



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

February 25, 2020

Mr. Skip Swanner
Plant Manager
e-copy: sswanner@aoc-resins.com
AOC, LLC - TN Plant
860 Hwy 57 E.
Collierville, TN 38017

Subject: **NPDES Permit No. TN0000442**
AOC, LLC
Collierville, Fayette County, Tennessee

Dear Mr. Swanner:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed NPDES Permit. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the Technical Secretary of the Water Quality, Oil and Gas Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

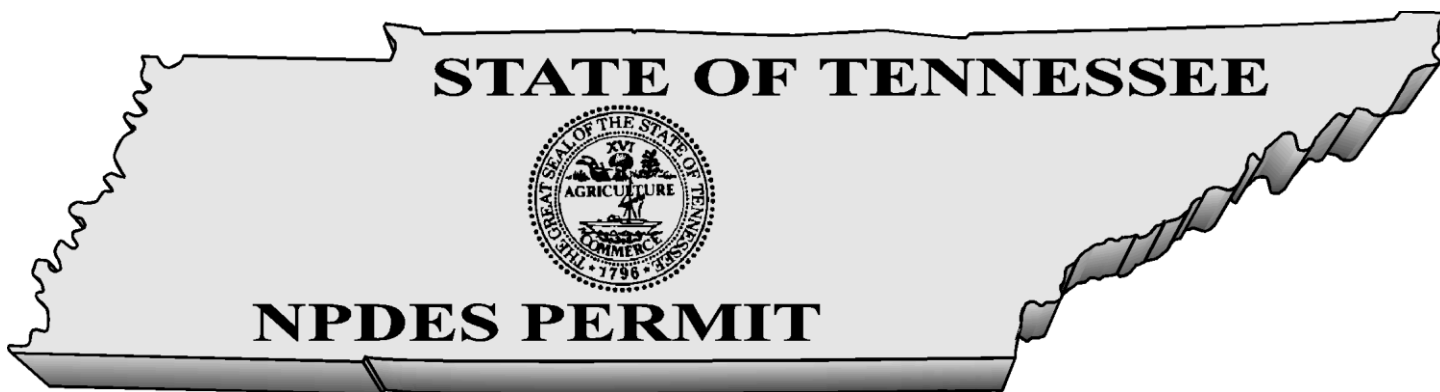
If you have questions, please contact the Memphis Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Miss Julie Harse, P.E. at (615) 532-0682 or by E-mail at Julie.Harse@tn.gov.

Sincerely,

Vojin Janjić
Manager, Water-Based Systems

Enclosure

cc: Permit File
Memphis Environmental Field Office
NPDES Permit Section, EPA Region IV, r4npdespermits@epa.gov
Mr. Darrell Richardson, EHS Coordinator, AOC, LLC, drichardson@aoc-resins.com
Ms. Angela J Hall, TDEC Consultant 1, TDEC Division of Water Resources, Angela.J.Hall@tn.gov



**Modified
No. TN0000442**

Authorization to discharge under the
National Pollutant Discharge Elimination System (NPDES)

Issued By

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

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger: **AOC, LLC**

is authorized to discharge: **treated sanitary wastewater (via Internal Monitoring Point 006), intermittent process wash water (via Internal Monitoring Point 01A), steam condensate, non-contact cooling water and storm water runoff from Outfall 001**

from a facility located at: **860 Highway 57 East, Collierville, Fayette County, Tennessee**

to receiving waters named: **unnamed tributary at mile 2.2 to Wolf River at mile 33.3**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on: **April 1, 2020**

This permit shall expire on: **June 30, 2023**

Issuance date: **March 1, 2020**



for Jennifer Dodd
Director

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PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

AOC, LLC is authorized to discharge treated sanitary wastewater (via Internal Monitoring Point 006), intermittent process wash water (via Internal Monitoring Point 01A), steam condensate, non-contact cooling water and storm water runoff from Outfall 001 to unnamed tributary at mile 2.2 to Wolf River at mile 33.3.

