



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/ 782-0610

November 20, 2020

Municipal Clerk
401 East Mississippi Avenue
Elwood, Illinois 60421-0435

Re: Stepan Company
NPDES Permit No. IL0002453
Bureau ID# W1978000013
Public Notice of Permit

Municipal Clerk:

In accordance with the requirements of the Illinois Pollution Control Board regulations of 35 Ill. Adm. Code 309.109(a)(2)(A), the attached National Pollutant Discharge Elimination System Public Notice is sent to a municipality in the vicinity of the applicant. The Agency understands that the applicant may not be associated with the municipality to which it is sent.

Please post the attached National Pollutant Discharge Elimination System Public Notice for a period of 30 days. In addition, please complete and return the enclosed postcard indicating the date of posting. Should you choose not to post the attached notice, please indicate so on the postcard and return.

Thank you for your cooperation.

Sincerely,

Darin E. LeCrone, P.E.
Manager, Industrial Unit, Permit Section
Division of Water Pollution Control

DEL:SMT:20052001.smt

Attachments: Public Notice/Fact Sheet, Post Card

cc: Records Unit

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
2009 Mall Street Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

NPDES Permit No. IL0002453
Notice No. SMT:20052001.smt

Public Notice Beginning Date: **November 20, 2020**

Public Notice Ending Date: **December 21, 2020**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water,
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

Stepan Company
22500 Stepan Drive
Elwood, Illinois 60421

Name and Address of Facility:

Stepan Company
22500 Stepan Drive
Elwood, Illinois 60421
(Will County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Shu-Mei Tsai at 217/782-0610.

The applicant is engaged in the production of anionic surfactants by oleum sulfonation, sulfation and air-SO₃ sulfonation, non-ionic surfactants by alkoxylation, cationic surfactants by quaternization, emulsifiers by sulfation and neutralization, phthalic anhydride by catalytic reaction, salts of sulfonated petrochemical feed stocks by neutralization, methyl esters and isopropyl esters by esterification and fractionation, drum dried and spray dried detergents, liquid detergents by batch blending, alkyamides by amidization and urethane foams and polyols by batch process (SIC 2821, 2841, 2842, 2843, 2844, 2865, and 2869) The water source is obtained from three on-site wells for the cooling water. Wastewater is generated by process operations, periodically discharging the cooling tower blowdown when solids build-up, sanitary wastewater and precipitation which contacts the site. Plant operation results in an average discharge of 0.88 MGD of process wastewater, sanitary wastewater, cooling tower blowdown, and stormwater from outfall 001 and an intermittent discharge of stormwater from outfalls 010 and 011.

The following modification is proposed:

1. The thermal compliance schedule has been added in the permit.
2. The language of Time-Limited Water Quality Standards for chloride has been added in the permit.

Application is made for the existing discharges which are located in Will County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

Outfall	Receiving Stream	Latitude	Longitude	Stream Classification	Biological Stream Characterization
001	Des Plaines River	41° 26' 32"	North 88° 09' 50" West	Secondary Contact	C
010	Cedar Creek	41° 26' 44"	North 89° 09' 49" West	General Use	Not Rated
011	Des Plaines River	41° 26' 23"	North 88° 09' 49" West	Secondary Contact	C

To assist you further in identifying the location of the discharge please see the attached map.

The subject facility discharges to the Des Plaines River, Water Body Segment (IL_G-12), at a point where 1501.5 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The Des Plaines River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The Des Plaines River at this location is not subject to enhanced dissolved oxygen standards, however, it is approximately 1.0 mile downstream from the treatment plant to the end of segment IL_G-12 is a distance of 2.2 stream miles. The impaired designated uses and pollutants causing impairment are tabulated below:

Designated Uses

Pollutants Causing Impairment

Fish Consumption

Mercury and Polychlorinated biphenyls (PCBs)

The discharge from the facility shall be monitored and limited at all times as follows:

