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Environmental Health

CLOSURE REPORT

FOR

Western Forge & Flange Co. - Albany

540 Cleveland Avenue
Albany, CA

May 2009

Prepared By Chemical Data Management Systems

CLOSURE REPORT

Prepared for:

Western Forge & Flange Co. - Albany

To be submitted to:

Alameda County Department of Environmental Health

This Closure Report is being submitted under the following conditions:

- Facility Decommissioning to be verified by aboveground sampling
- Subsurface investigations, cleanup, and sampling to be assessed by the Alameda County Department of Environmental Health Site mitigation/Local Oversight Program
- Facility closure activities meet the requirements set by the Alameda County Department of Environmental Health as described in the approved closure plan

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VIII References

- A Brown and Caldwell Report. 1984.
- B Fred Hoffman Geological Evaluation. 2008.

I. FACILITY DESCRIPTION

A. SITE INFORMATION

Business Name:	Western Forge & Flange Co. - Albany
Site Address:	540 Cleveland Ave
City, State, Zip:	Albany, CA 94706
County:	Alameda

Mailing Address

Company:	Western Forge & Flange Co.
Contact Name:	Walter Pierce
Title:	President
Street:	687 County Rd. 2201
City, State, Zip:	Cleveland, TX 77327
Telephone Number:	(281) 727-7001

Property Owner

Company:	Western Forge & Flange Co.
Contact Name:	Walter Pierce
Title:	President
Street:	687 County Rd. 2201
City, State, Zip:	Cleveland, TX 77327
Contact:	Walter Pierce
Telephone:	(281) 727-7001

B. SITE USE AND HISTORY

Business Activity Description:

Albany Western Forge & Flange manufactures flanges and forgings made from a variety of different materials including: titanium, aluminum, high nickel alloys, stainless steel, and alloy steels. Raw material stock is cut and then heated in furnaces. The flanges are then forged (hammered or pressed) into shape. The part is machined, if requested by the customer. Approximately 60% of all projects are machined. Flanges are then inspected and shipped to customers.

Date Business Started: 1944

Facility Description:

Square Footage:	25,000 (approximate)
Buildings:	1 Building
Hazardous Materials Area(s):	Production Area

Containment Area Description:

All hazardous material are in portable secondary container units.

Adjacent Properties:

North:	Albany Steel
South:	Grace Bakery
East:	Freeway I-80
West:	Railroad tracks

C. BUILDING LAYOUT

Refer to the facility drawing in Figure 1(Section III).

D. GEOLOGIC SETTING

The site is underlain by a low permeability clay saturated above a dry dense clay above a poorly cemented sand. The clay contains a thin perched ground water zone between 6 to 12 feet below the ground surface, which rose to within a foot below ground surface during the 2008-2009 wet season.

II. CLOSURE PROCEDURES-ABOVEGROUND

Western Forge and Flange relocated its manufacturing operation to their Texas facility during the course of one year (2007-2008). During this process, equipment and chemicals used at this facility were gradually moved to the Texas facility. All chemicals were shipped using hazardous material transporters. The equipment; the forges and hammers, were decommissioned at the Albany site and shipped to the Texas site. All the equipment and chemicals that were relocated to Texas were put into service at that location. Once the Texas facility was operational, the decision was made to close the Albany, California facility.

This section describes the procedures used to achieve closure. Closure activities were only implemented in the areas where hazardous materials were used and/or stored. All equipment and floor surfaces were decontaminated by triple rinsing with hot pressurized water. The wash water was then collected using industrial grade vacuums and transferred into a sealed 6500 gallon Baker tank. The wash water was then profiled and hauled off-site by a licensed waste hauler to an approved hazardous waste treatment site.

A. Production Area

Facility closure procedures in this area included the following:

1. All hazardous materials and equipment were removed and transported to the Texas facility by licensed hazardous material haulers during the operation of the Albany facility and prior to the facility closure.

2. Floors in this area were swept using a ride-on sweeper to eliminate the release of contaminated dust to the air during pressure washing. Sweepings were placed into 55-gallon drums and hauled off-site as Non-RCRA Hazardous Waste by a licensed waste hauler.

3. Floors in this area were triple rinsed with hot pressurized water. Wash water was collected using industrial grade vacuums and transferred into a sealed 6500 gallon Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site

4. All wash water was contained using absorbent socks and temporary berms during the cleaning process to prevent releases

5. Loose soil and gravel in all the pits was removed using a backhoe and placed into 40 yd bins and hauled off-site as Non-RCRA Hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site The pits were the result of equipment removal (presses and hammers) anchored below the floor surface.

