	<1.0	7.02	12.3	4.19	<0.5
	12/12/01	<1.0	3.2	111	<1.0	65.7	<1.0	44.0	18.5	23	<1.0	<1.0	7.84	<1.0	29.9	<0.2	3.67	62.3	<1.0	<1.0	26.8	<1.0	24.5	3.35	4.18	<0.5
	12/12/01 [2]	<1.0	3.62	104	<1.0	69.0	<1.0	NT	36.1	NT	<1.0	<1.0	9.15	<1.0	30.9	<0.2	4.12	57.0	<1.0	<1.0	26.3	<1.0	28.5	5.33	NT	<0.5
Equipment Blank	9/9/09	2.9	<2.0	<6	<2.0	NT	<2.0	<0.900	2.2	<10	<2.0	<5.0	NT	<2.0	NT	<0.2	<4.0	<2.0	<2.0	<2.0	NT	<4.0	6.3	<7.0	<1.0 [10]	<1.0 [10]
	6/8/09	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	3/9/09	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [10]	<1.0 [10]
	12/8/08	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [10]	<1.0 [10]
	9/8/08	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	6/9/08	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [9]	<1.0
	3/10/08	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	12/10/07	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [8]	<1.0 [8]
	9/24/07	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	0.275	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	6/14/07	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	6.24	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	16.2	<1.0	<1.0
	3/17/07	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [8]	<1.0 [8]
	12/11/06	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [8]	<1.0 [8]
	9/11/06	<3.0	<1.0	<1.0	<1.0	NT	<1.0	<0.50	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	6/13/06	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	3/13/06	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 [8]	<1.0 [8]

TABLE 2
LABORATORY ANALYSIS RESULTS
FORMER CALWA ICE HOUSE
FRESNO, CALIFORNIA

WELL	DATE	ANALYSIS RESULTS - MICROGRAMS PER LITER (Ug/L) (1)																									
		Sb	As	Ba	Be	Ca mg/L	Cd	Cl- mg/L	Cr Tot	Cr^{+6}	Co	Cu	K mg/L	Pb	Mg mg/L	Hg	Mo	Ni	Se	Ag	Na mg/L	Tl	V	Zn	TCE (4)	1,2 DCB (4)
Equipment Blank	12/19/05	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<2.0	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	9/19/05	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 (7)	<1.0 (7)
	6/23/05	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<1.0	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<40.0 (6)	<40.0 (6)
	3/21/05	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	4.43	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0 (5)	<1.0 (5)
	12/13/04	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	9/16/04	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	6/17/04	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	03/17/04	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	12/23/03	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<1.0	<1.0	<1.0	NT	<1.0	NT	<0.2	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	09/23/03	<3.0	<1.0	<10	<1.0	NT	<1.0	<0.400	<1.0	<10	<1.0	<1.0	NT	<1.0	NT	<1.0	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	06/26/03	<3.0	<1.0	<10	<1.0	NT	<1.0	0.430	<1.0	<0.2	<1.0	<1.0	NT	<1.0	NT	<1.0	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0
	03/06/03	<3.0	<1.0	<10	<1.0	NT	<1.0	0.424	<1.0	<0.2	<1.0	<1.0	NT	<1.0	NT	<1.0	<5.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<10	<1.0	<1.0

ME: (6/25/09)

Note: Results shown in parentheses are for a duplicate sample submitted blind to the analytical laboratory.

NT = Not tested.

(1) Sodium (Na), potassium (K), calcium (Ca), magnesium (Mg), and chloride (Cl-) results reported as milligrams per liter (mg/L).

(2) Field filtered samples.

(3) Samples for Cr+6 were collected on 9/20/02, however the laboratory was not able to to analyze the samples before expiration of the hold time. As a result, the wells were sampled on 11/4/02 and analyzed for Cr+6 and total chrome within the holding time by a State Certified Laboratory.

(4) Trichloroethene (TCE) and 1,2 Dichlorobenzene (1,2 DCB) are the VOCs of concern. Other VOCs were not detected in the 2nd Quarter 2005 samples. Refer to laboratory report for list of compounds and detection limits.

(5) Chloroform was detected in the Equipment Blank at 2.25 micrograms per liter.

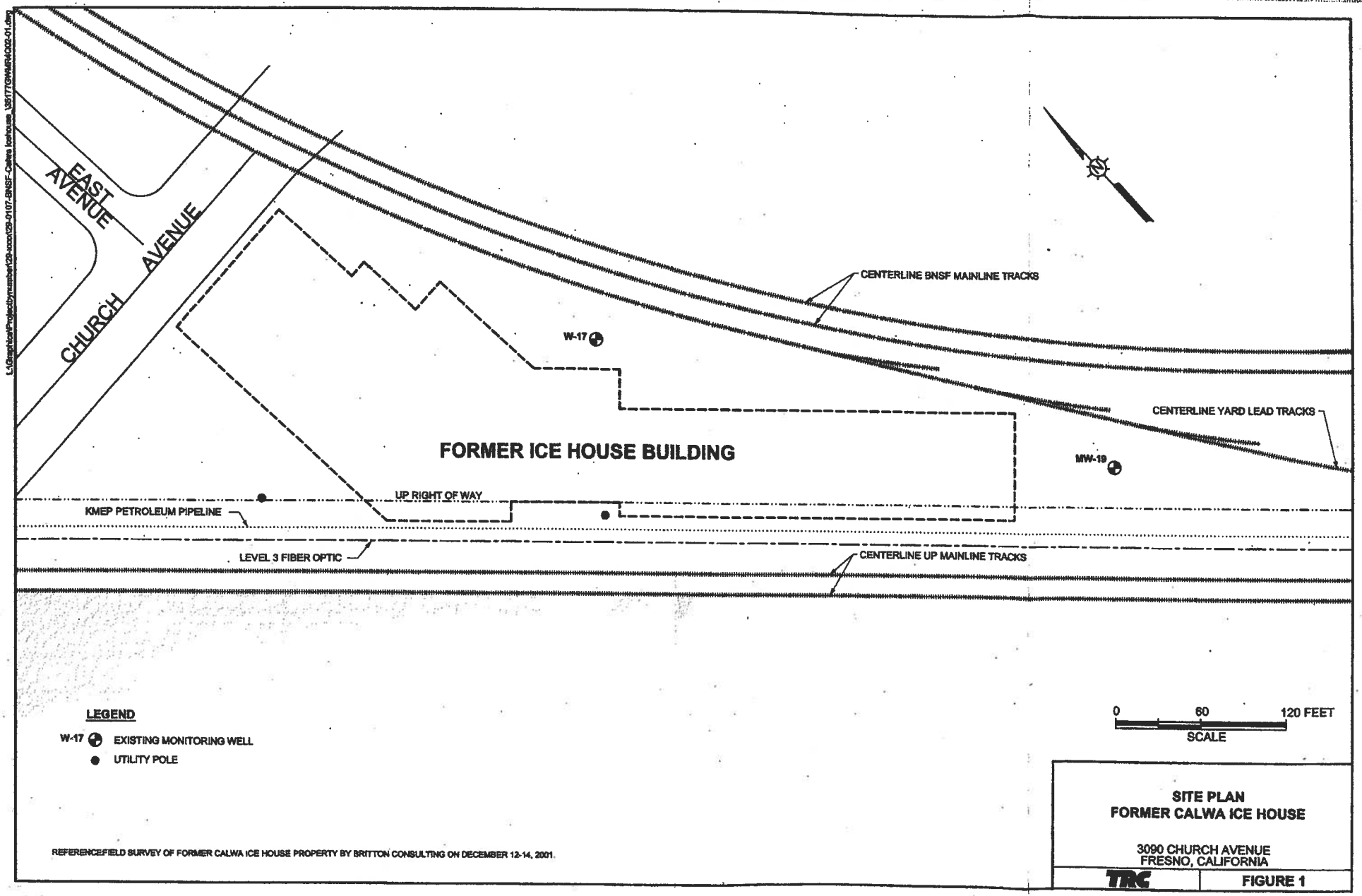
(6) 2-Butanone was detected in the Equipment Blank at 674 ug/L resulting in an increase in the detection limits. See laboratory report.