These discharges shall be limited and monitored by the permittee as specified below:

Internal Monitoring Point 01A Intermittent Wash Water
Note the details for monitoring are provided in Part III Section E

Description : Internal Monitoring Point, Number : 01A, Monitoring : See Comments, Season : All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
00400	pH	Report	-	SU	Grab	Once Per Discharge	Maximum
00400	pH	Report	-	SU	Grab	Once Per Discharge	Minimum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
00720	Cyanide, total (as CN)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
00720	Cyanide, total (as CN)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01032	Chromium, hexavalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01032	Chromium, hexavalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01034	Chromium, total (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01034	Chromium, total (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01042	Copper, total (as Cu)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01042	Copper, total (as Cu)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01051	Lead, total (as Pb)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

01051	Lead, total (as Pb)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01067	Nickel, total (as Ni)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01067	Nickel, total (as Ni)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01092	Zinc, total (as Zn)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01092	Zinc, total (as Zn)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32102	Carbon tetrachloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32102	Carbon tetrachloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
32103	1,2-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
32103	1,2-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32106	Chloroform	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32106	Chloroform	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34010	Toluene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34010	Toluene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34200	Acenaphthylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34200	Acenaphthylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34205	Acenaphthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34205	Acenaphthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34215	Acrylonitrile	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34215	Acrylonitrile	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34220	Anthracene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34220	Anthracene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34235	Benzene, dissolved	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34235	Benzene, dissolved	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34242	Benzo(k)fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34242	Benzo(k)fluoranthene	Report	-	mg/L	Grab	Once Per	Daily

						Discharge	Maximum
34247	Benzo(a)pyrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34247	Benzo(a)pyrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34301	Chlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34301	Chlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34320	Chrysene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34320	Chrysene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34336	Diethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34336	Diethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34341	Dimethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34341	Dimethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34371	Ethylbenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34371	Ethylbenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34376	Fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34376	Fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34381	Fluorene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34381	Fluorene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34391	Hexachlorobutadiene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34391	Hexachlorobutadiene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34396	Hexachloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34396	Hexachloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34418	Methyl chloride (Chloromethane)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34418	Methyl chloride (Chloromethane)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34423	Methylene chloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34423	Methylene chloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average

34447	Nitrobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34447	Nitrobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34461	Phenanthrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34461	Phenanthrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34469	Pyrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34469	Pyrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34475	Tetrachloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34475	Tetrachloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34496	1,1-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34496	1,1-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34501	1,1-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34501	1,1-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34506	1,1,1-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34506	1,1,1-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34511	1,1,2-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34511	1,1,2-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34526	Benzo(a)anthracene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34526	Benzo(a)anthracene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34536	1,2-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34536	1,2-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34541	1,2-Dichloropropane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34541	1,2-Dichloropropane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34546	trans-1,2-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34546	trans-1,2-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34551	1,2,4-Trichlorobenzene	Report	-	mg/L	Grab	Once Per	Monthly

						Discharge	Average
34551	1,2,4-Trichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34566	1,3-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34566	1,3-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34571	1,4-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34571	1,4-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34591	2-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34591	2-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34606	2,4-Dimethylphenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34606	2,4-Dimethylphenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34616	2,4-Dinitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34616	2,4-Dinitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34646	4-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34646	4-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34657	4,6-Dinitro-o-cresol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34657	4,6-Dinitro-o-cresol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34694	Phenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34694	Phenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34696	Naphthalene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34696	Naphthalene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39100	Bis(2-ethylhexyl) phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39100	Bis(2-ethylhexyl) phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39110	Di-n-butyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39110	Di-n-butyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39175	Vinyl chloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

39175	Vinyl chloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39180	Trichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39180	Trichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39700	Hexachlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39700	Hexachlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
50050	Flow	Report	-	Mgal/d	Recorder	Continuous	Daily Maximum
50050	Flow	Report	-	Mgal/d	Recorder	Continuous	Monthly Average
51058	Chromium, trivalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
51058	Chromium, trivalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
77163	1,3-Dichloropropene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
77163	1,3-Dichloropropene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
79531	3,4-Benzofluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
79531	3,4-Benzofluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
85811	Chloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
85811	Chloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
TAA3B	LC50 Static 48Hr Acute Ceriodaphnia	Report	-	%	Grab	Once Per Discharge	Value
TAA6C	LC50 Static 48Hr Acute Pimephales promelas	Report	-	%	Grab	Once Per Discharge	Value

* Flow shall be reported in Million Gallons per Day (MGD).

