SDMS Document
84278

PASSAIC RIVER STUDY AREA
POTENTIALLY RESPONSIBLE PARTIES
SEPTEMBER 1993

NAME OF PRP:

Ashland Chemical Company

FACILITY ADDRESS:

221 Foundry Street/400 Doremus Ave.
Newark, New Jersey

LOCATION:

River Mile: 0.2
Reference Map Number: 6

PROCESSES UTILIZED:

Repackaging and shipping of chemicals. Manufacturing of alkyd resins, polyesters and plasticizers. Raw materials used in production include vegetable oils, polyols, solvents and anhydrides.

DISCHARGE:

- 02/28/69 - Brown colored discharge from storm sewer outlet at Ashland, covered a 50 foot wide area. Possible contributing sources are a number of industries along west side of Doremus Avenue which tie into same storm sewer system as Ashland. [1969 Survey of Newark Industries - Document from microfilm at NJDEPE - likely source is ISC.]

- 05/06/76 - 03/11/77 - PVSC observed Ashland employees pumping liquid out of the Avenue P storm sewer basin which leads into the Roanoke Avenue storm sewer.The liquid being pumped out of the catch basin and into drums by the Ashland employees was sampled by PVSC and found to be highly flammable and potentially explosive. Condensate and washed out solvents from the tank truck wash area would spill onto the ground, flow into the storm sewer catch basin and discharge into the Passaic River via the Roanoke Avenue storm sewer. [PVSC Monthly Reports: May, 1976; June, 1976; and March-April, 1977]

- 06/30/77 - 8/01/77 - Approximately 5 gallons of a mixture containing 96% vegetable oil and 4% resin was discharged to the Passaic River. [PVSC Monthly Reports: July-August 1977.]

PROBABLE HAZARDOUS SUBSTANCES:

- Solvents
- Flammables
- PAHs

RIVER SAMPLES: Sediments in Samples 62 and 100, collected adjacent to the Roanoke Avenue storm sewer, contained significant concentrations of methylene chloride, methyl ethyl ketone (2-butanone), benzene, ethyl benzene, toluene and total extractable petroleum hydrocarbons. Total PAHs were detected at a level in exceedence of NOAA criteria.

842780002

ASHLAND CHEMICAL COMPANY

DIVISION OF ASHLAND OIL & REFINING CO.

400 Doremus Ave.
Newark, N.J. 07105

I. INTRODUCTION

This Newark Plant manufactures alkyd resins, polyesters and plasticizers.

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A. PLANT STATISTICS

Employees: 141

Plant Property:

Production: alkyd resins,
polyesters,
plasticizers

Operating Schedule: 24 hours per day
5 days per week

Water:

Source	Quantity	Usage
City of Newark		Sanitary cooling vapor scrubbers washing solution

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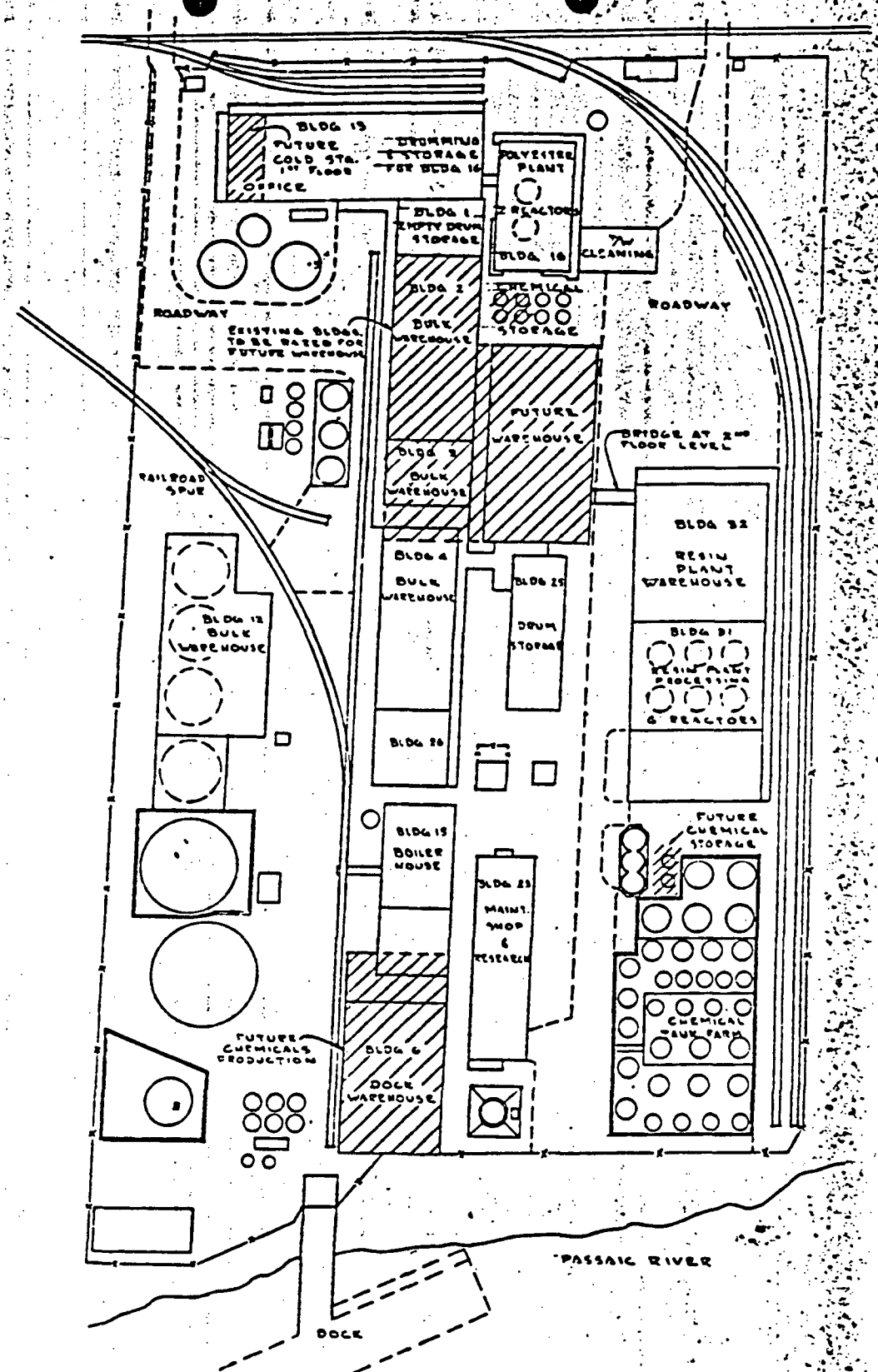

ARCHER-DANIELS-MIDLAND CO.
NEWARK, NEW JERSEY

842780005

II. PLANT PROCESSES

A. General

Following is a flow diagram of plant processes:

Raw materials used in production are:

(1) Vegetable Oils- Linseed, Soya, Tung

(2) Polyols

(3) Solvents- Hydrocarbons, Aliphatic and Aromatic

(4) Anhydrides- Phthalic, Maleic, Fumeric

Finished products are:

(1) Alkyd resins

(2) Polyesters

(3) Plasticizers

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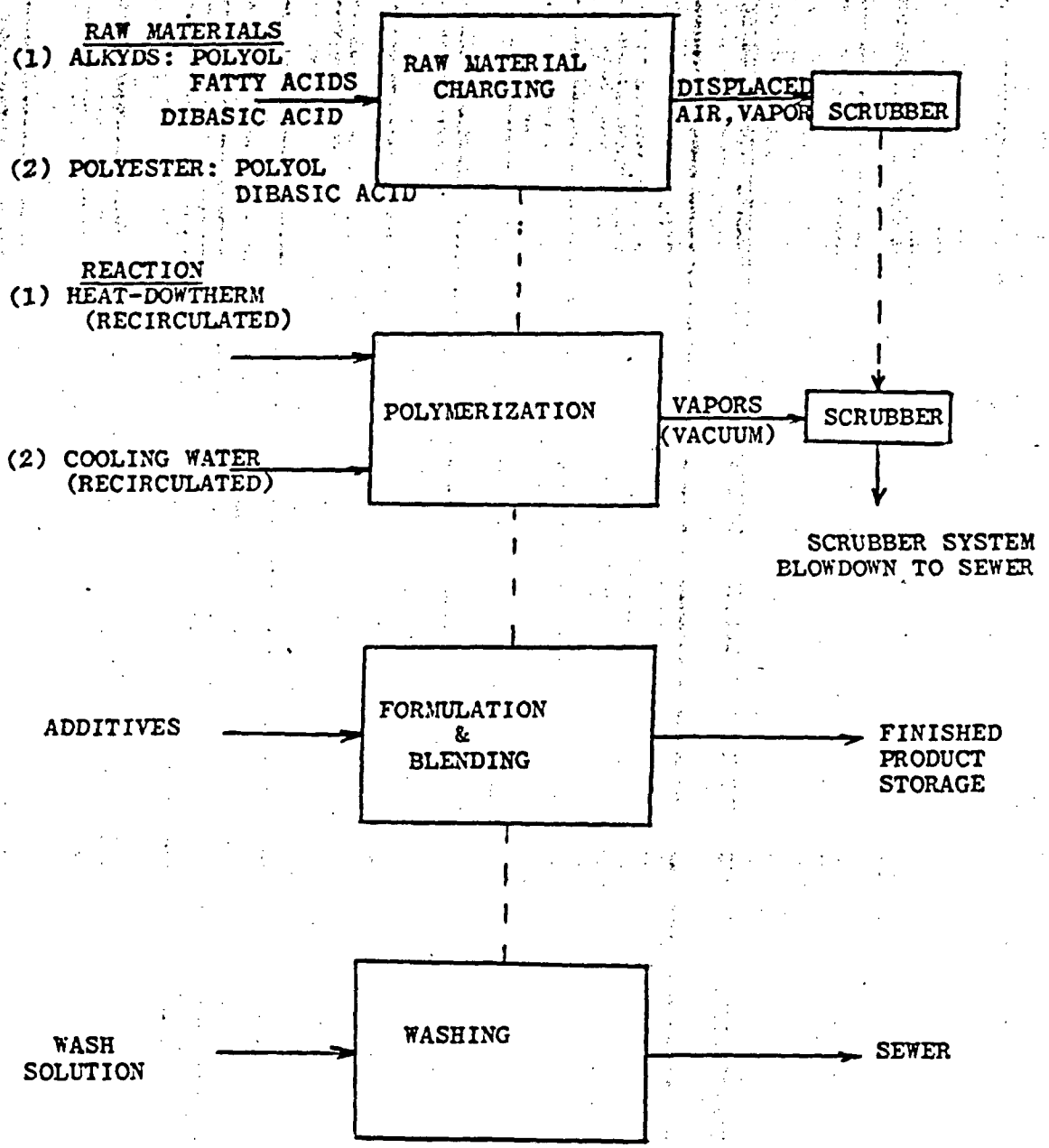
ALKYD & POLYESTER RESINS

FLOW DIAGRAM



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III. WATER USAGE

Only fresh water is utilized by Ashland Chemicals. It is used for sanitary, cooling, fume scrubbers and wash solution.