(7) 1,2-Dichloroethane was detected in the Equipment Blank at 1.47 micrograms per liter.

(8) Chloroform was detected in the Equipment Blank sample.

(9) Bromoform and dibromochloromethane were detected in the Equipment Blank sample at 2.40 and 1.74 micrograms per liter.

(10) Methylene chloride was detected in the Equipment Blank sample.



SITE PLAN
FORMER CALWA ICE HOUSE

3090 CHURCH AVENUE
FRESNO, CALIFORNIA

TRC | FIGURE 1

Linda S. Adams
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July 9, 2007

Mr. Matt Graham
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DRAFT REMEDIAL ACTION PLAN, FORMER CALWA ICE HOUSE PROPERTY, FRESNO, CALIFORNIA

Dear Mr. Graham:

The Department of Toxic Substances Control (DTSC) Fresno Site Mitigation Unit has reviewed the subject Draft Remedial Action Plan (RAP), dated October 11, 2005 prepared by Erler & Kalinowski, Inc. of Burlingame, California. As referenced in the draft RAP the Former Calwa Ice House Property (Site) was originally investigated as a potential contaminant source within the South Fresno Regional Groundwater Plume. DTSC subsequently agreed that the Weir Floway Facility and the FMC Facility would be the parties responsible for cleanup of the South Fresno Regional Groundwater Plume (SFRGP). Since that agreement, the responsible parties for SFRGP Operable Unit 1, located down-gradient of the Site, completed a Draft RAP dated December 2006. The December 2006 Draft RAP will provide down-gradient capture for contaminants of concern present in groundwater beneath the Former Calwa Ice House Site.

The submitted Draft RAP proposes implementing institutional controls for Site soils and no further action for groundwater. The institutional controls would include a deed restriction to notify potential redevelopers of the Site and require a risk management plan. No groundwater remedial actions are proposed for the BNSF Site, which is consistent with the DTSC agreement regarding the SFRGP.

Because of the methods with which the former structures on-site were demolished (leaving large amounts of buried debris), there were problems with collecting a comprehensive number of samples from the property. Additionally, a number of samples were not collected using appropriate methodology. An example of inappropriate sample collection includes groundwater samples that were collected as grab samples using PVC pipe or a Teflon bailer in an open borehole instead of discrete sampling techniques. This limited number of soil samples will not provide a statistically valid number for the purposes of risk assessment; therefore, the sample data reported in the Draft RAP should be used for screening purposes only.

The present data, or lack of data, leaves a "cloud" of uncertainty for impacts at the Site. However, based on the current use and site condition, for the interim the proposed Deed Restriction is an adequate remedy. In the future, more investigation work will need to be conducted prior to any Site development.

The proposed remedy proposed in the Draft RAP is more appropriate for a Remedial Action Workplan (RAW) based on the fact that capital expenses will be less than one million dollars. The format and basic content of the submitted Draft RAP is satisfactory for a RAW Report. Minor changes will be required such as modifying the title pages and the text to reference a Draft RAW and address the comments in this letter. Preparation of a RAW is outlined within DTSC procedures.

The Draft RAW will need to define the scope and include drawings showing the specific area of the proposed deed restriction. The Draft RAW also has to identify the means of enforcing the deed restriction. Additionally, an operations and maintenance plan (O&MP) will be required to continue management of the proposed remedial activities. The O&MP is a component to an overall Operations and Maintenance Agreement between Burlington Northern and Santa Fe Railway Company (BNSF) and DTSC that will be required to certify completion of remedial actions for the Site.

Please submit one copy of the Draft RAW to confirm the document is adequate to compile a California Environmental Quality Act (CEQA) package for the referenced project. After a brief review of the Draft RAW, four copies of the Draft RAW should be submitted to DTSC for review which will include review by DTSC Office of Program Audits and Environmental Analysis. The Draft RAW must be signed by a licensed professional. Additionally, an electronic copy of the Draft RAW needs to be submitted to DTSC in accordance with our policy for electronic submittals. If you should have any questions regarding this letter, please contact Mr. Thomas Berg, Engineering Geologist of the Fresno Responsible Party Unit, Northern California - Central Cleanup Operations Branch at (559) 297-3978.

Sincerely,

Thomas W. Kovac, P.E., Chief
Fresno Responsible Party Unit
Northern California - Central
Cleanup Operations Branch

cc: See next page.

TB:cm
TB02 077

cc: Mr. Matthew Eaton, R.G.
Project Manager
TRC Inc.
21 Technology Drive
Irvine, California 92618