** pH analyses shall be performed within fifteen (15) minutes of sample collection.

Internal Monitoring Point 006 Domestic Sanitary Water

Description : Internal Monitoring Point, Number : 006, Monitoring : Effluent Gross, Season : All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00300	Oxygen, dissolved (DO)	>=	3.0	mg/L	Grab	Two Per Week	Minimum
00310	BOD, 5-day, 20 C	<=	20	mg/L	Grab	Twice Every Month	Monthly Average
00310	BOD, 5-day, 20 C	<=	30	mg/L	Grab	Twice Every Month	Daily Maximum
00400	pH***	>=	6.0	SU	Grab	Two Per Week	Minimum
00400	pH***	<=	9.0	SU	Grab	Two Per Week	Maximum

00530	Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Twice Every Month	Monthly Average
00530	Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Twice Every Month	Daily Maximum
00545	Settleable Solids	<=	0.5	mL/L	Grab	Two Per Week	Daily Maximum
00610	Nitrogen, Ammonia total (as N)	<=	10	mg/L	Grab	Twice Every Month	Daily Maximum
00610	Nitrogen, Ammonia total (as N)	<=	5	mg/L	Grab	Twice Every Month	Monthly Average
50050	Flow*	Report	-	Mgal/d	Instantaneous	Two Per Week	Daily Maximum
50050	Flow*	Report	-	Mgal/d	Instantaneous	Two Per Week	Monthly Average
50060	Chlorine, total residual (TRC)***	<=	2.0	mg/L	Grab	Two Per Week	Daily Maximum
51040	E. coli**	<=	941	CFU/100mL	Grab	Twice Every Month	Daily Maximum
51040	E. coli**	<=	126	CFU/100mL	Grab	Twice Every Month	Geometric Mean

* Flow shall be reported in Million Gallons per Day (MGD).

** The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The E. coli monitoring requirement for this permit shall require the permittee to report the geometric mean and maximum values.

*** pH and TRC analyses shall be performed within fifteen (15) minutes of sample collection.

Final Outfall 001

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	20	mg/L	Grab	Monthly	Monthly Average
00310	BOD, 5-day, 20 C	<=	30	mg/L	Grab	Monthly	Daily Maximum
00400	pH**	>=	6.0	SU	Grab	Two Per Week	Minimum
00400	pH**	<=	9.0	SU	Grab	Two Per Week	Maximum
00530	Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Weekly	Daily Maximum
00530	Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Weekly	Monthly Average
50050	Flow*	Report	-	Mgal/d	Instantaneous	Continuous	Daily Maximum
50050	Flow*	Report	-	Mgal/d	Instantaneous	Continuous	Monthly Average

* Flow shall be reported in Million Gallons per Day (MGD).

** pH analyses shall be performed within fifteen (15) minutes of sample collection.

*** All parameters must be monitored at a point below the confluence of Discharges 001 and 006, but prior to entering the unnamed tributary.

Unless elsewhere specified, summer months are May through October; winter months are November through April.

Additional monitoring requirements and conditions applicable to all outfalls include:

NOTE: For the monitoring and reporting of measurements of FLOW, the "Monthly Avg." shall be the total flow volume during the reporting period divided by the number of calendar days in that period. The "Daily Max." shall be the total flow volume for the day with the greatest amount of discharge during the reporting period. Example: 3 discharges of 15,000 gallons/day and 1 discharge of 20,000 gallons/day during a 1-month period results in a Monthly Avg. of 65,000 gallons/30 days, or 2,166 gallons/day (to be reported as 0.002166 MGD). The Daily Maximum to be reported for this example is 20,000 gallons/day or 0.020 MGD.

There shall be no distinctly visible floating solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life.

The wastewater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner, which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act." (40 C.F.R. 125.98(b)(1))

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified herein shall be representative of the volume and nature of the monitored discharge, and shall be taken after treatment and prior to mixing with uncontaminated storm water runoff or the receiving stream. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than plus or minus 10% from the true discharge rates throughout the range of expected discharge volumes.

2. Sampling Frequency

If there is a discharge from a permitted outfall on any given day during the monitoring period, the permittee must sample and report the results of analyses accordingly, and the permittee should not mark the 'No Discharge' box on the Discharge Monitoring Report form.

3. Test Procedures

- a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.
- b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

In instances where permit limits established through implementation of applicable water criteria are below analytical capabilities, compliance with those limits will be determined using the detection limits described in the TN Rules, Chapter 0400-40-03-.05(8).

The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The concentration of the E. coli group after disinfection shall not exceed 126 cfu per 100 ml as the geometric mean calculated on the actual number of samples collected and tested for E. coli within the required reporting period. The permittee may collect more samples than specified as the monitoring frequency. Samples may not be collected at intervals of less than 12 hours. For the purpose of determining the geometric mean, individual samples having an E. coli group concentration of less than one (1) per 100 ml shall be considered as having a concentration of one (1) per 100 ml. In addition, the concentration of the E. coli group in any individual sample shall not exceed a specified maximum amount. A maximum daily limit of 487 colonies per 100 ml applies to lakes and exceptional Tennessee waters. A maximum daily limit of 941 colonies per 100 ml applies to all other recreational waters.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date and time of sampling;
- b. The exact person(s) collecting samples;
- c. The dates and times the analyses were performed;
- d. The person(s) or laboratory who performed the analyses;
- e. The analytical techniques or methods used, and;
- f. The results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation

shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Resources.