6. The pit housing the hydraulic ring roller was triple rinsed with hot pressurized water. The wash water was collected using industrial grade vacuums and transferred to a 6500 gallon Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

7. The oil/water separator tank was triple rinsed with hot pressurized water. The wash water was collected using industrial grade vacuums and transferred to a 6500 gallon Baker tank and hauled off-site as Non-RCRA Hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

8. All piping containing oil previously connected to the oil/water separator has been removed and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

B. Rafters, Control Panels, and Structural Elements

Facility closure procedures in this area included the following:

1. All loose residues that accumulated on the rafters and structural elements during the facilities operation were collected and removed using industrial grade vacuums and transferred and sealed into 55-gallon drums. The drums were then hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

2. All rafters and structural elements were scraped with stainless steel spatulas and wire brushes following the removal of the loose residue to further remove any contamination. The dust and debris that resulted from this action was collected using industrial grade vacuums and transferred and sealed into 55-gallon drums. The drums were then hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

3. Following actions 1 and 2 described above, the rafters and structural elements were triple rinsed using hot pressurized water. The wash water was collected using industrial grade vacuums and transferred into a sealed 6500 gallon Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

4. All wash water was contained using absorbent socks and temporary berms during the cleaning process to prevent releases.

C. Welding/Shipping Area

This area of the Facility closure procedures included the following:

1. All hazardous materials and equipment was removed and transported to the Texas facility by licensed hazardous material haulers during the operation of the Albany facility and prior to the facility closure.
2. Floors in this area were swept using a ride-on sweeper to eliminate the release of contaminated dust to the air during pressure washing. Sweepings were placed into 55-gallon drums and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler.
3. Floors in this area were triple rinsed with hot pressurized water in an attempt to remove hazardous materials and residues. Wash water was collected by industrial vacuums and placed in a sealed Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
4. All wash water was contained using absorbent socks and temporary berms during the cleaning process to prevent releases from the cleanup area.

III. SAMPLING AND ANALYSIS

During the facility closure, Chemical Data Management Systems (CDMS) on behalf of Western Forge and Flange Co. conducted several sampling events.

Sample locations were established jointly by a representative of Alameda County Environmental Health Department (ACDEH) and CDMS, and at additional locations selected by CDMS based upon surface staining and the locations of other operations. Four-inch holes were sawn through the 6 – 9 inches of concrete, and the samples were collected using a hydropunch rig. Core tubes were lined with clear liners and were advanced three feet at a time. At water sampling locations, slotted PVC well screens were inserted into the borehole, and water samples were taken with a bailer. Cement grout was tremied through the well screens to seal the holes upon completion. Figure 1.

The additional samples collected by CDMS, which were not approved by the County are identified as sample locations W101, W103, W107, W108, SB103, SB106, SB107, SB108, and SB110. These were collected to provide an additional source of data to evaluate potential contamination at suspect areas.

Parameters for the analysis of all samples were selected under the direction of Sukla De and Susan Hugo, representatives for ACDEH. ACDEH has adopted the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESL) for soil and groundwater, and the Department of Energy's clean-up standards for all wipe samples.

ESLs for soil and groundwater are included in Table 1A. These ESLs are representative of areas considered a potential source of drinking water. Additional ESLs from the Regional Water Quality Control Board are found in Table 1B. The ESLs in Table 1B were referenced as an additional source for clean-up levels. Clean-up levels for wipe sampling is included in Table 1C.

Table 1A. SFRWQCB ESLs for TPH and Metals for areas considered a potential source of drinking water

	TPH	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
Soil (mg/kg)	410	410	410	410	410
Groundwater (ug/L)	210 ppb	5 ug/l	50 ug/l	100 ug/l	15 ug/l

Table 1B. ESLs for Gross Contamination (RWQCB)

	TPH	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
Soil (mg/kg)	2500	2500	2500	2500	2500
Groundwater (ug/L)	1,000	5	50,000	50,000	50,000

Table 1C. DOE Clean-up standards for wipe sampling.

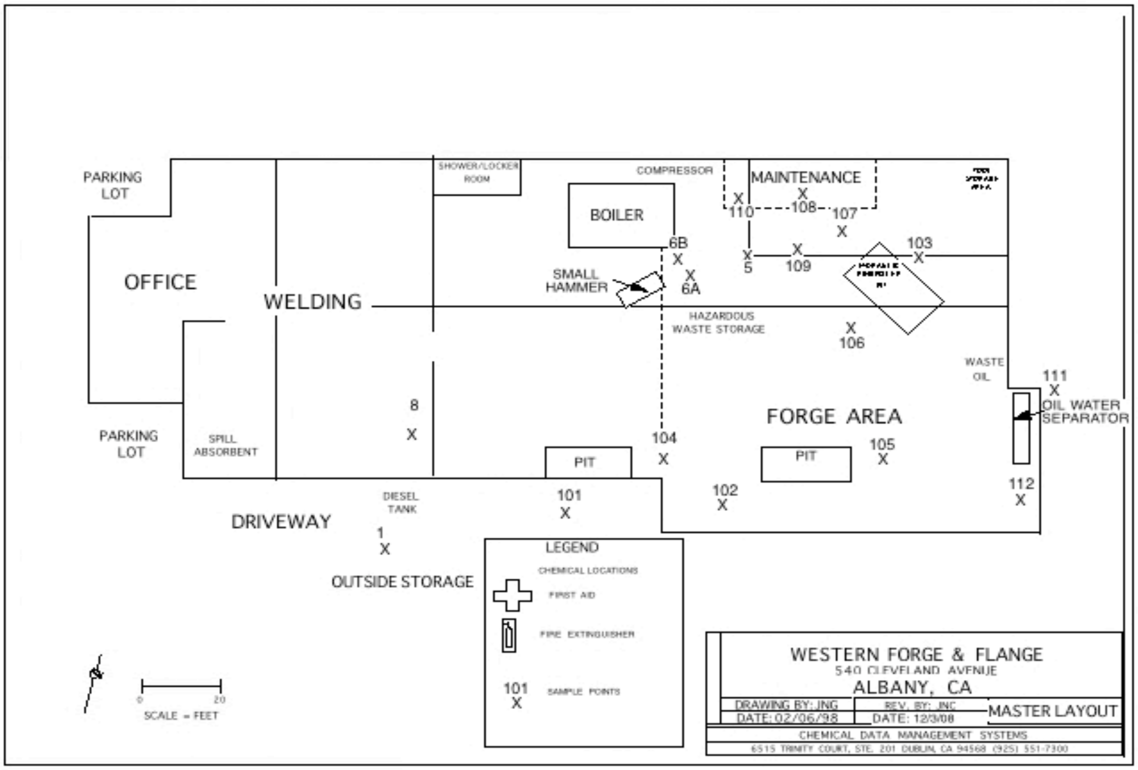
	Cd ($ug/100cm^2$)	**Cr ($ug/100cm^2$)**	**Ni ($ug/100cm^2$)**	**Pb ($ug/100cm^2$)**	**Zn ($ug/100cm^2$)**	**O&G (mg/100cm)**
Wipes	0.2	3.3	10	4.3	Unestablished	Unestablished

