STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737

COAST WOOD PRESERVING SUPERFUND SITE

UKIAH, CALIFORNIA
FIVE-YEAR REVIEW (TYPE IA)

January 26, 1996

I. INTRODUCTION

Authority Statement. Purpose. The Department of Toxic Substances Control (DTSC) conducted this review pursuant to CERCLA section 121(c), NCP section 300.400 (f)(ii), and OSWER Directives 9355.7-02 (May 23, 1991, and 9355.7-02a (July 26, 1994). It is a policy review. The purpose of a five-year review is to ensure that a remedial action remains protective of public health and the environment and is functioning as designed. This document will become a part of the site file. This review (Type IA) is applicable at a site at which response is ongoing.

Site Characteristics. The Coast Wood Preserving (CWP) facility is located approximately 3 miles south of Ukiah, California. The facility has operated continuously since 1971, treating wood with sodium dichromate, copper sulfate, and arsenic acid solutions. Drippings from treated wood contaminated near surface soils and groundwater, particularly during the early years of operation when the treatment and treated wood storage areas were not all paved. Since 1980, general facility improvements have been made including construction of berms and grading to preclude surface water runoff from the retort and treated wood storage area, surface paving, and construction of roofs over the retort area.

In 1983, CWP installed a slurry wall and groundwater extraction trench downgradient to limit the migration of chromium. CWP extracts groundwater contaminated with wood treatment chemicals and either uses the untreated groundwater in the wood treatment process, or treats the water to remove chromium before discharging into a deep injection well. All liquid waste from the site and from storm water runoff are consumed or reused in the wood treatment process. Solid wastes are collected and disposed at a Class I disposal site.

In 1989, DTSC approved a Remedial Action Plan (RAP), and US EPA issued a Record of Decision (ROD) for the site which called for operation and maintenance of the existing controls discussed above, as well as remediation of soil contamination after closure of the facility. CWP is required to implement the provisions of the RAP (regarding soil and groundwater cleanup) at the site.

Remedial Action Funding. The RAP includes a mechanism for CWP to fund future cleanup costs. CWP has agreed to establish an interest bearing certificate of deposit (CD) account. The CD account is for cleanup activities at the end of the business life at the site and for emergency response actions during active operations. The amount of funds estimated for cleanup of the soil is $500,000.00 (calculations provided by CWP, dated July 3, 1990, which are included in Section 9 and Table 12 of the RAP). The CD account will be renewed with annual deposits of $50,000.00 for 10 years. The CD account shall be fully funded within 10 years or by the end of the active life of the facility, whichever occurs first. CWP has named the Department as beneficiary. Currently negotiations are under way to convert the CD account into a trust fund, at US EPA's request. Currently the CD contains approximately $328,000.00.

II. DISCUSSION OF REMEDIAL OBJECTIVES

The Remedial Objectives for the site are defined in the September, 1989, final RAP prepared under DTSC order. Applicable or relevant and appropriate requirements (ARARs) are discussed in Section 7.5 of the RAP. The remedial objectives are:

(1). Prevent off-site migration of chromium, arsenic, and copper contaminated groundwater and surface water; and

(2). Provide final cleanup-up of soils contaminated with chromium, arsenic, and copper when the facility is closed.

A. The elements of objective number one were implemented and remain in effect as described below.

1. Surface Runoff Flow Management

All exposed soils were paved to prevent surface water infiltration and to reduce the potential for the leaching of chromium from soils to groundwater. The site is inspected at least once per year before the wet season. Surface paving and drainage features are repaired as appropriate. To prevent cross contamination, the facility uses dedicated equipment (forklifts) in the retort area, treated wood storage area, and untreated wood storage area. Equipment is not moved between the three areas without prior decontamination. Storm water monitoring is performed in accordance with Regional Water Quality Control Board (RWQCB) Order No. 85-101 and amendments (attachment 1). The RWQCB takes appropriate actions based on the results of storm water monitoring.

2. Plume Control and Aquifer Remediation

The zone of contamination is hydraulically controlled to prevent off-site migration and gradually remediate the aquifer. The contamination is controlled using strategically located extraction wells in the affected aquifer.

