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PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

COLOR MIX, INC.
(FORMERLY BORDEN CHEMICAL PRINTING INK)
ST. CHARLES, ILLINOIS
ILD 064 017 940

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

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EPA Region	:	5
Site No.	:	ILD 064 017 940
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1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. R05032 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release of hazardous waste or constituents to the environment has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Color Mix, Inc. (Color Mix), formerly Borden Chemical Printing Ink (Borden) facility (EPA Identification No. ILD 064 017 940) in St. Charles,

Kane County, Illinois. The PA was completed on March 1, 1993. PRC gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. Information from the United States Geological Survey (USGS), the Federal Emergency Management Agency (FEMA), and a National Wetland Inventory map were also reviewed. The VSI was conducted on March 17, 1993. It included interviews with facility representatives and a walk-through inspection of the facility. PRC identified seven SWMUs and one AOC at the facility.

The VSI is summarized and ten inspection photographs are included in Appendix A. Field notes from the VSI are included in Appendix B.

2.0 FACILITY DESCRIPTION

This section describes the facility's location; past and present operations; waste generating processes and waste management practices; a history of documented releases; regulatory history; environmental setting; and receptors.

2.1 FACILITY LOCATION

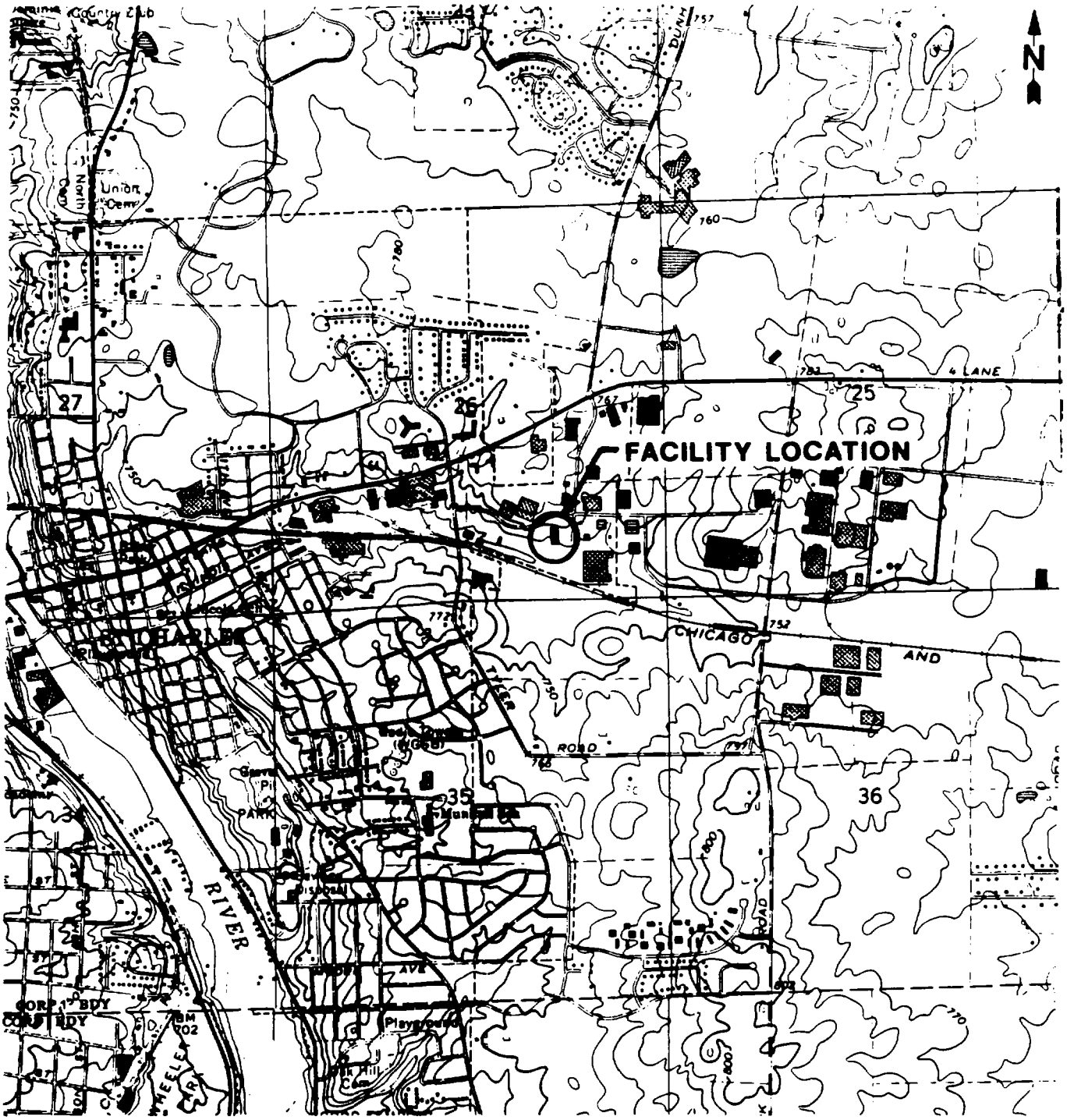
The Color Mix facility is located at 2445 Production Drive in St. Charles, Kane County, Illinois. Figure 1 shows the location of the facility in relation to the surrounding topographic features (latitude 41°54'57" N and longitude 88°17'15" W) (Borden 1980). The facility occupies 7.8 acres in an industrial area.

The facility is bordered on the north by Alpine Engineering and Illinois Bell, on the west by St. Charles Ready Mix, on the south by a vacant lot, and on the east by Bearing Headquarters and Waddel White.

2.2 FACILITY OPERATIONS

At the facility, Color Mix manufactures, and formerly Borden manufactured, solvent-based printing inks, some containing lead, which are sold for use in the screen printing industry. Color Mix also imports and distributes screen printing equipment. Inks are manufactured by mixing, milling, then remixing dry powders and pigments with various solvents. The remixed inks are canned and warehoused at the facility. Containers of raw materials are stored in the facility's production area. All hazardous wastes that contain solvents and are generated at the facility are combined for on-site reclamation. The following contribute to this process:

- Solvent for washing equipment
- Usable ink returned from customers
- Off-specification product ink



SCALE 1:24000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

SCALE 1"=2,000'

QUADRANGLE LOCATION

SOURCE: MODIFIED FROM USGS, GENEVA QUADRANGLE, 1980

COLOR MIX, INC.
ST. CHARLES, ILLINOIS

FIGURE 1

FACILITY LOCATION

PRC ENVIRONMENTAL MANAGEMENT, INC.

- Waste ink from the color laboratory, quality control laboratory, and research and development laboratory
- Aged or obsolete inventory

The facility's on-site reclamation system, in the Distillation Unit Area (SWMU 1), produces reusable solvent and hazardous waste still bottoms. The still bottoms are the only manifested hazardous waste that the facility generates for off-site disposal. Reclaimed solvent is used for equipment cleaning.

Borden used the same manufacturing process and generated the same wastes as Color Mix. However, Borden stored virgin solvent in eight underground storage tanks (UST), identified as the Product Tank Farm (AOC 1). Also, Borden had a fuel oil UST and a former overflow UST. Borden did not reclaim hazardous waste solvent on site.

Borden owned and operated the facility from the fall of 1969 until 1988. Color Mix is privately owned by Mr. John Legat. Color Mix has operated at the facility since February 1988 and employs about 29 people.

The original building, constructed in 1969, occupied 17,462 square feet. In 1973, a 9,600 square-foot warehouse was added by Borden. In 1989, Color Mix added 2,922 square feet of office space.

The facility currently occupies a 29,984-square-foot building on 7.8 acres of property. The facility consists of office, production, canning, loading dock, warehouse, dry storage, maintenance, and show room areas. Quality control, color, and research and development laboratories are also at the facility. The production area includes a tub washing area and a small room which houses the Distillation Unit Area (SWMU 1). A semienclosed storage area is located on the west side of the building where a Container Accumulation Area (CAA) (SWMU 2) is located. Adjacent to the storage area is a Dust Collector (SWMU 3). Parking lots are located on the east side and on the west side. The parking lot on the west side is the Former Container Storage Area (CSA) (SWMU 6) and is next to the Trash Compactor (SWMU 5). Also located on the west side of the facility is the Gravel Pad (SWMU 7).

Before Borden constructed the facility in 1969, the property was either farmland or a swamp, according to the facility representative.

2.3 WASTE GENERATION AND MANAGEMENT

This section describes waste generation and management at the Color Mix facility. The facility's SWMUs are identified in Table 1. The facility layout, including SWMUs and AOCs, is shown in Figure 2. The facility's waste streams are summarized in Table 2.

The Color Mix facility currently generates five hazardous wastes and one nonhazardous waste. Hazardous wastes include waste solvent and still bottoms (both are F002, F003, F005, D001, D018, D022, and D035) and lubricating oil (D001, and F002). Dust from the facility's Dust Collector (SWMU 3) has not been characterized and it is added to the still bottom waste. Toluene contaminated groundwater is also managed as a hazardous waste, but has not been characterized. The nonhazardous waste is general refuse.

