

EXHIBIT H

IN THE CIRCUIT COURT OF CALHOUN COUNTY, ALABAMA

BILLY R. NELSON, et al.,	)	
	)	
Plaintiffs,	)	
	)	
v	)	Civil Action No.
	)	CV 99-502
	)	
MONSANTO COMPANY, et al.,	)	
	)	
Defendants	)	

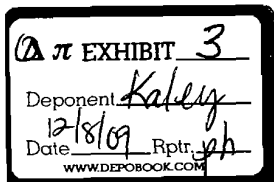
AFFIDAVIT OF ROBERT G. KALEY II, PH.D.

STATE OF MISSOURI)
)
COUNTY OF ST. LOUIS)

1. My name is Robert G. Kaley II, Ph.D. I am over the age of 21 and competent to make this Affidavit. I am currently employed by Solutia Inc. ("Solutia") as Director, Environmental Affairs. I was formerly employed by Monsanto Company ("Monsanto") as Director, Environmental Affairs. I make this Affidavit based upon my personal knowledge of the facts set forth herein and information provided to me in the normal course of my employment with Monsanto and Solutia and based upon my experience, education and training. This Affidavit is submitted in support of Defendants' Initial Objection and Motion to Dismiss or Stay Plaintiffs' Application for Injunctive Relief.

BACKGROUND

2. I received a Bachelor of Science in Chemistry from Purdue University in 1968 and a Ph.D. from the University of Illinois in Analytical Chemistry in 1974. I was employed by



ADA 000236

Monsanto from 1973 to September 1, 1997, when Monsanto spun off its former chemical businesses as Solutia Inc., and I became an employee of Solutia. I am familiar with Monsanto's manufacture of polychlorinated biphenyls ("PCBs") at its plant in Anniston, Alabama, and the characteristics of PCBs. In my positions with Monsanto and Solutia, I have also been charged with reviewing literature and reports regarding PCBs, including information regarding the toxicity of PCBs and environmental remediations involving PCBs. I am also familiar with the extensive investigation and remediation actions undertaken by Monsanto and Solutia under the direction of the Alabama Department of Public Health ("ADPH") and the Alabama Department of Environmental Management ("ADEM"), including: sampling to determine whether PCBs are present in sediments, soils, and storm water in the vicinity of the Anniston plant or in sediments in Snow Creek and in fish in Choccolocco Creek and Lake Logan Martin; the pertinent permits issued to Monsanto (now Solutia) by ADEM; the pertinent Consent Orders entered into by ADEM and Monsanto, the completed, ongoing and currently projected investigations, work plans, and remediation programs conducted or to be conducted by Monsanto and Solutia under the provisions of those Consent Orders and permits and the applicable statutes and regulations; and the activities of the United States Environmental Protection Agency (EPA) and the Agency for Toxic Substances and Disease Registry (ATSDR) in the Anniston and nearby areas.

MONSANTO'S MANUFACTURE OF PCBs

3 In 1935, Monsanto acquired a chemical manufacturing facility in Anniston, Alabama (the "Anniston plant"), from Swann Chemical Company. The Anniston plant had been in operation since approximately 1917. Between approximately 1929 and 1971, Swann Chemical Company and then Monsanto (after 1935) manufactured polychlorinated biphenyls

("PCBs") at the Anniston plant. PCBs were manufactured primarily in response to the electrical industry's desire for fire resistant dielectric insulating fluids. The vast majority of the PCB products manufactured at the Anniston plant were sold to electrical equipment manufacturers, who used PCBs in electrical transformers, capacitors, and other equipment associated with the distribution of electricity. PCBs are fire resistant materials that provided enhanced safety against the risk of electrical fires and explosions. During the time that PCBs were manufactured at Anniston, many fire and safety codes mandated the use of PCBs in electrical equipment. Because of the fire resistance of PCBs, they were also used in high pressure hydraulic applications where the risk of explosion and fire was great, for example, die casting and other foundry operations. PCB fluids also reduced the risk of fire and explosion in heat transfer applications. Prior to 1971, when Monsanto ceased manufacture of PCBs at the Anniston plant, there were no federal or state statutes or regulations governing the manufacture, sale, distribution, disposal or clean-up of PCBs.

4. Monsanto terminated its sale of PCBs for all uses except as dielectric fluids in electrical equipment in 1970-1972. Between 1972 and mid-1977, Monsanto continued to manufacture and sell PCBs only for dielectric uses, because there was no acceptable substitute available to the electric power industry and because the termination of PCB sales for dielectric uses would have resulted in severe economic and social dislocation. That fact was recognized by the Federal Interdepartmental Task Force on PCBs which concluded in May 1972 that the "continued use [of PCBs] for transformers and capacitors in the near future is considered necessary because of the significantly increased risk of fire and explosion and the disruption of electrical service which would result from a ban on PCB use." "Interdepartmental Task Force

Report on PCBs," at p. 4. Monsanto ceased manufacture of PCBs at the Anniston plant in 1971. Manufacture continued at a second Monsanto plant in Illinois to supply the electrical industry. That manufacturing process was voluntarily terminated in July 1977. By regulations promulgated in May 1979, the manufacture, sale and distribution of PCBs were prohibited by the U.S. Environmental Protection Agency acting under authority granted by the Toxic Substances Control Act of 1976. Continued use of PCBs already in service was permitted under the 1979 EPA regulations

PCB CHARACTERISTICS

5 The term "PCBs" refers to a family of chemicals that Monsanto manufactured and sold under the trade name "Aroclor." There are 209 different chemical structures (known as congeners) for PCBs. The congeners differ based upon the location and number of chlorine atoms attached to the rings of the biphenyl molecule. Monsanto made a variety of Aroclor products at the Anniston plant. Monsanto assigned a different numerical designation to each Aroclor product based upon the average chlorine content of the product. For example, Aroclor 1242 was a complex mixture of congeners that contained approximately 42-percent chlorine by weight, Aroclor 1260 contained approximately 60 percent chlorine by weight.

