- Casting Operations – Lithium Drum rinsing;
- Dewatering of the co-product solvent process;
- Tanker rinsing;
- Shipping container deactivation; and
- Cylinder and process equipment rinsing.
-

NPDES Application Form 2F describes the storm water discharges associated with the industrial activities at the New Johnsonville facility. The facility has two storm water outfalls, SW1 and SW2.

The area that drains to SW1 encompasses the North Plant and South Plant production areas and finished product storage areas. The North Plant production area and finished product storage area drain into a lift station that is pumped to the retention pond. All storm water from the South Plant is collected in a catch basin and pumped to the retention pond, commingled with the facility process wastewater. As previously noted, the water in the retention pond is treated by a simple pH adjustment system before discharging through outfall 001. During peak storm events, storm water may be discharged without pH adjustment.

The area that drains to SW2 encompasses the rail sidings into the plant, raw material loading & unloading areas located at the North Plant, storm water from the vegetative area to the north of the industrial areas, and storm water from the eastern portion of the facility that flows through a ditch into SW2. All storage and process areas of the North Plant are contained by dikes so that contaminated storm water may be pumped to the retention pond. During peak storm events, storm water may discharge to SW2. An undeveloped area also discharges to SW2.

If you have any questions concerning this permit application, please do not hesitate to call me at 931-535-6201 or email at Darrell.Fisher@albemarle.com.

Sincerely,

ROCKWOOD LITHIUM, INC 8/12
PETTY CASH FUND
856 FOOTE LANE
NEW JOHNSONVILLE, TN 37134

1644
87-7127/2641

Pay to the order of TDEC Environmental Protection Fees $ 1,170.00

Date 12/19/17

One thousand one hundred seventy & 00/100 Dollars

First Federal Bank NEW JOHNSONVILLE, TN 37134

Security details on back.

For NPDES #TN0062537 Renewal

MP

December 22, 2017

Tennessee Department of Environment and Conservation
Division of Water Resources
312 Rosa L. Parks Ave.
Nashville, TN 37243

Subject: **National Pollutant Discharge Elimination Systems (NPDES) Permit Renewal Application for Albemarle U.S., Inc. New Johnsonville, Tennessee Permit # TN0062537**

To Whom It May Concern:

Enclosed please find two (3) copies of an NPDES permit renewal application package for the Albemarle U.S., Inc. facility located in New Johnsonville, Tennessee.

The enclosed NPDES permit application package consists of the following:

1. This transmittal letter
2. TDEC Form CN-1090 – Permit Contact Information
3. EPA Form 1 – General Information
4. Figures 1, 2 and 3
5. EPA Form 2C – Wastewater Discharge Information
6. EPA Form 2F – Storm Water Discharges Associated with Industrial Activity
7. Alternatives analysis

All facility process wastewater is collected in a retention basin and discharged through Outfall 001. The batch discharge from Outfall 001 includes a commingled flow of process wastewater and storm water that is treated by a simple pH adjustment system. The NPDES Application Form 2C summarizes the process wastewater streams located at the facility. Process wastewater from the North Plant is generated from process equipment rinsing. Process wastewater from the South Plant is generated by the following operations:

- Filter Tank & Cylinder Cleaning;

- Casting Operations – Lithium Drum rinsing;
- Dewatering of the co-product solvent process;
- Tanker rinsing;
- Shipping container deactivation; and
- Cylinder and process equipment rinsing.
-

NPDES Application Form 2F describes the storm water discharges associated with the industrial activities at the New Johnsonville facility. The facility has two storm water outfalls, SW1 and SW2.

The area that drains to SW1 encompasses the North Plant and South Plant production areas and finished product storage areas. The North Plant production area and finished product storage area drain into a lift station that is pumped to the retention pond. All storm water from the South Plant is collected in a catch basin and pumped to the retention pond, commingled with the facility process wastewater. As previously noted, the water in the retention pond is treated by a simple pH adjustment system before discharging through outfall 001. During peak storm events, storm water may be discharged without pH adjustment.

The area that drains to SW2 encompasses the rail sidings into the plant, raw material loading & unloading areas located at the North Plant, storm water from the vegetative area to the north of the industrial areas, and storm water from the eastern portion of the facility that flows through a ditch into SW2. All storage and process areas of the North Plant are contained by dikes so that contaminated storm water may be pumped to the retention pond. During peak storm events, storm water may discharge to SW2. An undeveloped area also discharges to SW2.

If you have any questions concerning this permit application, please do not hesitate to call me at 931-535-6201 or email at Darrell.Fisher@albemarle.com.

Sincerely,

Darrell Fisher
Albemarle U.S., Inc.
Director of Operations – Butyllithium & Specialty Products

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Water-Based Systems
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243-1102

PERMIT CONTACT INFORMATION

Please complete all sections. If one person serves multiple functions, please repeat this information in each section.