Three types of sampling occurred during the facility closure; wipe, soil, and groundwater sampling. All sampling was limited to the production area and the dirt area behind the oil/water separator in the rear of the building.

Tables for all the sample results are summarized below in each subsection as they occurred. Values found in bold in the tables below represent values that have exceeded the ESLs or Clean-up Levels for the sampling locations of each event. (Figure 1). Note that the Total Petroleum Hydrocarbon (TPH) analysis found in the following tables include TPH Diesel (TPH (D)), TPH Motor Oil (TPH(MO)), and TPH Carbon Ranges C19 – C36 (TPH (TPH (CR)) respectively.

The following subsections will chronicle the sampling events as they occurred. Refer to Figure 1 for a description of all sampling locations.

Figure 1. Locations of Subsurface Sampling Events for Soil and Groundwater



A. Sampling Event, October 3, 2008

On October 3, 2008 the first round of soil and groundwater sampling occurred in the production area, wielding area and in the area immediately behind the oil/water separator on the outside of the building. This sampling event includes sampling locations initially proposed by the ACDEH. Oversight was provided by ACDEH.

Due to the number of samples required for both soil and groundwater samples, this event was extended to other sampling events as described in the following subsections.

The ESLs from Table 1C were used during the analysis of the results for Sampling Event October 3, 2008. Table 2A includes the results from the soil samples collected during the October 3, 2008 sampling event. Results for this sampling event indicated that sampling locations #5-6”-12”, #5-3’, and #6B exceeded the ESLs for TPH. Additional subsurface investigations and remediation occurred in these locations and is discussed in detail in Section IV.

Groundwater sampling results for this sampling event are included in Table 2B. These results exceeded the ESLs for cadmium, chromium, nickel, lead, and zinc, and are pending further evaluation by ACDEH Site Mitigation/Local Oversight Program.

Table 2A. Sampling Event October 3, 2008. Soil Sampling

Sample ID	Depth (ft.)	TPH (mg/kg)	Cd (mg/kg)	Cr (mg/kg)	Ni (mg/kg)	Pb (mg/kg)	Zn (mg/kg)
#5-6”-12”	6”-12”	**6500**	ND	51	140	30	73
#5-3’	3’ 10”	**4900**	ND	16	20	81	110
#6A-2.5’-3’	2.5’-3’	ND	ND	54	67	110	140
#6A-3’-4’	3’-4’	ND	ND	14	8.3	7.1	16
#6B 1’10”-2’4”	1’10”-2’4”	**3700**	ND	52	83	7.9	81
#6B 3’-3.5”-3’ 9.5”	3.5”-3’9”	780	ND	15	9.2	56	76
#8-1’-1.5”	1’-1.5”	880	ND	18	14	180	130
#8-3’-4”	3’-4”	1500	ND	73	180	140	90
#9-9”-15”	9”-15”	ND	ND	15	14	23	56
#9-3’-3’10”	3’-3’10”	ND	ND	20	24	15	29

*Values in bold print represent those that exceed the ESL as determined by ACDEH

Table 2B. Sampling Event October 3, 2008. Groundwater Sampling

Sample ID	Depth (ft.)	TPH (mg/L)	Cd (mg/L)	Cr (mg/L)	Ni (mg/L)	Pb (mg/L)	Zn (mg/L)
1-6	1’-6”	ND	**0.019**	**1.1**	**5.8**	**1.1**	**1.9**

*Values in bold print represent those that exceed the ESL as determined by ACDEH

B. Wipe Sampling Event October 3, 2008

As part of the closure requirements, the ceiling rafters, electrical boxes and structural elements were decontaminated by the methods described in Section II B. Verification wipe samples were taken in the production area, specifically on the electrical boxes, rafters and structural elements. These samples served to verify the removal of hazardous particulates (materials) on those structures. Results from Wipe Sampling Event October 3, 2008 are included in Table 3.