6. While the specific characteristics such as color, viscosity, average molecular weight, boiling point, and physical state (solid or liquid) varied among Monsanto's Aroclor products, all PCBs have very low solubilities in water. Additionally, all PCBs attach readily to and bind strongly to particulate matter such as sediment. The properties of the various PCBs determine their environmental behavior and relative persistence. The adhesion of PCBs to soils and sedimentary material largely determines fate and transport of PCBs in aquatic systems.

WEST END LANDFILL

7 In 1993, Alabama Power Company ("APCO") contacted Monsanto requesting information regarding a parcel of property that APCO had acquired from Monsanto in 1960. This property had been used as a landfill area by Monsanto from the mid-1930s to sometime prior to its transfer to APCO. The documents transferring title to this property indicate that APCO was informed that the site had been used for waste disposal. In April 1993, APCO performed some exploratory testing on this property and discovered detectable levels of PCBs near a switching station which APCO had constructed on the property during the mid to late 1970s. Further testing suggested that during the construction of this switching station, a section of the old landfill had been disturbed. State and federal environmental officials were promptly notified by APCO of APCO's findings. In December 1993, Monsanto voluntarily agreed to reacquire title to the property from APCO. This property is now referred to as the West End Landfill.

8. After obtaining title to this property, Monsanto completed a detailed investigation of the West End Landfill in August 1994 and reported its findings to ADEM. Following this investigation, Monsanto submitted, and ADEM and the United States Environmental Protection Agency approved, Monsanto's plan to upgrade the cap that had been placed on the area prior to its transfer to APCO. With the approval and oversight of ADEM, Monsanto began implementing this project in 1995. This project included installation of a multi-layered liner system on top of the old landfill area, rerouting the drainage ditches around the landfill area, seeding the landfill area, and lining the drainage ditch with concrete. The multi-layer liner is made up of four (4) protective layers: six inches of clay, a synthetic membrane, a geotextile and

Hydraway® layer for drainage, and eighteen inches of clay. The West End Landfill is surrounded by a chain-link fence, and there is no means of access to this property by members of the public. The work completed by Monsanto in this project precludes the West End Landfill from being a potential source of PCBs.

1993 FISH CONSUMPTION ADVISORY

9. In November 1993, ADPH issued a notice advising people to refrain from consuming fish caught in Choccolocco Creek between the confluence of Choccolocco Creek and Snow Creek and the confluence of Choccolocco Creek and Lake Logan Martin. This advisory (Exhibit 1) was based on fish tissue testing which revealed concentrations of PCBs above the FDA tolerance level of 2 parts per million ("ppm") in fish collected from Choccolocco Creek.

SNOW CREEK SAMPLING

10. Following this fish consumption advisory, ADEM took sediment samples from Choccolocco Creek and several tributaries of Choccolocco Creek, including Snow Creek. (Exhibit 2). ADEM detected PCBs in Snow Creek at several sampling stations, including two sampling stations upstream of the point where drainage ditches leading from the Anniston plant area join Snow Creek. ADEM's report also identified 11 potential sources (other than Monsanto) for the PCBs detected in Snow Creek (Exhibit 2, Table 1).

11. Monsanto also sampled and analyzed sediment from Snow Creek. A report of Monsanto's findings was submitted to ADEM in July 1995 (A diagram showing the sampling locations and the results of the analyses of these samples is attached as Exhibit 3). Monsanto took samples from sediments on the bottom of the creek at six locations. PCBs were detected in five of the samples at levels between 3.9 ppm and 248 ppm. The finding of 248 ppm was near

the confluence of Snow Creek and the drainage ditches leading from the Anniston plant area. Monsanto also took samples of a pile of material that the City of Anniston had dredged from Snow Creek and placed next to Snow Creek just north of where Snow Creek flows under Highway 202. This pile of dredged material contained detectable levels of PCBs. A liner was placed over this pile to stabilize the pile and preclude erosion. Neither Monsanto nor Solutia is aware of any soil samples from properties bordering or next to Snow Creek taken by any state or federal agency showing the presence of PCBs on such properties with the exception of the property of Tull Chemical. In 1984, the Alabama Attorney General sued Tull Chemical for discharging PCBs into Snow Creek. Samples taken at that time showed elevated levels (e.g., over 4,000 ppm) of PCBs next to or in Snow Creek at the Tull Chemical site.