PERMIT NUMBER: TN0062537 **DATE:** 12/15/2017

PERMITTED FACILITY: Albemarle, U.S., Inc. **COUNTY:** Humphreys

OFFICIAL PERMIT CONTACT:

(The permit signatory authority, e.g. responsible corporate officer, principle executive officer or ranking elected official)

Official Contact: Darrell Fisher	Title or Position: Director of Operations, Butyllithium & Specialities		
Mailing Address: 856 Foote Lane	City: New Johnsonville	State: TN	Zip: 37134
Phone number(s): (931) 535-6201	E-mail: darrell.fisher@albemarle.com		

PERMIT BILLING ADDRESS (where invoices should be sent):

Billing Contact: Tonya Bukky	Title or Position: Administrative Secretary		
Mailing Address: 856 Foote Lane	City: New Johnsonville	State: TN	Zip: 37134
Phone number(s): (931) 535-6204	E-mail: tonya.bukky@albemarle.com		

FACILITY LOCATION (actual location of permit site and local contact for site activity):

Facility Location Contact: John Stewart	Title or Position: Plant Chemist		
Facility Location (physical street address): 856 Foote Lane	City: New Johnsonville	State: TN	Zip: 37134
Phone number(s): (931) 535-6209	E-mail: john.stewart@albemarle.com		

Alternate Contact (if desired):	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone number(s):	E-mail:		

FACILITY REPORTING (Discharge Monitoring Report (DMR) or other reporting):

Cognizant Official authorized for permit reporting: Darrell Fisher	Title or Position: Director of Operations, Butyllithium & Specialities		
Mailing Address: 856 Foote Lane	City: New Johnsonville	State: TN	Zip: 37134
Phone number(s): (931) 535-6201	E-mail: darrell.fisher@albemarle.com		
Fax number for reporting: (931) 535-3404	Does the facility have interest in starting electronic DMR reporting? Yes No		

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	TN981014962		D
1	2 — 13	14	15

LABEL ITEMS	
I. EPA I.D. NUMBER	PLEASE PLACE LABEL IN THIS SPACE
III. FACILITY NAME	
V. FACILITY MAILING ADDRESS	
VI. FACILITY LOCATION	

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	16	X 17	18
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	19	X 20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X 22	23	X 24
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)	25	X 26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	28	X 29	30
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	31	X 32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	34	X 35	36
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	37	X 38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	40	X 41	42
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	43	X 44	45

III. NAME OF FACILITY

1 SKIP: ALBEMARLE U.S., INC.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*: 2 DARRELL FISHER, DIRECTOR OF OPERATIONS

B. PHONE *(area code & no.)*: (931) 535-6201

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 856 FOOTE LANE

B. CITY OR TOWN: 4 NEW JOHNSONVILLE

C. STATE: TN

D. ZIP CODE: 37134

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 856 FOOTE LANE

B. COUNTY NAME: HUMPRHEYS

C. CITY OR TOWN: 6 NEW JOHNSONVILLE

D. STATE: TN

E. ZIP CODE: 37134

F. COUNTY CODE *(if known)*:

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
2869 (specify) Industrial Organic Chemicals, Not Elsewhere Classified	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
ALBEMARLE U.S., INC.	☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*: A (931) 535-6201

E. STREET OR P.O. BOX: 856 FOOTE LANE

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
NEW JOHNSONVILLE	TN	37134	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N TN0062537	9 P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 570978 (specify) Title V Air Permit
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R TN981014962	9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Albemarle operates and organometallic compound manufacturing facility located in an industrial portion of New Johnsonville, Tennessee. The facility consists of two similar plants (North Plant and South Plant). The facility is primarily a lithium alkyl production facility that also produces other organometallic based materials.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Darrell Fisher, Dir. of Operations Butyllithium & Specialites		12/22/17