Waste solvent (F002, F003, F005, D001, D018, D022, and D035) is generated by combining waste ink with solvent used to clean equipment. The facility generates a maximum of 75 gallons of waste solvent each month. This waste is reclaimed on site in the Distillation Unit Area (SWMU 1). Reclaimed solvent, collected in 5-gallon pails, is reused to clean production equipment.

Still bottom waste (F002, F003, F005, D001, D018, D022, and D035) is generated in the on-site Distillation Unit Area (SWMU 1). Still bottom waste is collected in a 55-gallon steel drum at SWMU 1. When full, the drum of still bottom waste is transferred from SWMU 1 to the CAA (SWMU 2) for less than 90-day storage. Particulate matter collected in the facility's Dust Collector (SWMU 3) is mixed with the still bottom waste at SWMU 2. SWMU 3 collects less than one 55-gallon drum of dust per year. The facility has not analyzed the dust to determine whether it contains any hazardous constituents. The facility generates approximately 220 gallons of hazardous still bottom waste (including dust) every month. This waste is transported off site by Avganic Industries, Inc. (Avganic), to its facility in Cottage Grove, Wisconsin, for secondary fuel blending.

Approximately once every two years, lubricating oil in the production equipment is drained and replaced. The facility generates less than 55 gallons of hazardous waste lubricating oil (D001 and F002) every two years. Waste lubricating oil is combined with still bottom waste and is managed in the CAA (SWMU 2).

TABLE 1

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
1	Distillation Unit Area	No	Active, reclaims hazardous waste solvent
2	Container Accumulation Area (CAA)	No	Active, for less than 90-day storage of hazardous waste
3	Dust Collector	No	Active
4	Groundwater Pretreatment System	No	Active
5	Trash Compactor	No	Active, manages nonhazardous refuse, empty paint cans
6	Former Container Storage Area (CSA)	Yes	Inactive, RCRA closed in 1988
7	Gravel Pad	No	Inactive, managed hazardous waste for less than 90 days

Note:

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

River. The Fox River is located 1.1 miles southwest of the facility. Downstream from St. Charles, the Fox River is a source of municipal water for Aurora. In the St. Charles area, the Fox River is used for recreation.

The potential for release to air is low for all SWMUs except SWMU 5. The facility has operating air permits to control volatile organic compounds (VOC) and dust emissions. Outdoor SWMUs are either inactive and closed or active and maintained in good condition. All containers were found closed at the SWMUs. SWMU 5 and AOC 1 have a moderate potential for release to air. Liquids containing solvents that are disposed of in SWMU 5 may release VOCs to the air. The nearest residence is within 0.25 mile of the facility.

The potential for release to on-site soils is low for all SWMUs except SWMUs 2 and 5. Several large cracks were observed in the concrete floor of SWMU 2 and SWMU 5 is located on a gravel pad. Soil contamination has been documented at AOC 1. The nearest sensitive environment, a seasonally flooded wetland, is located less than 0.25 mile south of the facility. Access onto the facility property is limited by a chain link fence.

PRC recommends that no further action be taken for SWMUs 1, 3, 6, and 7. PRC recommends that cracks in the concrete at SWMU 2 be sealed to prevent contamination of on-site soils. PRC recommends that liquid wastes not be disposed of in SWMU 5 and that this unit be moved onto the adjacent concrete pad.

PRC also recommends that groundwater and soil remediation continue at SWMU 4 and AOC 1 under the guidance of IEPA's Leaking Underground Storage Tank Division.

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2. Container Accumulation Area (CAA)
3. Dust Collector
4. Groundwater Pretreatment System
5. Trash Compactor
6. Former CSA
7. Gravel Pad

Areas of Concern

1. Product Tank Farm

The current potential for release from SWMUs 1, 3, 4, 6, and 7 is low. The possibility that releases to environmental media occurred in the past is also low for these SWMUs. SWMU 2 and SWMU 5 have a moderate potential for release to certain environmental media. Conclusions are discussed below.

All SWMUs have a low potential for release to groundwater. SWMU 1, 4, 6, and 7 are the only SWMUs that managed liquid wastes. SWMU 1 is located indoors and SWMUs 6 and 7 are now inactive. A release of toluene was detected in groundwater at the facility from one of eight product USTs at AOC 1. Peak concentrations of toluene in groundwater samples reached 420,000 micrograms per liter. Groundwater and soil remediation to remove the toluene is in progress. Recovered groundwater is pretreated in a two-stage activated carbon system, the Groundwater Pretreatment System (SWMU 4), before being discharged to the City of St. Charles sewer system.

Groundwater is a source of municipal, private, and industrial water. The nearest municipal well is located within 1 mile of the facility. This well is west of the facility. Groundwater flow in the area is to the south and southwest. Three private wells, probably used for drinking water, are located downgradient and within 0.5 to 1 mile southwest of the facility. One production well is located 0.25 mile upgradient in a north-northeast direction. At least nine wells are located within a 1-mile radius of the facility.

The potential for release to surface water is low for all SWMUs and for AOC 1. The facility manages liquid wastes indoors, except for SWMU 4. Contaminated groundwater from AOC 1 is pretreated in SWMU 4 before disposal into the sewer system. The nearest surface water body is 7th Avenue Creek located 0.25 mile west of the facility, is used for area drainage, and flows to the Fox

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EXECUTIVE SUMMARY

PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Color Mix, Inc. (Color Mix), facility in St. Charles, Kane County, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified.

The Color Mix facility manufactures solvent-based printing inks, some containing lead, which are sold for use in the screen printing industry. Color Mix also imports and distributes screen printing equipment. The facility generates and manages the following waste streams: waste solvents and still bottom waste (both are F002, F003, F005, D001, D018, D022, and D035), lubricating oil (D001 and F002), and dust (which is mixed with the still bottom waste). The nonhazardous waste is general refuse. Color Mix has operated the facility at its current location since 1988. The facility occupies 7.8 acres in an industrial area and employs about 29 people. The facility's current regulatory status is that of a small-quantity generator of hazardous waste. From 1969 to 1988, Borden Chemical Printing Ink (Borden) owned and operated the facility and also manufactured solvent-based printing inks. Borden filed a Part A Permit Application as a treatment, storage, and disposal facility for the Former Container Storage Area (CSA) (SWMU 6).

Borden closed the Former CSA (SWMU 6) under RCRA in 1987 and removed 10 underground storage tanks (UST) in 1988 and 1989. No releases were documented for SWMU 6. Eight of the 10 USTs comprised the Product Tank Farm (AOC 1). A release of toluene has been documented for this AOC. AOC 1 is undergoing corrective action to remediate groundwater and soil contamination. The other two USTs have been removed in accordance with Illinois Environmental Protection Agency (IEPA) UST requirements.

The PA/VSI identified the following seven SWMUs and one AOC at the facility:

Solid Waste Management Units

1. Distillation Unit Area

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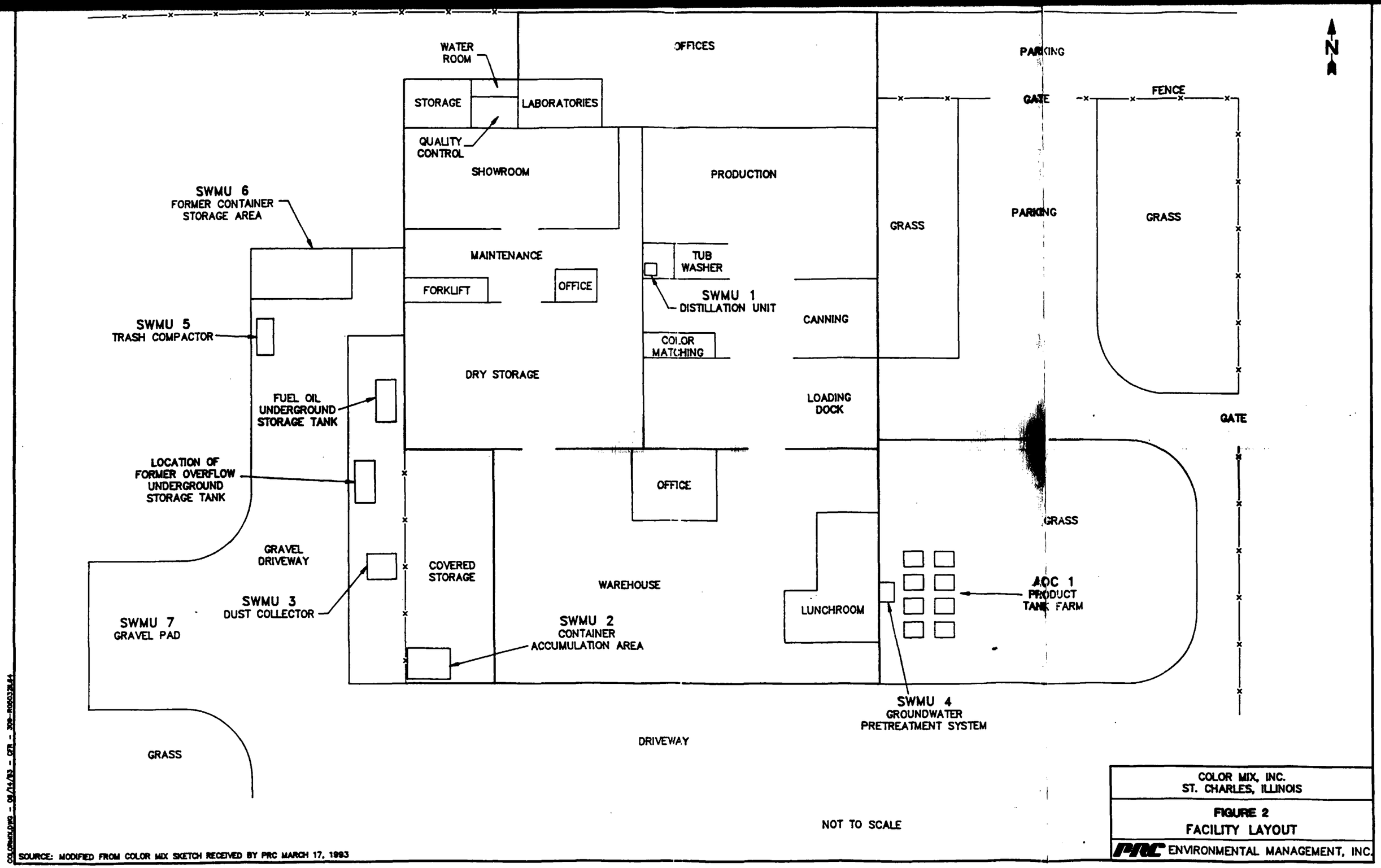