Results from all samples collected during this sampling event exceeded the clean-up levels for chromium, nickel, and lead which prompted further decontamination efforts of the ceiling and structural elements.

Table 3. Results from Wipe Sampling Event October 3, 2008

Sample ID	Cd (mg/wipe)	Cr (mg/wipe)	Ni (mg/wipe)	Pb (mg/wipe)	Zn (mg/wipe)
#1 Hoist A	ND	**0.29**	**1.6**	**0.22**	0.64
#2 Electrical Box A	ND	**0.46**	**7.6**	**0.054**	1
#3 Ring Roller A	ND	**0.39**	**2.3**	**0.28**	0.48

*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

C. Wipe Sampling Event October 28, 2008

Following the completion of a second round of decontamination, verification wipe samples were collected on October 28, 2008 without oversight from ACDEH. Results from Sampling Event October 28, 2008 indicate elevated levels of chromium, nickel and lead at those sample locations and are included in Table 4.

The findings from Sampling Event October 28, 2008 prompted further decontamination efforts on the rafters and adjacent structural elements.

Table 4. Results from Wipe Sampling October 28, 2008.

Sample ID	Cd (mg/wipe)	Cr (mg/wipe)	Ni (mg/wipe)	Pb (mg/wipe)	Zn (mg/wipe)
Electrical Box A	0.0052	**0.16**	**2.2**	**0.052**	5.2
Hoist A	ND	**0.36**	**2.3**	**0.51**	1.8
Ring Roller A	ND	**0.29**	**3.0**	**0.27**	0.6

*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

D. Sampling Event November 14, 2008

This sampling event is a continuation of the subsurface sampling events that occurred on October 3, 2008. The sample locations identified below are the initial sampling locations proposed by ACDEH. Oversight was provided by ACDEH during this sampling event

Table 5A includes the results from the soil samples collected during Sampling Event November 14, 2008. No soil samples during this sampling event exceeded the ESLs for TPH or metals.

The results from the groundwater samples collected during this sampling event are included in Table 5B. These results show elevated levels of nickel for all samples collected during this sampling event. Elevated levels of lead were found in sample locations W102 and W 103.

Table 5A. Sampling Event November 14, 2008. Soil Sampling

Sample ID	**Depth (ft.)**	**TPH (D) (mg/kg)**	**TPH (MO) (mg/kg)**	**TPH (CR) (mg/kg)**	**Cd (mg/kg)**	**Cr (mg/kg)**	**Ni (mg/kg)**	**Pb (mg/kg)**	**Zn (mg/kg)**
SB-101 3'-4'	3'-4'	85	58	150	ND	17	22	12	26
SB 101 7'-8'	7'-8'	ND	ND	ND	ND	14	8.2	5.2	9.4
SB 101 11'-12'	11'-12'	ND	ND	ND	ND	8.8	10	3.7	14
SB 101 15'-16'	15'-16'	ND	ND	ND	ND	16	20	6.2	23Q
SB 102 3'-4'	3'-4'	ND	ND	ND	ND	45	60	15	33
SB 102 7'-8'	7'-8'	13	ND	52	ND	16	7.8	110	70
SB 102 11'-12'	11'-12'	ND	ND	ND	ND	13	9.4	5	13
SB 102 15'-16'	15'-16'	4.9	ND	ND	ND	11	15	7.1	26
SB 103 3'-4'	3'-4'	46	180	210	ND	67	85	11	52
SB 103 7'-8'	7'-8'	23	94	110	ND	18	9.7	150	110
SB 103 11'-12'	11'-12'	ND	ND	ND	ND	18	23	3.7	12
SB 103 15'-16'	15'-16'	ND	ND	ND	ND	18	23	3.9	12
SB 111 0'-1'	0'-1'	68	310	360	ND	37	180	19	X
SB 111 3'-4'	3'-4'	8.6	55	60	ND	50	69	6.6	44
SB 111 5'-6'	5'-6'	3.6	ND	ND	ND	26	21	29	62
SB 111 7'-8'	7'-8'	23	70	87	ND	15	12	49	50
SB 111 9'-10'	9'-10'	ND	ND	ND	ND	14	8.8	10	13
SB 112 3'-4'	3'-4'	16	51	63	ND	13	26	13	29
SB 112 7'-8'	7'-8'	58	ND	ND	ND	70	86	7.7	42

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Table 5B. Sampling Event November 14, 2008. Groundwater Sampling

Sample ID	Depth (ft.)	TPH (D) (mg/L)	TPH (MO) (mg/L)	TPH (CR) (mg/L)	Cd (mg/L)	Cr (mg/L)	Ni (mg/L)	Pb (mg/L)	Zn (mg/L)
W 101		58	ND	ND	ND	ND	**0.12**	0.0065	0.056
W 102		54	ND	ND	ND	0.014	**0.14**	**0.77**	1.2
W 103		74	ND	ND	ND	0.026	**0.38**	**0.061**	1.4
W 111		91	ND	ND	ND	ND	**0.42**	ND	8.4

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

E. Sampling Event November 21, 2008

This sampling event was conducted without agency oversight to collect the remaining samples from all proposed subsurface sample locations. Tables 6A includes the results from this sampling event for soil.

