



COUNCIL OF LOS ANGELES REGION 213 576 6640 P.02

# California Regional Water Quality Control Board

## Los Angeles Region



Recipient of the 2001 Environmental Leadership Award from Keep California Beautiful

Linda S. Adams  
Agency Secretary

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Arnold Schwarzenegger  
Governor

August 23, 2007

Mr. Robert W. Comstock, Principal  
1800 Rosecrans Partners, LLC  
Comstock Crosser & Associates  
321 12th Street, Suite 200  
Manhattan Beach, CA 90266

**MODIFICATION TO MONITORING AND REPORTING PROGRAM FOR GENERAL WASTE DISCHARGE REQUIREMENTS FOR CALCIUM POLYSULFIDE SOLUTION INJECTION AT FORMER FAIRCHILD CONTROLS FACILITY, 1800 ROSECRANS AVENUE, MANHATTAN BEACH (SITE CLEANUP PROGRAM NO. 348; SITE ID NO. 1840900; CI NO. 8891)**

Dear Mr. Comstock:

1800 Rosecrans Partners, LLC (hereinafter Discharger) owns a former aerospace manufacturing site known as Former Fairchild Controls Facility (Site), located at 1800 Rosecrans Avenue, Manhattan Beach, California. Regional Board, in their letter dated December 28, 2006, approved the revised final Remedial Action Plan and Remedial Design (RAP/RD) dated December 1, 2006. Regional Board staff reviewed and required significant revision of the draft RAP/RD before approval. In the approved RAP/RD, Section 6.0 titled *Remedial Design* describes design of the full scale onsite and offsite remedial action involving in-situ subsurface injection of calcium polysulfide (CPS) solution to remediate hexavalent chromium followed by injection of molasses or vegetable oil to remediate volatile organic compounds (VOCs) in groundwater. The remedial design is based on the results of bench-scale tests and field pilot study documented in Section 4 titled *Remedial Alternative Bench-Scale Tests and Field Pilot Study*. The Discharger conducted the onsite in-situ chemical injection field pilot test to demonstrate reduction of both hexavalent chromium and VOCs in groundwater under the General Waste Discharge Requirements (WDR) Order No. R4-2007-0019 (formerly R4-2005-0030). On February 20, 2007, Mr. Jerome Zimmerle of the consultant URS submitted draft revisions of the Monitoring and Reporting Program (MRP) for the WDR including a map showing locations of injection wells and groundwater monitoring wells to the Regional Board staff for review and approval. In June 2007, URS informed the Regional Board staff that they are ready to implement the approved full-scale injection using calcium polysulfide (CPS) solution in accordance with the revised final RAP/RD.

**California Environmental Protection Agency**



Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

Mr. Robert W. Comstock  
1800 Rosecrans Partners, LLC

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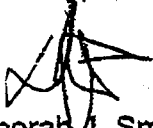
August 23, 2007

On August 9, 2007, Mr. Zimmerle of URS and Board staff (Kwang Lee, Mohammad Zaidi, and Wendy Phillips) had a meeting to discuss Regional Board comments on the draft MRP, and agreed to the some modifications in injection sequence and schedule, and groundwater monitoring well locations, to implement the full-scale onsite and offsite remedial action.

Attached is the revised Monitoring and Reporting Program (Compliance File No. CI-8891) based on discussion at the August 9, 2007 meeting. Please note that all monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit. Also, please send a second copy to Mohammad Zaidi (Board staff).

If you have any questions, please contact Mr. Mohammad Zaidi ([mzaidi@waterboards.ca.gov](mailto:mzaidi@waterboards.ca.gov)) at (213) 576-6732 or Dr. Kwang Lee ([klee@waterboards.ca.gov](mailto:klee@waterboards.ca.gov)) at (213) 576-6734.