Outfall: 001 Process Wastewater, Sanitary Wastewater, Cooling Tower Blowdown and Stormwater (DAF = 0.88 MGD)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L		
	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Flow (MGD)						
pH						35 IAC 304.125
Temperature						35 IAC 302.211
BOD ₅	167	334	35 IAC 309.143	20	40	35 IAC 304.120(b)
Total Suspended Solids	209	417	35 IAC 309.143	25	50	35 IAC 304.120(b)
Oil and Grease			40 CFR 122.44(l)	15	30	35 IAC 304.124
Total Residual Chlorine					0.05	35 IAC 302.410
MBAS	252	510	40 CFR 122.44(l)			
Acenaphthene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Acenaphthylene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Acrylonitrile	0.68	1.71	40 CFR 414.91	0.10	0.24	40 CFR 414.91
Anthracene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Benzene	0.26	0.96	40 CFR 414.91	0.04	0.14	40 CFR 414.91
Benzo(a)anthracene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
3,4-Benzofluoranthene	0.16	0.43	40 CFR 414.91	0.02	0.06	40 CFR 414.91

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L		
	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Outfall 001 Continued:						
Benzo(k)fluoranthene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Benzo(a)pyrene	0.16	0.43	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Bis(2-ethylhexyl)phthalate	0.73	1.97	40 CFR 414.91	0.10	0.28	40 CFR 414.91
Carbon Tetrachloride	0.13	0.27	40 CFR 414.91	0.02	0.04	40 CFR 414.91
Chlorobenzene	0.11	0.20	40 CFR 414.91	0.02	0.03	40 CFR 414.91
Chloroethane	0.73	1.89	40 CFR 414.91	0.10	0.27	40 CFR 414.91
Chloroform	0.15	0.32	40 CFR 414.91	0.02	0.05	40 CFR 414.91
2-Chlorophenol	0.22	0.69	40 CFR 414.91	0.03	0.10	40 CFR 414.91
Chrysene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Di-n-butyl phthalate	0.19	0.40	40 CFR 414.91	0.03	0.06	40 CFR 414.91
1,2-Dichlorobenzene	0.54	1.15	40 CFR 414.91	0.08	0.16	40 CFR 414.91
1,3-Dichlorobenzene	0.22	0.31	40 CFR 414.91	0.03	0.04	40 CFR 414.91
1,4-Dichlorobenzene	0.11	0.20	40 CFR 414.91	0.02	0.03	40 CFR 414.91
1,1-Dichloroethane	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
1,2-Dichloroethane	0.48	1.49	40 CFR 414.91	0.07	0.21	40 CFR 414.91
1,1-Dichloroethylene	0.11	0.18	40 CFR 414.91	0.02	0.03	40 CFR 414.91
1,2-trans-Dichloroethylene	0.15	0.38	40 CFR 414.91	0.02	0.05	40 CFR 414.91
2,4-Dichlorophenol	0.28	0.79	40 CFR 414.91	0.04	0.11	40 CFR 414.91
1,2-Dichloropropane	1.08	1.62	40 CFR 414.91	0.15	0.23	40 CFR 414.91
1,3-Dichloropropylene	0.20	0.31	40 CFR 414.91	0.03	0.04	40 CFR 414.91
Diethyl phthalate	0.57	1.43	40 CFR 414.91	0.08	0.20	40 CFR 414.91
2,4-Dimethylphenol	0.13	0.25	40 CFR 414.91	0.02	0.04	40 CFR 414.91
Dimethyl phthalate	0.13	0.33	40 CFR 414.91	0.02	0.05	40 CFR 414.91
4,6-Dinitro-o-cresol	0.55	1.95	40 CFR 414.91	0.08	0.28	40 CFR 414.91
2,4-Dinitrophenol	0.50	0.87	40 CFR 414.91	0.07	0.12	40 CFR 414.91
2,4-Dinitrotoluene	0.80	2.01	40 CFR 414.91	0.11	0.29	40 CFR 414.91
2,6-Dinitrotoluene	1.80	4.52	40 CFR 414.91	0.26	0.64	40 CFR 414.91
Ethylbenzene	0.23	0.76	40 CFR 414.91	0.03	0.11	40 CFR 414.91
Fluoranthene	0.18	0.48	40 CFR 414.91	0.03	0.07	40 CFR 414.91