COMMENTS FOR OFFICIAL USE ONLY

C

Alternative Analysis
RE: Albemarle U.S. Inc., NPDES Permit No. TN0062537

Alternate #1: Connection to a Publically Owned Treatment Works

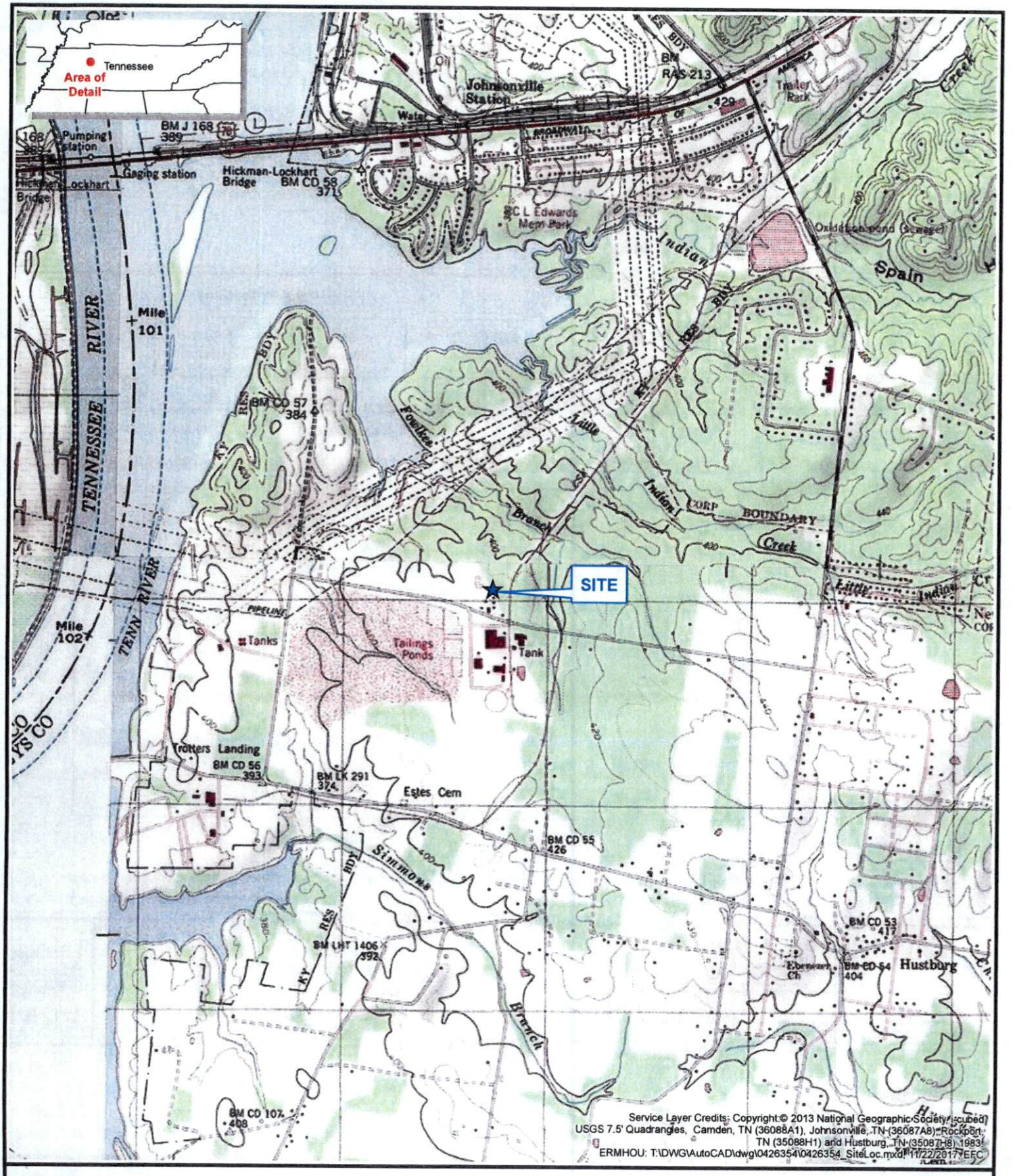
The nearest sanitary sewer line, maintained by the City of New Johnsonville, is approximately a quarter mile from the Albemarle property. In addition, the current discharge contains storm water, which is not permitted to be discharged into the sanitary sewer system. The alternative is deemed to be not feasible.

Alternate #2: Onsite Land Application

Albemarle does not own sufficient undeveloped land for the land application of the effluent. As noted in Alternative #1, the effluent also contains storm water in addition to process wastewater. This alternative is deemed to be not feasible.

Alternative #3: Water Re-Use / Recycling

The operations at Albemarle consume relatively low amounts of water. Re-use of the process wastewater alone would require extensive, costly treatment. In addition, there would be no possibility of onsite reuse of the storm water collected in the discharge pond. This alternative is deemed to be not feasible.

