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PRELIMINARY ASSESSMENT OF
BASF WYANDOTTE CORPORATION
PREPARED UNDER

TDD NO. F3-8412-17
EPA NO. WV-121
CONTRACT NO. 68-01-6699

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 19, 1986

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY	REVIEWED BY	APPROVED BY
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SECTION 1

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1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-6699. This specific report was prepared in accordance with Technical Directive Document No. F3-8412-17 for the BASF Wyandotte, Corporation located in Huntington, West Virginia.

1.2 Scope of Work

NUS FIT III was tasked to perform a preliminary assessment and site reconnaissance of the subject site.

1.3 Summary

The area of concern at the BASF Wyandotte site is located in an unimproved section of the plant facility and consists of less than 1 acre. Also of concern is the BASF Wyandotte landfill on 31st Street. Both sites are located in Huntington, West Virginia.

The plant facility has been in operation since 1908, when Chemetron owned it. Chemetron manufactured paint pigments. BASF Wyandotte purchased the facility from Chemetron in 1979. The facility currently manufactures paint and ink pigments.

Reportedly, toluene was spilled at the facility in an area that was used as a dumping area for construction debris. The spill allegedly occurred at the time of BASF Wyandottes purchase of the property. BASF Wyandotte installed small diameter monitoring wells in the vicinity of the suspected spill area. Independent chemical analysis of the sampled well water has revealed no toluene contamination of the groundwater. There are no logs of the wells in the BASF Wyandotte file.

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The spill site has since been cleaned up. All material has been moved to the 31st Street Landfill. The spill site has been regraded and covered with limestone gravel. It is presently being used as a turn-around area for tractor-trailer trucks that are used to ship the finished products of the plant.

On Tuesday, January 22, 1985, FIT III personnel visited the BASF Wyandotte plant. A meeting with Gary Francis, plant environmental enginneer, and Arthur Gillen, manager of Corporate Environmental Protection, was held at the BASF plant office prior to the inspection of the waste area. Additionally, the BASF Wyandotte landfill located at 31st Street in Huntington was inspected at the request of Pamela Hayes, West Virginia Division of Water Resources.

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SECTION 2

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2.0 THE SITE

2.1 Location

The BASF Wyandotte plant is located at 5th and 24th Streets in Huntington, West Virginia. The BASF Wyandotte landfill is located along the Guyandotte River on 31st Street, on the river side of the floodwall. The landfill is also located in Huntington, West Virginia.

2.2 Site Layout

The toluene spill site is a portion of the undeveloped plant property. The alleged spill occurred in 1 corner of the property. The area of concern encompasses less than 1 acre. The entire plant property is rectangular in shape and consists of approximately 9 acres. The entire area has been regraded. The turn-around area used by the tractor-trailer trucks has been gravelled over. The remaining area has been seeded. The entire property area has been enclosed by cyclone fencing.

The landfill is located between the floodwall and Guyandotte River. The site is rectangular in shape with the long axis of the landfill paralleling Guyandotte River, 1/2 mile south of the Ohio and Guyandotte Rivers. The site area encompasses approximately 6 acres. The landfill is presently closed. According to Gary Francis, of BASF Wyandotte, the landfill has an 18-inch clay cap overlain by 6 inches of seeded topsoil. There are 4 sets of monitoring wells, 1 shallow and 1 deep, that are equidistantly spaced along the river side of the landfill (see site sketch B).

2.3 Ownership History

The plant facility manufactures pigments for paints and inks. Chemetron operated the plant from 1908 until 1979, when it was purchased by BASF Wyandotte.

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2.4 Site Use History

The toluene spill site is in an undeveloped portion of the plant property. At the time of the alleged spill, part of this area was being used as a dumping area for bulk construction debris. There are no records of quantity and it is not known who was responsible for the dumping. The spill was reported to BASF Wyandotte by Chemetron at the time of purchase of the plant facility. BASF in turn reported the spill to EPA, as required by Section 103(C), Notification of Hazardous Waste, of CERCLA. Shortly thereafter, BASF Wyandotte installed 4 monitoring wells around the dump area. Independent laboratory analysis has determined no evidence of toluene contamination of the groundwater. All construction debris has been removed and the entire site has been regraded. Part of the area that is used as a truck turn-around area has been covered over with limestone gravel. Three of the 4 monitoring wells were destroyed when the area was regraded.

