

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91-079

SITE CLEANUP REQUIREMENTS FOR:

HENKEL CORPORATION
PARKER+AMCHEM
37899 NILES BOULEVARD
FREMONT, ALAMEDA COUNTY

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

1. SITE DESCRIPTION. Henkel Corporation, Parker+Amchem (Amchem) located at 37899 Niles Boulevard, Fremont, Alameda County (the Site), presently manufactures (blends) chemicals for the metal treating industry. Henkel Corporation, Parker+Amchem is also referred to as the Discharger.

2. SITE HISTORY. The existing facility was used as a cannery until 1952. Underground tanks were used to store fuel for an oil-fired boiler used in the canning operations. From 1952 to 1980, Amchem Products, Inc., a wholly owned subsidiary of Union Carbide Agricultural Products Corporation, Inc., manufactured metal-treating chemicals and formulated herbicides containing Dichlorophenoxy Acetic Acid (2,4-D) and Trichlorophenoxy Acetic Acid (2,4,5-T). In 1980, the metal-treating chemical business, the Fremont facility, and the AMCHEM name were sold to Henkel of America. The formulation of herbicides was discontinued.

A 2,4-D surface spill in 1978 triggered a series of soil and groundwater investigations. The investigations revealed the presence of herbicides in soil at the site. Some contaminated soil as well as buried drums were excavated in 1982. In 1984 ten underground storage tanks were removed. Significant petroleum and herbicide contamination was reported in soils beneath the tanks. Amchem examined the extent of soil and groundwater contamination in cooperation with Board staff.

3. INTERIM REMEDIAL MEASURES FOR SOIL. In 1987 the Department of Health Services, Amchem and Union Carbide Corporation entered into a Consent Agreement to clean up herbicide contaminated soils regulated under the State Hazardous Substance Account Act. Excavation of soil was completed by October 1988 under a DHS-authorized Remedial Action Plan. In June 1989 DHS certified the completion of their required remediation, but estimated that groundwater monitoring would continue for approximately 10 years.

4. OCCURRENCE OF GROUNDWATER. The site occurs within a subbasin of the Niles Cone groundwater basin. This subbasin is bounded to the west by the Hayward Fault, which acts as a barrier to groundwater flow. The Alameda County Water District (ACWD) artificially recharges the subbasin with surface water via Alameda Creek and a series of gravel pits. The primary area of groundwater discharge is the Peralta-Tyson wellfield located approximately 3,000 feet southwest of the site. This municipal supply wellfield extracts groundwater from a coarse gravel aquifer 60 feet below land surface. A secondary discharge point for groundwater is a City of Fremont irrigation well which serves a nearby community park. This well is referred to as the "I Street Well" and is located approximately 2,000 feet southwest of Amchem. East of the Hayward Fault, Niles Cone gravels are not classified into separate aquifer units.

Logs from monitoring wells at Amchem indicate the local geology consists of fill material from 0 to 8 feet with sands and silty sands interbedded with gravel lenses from 8 to 24 feet. Below 24 feet gravels, sandy gravels, and gravelly sands predominate. Shallow gravels are hydraulically connected to deeper gravels as evidenced by the replenishment of surface water from Alameda Creek to the Peralta-Tyson wellfield. Groundwater modeling conducted by Amchem has supported the existence of this hydraulic connection.

Recharge events directly effect groundwater levels beneath the Amchem site. Groundwater levels in Amchem monitoring wells seasonally fluctuates between 35 and 55 feet below ground surface. Groundwater flow is generally toward the west, but flow reversals have been reported. The variability of groundwater flow patterns has complicated efforts to delineate the extent of contamination.

5. SOIL AND GROUNDWATER INVESTIGATIONS. During removal of underground storage tanks, a heavy fuel oil was encountered. The product was attributed to an oil-fired burner used in conjunction with the pre-1952 canning operation. In addition a lighter hydrocarbon product has been detected in groundwater. Amchem has estimated that hydrocarbon contamination at the source occupies an area 200 feet by 250 feet extending to a depth greater than 55 feet. The source area has impacted groundwater; up to 15,000 ppb Total Volatile Hydrocarbons and 47,000 ppb Total Extractable Hydrocarbons have been reported in groundwater. A generalized plume has been delineated by Amchem, but its extent fluctuates as a function of seasonal groundwater levels. Free product is consistently reported in one onsite well.

