

UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF TEXAS

UNITED STATES OF AMERICA,)
Plaintiff,)
)
the LOUISVILLE METRO AIR) Civil Action No.
POLLUTION CONTROL DISTRICT,)
the STATE OF NEW JERSEY,)
Plaintiff-Intervenors,)
)
V.)
)
OXY VINYLS, LP)
)
Defendant.)
_____)

SCOPE OF WORK

I. PURPOSE/INTRODUCTION

Consistent with and as provided in the May 1, 1998 "Final Supplemental Environmental Projects Policy," the three Supplemental Environmental Projects ("SEPs") described herein are environmentally beneficial projects which Oxy Vinyls has agreed to undertake in settlement of the above-captioned enforcement action, but which Oxy Vinyls is not otherwise legally required to perform.

Oxy Vinyls shall undertake the following three SEPs and one New Jersey State-Only Environmental Project ("Project") pursuant to Section VII (Supplemental Environmental Projects and New Jersey State-Only Environmental Project) of the Consent Decree and this Scope of Work, which the Parties agree are intended to secure significant environmental or public health protection and improvement: (1) Pasadena Stripper Tray SEP; (2) Louisville Railcar Unloading SEP; (3) Pedricktown Equipment Openings SEP; and (4) Camden Waterfront South/Dust Control Project. Operation of the Pasadena Stripper Tray SEP is estimated to achieve emissions reductions of approximately 39,820 pounds per year of vinyl chloride at the Pasadena Facility relative to 2003 product mix at nameplate capacity.

II. BUSINESS CONFIDENTIALITY

Pursuant to 40 C.F.R. § 2.203, Oxy Vinyls may submit a claim of confidentiality for any document or information submitted pursuant to this Scope of Work or under the attached Consent Decree. Failure to make a confidentiality claim, including the submission of a redacted copy of the document in question, at the time the document is submitted shall constitute a waiver of such claim. Oxy Vinyls shall not assert a claim of confidentiality with respect to any sampling, monitoring or analytical data.

III. DESCRIPTION OF SUPPLEMENTAL ENVIRONMENTAL PROJECTS AND NEW JERSEY STATE-ONLY ENVIRONMENTAL PROJECT

A. PASADENA STRIPPER TRAY SEP

1. SEP DESCRIPTION

The Pasadena Facility has seven PVC slurry stripping columns. Each column is equipped with a series of trays that remove vinyl chloride monomer ("VCM") from PVC slurry. The remaining VCM is removed from the slurry during the drying process. Under this Pasadena Stripper Tray SEP, Oxy Vinyls shall install re-designed trays and tray supports in the Numbers 2, 3, 4, 5, 6, and 7 slurry-stripping columns. (Column Number 1 is already equipped with re-designed trays.) The existing trays, which are assembled in cartridge bundles that slide into the columns, will be removed and disposed of appropriately in accord with applicable federal and state environmental laws and regulations. The new tray design will allow for increased slurry residence time and therefore improved VCM removal capability. Emissions reductions are tied to the recovery of VCM in the PVC production process. VCM removed from the dryer is eventually released into the ambient atmosphere. The changes to the slurry strippers required under the Pasadena Stripper Tray SEP shall improve the recovery of VCM and significantly reduce VCM emissions. As more VCM is recovered in the production process, less VCM will be emitted. The Pasadena Stripper Tray SEP will not require installation of pollution abatement equipment, or generate additional pollutants. Rather, the Pasadena Stripper Tray SEP will provide for enhanced VCM recovery and, as such, will prevent pollution and provide for the recovery and subsequent use of a valuable feed stock.

2. PERFORMANCE STANDARDS

a. Time for performance

By no later than twenty-four (24) months after Entry of the Consent Decree, Oxy Vinyls shall complete one half of the equipment installation for implementation of the Pasadena Stripper

Tray SEP. And by no later than forty-eight (48) months after Entry of this Consent Decree, Oxy Vinyls shall complete installation of the entire Pasadena Stripper Tray SEP.