MONSANTO'S AND SOLUTIA'S INVESTIGATIONS AND ACTIVITIES

12 The following paragraphs summarize, generally in chronological order, the completed, ongoing and currently projected investigations, work plans and remediation programs conducted or to be conducted by Monsanto and Solutia under the direction of ADEM and in accordance with the provisions of Consent Orders between Monsanto and ADEM, permits issued to Monsanto (now Solutia) by ADEM, and applicable statutes and regulations. These activities are also described in a report prepared by ADEM, dated December 23, 1997, as updated June 12, 1998 and March 28, 2000, and entitled "Summary of Activities, Solutia, Inc. - Anniston Facility, Anniston, Alabama, EPA ID No ALD 004 019 048." (Exhibit 4) As described in that report and in the following paragraphs of this Affidavit, while Solutia has undertaken and continues to

implement measures to assess off-site presence of PCBs, the initial phases of the investigations, work plans and remediation actions have been directed to identifying, removing and remediating PCB sources on-site and in the areas adjacent to the plant site. This approach, which focuses first on controlling potential sources, expedites the remediation and containment of PCBs in those areas where higher levels of PCBs have been detected and eliminates the potential for any continuing or future release or migration of PCBs to off-site areas, including Snow Creek, prior to implementing the extensive second phase of the program to address those off-site areas. By the end of this year, Monsanto/Solutia will have expended approximately \$40,000,000.00 on the planning, investigation and remediation activities described in this Affidavit. Solutia has essentially completed the first phase source control measures, and it has completed certain aspects of the second phase of the program (described in detail below). Based on extensive sampling and analysis of water and sediments from Snow Creek and water, sediments and fish from Choccolocco Creek and Lake Logan Martin, the need for remediation in these areas will be addressed after the necessary information is evaluated. As discussed in the accompanying Affidavit of Dr. Brown and Paragraphs 29-32 of this Affidavit, it is not possible to determine, design, implement or monitor whatever remedial measures may be appropriate in these waterways without the information already developed and yet to be developed under the extensive off-site investigation implemented by Solutia under the direction of ADEM. Moreover, the effectiveness of the remedial measures previously undertaken on Monsanto's (and now Solutia's) property in Anniston will be evaluated by ADEM and the United States Environmental Protection Agency ("USEPA") and will be subject to public review, comment, and challenge, if ultimately approved as final corrective measures by these agencies.

THE 1995 CONSENT ORDER UNDER AWPCA.

13. Following Monsanto's acquisition of the property on which the West End Landfill is located, Monsanto tested storm water runoff from both the West End Landfill and from the area of Monsanto's former landfill area south of Highway 202 (known as the South Landfill). Monsanto unexpectedly detected a trace amount of PCBs (8.3 parts per billion in a grab sample; 6.3 parts per billion in a composite sample) in storm water runoff from the South Landfill in a sample obtained on Monsanto's property. (Exhibit 5). Monsanto promptly reported this information to ADEM. Subsequently, Monsanto took sediment samples in a drainage ditch on its property that led from the South Landfill. (Exhibit 6). These samples revealed the presence of PCBs in the sediment in the drainage ditch on Monsanto's property (Exhibit 7)

14. On April 5, 1995, Monsanto entered into a Consent Order (Exhibit 8) with ADEM under the Alabama Water Pollution Control Act to develop and implement a sampling plan to sample soils in the storm water drainage area and other areas outside of these ditches in an area designated as "Area A" (an area immediately east of the plant roughly bounded by Clydesdale Avenue, 8th Street, Montrose Avenue, and Highway 202). Monsanto ultimately took sediment samples throughout the reach of the drainage ditches and soil samples extending outward on both sides of the ditches on Monsanto's property and other areas in "Area A" and in an additional area designated as "Expanded Area A" (an area immediately north of Area A). Maps showing the location and analytical results from samples taken in Area A and Expanded Area A are attached as Exhibits 9 and 10. Exhibits 9 and 10 show that Monsanto found PCBs at varying levels in the bottom of the drainage ditches that flow from the area of the South Landfill and the Anniston plant to an area just south of Bethel Missionary Baptist Church. The drainage ditch flows

underground in a pipe from Bethel Missionary Baptist Church until it resurfaces north of 10th Street. Monsanto also found areas outside of these drainage ditches where PCBs were present at various levels almost exclusively in areas flooded by the drainage ditches during heavy rains.

15. In October 1995, to facilitate the implementation of an extensive plan to control storm water runoff, Monsanto initiated a Property Purchase Program, whereby it offered to purchase occupied and vacant residential properties within a specified area immediately east of the Anniston plant, as depicted on the map attached as Exhibit 11. Participation in the program by eligible property owners was voluntary. Prior to initiating the Property Purchase Program, Monsanto owned approximately 24 acres of property within this area. Monsanto purchased approximately 40 properties (improved and unimproved) in this Program Area.

16. On May 9, 1996, ADEM issued to Monsanto a letter confirming Monsanto's completion of its obligations under the 1995 Consent Order. (Exhibit 12).

THE 1996 CONSENT ORDER UNDER AHWMMMA

17. On March 8, 1996, Monsanto entered into a second Consent Order with ADEM under the Alabama Hazardous Wastes Management and Minimization Act. (Exhibit 13) This Consent Order further expanded and defined the scope of Monsanto's ongoing investigation and remedial activities in areas in close proximity to the Anniston plant. Under this Order, Monsanto agreed to: (1) sample four additional areas (designated as Areas A, B, C, and D) for the presence of PCBs; (2) to identify other areas of potential PCB contamination and propose and implement a sampling plan for such areas; (3) to complete the upgrading of the cap of the West End Landfill in accordance with the earlier plan approved by ADEM, (4) to complete the design and construction of storm water runoff controls for the area immediately east of the plant; (5) to

undertake additional efforts to relocate residents in the area east of the plant and efforts to mitigate potential exposure for those who did not relocate; and (6) to offer weekly cleaning services to two churches in the area immediately east of the Anniston plant.