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L		
	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Outfall 001 Continued:						
Fluorene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Hexachlorobenzene	0.11	0.20	40 CFR 414.91	0.02	0.03	40 CFR 414.91
Hexachlorobutadiene	0.14	0.35	40 CFR 414.91	0.02	0.05	40 CFR 414.91
Hexachloroethane	0.15	0.38	40 CFR 414.91	0.02	0.05	40 CFR 414.91
Methyl Chloride	0.61	1.34	40 CFR 414.91	0.09	0.19	40 CFR 414.91
Methylene Chloride	0.28	0.63	40 CFR 414.91	0.04	0.09	40 CFR 414.91
Naphthalene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Nitrobenzene	0.19	0.48	40 CFR 414.91	0.03	0.07	40 CFR 414.91
2-Nitrophenol	0.29	0.49	40 CFR 414.91	0.04	0.07	40 CFR 414.91
4-Nitrophenol	0.51	0.87	40 CFR 414.91	0.07	0.12	40 CFR 414.91
Phenanthrene	0.16	0.42	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Phenol	0.11	0.18	40 CFR 414.91	0.02	0.03	40CFR122.44(l)
Pyrene	0.18	0.47	40 CFR 414.91	0.03	0.07	40 CFR 414.91
Tetrachloroethylene	0.16	0.40	40 CFR 414.91	0.02	0.06	40 CFR 414.91
Toluene	0.18	0.56	40 CFR 414.91	0.03	0.08	40 CFR 414.91
Chromium	7.9	17	35 IAC 309.143	1.0	2.0	35 IAC 304.124
Copper	4.2	8.3	35 IAC 309.143	0.5	1.0	35 IAC 304.124
Cyanide	0.83	1.7	35 IAC 309.143	0.10	0.20	35 IAC 304.124
Lead	1.67	3.3	35 IAC 309.143	0.2	0.4	35 IAC 304.124
Nickel	8.3	17	35 IAC 309.143	1.0	2.0	35 IAC 304.124
Zinc	7.4	17	35 IAC 309.143	1.0	2.0	35 IAC 304.124
1,2,4-Trichlorobenzene	0.48	0.99	40 CFR 414.91	0.07	0.14	40 CFR 414.91
1,1,1-Trichloroethane	0.15	0.38	40 CFR 414.91	0.02	0.05	40 CFR 414.91
1,1,2-Trichloroethane	0.15	0.38	40 CFR 414.91	0.02	0.05	40 CFR 414.91
Trichloroethylene	0.15	0.38	40 CFR 414.91	0.02	0.05	40 CFR 414.91
Vinyl Chloride	0.73	1.89	40 CFR 414.91	0.10	0.27	40 CFR 414.91
Total Nitrogen (as N)				Monitor Only		35 IAC 309.146
Total Phosphorus (as P)				Monitor Only		35 IAC 309.146
Chloride				Monitor Only		35 IAC 309.146

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NOV 20 2020

Public Notice

Outfalls: 010 North Property Stormwater (Intermittent Discharge)
011 South Property Stormwater (Intermittent Discharge)

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
Stormwater Pollution Prevention Plan						40 CFR 122.26(b)(14)(ii)

Load Limit Calculations:

- A. Load limit calculations for the following pollutant parameters limited at outfall 001 were based on a process water flow of 0.846 and using the formula of process water flow (MGD) X concentration limit (mg/l) X 8.34 = the average or maximum load limit (lbs/day). A DMF of 1.0 MGD was used to calculate the daily max effluent limits for pollutants regulated under 35 IAC 304.
- B. Production based load limits for the following subcategories were derived during this permit review, but the information has been determined to be Confidential Business Information and will not be public noticed.