A contingency plan to pump from off-site wells such as No. AT-2 and/or install new extraction wells, is contained in the RAP, and will be implemented in the event that contamination migrates off-site.

3. Water Reuse, Discharge via Reinjection Well

Extracted groundwater is recycled untreated into CWP's operations to the greatest extent possible. Excess groundwater which can not be recycled is treated before discharge into a deep, on-site reinjection well.

4. Electrochemical Treatment of Groundwater

Extracted groundwater containing chromium in excess of the federal and state maximum contaminant level (MCL) of 0.05 parts per million is electrochemically treated at the site to achieve concentrations below the MCL (or lower concentrations designated by the RWQCB) before discharge.

5. Monitoring

Monitoring of groundwater and surface water is conducted as specified in RWQCB's Monitoring and Reporting Program No. 85-101 (including amendments). The groundwater, storm water, and treatment system are monitored to ensure the effectiveness of the RAP, and identify areas of noncompliance, action needs, and potential problems.

B. The elements of objective number two will be implemented upon facility closure as described below.

1. Control of Contaminated Soil.

After the closure of the site, on-site treatment of contaminated soils will be evaluated using the best available technology to provide a permanent clean-up remedy. Treatability studies will be conducted by CWP prior to the future selection of this remedy and approved by DTSC and US EPA. On-site treatment of contaminated soils will not commence until the closure of the facility. The RAP estimated that closure would be a minimum of 10 years from 1989.

III. AREAS OF NONCOMPLIANCE

A. Plume control and aquifer remediation (Section II. A2).

The RAP states that the zone of contamination shall be controlled hydraulically to prevent off-site migration and to gradually remediate the aquifer. This goal is accomplished by continually extracting groundwater from locations near the retort area and near the site boundary. CWP has generally been in compliance with the terms of the RAP except for a period beginning early in 1994 until June 1995.

Beginning in 1993, due to a decline in demand for treated wood, CWP could not use all extracted water for processing. As a result, CWP had to store extracted groundwater in above ground tanks. The groundwater was later treated, stored and discharge into a shallow injection well. The shallow injection well was not able to handle the increased discharge volume and water began to pond on adjacent land. In early 1994, CWP reported to the RWQCB that the shallow injection well for disposal of treated groundwater had failed. The RWQCB was concerned that the storage capacity for winter storm water run-off was too limited and authorized CWP, by letters dated August 19 and September 26, 1994, to stop pumping groundwater. The RWQCB's August 19, 1994, letter stated, "If CWP believes that storage capacity would be exceeded if both storm water run-off and pumped groundwater are collected, then CWP should cease pumping groundwater until alternative disposal options are developed". CWP entered the winter of 1994 with limited storage capacity. Due to extraordinary precipitation in 1994, CWP used all remaining above ground storage tanks. CWP ceased pumping shortly after September 1994, and as a result, contaminated groundwater began bypassing the slurry wall containment. CWP constructed a new deep aquifer injection well that could accommodate the increased discharge rate in June 1995. Groundwater extraction resumed as of that date. The well appears to be operating effectively and the facility is in compliance with the RAP.

IV. RESULTS OF GROUNDWATER SAMPLING

During the period May 1994, through June, 1995, measured concentrations of dissolved chromium in water samples from on-site monitoring wells ranged from non-detect (5 ug/l) to 62,500 ug/l. Since pumping resumed in June 1995, concentrations of dissolved chromium have been decreasing.

To date, measured concentrations of dissolved chromium in water samples from off-site monitoring wells have remained below the MCL of 50 ug/l. Only two samples from monitoring well AT-2 contained dissolved chromium in concentrations (9.9 ug/l & 10.7) above the detection limit of 5 ug/l.

A. Summary of Groundwater Monitoring

The RAP states that CWP shall conduct groundwater and surface water monitoring pursuant to the RWQCB Order. CWP is currently complying with the terms of the most recent RWQCB Order No. 95-76.

