

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 00-51

ADOPTION OF FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER
NO. 94-013 FOR:

CERRO METAL PRODUCTS COMPANY

for the property located at

6707 MOWRY AVENUE
NEWARK
ALAMEDA COUNTY

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

1. **Site Location:** The property is located at 6707 Mowry Avenue in Newark (the site). The site is located in the southwestern portion of the City of Newark. The site occupies an area of approximately 40 acres. It is bordered by Cherry Street to the northeast, Alameda County Flood Control Channel/Southern Pacific Railroad to the southwest, Peterbilt Motors to the northwest, and Mowry Avenue to the southeast. The local topography is generally flat to gently sloping (see attached map).
2. **Site History:** The site was originally tidelands that were filled and used for farming. Southern Pacific Corporation owned the land prior to 1955. In 1957, Consolidated Copper Company purchased the property and operated a brass manufacturing plant. In 1960, Cerro Corporation purchased the fabricating plant from Consolidated Copper Company, and the company's name changed to Cerro Copper and Brass, A Division of Cerro Corporation. Cerro Corporation merged with The Marmon Group, Inc. in 1979. The Newark facility became Cerro Metal Products, a division of the Marmon Group, Inc. The Marmon Group, Inc. changed its name to The Marmon Corporation, and Cerro Metal Products Company became a wholly-owned subsidiary.

Cerro Metal Products Company (Cerro Metal) utilized chemicals that included sulfuric, muriatic, chromic and nitric acids, sulfuric dioxide gas, truco solvent (containing trichloroethylene and dichloromethane), Dyna Sprex Powder (containing sodium hydroxide), liquid caustic, 1,1,1-trichloroethane, oil and diesel fuel. The following areas were identified to have contributed to the environmental pollution at the site: 1) unlined sludge settling ponds, 2) oil/water separator, 3) neutralization/acid storage tanks, 4)

treated wastewater drainage ditch, 5) evaporation ponds and 6) underground diesel tank. The Newark facility was closed in March 1986.

3. **Named Discharger:** Cerro Metal Products Company is named as a discharger because of substantial evidence that it and its corporate predecessors released pollutants to soil and groundwater at the site (including its use of chlorinated solvents at the site and the presence of these same pollutants in soil and groundwater in the vicinity of the onsite use) and because it and its corporate predecessors owned the property during and after the time of the activity that resulted in the discharge, had knowledge of the activities that caused the discharge during its ownership of the property, and had the legal ability to prevent the discharge.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the state, the Board will consider adding those parties' names to this order.

4. **Regulatory Status:** The site was previously subject to Site Cleanup Requirements (Order No.94- 013) adopted January 19, 1994.
5. **Site Hydrogeology:** The site is located within the Niles Cone groundwater basin. The Newark Aquitard is the uppermost clay unit covering nearly all of the Niles subarea, and is underlain by three identified aquifers, namely, the Newark Aquifer, Centerville-Fremont Aquifer and the Deep Aquifer. Each of these aquifers is separated by an extensive clay aquitard. The Newark Aquifer is the uppermost aquifer within the Niles subarea and ranges between 40 and 170 feet below ground surface (bgs), except in the forebay area where it begins at the surface. Lithologically, the site is characterized by a layer of silty to sandy clay to a depth of approximately 20 feet below ground surface, which is underlain by a 2 to 5 feet thick layer of silt, clayey to silty sand, and occasional gravel deposits. These units are collectively termed the shallow zone. Groundwater levels in the shallow zone below the site generally range between 4 and 11 feet bgs, and the groundwater flow varies between south and southwesterly.
6. **Remedial Investigation:** Remedial investigation began in 1986. The remedial investigation report dated August 25, 1992, contains a summary of results of sampling and analysis of soil and groundwater samples collected from the site.
 - o **Soil** - Petroleum hydrocarbon, volatile organic compounds (VOC) and lead were detected in soil. The concentrations of VOCs detected in soil were below the typical Board preliminary cleanup goal of 1 ppm.
 - o **Groundwater** - Cerro Metal conducted groundwater investigation in the shallow zone and Newark Aquifer to characterize the site and define the contaminants and

their impact to these water-bearing zones beneath the site. Groundwater monitoring data is currently obtained from 15 monitoring wells and six extraction wells. Chemical analysis of groundwater samples from the shallow zone indicated the presence of VOCs. No groundwater samples have been collected on-site from the Newark Aquifer, however, groundwater samples collected from an Alameda County Water District (ACWD) Salinity Barrier Project well, located approximately 500 feet downgradient from the site, indicated non-detect for VOCs. The contaminant levels in the shallow groundwater are above drinking water standards. The following are the maximum levels of chemical contaminant that were detected in shallow groundwater zone: TPH as diesel (11,000 ppb), TCE (8,800 ppb), 1,1,1-TCA (260 ppb), Cis-1,2-DCE (150 ppb), 1,1-DCE (1,500) and 1,1-DCA (200 ppb). Historic chemical data has shown a dramatic reduction in contaminant concentrations. There has not been an identified connection at the site between the shallow zone and deeper aquifers.