Table 6A. November 21, 2008. Soil Sampling

Sample ID	Depth (ft.)	TPH (D) (mg/kg)	TPH (MO) (mg/kg)	TPH (CR) (mg/kg)	Cd (mg/kg)	Cr (mg/kg)	Ni (mg/kg)	Pb (mg/kg)	Zn (mg/kg)
SB 104	1’-2’	2.2	ND	ND	ND	32	35	10	34
SB 104	3’-4’	6.1	ND	ND	ND	16	11	75	120
SB 104	7’-8’	ND	ND	ND	ND	12	8.3	13	17
SB 105	1’-2’	ND	ND	ND	ND	70	82	9	62
SB 105	3’-4’	3.4	ND	ND	ND	17	12	44	62
SB 105	7’-8’	ND	ND	ND	ND	14	10	17	35
SB 106	1’6”-2’6”	ND	ND	ND	ND	53	64	11	46
SB 106	4’-5’	**1100**	**1900**	**2800**	ND	54	79	31	67
SB 106	7’-8’	2.8	ND	ND	ND	12	24	210	200
SB 107	1’-2’	**5500**	**11000**	**15000**	1.3	72	72	260	580
SB 107	4’-5’	230	520	700	ND	14	10	23	49
SB 107	7’-8’	ND	ND	ND	ND	14	11	5.2	12
SB 108	1’-2’	2.6	ND	ND	ND	52	59	12	41
SB 108	4’-5’	49	110	150	ND	25	24	65	100
SB 108	7’-8’	ND	ND	ND	ND	14	10	4.8	9.3
SB 109	1’-2’	7.6	ND	ND	ND	14	12	160	210
SB109	4’-5’	8.4	ND	ND	ND	19	14	120	200
SB 109	7’-8’	ND	ND	ND	ND	13	10	4.8	10
SB 110	1’-2’	1.5	ND	ND	ND	25	19	87	290
SB 110	4’-5’	ND	ND	ND	ND	17	11	10	26
SB 110	7’-8’	ND	ND	ND	ND	13	8.4	5.3	7.8

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36 . *Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Groundwater results indicated that sample location W105 exceeded the ESLs for nickel, and sample locations W107 and W108 exceeded the ESLs for lead. Groundwater results for this event are included in Table 6B.

Table 6B. Sampling Event November 21, 2008. Groundwater Sampling

Sample ID	Depth (ft.)	TPH (D) (mg/L)	TPH (MO) (mg/L)	TPH (CR) (mg/L)	Cd (mg/L)	Cr (mg/L)	Ni (mg/L)	Pb (mg/L)	Zn (mg/L)
W 105		52	ND	ND	ND	ND	**0.052**	0.0094	0.93
W 107		62	ND	ND	0.0031	0.022	0.48	**0.12**	1.3
W 108		58	ND	ND	0.0022	0.025	0.076	**5.6**	0.97
W 109		ND	ND	ND	ND	ND	ND	ND	0.018

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

F. Wipe Sampling Event March 18, 2009

Following another round of cleanup on the rafters and adjacent structural elements, wipe Sampling Event March 18, 2009 occurred. This event was proposed for verification sampling with oversight provided by ACDEH.

Results from Wipe Sampling Event March 18, 2008 indicated that sample locations S-1 and S-2 exceeded the clean-up levels for chromium, nickel, and lead. Following this finding, another round of clean up was required. Wipe Sampling Event March 18, 2009 followed the last round of clean up. Table 7. includes the results from this sampling event.

Table 7. Results from Wipe Sampling Event March 18, 2009

	Cd ($mg/100cm^2$)	Cr ($mg/100cm^2$)	Ni ($mg/100cm^2$)	Pb ($mg/100cm^2$)	Zn ($mg/100cm^2$)	O&G (mg/100cm)
S-1	ND	**0.35**	**3.4**	**0.24**	0.68	ND
S-2	ND	**0.1**	**0.76**	**0.033**	0.15	ND
S-3	ND	ND	0.011	ND	0.12	ND

*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Table 8 summarizes the sample locations that were above the ESLs.