SOURCE: MODIFIED FROM COLOR MIX SKETCH RECEIVED BY PRC MARCH 17, 1993

COLOR MIX, INC.
ST. CHARLES, ILLINOIS

FIGURE 2
FACILITY LAYOUT

PRC ENVIRONMENTAL MANAGEMENT, INC.

TABLE 2

SOLID WASTES

Waste/EPA Waste Code[a]	Source	Solid Waste Management Unit
Waste solvent/F002, F003, F005, D001, D018, D022, and D035	Equipment cleaning and waste ink	1, 6, and 7
Still bottom waste/F002, F003, F005, D001, D018, D022, and D035	Solvent reclamation	1 and 2
Dust/not characterized	Dust collector	2 and 3
Waste Lubricating oil/(D001 and F002)	Production machinery	2
Groundwater/not characterized	Recovered groundwater	4
General refuse/NA	Entire facility	5

Notes:

[a] Not applicable (NA) designates nonhazardous waste.

Toluene contaminated groundwater is recovered and treated in the Groundwater Pretreatment System (SWMU 4) located outdoors on the eastern wall of the facility. Groundwater is being recovered to remediate a toluene spill at the Product Tank Farm (AOC 1). The unit was designed to treat 5,000 gallons per day. Treated groundwater is discharged to the City of St. Charles sewer system.

General refuse includes used, empty paint cans and paper towels from the facility's laboratories. The general refuse is transferred to a 30-cubic yard Trash Compactor (SWMU 5) owned by Color Mix. Compacted trash is transported by Browning Ferris Industries (BFI) for disposal at Settler's Hill landfill in Batavia, Illinois. Approximately 30 cubic yards of compacted trash is generated each month.

In the past, when Borden owned and operated the facility, two additional SWMUs existed. The Former CSA (SWMU 6) and a Gravel Pad (SWMU 7) were used to store hazardous waste. SWMU 6 was listed on the facility's Part A permit application but is now closed and is used for parking. The gravel pad did not store waste for greater than 90 days. Also, an overflow UST was connected to a drain in the facility's production area. Its intended use was to collect spilled solvent or ink from the production area and serve as a secondary containment. The overflow UST was never used to store waste (Gates 1988). Additional information on SWMUs 6 and 7 is found in Section 3.0.

2.4 HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to groundwater, surface water, air, and on-site soils at the facility.

Two releases at the facility have occurred from USTs at the facility. During a real estate environmental assessment in 1988, contamination was detected in association with the eight 3,000-gallon USTs at the Product Tank Farm (AOC 1). Of the eight tanks, which contained various solvents, only a tank containing toluene was found to have leaked. All eight USTs were removed in October 1988. Based on mass balance calculations, approximately one pound of toluene was released (Borden 1989). The release was limited to the relatively permeable sand backfill of the 40-foot by 50-foot by 20-foot-deep tank farm area. The backfill was surrounded by low permeability, in situ glacial deposits, which reportedly limited contaminant migration (Gates 1988). After all eight USTs

were removed in October 1988, Borden's contractor, T. M. Gates, installed a large diameter recovery well for groundwater and soil remediation at AOC 1. When groundwater collection began, a concentration of 420,000 micrograms per liter ($\mu g/l$) of toluene was detected in the sump. The concentration of total volatile organic compounds (VOC) (including toluene) was 473,200 $\mu g/l$. Eight monitoring wells were installed in six locations on facility property including four single wells and two pairs of clustered wells. Quarterly groundwater quality monitoring began in December 1988.

The City of St. Charles would not accept the untreated groundwater from the recovery well. Therefore, in October 1988, T.M. Gates installed a Groundwater Pretreatment System (SWMU 4), consisting of a two-stage granular activated carbon system under an IEPA permit (No. 1989-EE-2898). The facility began discharging treated effluent to the city sewers in September 1989 under a St. Charles permit (No. 101035). Contamination levels of the treated groundwater have been in compliance with the permits.

On March 15, 1993, groundwater treatment at AOC 1 ceased. For the four previous quarters, analytical results for samples taken from the monitoring wells and sump showed that contaminant levels in the groundwater were below IEPA groundwater objectives. The sump will be allowed to recharge for 30 days, then additional samples will be collected (analytical results were not available at time of report preparation). Monitoring wells will be sampled 90 days after March 15, 1993. Whether the treatment system is dismantled or treatment continues will depend on the results of these samples (PRC 1993d).

The second release was detected when the facility's fuel oil UST was removed. The 1,000-gallon steel UST and 180 tons of surrounding soil were removed in June 1989. The UST was visually inspected after removal and was found to be in good condition. Soil contamination was attributed to spillage during filling. Soil was removed based on visual observation of fuel oil-contaminated soil. The contamination appeared within granular sand from the original tank backfill. All of the sand backfill and some surrounding natural glacial till were excavated during UST removal. Five soil samples were collected from each side and from the bottom of the excavation. One perched water (which accumulated 24 hours after excavation was complete) sample was also collected. The soil analytical results for total recoverable petroleum hydrocarbons (TRPH) ranged from less than 10 milligrams per kilogram (mg/kg) to 130 mg/kg in the soil samples. The water sample had a

concentration of 3.2 milligrams per liter of TRPH. Following sampling, 300 tons of 1-inch screened, bank run gravel were used to backfill the excavation (Gates 1989). The fuel oil UST was removed in accordance with IEPA UST requirements (PRC 1993c).

2.5 REGULATORY HISTORY

A Notification of Hazardous Waste Activity form was not found during PRC's review of EPA and IEPA files. However, an EPA Hazardous Waste Data Management System master facility listing indicates that a notification was received on August 18, 1980 (EPA 1982). Borden submitted a RCRA Part A permit application on November 19, 1980 (Borden 1980). This application listed an S01 process code with a 1,100 gallon capacity. The application listed K086 waste with an estimated annual waste generation rate of 63,000 pounds. The S01 code referred to SWMU 6, the Former CSA.

In November 1989, Color Mix submitted an Illnois generator identification number request form (Color Mix 1989a). Subsequently, a revised Notification of Hazardous Waste Activity form was filed to reflect the change in name and ownership to Color Mix (Color Mix 1989b). Borden closed its S01 container storage unit, the Former CSA (SWMU 6). On October 10, 1984, a closure plan was submitted by Borden to IEPA for review (Borden 1984). Apparently the closure plan was approved by IEPA on January 10, 1985, but Borden did not submit the closure certification in a timely manner. Borden then submitted a revised closure plan (Borden 1986). In 1987, a closure documentation report was submitted by T.M. Gates, Inc., on behalf of Borden to IEPA (Gates 1987). On February 19, 1988, IEPA acknowledged receipt of closure certification and approved the closure of SWMU 6 (IEPA 1988). The facility currently operates as a small quantity generator storing hazardous waste for less than 90 days.

In the past, Borden had RCRA compliance problems. These violations, observed during three inspections conducted by IEPA in 1982, 1986, and 1987, pertained to deficiencies such as lack of waste analysis, inspection, and operating records; lack of personnel training records; and lack of closure and contingency plans (IEPA 1982a, 1986). In addition, the facility was found to have land disposal restrictions (LDR) deficiencies (EPA 1988a). All violations were resolved, and no

enforcement action was taken (IEPA 1982b, 1986 and EPA 1988b). Compliance inspection reports for Color Mix were not found during PRC's file review.