Since 1978 intermittent detections of 2,4-D and 2,4,5-T have been reported in groundwater. Despite the subsequent removal of some herbicide contaminated soil, trace levels of herbicides have been detected in groundwater. Groundwater samples collected in July 1990 revealed detectable levels of 2,4-D and 2,4,5-TP in MW-5 and 2,4,5-T in MW-10. The RWQCB directed Amchem to reinitiate quarterly groundwater monitoring in a January 10, 1991 letter. Amchem responded in a February 15, 1991 letter that groundwater sampling began on February 13, 1991.

6. PROPOSED INTERIM REMEDIAL MEASURES FOR GROUNDWATER. Measures have been proposed by Amchem to remediate remaining soil and groundwater contamination. In September 1987 an RI/FS for the oil contaminated area was completed; the preferred alternative was to initiate a pump and treat system while continuing an evaluation of bioremediation. As a follow-up to this effort, computer modeling results of the proposed pump and treat system were submitted in March 1988. A groundwater pumpage rate was developed to maintain hydraulic containment and to compensate for pumpage of ACWD municipal wells. The Amchem proposal never received RWQCB approval. The purpose of this Order is to provide regulatory direction for the ongoing groundwater investigations and for the initiation of groundwater remediation.

As requested by RWQCB in a January 10, 1991 letter to Amchem, a schedule for the design and implementation of a free product system and completion of a technical summary memorandum was received by RWQCB in a February 15, 1991 letter. Consultants for Amchem propose installation by June 28, 1991 of a passive skimming system with equipment located in one or two existing onsite wells. The proposed design and schedule are integrated into this Order.

7. BENEFICIAL USES. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) dated December 1986. The Basin Plan contains water quality objectives and beneficial uses for San Francisco Bay and contiguous surface and ground waters.

The existing and/or potential beneficial uses of groundwater in the vicinity of the Site include:

- a. municipal water supply (including irrigation)
- b. industrial process supply
- c. industrial service supply
- d. agricultural supply

The existing and/or potential beneficial uses of surface waters (Alameda Creek) include:

- a. agricultural supply
 - b. groundwater recharge
 - c. contact and non-contact water recreation
 - d. warm and cold fresh water habitat
 - e. wildlife habitat
 - f. fish migration and spawning
8. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.
 9. The Board has notified the Discharger and 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 the opportunity for a public hearing and an opportunity to submit their written views and recommendations.
 10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that Henkel Corporation, Parker+Amchem shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

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

B. SPECIFICATIONS

1. The treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050 (m) of the California Water Code.

2. Henkel Corporation, Parker+Amchem shall conduct monitoring activities reasonably necessary to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution. Should monitoring results show evidence of plume migration, additional plume characterization may be required.
3. Any wells identified as potential conduits for the migration of pollutants shall be properly abandoned, to the extent legally possible. A detailed workplan shall be submitted for review and approval which describes the proposed methods of abandonment for each well identified.

C. PROVISIONS

1. Henkel Corporation, Parker+Amchem shall review its existing groundwater monitoring program and shall propose modifications within 45 days of the adoption of this Order, modifications as necessary to comply with this Order. This monitoring program shall be acceptable to this Board's Executive Officer. The proposed monitoring program shall include, but need not be limited to, the identification/location of sample wells, the frequency of water levels and water quality sampling, and the identification of methods chosen for sample analysis.
2. Henkel Corporation, Parker+Amchem shall comply with Prohibitions A.1, A.2, and A.3., and Specification B.1, B.2, and B.3 by completing the tasks outlined below in accordance with the following time schedule:

COMPLETION DATE/TASK:

- a. COMPLETION DATE: July 1, 1991

TASK: EVALUATION OF KNOWN DISSOLVED GROUNDWATER POLLUTION AND RECOMMENDED INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer which reviews currently known dissolved groundwater pollution locations where pollutants exist because of actions previously conducted by the Discharger. The report shall also evaluate the various interim remedial alternatives for dissolved pollutants available to minimize further water quality degradation in surface and groundwater, and recommend the preferred interim cleanup alternative, and a time schedule for implementation of the interim cleanup measures.

b. COMPLETION DATE: August 1, 1991

TASK: IMPLEMENTATION OF FREE PRODUCT CLEANUP SYSTEM: Submit a technical report acceptable to the Executive Officer documenting installation of the free product groundwater extraction system referred to in Finding 6 listed above. The implementation includes but is not limited to engineering designs, equipment procurement, construction and installation, start up, and permitting (e.g. building permits, conditional use permits, air permits, discharge permits, hazardous waste variances, etc.).

c. COMPLETION DATE: 180 days after the Executive Officer approves the recommended shallow zone interim remedial actions.

