MCC WAREHOUSE
INTERIM MEASURES REPORT

SOLUTIA INC. FACILITY
Anniston, Alabama
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Prepared for:
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
1400 Coliseum Boulevard
Montgomery, Alabama 36110

Prepared by:
ROUX ASSOCIATES, INC.
1222 Forest Parkway, Suite 190
West Deptford, New Jersey 08066
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FIGURES

1. MCC Warehouse Location Map
2. MCC Warehouse Areas
1.0 INTRODUCTION

During the course of investigations into the potential source(s) of low levels of polychlorinated biphenyls (PCBs) in storm water runoff from the Solutia Inc. (Solutia) Anniston facility, the Monsanto Chemical Company (MCC) warehouse was identified as an additional Solid Waste Management Unit (SWMU). The location of the MCC warehouse is shown on Figure 1.

In accordance with Part III.B.2 of the facility’s Hazardous Waste Post-Closure Permit ALD 004019048, Solutia notified the Alabama Department of Environmental Management (ADEM) of the identification of the new SWMU in a letter dated May 4, 2001. An Interim Measures Work Plan was submitted to ADEM on May 17, 2001 and approved on September 13, 2001. Those measures consisted of the characterization of PCB impacts in the warehouse; removal of visible residues; and cleaning, removing, and/or isolating visibly affected areas.

The characterization and removal of the visible residues was completed between May and July 2001. The characterization and removal of visible residues results were presented in the SWMU Assessment Report (SAR) for the MCC Warehouse dated August 1, 2001. The SAR included an Interim Measures Work Plan (IMWP) to address the remaining areas. The Interim Measures included:

- Removal of loose dust and debris;
- Dismantling and replacing building components;
- Decontaminating concrete floor and steel columns;
- Decontamination of exterior foundation walls and concrete ditches; and
- Capping the rail spur.

The MCC Warehouse Interim Measures work was performed in accordance with the August 1, 2001 IMWP with one deviation: the concrete ditches were cleaned and coated with epoxy rather than filling the ditches with concrete. The original intent was to abandon the ditches and form drainage swales in the concrete backfill. However, Solutia concluded that the ditches would
provide better control of surface runoff and elected to decontaminate and seal the ditches. Solutia maintains the documentation of the project at its Anniston, AL facility.

The MCC Warehouse is a pre-engineered, single span, rigid frame steel building measuring approximately 360 feet long by 120 feet wide. The building is oriented lengthwise in a north-south direction.

The warehouse floor is a concrete slab on grade located approximately 2 to 4 feet above exterior grade. Concrete foundation walls are exposed around the perimeter of the building. Two concrete drainage ditches are located along the exterior foundation wall. One ditch is approximately 40 feet long on the east sidewall. The other ditch is approximately 100 feet long on the south end wall. Both ditches are approximately 12 inches wide by 18 inches deep and drain to a catch basin at the southeast corner of the building.

The rail spur is located along the west side of the building and is used for the delivery of raw materials and shipment of finished goods. The rail spur is approximately 18 feet wide and is bounded on the east by the warehouse foundation wall (approximately 5 feet high), and on the south and west by a concrete retaining wall (approximately 4 to 6 feet high). The railroad ties are backfilled with up to 6-inches of ballast.
2.0 PERFORMANCE CRITERIA


2.1 Concrete Surfaces

The MCC Warehouse floor and exterior foundation walls and ditches are unpainted concrete. The procedures used for decontamination of the concrete floor, exterior walls and ditches were in accordance with continued use provisions outlined in 40 CFR 761.30 (p). These procedures satisfy the following conditions:

- The source of PCB contamination is removed or contained;

- Accessible porous surfaces are cleaned using the double wash/rinse procedure in Subpart S, and the treated surface is allowed to dry for 24 hours;

- All accessible surfaces which have been cleaned in accordance with Subpart S and all inaccessible surfaces are completely covered with two solvent resistant and water repellent coatings of contrasting colors to allow for visual indication of wear through or loss of outer coating integrity; or a solid barrier is fastened to the accessible parts of the contamination; and

- The surface is marked with the ML marking at a location easily visible to individuals present in the area.

2.2 Steel Surfaces

The MCC Warehouse has two primary types of steel surfaces: uninsulated interior/exterior steel siding; and painted interior building supports including columns, zee girts and base angles.
There are also stationary metal equipment surfaces such as drum filling apparatus, pipes, light fixtures, electrical conduit/trays and service panels. The procedures used for metal surfaces were a combination of removal and decontamination for disposal and cleaning in place as described below.