Table 8. Summary of Results Above ESLs

Sample ID	Depth (ft.)	O&G	TPH Total	TPH (D)	TPH (MO)	TPH (CR)	Cd	Cr	Ni	Pb	Zn
#5-6"-12"	6"-12"	-	6500 (mg/kg)	-	-	-	-	-	-	-	-
#5-3'	3'10"	-	4900 (mg/kg)	-	-	-	-	-	-	-	-
#6B	1'10-2'4"	-	3700 (mg/kg)	-	-	-	-	-	-	-	-
SB106	4'-5'	-	-	1100 (mg/kg)	1900 (mg/kg)	2800 (mg/kg)	-	-	-	-	-
SB107	1'-2'	-	-	5500 (mg/kg)	11000 (mg/kg)	15000 (mg/kg)	-	-	-	-	-
1-6	1'-6"	-	-	-	-	-	0.019 (mg/L)	1.1 (mg/L)	5.8 (mg/L)	1.1 (mg/L)	1.9 (mg/L)
W 105	-	-	-	-	-	-	-	-	0.052 (mg/L)	0.0094 (mg/L)	0.93 (mg/L)
W 107	-	-	-	-	-	-	0.0031 (mg/L)	0.022 (mg/L)	0.48 (mg/L)	0.12 (mg/L)	1.3 (mg/L)
W 108	-	-	-	-	-	-	0.0022 (mg/L)	0.025 (mg/L)	0.076 (mg/L)	5.6 (mg/L)	0.97 (mg/L)
W 109	-	-	-	-	-	-	-	-	-	-	0.018 (mg/L)
W101	-	-	-	-	-	-	-	-	0.12 (mg/L)	-	-
W102	-	-	-	-	-	-	-	-	0.14 (mg/L)	0.77 (mg/L)	-
W103	-	-	-	-	-	-	-	-	0.38 (mg/L)	0.061 (mg/L)	
W111									0.42 (mg/L)	-	-
#1 Hoist A	-	-	-	-	-	-	-	0.29 (mg/wipe)	1.6 (mg/wipe)	0.22 (mg/wipe)	-
#2 Electrical Box	-	-	-	-	-	-	-	0.46 (mg/wipe)	7.6 (mg/wipe)	0.054 (mg/wipe)	-
#3 Ring Roller	-	-	-	-	-	-	-	0.39 (mg/wipe)	2.3 (mg/wipe)	0.28 (mg/wipe)	-
Electrical Box A	-	-	-	-	-	-	-	0.16	2.2	0.052	-
Hoist A	-	-	-	-	-	-	-	0.36 (mg/wipe)	2.3 (mg/wipe)	0.51 (mg/wipe)	-
Ring Roller A	-	-	-	-	-	-	-	0.29 (mg/wipe)	3.0 (mg/wipe)	0.27 (mg/wipe)	
S-1	-	-	-	-	-	-	-	0.35 (mg/wipe)	3.4 (mg/wipe)	0.24 (mg/wipe)	-
S-2	-	-	-	-	-	-	-	0.1 (mg/wipe)	0.76 (mg/wipe)	0.033 (mg/wipe)	-
S-3	-	-	-	-	-	-	-	-	0.011 (mg/wipe)	-	-

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

IV. SUBSURFACE INVESTIGATIONS

A. Subsurface Soil Exploration

Chemical analytical reports from the soil sampling events described in Section III indicated elevated levels of hydrocarbons (described as HEM and TPH in the analytical reports) at sample locations 5, 6B, SB106, SB107. Based on these findings, a soil cleanup plan was developed to remediate the proximity of these sample locations. A CDMS Environmental Specialist led all excavations and subsurface investigations. Consulting Geologist Fredric Hoffman provided additional guidance and support throughout the investigations. Refer to Table 9 for the excavation size and depth. Figure 2 identifies the excavation locations.

All contaminated soil that was removed during the excavations was placed into 40-yard bins and hauled offsite as hazardous waste by a licensed waste hauler. Wastewater pumped put from the pit and used absorbents were drummed and hauled offsite as hazardous waste by a licensed hauler.