TASK: IMPLEMENTATION OF SHALLOW ZONE INTERIM REMEDIAL ALTERNATIVES: Submit a technical report acceptable to the Executive Officer documenting completion of the implementation of the preferred remediation for dissolved groundwater pollutants as selected in Provision C.2.a. The implementation includes but is not limited to engineering designs, equipment procurement, construction and installation, start up, and permitting (e.g. building permits, conditional use permits, air permits, discharge permits, hazardous waste variances, etc.).

d. COMPLETION DATE: DECEMBER 1, 1991

TASK: GROUNDWATER CHARACTERIZATION AND POTENTIAL CONDUIT STUDY: Submit a technical report acceptable to the Executive Officer which defines and includes the results of work performed to complete the vertical and horizontal characterization of the extent of groundwater pollution at the Discharger's facility. This technical report shall include the results of a potential conduit study, and a summary and evaluation of all information the Discharger has collected regarding groundwater pollution.

e. COMPLETION DATE: JUNE 1, 1992

FINAL GROUNDWATER CLEANUP PLAN/FEASIBILITY STUDY: Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim free and dissolved product remediation. The report will identify and discuss the final groundwater cleanup alternatives, their feasibility, and their cost and benefits in relation to beneficial use protection, and recommend the preferred cleanup alternative and a time schedule for implementation of the cleanup measures. The report shall also specify a network of monitoring wells which will

document the effectiveness which remediation of the groundwater will have at this Site.

- f. COMPLETION DATE: 180 days after the Executive Officer approves the feasibility study

IMPLEMENTATION OF SHALLOW ZONE FINAL REMEDIAL ALTERNATIVES: Submit a technical report acceptable to the Executive Officer documenting completion of the implementation of the preferred remediation as selected in Provision C.2.d. The implementation includes but is not limited to engineering designs, equipment procurement, construction and installation, start up, and permitting (e.g. building permits, conditional use permits, air permits, discharge permits, hazardous waste variances, etc.).

3. On a quarterly basis, the Discharger shall submit a technical report one month following the end of each quarter, commencing with a report for the quarter ending June 30, 1991 and due July 31, 1991. These quarterly technical reports shall include, but need not be limited to, the results of updated groundwater quality sampling of wells, updated water table surface maps, updated cross-sectional geologic maps describing the hydrogeologic setting, and appropriately scaled and detailed base maps.
4. On an annual basis, for the previous calendar year, by the end of the second month following the calendar year, the Discharger shall submit an annual technical report acceptable to the Executive Officer which shall document and evaluate the progress of remedial actions. This report shall contain, but not be limited to, information on the number of gallons of groundwater pumped and treated, where the waters were discharged, changes and trends in water quality, problems encountered in the past year with implemented and/or proposed solutions, and projected cleanup anticipated for the coming year.
5. As specified in Section 13273(b) of the California Water Code, all hydrogeologic reports, documents, plans, and specifications, shall be certified by one of the following: a registered geologist, registered pursuant to Section 7850 of the Business and Professions Code; a certified engineering geologist, certified pursuant to Section 7842 of the Business and Professions Code; or a civil engineer registered pursuant to Section 6762 of the Business and Professions Code, who has at least five years experience in groundwater hydrology.

6. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.
7. All samples shall be analyzed by State certified 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 records for Board review.
8. The Discharger shall maintain in good working order, and operate, as efficiently as reasonably possible, any facility or control system installed to achieve compliance with the requirements of this Order.
9. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:
 - a. Alameda County Water District
 - b. City of Fremont
 - c. United States Environmental Protection Agency Region IX (H-4-4)
 - d. State Department of Health Services/TSCD
10. The Discharger shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:
 - a. Entry upon premises in which any pollution sources exist, 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 terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or methodology implemented 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.
11. The Discharger shall file a report on any changes in Site occupancy and ownership associated with the facility described by the Discharger.

12. If any hazardous substance is discharged in or on any water of the State, or discharged and deposited where it is, or probably will be, discharged in or on any waters of the State, the Discharger shall report such discharge to this Regional Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to the nature of waste or pollutant, quantity involved, duration of the incident, cause of spill, Spill Prevention, Control and Countermeasures Plan (SPCC) in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and person/agencies notified.
13. The Board will review this Order periodically and revise the requirements as necessary to effectuate the intent of this Order in a prompt and reasonable manner.

I, Steven R. Ritchie, 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 May 15, 1991.


Steven R. Ritchie
Executive Officer