The facility is required to have operating air permits. Color Mix submitted seven operating air permit applications in July 1991, after discovering that the air permits for Borden could not be found by IEPA (Color Mix 1991). IEPA issued an operating air permit (No. 91070096) to Color Mix on August 20, 1992 (IEPA 1991) which consolidated the seven applications. Of the seven applications, one was for the Dust Collector (SWMU 3), four were for an exhaust system, and two were for make up air. SWMU 4 collects dust from the powder and pigment mixing station. The exhaust system handles the emission of VOCs from the milling, mixing, canning, and Distillation Unit Area (SWMU 1) operations. Makeup air permits are for the facility's furnace. The facility has not violated its air permits. The facility has no history of odor complaints from area residents.

Color Mix has an industrial wastewater discharge permit (No. 105005) with the City of St. Charles under the Industrial Pretreatment Program. Noncontact cooling water from the facility's milling equipment is discharged through outfalls into the St. Charles sewer system (St. Charles 1992) under this permit. The Groundwater Pretreatment System (SWMU 4) also discharges to the St. Charles sewer system under a St. Charles permit (No. 101035).

The facility had a total of 10 USTs, all of which were removed in 1988 and 1989. The overflow UST, the fuel oil UST, and the eight 3,000-gallon USTs at the Product Tank Farm (AOC 1) account for the 10 USTs. Releases were associated with AOC 1 and the fuel oil UST and are discussed in Section 2.4.

The overflow UST consisted of a 1,000-gallon concrete tank which was connected to a drain in the facility's production area. The purpose of the overflow UST was to act as secondary containment in the event of a solvent or ink spill in the production area. However, Borden stated in its status reports to IEPA that no spills ever occurred and that the UST was never used (Gates 1988). The UST has been inactive since 1988. Closure included the removal of the UST and the filling of the drain with concrete. The UST excavation was backfilled using excavated soil and surrounding soil. This unit was closed under IEPA UST requirements since the unit never managed any waste (PRC 1993c). No releases from this unit have been documented. During removal of the UST, soil surrounding UST

sidewalls was excavated and visually inspected. No odors, soil staining, or other signs of leakage were identified (Gates 1988).

2.6 ENVIRONMENTAL SETTING

This section describes the climate; flood plain and surface water; geology and soils; and groundwater in the vicinity of the facility.

2.6.1 Climate

The climate in Kane County is temperate and humid. The average daily temperature is 49°F. The lowest average daily temperature is 12°F in January. The highest average daily temperature is 84°F in July (Goddard 1979).

The total annual precipitation for the county is 35 inches. The 1-year, 24-hour maximum rainfall was 10.5 inches in October 1954. The mean annual lake evaporation for the area is about 29 inches (Goddard 1979).

The prevailing wind is from the west. Average wind speed is highest in March at 12 miles per hour (Goddard 1979).

Average seasonal snowfall is 32 inches. The average relative humidity in midafternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 75 percent (Goddard 1979).

2.6.2 Flood Plain and Surface Water

The Color Mix facility is not located in a flood-prone area. However, the boundary on the 100-year flood plain is less than 0.25 mile west of the facility (FEMA 1981).

The nearest surface water body, 7th Avenue Creek, is located 0.25 mile west of the facility and is used for area drainage purposes. Local storm sewers and surface water runoff drain into the 7th Avenue Creek which flows westward to the Fox River (PRC 1993a).

Surface water runoff flows southward on the facility property to the vacant property, then westward to the 7th Avenue Creek. The Fox River is located 1.1 miles west of the facility. It is the major surface water body in the area and other surface water bodies drain into it.

2.6.3 Geology and Soils

According to a physiographic map of the Chicago area, the facility is situated in the Bloomington Ridged Plain subsection of the Till Plains section (Willman 1971). In general, the site area surface features and deposits are the result of Wisconsinan glaciation. These glacial deposits cover a bedrock surface on which glacial and stream erosion produced relief comparable to that of the present ground surface. The facility is located at the boundary between the Minooka Moraine and an associated ground moraine. The Minooka drift is predominantly gray, clayey till that is locally silty (Willman 1975). The glacial deposits are nearly 100 feet thick in the site vicinity and are considered to be part of Yorkville Till member of the Wedron Formation.

The glacial deposits in the area are underlain by Paleozoic bedrock which forms the broad, gently sloping Kankakee Arch. This arch separates the Illinois Basin to the southwest and the Michigan Basin to the northeast. The uppermost bedrock in the area is the Silurian age dolomite with a maximum thickness of about 500 feet (Willman 1971). Underlying the Silurian rocks are Ordovician rocks which consist of alternating layers of dolomite, sandstone, limestone, and shale. The Ordovician stratum varies in thickness from 700 to 1,100 feet (Willman 1971). Cambrian rocks underlie the Ordovician rocks. The upper half of the Cambrian System is comprised of layers of dolomite, sandy dolomite, and sandstones. Together, the Cambrian and Ordovician System include 3,000 to 4,000 feet of deposits.

According to the facility investigation by T.M. Gates, Inc., the upper 20 to 26 feet of material at the facility consists of brown and gray clay which grades locally to silty and sandy clay. Within this upper clay are discontinuous lenticular deposits of silt and fine sand. Beneath the upper clay is a uniform and continuous deposit of brown fine sand about 11 feet thick. Based on the one deep boring below this sand unit, 3 feet of sandy, silty clay have been encountered. Below the sandy, silty clay an unknown thickness of sandy, silty gravel was encountered (Gates 1989).

2.6.4 Groundwater

Based on Illinois water and geological survey reports and available well log data for the area, three major aquifer systems exist in the vicinity of the facility. These aquifer systems are the following:

- A glacial drift aquifer system
- A shallow Silurian dolomite aquifer
- A Cambrian - Ordovician aquifer

The glacial drift aquifer system consists of clayey till with occasional discontinuous sand and gravel beds containing perched water. The aquifer thickness is much greater in the buried bedrock valleys, where the most productive wells tend to be located. Recharge to this system occurs predominantly through local precipitation. The shallow bedrock aquifer system consists of Silurian age dolomite which directly underlie the glacial deposits. Groundwater occurs in joints, fractures, and solution cavities within the dolomite which are quite extensive and interconnected. The shallow bedrock aquifer system is hydraulically interconnected with the glacial drift aquifer system.

The glacial drift and silurian dolomite aquifers are underlain by the Cambro-Ordovician aquifer. This aquifer is hydraulically separated from the overlying aquifers by the relatively impermeable shales of the Maquoketa Formation. The principal water bearing formations in this sequence are the Glenwood-St. Peter sandstone and the Ironton-Galesville sandstone. Recharge occurs from precipitation in those areas where the bedrock is exposed.

During the investigation by T.M. Gates, Inc., six monitoring wells were installed at the facility. Based on this data, two water-bearing zones appear to be present beneath the facility separated by a clay deposit. The upper zone consists of saturated sand and silt deposits within the upper 13 feet of clay. This groundwater horizon is lenticular in nature and discontinuous through the facility. Two wells that are screened in the lower water bearing zone have shown that only the very bottom portion of this zone, immediately above an underlying deposit of relatively impermeable silty, sandy clay, is saturated (Gates 1989). The relative lack of water in the lower sand zone is evidence that the overlying clay deposit effectively acts as a barrier. The direction of groundwater flow is to the south and southwest. The flow rate is unknown.

2.7 RECEPTORS

The facility property occupies 7.8 acres in an industrial area in St. Charles, Illinois. St. Charles has a population of about 23,847 (PRC 1993b).

The facility is bordered on the north by Alpine Engineering and Illinois Bell, on the west by St. Charles Ready Mix, on the south by a vacant lot, and on the east by Bearing Headquarters and Waddel White. Access to the facility is limited by a fence. Seventy-five percent of the 7.8 acres is fenced in, including the entire manufacturing, shipping, and receiving areas. The facility also has an electronic alarm system.

The nearest surface water body, 7th Avenue Creek, is located 0.25 mile west of the facility and is used for area drainage purposes. Other surface water bodies in the area include the Fox River which is located 1.1 miles southwest of the facility. The Fox River, in the St. Charles area, is used for boating, fishing, and swimming. Upstream in Elgin and downstream in Aurora, the Fox River is a source of municipal water.

Groundwater is used as an industrial, municipal, and private water supply. At least nine wells are located within a 1-mile radius of the facility. Three private wells, probably for drinking water, are located between 0.5 and 1 mile downgradient of the facility in a south-southwest direction. The nearest production well is located 0.25 mile north of the facility. This well is located upgradient of the facility. One municipal well is located within 1 mile west of the facility. The town of Geneva, which is less than 3 miles downgradient from the facility, also uses groundwater for an industrial, municipal, and private water supply.

Sensitive environments are not located on site. The nearest sensitive environment, a seasonally flooded wetland, is located less than 0.25 mile south of the facility (U.S. Department of the Interior 1984).