IV. CHARACTERISTICS OF WASTES

All waste waters with the exception of storm runoff are discharged to the city sewer system. Storm water flows to a public storm sewer passing through Ashland's property and discharging to Newark Bay.

V. POLLUTION POTENTIAL

The pollution potential from Ashland Chemicals is relatively low. However, a number of industries from the west side of Doremus Ave. contribute waste waters to the storm system discharging at the Ashland shoreline. This discharge has been reported to be red at times and clear at other times. At the time of an inspection on 2/28/69, there was a brown discharge which covered an area about 50 feet wide.

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VI. EXISTING WASTE TREATMENT FACILITIES

There are no waste treatment facilities at Ashland Chemicals Co.

VII. PRESENT STATUS OF ENFORCEMENT

No water pollution abatement orders or letters have been issued against Ashland Chemicals Newark Plant.

VIII. RECOMMENDED ANALYSIS TO BE RUN ON SAMPLES

Samples from the storm drain which discharges at the Ashland shore line should be analyzed for industrial wastes after the types of contributing industries is determined.

IX. ACKNOWLEDGEMENTS

Mr. F. Lee Paul, Plant Manager, and Mr. R. C. Sterrett of the Company's Air & Water Pollution Group cooperated in a plant visit with Fred Ulrich of the Commission and in providing plant information.

RCRA INSPECTION FORM

Report Prepared for:

Generator [X]

Transporter [ ]

HWM (TSD) facility [X]

Copy of report sent to the facility [ ]

Facility Information

Name: Ashland Chemical Co.

Address: 221 Foundry Street
Newark N.J. 07105

County: Essex

EPA ID#: NJD060803905

Date of Inspection: 1/20/83

Participating Personnel

State or EPA Personnel: Mike NALBONE
Steve Kritsas

Facility Personnel: Ed Payson
chemist
WILLIAM ELSASSER - PLANT MNGR.
Mike McCANN - DISTRICT MNGR.

Report Prepared by Name: Mike Nalbone

Agency: NJDEP

Telephone #: (609) 292-9592

Approved for the Director by: _____

842780010

Facility Name Ashland Chem. Date Of Inspection 1/20/83

EPA I.D. No. NJD060803905

NOT FOR RELEASE TO COMPANY, PROTECTED INFROMATION

Summary, Conclusions and Recommendations

The company did not comply with 265.16 265 subpart DD, 265.73, 265.112 of the TSD requirements. The company did not comply with these requirements because the company feels they did not operate as a TSD facility.

I recommend a NOV to the company to inform them to comply.

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Summary of Findings

Facility Description and Operations

The company operates a one shift operation in manufacturing organic chemical and solvents. The company services Drug, Plastic, Foundry, Paint and Furniture industry.

The company blends certain chemicals and packages the material according to customer specifications. The company also accepts raw materials from other chemical manufacturers, places their label on the material and ships it out.

The company was inspected in 1981 and it was found that the company was burning the line flushing waste in the boiler. After the company was fined for this procedure the company ceased and desisted. Now I was informed that the line flushes which generate 10 or 15 gallons of either acetate, alcohols, ketones, nitrogen wastes go into a tank truck or a blending tank. It would then be reused for the next batch or blend as lacquer thinner.

see page 2

842780012

Summary of Findings Page 2

Facility Description and Operations

I was informed that the status obtained by Ashland Chemical will be accurate once the company starts storeing hazardous waste. At this time The company generates waste and also has obtained five (5) transporter hazardous waste vehicle I.D. numbers. Untill additional pads for tank trucks, rail cars and storage tanks are hooked up for hazardous waste storage will the status be accurate as a TSDF. Although the company generates waste on site disposal thru the PVSA sewer lines thru PVSA guidelines or reuse in additional batches of product made. Although the company has NJDEP hazardous waste vehicle permits S-8612 (AA) (AC)(AE)(AB)(AD) no transporting has been done according to Mr Elsasler and Mr. Papson.

The wastes generated on site as previously mentioned are acid waste and line flush water. The acid drumming operation generates acid waste which is placed in a 1000 gallon underground tank. The tank is filled up to approximatly 900 gallons. The acid

see page 3

lity Description and Operations

waste is neutralized by Ashland personnel. The acid waste tank and discharge monitored physically by PVSA personnel. A quarterly report is sent to Vince Allevia of PVSA.

The second waste is a line flush waste. This is usually generated when ashland personnel change from one product to another product. The lines are flushed with either acetates, alcohols, ketones or toxgen depending what lines need flushing. This line flushing generates 10 to 15 gallons of waste per flush. It then goes into a blending tank or a tank truck stored untill needed for the next product batch as lacquer thinner.

According to Mr Elsasser and Mr Papson, the permits held by Ashland are NJDEP air permits, NJDEP Div. waste mngt transporter vehicle permits & PVSA discharge permit.

Describe the activities that result in the generation of hazardous waste.

Acid dumpning operation generates HAZARDOUS WASTE
Line flushes generate HAZARDOUS WASTE
Note * Both above wastes are used or disposed of thru PVSA guidelines into PVSA sewer line.

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

Some WASTE Types on the application are potentia WASTES as RAW MATERIALS but ARE NOT NORMAL daily wastes. These waste types include

D000	U002	U092	U140
D001	U004	U102	U147
D002	U012	U103	U154
D003	U019	U107	U159
F002	U020	U108	U160
F003	U031	U110	U165
F005	U037	U112	U171
P022	U044	U117	U189
P029	U054 thru 57	U122	U190
P053	U069	U123	U194
P090	U070 thru 72	U125	U210 thru 213
U001	U088	U134	U219 thru U223
			U226
			U228
			U239

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Is there reason to believe that the facility has hazardous waste on-site?

Yes

a. If yes, what leads you to believe it is hazardous waste? Check appropriate boxes:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☒ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☒ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☒ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☐ Testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

118A

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SEYMOUR A. LUBETKIN
CHIEF ENGINEER

CHARLES C. CARELLA
CHIEF COUNSEL

MRS. CHARLES T. SCHAEDEL
CLERK-TREASURER

May 20, 1977

RECEIVED
JUN - 2 1977
INTERSTATE SANITATION
COMMISSION

Passaic Valley Sewerage Commissioners
600 Wilson Avenue
Newark, New Jersey

Re: Bi-Monthly Report
March and April 1977

Gentlemen:

The following is my report which covers the months of March and April 1977, and consists of three parts:

Part I: Special Reports

#1 - User Charges — Page 1

#2 - Pretreatment of Industrial Waste — Page 7

#3 - The Passaic River March-April 1977 — Page 19

Part II: Pollution violations that were eliminated during the month, together with a report on how elimination occurred — Page 26

Part III: Pollution violations that were still discharging at the end of the month into the streams under the jurisdiction of the PVSC, together with a report on what is being done to abate such pollution — Page 36

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PART II

VIOLATIONS AND ELIMINATIONS

The following are reports on pollutional discharges into the Passaic River and its tributaries within the PVSC jurisdiction (the watershed from the Great Falls in Paterson to the mouth of the river at Newark Bay), together with reports on how they were eliminated during March and April of 1977, and the names of the River Inspectors assigned to investigate the pollution.

Violation and Elimination - Ashland Chemical Company, 221 Foundry Street, Newark, N. J.

May 6, 1976 - March 11, 1977 (J. Colello)

On May 6, 1976, a PVSC employee, while driving to work, saw personnel apparently from Ashland Chemical Co., 221 Foundry St., Newark, pumping a liquid out of a storm sewer catch basin on Avenue P and into drums. He notified the Sanitary Control Department and Inspector McLaughlin was directed to investigate. He arrived at Ashland Chemical later that morning and took a sample from the catch basin and later spoke to Mr. Donald Moore, Plant Manager.

Laboratory analysis showed that the material was highly flammable and potentially explosive. The catch basin, located on Avenue P, discharged into the Roanoke Avenue storm sewer, owned by the City of Newark, thence into the Passaic River.

It appeared that the dangerous material came from the tank truck wash area where the tank trucks were brought for steam cleaning. Spills occurred when drivers disconnected hoses which had been connected from the steam cleaning equipment to the truck.

Condensate and washed out solvent would spill on the ground and flow into the catch basin thence Roanoke Avenue storm sewer. When the situation was pointed out to Mr. Moore, he stated that Ashland was aware of the hazards and was about to construct a means of containing any future spills. The plans included a blacktop curbing 6" high around the tank truck wash rack, the relocating of the existing catch basin which feeds Roanoke Avenue Storm Sewer away from the area, and the construction of a large shallow sump under the wash rack that would collect future spills and direct them into an existing 2,000 gallon storage tank located in the ground. The contaminated material would then be pumped into drums and disposed of by Mr. Frank Fernicola of Ocean Gate, N.J.

Work started and by May 14 the 6" asphalt retaining embankment to contain the spillage had been constructed.

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Violation & Elimination - Ashland Chemical Co. (con't.)

Inspector McLaughlin reported that the contractor, Brookside Contractors of Union, N.J., started grading the yard area in early July but was still awaiting bids on the balance of the construction.

