CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 93-148

AMENDING ORDER NO. 90-010, SITE CLEANUP REQUIREMENTS FOR:

OWENS/CORNING FIBERGLAS CORPORATION
960 CENTRAL EXPRESSWAY
SANTA CLARA, SANTA CLARA COUNTY

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

SITE DESCRIPTION

1. Owens/Corning Fiberglas Corporation (hereinafter called the discharger) owns a 42.8-acre site located at 960 Central Expressway in the City of Santa Clara and operates a facility thereon which manufactures thermal insulation, asphalt roofing rolls, and roofing shingles.

2. During the discharger's ownership and occupancy from 1949 to the present, releases of petroleum products to the soil and groundwater have occurred at this site.

REGULATORY HISTORY

3. On January 17, 1990 the Board adopted a site cleanup requirements (SCR) Order No. 90-010 for this site. Order No. 90-010 required the discharger to implement actions to remediate petroleum product pollution in soil and groundwater by October 31, 1992, and to evaluate the effectiveness of these actions by June 30, 1993.

4. The discharger has implemented action to remediate groundwater pollution and has installed one extraction well; groundwater polluted with petroleum product is pumped out of the ground and into a storage system, without treatment, and used for onsite process water by the discharger.

5. An effectiveness evaluation of the groundwater remediation performed by the discharger indicated that the one extraction well is not removing gasoline (petroleum products) detected at downgradient monitoring well(s) and therefore is not very effective in remediating polluted groundwater. The discharger has been requested by the Board to implement procedures to improve the effectiveness of groundwater remediation.

6. The discharger has not been able to implement action (soil gas venting) to remediate soil pollution because of a rising water table, and has evaluated four alternate procedures:

   a. Alternative No. 1: Additional Groundwater Extraction to Enhance Capture. The total cost of adding one extraction well to the system, assuming a lifetime of 7.5 years, is $95,500.

b. Alternative No. 2: Stimulation of In Situ Biodegradation, which includes one additional extraction well (as in Alternative No. 1) and involves adding oxygen in the form of hydrogen peroxide to the groundwater to stimulate the growth of indigenous microbes and accelerate metabolism of petroleum hydrocarbons. The total cost of this alternative is $87,000, based on the discharger's assumption that it reduces the project lifetime to three years.

c. Alternative No. 3: Water Table Depression and Air Sparging, which involves injecting air into the aquifer and collecting it with an SVE system. The hydrocarbon-laded vapor is then treated with granulated activated carbon prior to discharge to the atmosphere. Discharge requires a Bay Area Air Quality Management District permit. The total cost of this alternative is $323,000, based on a lifetime of three years. Air sparging potentially can reduce remediation time, but the control of air flow within the subsurface is uncertain and will be costly to optimize.

d. Alternative No. 4: Aquifer Dewatering and Soil Vapor Extraction, which uses six additional extraction wells to dewater the area of interest and then remove residual petroleum hydrocarbons. The collected vapor would be treated and discharged as in the previous alternative. The total cost of this alternative, assuming a lifetime of three years, is $295,200. More than six dewatering wells may be required, and the extraction needed for dewatering is uncertain and will be costly to optimize.

7. The discharger recommends implementing Alternative No. 2, which includes injecting hydrogen peroxide into the aquifer to stimulate biodegradation, and one additional extraction well. This alternative will also improve the effectiveness of interim remediation. The Board agrees with the discharger's recommendation.

8. The discharger will re-evaluate the need to specifically address soil pollution as part of the proposed final cleanup objectives and actions in a report to be submitted in 1995 (Task c.1).

BASIN PLAN

9. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 16, 1991. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and ground waters.

CEQA

10. 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.

NOTIFICATION

11. The Board has notified the discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe amendments to Site Cleanup Requirements and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

PUBLIC MEETING

12. The Board, in public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to provisions of the California Water Code and regulations adopted thereunder, that the discharger shall comply with the following:

PROVISIONS

1. New TASK b.4) is added to Provision 1 and TASKS c.1) and c.3) of Provision 1 are modified, as follows:

b. INTERIM REMEDIAL ACTION TASKS:

4) COMPLETE IMPLEMENTATION OF THE RECOMMENDED REMEDIAL ALTERNATIVE AND RECOMMENDED PROCEDURES TO IMPROVE THE EFFECTIVENESS OF GROUNDWATER REMEDIATION:

Submit a technical report acceptable to the Executive Officer which describes implementation of the recommended remedial alternative to address petroleum product pollution, and implementation of the recommended procedures adopted to improve the effectiveness of groundwater remediation.