- The lower half of the siding (approximately 12 feet) and supporting steel rails and clips were vacuumed, then removed and replaced in areas containing visible residues. The removed steel was decontaminated as necessary for disposal in accordance with 40 CFR 761.

- The remaining building support steel columns and stationary metal equipment were decontaminated in accordance with 40 CFR 761.79(b)(3)(i)(B).

The performance criterion for decontamination was visual inspection using the Visual Standard No. 2, Near-White Blast Cleaned Surface Finish of the National Association of Corrosion Engineers (NACE). After inspection and acceptance, the cleaned steel surface was painted with a primer.
3.0 INTERIM MEASURES

The Interim Measures implemented by Solutia included:

- Replacement of the lower 12 feet of steel siding panels along the entire length of the south end wall (approximately 120 feet), and portions of the east sidewall and west sidewall lengths (approximately 5 and 80 feet, respectively). Solutia also replaced an additional 20 feet of steel siding from the east wall, north of the loading dock in the south east corner of that wall. The decision to remove these panels was based on visual evidence of small deposits of material similar to residues observed in other parts of the warehouse.

- Decontamination and encapsulation of the immediately adjacent interior concrete floor surface (5 feet wide) along the approximately 225 feet of building perimeter.

- Decontamination and encapsulation of the exterior concrete foundation walls adjacent to areas described above and two concrete drainage ditches along the exterior of the south and east walls; and

- Asphalt capping of a rail spur adjacent to the west wall.

The following sections describe the steps implemented to complete the Interim Measures. Figure 2 shows the locations of the Interim Measures.

3.1 Removal of Loose Dust and Debris
The work area was decontaminated using a drum-vacuum equipped with a high-efficiency particulate air (HEPA) filter to collect loose dust and debris that might become airborne during the dismantling of the building components. The vacuuming was performed within two portable dust enclosures provided with negative air pressure via an exhaust fan and HEPA filter. Surfaces between the concrete floor to a height of 12.5 feet were vacuumed. The metal siding, steel columns, and girts at 12.5 and 7.5 feet above the floor were vacuumed. Prior to vacuuming the floor, the building siding was unfastened from the base angles. The base angles were
subsequently vacuumed, removed and placed in a roll-off container for off-site disposal. Debris and dust that had accumulated under the base angles were vacuumed.

The loose debris and dust were collected in 55-gallon drums fitted with drum liners. Once full, the liner was removed from the vacuum and placed in a dedicated roll-off container for characterization and off-site disposal.

3.2 Dismantling and Replacement of Building Components

Once the vacuuming was completed, the designated building components along the south, east and west walls were dismantled and replaced. The building components included the lower 12 feet of metal siding, girts, girt clips, and sag rods. Girders above the roll-up door on the south wall and behind the electrical panel on the west wall were not removed due to limited accessibility. These girders were decontaminated by sandblasting to a near-white metal finish, primed and painted. Following steel column and concrete floor decontamination (described below), new building girts, sag rods, base angles and metal siding were installed.

3.3 Decontamination of Concrete Floor and Steel Columns

After the removal of each section of building components, the concrete floor within 5 feet of the walls and the lower 12.5 feet of the interior steel columns along the 225-foot perimeter were decontaminated. This decontamination was completed in accordance with the continued use provisions in 40 CFR 761. Details are provided below.

3.3.1 Concrete Surfaces

The concrete surfaces were decontaminated using the double wash/rinse procedure described in Subpart S of 40 CFR 761 and summarized below.

- Step 1 - Water/Detergent Wash. The concrete surfaces were washed using ZEP Z-Green®, an industrial-strength cleaner mixed with potable water. The water-detergent solution was applied to the floor to be addressed under the Interim Measures, and each square foot of the treated concrete surface was scrubbed with brushes for a minimum of one minute. Each square foot of the treated concrete surface was wiped for at least one
minute using a detergent solution pad. Excess water was wet-vacuumed and collected in steel drums, and the surface was allowed to dry.

- **Step 2 - Potable Water Rinse.** The concrete surfaces were then rinsed with potable water to remove residuals. Absorbent pads were used to wipe the concrete surface clean. Excess water was wet-vacuumed and collected in steel drums, and the surface was allowed to dry.

- **Step 3 - Solvent Wash.** The concrete surfaces were then washed using ZEP Big Orange®, a solvent in which PCBs are 5% or more soluble. The solvent was applied to each square foot of treated concrete surface and allowed to soak for at least one minute. The concrete surface was then wiped with solvent-soaked pads for at least one minute. Excess solvent was collected with clean absorbent pads, and the surface was allowed to dry.