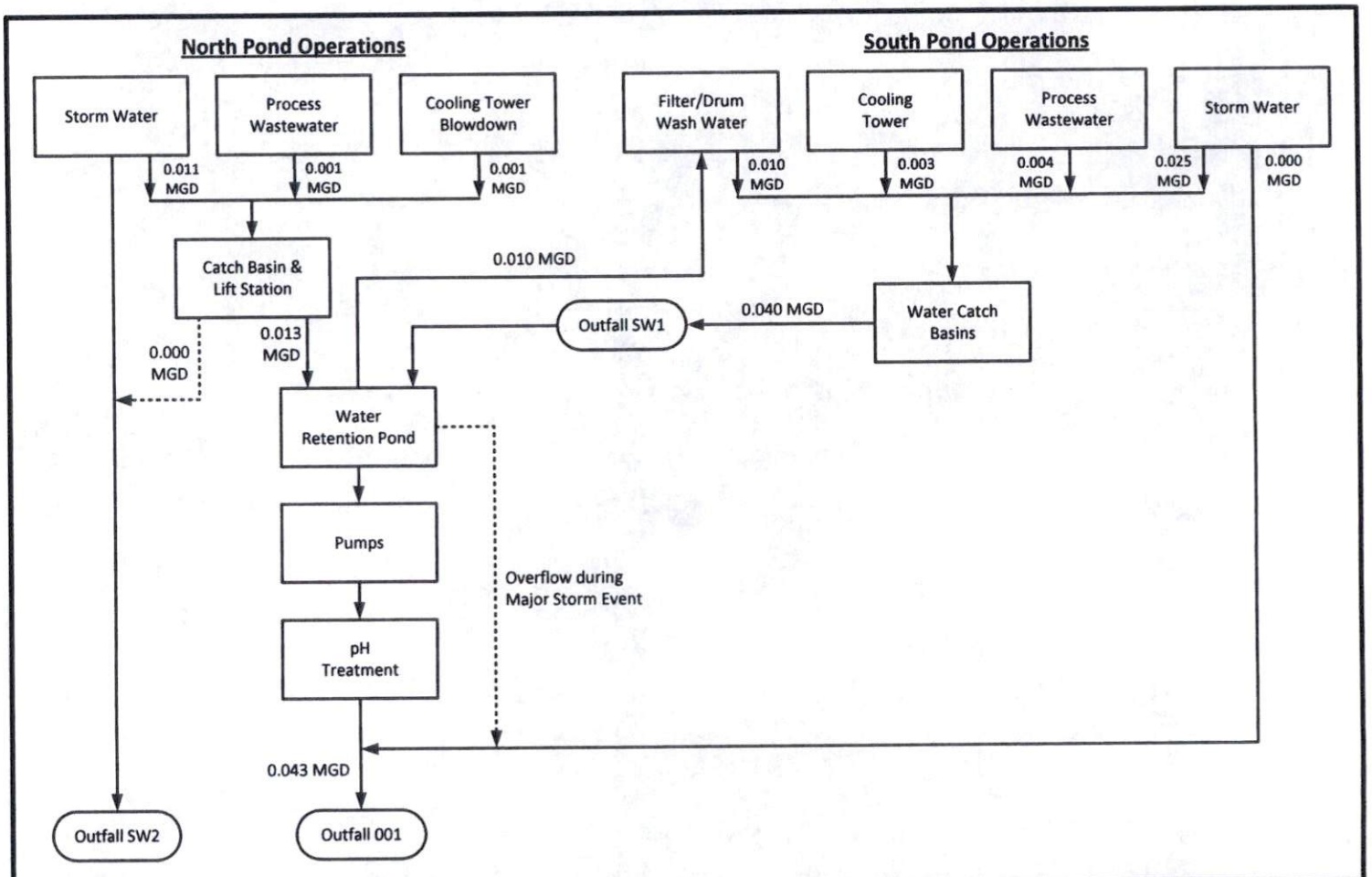


N

0 1,000 2,000 Feet

Environmental Resources Management
www.erm.com

FIGURE 1
SITE LOCATION MAP
Albermarle U.S., Inc.
New Johnsonville, Tennessee



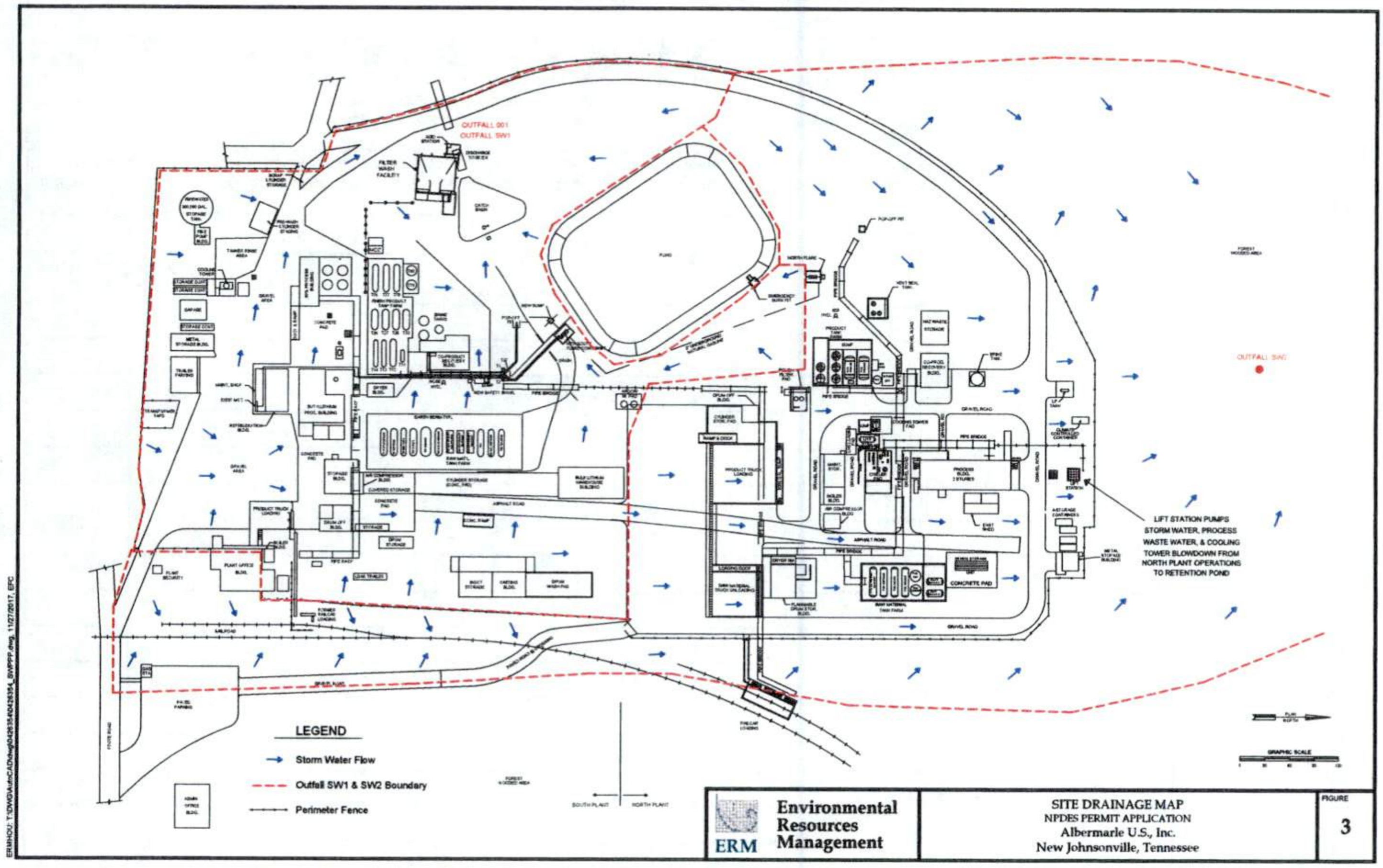
Environmental Resources Management

DESIGN:	L. Bagby	DRAWN:	EFC	CHKD.:	-
DATE:	12/18/2017	SCALE:	None	REV.:	0

HTX: T:\DWG\AutoCAD\dwg\0426354\0426354_WaterFlowDiagram.vsd

FIGURE 2
WATER FLOW DIAGRAM
Albermarle U.S., Inc.
New Johnsonville, Tennessee

ERM



OUTFALL 001
OUTFALL SW1
OUTFALL SW2
POND
PIPE BRIDGE
ASPHALT ROAD
GRAVEL ROAD
LIFT STATION PUMPS STORM WATER, PROCESS WASTE WATER, & COOLING TOWER BLOWDOWN FROM NORTH PLANT OPERATIONS TO RETENTION POND
CONCRETE PAD
LEGEND
Storm Water Flow
Outfall SW1 & SW2 Boundary
Perimeter Fence
SOUTH PLANT
NORTH PLANT
GRAPHIC SCALE
Environmental Resources Management
ERM
SITE DRAINAGE MAP
NPDES PERMIT APPLICATION
Albermarle U.S., Inc.
New Johnsonville, Tennessee
FIGURE
3

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
TN981014962

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	35.00	59.00	50.00	87.00	58.00	54.00	Unnamed ditch to Kentucky Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Storm water runoff	43,200 GAL/DAY	Evaporation	1-F	
	Cooling water		Flocculation - Sedimentation	1-G	1-U
	Process wastewater		Neutralization	2-K	
	Filter/Drum wastewater				

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
001	Discharge mostly affected by rainfall	3.8	12	0.0432	0.054			

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (*complete Item III-B*) ☑ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☐ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
TND981014962

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Cyclohexane	Used as solvent in production facility. 0.00905 mg/L from sample collected on 11/21/2017 from Outfall 001		
Stryene	Reactant in product production,used in stoichometric quantity		
Isoprene	Product using isoprene is in product portfolio, but not in production in last 3 years		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☑ YES (*list all such pollutants below*) ☐ NO (*go to Item VI-B*)

Chlorobenzene
Ethylbenzene
Methylchloride
Toluene

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
ESC Lab Sciences	12065 Lebanon Rd. Mt. Juliet, TN 37122	(615) 75805858	all

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Darrell Fisher, Dir. of Operations-Butyllithium & Specialties	(931) 535-3401
C. SIGNATURE	D. DATE SIGNED
	12/22/17

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): TN981014962

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	17.1	2540			6.9	910	1	mg/L	g			
b. Chemical Oxygen Demand (*COD*)	23.2	3790					1	mg/L	g			
c. Total Organic Carbon (*TOC*)	9.67	1580					1	mg/L	g			
d. Total Suspended Solids (*TSS*)	17.6	2880			11.38	1509	1	mg/L	g			
e. Ammonia (*as N*)	0.134	21.9					1	mg/L	g			
f. Flow	VALUE 0.0432		VALUE		VALUE 0.035		1		MGD	VALUE		
