CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-162

AMENDING ORDER NO. 90-036, SITE CLEANUP REQUIREMENTS FOR:

U.S CELLULOSE AND
LOUIS J. AND SHIRLEY D. SMITH

FOR THE PROPERTY LOCATED AT:
1545-1547 ALMADEN ROAD, SAN JOSE
SANTA CLARA COUNTY

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

1. Groundwater pollution and soil pollution have been found on the property at 1545-1547 Almaden Road in San Jose in Santa Clara County. Leaking underground storage tanks (USTs) have been identified as one major source of pollution; other sources may have existed. U.S. Cellulose, former tenant-occupant, and Louis J. and Shirley D. Smith, present owners of the property, are hereinafter referred to as the dischargers. Pacific States Chemicals Inc. (PSCI), a former tenant-occupant after U.S. Cellulose that did not use either of the USTs, and Haz/Control (formerly South Bay Chemical Co., Inc.), a non-occupant former user of at least one of the USTs while PSCI was the site tenant-occupant, are not at this time considered likely sources of the site pollution and are not named as dischargers.

   In addition to the parties named in this Order, other parties may have contributed to pollution on the property. If additional information comes to light showing that any party not currently named as a discharger caused or permitted any waste to be discharged or deposited on the 1545-1547 Almaden Road site where it entered or could have entered into the waters of the State, the Board will consider adding that party's name to this Order.

2. The property consists of two buildings and grounds which are rented/leased to prospective tenants for commercial activities of a varied nature. At one time two underground storage tanks were located on the property and used by occupants. Both tanks were excavated and removed by direction of the present owners on August 8, 1985.

3. The two tanks were: (1) a 6,000-gallon-capacity tank used to store lacquer thinner, and (2) a 2,000-gallon-capacity tank used to store acetone. Lacquer thinner is a mixture of a number of organic compounds including alcohols, ketones, and other volatile organic chemicals. The contents of both tanks have also been called "paint solvents".

4. A report submitted by the current owners states that the smaller tank was installed for the Almaden Paint Co. in October of 1963. The date of installation of the larger tank is not known. It is surmised that both tanks may have been installed at the same time. Almaden Paint Co. occupied both buildings, 1545 and 1547 Almaden Road, until September of 1966 when the company declared bankruptcy. The current owners acquired the property in March of 1968 from the previous owners, Samuel H. and Beulah Tyler and Robert R. and June T. Rogers.

5. After Almaden Paint Co. vacated the property, the original U.S. Cellulose Co. (Richard Castner, sole owner) occupied one of the buildings. The successor U.S. Cellulose (USC) purchased the assets of Richard Castner and continued using one building until mid-1977, at which time USC occupied both buildings through April or May of 1980. USC was engaged in the manufacture of lacquer products and paint remover products, and used the 6,000-gallon UST to store lacquer thinner and the 2,000-gallon tank to store acetone. Raw materials were also stored above ground in 55-gallon drums or in bags. USC utilized, among other materials, Nitrocellulose, Toluene, Acetone, Isopropyl Alcohol, Methyl Ethyl Ketone (MEK), Xylene, Methylene Chloride, and Benzene (discontinued as a raw material in 1972). The lacquer thinner in the UST was composed of Naptha Diluent, Toluene, Acetone, Isopropyl Alcohol, nButyl Acetate, nButyl Alcohol, and Butyl Cellosolve.

6. Pacific States Chemicals Inc. (PSCI) occupied first one and then both of the buildings on the property during the period June or July, 1980 to July or August, 1985, after which date PSCI ceased to operate. PSCI mixed and blended solvent and cleaning products mostly for janitorial supply companies and the car wash industry, but occasionally made acid cleaners, "carb cleaner", and paint strippers.

   PSCI reportedly did not use either of the USTs. PSCI purchases from suppliers were mostly 55-gallon containers, including in the period 1980-1985, Methyl Ethyl Ketone (MEK), Acetone, Xylene, Isopropyl Alcohol, Methylene Chloride, and a number of other chemicals. PSCI has reported one spill between the mixing tank and storage tank during the making of a water-base product; the spill was flushed down the building floor drain with water.

7. While Pacific States Chemicals Inc. was the tenant of record, Haz/Control used one of the USTs to store a quantity of Methyl Ethyl Ketone (MEK), otherwise identified as "paint thinner" by an employee of Haz/Control, in October of 1982.

8. Board staff met with Haz/Control on February 13, 1990, to review substantiating documents regarding the potential discharge of MEK and considers them to be credible. The information provided by Haz/Control indicates that through formula and invoice documents they can account for more than 99 percent of the 1525 gallons of MEK temporarily stored at the site, and that the smaller tank which may not have leaked was probably used to store the MEK for no longer than three days. Staff requested that Haz/Control complete its documentation and submit the information by March 21, 1990. A review of the information shows that Haz/Control did remove between 99 and 100% of the temporarily stored MEK.