18 Monsanto completed and reported to ADEM the sampling agreed to under the terms of the March 8, 1996, Consent Order in the four additional sampling areas. Maps of each of these areas are attached as Figures 1, 2, 3 and 4 to Exhibit 14. These sampling results confirmed that, generally, PCBs are only detected in areas directly adjacent to drainage ditches or in areas impacted by storm water flooding from those ditches. The drainage ditches ultimately flow toward and join Snow Creek just south of 11th Street near the point where a railway line crosses Snow Creek.

Monsanto also identified a sampling area immediately north of Area D designated as "Area E," which is south of 10th Street between Duncan Avenue and Parkwin Avenue. Area E was impacted by flooding from the North Drainage Ditch, and PCBs were detected on properties in Area E. A map of Area E is attached as Figure 5 to Exhibit 14.

Figure 6 of Exhibit 14 reports sampling results from certain commercial properties immediately across the street from the Anniston plant on Clydesdale Avenue or along 10th Street east of Clydesdale Avenue. While low levels of PCBs were detected in several samples, other samples within the immediate vicinity of the Anniston plant contained no detectable concentrations of PCBs.

19. In March 1996, as part of its relocation efforts, Monsanto expanded its Property Purchase Program to residential properties (improved and unimproved) on Montrose Avenue, a street immediately east of and adjacent to the initial Program Area. Monsanto purchased 7 of the

11 occupied residences on that street. Subsequently, in April and June of 1996, Monsanto again expanded the Property Purchase Program to include residential properties (improved and unimproved) in the areas north of the plant designated as Areas C and E, respectively. All but one of the residents in these Program Areas participated in the Property Purchase Program.

20. Monsanto filed biweekly reports with ADEM documenting its progress under the 1996 Consent Order, including its relocation of residents and cleaning of homes and furnishings. These reports are collected and attached to Monsanto's final report to ADEM under the March 1996 Consent Order. (Exhibit 15). That report also documented the results of Monsanto's sampling program and compliance with the other provisions of the Consent Order issued under the State's RCRA authority. Monsanto reported completion of the upgrade to the West End Landfill cap and submitted to ADEM plans and a schedule for construction of runoff controls for the area east of the facility, including a stormwater detention basin in that area (referred to as the "Lower Detention Basin") designed to store the runoff from a storm event of such magnitude that it would be unlikely to occur more than once in 25 years, and to channel the runoff from a storm event of such magnitude that it would be unlikely to occur more than once in every 100 years. The Lower Detention Basin is designed to capture sediment that may be transported from the South Landfill and was completed in February, 1997, in accordance with the plans submitted to ADEM under the 1996 Consent Order. ADEM issued a letter to Monsanto dated May 30, 1997, (Exhibit 16) confirming the completion of Monsanto's obligations under the 1996 Consent Order.

1996 FISH CONSUMPTION ADVISORY

21 In April 1996, ADPH revised the existing limited fish consumption advisory on Lake Logan Martin to a "no consumption" advisory for selected species of catfish and bass from an area near Riverside, Alabama, downstream to the Logan Martin Dam. This expanded advisory (Exhibit 17) was based on ADEM fish sampling data on fish which had been collected in the fall of 1995. The results of this testing reported that some composite samples and samples of individual fish contained PCBs at concentrations in excess of the 2 ppm FDA tolerance level. In early 1996, Monsanto commissioned Dr. David R. Bayne, Professor, Department of Fisheries and Aquacultures, Auburn University, to undertake an extensive fish sampling and analysis program in Lake Logan Martin and Choccolocco Creek. The purpose of this voluntarily undertaken program was to expand the understanding of the levels of PCBs in a wide variety of fish species of varying sizes and ages. Samples were taken in both the spring and autumn of 1996. The results of that study were presented to ADEM and ADPH in March of 1997. (Exhibit 18.) The results confirmed that larger fish of several species contained PCBs at levels in excess of the 2 ppm FDA tolerance level.

THE 1996 NPDES PERMIT

22. On December 31, 1996, ADEM issued to Monsanto a National Pollutant Discharge Elimination System ("NPDES") permit pursuant to the Alabama Water Pollution Control Act, Code of Alabama 1975, Sections 22-21-1 et seq., authorizing among other things, the discharge of non-contact cooling water and stormwater from several outfalls at the plant. The permit (Exhibit 19) includes specific provisions governing discharge of PCBs and other constituents and sets a stormwater discharge limit for the discharge of PCBs which, in effect,

prohibits the discharge of PCBs above the practical quantification limit of applicable analytical methods.

THE 1997 RCRA PERMIT

23. On January 7, 1997, ADEM issued to Monsanto a hazardous waste facility permit (also referred to as a RCRA Part B Post-Closure Permit, or RCRA Permit), pursuant to the procedures and requirements of AHWMA (including an opportunity for public comment). The RCRA Permit (Exhibit 20) establishes requirements for the monitoring and maintenance ("Post-Closure Care") and the investigation of specified areas of Monsanto's (now Solutia's) property which were or may have been used for the management of wastes generated by the plant's operations and the investigation of specified areas in the vicinity of the property where materials may have migrated from the property. The Post-Closure Care and investigative mandates set forth in the RCRA Permit draw upon numerous past and planned activities at the Anniston plant designed to eliminate the potential for migration of materials from Monsanto's property to off-site areas.

CORRECTIVE ACTION AND INTERIM MEASURES UNDER THE RCRA PERMIT

24. The RCRA Permit required Monsanto to develop a RCRA Facility Investigation ("RFI") Workplan to govern certain aspects of its investigation on the plant site and off-site areas. The RFI Workplan (Exhibit 21) was submitted to ADEM for its review and approval on April 7, 1997.