g. Temperature (*winter*)	VALUE		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		1	°C		VALUE		
i. pH	MINIMUM 7.0	MAXIMUM 7.5	MINIMUM	MAXIMUM			11	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		<0.10	<16					1	mg/L	g			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		0.926	151					1	mg/L	g			
h. Oil and Grease	X		<5.56	<909					1	mg/L	g			
i. Phosphorus (as P), Total (7723-14-0)	X		0.122	19.9					1	mg/L	g			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)	X		2.43	397					1	mg/L	g			
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
TN981014962	001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			<0.002	<0.33					1	mg/L	g			
2M. Arsenic, Total (7440-38-2)	X			0.00229	0.37					1	mg/L	g			
3M. Beryllium, Total (7440-41-7)	X			<0.001	<0.16					1	mg/L	g			
4M. Cadmium, Total (7440-43-9)	X			<0.001	<0.16					1	mg/L	g			
5M. Chromium, Total (7440-47-3)	X			<0.001	<0.16					1	mg/L	g			
6M. Copper, Total (7440-50-8)	X			0.00639	1.04					1	mg/L	g			
7M. Lead, Total (7439-92-1)	X			0.00159	0.26					1	mg/L	g			
8M. Mercury, Total (7439-97-6)	X			<0.0002	<0.033					1	mg/L	g			
9M. Nickel, Total (7440-02-0)	X			<0.001	<0.16					1	mg/L	g			
10M. Selenium, Total (7782-49-2)	X			<0.002	<0.33					1	mg/L	g			
11M. Silver, Total (7440-22-4)	X			<0.001	<0.16					1	mg/L	g			
12M. Thallium, Total (7440-28-0)	X			<0.001	<0.16					1	mg/L	g			
13M. Zinc, Total (7440-66-6)	X			0.0139	2.27					1	mg/L	g			
14M. Cyanide, Total (57-12-5)	X			<0.005	<0.082					1	mg/L	g			
15M. Phenols, Total	X			<0.04	<6.5					1	mg/L	g			
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X			<0.05	<8.1					1	mg/L	g			
2V. Acrylonitrile (107-13-1)	X			<0.01	<1.6					1	mg/L	g			
3V. Benzene (71-43-2)	X			<0.001	<0.16					1	mg/L	g			
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X			<0.001	<0.16					1	mg/L	g			
5V. Bromoform (75-25-2)	X			<0.001	<0.16					1	mg/L	g			
6V. Carbon Tetrachloride (56-23-5)	X			<0.001	<0.16					1	mg/L	g			
7V. Chlorobenzene (108-90-7)	X			<0.001	<0.16					1	mg/L	g			
8V. Chlorodibromomethane (124-48-1)	X			<0.001	<0.16					1	mg/L	g			
9V. Chloroethane (75-00-3)	X			<0.005	<0.82					1	mg/L	g			
10V. 2-Chloroethylvinyl Ether (110-75-8)	X			<0.050	<8.2					1	mg/L	g			
11V. Chloroform (67-66-3)	X			<0.005	<0.82					1	mg/L	g			
12V. Dichlorobromomethane (75-27-4)	X			<0.001	<0.16					1	mg/L	g			
13V. Dichlorodifluoromethane (75-71-8)	X			<0.005	<0.82					1	mg/L	g			
14V. 1,1-Dichloroethane (75-34-3)	X			<0.001	<0.16					1	mg/L	g			
15V. 1,2-Dichloroethane (107-06-2)	X			<0.001	<0.16					1	mg/L	g			
16V. 1,1-Dichloroethylene (75-35-4)	X			<0.001	<0.16					1	mg/L	g			
17V. 1,2-Dichloropropane (78-87-5)	X			<0.001	<0.16					1	mg/L	g			
18V. 1,3-Dichloropropylene (542-75-6)	X			<0.001	<0.16					1	mg/L	g			
19V. Ethylbenzene (100-41-4)	X			0.0115	1.88					1	mg/L	g			
20V. Methyl Bromide (74-83-9)	X			<0.005	<0.82					1	mg/L	g			
21V. Methyl Chloride (74-87-3)	X			<0.0025	<0.41					1	mg/L	g			