V. RECOMMENDATIONS

DTSC recommends that CWP continues to implement the terms of the RAP. The RAP states that groundwater and storm water monitoring to be carried out in accordance with RWQCB orders. Specifically, Section 7.2.6.2 of the RAP states, "Storm water monitoring results shall be complied and reported to the RWQCB as specified in Revised Monitoring and Reporting Program No. 85-101 (RWQCB, May 1987). The results shall be evaluated and recommendations and modifications regarding overall facility improvements shall be made as appropriate". DTSC understands Section 7.2.6.2 of the RAP to mean; 1) Because monitoring is an integral part of the RAP and ROD, results of storm water monitoring will be evaluated together by RWQCB, US EPA, and DTSC; 2) If any violations of RWQCB orders occur, the RWQCB will immediately notify both DTSC and US EPA to discuss actions to be taken; and 3) All recommendations and modifications that pertain to the RAP regarding facility improvements will be made together by RWQCB, US EPA, and DTSC.

Section 7.2.6.3 of the RAP specifically states, "The results of the groundwater monitoring shall be reviewed on a quarterly basis and reported to the RWQCB as required by Revised Monitoring and Reporting Program No. 85-101 (RWQCB, May 1987). Based on the evaluation of the monitoring results, recommendations and modifications shall be made as appropriate and subject to RWQCB approval". DTSC understands Section 7.2.6.3 of the RAP to mean: 1) Results of groundwater monitoring shall be reviewed on a quarterly basis by CWP; and 2) Based on CWP's evaluation of the monitoring results, recommendations for modification of the RAP, shall be made to RWQCB, US EPA, and DTSC, and shall be implemented subject to approval by RWQCB, US EPA, and DTSC.

The RAP is a document prepared under DTSC order and in itself contains references to RWQCB orders, however, any modification of the RAP will be subject to approval of lead agency which is DTSC. DTSC will consult with both US EPA and RWQCB before making any significant changes to the RAP.

Sections of the RAP delegate oversight of storm water and groundwater monitoring to the RWQCB. It is extremely important that the RWQCB responds in a timely manner to the needs of CWP in CWP's effort to comply with the RAP and RWQCB orders. In early 1994, CWP reported to the RWQCB that the shallow injection well for disposal of treated groundwater had failed. From February

1994, to April 1995, the RWQCB failed to respond in a timely manner to CWP's requests for approval of a new injection well for disposal of treated groundwater. During this time the RWQCB was more concerned with storage capacity for storm water run-off, and told CWP to cease pumping groundwater. As a result, hydraulic control of the plume was lost. It is DTSC's opinion that the failure of RWQCB to respond in a timely manner to mitigative actions proposed by CWP unnecessarily caused CWP to become in non-compliance with the RAP. Therefore, we recommend that DTSC as lead agency continuously monitor the performance of the RWQCB in enforcing the terms of the RAP. DTSC inspects the site at least twice per year to verify that the RWQCB is taking timely action to insure that the conditions specified in the RAP are met.

In addition, we recommend CWP determine the maximum amount of storm water run-off they may encounter (based on Winter 1994 precipitation data) and make certain they have enough storage capacity to collect all storm water run-off. All excess treated groundwater continue to be reinjected into the deep aquifer via the new well at a rate that will not cause well failure.

DTSC further recommends that CWP identify and obtain approval from RWQCB, US EPA, and DTSC by September 30, 1996, of alternative disposal options for use in the event of injection well failure. In the event CWP encounters problems with the reinjection well RWQCB, US EPA, and DTSC will be informed and this alternative disposal plan implemented.

VI. STATEMENT OF PROTECTIVENESS

I certify that the remedy selected for this site remains protective of human health and the environment.

VII. NEXT FIVE YEAR REVIEW

The next five-year review will be conducted by December, 2000.

Barbara J. Cook, P.E., Branch Chief
Site Mitigation Branch, Region 2

2/5/96
Date

Attachment A: RWQCB Cease and Desist Order No. 95-76.

ATTACHMENT 1

STATE OF CALIFORNIA - CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION
5550 SKYLANE BLVD. SUITE A
SANTA ROSA, CA 95403
PHONE: (707) 576-2220

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
REGION 2
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STATE OF CALIFORNIA, EPA
RECEIVED

October 3, 1995

Mr. Gene Pietila
Coast Wood Preserving
P.O. Box 673
Ukiah, CA 95482

Dear Mr. Pietila:

Subject: Coast Wood Preserving, Plant and Taylor Drive, Ukiah

We have received your letter dated October 2, 1995, transmitting your proposal to discharge the wastewater from the 330 tank. The proposal is submitted in compliance with Cease and Desist Order No. 95-76, Item 1. We concur with the proposal and schedule as written.