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the seven SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC's observations. Figure 2 shows the SWMU locations.

SWMU 1 **Distillation Unit Area**

Unit Description: The Distillation Unit Area (SWMU 1) is located in a room in the production area. The room is approximately 7 feet by 10 feet, has concrete block walls, and is open at its top to the production area. The floor is concrete and does not have a drain. SWMU 1 contains a feedstock drum, 5-gallon pails, a still bottom waste drum, and a Model LS-15JV Little Still manufactured by Finish Company, Inc., of Erie, Pennsylvania. The still has a 15-gallon capacity and has a maximum distillation rate of 15-gallons per day. The facility typically maintains a 55-gallon steel drum next to the still to hold waste solvent (feedstock) that is destined for recycling. Reclaimed solvent is collected in uncovered, 5-gallon pails located next to the still. Still bottom waste is collected in a covered 55-gallon drum.

Date of Startup: This unit began operation in 1990.

Date of Closure: This unit is active.

Wastes Managed: This unit manages waste solvent (F002, F003, F005, D001, D018, D022, and D035) from equipment cleaning and waste inks. The unit also manages reclaimed solvent which is collected in 5-gallon pails. Reclaimed solvent is again used to clean equipment. Hazardous still bottom waste (F002, F003, F005, D001, D018, D022, and D035) generated by the still is emptied into a 55-gallon steel drum. Full

drums from SWMU 1 are transferred to the outdoor CAA (SWMU 2). From SWMU 2, still bottom waste is transported off site for secondary fuel blending by Avganic.

Release Controls: The unit is located in a walled-off room inside of the facility. The room has one doorway which does not have a berm. There are no floor drains in the room. One exhaust duct of the permitted ventilation system draws air from the room.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit was in the process of recycling waste solvent during the VSI and contained one 5-gallon pail of reclaimed solvent. PRC observed that the 5-gallon pail used to collect reclaimed solvent as it dripped out of the still was uncovered. PRC observed some stains on the floor; however, there were no cracks in the concrete floor (see Photograph No. 1). The unit also contained one partially-filled 55-gallon drum of hazardous still bottom waste (F002, F003, F005, D001, D018, D022, and D035). The drum was labeled, stored closed, and in good condition (see Photograph No. 2). The area had warning signs posted. PRC noted no evidence of release.

SWMU 2 **CAA**

Unit Description: The CAA (SWMU 2) is located in a semienclosed storage area adjacent to the facility. The storage area has a roof and three concrete block walls. The open side of the area has a 10-foot chain link fence. SWMU 2 occupies a 5-foot by 9-foot section of the storage area. SWMU 2 has a 7-inch concrete dike on two sides. The other two sides have walls. The floor is concrete and did not have floor drains.

SWMU 2 can hold up to 12 55-gallon drums, but the facility limits the quantity of hazardous waste to one 55-gallon drum.

Date of Startup: This unit was constructed in 1973 and began operation in 1990 when Color Mix began recycling waste solvent.

Date of Closure: This unit is active.

Wastes Managed: This unit manages hazardous still bottom waste (F002, F003, F005, D001, D018, D022, and D035) in 55-gallon drums. Dust from the Dust Collector (SWMU 3) is added to the hazardous still bottom waste. Hazardous waste from this unit is transported off site for secondary fuel blending by Avganic.

Release Controls: The unit has a 7-inch concrete dike on two sides and walls on two sides. Drums are stored closed.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained one 55-gallon drum of hazardous still bottom waste during the VSI. The drum was stored closed and was in good condition. PRC observed several large cracks in the concrete floor of the unit (see Photograph No. 3). PRC noted no evidence of release.

SWMU 3 **Dust Collector**

Unit Description: The Dust Collector (SWMU 3) is located outdoors on the west side of the facility. Particulate matter from the facility's powder and pigment mixing station is drawn into the permitted exhaust system and is connected to SWMU 4. The Dust Collector has a maximum capacity of 0.031 pounds per hour. Collected dust is emptied into a 55-gallon

steel drum at a rate of less than 55 gallons per year. The drum is maintained on a concrete pad which does not have drains.

Date of Startup:	This unit began operation in August 1991 when IEPA issued an operating air permit for the unit.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages dust, made up of powders and pigments, in a 55-gallon drum. The dust is added to the hazardous still bottom waste in the CAA (SWMU 2) once each year. Wastes from SWMU 2 are transported off site for secondary fuel blending by Avganic.
Release Controls:	Releases from this unit are controlled by the cover on the 55-gallon drum.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained one partially full 55-gallon drum during the VSI. The drum was covered and in good condition. The concrete pad was also in good condition (see Photograph No. 4). PRC noted no evidence of release.

SWMU 4 **Groundwater Pretreatment System**

Unit Description: The unit consists of a recovery well, two 27-inch diameter by 40 inch absorbers. Each absorber holds 150 pounds of granular activated carbon and is run in series. The system, including all necessary piping and pumps, is designed to treat an average of 5,000 gallons per day, with a 6,000 gallon per day maximum, of contaminated

	groundwater. The absorbers are located in a locked shed and all piping is underground.
Date of Startup:	This unit was installed in October 1988 and was operational in June 1989 after a three-day demonstration test. Regular operation of the system began on September 19, 1989. The unit was installed in accordance with IEPA Permit No. 1989-EE-2898 and is operated under St. Charles Permit No. P-101035.
Date of Closure:	Groundwater pretreatment ceased on March 15, 1993. Groundwater samples must be collected 30 and 90 days after this date. Whether the unit is dismantled or reactivated will depend on the results of these samples (PRC 1993d).
Wastes Managed:	This unit recovers and treats toluene contaminated groundwater. Treated water is discharged to the St. Charles city sewer system. Contamination levels of the treated groundwater have been in compliance with the permits.
Release Controls:	The absorbers are located in a locked shed on a concrete floor.
History of Documented Releases:	No releases from the pretreatment unit have been documented.
Observations:	The unit was not in operation at the time of the inspection. Borden is overseeing the operation of this unit. Color Mix does not have access to the shed which houses the treatment unit, therefore PRC was unable to observe the actual treatment unit. PRC noted no visible evidence of release from outside the locked shed (see Photograph No. 5).

SWMU 5	**Trash Compactor**
Unit Description:	The Trash Compactor (SWMU 5) is located outdoors on the west side of the facility. The unit is on gravel. The unit is made of steel and has a capacity of 30 cubic yards.
Date of Startup:	This unit began operation in about 1976.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages used, empty paint cans, paper rags, and general refuse from the facility. BFI transports this waste to Settler's Hill Landfill in Batavia, Illinois.
Release Controls:	This unit has no release controls.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained compacted trash during the VSI. PRC observed some ink stains on the compactor which may indicate that liquid waste (such as waste ink) may be placed in the unit (see Photograph No. 6). PRC noted no evidence of release.
SWMU 6	**Former CSA**
Unit Description:	This unit consists of a concrete pad located outdoors on the west side of the facility. The unbermed concrete pad is 40 feet by 60 feet. Hazardous wastes were primarily stored in the north east corner of the pad. The facility's Part A permit application indicated a capacity at 1,100 gallons (or 20 55-gallon drums).

Date of Startup:	This unit began operation in 1970.
Date of Closure:	RCRA-closure activities for this unit occurred in 1987. IEPA acknowledged receipt of closure certification and approved closure on February 19, 1988 (IEPA 1988a). Prior to October 1984, hazardous waste were stored on the Former CSA (SWMU 6) on a greater than 90-day basis. After closure, no hazardous wastes were managed at SWMU 6.
Wastes Managed:	This unit managed hazardous waste solvent some of which contained lead and chromium. The facility's Part A permit application indicated a K086 (hazardous waste from ink formulation) waste code for hazardous wastes managed in this unit.
Release Controls:	This unit was located outdoors on a concrete pad, but had no other release controls.
History of Documented Releases:	No releases from this unit have been documented. Closure activities for the Former CSA (SWMU 6) included the collection of rinsate samples, two soil samples from under the concrete pad, and three soil samples from each corner of the concrete pad. Analytical data showed that these samples did not exceed any parameters of the closure plan performance standard set by IEPA (Gates 1987).
Observations:	The unit was empty during the VSI (see Photograph No. 7). According to the facility representative, the concrete pad is occasionally used for parking. PRC noted several large cracks in the concrete and a yellow ink stain on the pad.

SWMU 7	**Gravel Pad**
Unit Description:	This unit is locate outdoors on the west side of the facility and consists of a gravel covered area approximately 20 feet by 20 feet.
Date of Startup:	This unit began operation when under the operation of Borden.
Date of Closure:	This unit has been inactive since Color Mix began operating the facility.
Wastes Managed:	This unit temporarily managed hazardous waste solvent when the Former CSA (SWMU 6) was undergoing closure activities conducted by Borden, according to the Color Mix facility representative.
Release Controls:	This unit had no release controls.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	This unit did not contain anything during the VSI (see Photograph No. 8). The gravel pad is no longer used for anything. PRC noted no evidence of release.