The RCRA Permit also provided for the implementation of "Interim Measures" in advance of implementation of the RFI Workplan process to "minimize or prevent the further

migration of contaminants and limit human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented." (Exhibit 20, Condition III F p. 44) In February 1997, Monsanto proposed to undertake a number of projects as Interim Measures during the RFI process to eliminate the potential for contaminants to migrate from Monsanto's property, including properties that it had recently acquired. On March 11, 1997, ADEM requested that Monsanto prepare an Interim Measures Workplan ("IMWP" or "Workplan") for ADEM's review and approval. (Exhibit 22). On April 11, 1997, Monsanto submitted an IMWP to ADEM for review and approval. (Exhibit 23).

Interim Measures described in the Workplan included: (1) the diversion of stormwater runoff upgradient of the South Landfill; (2) the upgrade of the cap on a portion of the South Landfill; (3) the installation of synthetic and natural cover over surficial soils east of the operating facility and the installation of new piping to convey stormwater and to minimize flooding in that area, (4) the installation of synthetic and natural cover over surficial soils downgradient of the West End Landfill and north of the operating facility and the installation of new piping to convey stormwater and to minimize flooding in that area, and (5) the upgrade of on-plant storm sewers. As explained in the Workplan:

The primary goal for the Interim Measures identified in this IMWP is to control stormwater and mitigate the potential for migration of constituents from the Monsanto facility. Those areas that may act as potential sources of constituents and the mechanisms which could transport these materials offsite have been identified by an extensive soil and sediment sampling program conducted . . . since 1995. . . . Because the affected soils and sediments are generally confined to the floodplain areas of the drainage ways, the implementation of a comprehensive stormwater management system and the isolation and containment of soils provide the best means of achieving the primary goal of the Interim Measures program.

Exhibit 23, p. 4

Monsanto, while awaiting review, comments and final approval of the Interim Measures Workplan by ADEM, took a number of steps to expedite and facilitate implementation of the Interim Measures, including fencing most of the property it had acquired and removing structures from those properties to facilitate various stormwater management projects and the installation of synthetic and natural covers over surface soils. (Demolition Plan submitted to ADEM, attached as Exhibit 24) In addition, Monsanto eliminated the discharge of non-contact cooling water from its plant to a drainage ditch leading towards Snow Creek by routing this water to the plant's on-site treatment system.

25 After a period of review and comment on the proposed Interim Measures Workplan, Monsanto submitted a revised Interim Measures Workplan on June 16, 1997. (Exhibit 25). By letter dated July 28, 1997 (Exhibit 26), ADEM approved this revised Interim Measures Workplan. Monsanto, and now Solvua, has completed the following approved remedial measures in compliance with the Consent Orders and the Interim Measures Workplan: (1) constructing the stormwater detention basin (Lower Detention Basin) in the area immediately east of the plant to contain stormwater and minimize the potential for flooding; (2) fencing acquired property and removing structures to facilitate stormwater management and permit the installation of synthetic and natural covers over surface soils; (3) implementing additional actions to control stormwater runoff, including plant discharges of non-contact cooling water; (4) implementing measures to cover identified soils on and off the plant site, including an area adjacent to the western portion of the South Landfill and property purchased by Monsanto to the

east of the plant in an area consisting of approximately forty acres (the measures to cap and cover these areas included the installation of geotextile fabric over approximately 55 acres of property (including drainage ditches), covering the fabric with a minimum of 14 inches of clean soil, and then seeding that soil with new grass); (5) upgrading the cap of the western portion of the South Landfill with the same multi-layered liner system used on the West Landfill (see Paragraph 8); (6) implementing measures to prevent stormwater from carrying materials from the site, including diversion of stormwater away from remediated or potentially affected areas to a permitted discharge point; (7) implementing measures to install a new piping system to control and divert stormwater, including a separate diversion of stormwater from potentially affected areas through a pipeline to the permitted discharge point; and (8) implementing measures to upgrade in-plant storm sewers, including diversion of all non-contact process water from the in-plant sewer system to an in-plant waste water treatment facility, with subsequent discharge to the Publicly Owned Treatment Works. These actions are further documented in the Interim Measures Report submitted to ADEM by Solutia on March 31, 1998 (Exhibit 27) and the Completion Report for the South Landfill Construction submitted by Solutia to ADEM on April 24, 1998.

26 On December 22, 1997, Solutia submitted to ADEM a Supplemental Interim Measures Workplan (Exhibit 28) to address properties on the North side of the Anniston plant. The proposed measures are substantially the same as those completed on the properties east of the plant site. After a period of review and comment by ADEM, this Workplan was revised and resubmitted to ADEM on May 21, 1998 (Exhibit 29). Mobilization for construction under these

Interim Measures was initiated on August 10, 1998, and the work was completed in accordance with the Workplan by December 31, 1998.

RCRA FACILITY INVESTIGATION (RFI) WORKPLAN

27 The 1997 RCRA Permit required that Monsanto submit to ADEM a RCRA Facility Investigation (RFI) Workplan. The initial proposed RFI Workplan was submitted by Monsanto on April 3, 1997. (Textual portions attached as Exhibit 21). After a period of review and comment, the RFI Workplan was revised by Solutia on March 25, 1998. (Exhibit 30). The RFI/CS Workplan was approved by ADEM on April 21, 1998 (Exhibit 31).