On November 12, Mr. William Dorr, District Manager, wrote to Mr. D'Ascensio and stated that on October 25 Ashland received the contracts for the modifications to the loading rack from the Brandstatter Concrete Company. On November 2 the contracts were sent to company headquarters in Columbus, Ohio for final review and signatures. He stated finally that they expected that the completed contracts would be returned shortly. Mr. Moore informed Inspector Colello at the end of the month that the material for the wash rack was on order and the target date for completion was the end of December.

By the end of 1976, the spill tank had been installed; however, it was not until March 11, 1977 that the piping was completed, thus eliminating this violation.

Violation and Elimination - City of Clifton, Wabash Brook and Mersellis Avenue Storm Sewer

March 28 - April 14, 1977 (G. Fiore)

On March 28, 1977, while making routine checks in Clifton, Inspectors Fiore and Parr observed sewage flowing into the Passaic River from the Mersellis Avenue Storm Sewer, Clifton. Laboratory analysis of a sample later confirmed their suspicions that the discharge was polluting. Mr. Ed Bush, Foreman, Clifton Sewer Sewer Department, was contacted and advised of their observations and he was requested to investigate.

Inspector Fiore returned to the area the following day with Superintendent Cuccinello and Inspector Costello and they traced the flow upstream along Wabash Brook (which enters the Mersellis Avenue Storm Sewer at Mersellis Avenue), and observed sewage entering Wabash Brook at the corner of Wabash Avenue and Crooks Avenue. Mr. Bush investigated and found a break in the sanitary sewer line on Crooks Avenue, which allowed sewage to seep into the brook, causing the pollution.

The Clifton Sewer Department began excavating this area on April 13 and found the break in the 8" clay line. The leak was repaired with an Adams copper clamp on April 14 and the violation was eliminated.

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MRS. CHARLES T. SCHAEDEL
CLERK-TREASURER

September 21, 1977

Passaic Valley Sewerage Commissioners
600 Wilson Avenue
Newark, New Jersey 07105

Re: Bi-Monthly Report
July and August 1977

Gentlemen:

The following is my report which covers the months of July and August 1977, and consists of three parts:

Part I: Special Reports

#1 - Our Energy Crisis - The Problem — Page 1

#2 - Progress and Environmental Impact — Page 5

#3 - Testimony of S. A. Lubetkin at the New Jersey Clean Water Council Public Hearing On September 20, 1977 — Page 7

#4 - The Passaic River July - August 1977 — Page 10

Part II: Pollution violations that were eliminated during the month, together with a report on how elimination occurred — Page 19

Part III: Pollution violations that were still discharging at the end of the month into the streams under the jurisdiction of the PVSC, together with a report on what is being done to abate such pollution ..... Page 32

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PART II

VIOLATIONS AND ELIMINATIONS

The following are reports on pollutional discharges into the Passaic River and its tributaries within the PVSC jurisdiction (the watershed from the Great Falls in Paterson to the mouth of the river at Newark Bay), together with reports on how they were eliminated during July and August of 1977, and the names of the River Inspectors assigned to investigate the pollution.

Violation and Elimination - Ashland Chemical Company, 300 Doremus Avenue, Newark, N.J.

June 30 - August 1, 1977 (M. Cordsaco)

On June 30, 1977, PVSC received a call that oil had entered the Passaic River from Ashland Chemical Company. Inspector Cordasco went to the plant and when he met with Mr. Richard Barr, Plant Manager, he was informed that a mechanical seal in a process pump failed and allowed a mixture containing 96% vegetable oil and 4% resin to leak on the ground, where about 5 gallons ran down the embankment and into the Passaic River. Workmen placed sand bags on the embankment to contain the material and used Speedi-Dri to absorb it.

The pump seal was repaired and by August 1, 1977, the oil soaked earth had been replaced.

Violation and Elimination - Beecham Products, Inc., 65 Industrial South, Clifton, N. J.

July 12-18, 1977 (B. Fiore)

On July 12, 1977, PVSC received a call from Beecham that detergent was entering the storm sewer which feeds MacDonald Brook. When Inspector Fiore went to the plant, he was informed by Mr. Robert Gannon, Engineering Manager, that on July 8, a 55 gallon drum of the detergent, Stephenoll, had spilled on the platform and ran over the ground. Although Gaess Environmental Service Corp. of Passaic cleaned up the spill so that none of the material reached the storm sewer at that time, heavy rain on July 12 caused the residue remaining in the ground to foam.

Plant personnel spread Dow Antifoam and blocked the storm drain in an attempt to control this polluting material and prevent it from reaching MacDonald Brook. Although their quick action may have minimized the pollution, it was evident that some did reach the storm sewer.

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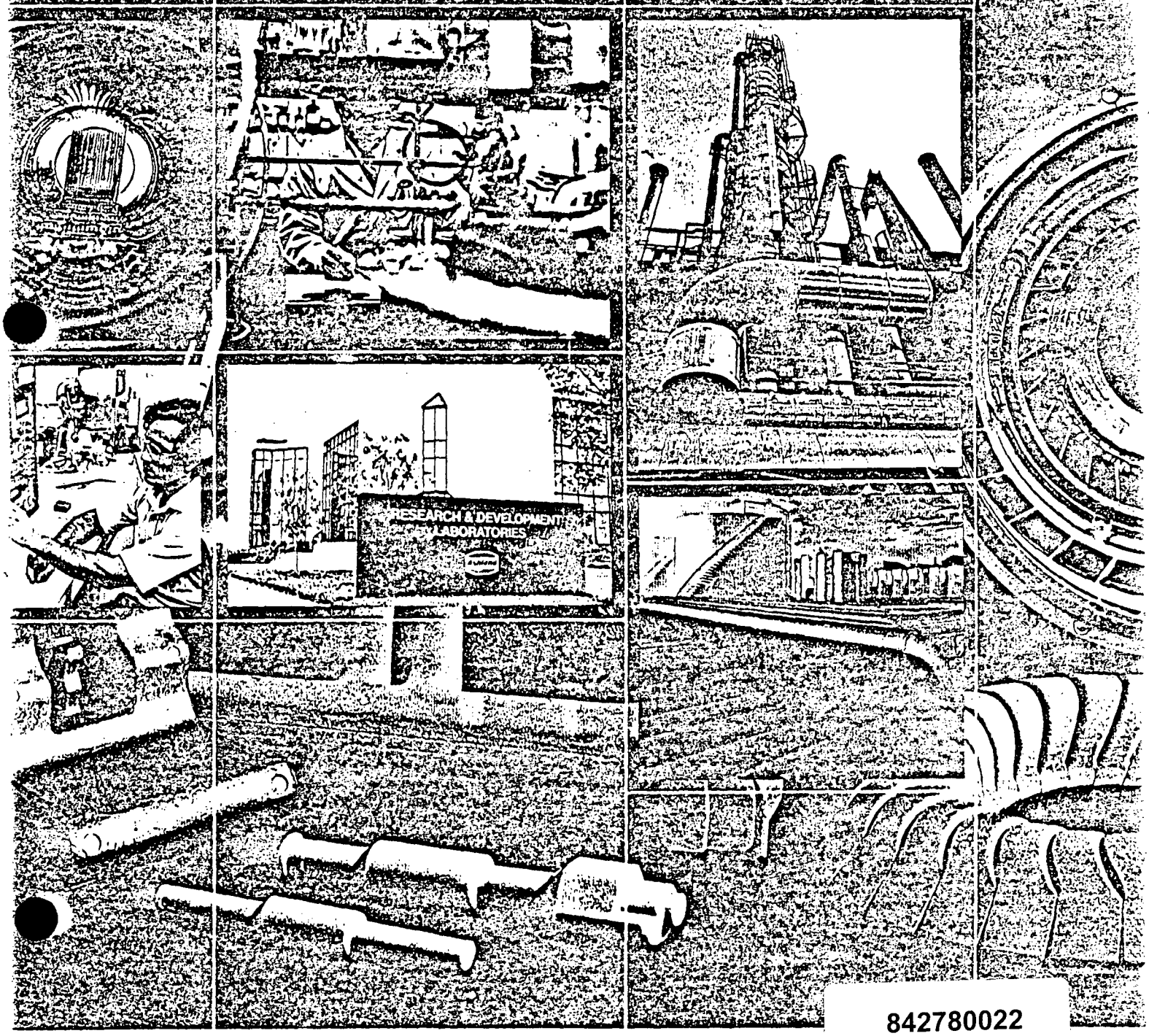
Ashland Chemicals

PRODUCT CATALOG

1981-1982 EDITION



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ASHLAND CHEMICAL COMPANY

Ashland Chemical Company is a worldwide leader within the chemical industry, offering an unusual range of chemical and specialty products. Its various divisions are major producers of petrochemicals, resins, carbon black, and foundry chemicals to name a few. Specialty areas include chemicals for metal finishing and electronics, institutional and laundry products, and even reagents. And through its Industrial Chemicals & Solvents Division, Ashland has become one of the top distributors of industrial chemicals in the U.S. While innovative research has kept us a leader in products for the many industries we serve, one of the best chemical distribution networks in the continental U.S.A. has kept us convenient neighbors to these same industries. A great many of Ashland's products are also available through subsidiaries, affiliates, and licensees in over 20 countries around the globe. This catalog describes some of the many products and services available. Your Ashland representative will be happy to provide more specific information.

CARBON BLACK DIVISION

As one of the world's leading producers of furnace carbon black for rubber and other industries, Ashland Chemical maintains continuing research and technical service programs aimed at better understanding and improving carbon black performance. New grades of carbon black are continually being studied to enhance elastomer characteristics or provide processing and economic benefits for the compounder. The company is deeply involved in international marketing and manufacturing with carbon black plants throughout the world.

Products - UNITED® Carbon Black. A full range of rubber grade furnace blacks for MRG, tire and other applications.