9. Louis J. and Shirley D. Smith have been the owners of the property since 1968. Although the owners have not directly initiated the discharge of waste on the property, they knew or should have known of the existence of the discharge or threat of discharge. Additionally, they have had some measure of control over the property.

10. A preliminary assessment for the property was performed by the RWQCB in 1986. It has been reported that "leaks were discovered from inspection of both tanks and excavated soil was found to be contaminated".

11. Analytical results of soil samples collected when the underground storage tanks were removed showed soil pollutants such as Methanol, Ethanol, Acetone, Isopropanol, Methyl Ethyl Ketone, Toluene, Xylene Isomers and Ethyl Benzene, Methylene Chloride, 1,1-Dichloroethane, 1,1-Dichloroethene, Tetrachloroethane, Trichloroethene, 1,1,1-Trichloroethane, and 1,1,2-Trichlorotrifluoroethane. A water sample collected at the bottom of the excavation on August 19, 1985 showed the presence of Acetone (1,500 ug/l), Isopropanol (2,400 ug/l), Methyl Ethyl Ketone (16,000 ug/l), Toluene (89,000 ug/l), and Xylene Isomers and Ethyl Benzene (1,800 ug/l).

12. From 1987 to 1989 the property owners made a preliminary site investigation, installed four monitoring wells and periodically collected water samples for analyses. A well installed at the location of the exhumed tanks has detected Toluene, Vinyl Chloride, Xylenes, 2-Butanone (another name for Methyl Ethyl Ketone), Chlorobenzene, and 1,1-Dichloroethane in the groundwater.

    In 1990 the dischargers continued the site characterization investigation and installed one additional monitoring well. It

has been proposed by the dischargers that significant groundwater pollution has not occurred, and the pollution detected in monitoring well MW-2 resulted from confined groundwater at a depth of about 27 feet being released, rising in the well to above the bottom of the tank excavation, and coming into contact with polluted soil. As a consequence of this investigation and with staff agreement MW-2 has been properly plugged and abandoned. The remaining four monitoring wells are being sampled as required.

13. The nearest municipal well serving the City of San Jose is approximately 1/4 mile from the property. Even though this municipal well produces water from a lower aquifer at a depth of approximately 150 feet, the aquifer at 10-30 feet below the surface which has been polluted at this site is suspected to be in hydraulic connection with the deeper aquifer. (Memorandum dated May 5, 1988, from ICF Technology Incorporated to the U.S. EPA Region IX.)

14. Vinyl Chloride, a known human carcinogen, has been identified in concentrations in excess of 2,000 ug/l (900 ug/l in the report of a sample collected on June 16, 1989) from groundwater at the site. A more recent report (September 10, 1990) shows a maximum of only 4 ug/l in a groundwater sample collected from well MW-3, which is downgradient of the former MW-2 location where the highest concentrations had been detected previously.

15. Based on the above Findings and the assessments and investigations cited in the Findings, subsurface pollution resulted in part from leaking USTs; a number of chemicals detected in the subsurface after the tanks were excavated are identified as chemicals stored in the USTs and used by U.S. Cellulose (USC); and any entity such as Haz/Control which used the leaking USTs to store a chemical or chemicals identified as site pollutants, after USC vacated the property, may have contributed to the subsurface pollution at this site.

16. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for South San Francisco Bay and contiguous surface waters and groundwater.

17. The existing and potential beneficial uses of the groundwater underlying and adjacent to the property include:

    a. Industrial process water supply
    b. Industrial service supply
    c. Municipal and domestic supply
    d. Agricultural supply

18. The dischargers have caused or permitted, and threaten to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.

19. 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.

20. Interim containment and cleanup measures need to be implemented and/or continued to alleviate the threat to the environment posed by the continued migration of the groundwater plume of organic solvents and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.

21. The Board has notified the dischargers 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.

22. 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 the dischargers 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 degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants 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 pollutants are prohibited.

B. SPECIFICATIONS

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

2. U.S. Cellulose, and Louis J. and Shirley D. Smith shall conduct further reporting, site investigation and monitoring activities as needed and as described in this Order. Results of such monitoring activities shall be submitted to the Board. Should monitoring results show evidence of plume migration, additional plume characterization may be required.

3. Final cleanup goals for polluted groundwater, onsite and offsite, shall be in accordance with State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California". Proposed final cleanup levels shall be based on a feasibility study of remedial alternatives that compare cost, effectiveness, time to achieve cleanup goals, and an assessment of risk to determine effect on beneficial uses, human health and the environment. Cleanup levels shall also have the goal of reducing the mobility, toxicity, and volume of pollutants. Final cleanup levels shall be approved by the Board.