Sincerely,



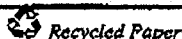
Deborah J. Smith  
Interim Executive Officer

Attachments: Figure 1. WDR Sampling Program

Enclosure: 1. Revised Monitoring and Reporting Program No. CI-8891 (dated August 21, 2007)

- cc: Mr. Michael Levy, Office of Chief Council, SWRCB  
Ms. Marilyn Levin, Attorney General's Office  
Mr. Jerome R. Zimmerle, Jr., P.E., URS Corporation  
Ms. Karen L. Lubovinsky, Esq., Kemper Insurance Companies  
Mr. Dan Romano, Esq., Law Offices of Dan Romano  
Mr. Walter Lipsman, Esq., Morris, Polich & Purdy LLP  
Mr. Eric Lindquist, Comstock, Crosser & Associates  
Mr. Jag Pathirana, City Manager, City of Hawthorne  
Mr. Amie Shadbehr, Director of Public Works, City of Hawthorne  
Mr. Geoff Dolan, City Manager, Manhattan Beach  
Mr. Robb Whittiker, Water Replenishment District of Southern California  
Mr. Mark Stewart, West Basin Watermaster, California Department of Water Resources

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ATTACHMENT A

**STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM NO. CI-8891  
FOR  
1800 ROSECRANS PARTNERS, LLC  
(FORMER FAIRCHILD CONTROLS FACILITY)**

**ENROLLMENT UNDER REGIONAL BOARD  
ORDER NO. R4-2007-0019 (Series No. 061)  
FILE NO. 1840900**

1. REPORTING REQUIREMENTS

- A. 1800 Rosecrans Partners, LLC (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment (August 21, 2007) under Regional Board Order No. R4-2007-0019. The first monitoring report under this Program is due by October 15, 2007.

Monitoring reports shall be received by the dates in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15

- B. If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.
- C. By January 30 of each year, beginning January 30, 2008, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall explain the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements (WDRs).
- D. Each monitoring report shall contain a separate section titled “summary of Non-Compliance” which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with WDRs. This section shall be located at the front of the report and shall

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clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.

- E. The Discharger shall comply with requirements contained in Section G of Order No. R4-2007-0019 "*Monitoring and Reporting Requirements*" in addition to the aforementioned requirements.

## II. INJECTION MONITORING REQUIREMENTS FOR THE PROJECT

### Calcium Polysulfide (CPS) and Carbon Source Solution Injection

The quarterly reports shall contain the following information regarding the injection activities. If there is no injection, during any reporting period, the report shall so state:

1. Location Map showing injection points for the calcium polysulfide and/or carbon source (vegetable oil) solution
2. Written summary defining:
  - Depth of injection points;
  - Quantity of calcium polysulfide solution injected per injection point; and
  - Total amount and injection rate of calcium polysulfide and carbon source injected at site.
3. Monthly visual inspection at each injection well shall be conducted to evaluate the well casing integrity for a period of three months after each injection. The quarterly report shall include a summary of the visual inspection.

## II. GROUNDWATER MONITORING PROGRAM FOR THE PILOT PROJECT

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities (calcium polysulfide). The Discharger shall implement the injection and monitoring schedule agreed with the Discharger's consultant (URS) on August 9, 2007, as shown on the tables and attached Figure 1 (WDR Sampling Program):

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Off-site Injection Barrier Wells			
Injection Period	Injection Wells	Monitoring wells to be implemented	
September 2007	N-9 to N-1, S-1, W-19 to W-6	X	
October 2007	S-10 to S-2, W-5 to W-1	X	X

On-site Injection Barrier Wells			
Injection Period	Injection Wells	Wells to be monitored	
September 2007	O-17, O-16, O-18, O-19, O- 21, O-22, O-1, O-2, O-3, O- 9, EW-6S, O-4, O-5, O-10	X	
October 2007	O-12, O-13, O-14, O-8, O-15	X	X

X - Wells to be sampled at the end of the indicated month

These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Regional Board Executive Office (Executive Officer) prior to their use. The Discharger shall conduct baseline sampling from these wells and regular sampling with the required frequencies from the monitoring wells for the following constituents:

