

January 24, 2000

Mr. Wm. Gerald Hardy, Chief
Hazardous Waste Branch
Land Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, AL 36130-1463

Solutia Inc. 300 Birmingham Highway Anniston, Alabama 36201



Re: Response to Comments on Proposed Extension of North Side Cover Solutia Inc. Anniston, AL Facility

EPA ID No. ALD 004 019 048

Dear Mr. Hardy:

This letter responds to comments contained in your letters of October 20 and December 15, 1999 regarding Solutia's September 21, 1999 proposal to extend the North Side cover to include recently acquired properties. For convenience, the comments are repeated below in italicized text and each comment is immediately followed by our response. Since your December 15th letter revised two of the comments contained in the October 20th letter, our responses are directed at the revised comments.

1. <u>Asphalt Cover:</u> Solutia states that in some limited areas shown in Figure 3, an asphalt cover will be constructed instead of using a soil cover. Is the use of an asphalt cover in certain areas in any way related to PCB levels in surface or subsurface soils? Please explain the basis of using an asphalt cover in the areas shown in Figure 3.

Response: The use of an asphalt cover is not related to PCB concentrations. The area proposed to be covered by asphalt will be used as an access route by the automobile repair facility located on the west side of Clydesdale Avenue, north of the railroad tracks. The facility currently uses an alleyway leading off of West 10th Street. Since that alleyway will be vacated and fenced off, an alternative access route will be provided off of Clydesdale Avenue, through the area to be paved. That area will also be fenced and access will be limited to the operator of the auto repair facility.

<u>Initial Comment No. 2. - Final Corrective Measures:</u> The Department notes that the workplan construction activities are proposed as interim measures. The workplan that Solutia desires to modify was first submitted to the Department in December 1997. The IM Workplan for the north side was modified once before to address several miscellaneous properties acquired on the north and east side of the facility. The

September 21, 1999 request for extension of the north side cover represents the second modification to the North Side IM Workplan.

The Department believes that it is inappropriate to continue to modify the IM Workplan without establishing a firm deadline for development and submittal of a Final Corrective Measures System (CMS) Workplan for the North Side. According to Solutia's Post-Closure Permit, Solutia must submit the Final CMS Workplan within 60 calendar days from the date of notification by the Department that such a workplan is required. Hence, please submit the Final CMS Workplan within 60 days from the date of receipt of this letter. Solutia should acknowledge that it intends to meet this deadline in the response to comments to this Notice of Deficiency.

Revised Comment No. 2: ADEM imposed the requirement for submittal of a Final CMS Workplan because the North Side IM Workplan had already been modified previously. As outlined in Comment No. 2 of the NOD issued by the Department on October 20, 1999, the Department believes that it remains inappropriate to continue to amend the previously approved IM workplan without establishing a deadline for submittal of a Final CMS Workplan. As a result, the Department requests that Solutia submit a milestone schedule indicating a date for submittal of the CMS Workplan. The submittal date for the workplan should be established as 60 calendar days from approval of the RFI Report for the north side areas (including the extended north side areas). The Department's Comment No. 2 is now considered revised to implement this requirement.

Response: The scope of the first modification referred to in this comment is unclear. The North Side Interim Measures Work Plan was originally submitted to ADEM in December 1997. Revised versions of this Work Plan were submitted on May 19, 1998 and on August 27, 1998. This second revision was approved by the Department on September 10, 1998. Both revisions responded to comments from the Department and neither materially modified the scope of the Interim Measures described in the December 1997 submission. The only construction activity that was not envisaged in the original Work Plan was the consolidation of small amounts of soil under the cover. This soil was excavated from four properties in the immediate vicinity of the Solutia facility.

Nevertheless, it is recognized that a CMS is required for the North Side. Since no separate RFI is scheduled for the North Side, it is intended that Final Corrective Measures for this area will be evaluated as part of the CMS to be performed for the on-site facilities. A Work Plan for this CMS will be submitted within 60 days of approval of the on-site RFI report. This report is currently under review by the Department.

Revised Comment No. 3: Solutia's Interim Measures proposal implies that either a soil or asphalt cover will be installed over contaminated soil areas with PCB levels exceeding 50 mg/kg. Several areas that Solutia proposes to cover are contaminated with PCBs at levels exceeding 500 mg/kg, and one location reportedly contains PCBs at 2810 mg/kg.