COMPLETION DATE: No later than May 1, 1994

c. FINAL CLEANUP TASKS

1) PROPOSE FINAL CLEANUP OBJECTIVES AND ACTIONS:

Submit a technical report acceptable to the Executive Officer that proposes final cleanup objectives and actions for petroleum product pollution. This report shall contain the results of the remedial investigation; an evaluation of the installed interim remedial measures and the need to specifically address remediation of soil pollution; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures. If site characterization and/or interim remedial actions completed indicate that final cleanup of VOCs is necessary, the Board will amend or revise this Order accordingly.

COMPLETION DATE: No later than May 1, 1995

3) FIVE YEAR STATUS REPORT:

Submit a technical report acceptable to the Executive Officer containing the following: 1) results of any additional investigative work completed; 2) an evaluation of the effectiveness of installed final cleanup measures; 3) additional

recommended measures to achieve final cleanup objectives and goals, if necessary; 4) a comparison of previous expected costs with the costs incurred and projected costs necessary to achieve cleanup objectives and goals; 5) the tasks and time schedule necessary to implement any additional final cleanup measures; and 6) recommended measures for reducing Board oversight. This report shall also describe the reuse of extracted groundwater, evaluate and document the removal and/or cleanup of polluted soil. If safe drinking water levels have not been achieved through continued groundwater extraction and/or soil remediation, this report shall also contain an evaluation addressing whether it is technically feasible to achieve drinking water quality onsite, and if so, a proposal for procedures to do so.

COMPLETION DATE: No later than December 1, 1995

2. New Provision 13 is added:

13. Pursuant to California Water Code Section 13304 (c), the discharger is hereby notified that the Board is entitled to and may seek reimbursement for all reasonable staff oversight costs incurred related to cleanup of wastes at the 960 Central Expressway site in Santa Clara, abating the effects thereof, or taking other remedial action.

I, Steven R. Ritchie, Executive Officer, do hereby certify 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 November 19, 1993.

STEVEN R. RITCHIE
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

OWENS/CORNING FIBERGLAS CORPORATION

FOR THE PROPERTY LOCATED AT 960 CENTRAL EXPRESSWAY

SANTA CLARA, SANTA CLARA COUNTY

SITE CLEANUP REQUIREMENTS

ORDER NO. 93-148

CONSISTS OF

PART A

AND

PART B

PART A

A. General

1. Reporting responsibilities of waste Dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16.

2. The principal purposes of a self-monitoring program by a waste Discharger are the following:

   a. To document compliance with Site Cleanup Requirements and prohibitions established by the Board;

   b. To facilitate self-policing by the waste Discharger in the prevention and abatement of pollution arising from waste discharge;

   c. To develop or assist in the development of standards of performance, toxicity standards and other standards; and,

   d. To prepare water and wastewater quality inventories.

B. Sampling And Analytical Methods

1. Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater, and Test Methods for Evaluating Solid Waste EPA Document SW-846, or other EPA approved methods and in accordance with an approved sampling and analysis plan.

2. Water and waste analysis (except total suspended solids) shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. Definition Of Terms

1. A grab sample is a discrete sample collected at any time.

2. Duly authorized representative is a duly authorized representative may thus be either a named individual or any individual occupying a named position such as the following:

a. Authorization is made in writing by a principal executive officer; or,

b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietor in a sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.

D. Schedule Of Sampling, Analysis, And Observations

1. The Discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B.

E. Records To Be Maintained By The Discharger

1. Written reports shall be maintained by the Discharger for ground water monitoring and wastewater sampling, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

a. Identity of sample and sample station number;
b. Date and time of sampling;
c. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory;
e. Calculation of results;
f. Results of analyses, and detection limits for each analyses; and,
g. Chain of custody forms for each sample.