The landfill is located on the flood plain of Guyandotte River on the river side of the flood plain. The landfill area was included with the plant facilities in the purchase of the property from Chemetron by BASF Wyandotte. Chemetron disposed of demolition material (such as concrete and wood), filter cakes, and other bulk plant wastes. The landfill has not been used as an industrial landfill site by BASF Wyandotte at any time. The landfill is presently inactive and a closure plan for the abandonment of the landfill has been submitted and approved by the West Virginia Division of Water Resources (see appendix D).

2.5 Permit and Regulatory Action History

The toluene spill area at the plant site is unpermitted as a disposal area.

The landfill site was last permitted by West Virginia Division of Water Resources of Natural Resources in 1977 when the site was owned by Chemetron Corporation. The landfill is identified under Water Pollution Control Permit No. IW-5959-77. Additionally, West Virginia Division of Water Resources inspected the landfill in 1919 and 1982 for the possible disposal of hazardous waste. Presently, the landfill is inactive and BASF Wyandotte has submitted a closure plan for the landfill (see appendix D).

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2.6 Remedial Action To Date

There has been no remedial action to date at either the toluene spill site or the landfill.

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SECTION 3

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3.0 ENVIRONMENTAL SETTING

3.1 Water Supply

According to Allen Lucas, Director of Operations of Huntington Water Company, the city of Huntington is supplied with water by the Huntington Water Company. The Huntington Water Company obtains its water from 2 intakes on the Ohio River; 1 is located at 24th Street and the other is located at 40th Street. Groundwater is not tapped as a source of water in Huntington.

3.2 Surface Waters

There are no surface water streams in the vicinity of the toluene spill site. The nearest surface water bodies are the Ohio River, approximately 3,500 feet to the north, and Guyandotte River, approximately 6,500 feet to the east. Any surface drainage will be toward 5th Avenue and into the municipal drainage system.

The landfill is approximately 50 feet from the Guyandotte River. All surface drainage flows toward the Guyandotte River. The entire length of the landfill facing the river is lined with hay bales that have been securely staked into the ground.

3.3 Geology and Soils

According to "The Ground-Water Resources of the Ohio River Valley in West Virginia," both the toluene spill area and the landfill are underlain by alluvial deposits of Quaternary age. The upper 15 to 20 feet of the unit consists of silt, clay, and fine sand and gravel with depth. These coarser layers are interbedded with silt and clay layers. Occasionally these layers become intermingled with zones of material consisting of a mixture of sand, silt, and clay. The alluvial material is approximately 80 feet thick.

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The Conemaugh Formation of Pennsylvanian age underlies the alluvial deposits. The Conemaugh Formation consists of cyclic sequences of alternating layers of shale, sandstone, limestone, coal, and underclay. Thickness of the beds varies with lithology, ranging from massive bedding in the sandstone to fissile bedding in the shale. Fracturing is poor to moderately well developed. Primary porosity of the sandstone and conglomeratic sandstone is generally high. Secondary porosity created by jointing may also be higher.

3.4 Groundwaters

The gravel and coarse sand layers of the alluvial deposits are the principal water-bearing units in the site area. These zones may be expected to periodically occur throughout the alluvial deposits. Depth to the top of water is unknown, but probably parallels the level of the Ohio River. Additionally, rises and falls in the water level of the Ohio River will be reflected by the surface of the groundwater table. Although no data is available, the direction of groundwater flow is expected to be a combination of the direction of present river flow and toward the river.

3.5 Climate and Meteorology

The site has a moderate continental climate with high summer rainfall. Summers are warm with a mean July temperature of 74.8°F. Mean January temperatures are 34°F. Precipitation is ample and is fairly well distributed throughout the year. The total annual precipitation in Huntington is 41.66 inches.

