**United States Environmental Protection Agency**
**Region IV**
**POLLUTION REPORT**

**Date:** Monday, August 26, 2002
**From:** Warren Dixon, David Andrews

**To:** Angie R. Jones, SCDHEC

**Subject:** Continuation of Removal Action
Cardinal Chemical
2010 South Beltline Blvd., Columbia, SC

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|---|---|---|---|
| **POLREP No.:** | 15 | **Site #:** | A45T |
| **Reporting Period:** | | **D.O. #:** | 0204-F4-0002 |
| **Start Date:** | | **Response Authority:** | CERCLA |
| **Mob Date:** | 4/18/2002 | **Response Type:** | Time-Critical |
| **Demob Date:** | | **NPL Status:** | Non NPL |
| **Completion Date:** | | **Incident Category:** | Removal Action |
| **CERCLIS ID #:** | SCD003394447 | **Contract #** | 68-S4-02-04 |
| **RCRIS ID #:** | | | |

**Site Description**

The site is composed of two plants. Plant 1 housed the manufacturing facility and Plant 2 produced waxes and served as a storage lot. EPA activities in plant 1 is mostly related to waste water management. EPA activities in Plant 2 were related to the disposal of waste water found in frac tanks and stannic chloride cylinders. All of the Frac tanks were removed from Plant 2 (please see pollution reports 1-13 concerning this activity). These two facilities are divided by another company unrelated to the site.

**Current Activities**

- As of August 23, 2002, a total of 1,129 stannic chloride cylinders were found in Plant 1 and Plant 2. Of this total, 985 cylinders were decommissioned, decontaminated and sold as scrap metal by the ERRS contractor. The majority of the 985 containers were empty, but a few of them contained enough stannic chloride residue to cause a reaction during the decommissioning process. Of the remaining cylinders, 54 cylinders were identified with recoverable product, 29 cylinders had residue or solids inside, and 61 one-ton cylinders need to be checked for residues.

- While opening some one-ton cylinders, it was discovered that some of them were pressurized. These one-ton cylinders were left by Cardinal Chemical out in the direct sunlight causing them to be pressurized. In order to avoid the escape of HCL fumes from the site, it was decided to construct a cylinder opening room. The ERRS contractor constructed a cylinder room out of an existing building in Plant 2 and fabricated a metal cylinder box to be used for the opening of the 61 one-ton cylinders. The cylinder box has two valve openings a hatch on the top and is attached to a vacuum system and scrubber. Process starts by inserting the one ton cylinder in the box, sealing the box tight, and a drill bit is inserted through one of the valve openings in order to drill a hole into the cylinder. The cylinder is allowed to depressurized, stannic chloride is vacuumed from the box through a scrubber system, the box is opened and the cylinder bungs are opened. The cylinder is checked for residue or recoverable product. The cylinder is then removed from the box and the cylinder's drilled hole is sealed with a rubber cork.

- In addition to the cylinder operation, the ERRS contractor finished with the inventory of the laboratory chemicals. More than 5,500 containers were found in the laboratory. Some of these containers were quality assurance samples and were bulked accordingly. The others are regular laboratory chemicals that will require further analysis before bulking.

- During August 14, 15, 16, 2002, more than 108,000 gallons of waste waster from the above ground storage tank in Plant 1 were sent for disposal.

**Planned Removal Actions**

- Continue opening cylinders and determine if they have recoverable product or residue inside of them.

- Destroy empty cylinders with shearer and decon scrap metal.

- Continue identifying and bulking laboratory chemicals.  Continue developing a disposal plan.

**Next Steps**

- Set up treatment system in order to recover stannic chloride from cylinders that contain recoverable product.

- Continue with water management practices at Plant 1.

**Key Issues**

- Continue coordinating with Reagens USA Inc. pertaining to the removal of vessels from Plant 2. Reagen USA Inc. bought some of the assets from the bank.

**Disposition of Wastes**

| Waste Stream | Quantity | Manifest # | Disposal Facility |
|---|---|---|---|
| Waste water | 54,203 | 4/25/2002 | US Liquids of Georgia |
| Waste water | 65,600 | 5/3/2002 | US Liquids of Georgia |
| Waste water | 54,485 | 5/7/2002 | US Liquids of Georgia |
| Waste water | 155,502 | 5/14/2002 | US Liquids of Georgia |
| Waste water | 193,029 | 5/17/2002 | US Liquids of Georgia |
| Waste water | 134,904 | 5/22/2002 | US Liquids of Georgia |
| Waste water | 102,440 | 5/30/2002 | US Liquids of Georgia |
| Waste water | 108,045 | 8/14,15,16/2002 | US Liquids of Georgia |