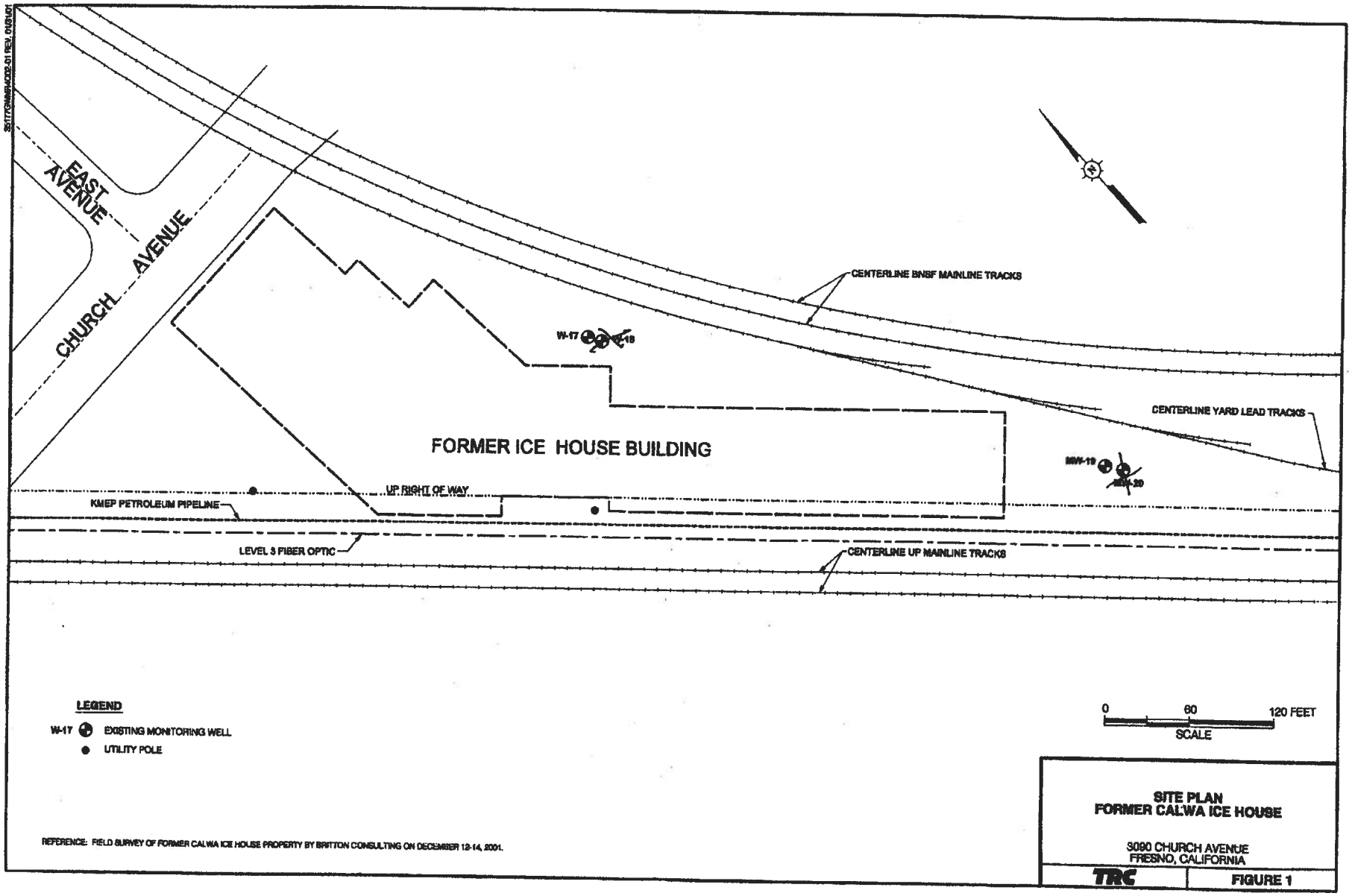
Mr. Nate Lincoln
Vice President, Manufacturing
Weir Floway, Inc.
2494 South Railroad Avenue
PO Box 164
Fresno, California 93707

Mr. John Mackenzie
Facilities and Environmental Manager
The Vendo Company
PO Box 3688
Oakhurst, California 93644

Ms. Marguerite Carpenter
Associate Director, Environment
FMC Corporation
1735 Market Street
Philadelphia, Pennsylvania 19103

Mr. James Tjosvold, P.E., Chief
Northern California - Central
Cleanup Operations Branch
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826-3200

TB:cm
TR02 077


EAST AVENUE
CHURCH AVENUE
CENTERLINE BNSF MAINLINE TRACKS
W-17
W-18
CENTERLINE YARD LEAD TRACKS
FORMER ICE HOUSE BUILDING
MW-19
MW-20
UP RIGHT OF WAY
KMEP PETROLEUM PIPELINE
LEVEL 3 FIBER OPTIC
CENTERLINE UP MAINLINE TRACKS
LEGEND
W-17 EXISTING MONITORING WELL
UTILITY POLE
0
60
120 FEET
SCALE
REFERENCE: FIELD SURVEY OF FORMER CALWA ICE HOUSE PROPERTY BY BRITTON CONSULTING ON DECEMBER 12-14, 2001.
SITE PLAN
FORMER CALWA ICE HOUSE
3090 CHURCH AVENUE
FRESNO, CALIFORNIA
TRC
FIGURE 1

FA02 BURLINGTON NRTHRN/SAI 3090 CHURCH FRESNO 92408 BURLING CONTAMINATED SITE - MISC/DTSC LEAD

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former BNSF Ice House (aka ATSF Ice House; others) 3090 E Church, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
1

Direction Photo Taken:

Looking south

Description:

View of the west side of the vacant site along the Union Pacific tracks.

Photo No.
2

Direction Photo Taken:

Looking east

Description:

View of the north end of the site along Church Avenue. Note the BNSF tracks and crossing.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former BNSF Ice House (aka ATSF Ice House; others) 3090 E Church, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
3

Direction Photo Taken:

Looking south

Description:

View along the east side of the site and the BNSF tracks.

Photo No.
4

Direction Photo Taken:

Looking west

Description:

View of the north side of the site along Church Avenue. Note the Union Pacific tracks and crossing.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former BNSF Ice House (aka ATSF Ice House; others) 3090 E Church, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
5

Direction Photo Taken:

Looking southeast

Description:

Debris near the middle of the site.

Photo No.
6

Direction Photo Taken:

Looking south

Description:

View of the south end of the triangular site. Union Pacific tracks are on the right (west), and BNSF tracks are on the left (east).

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Former BNSF Ice House (aka ATSF Ice House; others) 3090 E Church, Fresno, CA 93721	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
7

Direction Photo Taken:

Looking north

Description:

View of the site from the south end. Union Pacific tracks are on the left.

Photo No.
8

Direction Photo Taken:

Looking east

Description:

One of two groundwater monitoring wells located on the site (middle foreground of the frame). BNSF tracks are in the background.

HST PHASE I ENVIRONMENTAL SITE ASSESSMENT

Name of Site: WEIR FLOWAY INC.

EDR ID Number: S104241813 S104404097

Date of Inspection: 3/11/10

Requires Follow-up Site Visit: Yes (No)

Requires Agency File Review: (Yes) No

Site Inspector: FRANK GEGUMDE

URS Office: FRESNO

Please take digital photographs during the reconnaissance. Please catalog the pictures - a sheet is attached for your use.

1. **Facility name** and address including zip code and county

WEIR FLOWAY, INC (AKA PEABODY FLOWAY AND FLOWAY PUMPS)
2494 S. RAILROAD AVE
FRESNO, CA 93707
County: FRESNO

2. **Site layout**: Prepare or obtain a sketch of site if needed.