4.0 AREAS OF CONCERN

PRC identified one AOC during the PA/VSI. This AOC is discussed below; its location is shown in Figure 2.

AOC 1 Product Tank Farm

The Product Tank Farm (AOC 1) consisted of eight 3,000-gallon steel USTs used to store various solvents. In 1988, during a real estate environmental assessment, one tank was found to have leaked toluene. Toluene contamination was limited to the sand backfill of the tank farm area. After all eight USTs were removed, a large diameter recovery well was installed for groundwater and soil remediation (see Photograph No. 10). Eight monitoring wells were also installed on the property. Under a conditional sale agreement between Borden and Color Mix, continuing remediation is the responsibility of Borden. Ongoing work includes quarterly groundwater sampling and pretreatment of recovered groundwater in a two-stage, granular activated carbon system, the Groundwater Pretreatment System (SWMU 4). Treated groundwater is discharged to the City of St. Charles sewer system under a permit with the city and IEPA.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified seven SWMUs and one AOC at the Color Mix facility. Background information on the facility's location; operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. The AOC is discussed in Section 4.0. Following are PRC's conclusions and recommendations for each SWMU and AOC. Table 3, at the end of this section, summarizes the SWMUs and AOC at the facility and the recommended further actions.

SWMU 1 **Distillation Unit Area**

Conclusions: This SWMU includes a 55-gallon waste solvent drum, 5-gallon pails, a still, and a 55-gallon still bottom waste drum. The SWMU is located indoors in its own room, on a concrete floor, and has a permitted exhaust system to remove VOCs. The potential for release to all environmental media is low. No releases from this unit have been documented.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 2 **CAA**

Conclusions: The CAA (SWMU 2) is located in a semienclosed storage area that has a concrete floor. Because of the limited quantity of hazardous waste managed in this unit, its secondary containment, and maintenance of waste containers, the potential for release to groundwater, surface water, and air is low. The potential for release to on-site soils is low to moderate because of several large cracks observed in the floor.

Recommendations: PRC recommends that the cracks in the concrete floor be repaired.

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SWMU 3 **Dust Collector**

Conclusions: The Dust Collector (SWMU 3) is located outdoors and operates under an air permit. The unit collects a small quantity (less than 55-gallons) of dust each year in a covered container. The potential for release to all environmental media is low because the unit is well maintained and is monitored under the operating air permit.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 4 **Groundwater Pretreatment System**

Conclusions: The unit consists of a recovery well, two absorbers, and associated piping. The unit is located on a concrete floor in a locked shed. The potential for release to all environmental media is low. The unit was installed under an IEPA permit and is operated under a St. Charles city permit. No releases from this unit have been documented.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 5 **Trash Compactor**

Conclusions: The Trash Compactor (SWMU 5) is located outdoors on gravel. Ink stains were observed on the unit. The potential for release to groundwater and surface water is low because of the small quantity of liquid waste disposed of in the unit. The potential for release to air and on-site soil is summarized below.

The potential for release to air is moderate. VOCs may be released to the atmosphere from liquid wastes that contain solvents and disposed of in the unit.

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The potential for release to soils is moderate because liquid wastes containing solvents may leak out of the unit and contaminate soils under the unit.

Recommendations: PRC recommends that liquid wastes, especially those that contain solvents, not be disposed of in this SWMU. Also, the unit should be moved onto the adjacent concrete pad to prevent soil contamination.

SWMU 6 **Former CSA**

Conclusions: The unit consists of a concrete pad that, in the past, was used to store hazardous waste on a greater than 90-day basis. The potential for release to all environmental media is low because the unit has undergone RCRA-closure activities and is no longer being used to manage hazardous waste.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 7 **Gravel Pad**

Conclusions: This unit is located outdoors and consists of a gravel-covered area. The unit temporarily managed hazardous waste solvent on a less than 90-day basis while the Former CSA (SWMU 6) was undergoing closure activities. The potential for release to all environmental media is low because the unit is no longer used and no releases have been documented.

Recommendations: PRC recommends no further action for this SWMU at this time.

AOC 1 **Product Tank Farm**

Conclusions: This AOC consisted of eight 3,000-gallon steel USTs that held various solvents. All of the USTs were removed in 1988 when a release of toluene was detected. The potential for release to environmental media is summarized

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below. Groundwater contamination at this AOC has been documented and is undergoing remediation in the Groundwater Pretreatment System (SWMU 4).

The potential for release to surface water is low because contamination has been limited to groundwater and soil. The groundwater undergoes pretreatment before being discharged to the local sewer system.

The potential for release to air is low because VOC contamination in the soil and groundwater is located in the subsurface soil.

The potential for release to on-site soils is moderate because contaminated sand backfill surrounding the USTs was removed during the UST removals.

Recommendations: PRC recommends that ongoing groundwater monitoring as well as recovery and pretreatment continue following IEPA-approved work plans.

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TABLE 3

SWMU AND AOC SUMMARY

SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
1. Distillation Unit Area	1990 to present	No	No further action
2. CAA	1990 to present	No	Seal floor cracks
3. Dust Collector	August 1991 to present	No	No further action
4. Groundwater Pretreatment System	September 1989 to present	No	No further action
5. Trash Compactor	1976 to present	No	Move unit on to concrete pad, use unit for dry waste only
5. Former CSA	1970 to 1988	No	No further action
6. Gravel Pad	Unknown to 1988	No	No further action

AOC	Dates of Operation	Evidence of Release	Recommended Further Action
1. Product Tank Farm	Unknown to 1988	Yes, toluene leakage detected in 1988	Continue groundwater recovery and quarterly sampling

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APPENDIX A

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

APPENDIX B

VISUAL SITE INSPECTION FIELD NOTES

VISUAL SITE INSPECTION SUMMARY

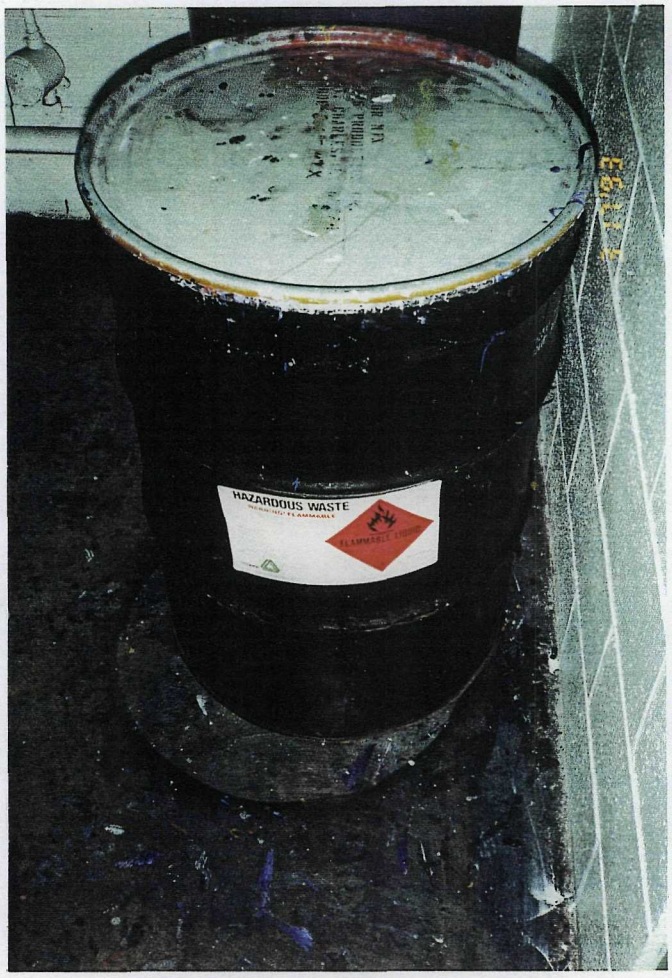
Color Mix, Inc.
2445 Production Drive
St. Charles, IL 60174
ILD 064 017 940

Date:	March 17, 1993
Primary Facility Representative: Representative Telephone No.:	George West, Plant Manager 708/513-5348
Inspection Team:	John Maher, PRC Environmental Management, Inc. (PRC) Judy Wagner, PRC
Photographer:	John Maher, PRC
Weather Conditions:	Sunny, cold and windy, 30°F
Summary of Activities:	The visual site inspection (VSI) began at 9:00 a.m. with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. Facility representatives then discussed the facility's past and current operations, solid wastes generated, and release history. Facility representatives provided the inspection team with copies of requested documents. The VSI tour began at 10:10 a.m. PRC toured the facility's production area first, observing the ink manufacturing process, equipment cleaning process, and the Distillation Unit Area (SWMU 1). PRC then toured the canning area, maintenance department, indoor storage area, and warehouse. PRC observed the outdoor storage area where the Container Accumulation Area (SWMU 2) is located. PRC went outdoors to observe the Former Container Storage Area (SWMU 6), the Trash Compactor (SWMU 5), the Dust Collector (SWMU 3), and the Gravel Pad (SWMU 7) which were all located on the west side of the building. Also on this side, PRC noted the area where two underground storage tanks (UST) had been located in the past. One of the removed USTs formerly held fuel oil and the other UST was an overflow UST which was never used. PRC walked along the south side of the building, observing three of the eight groundwater monitoring wells. On the building's east side, PRC observed the location where eight USTs, the Product Tank Farm (AOC 1) had been removed from. PRC observed