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X			<0.005	<0.82					1	mg/L	g			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<0.001	<0.16					1	mg/L	g			
24V. Tetrachloroethylene (127-18-4)	X			<0.001	<0.16					1	mg/L	g			
25V. Toluene (108-88-3)	X			0.00950	1.55					1	mg/L	g			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<0.001	<0.16					1	mg/L	g			
27V. 1,1,1-Trichloroethane (71-55-6)	X			<0.001	<0.16					1	mg/L	g			
28V. 1,1,2-Trichloroethane (79-00-5)	X			<0.001	<0.16					1	mg/L	g			
29V Trichloroethylene (79-01-6)	X			<0.001	<0.16					1	mg/L	g			
30V. Trichlorofluoromethane (75-69-4)	X			<0.005	<0.82					1	mg/L	g			
31V. Vinyl Chloride (75-01-4)	X			<0.001	<0.16					1	mg/L	g			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<0.05	<8.1					1	mg/L	g			
2A. 2,4-Dichlorophenol (120-83-2)	X			<0.05	<8.1					1	mg/L	g			
3A. 2,4-Dimethylphenol (105-67-9)	X			<0.05	<8.1					1	mg/L	g			
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<0.05	<8.1					1	mg/L	g			
5A. 2,4-Dinitrophenol (51-28-5)	X			<0.05	<8.1					1	mg/L	g			
6A. 2-Nitrophenol (88-75-5)	X			<0.05	<8.1					1	mg/L	g			
7A. 4-Nitrophenol (100-02-7)	X			<0.05	<8.1					1	mg/L	g			
8A. P-Chloro-M-Cresol (59-50-7)	X			<0.05	<8.1					1	mg/L	g			
9A. Pentachlorophenol (87-86-5)	X			<0.05	<8.1					1	mg/L	g			
10A. Phenol (108-95-2)	X			<0.05	<8.1					1	mg/L	g			
11A. 2,4,6-Trichlorophenol (88-05-2)	X			<0.05	<8.1					1	mg/L	g			

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<0.005	<0.82					1	mg/L	g			
2B. Acenaphtylene (208-96-8)	X			<0.005	<0.82					1	mg/L	g			
3B. Anthracene (120-12-7)	X			<0.005	<0.82					1	mg/L	g			
4B. Benzidine (92-87-5)	X			0.050	<8.2					1	mg/L	g			
5B. Benzo (*a*) Anthracene (56-55-3)	X			<0.005	<0.82					1	mg/L	g			
6B. Benzo (*a*) Pyrene (50-32-8)	X			<0.005	<0.82					1	mg/L	g			
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			<0.005	<0.82					1	mg/L	g			
8B. Benzo (*ghi*) Perylene (191-24-2)	X			<0.005	<0.82					1	mg/L	g			
9B. Benzo (*k*) Fluoranthene (207-08-9)	X			<0.005	<0.82					1	mg/L	g			
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X			<0.05	<8.2					1	mg/L	g			
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X			<0.05	<8.2					1	mg/L	g			
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X			<0.05	<8.2					1	mg/L	g			
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X			<0.015	<2.4					1	mg/L	g			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<0.050	<8.2					1	mg/L	g			
15B. Butyl Benzyl Phthalate (85-68-7)	X			<0.015	<2.4					1	mg/L	g			
16B. 2-Chloro-naphthalene (91-58-7)	X			<0.005	<0.82					1	mg/L	g			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X			<0.050	<8.2					1	mg/L	g			
18B. Chrysene (218-01-9)	X			<0.005	<0.82					1	mg/L	g			
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X			<0.005	<0.82					1	mg/L	g			
20B. 1,2-Dichloro-benzene (95-50-1)	X			<0.001	<0.16					1	mg/L	g			
21B. 1,3-Di-chloro-benzene (541-73-1)	X			<0.001	<0.16					1	mg/L	g			