FOUNDRY PRODUCTS DIVISION

Core and Mold Binders - Cold Box ISOCURE® binders offer fast, catalyzed resin that cures in seconds. Ashland Process employs quick-curing ISOCURE binders, with their low energy requirement, in automated, closed system machine operation or flexible, individually-controlled processes.
No-Bake PEP SET®, LINO-CURE®, and CHEM-REZ® binder systems save energy by curing without heat, operate on controlled work and strip time according to foundry needs.
Binders for light metal include ISOSET™ Cold Box and PEP SET 5000 Series No-Bake binders with improved shakeout.
Hot-Box binders in the CHEM-REZ line are heat cured. Both furan and phenolic types.
Inorganic binders, both new INOSET® and silicate no-bakes, have clean air advantages which mean an expanding future in ecology-controlled foundries.
Core oils sold under famous LINOIL® brand are used to make oven-baked cores.

Core and Mold Coatings - Zircon, ceramic and graphite core and mold coatings, are sold under VELVALITE®, VELVAPLAST®, VELVASEAL™, VELVADRI™, and VELVAWASH® trademarks either as liquid, paste or powdered products, in air dry, lite-off, or water base.

Exothermics - Exothermic and insulating sleeves, toppings and moldable exothermics control metal solidification of castings to prevent shrinkage and casting failures.

Facings, Partings, Release Agents - ZIP-SLIP® partings and release agents promote efficiency, particularly with the newer fast systems like cold box and PEP SET no-bake. Dry or liquid core paste, core mud and mold seal aid the completion of molds and prevent pouring problems.

Bentonite - GREEN BOND® western bentonite (sodium) adds hot strength to molding sand mixes. Calcium based southern bentonite is used for green strength when hot and dry strength can be low.

Foundry Specialties - Sand Stabilizers • Talc • Catalysts • Accelerators • Zircon Sand & Flour

POLYESTER DIVISION

An extremely basic position, beginning with production of many of its own raw materials, makes Ashland a leader in supplying polyester resins to the FRP industry. Continuing development programs keep Ashland ahead of industry change.

Ashland innovations include the first continuous production polyester resins. But Ashland's leadership is based on more than its ability to meet new industry trends. Its extensive resources and broad product line make Ashland a logical, dependable source for your polyester resin needs.

Polyester Resins

	Trademark	Special Qualities
Press Molding Hand Lay-up Spray-up	AROPOL™	General purpose and isophthalic resins for a variety of applications. Rigid, flexible, high tensile and many other resins.
Filament Winding Pultrusion	HETRON®	HETRON resins for corrosion resistant and fire retardant applications.
Nonreinforced Casting Resins	AROPOL	Resins for furniture, clear castings, marble, buttons and other nonreinforced applications.
Decorative Art and Wall Decor	AROPOL WEP®	Rapid-curing, high-impact resin using 50 to 60% water cures at room temperature, to hard, paintable surface.

842780023

Ashland Chemicals

PETROCHEMICALS DIVISION

Ashland's Petrochemicals Division operates refineries at Catlettsburg, Kentucky and Buffalo, New York; producing a broad mix of basic aromatic and aliphatic hydrocarbons plus sulfur. The division also maintains sulfur production at St. Paul, Minnesota and Canton, Ohio. It recently brought on stream a maleic anhydride plant at Neal, West Virginia, has methanol production at Plaquemine, Louisiana, and is continually exploring new petrochemical opportunities for future development and growth.

Production resources are backed by up-to-date refinery technology. And through innovation in areas such as superfractionation, sulfolane extraction, and the Ashland-patented Hydeal Hydrodealkylation process, we have stayed flexible to the changing needs of the industries we serve.

Aromatics

	API Gravity @ 60°F	Solidification Point, °C	KB Value	Thiophene	Dist. Range °C IBP	Dist. Range °C DP	Flash Pt. °F TCC*
Benzene Nitration Grade	28.6	5.48	110	Nil	Within 1° incl. 80.1°		5
Toluene, Nitration Grade	30.6	—	105	—	Within 1° incl. 110.6°		45
Xylene, Nitration Grade	34.1	-	98		138.5	142.5	81

*Tag Closed Cup

	Color Pt-Co	Acid Wash Color	Dist. Range °C IBP	Dist. Range °C DP	Composition*, % Wt. Cumene	Composition*, % Wt. Impurities
Cumene	5	<1	Within 1.0°C incl. 152.5		99.95	0.05

*By Gas Chromatography

	Solidification Point, °C	Color, Pt-Co	Acid Wash Color	Sulfur, ppm
Naphthalene	80.0	10	1	10

Aliphatics

	API Gravity @ 60°F	Color	Flash Pt. °F TCC	Composition Volume % Aromatics	KB Value	Aniline Point °F	Distillation °F IBP	Distillation °F DP
Hi-Flash VM&P Naphtha	52	30	90	0 3.0	33	150	295	319
Hi-Initial VM&P Naphtha	61	30	52	0 - 3.0	32	153	246	268
KWIK-DRI™	50.9	30	105	0 - 3.0	32	154	315	355
LACOLENE™	69	30	- 22	0 - 3.0	30	150	198	229
Mineral Spirits	51.5	+30	105	0 - 3.0	31	155	315	385
140 Solvent	48.6	30	142	0 - 4.0	31	161	368	394

Maleic Anhydride

Density, g/cc Molten @ 70°C	Density, g/cc Solid	% Maleic Anhydride	Solidification Point, °C	Molten Color Pt-Co	Molten Color Pt-Co After Heating
1.3	1.43	99.5	52.5	20	40

Methanol

Dist. Range, °C	ASTM Pt-Co Color	Specific Gravity 25°/25°C	Percent By Weight, Typical: Purity	Acidity As Acetic	Acetone	Alkalinity	Moisture
Within 1° incl. 64.5	5*	0.7889*	99.9†	0.002*	0.002*	0.0003*	0.10*

* Max. Value † Min. Value

INORGANIC PRODUCT DEPARTMENT

Sodium Sulfate

Ashland's Inorganic Product Department is one of the major suppliers of salt cake and anhydrous sodium sulfate in the U.S. From sources across the North American continent, the department provides fast, dependable delivery to customers in the paper, detergent, glass and other specialized industries. Product is available bulk or bagged.

Sulfur

Recovered bright sulfur is available from production at Catlettsburg, KY; Canton, OH; Buffalo, NY; and St. Paul, MN.

842780024

Ashland Chemicals

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION

Local stocks, fast delivery, and an unmatched product line make Ashland's Industrial Chemicals and Solvents (IC&S) Division a leading supplier of chemicals for industry. The division currently operates 59 bulk plants in major market centers around the country. Facilities include dry chemical storage, tank farms and custom solvent blending - so we're ready with the chemicals you need, when you are ready to order.

And when you order you won't need to stock a huge inventory. Ashland maintains a giant fleet of trucks, tank cars, and the largest barge fleet on the inland waterways.

Technical service experts are ready to work with you on your individual requirements. And they are backed by a sophisticated research organization that keeps us abreast with new technology and new industrial needs.

Aliphatic Solvents

Listed By IBP	API Gravity @ 60°F	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC	KB Value
n-Pentane	92.7	95	102	−50	25
Rubber Solvent	71.0	115	278	−40	33
Hexane	78.5	150	157	−10	29
Heptane	69.0	190	210	20	31
LACOLENE	69.0	195	230	20	30
Super LACOLENE	56.2	195	230	22	44
Hi Initial VM & P	64.0	245	280	52	32
Hi Flash VM & P	52.0	285	320	90	33
KWIK-DRI	50.9	308	355	101	32
Mineral Spirits	48.3	310	400	105	35
Rule 66 Mineral Spirits	51.5	315	390	105	31
Odorless Mineral Spirits	54.0	355	400	128	28
Odorless Solvent LR	50.5	360	580	136	26
140 Solvent	48.6	368	400	141	31
Low Odor Base Solvent	45.0	370	500	145	30
Mineral Seal Oil	35.5	490	610	265	22

Aromatic Solvents

Listed By IBP	API Gravity @ 60°F	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC	KB Value
Toluene	30.6	230	232	45	105
Ethylbenzene	31.0	276	278	59	96
Xylene	31.1	280	288	81	98
HI-SOL™ XB	28.2	310	450	105	96
HI-SOL 10	30.5	315	350	110	90
HI-SOL 70	33.6	325	395	112	70
HI-SOL 3	32.5	347	425	141	71
HI-SOL 15	28.0	360	400	140	90

Custom products and special blends available

Ethers, Oxides, & Other Products

	Specific Gravity 20° / 20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC
Dimethyl Formamide	0.950	307	309	136
1,4-Dioxane	1.034	210	217	65
Isopropyl Ether	0.728	149	158	−10
Tetrahydrofuran	0.887	151	152	6
Ni Par[1] S-20	0.992	246	252	82
Ni Par S-30	0.997	246	271	98

[1]IMC Chemical Group, NP Division

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Chlorinated Solvents

	Specific Gravity 20° / 20°F	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TOC
Carbon Tetrachloride	1.584	169	171	None
Chloroform	1.485	140	143	None
Ethylene Dichloride	1.255	181	183	70
Methylene Chloride	1.366	103	105	None
Monochlorobenzene	1.113	268	271	84*
Orthodichlorobenzene	1.313	355	361	170
Perchlorethylene	1.627	247	251	None
Trichlorethylene	1.455	187	190	None
1,1,1-Trichloroethane	1.316	162	190	None

* TCC

Alcohols

	Specific Gravity 20° / 20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC
Amyl Alcohol, Primary	0.8134	262	282	120
n-Butanol	0.8108	241	245	96
2-Butanol	0.8090	206	216	72
Cyclohexanol	0.948 (25°C)	320	325	140
Ethyl Alcohol, Industrially Denatured	All commercial formulas.			
2-Ethylhexanol	0.834	360	367	164
Furfuryl Alcohol	1.135	338	—	149
Isobutanol	0.8030	225	228	86
Isopropanol, 91%	0.8176	176	178	63
Isopropanol, Anhydrous	0.7861	180	182	53
Methanol	0.7924	147	149	54
Methyl Amyl Alcohol	0.8083	266	271	103
n-Propanol	0.8060	205	208	74
Tetrahydrofurfuryl Alcohol	1.054	352	—	183
TEXANOL[1]	0.950	356	360	248*