The groundwater plume is predominantly delineated. No additional groundwater investigation is needed, if VOC concentrations at the downgradient monitoring wells remain stable or decline.

7. **Adjacent Sites:** There are no nearby sites whose contamination or cleanup activities affect the site or are affected by pollution from the site.
8. **Interim Remedial Measures:** Cerro Metal has implemented soil and groundwater interim remedial measures (IRMs) that included soil excavation and groundwater pump and treat at the site. The entire site is capped with buildings and paving. Cerro Metal began conducting groundwater monitoring in 1986.

- a. **Interim Soil Remedial Measures**

Cerro Metal began active remediation on July 19, 1994 with the excavation, removal and off-site disposal of approximately 8,600 cubic yards of contaminated soil and several sections of PVC pipes, and the installation of five extraction wells and a pump and treat system. Soil cleanup goals were developed based on a human health risk assessment and a leachability study (URS 1992a and b). The soil cleanup goals for the identified contaminants of concern were as follows: TPH as diesel (80 ppm), Oil and grease (100 ppm), lead (100 ppm) and copper (80 ppm). The Board and the Alameda County Health Department (ACHD) granted approval on March 10, 1994, and July 28, 1994, respectively, for the soil cleanup activities.

b. **Interim Groundwater Remedial Measures**

Cerro Metal began IRMs for the on-site groundwater in 1994 with installation of extraction sumps and a pump and treat system. Monitoring data is currently obtained from 15 monitoring wells and six extraction wells. The groundwater treatment system provides hydraulic control and mass removal. The average flow rate from the extraction system is 2.7 gallons per minute (gpm) from July 19, 1994 to September 8, 1999. The current flow rate is approximately 1 gpm. Approximately 43.5 pounds of VOC and TPH as diesel were removed based on influent concentration of 705 ppb of organics and 7,425,810 gallons of treated groundwater recorded on November 30, 1997. The current mass removal rate is 1.25 pounds of contaminants per year. The estimated hydraulic drawdown is between 2 and 5 feet. The pump and treat system has been effective in reducing concentrations of chemicals as follows: TPH as diesel from 6100 to 62 ppb, TCE from 8800 to 1400 ppb and 1,1-DCE from 1400 to 170 ppb. The treated groundwater is discharged to the Union Sanitary District's sanitary sewer.

9. **Feasibility Study:** Cerro Metal developed and evaluated three possible alternatives for further remediation of contaminated groundwater in the shallow zone at the site. The screening of technologies was based on their effectiveness, implementability and cost.

Interim shut-down of the existing extraction and treatment system and monitoring to evaluate the occurrence and rate of natural attenuation was recommended after evaluating the following alternatives: 1) Maintain operation of the existing six-well groundwater extraction and treatment system; 2) Apply hydrogen releasing compounds into groundwater to aid in the anaerobic biodegradation of VOCs; and 3) Interim shut-down of existing extraction and treatment system, monitoring would be increased from semiannual to quarterly to assess changes in contaminant concentrations and water levels, and evaluate the occurrence and rate of natural attenuation. The extraction system will be restarted if the chemical concentrations at the edge of the plume do not remain stable or decline, or if the chemical concentrations in the extraction wells increase significantly.