b. Operation of Pasadena Stripper Tray SEP/Emission Reductions

Oxy Vinyls shall meet a residual vinyl chloride monomer (RVCM) limit of 10 ppm (weighted 12 month rolling average across all seven stripper columns) at the Pasadena Facility one year after the completion of tray installation and successful start-up of all slurry stripper columns, but in no event later than sixty-two (62) months after Entry of the Consent Decree. The RVCM limit shall be calculated in accordance with the Vinyl Chloride NESHAP, 40 C.F.R. § 61.64(e), Method 107. Oxy Vinyls shall install and operate the Pasadena Stripper Tray SEP for three (3) years following completion of installation, pursuant to Section XVII of the Consent Decree (Effective Date and Termination), and shall demonstrate to the satisfaction of EPA Region 6 that it has, subject to Paragraph 32 of the Consent Decree, operated the SEP for three (3) years while continuously meeting the RVCM limit of 10 ppm (weighted 12 month rolling average across all seven columns) set forth in Section VII (Supplemental Environmental Projects and New Jersey State-Only Environmental Project) of the Consent Decree and this Scope of Work. Oxy Vinyls shall apply to incorporate the requirements of this SEP into permits as set forth in Paragraph 32a of the Consent Decree.

3. EXPENDITURES

The expenditures for this SEP shall total no less than \$964,000.

4. DRAFT IMPLEMENTATION PLAN/SCHEDULE FOR IMPLEMENTATION

Within thirty (30) days of Entry of the Consent Decree, Oxy Vinyls shall submit a draft implementation plan for the Pasadena Stripper Tray SEP. The draft implementation plan/schedule for implementation shall include, but not be limited to the following:

- a. The goals of the SEP;
- b. The estimated amount of emissions reductions that will be achieved by the SEP;
- c. A description of the construction and operation of the SEP;
- d. Specify projected expenditures of the SEP including the following:
 - i. contractor costs
 - ii. capital costs

- iii. operational costs
- e. Specify cost savings associated with the SEP from the emissions reductions achieved; and
- f. Schedule for implementing the SEP, including milestones.

5. PERIODIC REPORTS

Oxy Vinyls shall submit to EPA quarterly status reports regarding its performance of this SEP. Beginning upon Entry of the Consent Decree, these reports must be received by EPA no later than thirty (30) days after the end of each calendar quarter. Such quarterly reports shall continue to be submitted until Oxy Vinyls submits a SEP Completion Report for this SEP pursuant to Section VII of the Consent Decree. Each status report shall contain the following information at a minimum:

- a) a narrative description of the work completed in the past calendar quarter and the actions taken by Oxy Vinyls towards implementing the SEP;
- b) a running total of expenditures to date as incurred by Oxy Vinyls and as valued under the Expenditures section above;
- c) a proposed schedule and description of all activities projected for the next quarterly reporting period;
- d) a description of any problems and/or delays encountered or anticipated directly or indirectly resulting from implementation of the SEP;
- e) a description of any actions taken to prevent or mitigate such problems and (if applicable) a proposed modified completion schedule;
- f) the vinyl chloride reductions achieved and RVCM levels experienced during the reporting period; and
- g) At any time it appears that Oxy Vinyls will be unable to meet the 10 ppm RVCM limit (twelve month rolling average across all seven columns) one year after the completion of tray installation and successful start-up of all slurry stripper columns in accord with Section VII (Supplemental Environmental Projects and New Jersey State-Only Environmental Project) of the Consent Decree and section A.2.b. above, Oxy Vinyls shall submit a compliance plan within thirty (30) days setting forth how it will meet such limit.

B. LOUISVILLE RAILCAR UNLOADING SEP

1. SEP DESCRIPTION

Background: The Louisville Facility receives VCM via railcars. The VCM is unloaded into fixed storage via a series of unloading hoses and ancillary piping. After the unloading process is complete, a small residual amount of VCM remains in the unloading hoses. Once the hose-to-rail car connection is broken, the residual VCM is released into the atmosphere. This SEP is designed to capture residual VCM and reduce the amount released to the atmosphere.

Description: Oxy Vinyls shall install a rail car vapor unloading vacuum system at the Louisville Facility designed to recover approximately one hundred (100) pounds per year of VCM (relative to 2004 railcar unloading events) that would otherwise be released into the atmosphere from the unloading hose. Oxy Vinyls will install a compressor capable of pulling a vacuum down to 20" Hg to recover the residual amount of VCM in the unloading hoses. The vacuum compressor will be piped into the existing recovery line from the rail cars to the unloading compressors.

2. PERFORMANCE STANDARDS

a. Time for Performance

Oxy Vinyls shall complete installation of the Louisville Railcar Unloading SEP within twelve (12) months after Entry of the Consent Decree.

b. Emissions Reductions

Oxy Vinyls shall operate the Louisville Railcar Unloading SEP for three (3) years after completion of installation of the SEP, or until a total of three hundred (300) pounds of vinyl chloride emissions reductions have been achieved relative to 2004 railcar unloading events, whichever is later.