[1] Eastman * COC

Glycols

Listed By IBP	Specific Gravity 20° / 20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F COC
Propylene Glycol USP/IND	1.0381	367	374	225
Ethylene Glycol	1.1155	379	396	240
Hexylene Glycol	0.9234	385	390	215
Dipropylene Glycol	1.0232	442	457	280
Diethylene Glycol	1.1184	468	482	290
Tripropylene Glycol	1.025	514	—	285
Triethylene Glycol	1.122	532	572	330
Tetraethylene Glycol	1.126	597	—	365
Aircraft Deicing Fluid	1.10	—	—	245

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Esters

	Specific Gravity 20° / 20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC
Amyl Acetate, Primary	0.8752	284	302	101
n-Butyl Acetate	0.8750	244	262	81
Ethyl Acetate 85-88%	0.8860	163	176	21
Ethyl Acetate 99%	0.902	169	172	26
2-Ethylhexyl Acetate	0.873	378	401	160
Glycol Ether DB Acetate	0.980	455	482	240*
Glycol Ether DE Acetate	1.010	417	430	235*
Glycol Ether EB Acetate	0.9424	367	381	160
Glycol Ether EE Acetate	0.9724	302	320	130
Glycol Ether EM Acetate	1.005	284	297	120
Isobutyl Acetate	0.8693	234	246	63
Isobutyl Isobutyrate	0.855	291	304	101
Isopropyl Acetate 99%	0.8730	187	194	47
n-Propyl Acetate	0.8880	210	217	55

* COC

Ketones

	Specific Gravity 20° / 20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC
Acetone	0.7907	131	133	−4
Cyclohexanone	0.944	309	315	112
Diacetone Alcohol	0.9406	293	342	120
Diisobutyl Ketone	0.8076	325	343	120
Ethyl Amyl Ketone	0.818	313	328	100
Isophorone	0.923	410	424	180
Methyl Amyl Ketone	0.818	297	309	102
Methyl Ethyl Ketone	0.8006	172	176	24
Methyl Isoamyl Ketone	0.8164	286	298	96
Methyl Isobutyl Ketone	0.8024	237	243	61
Methyl Propyl Ketone	0.807	214	221	46

Amines

	Specific Gravity 20° / 20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TOC
Diethanolamine	1.0919 (30°C)	Decomposes		280
Diethylamine	0.7079	129	140	below 0
Diethylenetriamine	0.955	383	419	215
Diisopropanolamine	0.992 (40°C)	486 (5 mm)	—	200
Diisopropylamine	0.718	181	184	21
Ethylamine, 70%	0.802	102	—	below 0
Ethylenediamine, 99%	0.900	239	246	104
Isopropylamine	0.689	86	93	below 0
Monoethanolamine	1.0179	331	345	200
Monoisopropanolamine	0.9619	316	329	165
Morpholine	1.0020	259	266	100
Triethanolamine	1.1258	675	685	375
Triethylamine	0.729	185	196	20
Triethylenetetramine	0.980	500 (5 mm)	554	290
Triisopropanolamine	1.010 (40°C)	581 (dec.)	—	320

Ashland Chemicals

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION

Glycol Ethers

Listed By IBP	Specific Gravity 20°/20°C	Dist. Range °F IBP	Dist. Range °F DP	Flash Pt. °F TCC
Glycol Ether PM (Propylene Glycol Monomethyl Ether)	0.923	246	264	97
Glycol Ether EM (Ethylene Glycol Monomethyl Ether)	0.966	253	257	103
Glycol Ether EE (Ethylene Glycol Monoethyl Ether)	0.931	273	277	110
Glycol Ether EB (Ethylene Glycol Monobutyl Ether)	0.903	336	343	140
Glycol Ether DPM (Dipropylene Glycol Monomethyl Ether)	0.961	369	379	170
Glycol Ether DE (Diethylene Glycol Monoethyl Ether)	1.027	374	401	201
Glycol Ether DM (Diethylene Glycol Monomethyl Ether)	1.0211	378	385	189
Glycol Ether DB (Diethylene Glycol Monobutyl Ether)	0.9536	441	453	214
Glycol Ether TPM (Tripropylene Glycol Monomethyl Ether)	0.972	457	484	250

Poly Glycols

	Specific Gravity 20°/20°C	Mol. Wt.	Freeze Range °C	Flash Pt. °C TOC	Visc. CPS at 212°F
Polyethylene Glycol 200	1.126	190-210	Supercools	340	4.3
Polyethylene Glycol 300	1.125	285-315	−15 to −8	385	5.8
Polyethylene Glycol 400	1.128	380-420	4 to 8	435	7.3
Polyethylene Glycol 600	1.128	570-630	20 to 25	475	10.5
Polyethylene Glycol 1000	1.101	950-1050	36.5 to 39.5	510	17.4
Polyethylene Glycol 1500	1.151	500-600	38 to 41	430	13-18
Polyethylene Glycol 1540	1.091	1300-1600	43 to 46	510	25-32
Polyethylene Glycol 4000	1.204	3000-3700	53 to 56	515	75-85
Polyethylene Glycol 6000	—	6000-7500	60 to 63	520	700-900
Polypropylene Glycol P400	1.007*	400 avg.	−49°F	330	33**
Polypropylene Glycol P1200	1.003*	1200 avg.	−40°F	224	91**
Polypropylene Glycol P2000	1.002*	2000 avg.	−31°F	390	167**
Polypropylene Glycol P4000	1.001*	4000 avg.	−20°F	365	537**

* 25°C

**CS @ 100°F

Plasticizers

	Specific Gravity 20°/20°C	lb/gal 20°C	Visc. CPS 20°C
Phosphate Plasticizers			
Tricyl Phosphate	1.145	9.54	90
Tri (butoxyethyl) Phosphate	1.017	8.50	12.2
Tributyl Phosphate	0.978	8.14	3.7
Tricresyl Phosphate	1.173	9.70	80
Tri (2-ethylhexyl) Phosphate	0.926	7.70	14
Phthalate Plasticizers			
Butyl Octyl Phthalate (BOP)	0.992	8.26	42*
Diallyl Phthalate	1.117*	9.29	9*
Dibutyl Phthalate (DBP)	1.049	8.74	20
Di (2-ethylhexyl) Phthalate (DOP)	0.986	8.21	80
Diethyl Phthalate	1.120	9.32	9.5
Diisodecyl Phthalate (DIDP)	0.966	8.05	108
Diisononyl Phthalate (DINP)	0.969*	8.10	72*
Diisooctyl Phthalate (DIOP)	0.983*	8.20	58*
Di (methoxyethyl) Phthalate (DMEP)	1.171	9.75	53
Dimethyl Phthalate	1.190	9.92	11
Dioctyl Terephthalate (DOTP)	0.984	8.13	63*
Adipate & Fatty Acid Plasticizers			
Butyl Stearate	0.857	7.15	7.9*
Di (2-ethylhexyl) Adipate (DOA)	0.927	7.71	13.5
Epoxidized Soybean Oil	0.994	8.25*	445*
Glyceryl Triacetate	1.160	9.66	17.4
Texanol Isobutyrate (TXIB)	0.945	7.86	9.0*
Trioctyl Trimellitate (TOTM)	0.987*	8.20	216*
Plasticizers for Vinyl			
Epoxidized Linseed Oil, Epoxidized Soybean Oil, Epoxidized Tallate Ester, Polyesters			

*25°C

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Ashland Chemicals

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION

Fatty Chemicals

Fatty Esters
- Ethoxylated Glyceryl Monostearate
- Isopropyl Myristate
- Isopropyl Palmitate
- Synthetic Spermaceti Wax

Fatty Acids
- Distilled Fatty Acids
- Hydrogenated Fatty Acids
- Hydrogenated Glycerides
- Oleic Acids
- Palmitic Acids
- Stearic Acids

Fatty Alcohols
- Cetyl Alcohols
- Isostearyl Alcohol
- Oleyl Alcohols
- Stearyl Alcohols
- Vicinal Glycol

Fatty Amides
- Erucyl Amide
- Oleyl Amide

Primary Fatty Amines
- Coco Amine
- Hydrogenated Tallow Amine
- Lauryl Amine
- Oleyl Amine
- Stearyl Amine
- Tall Oil Amine
- Tallow Amine

Tertiary Fatty Amines
- Dimethyl Coco Amine
- Dimethyl Hydrogenated Tallow Amine
- Dimethyl Soya Amine
- Dimethyl Stearyl Amine
- Dimethyl Tallow Amine
- Tri C_8-C_{10} Amine
- Tri C_8-C_{10}-C_{12} Amine
- Tri Hydrogenated Tallow Amine
- Triisodecyl Amine
- Triisooctyl Amine
- Trilauryl Amine
- Tri Tridecyl Amine

Fatty Diamines
- C_{12}-C_{15} Ether Diamine
- Coco Diamine
- Tallow Diamine

Specialty Quats

- Alkyl Dimethylbenzyl Ammonium Chloride
- Allyl Trimethyl Ammonium Chloride
- Benzyl Trimethyl Ammonium Chloride
- Dialkyl Imidazoline Quaternary
- Dicoco Imidazoline Quaternary
- Dimethyl Dialkyl Ammonium Chloride
- Dimethyl Dicoco Ammonium Chloride
- Ethoxylated Quaternary
- Methyl Tri (C_8-C_{10}) Ammonium Chloride
- N-Tallow Pentamethyl Propane Diammonium Dichloride
- Trimethyl Soya Ammonium Chloride
- Trimethyl Tallow Ammonium Chloride

Acids & Inorganic Chemicals

Acid
- Acetic
- Battery
- Benzoic
- Boric
- Chromic
- Citric
- Cresylic
- Fluoboric
- Formic
- Fumaric
- Gluconic
- Hydrochloric
- Hydrofluoric
- Hydroxyacetic
- Lactic
- Muriatic
- Nitric
- Oxalic
- Phosphoric
- Propionic
- Sulfamic
- Sulfuric

Alkalis
- Caustic Potash
- Caustic Soda
- Soda Ash

Alum (Aluminum Sulfate)