C. DEFINITIONS

For the purpose of this permit, **Annually** is defined as a monitoring frequency of once every twelve (12) months beginning with the date of issuance of this permit so long as the following set of measurements for a given 12 month period are made approximately 12 months subsequent to that time.

A **bypass** is defined as the intentional diversion of waste streams from any portion of a treatment facility.

A **calendar day** is defined as the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

Continuous monitoring, for the purposes of this permit, is the measurement of flow at a frequency that will accurately characterize the nature of discharges from the site and water in the receiving stream. Samples collected continuously shall be at a frequency of not less than once every fifteen minutes for flow.

Cooling water means water used for contact or non-contact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises.

Cooling water intake structure means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States. The cooling water intake structure extends from the point at which water is first withdrawn from waters of the United States up to, and including the intake pumps.

Actual Intake Flow (AIF) means the average volume of water withdrawn on an annual basis by the cooling water intake structures over the past three years.

Design intake flow (DIF) means the value assigned during the cooling water intake structure design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody.

Entrainment- means the incorporation of all life stages of fish and shellfish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system.

Impingement- means the entrapment of all life stages of fish and shellfish on the outer part of an intake structure or against a screening device during periods of intake water withdrawal.

The **Daily Maximum Amount**, is a limitation measured in pounds per day (lb/day), on the total amount of any pollutant in the discharge by weight during any calendar day.

The **Daily Maximum Concentration** is a limitation on the average concentration, in milligrams per liter (mg/L), of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

“Degradation” means the alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.

“De Minimis” - Degradation of a small magnitude, as provided in this paragraph.

(a) Discharges and withdrawals

1. Subject to the limitation in part 3 of this subparagraph, a single discharge other than those from new domestic wastewater sources will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged.

2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream.

3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized in a segment and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, they are presumed to be de minimis. Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource.

(b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively are offset by impact minimization and/or in-system mitigation, provided however, in ONRWs the mitigation must occur within the ONRW.

Discharge or “discharge of a pollutant” refers to the addition of pollutants to waters from a source.

Dry Weather Flow shall be construed to represent discharges consisting of process and/or non-process wastewater only.

An **ecoregion** is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

The **geometric mean** of any set of values is the n^{th} root of the product of the individual values where “n” is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

A **Grab Sample**, for the purposes of this permit, is defined as a single effluent sample of at least 100 milliliters (sample volumes <100 milliliters are allowed when specified per standard methods, latest edition) collected at a randomly selected time over a period not exceeding 15

minutes. The sample(s) shall be collected at the period(s) most representative of the total discharge.

The **Instantaneous Concentration** is a limitation on the concentration, in milligrams per liter (mg/L), of any pollutant contained in the discharge determined from a grab sample taken at any point in time.

The **monthly average amount**, shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

The **monthly average concentration**, other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A **one week period** (or **calendar-week**) is defined as the period from Sunday through Saturday. For reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

Pollutant means sewage, industrial wastes, or other wastes.

A **Qualifying Storm Event** is one which is greater than 0.1 inches and that occurs after a period of at least 72 hours after any previous storm event with rainfall of 0.1 inches or greater.

For the purpose of this permit, a **Quarter** is defined as any one of the following three month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, or October 1 through December 31.

A **rainfall event** is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

A **rationale** (or "fact sheet") is a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

A **reference site** means least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

A **reference condition** is a parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

For the purpose of this permit, **Semi-annually** means the same as "once every six months." Measurements of the effluent characteristics concentrations may be made anytime during a 6 month period beginning from the issuance date of this permit so long as the second set of measurements for a given 12 month period are made approximately 6 months subsequent to that time, if feasible.

A **subecoregion** is a smaller, more homogenous area that has been delineated within an ecoregion.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

The term, **washout** is applicable to activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

Waters means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

The **weekly average amount**, shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar week when the measurements were made.

The **weekly average concentration**, is the arithmetic mean of all the composite samples collected in a one-week period. The permittee must report the highest weekly average in the one-month period.

Wet Weather Flow shall be construed to represent storm water runoff which, in combination with all process and/or non-process wastewater discharges, as applicable, is discharged during a qualifying storm event.