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CONSTITUENT	UNITS <sup>1</sup>	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
pH <sup>4</sup>	pH units	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Temperature <sup>4</sup>	°F	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Oxidation-reduction potential <sup>4</sup>	millivolts	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Specific conductivity <sup>4</sup>	µmhos/cm	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Dissolved Oxygen <sup>3</sup>	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Acetone	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Methyl ethyl ketone	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Trichlorobenzene	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Tetrachloroethene (PCE)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Trichloroethene (TCE)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Cis-1,2-dichloroethene (Cis-1,2-DCE)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
1,1-dichloroethane (1,1-DCA)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
1,1-dichloroethene (1,1-DCE)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
1,2-dichloroethane (1,2-DCA)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
1,1,1-trichloroethane (1,1,1-TCA)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Total dichlorobenzene (TDCB)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Ethylbenzene (EBN)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Trichlorotrifluoroethane (Freon 113)	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Xylenes	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
1,4-dioxane	µg/L	grab	One-time <sup>5</sup> /Quarterly
N-nitrosodimethylamine	µg/L	grab	One-time <sup>5</sup> /Quarterly
1,2,3-trichloropropane	µg/L	grab	One-time <sup>5</sup> /Quarterly
Perchlorate	µg/L	grab	One-time <sup>5</sup> /Quarterly
Methane	µg/L	grab	First Year <sup>6</sup>
Total organic carbon	µg/L	grab	First Year <sup>6</sup>
Hexavalent chromium	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
Dissolved total chromium	µg/L	grab	Weekly <sup>2</sup> /Monthly/Quarterly <sup>3</sup>
General Minerals: Sulfate, sulfide, nitrate, nitrite, chloride, and alkalinity	µg/L	grab	Weekly <sup>2</sup> /Monthly <sup>3</sup>
Priority pollutants <sup>7</sup> : (arsenic, iron, and manganese)	µg/L	grab	On-time <sup>6</sup>

<sup>1</sup> Mg/L: milligrams per liter; µg/L: micrograms per liter; °F: degree Fahrenheit.

<sup>2</sup> Weekly sampling events are required for the first four weeks from the injection date or until concentrations have stabilized, whichever is later.

<sup>3</sup> Monthly sampling events are required during six months after the weekly sampling events; after the six months sampling event, quarterly sampling is required.

<sup>4</sup> Field instrument will be used to test for this constituent.

<sup>5</sup> One time sampling event before the injection of CPS. If detected, quarterly monitoring is required.

<sup>6</sup> First Year sampling is at the 1<sup>st</sup> and 3<sup>rd</sup> month after the injection date and at the end of the first year.

<sup>7</sup> A complete list of priority pollutants (Attachment A) is attached, but the Discharger is required to analyze only for the listed metals plus total and hexavalent chromium.

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All groundwater monitoring reports must include, at minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level, iso-concentration contour map and groundwater flow direction.

III. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

IV. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)"

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All records and reports submitted in compliance with this Order are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger, will be treated as confidential.

Ordered by:

  
\_\_\_\_\_  
Deborah J. Smith  
Interim Executive Officer

Date: August 21, 2007





# PRIORITY POLLUTANTS

## Metals

- (1) Antimony
- (2) Arsenic
- (3) Beryllium
- (4) Cadmium
- (5) Chromium
- (6) Copper
- (7) Lead
- (8) Mercury
- (9) Nickel
- (10) Selenium
- (11) Silver
- (12) Thallium
- (13) Zinc

## Miscellaneous

- (14) Cyanide
- (15) Asbestos
- (16) 2,3,7,8-TCDD (Dioxin)

## Volatile Organics

- (17) Acrolein
- (18) Acrylonitrile
- (19) Benzene
- (20) Bromoform
- (21) Carbon tetrachloride
- (22) Chlorobenzene
- (23) Chlorodibromomethane
- (24) Chloroethane
- (25) 2-Chloroethyl vinyl ether
- (26) Chloroform
- (27) Dichlorobromomethane
- (28) 1,1-Dichloroethane
- (29) 1,2-Dichloroethane
- (30) 1,1-Dichloroethylene
- (31) 1,2-Dichloropropane
- (32) 1,3-Dichloropropylene
- (33) Ethylbenzene
- (34) Methyl bromide
- (35) Methyl chloride
- (36) Methylene chloride
- (37) 1,1,2,2-Tetrachloroethane
- (38) Tetrachloroethylene
- (39) Toluene
- (40) trans-1,2-Dichloroethylene
- (41) 1,1,1-Trichloroethane
- (42) 1,1,2-Trichloroethane
- (43) Trichloroethylene
- (44) Vinyl chloride
- Xylenes<sup>(A)</sup>