Ammonia, Anhydrous

Ammonia, Aqua

Ammonium
- Alum
- Bicarbonate
- Bifluoride
- Chloride
- Hydroxide
- Persulfate
- Phosphate (Di)
- Phosphate (Mono)
- Sulfate

Barium
- Carbonate
- Chloride

Borax

Calcium
- Carbonate
- Chloride
- Hypochlorite

Caramel Colors

Chelating Agents

Chlorine

Colloidal-Silica

Copper
- Carbonate
- Cyanide
- Sulfate

Epsom Salts

Ferric
- Ammonium Oxalate
- Chloride
- Sulfate

Ferrous Sulfate

Filter Aids

High Purity Inorganics

Hydrogen Peroxide

Lead Fluoborate

Lime

Lithium Carbonate

Lithium Chloride

Magnesium
- Carbonate
- Chloride
- Sulfate

Nickel
- Acetate
- Carbonate
- Chloride
- Fluoborate
- Sulfamate, Conc.
- Sulfate

Oil Absorbents

Paradichlorobenzene

Potassium
- Bichromate
- Carbonate
- Chloride
- Citrate
- Copper Cyanide
- Cyanide
- Fluoride
- Permanganate
- Persulfate
- Phosphate, Di
- Phosphate, Tri
- Pyrophosphate
- Silicate
- Stannate
- Sodium Tartrate
- Tripolyphosphate

Reagent Chemicals

Rochelle Salts

Silicate of Soda

Sodium
- Acetate
- Acid Pyrophosphate
- Aluminate
- Arsenite
- Benzoate
- Bicarbonate
- Bichromate
- Bifluoride
- Bisulfate
- Bisulfite
- Borate
- Carbonate
- Chlorate
- Chloride
- Chromate
- Citrate
- Copper Cyanide
- Cyanide
- Fluoride
- Formate
- Gluconate
- Hexametaphosphate
- Hydrosulfite
- Hypochlorite
- Hypophosphite
- Metasilicate
- Nitrate
- Nitrite
- Orthosilicate
- Perborate
- Phosphate, Di
- Phosphate, Mono
- Phosphate, Tri
- Pyrophosphate
- Sesquicarbonate
- Silicate
- Silicofluoride
- Stannate
- Sulfate
- Sulfhydrate
- Sulfide
- Sulfite
- Tetrasulfide
- Thiosulfate
- Tripolyphosphate

Sorbitol

Sulfur

Sulfur Dioxide

Tin Fluoborate

Urea

Zinc
- Ammonium Chloride
- Chloride
- Cyanide
- Hydrosulfite
- Sulfate

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Ashland Chemicals

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION

Fabric Softener Quats

Dimethyl Dihydrogenated Tallow Ammonium Chloride
Dimethyl Distearyl Ammonium Chloride
Methyl (1) Alkylamidoethyl (2) Alkylimidazolinium Methosulfate

Antioxidants

CAO-1* and 3: 2,6-Ditertiary-butyl-p-cresol (BHT)
CAO-5 and 14: 2,2' Methylene bis (4-methyl-6-tertiary-butyl-phenol)
CAO 42: Hindered phenolic

*Sherex Chemical Co., Inc.

Other Products

Absorbents	Dimethyl Formamide (DMF)	Methylcellulose
Acetic Anhydride	Epoxy Resins & Related Products	Nitromethane Racing Fuel
Antimicrobial Agents	Formaldehyde	Phenol
Chelating Agents	FREON* Cleaning Agents	Styrene Monomers
Chlorinated Paraffins	Furfural	Surface Active Agents
Clay Kaolin	Glycerine	Vinyl Toluene
Dimethylacetamide (DMAC)	Hydroxypropyl Methylcellulose	

*Dupont

Metal Finishing Products

Products and Processes for the Metal Finishing Industry
As a full-service supplier to the finishing and plating industry, Ashland's IC&S Division offers a complete line of industrial chemicals and solvents, processes, and waste treatment chemicals tailored to **your** specific operation. Everything you need for cleaning, polishing, bright dipping, plating, anodizing, phosphate coating or other metal finishing and pre-paint applications. Our line also includes a variety of industrial maintenance cleaners.

PRODUCTS:
Chemical Polishing and Electropolishing Solutions • Alkaline Cleaners & Etchants • Hot Alkaline Paint Strippers • Acid Cleaners, Descalers & Desmutters • Alkaline Products for Oxide Removal & Scale Conditioning • Miscellaneous Cleaners • Industrial Maintenance Cleaners • Metal Anodes • Phosphate Conversion Coatings.

PROCESSES:
Chromium Plating • Copper Plating • Zinc Plating • Bright Nickel • Chromate Conversion Coatings • Brass • Cadmium • Gold • Silver • Tin • Tin Lead • Aluminum • Special Finishes • Anodizing Dyes and Sealing Additives.

Textile & Institutional Products

A number of Ashland's IC&S locations have become leading suppliers of fabric care and institutional maintenance products in their areas, serving laundry and dry cleaning establishments, hospitals, nursing homes, schools, hotels, motels and institutions. Fabric care and laundry service start with the basic requirements for quality chemicals such as solvents, detergents, bleaches, sours, softeners, spotters, germicides, etc. But available inventories may encompass hundreds of other needs as varied as pins, hangers, tags, aprons...even business forms. Products for the institutional and hospitality markets range from fabric care and laundry products to a complete line of floor strippers and finishes, carpet care products, bowl cleaners, disinfectants, polishes and other maintenance products.

CHEMICALS:
Alkalis • Bleaches • Brighteners • Detergents • Dry Cleaning Solvents • Soaps • Sours • Spotters • Sizings • Waterproofing • Antistats • Sodium Perborate • Filter Powder • Wet Soap • Ink Removers • Blood Removers • Albumin Removers • Tanning Formulas • Ammonia • Amyl Acetate • Acetic Acid • Pre-Spotters • Floor Finishes • Disinfectants • Floor Strippers • Specialty Cleaners • Polishes • Insecticides • Carpet Care Products • Germicides • Boiler Treatments • Softeners • Cooling Tower Chemicals.

MATERIALS:
Hangers • Poly and Poly Bags • Hanger Clips • Bags • Boxes • Guards • Dress Shields • Skirt Clips • Coat Retainers • Collar Supports • Tags • Pins • Staples • Containers • Container Liners • Filters • Floor Mats and a long list of other day-to-day requirements.

MACHINERY & EQUIPMENT:
DC Machines • Dryers • Tanks • Scales • Presses • Irons • Form Finishers • Steam Cabinets • Press Plates • Tie Formers • Sleeve Formers • Marking Machines • Spotting Boards • Brushes • Conveyors • Bagging Machines • Canvas Baskets and Carts • Cartridge Filter Systems • Cooling Towers.

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Ashland Chemicals

SPECIALTY CHEMICALS DIVISION

GLOBRITE® CLEANERS AND METAL FINISHING SPECIALTIES

Our GLOBRITE Products Group manufactures specialty cleaners, corrosion preventatives, and metal treating chemicals for the metal finishing, painting, automotive, appliance, truck and transportation equipment industries, to name a few. Specialties range from the general products indicated below, to unique cleaners for removing dried latex from tank trucks, and quick, economical, effective anti-corrosion coatings for fasteners and small parts. A complete technical service center is available to provide process development and troubleshooting.

GLOBRITE PRODUCTS:

- Maintenance Cleaners
- Truck Cleaners
- Heavy Equipment Cleaners
- Metal Finishing Cleaners
- Chemical Polishes
- Electropolishes
- Paint Strippers
- Etchants
- Scale, Smut & Rust Removers
- Phosphating Agents
- Sealing Oils
- Corrosion Treatments

HIGH PURITY PRODUCTS

For Microelectronics: Ashland's High Purity Products Group is a leader in critical-quality chemicals for semiconductor production. TARGET™ brand etches, acids, solvents and salts are available in Electronic and SEMI Grades, and meet the toughest standards in the industry.

For Laboratory: The Group also produces a line of top-quality ASHLAND® HPLC Solvents, and a line of basic ASHLAND Reagents, available through more than 80 U.S. locations.

ASHLAND HPLC SOLVENTS:

- Acetone
- Acetonitrile
- Butanol
- iso-Butyl Alcohol
- Chloroform
- Cyclohexane
- Methylene Chloride
- Ethyl Acetate
- Hexanes
- Methanol
- iso Propyl Alcohol
- Tetrahydrofuran

ASHLAND REAGENTS:

- Acetic Acid, Glacial
- Acetone
- Alcohol, Denatured
- Ammonium Acetate
- Ammonium Chloride
- Ammonium Citrate
- Ammonium Dichromate
- Ammonium Fluoride
- Ammonium Hydroxide
- Ammonium Oxalate
- Ammonium Peroxydisulfate
- Ammonium Sulfate
- Amyl Acetate
- Barium Chloride
- Boric Acid
- Buffered Oxide Etches
- n-Butyl Acetate
- n-Butyl Alcohol
- Carbon Tetrachloride
- Ceric Ammonium Nitrate
- Ceric Ammonium Sulfate
- Ceric Sulfate
- Chloroform
- Chromium Trioxide
- Citric Acid
- Cleaning Solution
- Cupric Sulfate
- Dextrose
- Ethyl Acetate
- Ethylene Dichloride
- Ethylene Glycol
- Ethylene Glycol Monomethyl Ether
- Ferric Ammonium Sulfate
- Ferric Chloride
- Formaldehyde Solution
- Formic Acid
- Glycerin
- Hexanes
- Hydrochloric Acid
- Hydrofluoric Acid
- Hydrogen Peroxide
- Iodine
- Isopropyl Alcohol
- Manganous Nitrate
- Mercury
- Methanol
- Methylene Chloride
- Methyl Ethyl Ketone
- Mixed Etchants
- Nickel (ous) Chloride
- Nickel (ous) Sulfate
- Nitric Acid
- Oxalic Acid
- Petroleum Ether
- Phosphoric Acid
- Potassium Acetate
- Potassium Carbonate
- Potassium Dichromate
- Potassium Hydroxide
- Potassium Iodide
- Potassium Permanganate
- Potassium Phosphate
- Potassium Sodium Tartrate
- Silver Nitrate
- Sodium Acetate
- Sodium Bicarbonate
- Sodium Borate
- Sodium Carbonate
- Sodium Chloride
- Sodium Citrate
- Sodium Dichromate
- Sodium Hydroxide
- Sodium Hypochlorite Solution
- Sodium Hypophosphite
- Sodium Thiosulfate
- Stripping Solutions
- Sulfur
- Sulfuric Acid
- Tetrachloroethylene
- Talc
- Tetrahydrofuran
- Toluene
- 1,1,1-Trichlorethane
- Trichloroethylene
- Xylenes

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Ashland Chemicals

CHEMICAL SYSTEMS DIVISION

The Chemical Systems Division manufactures a broad grouping of specialty resins well respected in the industries where they are used. These include resins for adhesives, paper making, wood and nonwood bonding, to name a few.