   If it is determined by the Executive Officer that polluted soils need to be remediated, the cleanup goal is 1 ppm for total VOCs. This goal may be modified by the Executive Officer if the dischargers demonstrate with site specific data that higher levels of VOCs in the soil will not threaten the quality of waters of the State or that cleanup to this level is infeasible and human health and the environment are protected.

   The dischargers shall optimize, with a goal of 100%, the reclamation or reuse of groundwater extracted as a result of cleanup activities. The dischargers shall not be found in violation of this Order if documented factors beyond the dischargers' control prevent the dischargers from attaining this goal, provided the dischargers have made a good faith effort to attain this goal.

4. The dischargers shall implement a cleanup plan acceptable to the Executive Officer.

C. <u>PROVISIONS</u>

1. U.S. Cellulose, and Louis J. and Shirley D. Smith shall perform all investigation and remedial work in accordance with the requirements of this Order.

2. The dischargers shall submit to the Board acceptable monitoring program reports containing results of work performed according to a program prescribed by the Board's Executive Officer.

3. The dischargers shall comply with all Prohibitions and Specifications of this Order, in accordance with the following time schedule and tasks:

COMPLETION DATE/TASK:

a. SITE CHARACTERIZATION

1) COMPLETION DATE: April 15, 1990

TASK 1: SUMMARY OF PREVIOUS WORK AND PROPOSAL FOR ADDITIONAL WORK. Submit a technical report acceptable to the Executive Officer which contains (1) identification and quantification of all organic and inorganic pollutants known or suspected because of previous activities and analytical testing, (2) an evaluation of soil pollution and groundwater pollution found to be present, (3) a summary of any work which resulted in the removal of pollutants from the soil and groundwater including quantities removed and where disposed, and (4) an estimate of remaining pollution.

In addition, this report shall contain (5) a proposal for the completion of site characterization work. The proposal should consider, at a minimum, the below listed elements:

(a) Definition of lateral and vertical extent of remaining soil and groundwater pollution.

(b) Evaluation of the threat or potential threat to human health and the environment including potential offsite migration of pollutants and vertical migration of pollutants into existing water sources and wells.

(c) Evaluation of aquifer characteristics of the subsurface water-bearing deposits and the geologic framework of the site including potential pathways for migration of pollutants.

(d) Modification of the existing sampling program including the installation of additional monitoring wells.

2) COMPLETION DATE: June 15, 1990

TASK 2: SAMPLING PLAN, SITE SAFETY PLAN, QUALITY ASSURANCE PROJECT PLAN. Submit technical reports acceptable to the Executive Officer, with format and

content being consistent with CERCLA regulations and guidance documents:

(a) Sampling Plan which includes a quarterly schedule for sampling groundwater and soil, for organic and/or inorganic constituents.

(b) Site Safety Plan.

(c) Quality Assurance Project Plan.

3) COMPLETION DATE: September 15, 1990

TASK 3: COMPLETION OF SITE CHARACTERIZATION. Submit a technical report acceptable to the Executive Officer documenting completion of the necessary work to accomplish Task 1 above, and presenting findings and results.

b. INTERIM REMEDIAL ACTIONS

1) COMPLETION DATE: January 15, 1991

TASK 4: RECOMMENDED INTERIM REMEDIAL ACTION. Submit a technical report acceptable to the Executive Officer which contains an evaluation of interim remedial action alternatives, a recommended plan for remedial action, and an implementation time schedule. This report shall consider, at a minimum, soil remediation, soil vapor extraction, and groundwater extraction and treatment and the reclamation or disposal of treated groundwater; and shall evaluate remediation of polluted soil and control systems to contain and initiate cleanup of polluted groundwater; and shall include any necessary permit application(s) which may be an essential element of the plan.

2) COMPLETION DATE: July 15, 1991

TASK 5: COMPLETION OF INTERIM REMEDIAL ACTIONS. Submit a technical report acceptable to the Executive Officer documenting completion of the necessary work identified in the technical report submitted for Task 4 above.

c. EVALUATION AND MODIFICATION OF INTERIM REMEDIAL ACTIONS
1) COMPLETION DATE: January 15, 1992

TASK 6: EVALUATE INTERIM GROUNDWATER CONTAINMENT AND SOIL REMOVAL MEASURES. Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim groundwater containment system. The evaluation for a system using extraction

wells shall include but not be limited to an estimation of the flow capture zone, establishment of cones of depression by field measurements, and presentation of chemical analyses data. This report shall also evaluate and document the removal and/or cleanup of polluted soil, if such is an element of the remedial measures.

2) COMPLETION DATE: January 15, 1992

TASK 7: MODIFICATION TO INTERIM REMEDIAL ACTIONS. Specific modifications to the system and an implementation time schedule shall be proposed in the event that the groundwater containment system is demonstrated not to be effective in containing and removing onsite pollutants. This proposal shall be made in a report acceptable to the Executive Officer.