10. **Cleanup Plan:** Cerro Metal submitted a RAP addendum on December 29, 1999, and a revised remedial action plan (RAP) addendum on February 15, 2000. The RAPs evaluate the remedial investigation, IRMs and cleanup alternatives, and propose a temporary shut down of the groundwater extraction system in order to evaluate natural attenuation; and to restart the extraction system if the chemical concentrations at the edge of the plume do not remain stable or decline, or if the chemical concentrations in the extraction wells increase significantly. The revised RAP evaluates risk to human health. The site will be closed when groundwater is cleaned to regulatory standards.
11. **Risk Assessment:** The shallow water-bearing zones underneath the site are not currently used for domestic supply. The risk assessment section of the RAP determined that

migration pathways for ingestion or dermal contact of groundwater were incomplete pathways. Cerro Metal based this determination on hydrogeologic conditions and observed migration rates for chemicals. The following pathways were found to be complete: volatilization from subsurface soils and groundwater, vapor inhalation and dust ingestion from surface soils, and dermal contact and/or ingestion of surface soils. Cerro Metal evaluated several scenarios during the risk assessment, but three scenarios are appropriate to the scope of this order. Scenario 1 evaluated current site conditions using average groundwater VOC concentrations at the extraction wells. Scenario 2 evaluated future conditions assuming no use of shallow groundwater, calculating maximum levels of each constituent that will result in acceptable risk levels in surface soil, subsurface soil and groundwater. Scenario 3 is the same as Scenario 2 but assumes future use of shallow groundwater and evaluates residual risks if VOC concentrations are reduced to MCL levels. In Scenario 3, attainment of cleanup standards will protect human health in the event that shallow groundwater is used for domestic purposes. The risk analysis considered the worst case scenarios for exposure of workers in buildings at the site and for construction workers working in utility excavations on the site.

Toxicity Classification for Chemicals of Interest: The constituents of concern (COCs) were identified as the constituents that have been routinely detected in the source media. The COCs for groundwater include 1,1-DCA, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCE and TCE. The COCs for surface and subsurface soils are 1,1-DCA, 1,1,1-TCA and TCE. These COCs have been consistently detected above their respective MCL in shallow groundwater zone beneath the site. The risk assessment excluded in scenarios 1, 2 and 3, vinyl chloride and other breakdown products of TCE that have not been detected at the site.

Based on EPA's classification, vinyl chloride is a class "A" carcinogen (sufficient human evidence). TCE is a class "B2" carcinogen (inferring probable human carcinogen, with inadequate human evidence and sufficient evidence from animal experiments). 1,1-DCE is a class "C" carcinogen (possible human carcinogen, limited evidence of carcinogenicity in animals with inadequate human data). Cis-1,2-DCE and trans-1,2-DCE are non-carcinogens (class "D" or lower).

Exposure Assessment: Under the current use of the site, there appear to be no complete exposure pathways for ingestion and dermal contact of groundwater. The TCE concentrations in the shallow zone are greater than drinking water standards. This water-bearing zone is currently not being used for drinking water. The deeper aquifer that is used for drinking water has not been impacted by VOCs based on measurements from ACWD's well located approximately 500 feet downgradient from the site.

Baseline Risk: The shallow groundwater is not used at this time. There is no complete exposure pathway under the current land use scenario. However, the current TPH and

VOCs concentrations at the site may pose a threat to human health if the impacted water-bearing zone is used for domestic use pending final remediation. The risk assessment was evaluated after soil excavation was implemented and groundwater was still being treated. The cleanup goals were calculated based on a cumulative target risk of (1×10^{-5}) and a cumulative hazard index (HI) of 1.0. For comparison, the Board considers the following risk to be acceptable at remediation sites: a hazard index of 1.0 or less for non-carcinogens, and a cumulative excess cancer risk of 1×10^{-4} or less for carcinogens.

There still exists VOC concentrations in the shallow water bearing zone, but the VOC vapors do not pose a significant health threat. Cerro Metal will implement further remediation in the shallow water bearing zone, if chemical concentrations at the edge of the plume do not remain stable or decline, or if chemical concentrations in the extraction wells increase significantly.

The current VOC concentrations may pose carcinogenic and non-carcinogenic excessive risk if the shallow water-bearing zone is used for domestic purpose. Therefore, institutional constraints are appropriate to limit the on-site exposure. Institutional constraints include a deed restriction that notifies future owners of sub-surface contamination and prohibits the use of the shallow water-bearing zone beneath the site as a source of drinking water until cleanup standards are met. The entire site is already capped with buildings and paving.

Post-Remediation Risk: Attainment of cleanup standards will protect human health in the event that shallow groundwater is used for domestic purposes. For the carcinogenic chemicals, the excess cancer risk predicted by this analysis is less than (1×10^{-6}) or less than 1 excess cancer cases in a population of 1,000,000. This cancer risk level lies within the Board's acceptable risk range. Likewise, the total HI for non-carcinogenic compounds was found to be less than 1.