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X			<0.001	<0.16					1	mg/L	g			
23B. 3,3-Dichlorobenzidine (91-94-1)	X			<0.050	<8.2					1	mg/L	g			
24B. Diethyl Phthalate (84-66-2)	X			<0.015	<2.4					1	mg/L	g			
25B. Dimethyl Phthalate (131 -11-3)	X			<0.015	<2.4					1	mg/L	g			
26B. Di-N-Butyl Phthalate (84-74-2)	X			<0.015	<2.4					1	mg/L	g			
27B. 2,4-Dinitrotoluene (121-14-2)	X			<0.050	<8.2					1	mg/L	g			
28B. 2,6-Dinitrotoluene (606-20-2)	X			<0.050	<8.2					1	mg/L	g			
29B. Di-N-Octyl Phthalate (117-84-0)	X			<0.015	<2.4					1	mg/L	g			
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X			<0.050	<8.2					1	mg/L	g			
31B. Fluoranthene (206-44-0)	X			<0.005	<0.82					1	mg/L	g			
32B. Fluorene (86-73-7)	X			<0.005	<0.82					1	mg/L	g			
33B. Hexachlorobenzene (118-74-1)	X			<0.005	<0.82					1	mg/L	g			
34B. Hexachlorobutadiene (87-68-3)	X			<0.05	<8.2					1	mg/L	g			
35B. Hexachlorocyclopentadiene (77-47-4)	X			<0.05	<8.2					1	mg/L	g			
36B Hexachloroethane (67-72-1)	X			<0.05	<8.2					1	mg/L	g			
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X			<0.005	<0.82					1	mg/L	g			
38B. Isophorone (78-59-1)	X			<0.05	<8.2					1	mg/L	g			
39B. Naphthalene (91-20-3)	X			<0.005	<0.82					1	mg/L	g			
40B. Nitrobenzene (98-95-3)	X			<0.05	<8.2					1	mg/L	g			
41B. N-Nitrosodimethylamine (62-75-9)	X			<0.05	<8.2					1	mg/L	g			
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<0.05	<8.2					1	mg/L	g			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<0.05	<8.2					1	mg/L	g			
44B. Phenanthrene (85-01-8)	X			<0.005	<0.82					1	mg/L	g			
45B. Pyrene (129-00-0)	X			<0.005	<0.82					1	mg/L	g			
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X			<0.05	<8.2					1	mg/L	g			
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X			<0.00005	<0.008					1	mg/L	g			
2P. α-BHC (319-84-6)	X			<0.00005	<0.008					1	mg/L	g			
3P. β-BHC (319-85-7)	X			<0.00005	<0.008					1	mg/L	g			
4P. γ-BHC (58-89-9)	X			<0.00005	<0.008					1	mg/L	g			
5P. δ-BHC (319-86-8)	X			<0.00005	<0.008					1	mg/L	g			
6P. Chlordane (57-74-9)	X			<0.0005	<0.08					1	mg/L	g			
7P. 4,4'-DDT (50-29-3)	X			<0.00005	<0.008					1	mg/L	g			
8P. 4,4'-DDE (72-55-9)	X			<0.00005	<0.008					1	mg/L	g			
9P. 4,4'-DDD (72-54-8)	X			<0.00005	<0.008					1	mg/L	g			
10P. Dieldrin (60-57-1)	X			<0.00005	<0.008					1	mg/L	g			
11P. α-Enosulfan (115-29-7)	X			<0.00005	<0.008					1	mg/L	g			
12P. β-Endosulfan (115-29-7)	X			<0.00005	<0.008					1	mg/L	g			
13P. Endosulfan Sulfate (1031-07-8)	X			<0.00005	<0.008					1	mg/L	g			
14P. Endrin (72-20-8)	X			<0.00005	<0.008					1	mg/L	g			
15P. Endrin Aldehyde (7421-93-4)	X			<0.00005	<0.008					1	mg/L	g			
16P. Heptachlor (76-44-8)	X			<0.00005	<0.008					1	mg/L	g			

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
TN981014962	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X			<0.00005	<0.008					1	mg/L	g			
18P. PCB-1242 (53469-21-9)	X			<0.0005	<0.08					1	mg/L	g			
19P. PCB-1254 (11097-69-1)	X			<0.0005	<0.08					1	mg/L	g			
20P. PCB-1221 (11104-28-2)	X			<0.0005	<0.08					1	mg/L	g			
21P. PCB-1232 (11141-16-5)	X			<0.0005	<0.08					1	mg/L	g			
22P. PCB-1248 (12672-29-6)	X			<0.0005	<0.08					1	mg/L	g			
23P. PCB-1260 (11096-82-5)	X			<0.0005	<0.08					1	mg/L	g			
24P. PCB-1016 (12674-11-2)	X			<0.0005	<0.08					1	mg/L	g			
25P. Toxaphene (8001-35-2)	X			<0.0005	<0.08					1	mg/L	g			