28. The primary objectives of the RFI Workplan for the on-site investigation are to evaluate the continuing effectiveness of corrective measures previously completed at the site, including source elimination actions, engineering controls such as caps and covers, and ground water pumping systems, and to collect confirmatory soil, ground water, and surface water samples to demonstrate the absence of off-site migration of constituents of primary concern (COPCs). The primary tasks to be completed for the on-site RFI investigation included the following: (1) installation of 12 additional ground water observational wells to supplement over 100 existing monitoring points to assure complete understanding of ground water gradients and potential movement of COPCs; (2) performance of aquifer testing at the existing ground water pumping system to confirm effective capture of COPCs in ground water; (3) collection of surface and subsurface soil samples to confirm adequacy of previously completed corrective measures; and (4) collection of surface water samples to confirm the absence of runoff of COPCs into drainage points and outfalls. All four of these items have been completed. On January 14, 1999, Solutia submitted a draft RFI/CS Report to ADEM and USEPA. ADEM commented on the

Report on September 1, 1999. In response to these comments, Solutia submitted a letter to ADEM on October 7, 1999, suggesting a workplan for additional soil sampling and submitted a formal response to ADEM's comments on October 29, 1999. Solutia is awaiting approval or further comment from ADEM on the RFI/CS Report.

SUPPLEMENTAL RFI WORKPLAN FOR OFF-SITE INVESTIGATION

29 The RFI Workplan described in the preceding paragraph called for Solutia to submit to ADEM a Supplemental Workplan for the Off-Site Investigation. In order to expedite the off-site portion of the RFI process, Solutia proposed an Off-Site Interim Measures Plan to ADEM in a letter dated June 18, 1998. (Exhibit 32) In that letter, Solutia proposed several measures to accelerate the off-site phase, including locating and evaluating dredge piles; designing and implementing protective measures for the 11th Street ditch, and submitting the Off-Site Workplan in October 1998, rather than in December. Solutia responded to several ADEM inquiries concerning this interim measures plan, and this plan was approved by ADEM on August 14, 1998. (Exhibit 33). The Supplemental Workplan for the instream portion of the off-site area (Exhibit 34) was approved by ADEM on July 26, 1999 (Exhibit 35). A workplan to investigate the floodplain areas of Snow Creek and Choccolocco Creek was submitted to ADEM on April 15, 2000 (Exhibit 36) and will be implemented upon receipt of approval of ADEM. In addition, a workplan for the investigation of groundwater in the off-site area was submitted to ADEM on April 24, 2000 (Exhibit 37) and will be implemented upon receipt of approval of ADEM.

30 To implement the first phases of the Supplemental Workplan for the in-stream portion of the off-site investigation, Solutia engaged a team of outside and in-house experts,

including Dr. Mark Brown of Blasland, Bouck & Lee, Inc. (BBL)-to design and implement the plan. That plan is comprised of an extensive program of sampling and analysis of various environmental media in Snow Creek, Choccolocco Creek, and Lake Logan Martin (Coosa River) The proposed investigation included the collection and analysis of samples of sediment, surface water, and fish

31. The in-stream portion of the off-site investigation was completed and a report submitted to ADEM on June 29, 2000 (Exhibit 38). The cost of this investigation was approximately \$3,000,000.00. The investigation of the floodplain areas is anticipated to cost in excess of \$3,000,000.00 and the implementation of the groundwater investigation workplan is expected to cost approximately \$100,000.00.

32. The RCRA RFI process is administered by ADEM under authority granted to it by the U.S. Environmental Protection Agency. The process is a comprehensive program of assessment, investigation, evaluation, design and implementation, the purpose of which is to assure that constituents associated with current and past waste management practices are not having an impact on human health or the environment. Monsanto, and subsequently Solutia, have engaged in a comprehensive, ambitious, and expedited effort to comply with our responsibilities under the RCRA process. It is important to understand, however, that there is a logical progression to the various aspects of the process, for example, using a phased approach to assure that potential on-site sources of various constituents, such as PCBs, are appropriately contained and managed prior to off-site investigatory activities. Off-site, it is critical to understand the Snow Creek-Choccolocco Creek-Lake Logan Martin system before evaluating, designing, and implementing potential remedial measures. Indeed, premature and inappropriate

remedial activities could potentially cause severe harm to the environment in the vicinity of the Anniston plant and of these waterways. Solutia's ambitious and expedited approach to the Off-Site RFI process will assure that appropriate information is obtained in a timely and comprehensive manner and that necessary and appropriate remedial measures will be proposed to ADEM with confidence that the measures will accomplish the goals of the RFI process.

AMBIENT AIR MONITORING

33. In January 1998, Solutia retained the Massachusetts office of ENSR Corporation to take samples of ambient air at several locations near the Anniston facility and at several background locations. The procedure used for sampling and analysis of the air is described in a document entitled "Work Plan for Estimating Ambient PCB Levels in the Vicinity of Solutia's Anniston, AL Facility", ENSR Corporation, April 2000, Document 6105-006-150. (Exhibit 39)

34. In February 1998, four sampling events were carried out at three locations near Mars Hill Missionary Baptist Church (ANN SW, ANN NE, and ANN NE2), in the area immediately east of the Solutia plant, and in Birmingham (B'HAM) and Gadsden (GADS), Alabama. (The sampler identifications correspond to columns in a spreadsheet summarizing Solutia's air sampling results that is attached to a November 22, 1999, letter to ADEM, which will be described below.) In April 1998, four sampling events were carried out. Air samplers for these events were located near Mars Hill Missionary Baptist Church (ANN SW and ANN NE), near the detention pond constructed east of the plant (DETPOND), at the West End Landfill (WEL and WEL2), and at the storm water diversion berm south of the South Landfill (SOL). Sampling was also conducted at an office building in downtown Anniston (DNTOWN). The

downtown sampler was removed after the April 1998 sampling events. Sampling continued at the other locations on a monthly basis (two sampling events per month) from October 1998 through May 1999