For the more highly contaminated areas throughout the facility and on the North Side properties where interim measures have previously been completed, Solutia installed a 40-mil HDPE geomembrane liner in addition to geotextile fabric and 14 inches of clean soil cover. It appears that Solutia should undertake a similar action to address the more highly contaminated areas throughout the extended North Side.

The Department understands that the previously completed interim measures included a multi-media liner over drainage ditches and newly constructed impoundment areas. While the extended North Side areas do not have a defined drainage ditch or impoundment, the Department believes that Solutia should evaluate erosion characteristics of elevated PCB-contaminated areas and develop a revised proposal to include a multi-media cover over selected areas with elevated contamination levels.

Response: The design of the cover over the newly acquired properties has been revised to include a multi-media cover. As was done on the East Side, a 40-mil HDPE geomembrane will be incorporated in the cover in areas where PCB concentrations exceed 500 mg/kg. The geomembrane will be placed on the existing ground surface and will be covered by a geotextile and 14 inches of clean soil. The extent of the HDPE cover is shown on Figure 4 of the *Interim Measures Work Plan for the Extension of the North Side Cover* which is attached to this letter.

4. <u>Figure Discrepancies:</u> Note that certain sampling locations indicated by blue and green dots do not appear accurate. For instance, Figure 1 indicates that three of the sampling locations represent areas with PCBs less than the screening limit. On Figure 3, however, these same locations are shown as representing soil areas exceeding the screening limit. Please correct the discrepancies.

Response: The discrepancies have been corrected.

5. <u>Screening Value(s):</u> Please confirm the "screening limit(s)" referenced in the figures; i.e., are they all representative of 5 mg/kg, 10 mg/kg, or some other value. If more than one screening limit was used, please indicate so.

Response: The screening limit referenced on the figures is 5 mg/kg.

6. <u>Delineation of Covered Areas:</u> Please clarify whether or not one of the sampling areas located west of Clydesdale Avenue will be addressed by the interim measures. Specifically, this comment refers to the location with a reported PCB level of 26.3 mg/kg. According to Figure 3, it does not appear that this area will be covered with either soil or asphalt. If this area is not addressed by the interim measures, Figure 3 should be modified accordingly and the basis for excluding this location should be presented to ADEM.

Response: The specific area referred to in this comment will be addressed by the Interim Measures.

7. Area East of Clydesdale Ave and Relation to 11th Street Ditch: The two southernmost soil screening areas located on the east side of Clydesdale Avenue are reportedly going to be addressed by the proposed interim measures. While they will not be covered, they are shown on the associated figures and Solutia states that: "The properties on the east side are either paved, or do not contain affected soils. Consequently, a cover is not necessary in this area". However, ADEM notes that these two areas are located in an region that will reportedly undergo remediation in accordance with final measures for the 11th Street Ditch. The Department believes it is appropriate to address these areas under the pending final measures for the 11th Street Ditch. If they are no longer in the region designated for 11th Street Ditch remediation, please explain the basis of this change.

These two areas also should undergo further evaluation in accordance with the pending 11^{th} Street Ditch sampling event. If this is not the case, additional sampling appears warranted to delineate contamination prior to developing a proposal for soil removal and/or remediation in this soil region. In any event, it does not appear appropriate to address the two aforementioned areas in this IM Workplan without further delineation of PCB levels and without soil removal activities.

<u>Response:</u> The two areas referred to in this comment will be addressed as part of the Final Measures for the 11th Street Ditch. The extent of the affected areas will be defined by additional sampling to be conducted prior to implementation of these Final Measures.

8. Area East of Clydesdale Ave: Solutia states that is does not intend to complete interim measures on the east side of Clydesdale Avenue because these properties are either paved or do not contain affected soils. In reviewing the September 21, 1999 submittal, the majority of this area does appear to be impacted by PCB contamination above screening levels. Thus, Solutia's reasoning for excluding most of this area appears to be that the sediment sampling points indicated on Figure I are paved. However, the figure is unclear on this matter. Please confirm that the sediment sampling points are located in paved areas.