Site Acreage: ~ 17 ACRES

Site Buildings:

Name	Number of stories	Dimensions	Square Footage	Year Built
MULTIPLE OFFICE, WAREHOUSE, AND SHOP BUILDINGS				

3. The **general topography** of the site area is:

slightly / (relatively) / very (flat) / rolling / hilly

with surface drainage appearing to flow to the ~~N~~ ~~S~~ ~~E~~ ~~W~~ CENTER OF THE SITE AND ONSITE STORM DRAINS

4. Are the following located on or **adjacent to the subject site**?

Surface water: RETENTION BASIN IN THE SOUTH END OFF THE SITE
Wetlands: NO
Floodplains: NO
Parklands: NO
Sensitive habitats: NO

5. Please list **current visible onsite activities**:

PUMP MFG; FILTRATION MEDIA SALES + STORAGE FOR AG WELLS AND WATER SYSTEMS; PUMP MAINT, SALES, + INSTALLATION

Is equipment washed onsite? YES
Is maintenance conducted onsite? If so, what types? YES; PUMPS, FLEET SERVICES
Is fueling conducted onsite? YES

6. **Site Area:**
General site area is (circle) residential (commercial) (light industrial) heavy industrial rural
other_____

Identify adjacent roadways and properties. Indicate any current surrounding land uses that have the potential to impact the site.

North COMMERCIAL – PROPANE TANK RECYCLER

South JENSEN AVENUE; COMMERCIAL + WAREHOUSES

East RAILROAD AVENUE; UNION PACIFIC R.R., BNSF RAILROAD COMMERCIAL

West GOLDEN STATE BLVD.; COMMERCIAL

7. Observations of potential environmental issues: (stressed vegetation, indications of liquid or solid waste dumping or disposal, discolored flowing or ponded waters, evidence of (groundwater monitoring wells) or (remedial activities), abnormal odors, the presence of unnatural fill material or soil grading):

SOUTHERN ~1/4 OF THE SITE HAS AN IMPERVIOUS CAP AND IS GRADED TO CAPTURE RUNOFF TO THE ONSITE RETENTION BASIN; NUMEROUS MONITORING WELLS OBSERVED ONSITE

8. **Utilities-list all visable utility services (power lines, meters etc)**

Electric Service by: PG&E

Gas Service by: THE GAS COMPANY

Water Service by: CITY OF FRESNO (ONSITE WELL?)

Wastewater Service by: CITY OF FRESNO

Steam by: NONE

9. **Onsite Aboveground and Underground Storage Tanks**; complete the table below. Be sure to include the tank locations on the site sketch!

Are there any ASTs/USTs, active or inactive, present at the site currently? YES, formerly? YES

UST (U) or AST (A)	Tank Size	Contents	Installation Date	Tank Material	Visible Staining	Registration	Active Removed Closed or
U (A)	NUMEROUS ASTS OBSERVED				Y (N)	Y / N	ACTIVE + INACTIVE
(U) A	SEVERAL USTS REMOVED (SEE				Y / N	Y / N	REMOVED
U / A	ATTACHED DOCS FOR DETAILS)				Y / N	Y / N	

U (A) 1 PROPANE AST OBSERVED IN USE (FORKLIFT FUEL) Y/N Y/N ACTIVE
(ALSO WELDING COMPRESSED GAS CYLINDERS)

10. What is the condition of the tanks as indicated by visual inspection etc.? FAIR TO GOOD; SOME ASTs ARE NOT IN USE (S/W CORNER)

11. Have there been any releases? YES (SEE ATTACHED DOCS)

To whom were the releases reported? DTSC - RWQCB

What is status of release investigation? SEE ATTACHED DOCS

12. **ASBESTOS**

Is there known asbestos onsite? **Yes** **No** **Unknown**

Was an asbestos survey conducted and what were the results?

13. **HAZARDOUS CHEMICALS**

Does the site or facility currently store or use hazardous chemicals? **Yes** **No** **Unknown**

Indicate **primary** chemicals, raw materials and petroleum used, generated stored, released,

Chemical	Quantity	Location/Bldg. ID	Condition	Pathways
☆ NEED SITE HAZ MAT BUSINESS PLAN FROM FSO COUNTY				

14. **SOLID WASTE GENERATION**

Does the site or facility currently generate solid wastes? **Yes** **No** **Unknown**

General Plant Trash consists of (Circle): Office Paper; Breakroom Waste; General Packaging; Restroom Wastepaper;

Other: Pump mfg + INDUSTRIAL WASTE (RCRA-LQG)

Accumulated in: compactor? Dumpster? located: N S E W of the building.

Hauled off by: IWS OR CITY OF FRESNO

15. **HAZARDOUS WASTES**

Does the site or facility currently generate hazardous wastes? **Yes** **No** **Unknown**

Where are the wastes disposed? AUSBURY ENVIRONMENTAL

Were any wastes observed that might meet the definition of hazardous waste but have not been tested to be hazardous or are not handled as hazardous? No if so, describe:

16. **PCBs**

Identify the presence of PCB contamination including the presence of potential PCB electrical or other equipment.

Equipment	Owner	Condition	PCB-content	Serial #	Pathways
SEVERAL TRANSFORMERS ONSITE - ALL IN GOOD CONDITION NOTE LARGE PAD-MOUNTED UNITS NEAR N/W CORNER OF THE SITE, SOUTH OF THE PUMP SHOP					

17. **DRINKING WATER**

What is source of drinking water at the site? CITY OF FRESNO

What is source of process water for the site? n/a or UNKNOWN

What is the source of drinking water for surrounding properties? CITY OF FRESNO

Are there any wells known to exist at the site? YES, Describe WATER SUPPLY WELL LOCATED WEST OF THE OFFICE (SEE ATTACHED MAP)

If wells are used for drinking water at the site, obtain water quality data N/A

Describe any onsite surface water resources: none or NONE

18. **WASTEWATER**

Does the site or facility currently generate wastewater? **Yes** **No** **Unknown**

Describe the type and volume of wastewater that is generated (sanitary, non-contact, process, etc.)

Is any wastewater treatment conducted (e.g. pH adjustment, equalization, grease trap, DAF, etc.? UNKNOWN

if so, describe:

Where is wastewater discharged:			Does a Permit Exist?	
Surface water discharges	Yes	No	Yes	No
Land application discharges	Yes	No	Yes	No
Deep well injection	Yes	No	Yes	No
Discharge to municipal system	Yes	No	Yes	No
Impoundments	Yes	No	Yes	No
Septic systems	Yes	No	Yes	No

describe as appropriate RETENTION BASIN AT THE SOUTH END OF THE SITE

Any evidence of groundwater wells, cisterns, or septic tanks? if so describe:

YES ; SEE ATTACHED MAP + PHOTOS

19. **STORMWATER**

Describe how stormwater is managed: RUNOFF IS CONTAINED ONSITE ; RETENTION BASIN

Does the stormwater flow to a combined sewer? NO

Does water run-off from neighboring facilities and have potential to impact this facility? NO

20. **WETLANDS**

Any known/delineated wetlands at the site? NO, Indicate size, location (indicate on sketch), and description.