35. In June 1999, the United States Environmental Protection Agency (EPA) conducted air sampling in the Anniston area, including locations near the Solutia facility. At Solutia's request and with the agreement of EPA, ENSR co-located samplers alongside the EPA samplers to obtain duplicate samples. The additional sampling locations were near the Alabama Power Company substation near the West End Landfill (SUBSTAT), a background sampler alongside Highway 202 at the north edge of the South Landfill (BGB), at the former Miller property northeast of the plant site (MILLER), and at Wellborn High School west of the Anniston plant (HI SCH.). Three sampling events were carried out. EPA's results were reported in a memorandum dated August 17, 1999, entitled "Laboratory Results of PCB Air Study, Anniston, Alabama, June 28 to July 1, 1999". (Exhibit 40)

36. In a July 20, 1999, letter to Solutia, ADEM requested that air monitoring data be provided to both ADEM and EPA. Solutia met with ADEM on September 2, 1999, to summarize the data available at that time. On November 22, 1999, Solutia wrote a letter to ADEM, of which copies were sent to EPA, summarizing all of the air monitoring data which Solutia had obtained from February 1998 through June 1999 (Exhibit 41) Included in Appendix II of Exhibit 41 is a spreadsheet documenting those data. The sampling locations are

identified using the abbreviations noted in the Paragraphs 34 and 35 above. Appendix II also includes a map showing most of the sampling locations.

37. Solutia's November 22, 1999, letter to ADEM contains the following paragraph summarizing Solutia's understanding of the air level sampling results available at that time:

The results of the air sampling conducted by Solutia confirm that PCB migration via an air pathway is not a source of concern, in that the concentrations are typically in the range of 0.1 to 50 nanograms per cubic meter (ng/m³). The highest value reported during sampling by Solutia was 80 ng/m³ near Mars Hill Missionary Baptist Church, an area which has since been remediated. All of the air levels detected by the plaintiffs and by Solutia are orders of magnitude below the OSHA PEL for Aroclor 1242, which is 1,000,000 ng/m³. The OSHA PEL is strictly applicable only to occupational exposures, which are considered to be 40 hours per week. Even if the OSHA PEL is divided by four to adjust for a worst case, 168 hours per week potential residential exposure scenario, the levels at the Anniston facility are still orders of magnitude lower than the PEL. They are also well below the 1,000 ng/m³ recommended by NIOSH, a level which was based on analytical considerations and is not a risk-based value.

38 In the November 22, 1999, letter to ADEM, Solutia agreed to continue semimonthly (twice per month) air sampling events and report the results to ADEM on a bimonthly (once every two months) basis. Solutia also notified ADEM of its intention to reposition the air samplers to more clearly define the levels of PCBs at the fence line of the Anniston facility. The samplers were relocated in January of 2000. ADEM confirmed its understanding of Solutia's activities in a December 15, 1999, letter to Solutia. (Exhibit 42). On February 18, 2000, and February 28, 2000, Solutia provided bimonthly updates of the air sampling results for the former locations of the air samplers. Updated spreadsheets were also included. (Exhibits 43 and 44) On April 18, 2000, and June 5, 2000, Solutia provided bimonthly

updates of the air sampling results for the relocated air samplers. A map showing the location of the samplers and a new spreadsheet compiling the results from those samplers were included. (Exhibits 45 and 46).

FINAL DELINEATION OF AREA OF CONCERN B (AOC B)

39. In a letter dated September 8, 1999, ADEM requested that Solutia undertake several activities, including specific delineation of Area of Concern B (AOC B). (Exhibit 47) Solutia responded to that letter on October 1, 1999. (Exhibit 48) In its response, Solutia summarized soil sampling results, air sampling results, and alternate sources of PCBs to support its conclusion that AOCB is definitively defined by drainage patterns leading from the Anniston plant. Specifically, AOCB is defined as follows:

- ☐ In the near-plant area (Figure 1 in Exhibit 48), the limits include the areas along drainage ditches which were historically prone to flooding. These include the East Side Ditch, a ditch running along the west side of the plant and then through the North Side properties, and the 11th Street Ditch. The limits shown on Figure 1 were defined on the basis of observed historical flooding and topography.
- ☐ Downstream of the 11th Street Ditch, the limits of AOC B (Figure 2 in Exhibit 48) are defined to be the 100-year flood plains of Snow Creek, Choccolocco Creek (downstream of Snow Creek), and Lake Logan Martin between Choccolocco Creek and the Logan Martin Dam.

Subject to minor modifications (Exhibit 49), ADEM concurred in this delineation of AOC B on February 1, 2000 (Exhibit 50).

ADDITIONAL ACTIVITIES UNDER THE RCRA PERMIT

40. In addition to the investigative and remedial activities described in preceding paragraphs, Solutia has submitted a number of additional workplans for remedial activities,

including a Corrective Measures Study to address PCB-containing sediments in the 11th Street Ditch, a Corrective Measures Study to address certain dredge spoil piles located along Snow Creek, and an interim measures workplan to extend the North Side cover to address certain commercial properties acquired since the original cover was installed. (Exhibit 50A) Solutia is awaiting ADEM approval of these workplans. Monsanto (and now Solutia) have also been assisting the Alabama Department of Transportation to address PCB-containing soils in a bridge construction site on Highway 21 in Calhoun and Talladega Counties, south of Oxford, Alabama. A corrective measures study for this project is under review by ADEM. (Exhibit 51) Solutia has also assisted Quintard Mall Ltd. in managing PCB-containing soils excavated during an ongoing project to expand Quintard Mall in Oxford.