Response: The discrepancies between Figures 1 and 3 of our September 21, 1999 letter were noted by the Department (refer to Comment No. 4 above). The revised figures included in the attached *Interim Measures Work Plan for the Extension of the North Side Cover* (Figures 1 and 4) show that there are, in fact, three sampling points on the east side of Clydesdale Avenue where PCBs were detected at concentrations in excess of the screening limit. Two of these points are along the railroad right-of-way and will be addressed as part of the 11th Street Ditch Final Measures (refer to Comment No. 7 above). The near-surface soils at the location of the third point will be excavated and replaced with clean material. The actual depth of the excavation will be determined by immunoassay screening in the field, but will not exceed 18 inches. Similar procedures will be used at two other locations shown on Figure 4 (one on the northwestern corner of West 10th Street and Parkwin Avenue, and the other on the northwestern corner of Duncan Avenue and West 9th Street).

The extent of the paved area owned by Solutia on the east side of Clydesdale Avenue is also shown on Figure 4 of the attached Work Plan. As shown on this figure, the soil sampling points in this area were all located in unpaved areas.

The revisions identified in the preceding responses were incorporated into an *Interim Measures Work Plan for the Extension of the North Side Cover*. Three copies of this Work Plan are attached to this letter for your review

If you have any questions about this letter or the attached plan, please call. We would welcome the opportunity to meet with Department representatives to address any additional comments or concerns.

Sincerely, Solutia Inc.

Craig R. Branchfield

Manager, Remedial Projects





Solutia Inc.

300 Birmingham Highway Anniston, Alabama 36201 *Tel* 256-231-8447

INTERIM MEASURES WORK PLAN FOR EXTENSION OF NORTH SIDE COVER SOLUTIA INC. FACILITY ANNISTON, ALABAMA

Submitted to:

Alabama Department of Environmental Management 1400 Coliseum Avenue Montgomery, Alabama 36130-1463

Interim Measures Work Plan for North Side Cover Extension Solutia Anniston Facility January 24, 2000 Page 1 of 7

1. INTRODUCTION

Solutia Inc. (Solutia) has recently purchased additional property on the north side of its facility in Anniston, Alabama. These newly acquired properties are all located on the north side of the Norfolk Southern railway tracks and east of the cover that was constructed as a Supplemental Interim Measure in the second half of 1998. The scope of this Supplemental Interim Measure was described in a Work Plan that was approved by the Alabama Department of Environmental Management (ADEM) in a letter dated September 10, 1998. The final report on the construction of this Supplemental Interim Measure was submitted to ADEM on March 30, 1999. A summary of this is provided in Section 2 of this Work Plan.

Analyses of soil samples from the newly purchased properties report the presence of polychlorinated biphenyls ("PCBs") on some properties (refer to Figures 1 and 3). These figures show the extent of the existing cover constructed in 1998, together with the results of analyses of samples taken within the immediate project area. The new properties are primarily located between Parkwin and Clydesdale Avenues, south of West 10th Street. However, some additional property was also purchased on the east side of Clydesdale Avenue, between the railroad tracks and Eleventh Street.

PCBs were detected on each of the properties on the west side of Clydesdale Avenue. To contain these soils, the existing cover system will be extended to include these properties. The properties on the east side of the street are either paved, or have not been found to contain affected soils for the most part. Consequently, a cover is not necessary in this area, although some limited soil removal in isolated areas is planned. The scope of the proposed work is the subject of this Work Plan.

2. PREVIOUS NORTH SIDE INTERIM MEASURES

The primary goal of the Interim Measures constructed on the North Side in 1998 was to contain soils and sediments on property owned by Solutia downgradient of the West End Landfill. Those areas that may have acted as potential sources of constituents and the mechanisms which could transport these materials offsite were identified by an extensive soil and sediment sampling program conducted between 1995 and 1997. Previous sampling efforts demonstrated that the primary transport mechanism for sediments was surface water and, in particular, stormwater flows that exceeded the capacity of the culvert systems in the drainage ways north and east of the Solutia plant. Because the affected soils and sediments are generally confined to the near-ditch areas of the drainage ways, the implementation of a comprehensive stormwater management system and the isolation and containment of soils provided the best means of achieving the primary goal of the Interim Measures program. This program is based on the requirement that areas in which affected soils and sediments have been identified will be isolated and contained with appropriate covers to prevent offsite migration.