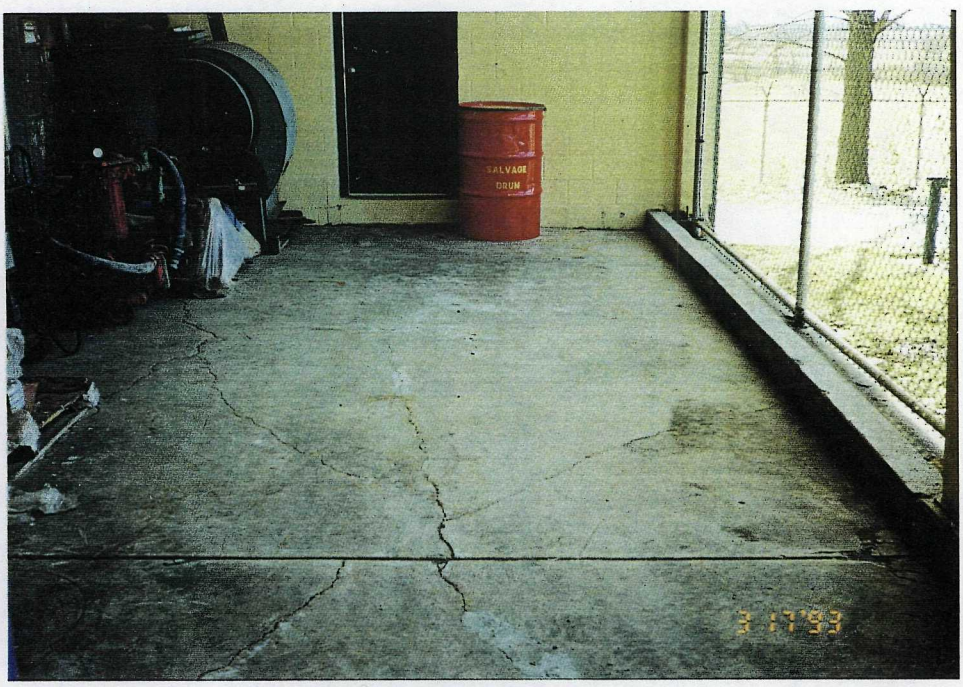
the Groundwater Pretreatment System (SWMU 4) shed. PRC observed three more groundwater monitoring wells on this side of the building.

The tour concluded at 11:45 a.m., after which the inspection team held an exit meeting with facility representatives. The VSI was completed and the inspection team left the facility at 12:35 p.m.

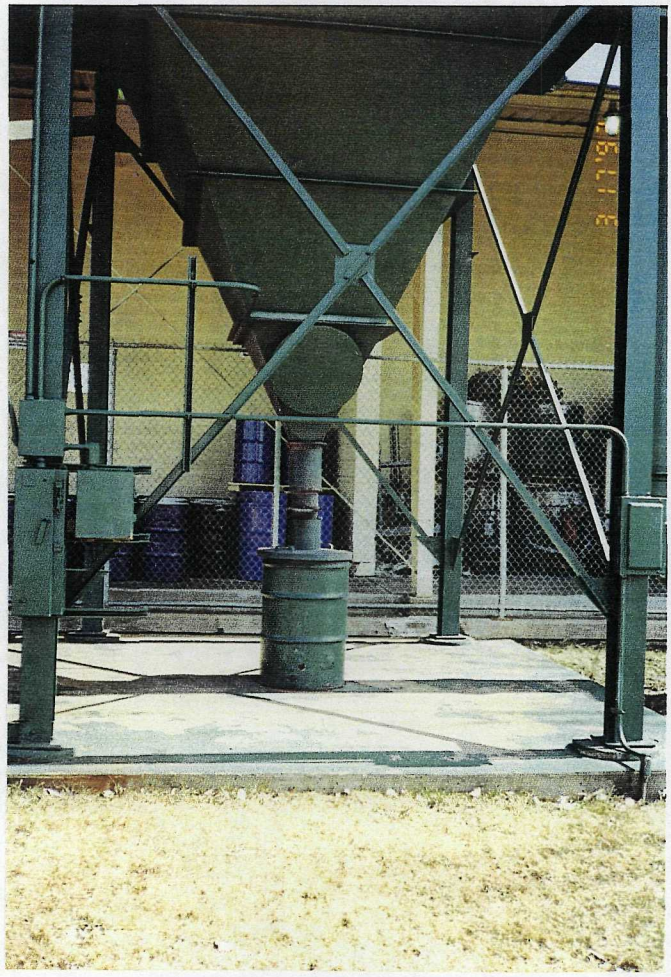
Photograph No. 1 Location: SWMU 1
Orientation: Southwest Date: 03/17/93
Description: Distillation Unit Area (SWMU 1) with still and 5-gallon pails to collects reclaimed solvent. A 55-gallon drum containing feedstock waste solvent is typically maintained to the left of the still.



Photograph No. 2 Location: SWMU 1
Orientation: West Date: 03/17/93
Description: Drum containing hazardous still bottom waste. The still is located to the left of the drum.



Photograph No. 3 Location: SWMU 2
Orientation: South Date: 03/17/93
Description: SWMU 2 contains one drum of hazardous still bottom waste.



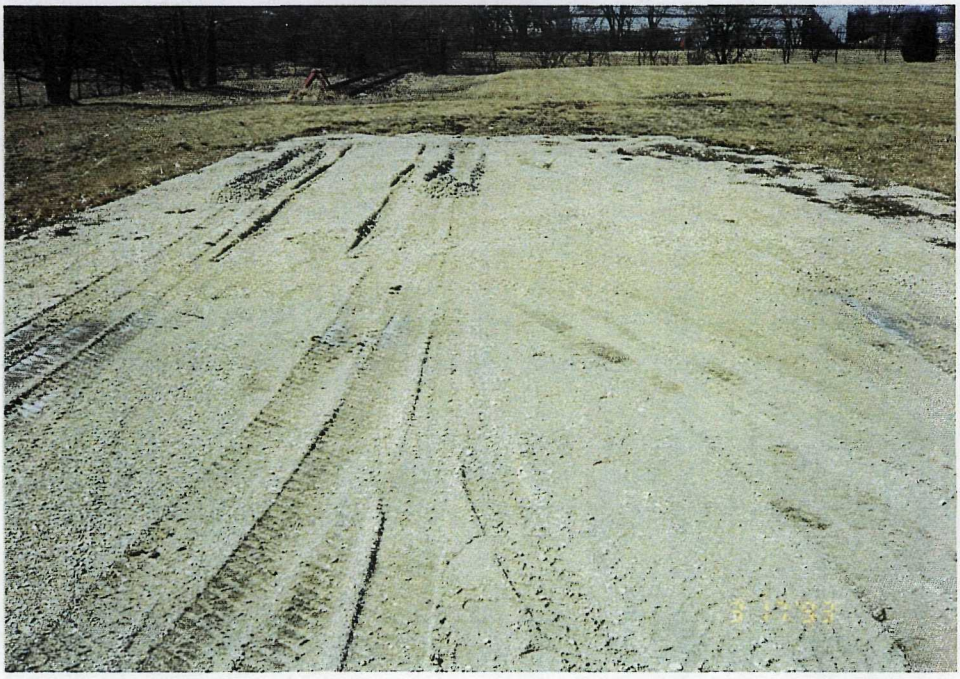
Photograph No. 4 Location: SWMU 3
Orientation: East Date: 03/17/93
Description: Dust Collector (SWMU 3) is shown above with a portion of the semienclosed storage area in background.

Photograph No. 5 Location: SWMU 4
Orientation: North Date: 03/17/93
Description: The Groundwater Pretreatment System (SWMU 4) is in a locked shed located just beyond the left edge of the photograph.

Photograph No. 6 Location: SWMU 5
Orientation: Southwest Date: 03/17/93
Description: Trash Compactor (SWMU 5) is shown above; note ink stains on cover. The Former CSA (SWMU 6) is the concrete pad to the right of the compactor and the Gravel Pad (SWMU 7) is located in the background on the left.

Photograph No. 7
Orientation: East
Description: Former CSA (SWMU 6) is shown above.

Location: SWMU 6
Date: 03/17/93



Photograph No. 8
Orientation: West
Description: The Gravel Pad (SWMU 7) is located on the west side of the facility.

Location: SWMU 7
Date: 03/17/93

Photograph No. 9 Location: Former USTs
Orientation: North Date: 03/17/93
Description: Grass area above is where the overflow UST and the fuel oil UST were formerly located.

Photograph No. 10 Location: AOC 1
Orientation: Northeast Date: 03/17/93
Description: Area above is where the Product Tank Farm (AOC 1) was located. The green metal plate covers the recovery well of SWMU 4.