Figure 2. Excavation Locations

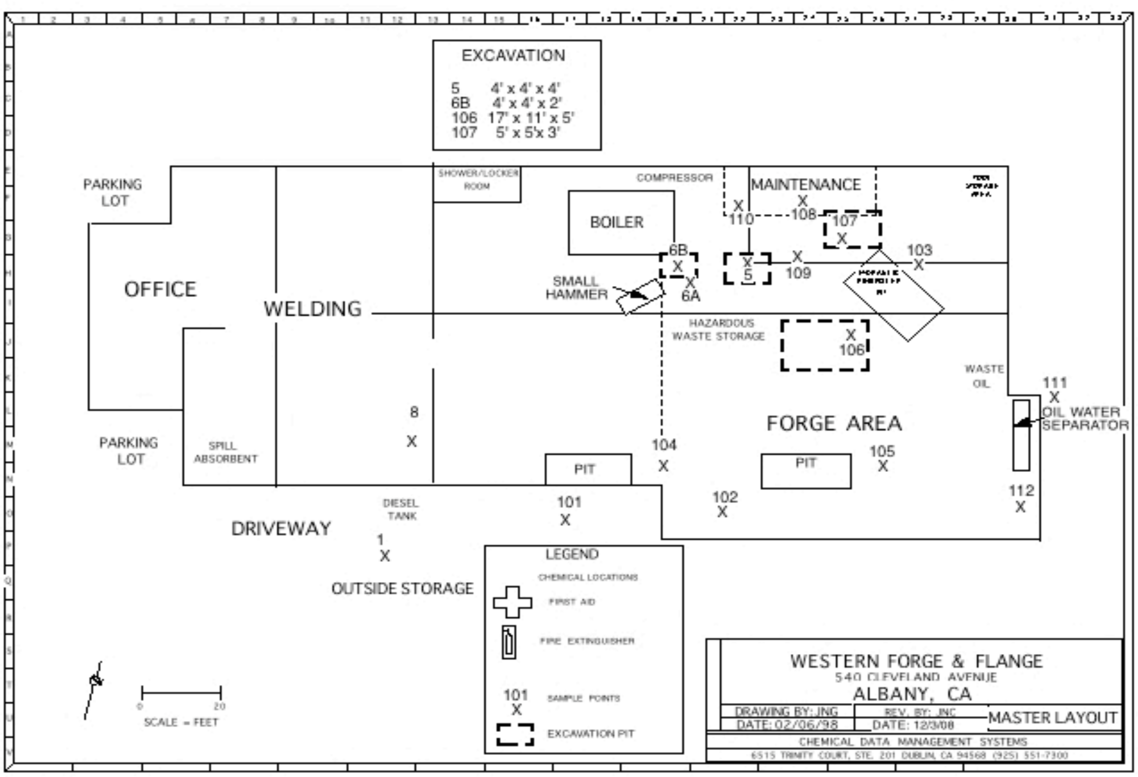


Table 9. Excavation Location, Size and Depth

Sample Loc	Width (in ft)	Length (in ft)	Depth (in ft)
5	4	4	5
6B	4	4	3
106	17	11	5
107	5	5	3

Clean up began on January 21, 2009. In all three of the initial excavations, at locations 5, 6B, and 107 the dark gray clay began at 18" below the ground surface (bgs) and was present throughout the excavations. The excavations at Sample locations 107 and 6B were terminated at three feet in moist clay. The excavation at sample location 5 was terminated at five feet and water began to accumulate in the bottom of the trench.

After breaking up the concrete for the large excavation at sample location 106, a large steel foundation was uncovered, and the decision was made to limit the excavation to a 5' wide and 11" long trench that encompassed the sample location and extended parallel to the hydraulic ring roller pit.

The excavation was in the dark gray clay and ground water was encountered at 5' bgs. Approaching the 10' to 11' limit of the planned trench, oil began to seep from a point source in the wall of the trench closest to the pit at 2.5 feet below ground surface, and began to accumulate on the water in the bottom of the pit.

In order to discover the source of the oil, additional concrete was removed and a new trench was excavated on the north side of the roller pit. At 2.5 feet below ground surface oil began seeping into the new excavation from the pit side of the trench, but not from the outside face of the trench. Trenching continued around the north and west side of the roller pit following the oil seeps.

On the following morning, January 22, 2009, the oil and water had risen in the trench to 3.5' bgs. Excavation continued along the west side of the roller pit until no more oil was observed seeping into the excavation. Oil and water was then pumped out of the excavations into 2 - 55 gallon drums, and the excavators began to excavate the sediments right up to the edge of the cement sides of the roller pit. A layer of gravel was discovered in the trench against the walls of the pit and was removed by the excavators.

Following these events Fredric Hoffman, Geologist with CDMS evaluated the site and concluded that the oil that was released into the subsurface next to the hydraulic roller press, was held in the gravel backfill around the roller pit and had not appreciably penetrated the surrounding clay. When the excavator nicked a corner of the gravel, the oil was released into the excavation. The excavator then released the remainder of the oil into the trench when the oil-contaminated gravel was removed.

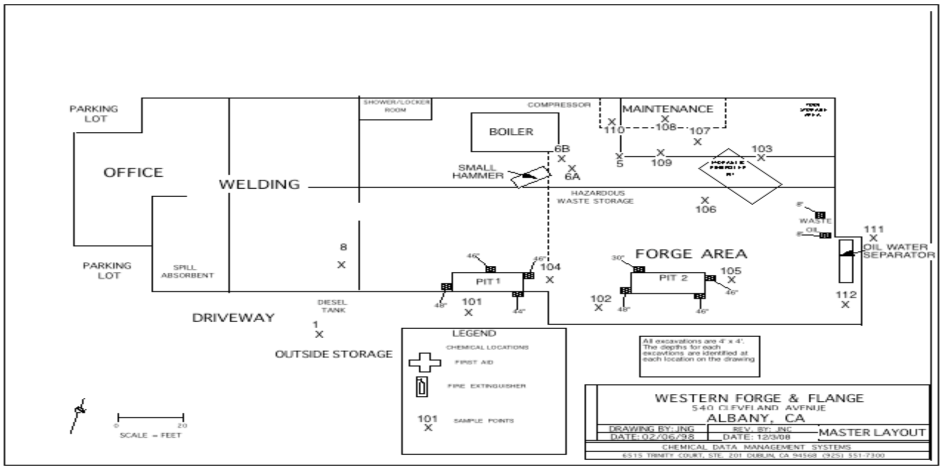
After investigations around the roller pit had ceased, further subsurface investigations were conducted around Pit 1 and Pit 2 in the northwest side of the building and near the rear wall at the west side of the building. Figure 2.