In order to isolate and contain potentially affected surficial soils and control stormwater drainage, a cover was constructed on Solutia-owned property north of the railroad tracks. A large number of soil and sediment samples from within the area were analyzed for PCBs and the extent of the cover was selected to include all of the sample locations on Solutia-owned property where PCB concentrations exceeded the screening level of 5 mg/kg. The cover limits are shown on Figure 1

The entire area within the cover limits was cleared, with the exception of established mature trees. A 6-oz weight, continuous filament, needle punched, non-woven geotextile was installed in cleared areas to define the boundary between the cover and the former soil surface. Over the geotextile, a minimum of 14 inches of soil cover was placed and a vegetative cover was established by hydroseeding the cover soils. The drainage ditch

Interim Measures Work Plan for North Side Cover Extension Solutia Anniston Facility January 24, 2000 Page 3 of 7

which ran through the property was covered by the same geotextile and backfilled with as much as 3 to 5 feet of clean fill. A 40-mil high density polyethylene (HDPE) geomembrane liner was then placed over the ditch area on Solutia-owned property and covered by the 14 in. thick soil cover. The covered area is presently fenced

Stormwater runoff from the West End Landfill and areas west of the plant flows under the railway tracks and is then channeled in a drainage ditch which runs east along the north side of the railroad tracks for about 150 feet, until it enter Solutia's property. This ditch was lined with a 40-mil HDPE liner, 12 inches of soil, and 4 inches of concrete. Flow from the ditch enters a newly constructed manhole structure at the boundary of Solutia-owned property and then into a new 42 in. diameter HDPE pipeline to the corner of West Tenth Street and Parkwin Avenue. Flow from this pipe is directed into an existing culvert that runs along the north side of Tenth Street, under Clydesdale Avenue, and which discharges into a tributary of Snow Creek east of Clydesdale Avenue and north of the railroad tracks (the Eleventh Street Ditch).

A low berm was constructed along West Tenth Street, Parkwin Avenue, and Duncan Avenue to create an impoundment. This impoundment collects stormwater runoff from the covered area, as well as the stormwater backup that cannot be accommodated by the culvert along Tenth Street in high flow conditions. This overflow enters the impoundment through a manhole structure within the berm near the corner of West Tenth Street and Parkwin Avenue. A perimeter ditch running along the outside of the berm along its northern and western sides conveys stormwater runoff from adjacent properties to a sewer running eastwards under West Tenth Street. The berm is equipped with an emergency spillway on the north side which allows for stormwater release into the storm sewer system in the event of major storms which exceed the 100-year, 24-hour design storm.

Interim Measures Work Plan for North Side Cover Extension Solutia Anniston Facility January 24, 2000 Page 4 of 7

3. PROPOSED COVER EXTENSION

The newly acquired properties are shown on Figure 2. The structures shown have been demolished in preparation for construction of the cover extension. The properties include:

- two parcels on the south side of the existing cover, west of Parkwin Avenue, and north of the railroad tracks;
- the majority of the property on the south side of West Tenth Street, between Parkwin and Clydesdale Avenues. The only exception is Brown's Auto Repair facility, located on the west side of Clydesdale Avenue immediately north of the tracks; and
- three parcels on the east side of Clydesdale Avenue, north of the tracks.

The scope of the activities on these additional areas includes demolition of some of the buildings, construction of a multi-layer cover over a portion of the area, removal of impacted soils in three limited areas, and fencing the newly covered property. Each of these activities is separately described below.

3.1 **Building Demolition**

Demolition of the ten structures shown on Figure 2 was completed at the end of 1999 in preparation for construction of the cover extension. As was done on previous demolition projects, each of the buildings was inspected for asbestos and an asbestos abatement plan was implemented on three of the buildings. The asbestos was removed by a licensed abatement contractor and disposed of at a landfill permitted to receive asbestos waste. Air quality was monitored in the immediate vicinity of each of the structures during demolition, and the demolition debris was transported to a permitted landfill for disposal. Concrete floor slabs were left in place, since they will either be isolated by the cover to be placed over some of these properties, or are located in areas of unimpacted soils.