12. **Basis for Cleanup Standards**

- a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives. The previously cited cleanup plan provides sufficient rationale that background levels of water quality cannot be restored. This order and its requirements are consistent with Resolution No. 68-16.

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

- b. **Beneficial Uses:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in Title 23, California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

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

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the site:

- o Municipal and domestic water supply
- o Industrial process water supply
- o Industrial service water supply
- o Agricultural water supply
- o Freshwater replenishment to surface waters

At present, there is no known use of the shallow water-bearing zone underlying the site for the above purposes.

- c. **Basis for Groundwater Cleanup Standards:** The groundwater cleanup standards for the site are based on applicable water quality objectives and are the more stringent of EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will result in acceptable residual risk to humans.

13. **Future Changes to Cleanup Standards:** The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not

technologically nor economically achievable within a reasonable period of time, then the discharger may request modification to the cleanup standards or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide that further cleanup actions should be taken.

14. **Reuse or Disposal of Extracted Groundwater:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.
15. **Basis for 13304 Order:** The discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
16. **Cost Recovery:** Pursuant to California Water Code Section 13304, the discharger is hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.
17. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
18. **Notification:** The Board has notified the discharger and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
19. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

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

A. PROHIBITIONS

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

B. CLEANUP PLAN AND CLEANUP STANDARDS

1. **Implement Cleanup Plan:** The discharger shall implement the cleanup plan described in finding 10.
2. **Groundwater Cleanup Standards:** The following groundwater cleanup standards shall be met in all wells identified in the Self-Monitoring Program:

Constituent	Standard (ug/l)	Basis
Benzene	1	California MCL
1,1-Dichloroethane	5	California MCL
Cis-1,2-Dichloroethylene	6	California MCL
Trans-1,2-Dichloroethylene	10	California MCL
1,1-Dichloroethylene	6	California MCL
Tetrachloroethene	5	California MCL
Trichloroethylene	5	EPA/California MCL
Vinyl Chloride	0.5	California MCL

C. TASKS

1. **DEMONSTRATION OF NATURAL ATTENUATION (NA)**

COMPLIANCE DATE: September 30, 2000

Submit a technical report acceptable to the Executive Officer documenting shutdown of existing groundwater system and if necessary, installation of additional monitoring wells for evaluating NA. The report should include chemical constituents to be monitored and used to evaluate natural attenuation in addition to VOCs and TPH (i.e., metabolic gases - methane, ethane, ethane; DO, redox potential, TOC; and geochemical indicators – iron, chloride, nitrate, sulfate and alkalinity).

2. **EVALUATION OF NATURAL ATTENUATION**

COMPLIANCE DATE: December 15, 2001

Submit a technical report acceptable to the Executive Officer documenting evaluation of NA, and a recommendation on NA as remedy at this site. If NA is determined to be inadequate for this site, submit a proposal for an alternate remedy or continue groundwater extraction as proposed in the RAP. Proposal for further expansion or modification to NA monitoring may be included in the evaluation report.

3. **PROPOSED INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: January 15, 2001

Submit a technical report acceptable to the Executive Officer documenting procedures to be used by the discharger to prevent or minimize human exposure to soil and groundwater contamination prior to meeting cleanup standards. Such procedures shall include a deed restriction prohibiting the use of shallow groundwater as a source of drinking water.

4. **IMPLEMENTATION OF INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: 60 days after acceptance by the Executive Officer of the Task 3 report

Submit a technical report acceptable to the Executive Officer documenting that the proposed institutional constraints have been implemented.

5. **FIVE-YEAR STATUS REPORT**

COMPLIANCE DATE: June 15, 2005

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved cleanup plan. The report should include:

- a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
- b. Comparison of contaminant concentration trends with cleanup standards
- c. Comparison of anticipated versus actual costs of cleanup activities
- d. Performance data (e.g. groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted)
- e. Cost effectiveness data (e.g., cost per pound of contaminant removed)
- f. Summary of additional investigations (including results) and significant modifications to remediation systems
- g. Additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule

If cleanup standards have not been met and are not projected to be met within a reasonable time, the report should assess the technical practicability of meeting cleanup standards and may propose an alternative cleanup strategy.

6. PROPOSED CURTAILMENT

COMPLIANCE DATE: 60 days prior to proposed curtailment

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

7. IMPLEMENTATION OF CURTAILMENT

COMPLIANCE DATE: 60 days after acceptance by the Executive Officer of the Task 6 report

Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 6.