- **Step 4 - Solvent Rinse.** The concrete surfaces were then rinsed with clean solvent. After a minimum of one minute, the solvent was wiped off using absorbent pads. Clean absorbent pads were then used to wipe the surfaces dry.

The procedures identified in 40 CFR 761.30(p)(1)(A) were then followed to encapsulate the cleaned concrete surfaces. The encapsulation consisted of applying two coats of paint with contrasting colors. The contrasting colors allow for immediate assessment of the integrity of the encapsulation during routine inspections conducted in accordance with the PCB Mega-Rule requirements. The encapsulation procedures are described below.

- **Step 5 - Acid Wash.** The concrete surfaces were acid washed using a 30% solution of muriatic acid and potable water rinse to etch the surface and improve the bonding capability of the epoxy. Solids and acid rinsate were collected and drummed separately for disposal.

- **Step 6 - Base Epoxy Coat.** The concrete surfaces were then painted using Sherwin Williams Company Armorseal 700HS®, a solvent-resistant water-repellent red epoxy
designed for application to concrete. The concrete surface base coat was allowed to cure for 24 hours before the topcoat was added.

- Step 7 - Top Epoxy Coat. The next step was application of a gray (contrasting color) Armorseal 700HS® epoxy. The concrete surface top coat was allowed to cure for the recommended 24 hours.

- Step 8 - Marking. Labels were placed on the freshly painted concrete surfaces as required under 40 CFR 761.30(p)(2)(B) of the continued-use procedures. Each area of cleaned and encapsulated concrete surface was marked using the USEPA PCB “ML” label identified in 40 CFR 761.45.

3.3.2 Steel Surfaces
The interior building steel columns (the lower 12.5 feet) were decontaminated to Visual Standard No.2, Near-White Blast Cleaned Surface Finish, of the NACE using needle guns, sandblasting equipment and dust enclosures equipped with a negative air pressure unit to control particulates. After the steel was decontaminated, pictures were taken to document compliance with the NACE standard. After the cleaning was verified to meet the NACE standard, the bare steel was painted with a primer followed by a topcoat. Any liquids or other wastes were collected, containerized and characterized for appropriate disposal.

3.4 Decontamination of Exterior Foundation Walls and Concrete Ditches
Approximately 775 square feet of exterior foundation walls along the east, south and west sides of the building (approximately 225 feet length x 3 feet average height) were decontaminated and encapsulated following the procedures described in Section 3.3.1.

The concrete ditches along the east and south sides of the building were also decontaminated using the Subpart S procedures. Prior to encapsulation, a hydraulic cement cap was applied to seal the joints between the ditch walls and bottom. The two contrasting color coats of epoxy and ML markings were then applied. A 3-inch polyvinyl chloride (PVC) pipe under the bay door entrance ramp on the south wall connects the drainage ditches along that wall. This pipe was flushed and cleaned, and the rinseate was collected for off-site disposal. The brick-lined catch
basin was rehabilitated with mortar and lined with the two contrasting color coats of epoxy and Mₘₙ markings.

3.5 Rail Spur Cap

The rail spur is located adjacent to the west side of the MCC Warehouse. A part of the rail spur is active for plant loading/unloading activities, however, the southern part is no longer used. Solutia capped and abandoned the southern 150 feet of rail spur that exhibited elevated PCB concentrations in soils under the ballast material. The active part of the rail spur cap was placed such that the ballast of the rail spur was covered with the asphalt cap, leaving the rails exposed. Prior to initiating the capping activities, Solutia personnel inspected and replaced damaged railroad ties along the spur. The damaged ties were placed in a roll-off for off-site disposal.

The cap over the southern rail spur was constructed by placing dense graded aggregate (DGA) to an elevation higher than the rails that is sloped to promote runoff to the north and away from the MCC Warehouse. Approximately 6 to 12 inches of DGA was placed and compacted to at least 95 percent of its maximum dry density. Following compaction of the DGA, a 2-inch asphalt base course was placed over the rail spur area. The final asphalt grade promotes runoff to the north, away from the MCC Warehouse.
4.0 WASTE HANDLING AND DISPOSAL

The wastes generated via the decontamination activities included: dust; detergent rinsate; solvent rinsate; acid rinseate; bulk steel building materials; debris removed from ditches; railroad ties; sandblasting grit and debris; and absorbent pads, rags, towels and personal protective equipment (PPE).

Solutia personnel coordinated waste characterization and disposal activities for each waste stream. The wastes were disposed at the TSCA-approved Chemical Waste Management landfill in Emmelle, Alabama. Documentation of waste disposal is maintained at the Solutia plant.