21. **AIR EMISSIONS**

Does the site or facility currently generate Air Emissions? **Yes** **No** **Unknown**

Describe each piece of fuel burning equipment at the facility (e.g. manufacturer, heat input capacity, HP, installation date, etc.)

22. **GROUNDWATER**

Is there known groundwater contamination at this facility? YES

If yes, list the contaminants:

HEXAVALENT CHROMIUM ; TCE (SEE ATTACHED DOCS)

Are there groundwater monitoring wells at this facility? YES

Where are these wells located?

SEE ATTACHED DOCS

Are regulatory agencies involved with monitoring? DTSC

Status of investigation/remediation program? SEE ATTACHED DOCS

23. **SPILLS**

Has this site or facility had spills or leaks of hazardous wastes, PCBs, hazardous substances, or chemicals used at the facility? **Yes** **No** **Unknown**

Complete the following information for spills which have occurred:

Date	*Substance Spilled*	*Spill Location*	*Cleaned Up*	*Reported*
SEE ATTACHED DOCS			**Yes** **No**	**Yes** **No**
			Yes **No**	**Yes** **No**

24. **USED OIL**

Does this facility generate used oil? YES

Describe the types and sources of used oil generated: UNKNOWN

Are all containers of used oil labeled accordingly? UNKNOWN

Describe how and where used oil is stored and handled:

UNKNOWN

25. **OTHER**

Are any pesticides or herbicides stored or used onsite? **Yes** **No** **Unknown**

Are lead acid batteries stored or used onsite? **Yes** **No** **Unknown**

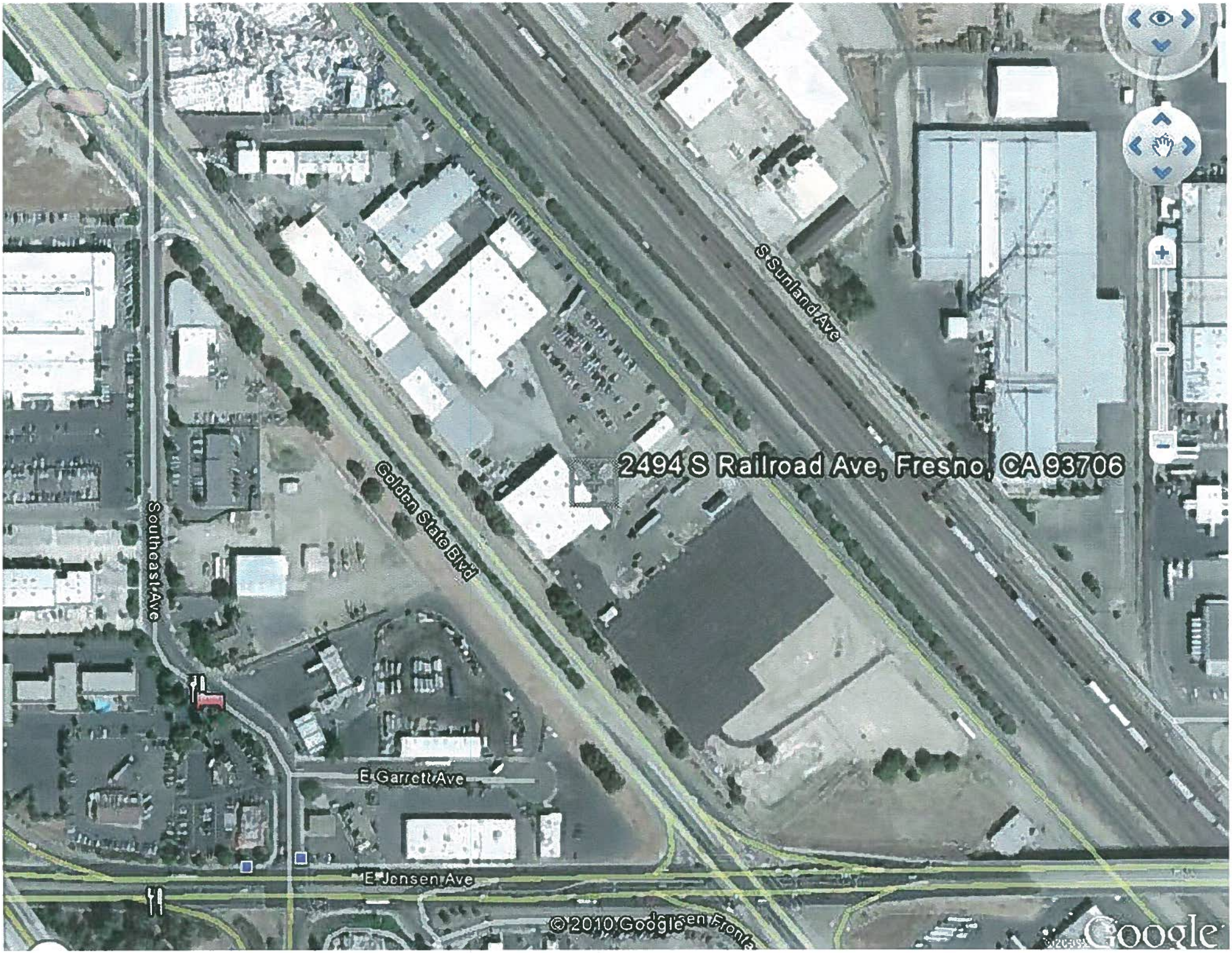
Is there ozone depleting substances (e.g., freons) containing equipment at the facility? **Yes** **No** **Unknown**

Is it maintained by onsite personnel? **Yes** **No** **Unknown**

Are fork lift trucks or any other hydraulic equipment maintained onsite? **Yes** **No** **Unknown**

Are there any hydraulic lifts onsite? **Yes** **No** **Unknown**

BASED ON DETAILS VISIBLE FROM THE PUBLIC ROWS; SEE ATTACHED DOCS FOR DETAILS ON SITE CONTAMINATION; NEED TO ACQUIRE A HAZ MAT BUSINESS PLAN FOR MORE DETAILS ON MATERIALS USED AND STORED AT THE SITE


2494 S Railroad Ave, Fresno, CA 93706
S Sunland Ave
Golden State Blvd
Southeast Ave
E Garrett Ave
E Jensen Ave
© 2010 Google
Google