The purpose of this investigation was to determine whether or not these areas had the same issues as the roller pit area and were contaminated with oil. Excavators removed 4'x4' pieces of concrete at each location. During the excavation, soil was removed from each site, until the soil was moist, indicating a short interval between the soil and the water table. After about 15 minutes water slowly began to seep into these excavations. At that point excavation ceased.

At the pits, excavation occurred adjacent to the steel lining of the pits. If oil were present in this area, it would be found between the soil and the steel lining of the pit; as was the case with the roller pit. No indications of contamination were observed during or after excavation at these sites.

At the west side of the building, excavation occurred near the wall where etching was visible and where waste oil was once stored. Water was found immediately below the concrete, at which point the excavations ceased. No indications of contamination were observed during or after excavation at these sites.

Figure 2. Additional Subsurface Investigations



B. Subsurface Investigation-Ground Water

In early February 2009, Jim Carro, Fredric Hoffman, and Jamie Hernandez of CDMS evaluated the site. The focus of this site evaluation was the excavation pit near the ring roller. A thin film of oil was observed on the surface of the water in the excavation pit near the ring roller. After discussing possible alternatives to remedy the oil film on the water surface, the CDMS representatives decided to skim the surface of the water to remove the oil followed by the removal of the standing water by a vacuum tanker truck.

The removal of the oil from the water surface involved the use of oil absorbent pads, oil absorbent socks, and oil-only sorbent skimmers®. After several rounds of skimming, approximately 3/4 of the water volume was then removed using a vacuum tanker truck. These procedures have significantly reduced the amount of oil on the surface of the water.

Currently, Most of the discharged oil has been removed from the water surface in the pit near the ring roller. A consulting Geologist Fredric Hoffman believes that the remaining oil is contained in the disturbed sediments of the excavation. It is Mr. Hoffman's recommendation to inoculate the excavation near the ring roller pit with a chemical reagent designed to treat organic contaminants in an effort to address this area of concern. Addtional subsurface investigations and remedial activities are pending in this area, identified as sample location SB106, following Mr. Hoffman's recommendation.

V. Conclusion

Since the relocation of the Western Forge and Flange Co. facility in Albany to Texas, there have been extensive clean up activities in the effort to decommission the facility and achieve closure.

Subsurface sampling occurred during several sampling events. The results from these sampling events indicated elevated levels of metals at various sample locations for groundwater when using the criteria provided by ACDEH. (Table 2B, Table 5B, and Table 6B). When comparing the results of Table 2B, 5B, and Table 6B to the criteria in Table 1C, all groundwater results were found below the ESLs.

Results also indicated elevated levels of oil and grease (shown as TPH in the analytical report) and TPH (residual fuel) for soil samples at sample locations 5, 6B, SB106, and SB107. (Table 2A and Table 6A). Further investigation occurred at those locations, and the contaminated soil was ultimately removed during several soil cleanup excavations. As a result of the soil cleanup excavations, TPH (residual fuel) contamination has been eliminated at soil sampling locations 5, 6B, and SB107.

In addition, oil was discovered during the soil cleanup excavation of soil sample location SB106 and several oil cleanup efforts have been conducted. Currently, this sample location is pending further remedial activities.

Based on the findings of the subsurface samples, ACDEH has made the decision to transfer all subsurface concerns and investigations to ACDEH Site Mitigation/Local Oversight Program (LOP). Western Forge and Flange Co. is currently anticipating a meeting with ACDEH LOP to address all subsurface issues.

In addition, several phases of cleaning occurred on the rafters and structural elements before and in between wipe sampling events to further remove trace contaminants. The results from initial wipe sampling events indicated elevated levels of metals. Similarly, final wipe sampling results also indicated elevated levels of metals when compared to the standards set by ACDEH.

At this time CDMS believes that due diligence has been served in decontaminating the above ground portions of the facility to the fullest extent possible at the Western Forge and Flange Co. facility in Albany, with the guidance of ACDEH. Further work in remediating the subsurface at soil sample location SB106 at the site is pending.

VI. APPENDICES

A. HAZARDOUS WASTE MANIFESTS

VII. ANALYTICAL REPORTS

TestAmerica. 2008a. Analytical Report, Job Number 720-16304-1, Job Description: Western Forge. October 10, 2008.

TestAmerica. 2008b. Analytical Report, Job Number 720-16328-1, Job Description: Western Forge, Albany. October 16, 2008.

TestAmerica. 2008c. Analytical Report, Job Number 720-16651-1, Job Description: Western Forge. November 04, 2008.

TestAmerica. 2008d. Analytical Report, Job Number 720-16931-1, Job Description: Western Forge, Albany. November 24, 2008.

TestAmerica. 2008e. Analytical Report, Job Number 720-17028-1, Job Description: Western Forge, Albany. December 02, 2008.

VIII. References

Brown and Caldwell. 1984. Western Forge and flange, Albany Facility – Problem Definition Report. Submitted to Western Forge and Flange on July 10, 1984

Hoffman. 2008. Data Evaluation of Materials Related to the Subsurface Environmental Closure of Western Forge & Flange, 540 Cleveland Ave., Albany CA. Prepared for Chemical Data Management Systems, Inc., Dublin, CA (CDMS). December 18, 2008