F. Reports To Be Filed With The Board

1. Groundwater monitoring results shall be filed quarterly, unless a different schedule is adopted by the Board and/or Executive Officer. Written self-monitoring reports shall be filed no later than 45 calendar days following the end of the report period. In addition an annual report shall be filed if and as indicated. The reports shall be comprised of the following:

a. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the Discharger has previously submitted a

detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are 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 managed 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 fine and imprisonment for knowing violations."

b. Each monitoring report shall include a compliance evaluation summary sheet. Until the Order's amended to specify ground water protection standards, the following shall apply and the compliance sheet shall contain:

   i. The method and time of water level measurement, the type of pump used for purging, pump placement in the well, method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water; and,

   ii. Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; the chain of custody record.

c. A summary of the status of any remediation work performed during the reporting period. This shall be a brief and concise summary of the work initiated and completed as follows:

   i. As interim corrective action measures; and,

   ii. To define the extent and rate of migrations of waste constituents in the soil and ground water at the site.

d. The Discharger shall describe, in the quarterly or periodic report, the reasons for significant increases in a pollutant concentration at a well onsite. The description shall include the following:

   i. The source of the increase;

   ii. How the Discharger determined or will investigate the source of the increase; and,

   iii. What source removal measures have been completed or will be proposed.

e. A map or aerial photograph showing observation and monitoring station locations, and plume contours for each chemical in each aquifer shall be included as part of the quarterly Self-Monitoring Report.

f. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. The following information shall be provided:

   i. The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review; and,

   ii. In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

g. By January 31 of each year the Discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

   i. Tabular and graphical summaries of the monitoring data obtained during the previous year;

   ii. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the Site Cleanup Requirements; and,

iii. A written summary of the ground water analyses indicating any change in the quality of the ground water.

G. In the event the Discharger violates or threatens to violate the conditions of the Site Cleanup Requirements and prohibitions or intends to experience a plant bypass or treatment unit bypass due to:

1. Maintenance work, power failures, or breakdown of waste treatment equipment, or;
2. Accidents caused by human error or negligence, or;
3. Other causes, such as acts of nature.

The Discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within 7 working days of the telephone notification. The written report shall include time and date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, the waste Discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day. Such daily analyses shall continue until such time as the effluent limits have been attained, until bypassing stops or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

Part B

A. Description Of Observation Stations And Schedule Of Observations

1. The observation stations shall consist of existing groundwater monitoring wells, grouped as follows:

   a. Group A
      1. Wells E-1 through E-5, E-7 through E-11, M-1, M-4, 17A, 18A, 19A, E-6R, MW-1R, MW-3R, and MW-4R;

   b. Group B
      1. E-1: VOCs
      2. E-2R, E-3, E-4, E-5: VOCs, gasoline, BTEX
      3. E-9, E-10, E-11: gasoline, BTEX;

   and, any other groundwater monitoring wells selected from wells existing or added during the soil and groundwater characterization or the evaluation of remediation work.

2. The schedule of well observations and grab sampling shall be conducted semi-annually during the months of February and August.

B. Observations and Test Procedures

1. The groundwater well observations for all wells shall consist of the following:

   a. Water elevation reported to the nearest 0.01 foot for both depth to water from the ground surface and the elevation of the groundwater level;

   b. Groundwater temperature measured at the time of sampling and reported in degrees Fahrenheit;

   c. Groundwater conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;

   d. Groundwater pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and,

   e. Groundwater turbidity measured at the time of sampling.

2. The test procedures for the groundwater samples taken from Group B wells shall be as described in B.1. above, and B.2.a., b., and c. below:

   a. Volatile organic compounds (VOCs)
      1) Chlorinated hydrocarbons by EPA Method 8010;
      2) BTEX by EPA Method 8020.

   b. Gasoline and HBHC (high-boiling-point hydrocarbons) by methods specified by Cal EPA (DTSC)/EPA Method 5030/8015 (Modified), and EPA Method 3550/8015 (Modified), respectively.

   c. Detection limits shall be adequate for determining compliance with cleanup standards.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Developed in accordance with the procedures set forth in this Board's Resolution No. 73-16;

2. Effective on the date shown below; and,

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the Discharger.

Steven R. Ritchie
Executive Officer

11/19/98
Date Ordered