3.6 Land Use

Land use within a 1-mile radius of the site is a combination of industrial and high density urban. The 1-mile radius encompasses the urban area of the city of Huntington and a small portion of its outlying suburbs.

3.7 Population Distribution

According to the 1970 census, the population of the city of Huntington is 69,900.

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3.8 Critical Environments

Rotary Park is located approximately 2,500 feet southeast of the site. There are no known critical environments within 3 miles of the site.

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SECTION 4

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4.0 WASTE TYPES AND QUANTITIES

Between 100 and 1,000 gallons of toluene are alleged to have been disposed of at the plant facility. According to Arthur Gillen, manager of Corporate Environmental Protection, BASF Wyandotte has no tangible evidence of any toluene disposal. The spill was reported to BASF Wyandotte by Chemetron at the time of purchase by BASF. The exact quantity or even verification that a spill had occurred is unknown. BASF Wyandotte reported the spill based on the Chemetron information. Four shallow monitoring wells were installed to determine the extent of contamination. Laboratory analysis of the well samples provided no evidence of toluene.

The West Virginia Division of Water Resources has reported that barium wastes, toluene, iron oxide, sulphur, and calcium sulphate wastes were disposed of in the landfill. The quantities are unknown. See appendix E for the state data on the landfill site.

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SECTION 5

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5.0 FIELD TRIP REPORT

5.1 Summary

On January 22, 1985, FIT III members (b) (4)(b) (4)(b) (4)(b) (4) visited the alleged toluene spill site and inspected the landfill site at the request of Pamela Hayes, West Virginia Division of Water Resources.

The FIT team met with Gary Francis and Arthur Gillen, both of BASF Wyandotte, at the plant facility offices. During the meeting, the past histories of both sites were reviewed. Afterward, the toluene spill and then the landfill were inspected. A general site reconnaissance, including photo log preparation, was conducted of both sites.

The weather was clear with a temperature of 20°F. There were 2 to 4 inches of snow covering.

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Yener Soylemez
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107
(215) 597-0804

Arthur Gillen
BASF Wyandotte Corporation
100 Cherry Hill Road
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Parsippany NJ 07054
(201) 263-5496

Stanley Mills
Cabell County
Department of Health
County Court House
Huntington, WV 25722
(304) 523-6483

Gary Francis
BASF Wyandotte Corporation
Pigments Division
P.O. Box 2166
24th and 5th Avenues
Huntington, WV 25722
(304) 529-1311

Pamela D. Hayes
West Virginia Division of
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1201 Greenbrier Street
Charleston, WVA 25311
(304) 348-5935

Allen Lucas
Director of Operations
Huntington Water Corporation
720 Fourth Avenue
Huntington, WV 25722
(304) 523-8453

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5.2.2 At The Site

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BASF Wyandotte Corporation
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Huntington, WV 25722
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Arthur Gillen
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100 Cherry Hill Road
P.O. Box 181
Parsippany, NJ 07054
(201) 263-5496

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5.3 Site Observations

5.3.1 Plant Facilities

- There were no HNU readings above background.
- Snow covered the entire area.
- The site has obviously been regraded.
- Only 1 monitoring well remains. It is on other side of fence surrounding the BASF property.

5.3.2 Landfill

- No HNU readings above background were recorded.
- Snow covered the entire area.
- Guyandotte River was frozen over.
- There was no evidence of seepage anywhere along landfill.
- Four sets of monitoring wells were spaced equidistantly along the river side of the landfill.
- The downgradient side of the landfill (along the river side) was lined with hay bales that were staked into the ground.
- Approximately at the midpoint of the landfill, a rusty red spill was observed on the ice on the river. No evidence of seepage emanating from the river bank could be seen due to the steepness of river bank. Ice along the river bank had a very slight rust color. There is no evidence that the cause of this was the landfill. The rust color extended both up- and downstream from the landfill.
- There were 2 Department of Highway wells at the toe of the landfill. These were not monitored.