8. **EVALUATION OF NEW HEALTH CRITERIA**

COMPLIANCE DATE: 90 days after requested
by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved cleanup plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

9. **EVALUATION OF NEW TECHNICAL INFORMATION**

COMPLIANCE DATE: 90 days after requested
by Executive Officer

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

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

D. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good O&M:** The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The discharger shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by

this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the discharger shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
5. **Self-Monitoring Program:** The discharger shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g., temperature, dissolved oxygen, redox potential, conductivity etc.).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:

- a. City of Newark
- b. Alameda County Water District

The Executive Officer may modify this distribution list as needed.

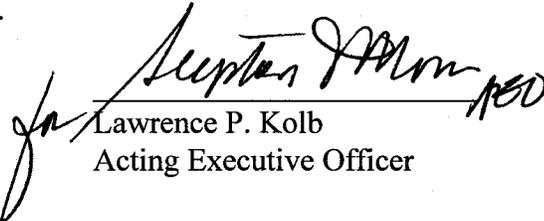
- 9. **Reporting of Changed Owner or Operator:** The discharger shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
- 10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

- 11. **Rescission of Existing Order:** This Order supersedes and rescinds Order No. 94-013.
- 12. **Periodic Site Cleanup Requirements Review:** The Board will review this Order periodically and may revise it when necessary.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 21, 2000.