3. EXPENDITURES

The expenditures for this SEP shall total no less than \$250,000.

4. DRAFT IMPLEMENTATION PLAN/SCHEDULE FOR IMPLEMENTATION

Within thirty (30) days of Entry of the Consent Decree, Oxy Vinyls shall submit a draft implementation plan for the Louisville Railcar Unloading SEP. The draft implementation plan/schedule for implementation shall include, but not be limited to the following:

- a. The goals of the SEP;
- b. The estimated amount of emissions reductions that will be achieved by the SEP;
- c. A description of the construction and operation of the SEP;
- d. Specify projected expenditures of the SEP including the following:
 - i. contractor costs
 - ii. capital costs
 - iii. operational costs
- e. Specify cost savings associated with the SEP from the emissions reductions achieved; and
- f. Schedule for implementing the SEP, including milestones.

5. PERIODIC REPORTS

Oxy Vinyls shall submit to EPA quarterly status reports regarding its performance of this SEP. Beginning upon Entry of the Consent Decree, these reports must be received by EPA no later than thirty (30) days after the end of each calendar quarter. Such quarterly reports shall continue to be submitted until Oxy Vinyls submits a SEP Completion Report for this SEP pursuant to Section VII of the Consent Decree. Each status report shall contain the following information at a minimum:

- a) a narrative description of the work completed in the past calendar quarter and the actions taken by Oxy Vinyls towards implementing the SEP;
- b) a running total of expenditures to date as incurred by the Oxy Vinyls and as valued under the Expenditures section above;
- c) a proposed schedule and description of all activities projected for the next quarterly reporting period;

d) a description of any problems and/or delays encountered or anticipated directly or indirectly resulting from implementation of the SEP; and

e) a description of any actions taken to prevent or mitigate such problems and (if applicable) a proposed modified completion schedule.

C. PEDRICKTOWN EQUIPMENT OPENINGS SEP

1. SEP DESCRIPTION

The Pedricktown Facility produces PVC resin in a series of six (6) reactors. These reactors and associated "chip catcher" equipment must be opened to the atmosphere for cleaning. A small residual amount of VCM is emitted to the atmosphere when the reactors and chip catchers are opened. In addition, during the cleaning operation, some PVC resin is recovered from the reactors. This PVC resin has not undergone the stripping process, and emits some VCM once it is removed and stored.

Oxy Vinyls proactively completed a pilot study on two reactors at the Pedricktown Facility on the production of flexible grade resin, and determined that reactor and chip catcher openings at that reactor can be reduced. As part of this SEP, the third reactor on Line 2 will be modified. However, it is not yet certain whether reactor and chip catcher openings can be reduced for all products manufactured by the Pedricktown Facility. Therefore, the Pedricktown Equipment Openings SEP will proceed in two phases.

The completion of modifications to the one remaining reactor not yet modified on Line 2 and assessment of performance thereof will constitute Phase I of this SEP. Oxy Vinyls shall modify one reactor at the Pedricktown Facility in Phase I of the Pedricktown Equipment Openings SEP to reduce the number of reactor openings and chip catcher openings by implementing an experimental reactor design change that is intended to reduce PVC buildup in the reactor. Following modification of the remaining unmodified reactor on Line 2 of the Pedricktown Facility, a determination will be made, in accord with section 2. below, whether the number of reactor openings and associated emissions will be reduced. If so, the design change will then be implemented on the remaining three (3) reactors at the Pedricktown Facility during Phase II of the Pedricktown Equipment Openings SEP.

2. PERFORMANCE STANDARDS

a. Timing for Phase I

Oxy Vinyls shall complete Phase I of the Pedricktown Equipment Openings SEP within twelve (12) months of Entry of the Consent Decree.

b. Determination Whether To Proceed With Phase II

Following completion of Phase I of the Pedricktown Equipment Openings SEP, Oxy Vinyls shall, in the next Periodic Report due, include a recommendation as to whether Oxy Vinyls should proceed forward with Phase II of the Pedricktown Equipment Openings SEP. This recommendation, which shall in no way be binding upon EPA, shall be based upon, *inter alia*, the effectiveness of the design change in reducing the number of reactor or chip catcher openings and whether there were any adverse impacts to production efficiency at the Pedricktown Facility resulting from the design change. Oxy Vinyls shall implement Phase II of the Pedricktown Equipment Openings SEP unless Oxy Vinyls demonstrates to the satisfaction of EPA that (1) the design change has not resulted in a reduction of the number of reactor or chip catcher openings as compared to operations prior to Phase I; or (2) Oxy Vinyls demonstrates to the satisfaction of EPA that there were significant adverse impacts to production efficiency at the Pedricktown Facility resulting from the design change. Following EPA's receipt of the Periodic Report containing the recommendation as to whether to proceed with Phase II, EPA shall determine whether Oxy Vinyls shall proceed with Phase II of the Pedricktown Equipment Openings SEP.