Color Mix

03/17/93 9:00 - 12:40 pm

at Borden closed 04/88

02/87 Color Mix purchased.

No tanks on site

Borden removed all tanks

Don't have report of UST removal

6-8 wells on site sampled once a month by Borden

Borden taking responsibility of outside site and contamination

Borden requesting from IEPA to stop sampling

USTs removed summer/fall 1987

other than USTs overflow tank & fuel oil tank

2 USTs removed in Summer 1989 by Borden, though Color Mix owned property at the time.

Possibly used to be farm land - Borden?

Processes have not changed since Color Mix started.

Borden also stored H.W. outside on gravel

Receive unusable inks products:
1. rework
2. dispose

Perimeter fence and also fence around storage area.

~~Two~~ Sources of H.W.
1. mfg.
2. cleaning
3. returned inks, mistakes in production, aged inventory
4. laboratory testing QC
5. spills

several cleaning areas.
When dirty drain to bucket then transfer to 55-gal drum that feeds the still

[safety-meetings daily]

UST tank farm 3,000 gal each carbon steel
other two were carbon steel @ 1,000 gal

[providing us w/ solvent constituents]

Some lead inks.
inks and solvents are mixed w/ one waste stream

Lubricating oil → Avgenics (Hydrite)
Hauled as D001 because
it probably had been mixed w/
something ignitable.
Generated ~ <55 gal/2yrs

Secondary fuel blending (could be sent
for incineration by Avgenics)

Still: Put in in 1989 but not used
until 1990

Tub cleaning process

concrete pit
and lined
with steel

Still 1: Little Still LS-15JV
Finish Company, Inc.
Erie, PA

One accumulation area
No satellite accumulation areas

One drum in waste room

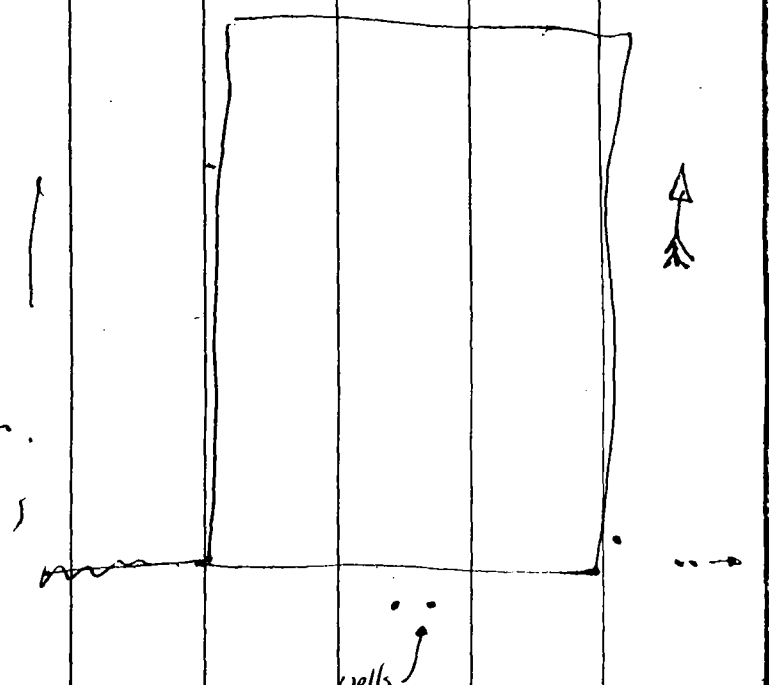
Rags sent out to be cleaned
Tour 10:30-11:00
11:00-11:30 break
Tour 11:30-12:00

Noncontact cooling water in mills goes to
sanitary district (St. Charles)

Outdoor container storage area

110

111



03/17/93

PA/VSI 1 3

Color Mix 3/17/93

John Maher
Judy Wagner

On-site Gam
Facility Rep: George West
Borden - closed April 88
Feb '89 became Color Mix
11/89 - began manuf. gh

- Permits -
Air x
Sewer discharge

mers

11/89 - mfg printing ink

Borden - to were spill -in-
leak at top of UST doors
- all ~~6~~ JLW 8 tanks removed
NO USTs now

JLW

→ all UST removal done by Borden — no connection w/CM even though owned by Color Mix already

- Lanrock Eng — conducting GW monitoring — for Borden

USTs

- 6 solvent USTs Summer 88 removal — carbon steel 3,000 each
- one — overflow — for — carbon steel — Summer '89
- one diesel fuel (#2 fuel oil) — carbon steel 1,000 gal (?) → for heating — Summer '89

Contact at Borden

see manual

History see manual

1969 Borden

Pre-1969 — use unknown

Probably farm or swamp

JLW

Process is same as Borden

Raw material + products differ from Color Mix

SWMUs under Borden — will show during walk-through

- Currently SQG

do have annual one-time generation because of unused inks from customers "aged material"

Waste Generation

→ Solvents recycled on site — in-doors

sludge is HW

Outside — recycle paper + cardboard

JLW

1.) Cleaning = mills, mixers, canning - tubs - returned ink
2.) Manufacturing = lab & QC, off spec, aged inventory - spills

→ see manual Safety meeting memo

Solvents showed Tier Two variety used, all mixed - creating one waste stream (ink + still bottoms)

Stations to hold ink knifes (from cleaning process) solvents handled: by removing solvent, take to recycling still) stations are wash tubs w/ foot operated lids (like a parts-washer)

JLW

Safety meetings - held daily

employees: 29 total
20-21 at any one time

Shifts: primarily one shift (somewhat extended)

Some lead inks - "not much anymore" mostly flammable now (F002 + F003)

Other wastes
Lubricating oil = haz. waste generated once every 2 yrs from changing oil on machines - 55 gallon max

JLW

6 Color Mix 3/17/93

UST farm does have pump-n-treatment system in place now - under Borden

~~- IEPA did conduct a compliance inspection~~ JLW

Avganic →
2° fuel blending (or incinerated, but rare)

Still = SWMU?
installed in '89, began use in '90
- has a permit

JLW

Color Mix 3/17/93 7

10:10 Facility Tour

Station: (like a PW)
2 stations

Tub Cleaning * method is proprietary
2 pits w/ spray nozzel,
tub placed upside down over pit and nozzel
waste → steel lined concrete
liquid is collected in pit for ~3 weeks, then pumped to 55 gal drum
pits hold ~90 gal filled to 85 gal each

Still
Four concrete block walls - uncovered
cement floor - no cracks, some ink stains
no berm at door way

JLW

8 Color Mix 3/17/93

Still - well labeled area
feedstock - 55 gal - none at time of inspection
Still in use - reclaimed → 5 gal pail
contained 1-55 gal drum
Haz Was (still bottom)
- waste from:
tub cleaning stations
- clean solvent collected in 5 gal pail

still
Volume: 15 gal
Rate: 15 gal / day max
↳ output or shift

~~CSH~~ JLW CAA
3 concrete block (construction 1973)
SLW ~~to~~ walls, covered,
fence on 4th side
Haz Waste area 6" berm
many large cracks
1-55 gal drum JLW

Color Mix 3/17/93 9

Dirty rags - sent out to be cleaned - ~~to~~ JLW like uniforms

Product warehouse - back '73

Rag car = SW MCL ?

Off site 10:45 - fax film
Back at 11:15

JLW

To be photographed:

Possible SWMU List

① Still
② Rag cans - 4 total
JLW ~~CAA~~ ③ CAA
④ Overflow tank w/ drain
⑤ Former CAA
⑥ Gravel other areas by Borden
⑦ Compactor
⑧ Still Bottom Container, A.A.
⑨ Dust collector

AOCs (?)

Fuel oil UST
6 - solvent USTs (toluene spill)

Special Waste (?)

BFI takes paint cans w/ residual ink, paper rags, from compactor

JLW

Manufacture solvent based inks, some with lead, for screen printing ~~we~~ sold to producers of stickers, posters, vinyl/stock items

blenders

3rd mills w/ non-contact cooling water

- St. Charles San. Dist

~~CAA~~ JLW

Compactor - for general refuse, old, empty ink cans, paper rags - partially full "30 yd3 ~~dumpster~~ self contained compactor"

JLW

12 Color Mix 3/17/93

Noon - end facility tour

→ Compactor waste to Settler's Hill - Batavia thru BFI

Elgin - Wayne Disposal used in past - also to Settler's Hill

Compactor in use since about 1976

HW

Color Mix 3/17/93 13

Exit Interview:
Discussed report system and availability

Asked about any environmental assessment report as part of Color Mix's purchase of facility (due diligence)
→ ck w/ owner John Legat

HW

Former OSA '83-'88
40 x 60 concrete pad
Inactive - not storing at inspection
Dust Collection - outside
2 USTs - west side

Monitoring wells - UST farm
Southeast - 2
NW corner 1
East side - Tank Farm (Former)
→ Sunny cold + windy ~30°F

Off-site
12:35 pm

KW