3) COMPLETION DATE: April 15, 1992

TASK 8: COMPLETION OF MODIFICATIONS TO INTERIM REMEDIAL ACTIONS. Submit a technical report acceptable to the Executive Officer documenting completion of the necessary work identified in the report submitted for Task 7 above.

d. FINAL REMEDIAL ACTION

1) COMPLETION DATE: April 15, 1992

TASK 9: PROPOSED FINAL REMEDIAL ACTION PLAN. Submit a technical report acceptable to the Executive Officer containing the result of the remedial investigation, an evaluation of the installed interim remedial measures, 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.

e. STATUS REPORT

1) COMPLETION DATE: February 21, 1995

TASK 10: STATUS REPORT AND EFFECTIVENESS EVALUATION. Submit a technical report acceptable to the Executive Officer containing the following: (1) results of any additional investigation including a soil remediation study; (2) an evaluation of the effectiveness of installed final cleanup measures and cleanup costs; (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 and are not expected to be achieved through continued groundwater extraction and/or soil remediation, this report shall also contain an evaluation of the feasibility of achieving drinking-water quality with the implemented remedial measures and a proposal for alternative measures if required to achieve drinking water quality.

4. The submittal of technical reports evaluating proposed interim and final remedial measures will include a projection of the cost, effectiveness, benefits and impact on public health, welfare and environment of each alternative measure. A remedial investigation and feasibility study shall consider guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); CERCLA guidance documents with reference to Remedial Investigations, Feasibility Studies and Removal Actions; and the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California".

5. Any proposal for the discharge of extracted groundwater included in the technical report required in Tasks 4, 7, and 9 must initially consider the feasibility of reclamation or discharge to a publicly owned treatment works (POTW), as specified in Board Resolution No. 88-160. If it can be demonstrated that reclamation or discharge to a POTW is technically and economically infeasible, a proposal for discharge to surface water shall be considered. Such proposal for discharge to surface water shall include a completed application for an NPDES permit.

6. If the dischargers are delayed,interrupted or prevented from meeting one or more of the completion dates specified in this Order, the dischargers shall promptly notify the Executive Officer. In the event of such delays,the Board may consider modification of the task completion dates established in this Order.

7. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing with the February 1990 report due March 15, 1990 and for a period of four months thereafter, then quarterly beginning with the report for the July-September 1990 quarter due November 15, 1990. These reports shall consist of a brief letter report that (a)

summarizes work completed since submittal of the previous report, and work projected to be completed by the time of the next report, (b) identifies any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles, and (c) includes, in the event of non-compliance with Provisions of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.

8. In addition to the report required in Provision 7 the dischargers shall submit a quarterly technical report commencing with the January through March 1990 quarterly report due May 15, 1990. The quarterly technical report shall include, but need not be limited to, updated water table/piezometric surface contour maps, pollutant concentration contour maps for all affected water-bearing zones, geologic cross-sections describing the hydrogeologic setting of the site, and appropriately scaled and detailed base maps showing the locations of all monitoring and extraction wells, and identifying adjacent facilities and structures. The above information will be generated on a quarterly basis. The report required in Provision 7 may be combined with this report when due dates coincide.

   On an annual basis, technical reports on the progress of compliance with all requirements of this Order shall be submitted, commencing with the report for 1990, due February 15, 1991. The annual report may be combined with other technical report(s) which are due to be submitted on February 15, 1991. The progress reports shall include, but need not be limited to, an evaluation of the effectiveness of the cleanup actions/systems and the feasibility of attaining groundwater and soil cleanup goals.

9. All hydrogeological plans, specifications, reports and documents shall be signed by or stamped with the seal of a registered geologist, registered civil engineer, or certified engineering geologist.

10. 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 records for Board review.

11. The dischargers 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.

12. 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. Santa Clara Valley Water District
    b. Santa Clara County Health Department
    c. City of San Jose
    d. State Department of Health Services/TSCD

    The Executive Officer shall receive one complete copy of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, and may require additional copies be provided to the U.S. Environmental Protection Agency, Region IX, and to a local repository for public use.

13. The dischargers shall permit the Board or its authorized representative, in accordance with Section 13267 (c) of the California Water Code:

    a. Entry upon dischargers' 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.

14. The dischargers shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.

15. If any hazardous substance is discharged in or on any waters of the State, or discharged and deposited where it is, or probably will be discharged in or on any waters of the State, the dischargers shall report such a discharge to this 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-office hours. A written report shall be filed with the Board within five (5) working days and shall contain information relative to: the nature of the waste or

pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control and Countermeasure 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 persons notified.

16. The Board will review this Order periodically and may revise the requirements when necessary.

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 December 12, 1990.

Steven R. Ritchie
Executive Officer