FEDERAL AGENCY ACTIVITIES

41. From June 28, 1999, through July 1, 1999, the United States Environmental Protection Agency (EPA) conducted a preliminary air and soil sampling program in Anniston. The results of the air sampling were described in Paragraph 35 above. The results of the soil sampling became available to Solutia on September 17, 1999, in the form of tables of sample locations designated by number and address and sample results designated by number. (Exhibit 52) In summary, the results showed that of the 38 samples taken and analyzed, 27 contained less than 1 ppm PCBs, 11 contained between 1 ppm and 10 ppm PCBs (of which 5 were less than 2 ppb PCBs), and only 2 contained greater than 10 ppm PCBs. One of those samples was on commercial property in an area known to be affected in the past by flooding from drainage ditches and owned by a litigant against Monsanto (15 ppm); the other was on residential property

owned by a litigant against Monsanto (14 ppm). One sample was reported to contain 172 ppm of DDT, an insecticide not associated with Monsanto's or Solutia's operations in Anniston.

42. In September 1999, Solutia received a Request for Information Pursuant to Section 3007 of RCRA from EPA Region 4. (Exhibit 53) The request was for information generated by attorneys for plaintiffs as part of their litigation strategy against Monsanto. Solutia understood from EPA that the attorneys had refused to comply with requests from EPA for this information. On October 29, 1999, Solutia responded to EPA by submitting all of the blood sampling, soil sampling, and air sampling results which it had received from the attorneys for plaintiffs. Solutia also included various other results of soil sampling which were not specifically included in EPA's request. (Exhibit 54)

43. On December 6, 1999, the Agency for Toxic Substances and Disease Registry (ATSDR) issued a draft Public Health Assessment for areas near the Solutia Anniston plant. (Exhibit 55) Most of the areas addressed in the Public Health Assessment were areas in which Monsanto and Solutia had done extensive sampling and remediation. Solutia disagreed with some of the characterizations of potential exposures and potential health risks and filed comments with ATSDR in a letter dated February 8, 2000. (Exhibit 56) ATSDR has not responded to those comments.

44. On February 14, 2000, ATSDR released for public comment a draft Health Consultation for Monsanto Company, Anniston, Calhoun County, Alabama. (Exhibit 57) The information relied upon by the agency for this Health Consultation included sampling and analysis results generated by Monsanto and Solutia, by the EPA, by Alabama regulatory agencies, and by attorneys representing plaintiffs in litigation against Monsanto. Much of the

data from the attorneys for plaintiffs was provided to the agencies by Solutia in response to the Section 3007 request discussed in Paragraph 42 above. The Health Consultation purported to integrate all of the available soil, air, and blood sampling data available to the agency; to reach conclusions about potential past, present, and future exposures and health risks; and to recommend additional activities.- Solutia believes the draft Health Consultation contains serious factual errors which potentially invalidate many of the conclusions drawn by ATSDR. Solutia filed extensive comments to ATSDR on April 26, 2000. (Exhibit 58) ATSDR has not responded to those comments.

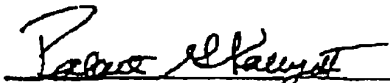
45 During the week of February 14, 2000, EPA collected environmental samples from residential and communal areas in Anniston and nearby areas. Samples were analyzed for PCBs, pesticides, metals, and other compounds. A smaller set of samples was analyzed for polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). The results of this sampling program were released by the EPA on or about July 20, 2000, in a report entitled "FIELD INVESTIGATION REPORT, ANNISTON PCB SITE, CALHOUN COUNTY, ANNISTON, ALABAMA. (Exhibit 59) Of the 144 samples analyzed for PCBs and pesticides, some of which were duplicate samples, only six contained PCBs at greater than 10 ppm. And of those six samples, Solutia believes one is from a drainage ditch which Solutia is currently investigating, two are on commercial property in an area known to be affected in the past by flooding from drainage ditches and owned by a litigant against Monsanto, and three are on two pieces of residential property in an area suspected to be affected by flooding from the 11th Street Ditch and/or Snow Creek. The reported levels of PCDDs and PCDFs were below EPA levels of concern. Solutia finds it reassuring that this EPA sampling program did not report widespread

PCB levels above the 10 ppm level EPA has stated as an action level in Anniston.

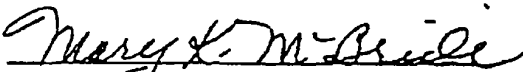
46. EPA has conducted and continues to conduct additional phases of its sampling and analysis program in Anniston and nearby areas. Results are not available for any of these other sampling events.

47. On July 28, 2000, Solutia received a CERCLA Section 104(c) Information Request Letter from the EPA Region 4 office in Atlanta. (Exhibit 60) This CERCLA 104(c) letter is an initial stage in the CERCLA process of consideration of listing the "Anniston PCB Site" on the National Priority List. Solutia's responses are currently due on August 31, 2000.

FURTHER AFFIANT SAYETH NOT.


Robert G. Kaley, II, Ph.D.

Sworn to and subscribed before me
on this the 1st day of August, 2000.


Notary Public

MARY K. MC BRIDE
NOTARY PUBLIC - STATE OF MISSOURI
MY COMMISSION EXPIRES 2/12/2003
ST. LOUIS COUNTY

My Commission Expires: _____