Interim Measures Work Plan for North Side Cover Extension Solutia Anniston Facility January 24, 2000 Page 5 of 7

3.2 Cover Construction

The limits of the existing cover shown on Figure 1 will be extended to include the Solutia-owned property containing soils with PCB concentrations in excess of 5 mg/kg, with the exception of four areas described below. The results of the soil investigation carried out on all of the North Side properties, including the properties under the existing cover, are shown on Figure 3. Based on these results, the limits of the extended cover are shown on Figure 4 and the following points should be noted:

• Four locations which contain soils with PCB concentrations in excess of 5 mg/kg will not be incorporated under the cover (refer to Figure 4). One of these locations is in the railway right-of-way, north of the tracks and east of Clydesdale Avenue. The two samples obtained in this area were both above the 5 mg/kg screening limit and, hence corrective measures will be implemented to isolate and contain these soils. However, it is proposed that these corrective measures be included as part of the final measures for the Eleventh Street Ditch. The extent of the affected soils in this area will be defined during a sampling program which is to be carried out in the ditch prior to construction of the final measures.

The other three locations with affected soils which will not be covered are each very limited in areal extent. Consequently, the soils at these locations will be excavated to a maximum depth of 18 inches and the excavation will be backfilled with clean material. Verification sampling with immunoassay kits will be performed in the excavations prior to backfilling to document the concentrations of PCBs remaining at these locations (if any). The excavated material will be consolidated under the new cover. It is noted that the maximum depth of 18 inches will permit the excavated area to be covered by a minimum of 14 inches of clean soil in the event that residual PCB concentrations remain in the bottom of the excavation.

- One sample shown on the east side of Clydesdale Avenue in the railroad right-of-way contained PCBs at a concentration of 5.3 mg/kg. While this location is shown as being outside of the existing cover limits on Figures 1 and 4, the area was covered in 1998 by the lining constructed in the ditch in which the sample was obtained. As noted previously, that lining consists of an HDPE membrane, 12 inches of soil, and four inches of concrete.
- In some areas, the cover extension will consist of the same materials as used in the existing cover i.e., a 6-oz/sq. yd. non-woven, needle punched geotextile

Interim Measures Work Plan for North Side Cover Extension Solutia Anniston Facility January 24, 2000 Page 6 of 7

placed over the existing ground surface and covered with a minimum of 14 inches of clean, vegetated soil. In other areas, the cover will consist of the same geotextile, but covered with six inches of graded crushed stone and three inches of asphalt, instead of 14 inches of soil. The use of an asphalt cover is dictated by the need to provide access to the auto repair facility on the west side of Clydesdale Avenue. This facility currently has access to the rear of the property along an alleyway off of West Tenth Street. It is intended that the alleyway will be vacated and fenced. Consequently, an alternative access route must be provided to the rear of the property. That route will be off of Clydesdale Avenue, through the paved area.

- Since the limited areas of impacted soils on the east side of Clydesdale Avenue will be excavated, a cover is not required on the east side of the street.
- Consistent with previous practice, areas with PCB concentrations in excess of 500 mg/kg will be covered with a 40-mil HDPE geomembrane, in addition to the normal cover. The geomembrane will be placed on the existing ground surface and will be covered by the geotextile and the soil (or asphalt) layer, as appropriate. The limits of the HDPE cover are shown on Figure 4.

The new cover will be graded to drain to the existing surface water structures. Since the majority of the buildings on the additional properties have been demolished and at least sixty percent of the newly covered area will be vegetated, the peak runoff from the area will be reduced and the existing surface drainage system will accommodate the runoff.

3.3 Fence Construction

The existing fence will be extended to include the newly covered areas. Since the properties on the east side of Clydesdale Avenue are presently paved with asphalt, or will not contain any affected soils after construction, no fence is planned for this area. Further, although access to the auto repair shop on the east side of Clydesdale Avenue will be allowed through the covered area, that access will be controlled by the fence and a gate.

Interim Measures Work Plan for North Side Cover Extension Solutia Anniston Facility January 24, 2000 Page 7 of 7

3.4 Reports

An Interim Measures report will be submitted to ADEM within 90 days of the completion of construction. In addition, a Corrective Measures Study and Final Measures Report (CMS) will also be prepared and submitted to ADEM. Since the North Side area is include in the on-site portion of the Remedial Facility Investigation (RFI), a Work Plan to perform the CMS will be submitted within 60 days of approval of the RFI report. That report is presently being reviewed by ADEM.