Weir Floway
2494 s Railroad Avenue
Fresno, Ca 93707

Regulatory Profile

CLEANUP STATUS
OPEN - REMEDIATION AS OF 1/1/1995

POTENTIAL CONTAMINANTS OF CONCERN
CHROMIUM, OTHER PETROLEUM, STODDARD SOLVENT / MINERAL SPRIITS / DISTILLATES, TRICHLOROETHYLENE (TCE)

POTENTIAL MEDIA AFFECTED
AQUIFER USED FOR DRINKING WATER SUPPLY

FILE LOCATION
REGIONAL BOARD

DTSC is lead on this Site and more information can be found on Envirostor Site by using ID#10340137

The Site presently consists of four parcel numbers 12, 13, 18, 19 and has been the location of a succession of pump manufacturing operations since the 1930's. From 1939 to 1964, a portion of the site was leased to the Vendorlator Manufacturing Company. Information available suggests that chrome plating by Vendorlator may have begun between 1945 and 1950, and that use of trichloroethyle (TCE) as a solvent degreaser may have begun some time later. During preparations by Weir Floway, Inc. in March 1991 to erect a metal building on an existing foundation, a 300-gallon underground storage tank was discovered which prompted an investigation to determine the extent of petroleum wastes associated with past releases from the tank. It was determined that soil underlying parcels 12 and 13 had been impacted with petroleum waste constituents from various past operations on the parcels. It was also determined that hexavalent chromium and TCE are present in groundwater underlying and downgradient of parcel 18. In 1993, soil-related activities on parcel 18 included the removal of concrete storage vaults and the drilling of soil borings. Minimal historical information has been provided by the Vendo Company about specific waste disposal practices at the Site. The area surrounding the Site is generally devoted to industrial, residential and agricultural-related land uses. Groundwater in the vicinity of the Site is used as a drinking water source, and is also used for industrial and agricultural purposes. Continued investigation work on the Site focus on treatment of soil and groundwater impacted with TCE and hexavalent chrome.

April 20, 2009

Project 9662.006

Mr. Thomas W. Kovac, P.E.
State of California
Department of Toxic Substances Control
Region 1
1515 Tollhouse Road
Clovis, California 93612

Subject: Groundwater Extraction Systems Report
Second Semi-Annual 2008
Railroad Avenue Site and Operable Unit 1
Fresno, California

Dear Mr. Kovac:

Dear Mr. Kovac:
AMEC Geomatrix Inc., (AMEC) has prepared this Semi-Annual Groundwater Extraction Systems Report on behalf of Weir Floway Inc. (Floway) and The Vendo Company (Vendo). This report summarizes operation and monitoring results for the Railroad Avenue Groundwater Extraction System (Railroad Avenue System), located at 2494 Railroad Avenue in Fresno, California and the Operable Unit 1 (OU1) Systems. The OU1 Systems are comprised of the California Avenue Groundwater Extraction System (California Avenue System) and the Florence Avenue Groundwater Extraction System (Florence Avenue System), located at 2020 East Avenue and 2851 E. Florence Avenue, respectively, within OU1 of the South Fresno Regional Groundwater Plume in Fresno, California.

Groundwater extraction system operation, monitoring, and sampling activities at the Railroad Avenue Site are conducted in accordance with Imminent and Substantial Endangerment Determination and Remedial Action Order, Docket No. I&SE 99/00-001 (Railroad Avenue Site Order)[1]. Groundwater extraction system operation, monitoring, and sampling activities at OU1 are conducted in accordance with Imminent or Substantial Endangerment Determination and Consent Order, South Fresno Regional Groundwater Plume, Docket No. HAS-CO 02/03-069 (Regional Order)[2].

This report provides a brief discussion of system background, the semi-annual operational performance, the semi-annual monitoring activities, and a summary of the mass of trichloroethene (TCE) and total dissolved chromium removed.

---

1 DTSC, 1999. Imminent or Substantial Endangerment and Determination and Consent Order, Railroad Avenue Site, Docket No. I&SE 99-00-001, Fresno, California, October 1999.

2 DTSC, 2002. Imminent or Substantial Endangerment and Determination and Consent Order, South Fresno Regional Groundwater Plume, Docket No. HAS-CO 02/03-069, Fresno, California, November 2002.

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Rancho Cordova, California
USA 95670-6032
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Fax (916) 636-3208
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AMEC Geomatrix

BACKGROUND

The Railroad Avenue System began operation in August 1995. Originally, the Railroad Avenue System extracted and treated (via ion exchange and granular activated carbon) groundwater from extraction wells EW-1, EW-2, and EW-3 prior to discharging to injection wells I-1 and I-2. Groundwater was discharged under Waste Discharge Requirements (WDR) Order No. 95-192 issued by the California Regional Water Quality Control Board (RWQCB) Central Valley Region.

On December 18, 2001 the Railroad Avenue System was modified to allow extraction wells EW-1, EW-2 and EW-3 to discharge to the City of Fresno Publicly Owned Treatment Works (POTW) as an alternative to injection. EW-1, EW-2, and EW-3 began discharging to the POTW on December 20, 2001. In April 2004 monitoring wells MW-35 and MW-37 were converted to extraction wells EW-4 and EW-5, respectively. These wells were configured to discharge only to the POTW. Since groundwater is no longer re-injected into the underlying aquifer, the RWQCB rescinded WDR Order No. 95-192 on January 27, 2005

Modifications to the Railroad Avenue system were completed in September 2005 to replace aging equipment and reduce operation and maintenance expenses. Extraction system modifications included installation of new pumps and flow control and monitoring devices for extraction wells EW-1, EW-2, and EW-3.

Additionally, a monitoring well (MW-38) was converted to an extraction well (EW-6) as a contingency to the existing extraction wells. The new extraction well was plumbed into the existing conveyance piping for extraction well EW-1, EW-2, and EW-3 and discharges to the sewer at the same sewer connection point. EW-6 was originally utilized during times of seasonal low water levels, but is currently operated continuously.

Extraction wells EW-1, EW-2, and EW-3 did not operate during the first part of January due to low groundwater levels. These three extraction wells were decommissioned on January 28 and 29, 2008 and the extraction pumps were removed from the wells. EW-1, EW-2, and EW-3 are currently being used as monitoring wells.

Extraction well EW-7 was installed to replace EW-1 through EW-3 as part of the Railroad Avenue System. Groundwater from EW-7 is discharged to the sanitary sewer through the same sewer connection as EW-5. Operation of EW-7 began on January 30, 2008.

The California Avenue and Florence Avenue systems (OU1 Systems) were installed as pilot-scale systems. The California Avenue Pilot Scale System (EWOS-1 and EWOS-2) began operation on June 9, 2003 and the Florence Avenue Pilot Scale System (EWOS-3 and EWOS-4) began operation on November 20, 2004. The OU1 Systems are connected to the City of Fresno sewer system, which discharges water to the Publicly Owned Treatment Works (POTW).