c. Phase II

If Phase II of the Pedricktown Equipment Openings SEP is implemented pursuant to Section VII of the Consent Decree and this Scope of Work, Phase II of the SEP shall be completed within twenty-four (24) months of Entry of the Consent Decree or within twelve (12) months of notification from EPA pursuant to b. above that Oxy Vinyls shall implement Phase II of the Pedricktown Equipment Openings SEP, whichever is earlier.

3. EXPENDITURES

The expenditures for this SEP shall total at least \$10,000 for Phase I. Should Phase II be implemented, the expenditures for Phase II shall be at least an additional \$20,000.

4. DRAFT IMPLEMENTATION PLAN/SCHEDULE FOR IMPLEMENTATION

Within thirty (30) days of Entry of the Consent Decree, Oxy Vinyls shall submit a draft implementation plan for the Pedricktown Equipment Openings SEP. The draft implementation plan/schedule for implementation shall include, but not be limited to the following:

- a. The goals of the SEP;
- b. The estimated amount of emissions reductions that will be achieved by the SEP;

- c. A description of the construction and operation of the SEP;
- d. Specify projected expenditures of the SEP including the following:
 - i. contractor costs
 - ii. capital costs
 - iii. operational costs
- e. Specify cost savings associated with the SEP from the emissions reductions achieved;
- f. Schedule for implementing the SEP, including milestones; and
- g. Information sufficient to measure the baseline number of reactor and chip catcher openings on the Pilot Project-related Reactor and Chip Catchers (Line 2) at the Pedricktown Facility in calendar year 2004.

5. PERIODIC REPORTS

Oxy Vinyls shall submit to EPA quarterly status reports regarding its performance of this SEP. Beginning upon Entry of the Consent Decree, these reports must be received by EPA no later than thirty (30) days after the end of each calendar quarter. Such quarterly reports shall continue to be submitted until Oxy Vinyls submits a SEP Completion Report for this SEP. Each status report shall contain the following information at a minimum:

- a) a narrative description of the work completed in the past month or calendar quarter (as applicable) and the actions taken by Oxy Vinyls towards implementing the SEP;
- b) a running total of expenditures to date as incurred by the Oxy Vinyls and as valued under the Expenditures section above;
- c) a proposed schedule and description of all activities projected for the next quarterly reporting period;
- d) a description of any problems and/or delays encountered or anticipated directly or indirectly resulting from implementation of the SEP;
- e) a description of any actions taken to prevent or mitigate such problems and (if applicable) a proposed modified completion schedule; and
- f) the Periodic Report following completion of Phase I of the Pedricktown Equipment Openings SEP shall include adequate information for EPA to make a determination as to

whether to proceed with Phase II of the Pedricktown Equipment Openings SEP as set forth in C.2.b above.

D. CAMDEN WATERFRONT SOUTH/DUST CONTROL PROJECT/NEW JERSEY STATE-ONLY ENVIRONMENTAL PROJECT

1. PROJECT DESCRIPTION

By no later than ninety (90) days after Entry of this Consent Decree, Oxy Vinyls shall pay the University of Medicine and Dentistry of New Jersey ("UMDNJ") \$125,000 for UMDNJ to design and conduct a study to determine the source of the dust and particulate deposition in and around residential locations in the Camden Waterfront South neighborhood in Camden, New Jersey and fingerprint the samples through laboratory analysis ("Camden Waterfront South/Dust Control Project").

2. PERFORMANCE STANDARDS

a. Time for performance and Performance Standard for New Jersey State-Only Environmental Project

Within ninety (90) days of Entry of the Consent Decree, Oxy Vinyls shall pay UMDNUJ \$125,000 to perform this Project. Oxy Vinyls shall provide notice of such payment, referencing DOJ Case Number 90-5-2-1-08333 and the civil action case name and case number, to the Department of Justice and to EPA, as provided in Section VI (Notices) of the Consent Decree. This Project shall be subject to oversight by the NJDEP's Division of Science and Research, P.O. Box 409, Trenton, NJ 08625-0409.

3. EXPENDITURES

The expenditures for this SEP shall total \$125,000.