Pressure-Sensitive Adhesive Resins

Use	Resin Type	Trademark	Special Qualities
Adhesive Base	Acrylic (Solution & Emulsion)	AROSET®	Crosslinking and thermoplastic resins with outstanding clarity and UV and oxidation resistance.

Paper Resins

Use	Resin Type	Trademark	Special Qualities
Photoconductive	Acrylic and Alkyd Copolymers	AROTAP®	Offer excellent charge retention, low dye demand and high coating speeds. Also utilized in offset masters requiring high wear properties.
Impregnating	Phenolic	AROTAP	Add strength, chemical and heat resistance, flame proofing, and other qualities to paper.

Crosslinking Aqueous Adhesive Systems

Use	Resin Type	Trademark	Special Qualities
Woodworking, Millwork Panels, Beams Spec. Plywood Laminating Coating Contact, Pressure Sensitive Fiberbonding	Emulsion Polymer, Isocyanate (EPI)	ISOSET™	High performance, two component adhesive system providing chemical, water and temperature resistance. Room temperature curable. Excellent structural/creep-resistant properties. Neutral color. Environmentally attractive, non-hydrocarbon emitting.

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Ashland Chemicals

CARBON BLACK DIVISION

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GA	Atlanta 30345	2295 Parklake Dr.	(404) 491-3894
IL	Chicago 60176	4333 Transworld Rd.	(312) 671-5690
NJ	Englewood Cliffs 07632	580 Sylvan Ave.	(201) 568-3023
OH	Akron 44308	308 Akron Savings Bldg.	(216) 376-8126
TX	Dallas 75229	2860 Walnut Hill Lane	(214) 351-0216

FOUNDRY PRODUCTS DIVISION

CA	Anaheim 92801	501 N. Brookhurst St.	(714) 991-8400
IL	Chicago 60176	4333 Transworld Rd.	(312) 671-5690
MI	Southfield 48075	18800 W. Ten Mile Rd.	(313) 559-1410
OH	Cleveland 44102	2191 West 110th Street	(216) 961-4690
	Columbus 43017	5200 Blazer Pkwy. (Dublin)	(614) 889-3333
PA	Philadelphia 19406	1013 W. Ninth Ave., Suite E	(215) 337-4483
CAN	Mississauga, Ont. L5J4E7	2620 Royal Windsor Dr.	(416) 823-1800

POLYESTER DIVISION

CA	Los Angeles 90040	6608 E. 26th St.	(213) 724-2440
OH	Ashtabula 44044	4501 Benefit Ave.	(216) 998-7072
	Columbus 43017	5200 Blazer Pkwy. (Dublin)	(614) 889-4191
CAN	Mississauga, Ont. L5J4E7	2620 Royal Windsor Dr.	(416) 823-1800

CHEMICAL SYSTEMS DIVISION

CA	Anaheim 92801	501 N. Brookhurst St.	(714) 991-8400
NJ	Englewood Cliffs 07632	580 Sylvan Ave.	(201) 568-3023
OH	Columbus 43017	5200 Blazer Pkwy. (Dublin)	(614) 889-4191
CAN	Mississauga, Ont. L5J4E7	2620 Royal Windsor Dr.	(416) 823-1800

PETROCHEMICALS DIVISION

OH	Columbus 43017	5200 Blazer Pkwy. (Dublin)	(614) 889-3333

SPECIALTY CHEMICALS DIVISION

GA	Savannah 31401	400 Telfair Rd.	(912) 236-7995
OH	Cincinnati 45217	Murray Rd. & Big Four RR	(513) 242-5112
	Columbus 43017	5200 Blazer Pkwy. (Dublin)	(614) 889-3333
	Columbus 43228	3849 Fisher Rd.	(614) 889-4545
	Easton 18042	Hellertown Rd.	(215) 258-9135
	Monasha 54962	204 Madison St.	(414) 722-3371

EXPORT DEPARTMENT

OH	Columbus 43228	Telex 245343	(614) 889-3333

The Export Department sells U.S. made chemicals and chemical products for shipment to foreign countries. Ashland Chemical Company operations also include a number of overseas subsidiaries, affiliates and licensees.

Subsidiaries and Affiliates

Brazil	Sao Paulo	Ashland Resinas Sinteticas Ltda
Canada	Toronto	Resins & Chemicals Division
England	Birmingham	Ashland Chemical, Ltd.
France	Paris	Ashland-Avebene S.A.
Germany	Hilden	Ashland-Suedchemie Kernfest, GmbH
Holland	Geertruidenberg	B.V. Ashland-Suedchemie vh Necof
Italy	Milan	Ashland Chemical Italiana, SpA.
Mexico	Mexico City	Ashland de Mexico, S.A. de C.V.
Saudi Arabia	Jeddah	Saudi Industrial Resins Ltd.
Spain	Bilbao	Iberia Ashland Chemical S.A.
Spain	Castro Urdiales	Oleotecnica, S.A.

Licensees

Australia	Sydney	Jordan Chemicals Ltd.
Japan	Tokyo	Hodogaya Chemical Co., Ltd.
Philippines	Manila	Pacific Products, Inc.
Singapore	Singapore	Dyno Industries (s) Pte. Ltd.
South Africa	Johannesburg	Industrial Chemical Products S.A. (Pty) Ltd.
Taiwan	Kaohsiung	Eternal Chemical Co. Ltd.
Venezuela	Caracas	Venezolana de Resinas, C.A.

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION

AL	Birmingham 35234	3300 Ball St.	(205) 841-6451
	Mobile 36607	701 Western Dr.	(205) 471-3404
AZ	Mesa 85202	150 W. Broadway	(602) 962-0376
CA	Santa Fe Springs 90670	10505 S. Painter Ave.	(213) 685-9333
	Newark 94560	8600 Enterprise Dr.	(415) 796-9333
CO	Sheridan 80110	3350 S. Zuni St.	(303) 789-1888
FL	Jacksonville 32205	1645 N. McDuff Ave.	(904) 387-5531
	No. Miami Beach 33162	200 N.E. 181st St.	(305) 652-4940
	Orlando 32809	1929 Directors Row	(305) 855-4155
	Tampa 33614	5125 W. Hanna Ave.	(813) 884-1468
GA	Atlanta 30340	4550 N.E. Expressway	(404) 448-7010
	Columbus 31901	715 - 6th St.	(404) 327-3669
	Savannah 31401	400 Telfair Rd.	(912) 232-4305
IL	Chicago 60176	4333 Transworld Rd.	(312) 671-5690
	Argenta 62501	Elm St.	(217) 795-2311
	Moline 61265	6600 John Deere Rd.	(309) 796-0123
IN	Indianapolis 46226	8315 E. 33rd St.	(317) 897-1770
	So. Bend 46613	1817 W. Indiana Ave.	(219) 233-0033
KS	Kansas City 66106	5420 Speaker Rd.	(913) 371-0740
KY	Ashland 41129	100 - 12th St. (Catlettsburg)	(606) 329-5044
	Louisville 40211	4185 Algonquin Pkwy.	(502) 778-7322
LA	Baton Rouge 70815	11109 S. Choctaw Dr.	(504) 275-7011
	New Orleans 70058	3540 River Rd. (Harvey)	(504) 347-1491
	Shreveport 71107	1315 Airport Dr.	(318) 221-0681
MA	Westfield 01085	Westfield Industrial Pk.	(413) 568-1258
MI	Harpor Woods 48225	19959 Vernior Rd. (Detroit)	(313) 885-2500
	Lansing 48915	1800 Glenrose Ave.	(517) 372-4165
MN	Shakopee 55379	4401 Valley Industrial Blvd.	(612) 445-7214
MS	Jackson 39209	455 Industrial Dr.	(601) 355-8381
MO	St. Louis 63111	7710 Polk St.	(314) 638-7400
NJ	Newark 07105	221 Foundry St.	(201) 344-3333
NY	Binghamton 13902	3 Broad St.	(607) 723-5455
	Buffalo 14150	3701 River Rd.	(716) 873-2446
	Rensselaer 12144	South St.	(518) 465-7531
	Syracuse 13057	Midler Pk. & Boxwood Ln.	(315) 463-8669
NC	Charlotte 28208	3930 Glenwood Dr.	(704) 392-2121
	Greensboro 27407	2802 Patterson St.	(919) 299-1101
	Raleigh 27601	1415 S. Bloodworth St.	(919) 828-0615
OH	Akron 44305	200 Darrow Road	(216) 733-7926
	Cincinnati 45241	2788 Glendale - Milford Rd.	(513) 563-6660
	Cleveland 44125	9450 Midwost Ave.	(216) 587-2230
	Columbus 43228	3855 Fisher Rd.	(614) 276-6143
	Dayton 45439	2854 Springboro Pike	(513) 298-5256
OK	Oklahoma City 73119	4300 S. W. 36th St.	(405) 685-5586
	Tulsa 74107	3535 W. 21st St.	(918) 587-0168
PA	Easton 18042	Hellertown Rd.	(215) 258-9135
	Pittsburgh 15042	150 W. Fourth Ave. (Freedom)	(412) 728-2500
SC	Columbia 29201	916 Rosewood Dr.	(803) 799-5200
	Greenville 29607	100 Industrial Blvd.	(803) 288-2760
TN	Knoxville 37914	5263 National Drive	(615) 525-9356
	Memphis 38106	2351 Channel Ave.	(901) 775-9062
	Nashville 37208	91 Van Buren St.	(615) 244-9890
TX	Dallas 75001	4904 Arapaho Rd. (Addison)	(214) 233-3363
	Houston 77034	8901 Old Galveston Rd.	(713) 941-3403
	Midland 79701	Rankin Hwy., Route 1	(915) 563-0255
VA	Roanoke 24016	2410 Patterson Ave. S.W.	(703) 981-1251
WA	Seattle 98031	831 Fifth Ave. S. (Kent)	(206) 852-3631
WI	Monasha 54962	204 Madison St.	(414) 722-3371
	Milwaukee 53208	1033 N. Hawley Rd.	(414) 258-4235
CAN	Montreal, Que. J3Y7L3	4645 Fortier Ave. (St. Hubert)	(514) 462-0191
	Toronto, Ont. L5J4E7	2620 Royal Windsor Dr.	(416) 823-7680
PR	Bayamon 00619	Box 1026	(809) 788-2400