The Railroad Avenue System and OU1 Systems discharge extracted groundwater to the sewer under Fresno-Clovis Regional Wastewater Discharge Permit number FIV-94705.

SYSTEM OPERATION

The semi-annual reporting period is defined by the dates totalizer readings were recorded. The 2008 Second Semi-Annual period was between July 1, 2008 and January 5, 2009, which is approximately 188 days. Extraction wells EW-4, EW-5, EW-6, and EW-7 operated for approximately 108, 138, 177, and 177 days, respectively during this reporting period. EW-4 experienced downtime due to motorized valve maintenance, and ball valve replacement. EW-4 and EW-5 experienced downtime due to electrical problems and low groundwater levels. EW-6 and EW-7 experienced downtime due to low groundwater levels during December, 2008.

The OU1 extraction wells EWOS-1, EWOS-2, EWOS-3, and EWOS-4 operated for approximately 187, 183, 175, and 142 days respectively, during this reporting period. All extraction wells experienced downtime due to routine maintenance. EWOS-2, EWOS-3, and EWOS-4 experienced additional downtime due to electrical problems. A summary of the groundwater extraction system downtime is provided in Table 1.

Railroad Avenue System extraction wells EW-4, EW-5, EW-6, and EW-7 discharged to the POTW at average operational flow rates of approximately 9.6, 9.8, 28, and 16 gallons per minute (gpm), respectively. The Railroad Avenue System extracted an approximate total of 14,806,238 gallons of groundwater during the Second Semi-Annual 2008 reporting period. A summary of extracted groundwater volumes and efficiencies for the Railroad Avenue system is presented in Table 2.

The OU1 extraction wells EWOS-1, EWOS-2, EWOS-3, and EWOS-4 discharged to the POTW at average operational flow rates of approximately 37, 32, 37, and 39 gpm, respectively. The OU1 Systems extracted an approximate total 36,129,500 gallons of groundwater during the Second Semi-Annual 2008 reporting period. A summary of extracted groundwater volumes and efficiencies for the OU1 Systems is presented in Table 3.

SYSTEM MONITORING

During the Second Semi-Annual 2008 reporting period, two groundwater samples were collected from extraction wells EW-4 through EW-7 and analyzed for total chromium, dissolved chromium, and volatile organic compounds (VOCs) analysis. Two groundwater samples were collected from extraction wells EWOS-1 through EWOS-4 and analyzed for pesticides, nitrate, VOCs, total chromium, and dissolved chromium. All samples were analyzed by APPL Labs, Inc. in Fresno, California. Laboratory analytical results for these extraction wells are presented in Table 4. The laboratory analytical reports, data validation memorandums, and the chain-of-custody forms are provided in Appendix A. The data validation memo indicates that the data for groundwater samples from these extraction wells are acceptable and useful for the purposes of reporting.

Field parameters, including pH, conductivity, dissolved oxygen, oxidation reduction potential, turbidity, and temperature, were also collected from each extraction well. A summary of the field parameters collected during the sampling events is presented in Table 5. Copies of field records documenting the sampling activities are provided in Appendix B.

MASS REMOVAL CALCULATIONS

During the reporting period, a total of 1.76 pounds of chromium and 0.26 pounds of TCE were removed by the Railroad Avenue System. Contaminant mass removal calculations for the Railroad Avenue System are presented in Table 6. Note that no calculated mass of chromium was removed from EW-5 or EW-7 because chromium was not detected in the quarterly samples.

During this reporting period, a total of 29.44 pounds of dissolved chromium and 2.35 pounds of TCE were removed by the OU1 systems. Contaminant mass removal calculations for the OU1 systems are presented in Table 7.

CONCLUSION

The analytical results from the reporting period were consistent with the results from previous reports. The results also indicated that all discharged groundwater concentrations were below local discharge limits. These discharge limits, set forth by the City of Fresno Wastewater Management Division, are presented in Table 8.

If you have any questions regarding this report, or the project in general, please contact either of the undersigned at (916) 636-3200.

Sincerely yours,
AMEC Geomatrix, Inc.

Eileen D. McFadden
Project Engineer
Direct Tel.: 916-853-8913
E-mail: eileen.mcfadden@amec.com

Scott W. Forbess, P.E.
Senior Engineer
Direct Tel.: 916-853-8907
E-mail: scott.forbess@amec.com

LIST OF TABLES

Table 1 – Extraction System Down Time

Table 2 – Extracted Groundwater Volumes and Efficiencies – Railroad Avenue System