## Base/Neutral Extractables

- (56) Acenaphthene
- (57) Acenaphthylene
- (58) Anthracene
- (59) Benzidine
- (60) Benzo[a]anthracene
- (61) Benzo[a]pyrene
- (62) Benzo[b]fluoranthene
- (63) Benzo[ghi]perylene
- (1,12-Benzoperylene)<sup>(B)</sup>
- (64) Benzo[k]fluoranthene
- (65) bis(2-Chloroethoxy) methane
- (66) bis(2-Chloroethyl) ether
- (67) bis(2-Chloroisopropyl) ether
- (68) bis(2-Ethylhexyl)phthalate
- (69) 4-Bromophenyl phenyl ether
- (70) Butyl benzyl phthalate
- (71) 2-Chloronaphthalene
- (72) 4-Chlorophenyl phenyl ether
- (73) Chrysene
- (74) Dibenzo[a,h]anthracene
- (1,2,5,6-Dibenzanthracene)<sup>(B)</sup>
- (75) 1,2-Dichlorobenzene
- (76) 1,3-Dichlorobenzene
- (77) 1,4-Dichlorobenzene
- (78) 3,3'-Dichlorobenzidine
- (79) Diethyl phthalate
- (80) Dimethyl phthalate
- (81) Di-n-butyl phthalate
- (82) 2,4-Dinitrotoluene
- (83) 2,6-Dinitrotoluene
- (84) Di-n-octyl phthalate
- (85) 1,2-Diphenylhydrazine
- (86) Fluoranthene
- (87) Fluorene
- (88) Hexachlorobenzene
- (89) Hexachlorobutadiene
- (90) Hexachlorocyclopentadiene
- (91) Hexachloroethane
- (92) Indeno[1,2,3-cd]pyrene
- (93) Isophorone
- (94) Naphthalene
- (95) Nitrobenzene
- (96) N-nitrosodimethylamine
- (97) N-nitrosodi-n-propylamine
- (98) N-nitrosodiphenylamine
- (99) Phenanthrene
- (100) Pyrene
- (101) 1,2,4-Trichlorobenzene

## Acid Extractables

- (45) 2-chlorophenol
- (46) 2,4-dichlorophenol
- (47) 2,4-dimethylphenol
- (48) 2-Methyl-4,6-dinitrophenol
- (4,6-dinitro-o-cresol)<sup>(B)</sup>
- (49) 2,4-dinitrophenol
- (50) 2-nitrophenol
- (51) 4-nitrophenol
- (52) 4-Chloro-3-methylphenol
- (P-chloro-m-cresol)<sup>(B)</sup>
- (53) Pentachlorophenol
- (54) Phenol
- (55) 2,4,6-trichlorophenol

## Pesticides & PCBs

- (102) Aldrin
- (103) alpha-BHC
- (104) beta-BHC
- (105) gamma-BHC (Lindane)
- (106) delta-BHC
- (107) Chlordane
- (108) 4,4'-DDT
- (109) 4,4'-DDE
- (110) 4,4'-DDD
- (111) Dieldrin
- (112) alpha-Endosulfan
- (113) beta-Endosulfan
- (114) Endosulfan sulfate
- (115) Endrin
- (116) Endrin aldehyde
- (117) Heptachlor
- (118) Heptachlor epoxide
- (119) PCB 1016
- (120) PCB 1221
- (121) PCB 1232
- (122) PCB 1242
- (123) PCB 1248
- (124) PCB 1254
- (125) PCB 1260
- (126) Toxaphene

(X) 40 CFR 131.38(b)(1) number

A. Xylenes are to be analyzed in addition to the priority pollutants

B. Synonym

grc 07/27/07