Part 417 Soap and Detergent Manufacturing Point Source Category

- Subpart I – Oleum Sulfonation and Sulfation Subcategory (40 CFR 417.93)
- Subpart J – Air – SO3 Sulfation and Sulfonation Subcategory (40 CFR 417.103)
- Subpart N – Neutralization of Sulfuric Acid Esters and Sulfonic Acids Subcategory (40 CFR 417.143)
- Subpart O – Manufacture of Spray Dried Detergents Subcategory
- Subpart P – Manufacture of Liquid Detergents Subcategory
- Subpart R – Manufacture of Drum Dried Detergents Subcategory (40 CFR 417.183)

Part 414 Organic Chemicals Plastics and Synthetic Fibers (OCPSF) Point Source Category

- Subpart G – Bulk Organic Chemicals (40 CFR 414.71)
- Subpart E – Urethane Foam Resin (40 CFR 414.51)

Part 414 OCPSF Subpart I – Direct Discharge Point Sources That Use End-of-Pipe Biological Treatment

Example Calculation:

Acenaphthene Daily Maximum Load Limit = Concentration given in 40 CFR 414.91 x Flow x Unit Conversion Factor =
59 µg/L x (1 mg / 1000 µg) x 0.846 MGD x 8.34 = 0.42 lbs/day

Acenaphthene Monthly Average Load Limit = Concentration Given in 40 CFR 414.91 x Flow x Unit Conversion Factor =
22 µg /L x (1 mg / 1000 µg) x 0.846 MGD x 8.34 = 0.16 lbs/day

The load limits appearing in the permit will be the more stringent of the State and Federal Guidelines.

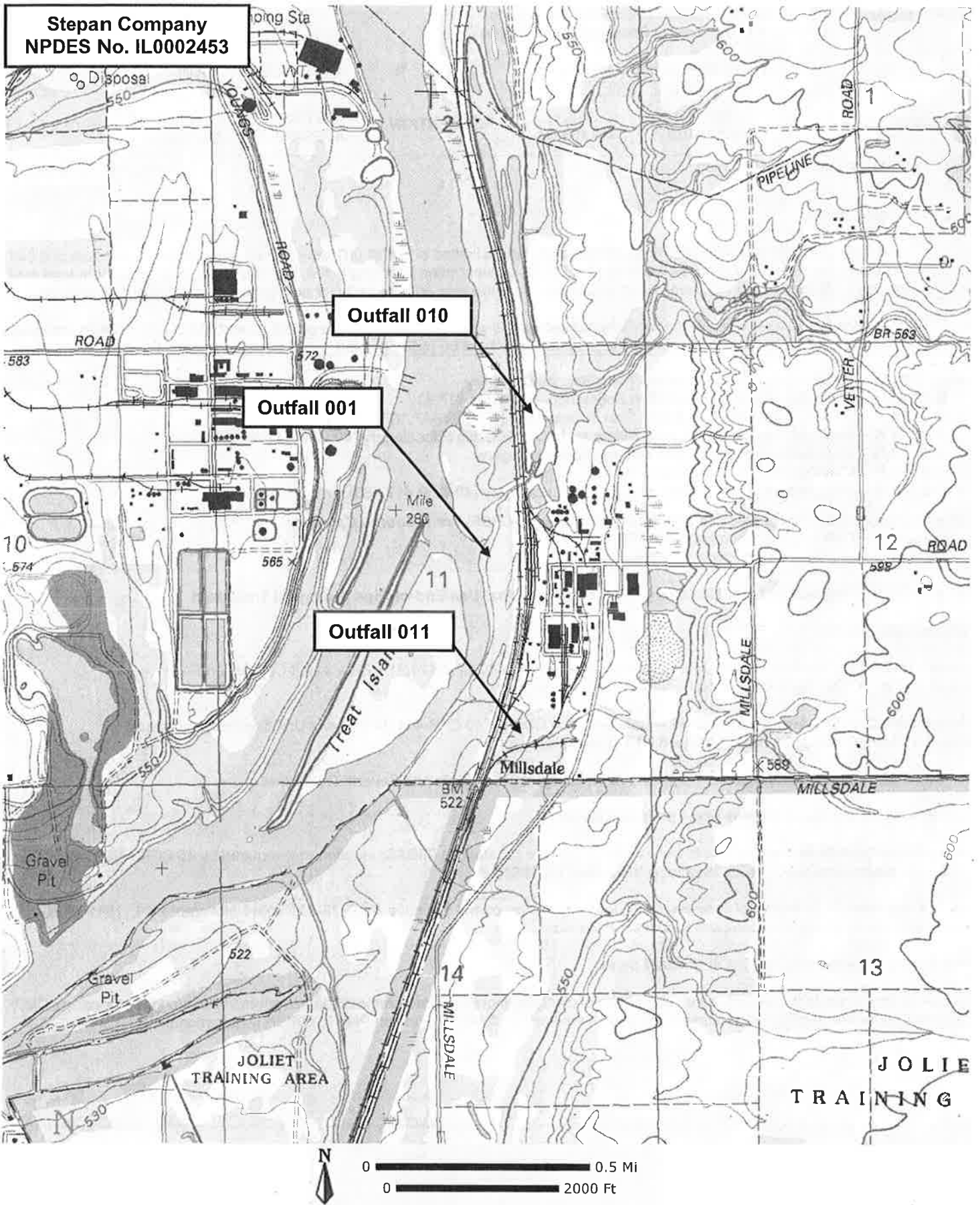
The following explain the conditions of the proposed permit:

Testing for surfactants through the use of methylene blue active substances (MBAS) monitoring is required by 40 CFR 136.3(a) and was found to be reasonable per PCB 79-161 dated November 19, 1981.

Part 417 requires COD limits but they were not included in the permit because PCB 79-161 dated November 19, 1981 found the requirement unnecessary to accomplish purposes of the Act.

The following explain the conditions of the draft permit:

The special conditions of the permit serve the purpose of clarifying monitoring requirements, temperature limits, monitoring location, DMR submission, operator certification requirements, and Stormwater Pollution Prevention Plan (SWPPP) requirements.



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NOV 20 2020

Public Notice 1000

Public Notice of Draft Permit

Public Notice Number SMT:20052001.smt is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0002216 has been prepared under 40 CFR 124.6(d) for Stepan Chemical, 22500 West Millsdale Road, Elwood, Illinois 60421, (Will County) for discharge into the Des Plaines River and Cedar Creek.

The applicant is engaged in the production of anionic surfactants by oleum sulfonation, sulfation and air-SO₃ sulfonation, non-ionic surfactants by alkoxylation, cationic surfactants by quaternization, emulsifiers by sulfation and neutralization, phthalic anhydride by catalytic reaction, salts of sulfonated petrochemical feed stocks by neutralization, methyl esters and isopropyl esters by esterification and fractionation, drum dried and spray dried detergents, liquid detergents by batch blending, alkyamides by amidization and urethane foams and polyols by batch process (SIC 2843, 2865, 2821, 2841, 2842, 2869 and 2844) Wastewater is generated by process operations, periodically discharging the cooling tower blowdown when solids build-up, sanitary wastewater, and precipitation which contacts the site.

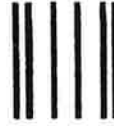
Plant operation results in an average discharge of 0.88 MGD of process wastewater, sanitary wastewater, cooling tower blowdown, and stormwater from outfall 001 and an intermittent discharge of stormwater from outfalls 010 and 011.

The application, draft permit and other documents are available for inspection and may be copied at the Agency between 9:30 a.m. and 3:30 p.m. Monday through Friday. A Fact Sheet containing more detailed information is available at no charge. For further information, call the Public Notice Clerk at 217/782-0610.

Interested persons are invited to submit written comments on the draft permit to the Agency at the above address. The NPDES Permit and Joint Public Notice numbers must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

Any interested person may submit written request for a public hearing on the draft

If written comments and/or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing.



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1021 NORTH GRAND AVENUE EAST
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