Table 3 – Extracted Groundwater Volumes and Efficiencies – OU1 Systems

Table 4 – Summary of Results

Table 5 – Field Parameters

Table 6 – Mass Removal Calculations – Railroad Avenue System

Table 7 – Mass Removal Calculations – OU1 System

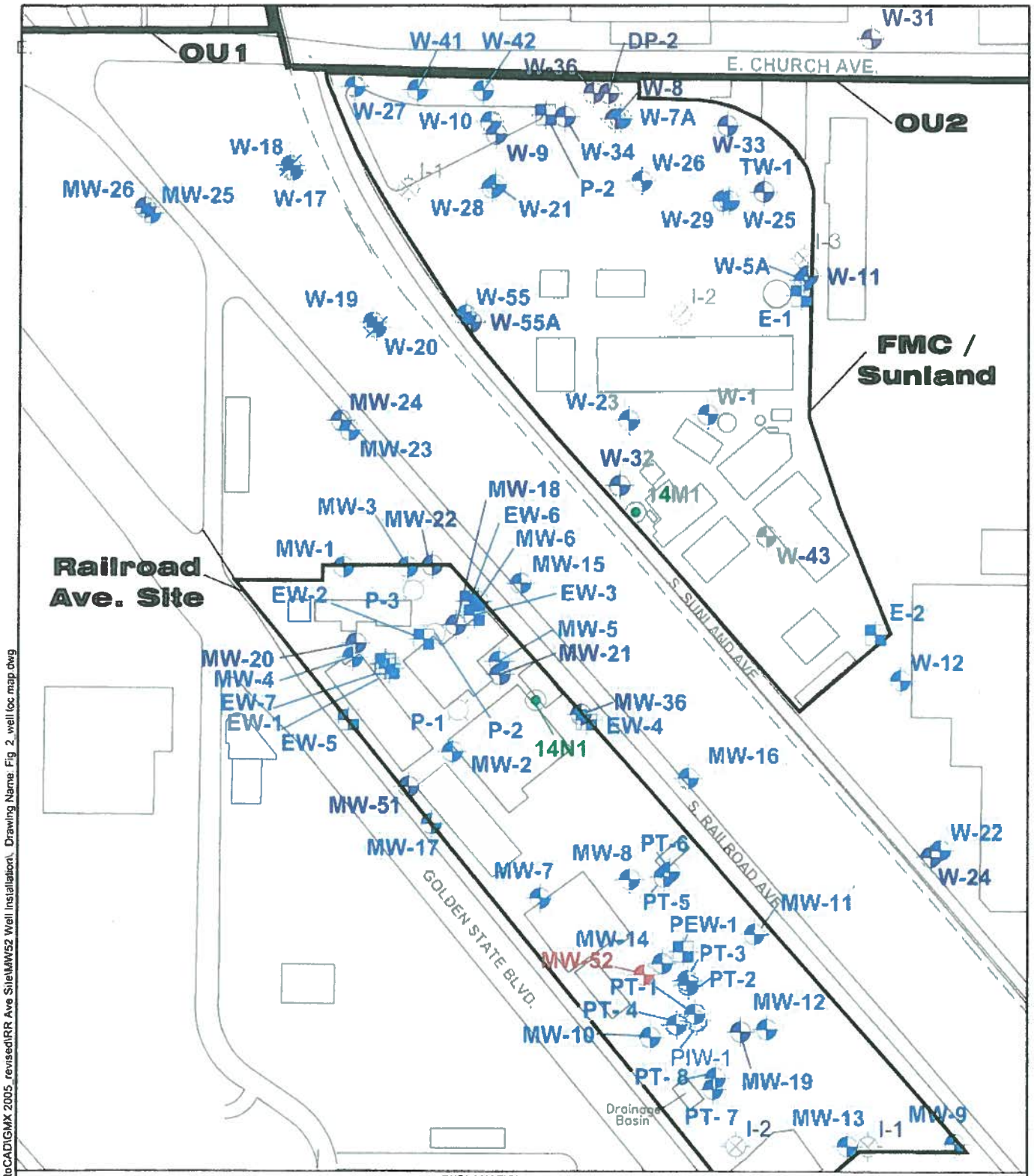
Table 8 – City of Fresno Wastewater Discharge Limits

LIST OF APPENDICES

Appendix A - Laboratory Results, Data Validation Memos, and Chain-of-Custody Forms

Appendix B - Railroad Avenue and OU1 Extraction Systems Field Records

cc: Nate Lincoln, Weir Floway, Inc.
John Mackenzie, The Vendo Company
Tom Berg, DTSC (with CD enclosure)
Shawn Tollin, FMC
Robert Hanford, City of Fresno Wastewater Management Division
Fresno County Public Library – Central Branch, Government Documents Division (with CD enclosure)



APPROXIMATE SCALE IN FEET
0 150 300

-N-

EXPLANATION

- Upper Zone Well Screened from 0 to 110 Feet BGS
- Upper Zone Well Screened from 110 to 150 Feet BGS
- Lower Zone Well Screened Deeper than 150 Feet BGS
- Monitoring Well
- Abandoned Monitoring Well
- Extraction Well
- New Groundwater Extraction Well
- Injection Well
- Piezometer
- Water Supply Well
- Operable Unit Boundary

Geomatrix

WELL LOCATION MAP
Monitoring Well Installation Work Plan
Railroad Avenue Site
Fresno, California

Figure By	Project No.
DPV	9662.005
Map No.	Figure
Date 06/09/08	2

Plot Date: 06/09/08 - 11:31am, Plotted by: dvalasek
Drawing Path: I:\Project\9000s\Floway\AutoCAD\GMX 2005_revised\RR Ave Site\MW52 Well Installation\, Drawing Name: Fig 2_well loc map.dwg

FA00 WEIR FLOWAY	2494 S	RAILROAD	FRESNO	93706	WEIR FLO	MEDIUM HAZARDOUS MATERIALS HANDLER
FA00 WEIR FLOWAY	2494 S	RAILROAD	FRESNO	93706	WEIR FLO	FORMER CONTAMINATED SITE/CLEANUP COMPLET
FA00 WEIR FLOWAY	2494 S	RAILROAD	FRESNO	93706	WEIR FLO	CONTAMINATED SITE - MISC/DTSC LEAD
FA00 WEIR FLOWAY	2494 S	RAILROAD	FRESNO	93706	WEIR FLO	HAZARDOUS WASTE GENERATOR (LQG)
FA00 WEIR FLOWAY	2494 S	RAILROAD	FRESNO	93706	WEIR FLO	UST REMOVAL/CLOSURE W/3 TANKS

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Weir Floway Inc. (formerly Vendo) 2494 S Railroad, Fresno, CA 93707	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No. **1**

Direction Photo Taken:

Looking south

Description:

Weir Floway is the reported source for extensive groundwater contamination. The site has been identified as the source area for the South Fresno Regional Groundwater Plume operational unit #1 (OU-1). The site is between Golden State Boulevard and Railroad Avenue.

Photo No. **2**

Direction Photo Taken:

Looking west

Description:

Storage yard for Floway pumps manufacturing, sales and service at the north end of the site.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Weir Floway Inc. (formerly Vendo) 2494 S Railroad, Fresno, CA 93707	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
3

Direction Photo Taken:

Looking east

Description:

Chemical and mineral staining in the Floway pumps shop area on the west side of the site.

Photo No.
4

Direction Photo Taken:

Looking north

Description:

Weir Minerals division located in the middle of the site. Access is from Railroad Avenue.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Weir Floway Inc. (formerly Vendo) 2494 S Railroad, Fresno, CA 93707	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
5

Direction Photo Taken:

Looking southeast

Description:

Chemical totes and mineral bins located near the middle of the site along Golden State Boulevard.

Photo No.
6

Direction Photo Taken:

Looking northwest

Description:

Pumps and materials storage in the middle of the site along Railroad Avenue.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Weir Floway Inc. (formerly Vendo) 2494 S Railroad, Fresno, CA 93707	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
7

Direction Photo Taken:

Looking east

Description:

Stormwater retention basin located in the southwest corner of the site.

Photo No.
8

Direction Photo Taken:

Looking east

Description:

View of the remediation site: groundwater extraction and monitoring well field located at the south end of the site. The location is covered with asphalt to inhibit stormwater infiltration. View is from Golden State Boulevard.

PHOTOGRAPHIC LOG

California High Speed Train	**Fresno to Bakersfield Baseline Conditions Report** Weir Floway Inc. (formerly Vendo) 2494 S Railroad, Fresno, CA 93707	**URS Project No.** 27560811.53090100 **Date:** 3-11-10

Photo No.
9

Direction Photo Taken:

Looking east

Description:

Another view of the groundwater extraction and monitoring field located at the south end of the site.

Photo No.
10

Direction Photo Taken:

Looking northwest

Description:

View from the southeast corner of the site along Railroad Avenue. Uncovered area of the site with multiple groundwater monitoring wells.