Ashland®

ASHLAND CHEMICAL COMPANY
DIVISION OF ASHLAND OIL, INC.
5200 Paul G. Blazer Memorial Parkway
Dublin, Ohio 43017 • (614) 889-3333

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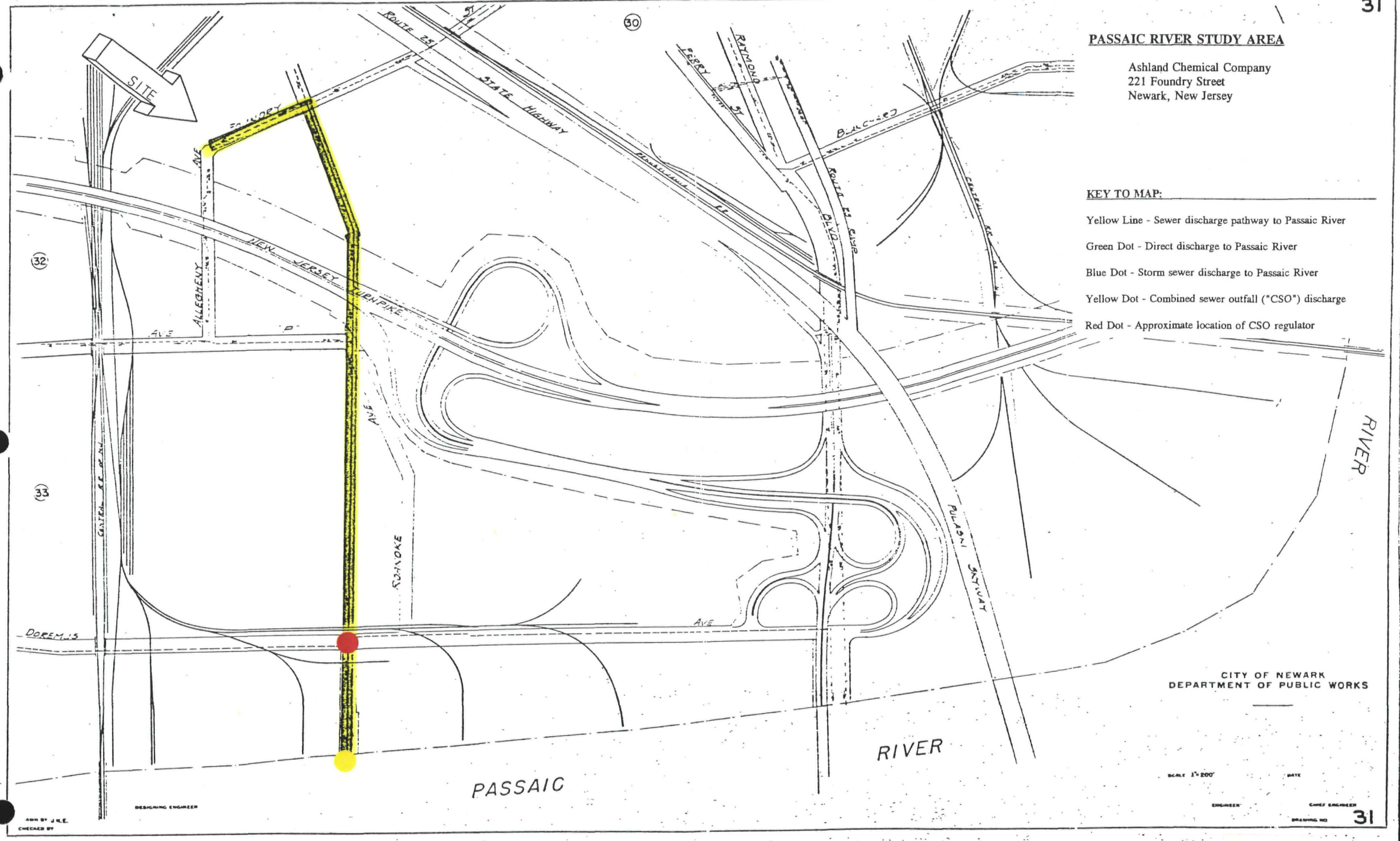


PASSAIC RIVER STUDY AREA

Ashland Chemical Company
221 Foundry Street
Newark, New Jersey

KEY TO MAP:

Yellow Line - Sewer discharge pathway to Passaic River

Green Dot - Direct discharge to Passaic River

Blue Dot - Storm sewer discharge to Passaic River

Yellow Dot - Combined sewer outfall ("CSO") discharge

Red Dot - Approximate location of CSO regulator

CITY OF NEWARK
DEPARTMENT OF PUBLIC WORKS

SCALE 1"=200'

DATE

DESIGNING ENGINEER

ENGINEER

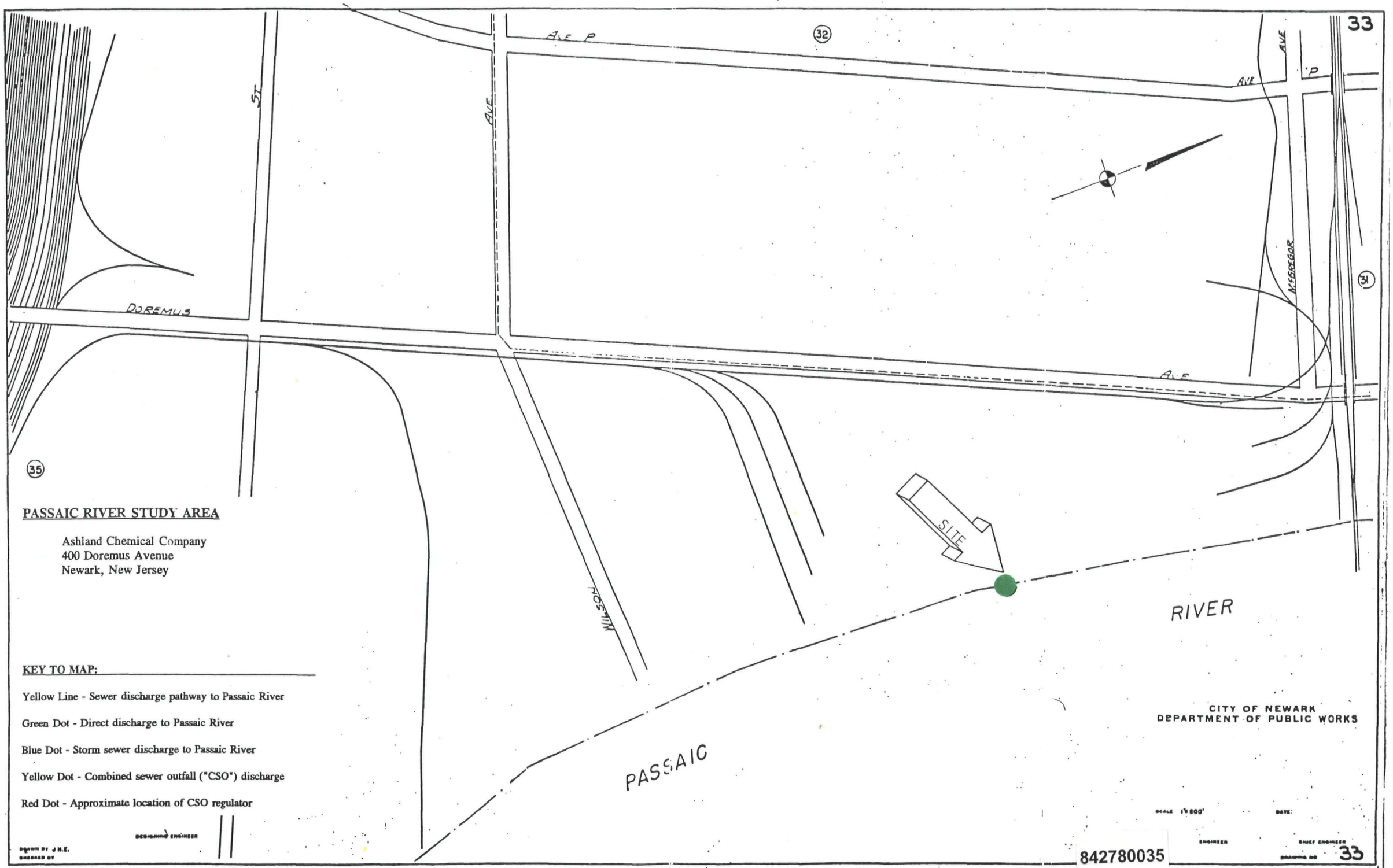
CHIEF ENGINEER

DRAWING NO. 31

DWN BY J.R.E.

CHECKED BY

842780034



PASSAIC RIVER STUDY AREA

Ashland Chemical Company
400 Doremus Avenue
Newark, New Jersey

KEY TO MAP:

Yellow Line - Sewer discharge pathway to Passaic River

Green Dot - Direct discharge to Passaic River

Blue Dot - Storm sewer discharge to Passaic River

Yellow Dot - Combined sewer outfall ("CSO") discharge

Red Dot - Approximate location of CSO regulator