As you know, the Regional Water Board adopted Cease and Desist Order No. 95-76 at its September 28, 1995 meeting. The Order was adopted as proposed. Enclosed is a signed copy for your records.

Please contact Janice Goebel of my staff at (707) 576-2676 if you have any questions.

Sincerely,

Benjamin D. Kor
Executive Officer

JMG:bp\jmggene.doc

Certified-Return Receipt

Enclosure
cc: Coast Wood List

California Water Quality Control Board
North Coast Region

ORDER NO. 95-76

REQUIRING COAST WOOD PRESERVING TO
CEASE AND DESIST FROM DISCHARGING WASTES
CONTRARY TO WASTE DISCHARGE REQUIREMENTS
PRESCRIBED BY ORDER NO. 94-63

Mendocino County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board) finds:

1. On April 26, 1972, Waste Discharge Requirements were adopted for Coast Wood Preserving Company (hereinafter referred to as discharger) who owns and operates a wood treatment plant in Ukiah, California. The Waste Discharge Requirements have been subsequently revised several times, with the last revisions on December 12, 1994, when the Waste Discharge Requirements were revised with Order No. 94-63 to reflect changes at the plant and to recognize the reinjection of treated groundwater to a deep well. These Waste Discharge Requirements prohibit the discharge of wood treatment chemicals to groundwater or surface water.

2. On March 26, 1981, Cease and Desist Order No. 81-61 was issued to Coast Wood Preserving. The Order required the submittal of technical reports in accordance with a time schedule, to eliminate the discharge and threat of discharge to surface waters and to conduct a groundwater investigation.

3. Cease and Desist Order No. 81-61 was complied with by controlling runoff, increasing storage capacity, and conducting the necessary groundwater investigation and cleanup. Litigation for violations of Order No. 81-61 was settled on April 10, 1992.

4. Waste Discharge Requirements Order No. 94-63 require discharge controls on two waste streams: collection and reuse without treatment of storm water runoff contaminated with copper, chrome and arsenic which comes in contact with treated wood; and extraction, treatment and disposal of contaminated groundwater containing chromium. These discharge controls require that wastewater be managed and storage capacity for wastewater not be exceeded. Waste Discharge Requirements Order No. 94-63 also contains the following specific elements:

"A. Discharge Prohibitions

1. The discharge of any waste not specifically regulated by this order is prohibited...

4. The discharge of wood treatment chemicals or stain control fungicides to surface waters or to groundwaters is prohibited...

C. Provisions...

3. Operation and Maintenance

The discharger must maintain in good working order and operate as efficiently as possible any facility or control system installed by the discharger to achieve compliance with the waste discharge requirements."

5. In early 1994, Regional Water Board staff learned that the contaminated groundwater waste stream disposal system had failed in that highly treated wastewater being reinjected into groundwater would surface on an adjoining property. Further, in a meeting of June 28, 1994, Coast Wood Preserving personnel reported that some storm water and groundwater had been comingled, treated and reinjected in violation of Waste Discharge Requirements. Because of the surfacing effluent from the reinjection well, and the threat of potential inadequate wastewater storage capacity without effluent disposal, the discharger ceased pumping contaminated groundwater.

6. Data obtained on June 27, 1995, indicate that contaminated groundwater has commenced migration offsite onto adjacent properties. Engineering information provided on October 19, 1994, indicates that existing storage capacity for all waste streams (groundwater and storm water) would be insufficient for most winters, and that alternative wastewater handling and disposal options were needed. Regional Water Board staff requested an assessment of waste disposal options by the Spring of 1995, but this has not been submitted. However, Coast Wood has submitted conceptual alternatives for wastewater management and disposal. These alternatives included reducing the wastewater volume through wrapping of some treated wood.