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
TN981014962

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
SW1	35.00	59.00	50.00	87.00	58.00	54.00	Retention pond, outfall 001, then unnamed ditch
SW2	35.00	59.00	87.00	87.00	58.00	45.00	Unamed ditch to Kentucky Lake/Tennessee River

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
N/A					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
SW1	2.25 Acres	7.75 Acres	SW2	3 Acres	6 Acres

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

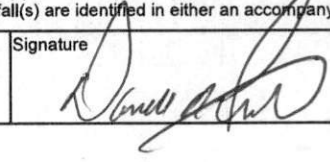
The area that drains to SW1 encompasses the North Plant and South Plant production areas and finished product storage sites. The North Plant production area and finished product storage area drain into a lift station that is pumped to the retention pond. Storm water from the South Plant is collected in a catch basin and pumped to the retention pond and comingled with the facility process wasterwater. As previously noted, the water in the retention pond is treated by a simple pH adjustment system before discharging through 001. During peak storm events at peak hours, some storm water flow may bypass treatment and will be discharged at outfall 001. The area that drains to SW2 encompasses the rail sidings into the plant, raw material loading & unloading areas located at the North Plant, storm water from the vegetative area to the north of the industrial areas, and storm water from the eastern portion of the facility that flows through a ditch into SW2. All storage and process areas of the North Plant are contained by dikes so that contaminated storm water may be pumped to the retention pond for treatment and discharge at outfall 001. During storm events at peak hours, some discharge occurs to SW2. No pesticides, herbicides, soil conditioners or fertilizers are applied. The products are highly water reactive and raw materials and products are protected from exposure to water and storm water to prevent product degradation.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
SW1	See Figure 2 and 3 for details. Storm water drains into the retention pond for solids separation, then is pumped to pH treatment and discharge at outfall 001. Treatment consists of evaporation, flocculation, sedimentation and neutralization. During peak storm events, some storm water will be discharged at the water retention pond and other areas without treatment.	
SW2	Storm water is collected from catch basins and pumped to the water retention pond. During heavy storm events, the excess storm water discharges at SW2. Some undeveloped portion of the site also discharge to SW2.	

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
Darrell Fisher, Dir. of Operations		12/22/17

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Visual investigation at SW1 & SW2 during dry weather on October 24, 2017.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

No significant leaks or spills in over 3 years

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*
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VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☑ Yes (*list all such pollutants below*) ☐ No (*go to Section IX*)

Magnesium
Chlorobenzene
Ethylbenzene
Methylchloride
Toluene
Isoprene
Styrene
Cyclohexane

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

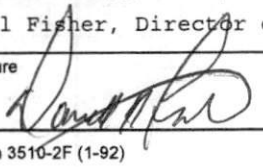
Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
ESC Lab Sciences	12065 Lebanon Rd. Mt. Juliet, TN 371222	(615) 758-5858	all

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
Darrell Fisher, Director of Operations	(931) 535-3401
C. Signature	D. Date Signed
	12/22/17

EPA ID Number (*copy from Item 1 of Form 1*) TN981014962 | SW-1 | Form Approved. OMB No. 2040-0086 Approval expires 5-31-92

VII. Discharge Information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	6.9 mg/L	N/A	5.8 mg/L		2.00	
Biological Oxygen Demand (BOD5)	16.6 mg/L		10.5 mg/L		2.00	
Chemical Oxygen Demand (COD)	16.6 mg/L		16.6 mg/L		1.00	
Total Suspended Solids (TSS)	7.33 mg/L		4.90 mg/L		2.00	
Total Nitrogen	1.27 mg/L		1.27 mg/L		1.00	
Total Phosphorus	0.46 mg/L		0.46 mg/L		1.00	
pH	Minimum 9.00	Maximum 9.10	Minimum 9.05	Maximum 9.05	2.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Cyclo-						
hexane	<0.0010 mg/L				1.00	Used in production
Nitrate -						
Nitrite	0.864 mg/L				1.00	No known sources used in production
Toluene	<0.001 mg/L				1.00	Used in production

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
11/15/2017	45	0.15	>72	2 gpm	250 gal

7. Provide a description of the method of flow measurement or estimate.

Flow rate estimated from time to fill container. Estimated total flow.

EPA ID Number (*copy from Item 1 of Form 1*)
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Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<5.75 mg/L	N/A	<5.75 mg/L	N/A	2.00	Equipment, machinery
Biological Oxygen Demand (BOD5)	7 mg/L		5.16 mg/L		2.00	Environmental
Chemical Oxygen Demand (COD)	<10				1.00	Environmental
Total Suspended Solids (TSS)	423 mg/L		383 mg/L		2.00	Environmental, truck traffic
Total Nitrogen	0.365 mg/L				1.00	Environmental
Total Phosphorus	0.101 mg/L				1.00	Environmental
pH	Minimum 8.20	Maximum 8.50	Minimum 8.35	Maximum 8.35	2.00	Environmental, product deactivation

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Cyclo-						
hexane	<0.0010 mg/L				1.00	Used in production
Nitrate -						
Nitrite	0.365 mg/L				1.00	No known sources used in production
Toluene	<0.001 mg/L				1.00	Used in production

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
11/15/2017	45	0.15	>72	1 gpm	120 gal

7. Provide a description of the method of flow measurement or estimate.

Flow rate estimated from time to fill container. Estimated total flow.