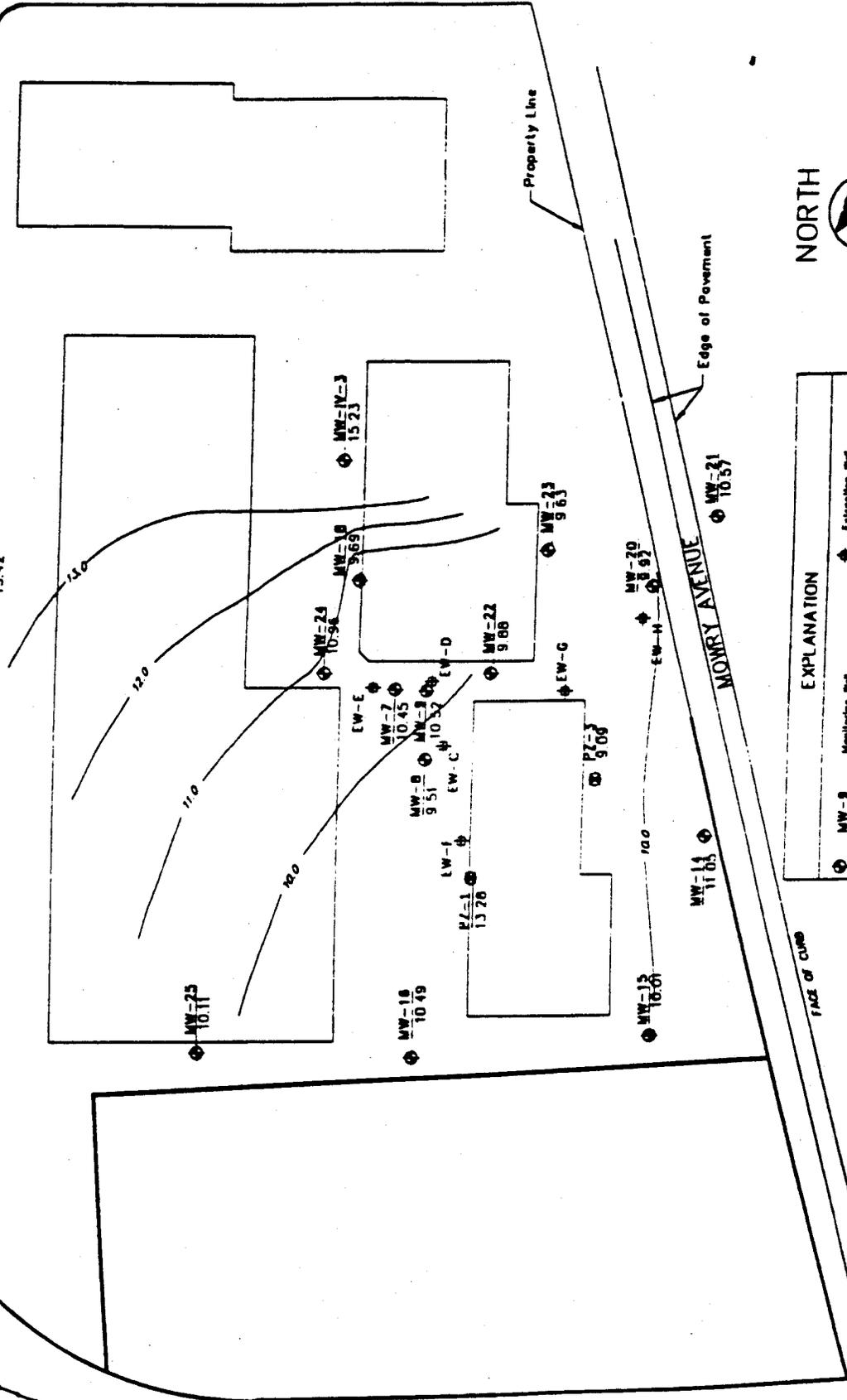

Lawrence P. Kolb
Acting Executive Officer

FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

Attachments: Site Map
Self-Monitoring Program

SITE OF GEORGIA PACIFIC

MW-17
11.77



SCALE IN FEET
0 100 200

EXPLANATION

- MW-9 Monitoring Well
- 11.00 Groundwater Elevation
- 10.0 Groundwater Contour
- Extraction Well
- Building Outline

NOTE:
Coordinates system based on Standard City Monument
at intersection of Mowry Avenue and Cherry Street.

SOURCE:
PARCEL MAP 6707 for property lines.

PROJECT NO.:	43-00007.02	DATE:	9/21/99
FILE NAME:	108819.dwg	SCALE:	1" = 200'
DESIGNED BY:	SP	DRAWN BY:	PS
CHECKED BY:	HEP	APPROVED BY:	HEE

URS GREINER

FORMER CLORRO METAL PRODUCTS FACILITY
THE MARMON GROUP, Inc.
NEWARK, CALIFORNIA

Groundwater Contour Map
December 14, 1999

SOUTHERN PACIFIC
R/R R/W

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

CERRO METAL PRODUCTS COMPANY

for the property located at

6707 MOWRY AVENUE
NEWARK
ALAMEDA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Site Cleanup Requirements Order No. 00-51.
2. **Monitoring:** The discharger shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
IV-3	Q	8260/8015m	MW-18	Q	8260/8015m
MW-6	Q	8260/8015m	MW-21	Q	8260/8015m
MW-7	Q	8260/8015m	MW-22	Q	8260/8015m
MW-8	Q	8260/8015m	MW-24	Q	8260/8015m
MW-9	Q	8260/8015m	MW-25	Q	8260/8015m
MW-14	Q	8260/8015m	EW-C	Q	8260/8015m
MW-15	Q	8260/8015m	EW-D	Q	8260/8015m
MW-16	Q	8260/8015m	EW-E	Q	8260/8015m
EW-F	Q	8260/8015m	EW-G	Q	8260/8015m
EW-H	Q	8260/8015m			

Key: 8015m = EPA Method 8015 modified or equivalent
8260 = EPA Method 8260 or equivalent
Q = Quarterly

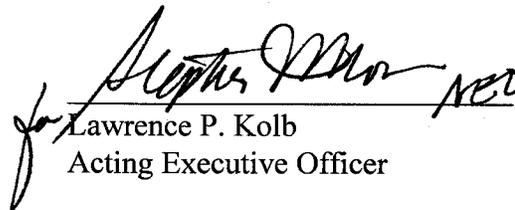
The discharger shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The discharger may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Semi-annual Monitoring Reports:** The discharger shall submit semi-annual monitoring reports to the Board no later than 30 days following the end of the semi-annual period (i.e., report for July through December period due January 31). The first semi-annual monitoring report shall be due on July 31, 2000. The reports shall include:
 - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
 - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the second semi-annual monitoring report each year.
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the second semi-annual monitoring report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
 - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the

quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g., soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the second semi-annual monitoring report each year.

- e. **Status Report:** The semi-annual monitoring report shall describe relevant work completed during the reporting period (e.g., site investigation, interim remedial measures) and work planned for the following semi-annual reporting period.
4. **Violation Reports:** If the discharger violates requirements in the Site Cleanup Requirements, then the discharger shall notify the Board office by telephone as soon as practicable once the discharger has knowledge of the violation. Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five working days of telephone notification.
5. **Other Reports:** The discharger shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
6. **Record Keeping:** The discharger or his/her agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
7. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Lawrence P. Kolb, Acting Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on, June 21, 2000.


Lawrence P. Kolb
Acting Executive Officer