7. The discharger has amassed 250,000 gallons of treated groundwater which contains between 9 and 11 ug/l of copper, but does not contain chromium or arsenic above the detection limit of 5 ug/l. This wastewater requires immediate disposal prior to the onset of the 1995-1996 winter to ensure adequate storage remains for collected storm water and extracted groundwater. The background levels for copper in this area are limited, but appear to vary onsite from less than a detection limit of 10 ug/l up to 16 ug/l in an offsite domestic well. Insufficient data is available to assess background levels utilizing a detection limit of 5 ug/l, however, the 250,000 gallons of wastewater appears to be within the variability of probable background levels. On September 13, 1995, the discharger proposed a one-time discharge to the reinjection well of this 250,000 gallons of wastewater containing no greater than 11 ug/l of copper. Further information is required on the operational requirements of the one-time

discharge, but the discharge is needed to prevent a threatened discharge this winter, will not adversely impact areal groundwaters, and is likely within background levels for copper for groundwater.

8. On September 28, 1995, in Santa Rosa, California, after due notice to the discharger and all other interested persons, the Board conducted a public hearing at which the discharger appeared and evidence was received concerning this discharge.

9. Coast Wood is discharging wastes or threatening to discharge wastes to waters of the State in violation of Order No. 94-63.

10. The discharge has unreasonably impaired and threatened to unreasonably impair the existing and potential beneficial uses of water.

11. The discharge of wastes will continue to cause or threaten to cause a condition of pollution or nuisance until the waste is cleaned up.

12. Pursuant to §15321, Chapter 3, Division 7, Title 14, California Code of Regulations, the adoption of this Cease and Desist Order is an enforcement action is therefore exempt from the provisions of the California Environmental Quality Act (CEQA); further, pursuant to §15301, this facility is an existing facility and this project involves no expansion in use beyond that previously existing, and is therefore exempt from the provisions of CEQA; and further, pursuant to §15308, this action is being taken for the protection of the environment, and is therefore exempt from the provisions of CEQA.

THEREFORE, IT IS HEREBY ORDERED THAT Cease and Desist Order No. 81-61 be rescinded and that it be further ordered that Coast Wood Preserving shall cease and desist from discharging wastes contrary to Order No. 94-63 by complying with the following tasks and time schedule:

1. Submit by October 5, 1995, a modified plan for disposal of the 250,000 gallons of treated groundwater containing less than 15 ug/l copper, less than 5 ug/l chromium, and less than 5 ug/l arsenic. The modified plan shall include provisions for avoidance of discharge of any sludges associated with the wastewater storage system, and shall include a provision for implementation by October 30, 1995.

2. Submit by October 15, 1995, a sampling and analysis plan to evaluate the effectiveness of the cleaning and resurfacing of the storm water collection area.

3. Submit a revised operations plan by October 31, 1995, detailing (1) the storm water collection and reuse waste stream plumbing and storage system; (2) the contaminated groundwater extraction, treatment design of the disposal systems

(plumbing, injection flow rates, etc), and (3) an updated sump sealing, pavement sealing, and sump cleaning schedule and reporting.

4. Submit a plan by October 31, 1995, for compliance with Monitoring and Reporting Program No. 94-63, No. 12 (c) and (d).

5. Submit by October 15, 1995, a status report on available storage capacity and projected storage needs for the winter of 1995-1996, anticipating a 10 year return winter, with contingency plans if needs exceed capacity. Monthly reports shall be submitted thereafter to the Regional Water Board on available storage capacity for collection of storm water runoff and extracted groundwater.

6. Submit a technical report prepared by a California registered engineer or geologist by April 15, 1996, and November 15, 1996, evaluating the adequacy of the existing groundwater containment and extraction controls and potential for migration of contaminated groundwater.

7. All documents submitted to comply with Provisions 1 through 5 of this Order shall be submitted by a responsible individual familiar with the operations at Coast Wood Preserving and with the contents of the submitted documents, and shall be certified as accurate, under penalty of perjury.

8. If, in the opinion of the Executive Officer, the discharger fails to comply with the provisions of this Order, the Executive Officer is directed to request the Attorney General to take the appropriate enforcement action against the discharger, including injunction and civil monetary remedies, if appropriate.

Certification

I, Benjamin D. Kor, 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, North Coast Region, on September 28, 1995.

Benjamin D. Kor
Executive Officer

(cwpcdo.doc)