D. ACRONYMS AND ABBREVIATIONS

1Q10 – 1-day minimum, 10-year recurrence interval
30Q5 – 30-day minimum, 5-year recurrence interval
7Q10 – 7-day minimum, 10-year recurrence interval
BAT – best available technology economically achievable
BCT – best conventional pollutant control technology
BDL – below detection level
BOD₅ – five day biochemical oxygen demand
BPT – best practicable control technology currently available
CBOD₅ – five day carbonaceous biochemical oxygen demand
CEI – compliance evaluation inspection
CFR – code of federal regulations
CFS – cubic feet per second
CFU – colony forming units
CIU – categorical industrial user
CSO – combined sewer overflow

DMR – discharge monitoring report
D.O. – dissolved oxygen
E. coli – *Escherichia coli*
EFO – environmental field office
LB(lb) - pound
IC₂₅ – inhibition concentration causing 25% reduction in survival, reproduction and growth of the test organisms
IU – industrial user
IWS – industrial waste survey
LC₅₀ – acute test causing 50% lethality
MDL – method detection level
MGD – million gallons per day
MG/L(mg/l) – milligrams per liter
ML – minimum level of quantification
ml – milliliter
MLSS – mixed liquor suspended solids
MOR – monthly operating report
NODI – no discharge
NPDES – national pollutant discharge elimination system
PL – permit limit
POTW – publicly owned treatment works
RDL – required detection limit
SAR – semi-annual [pretreatment program] report
SIU – significant industrial user
SSO – sanitary sewer overflow
STP – sewage treatment plant
TCA – Tennessee code annotated
TDEC – Tennessee Department of Environment and Conservation
TIE/TRE – toxicity identification evaluation/toxicity reduction evaluation
TMDL – total maximum daily load
TRC – total residual chlorine
TSS – total suspended solids
WQBEL – water quality based effluent limit

E. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using NETDMR. Submittals shall be no later than 15 days after the completion of the reporting period. If NETDMR is not functioning, a completed DMR with an original signature shall be submitted to the following address:

**STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
COMPLIANCE & ENFORCEMENT SECTION
William R. Snodgrass - Tennessee Tower**

**312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102**

If NETDMR is not functioning, a copy of the completed and signed DMR shall be mailed to the Memphis Environmental Field Office (EFO) at the following address:

**STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, Tennessee 38133**

A copy should be retained for the permittee's files. In addition, any communication regarding compliance with the conditions of this permit must be sent to the two offices listed above.

The first DMR is due on the 15th of the month following permit effectiveness.

DMRs and any other information or report must be signed and certified by a responsible corporate officer as defined in 40 CFR 122.22, a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

The electronic submission of DMR data will be accepted only if formally approved beforehand by the division. For purposes of determining compliance with this permit, data approved by the division to be submitted electronically is legally equivalent to data submitted on signed and certified DMR forms.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant specifically limited by this permit more frequently than required at the location(s) designated, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form. Such increased frequency shall also be indicated on the form.

3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Outlier Data

Outlier data include analytical results that are probably false. The validity of results is based on operational knowledge and a properly implemented quality assurance program. False

results may include laboratory artifacts, potential sample tampering, broken or suspect sample containers, sample contamination or similar demonstrated quality control flaw.

Outlier data are identified through a properly implemented quality assurance program, and according to ASTM standards (e.g. Grubbs Test, 'h' and 'k' statistics). Furthermore, outliers should be verified, corrected, or removed, based on further inquiries into the matter. If an outlier was verified (through repeated testing and/or analysis), it should remain in the preliminary data set. If an outlier resulted from a transcription or similar clerical error, it should be corrected and subsequently reported.

Therefore, only if an outlier was associated with problems in the collection or analysis of the samples and as such does not conform with the Guidelines Establishing Test Procedures for the Analysis of Pollutants (40 CFR §136), it can be removed from the data set and not reported on the Discharge Monitoring Report forms (DMRs). Otherwise, all results (including monitoring of pollutants more frequently than required at the location(s) designated, using approved analytical methods as specified in the permit) should be included in the calculation and reporting of the values required in the DMR form. You are encouraged to use "comment" section of the DMR form (or attach additional pages), in order to explain any potential outliers or dubious results.

F. SCHEDULE OF COMPLIANCE

Full compliance and operational levels shall be attained from the effective date of this permit.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of the Division of Water Resources (the "Director") no later than 180 days prior to the expiration date. Such applications must be properly signed and certified.

2. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;
- b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and
- c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources. As required by the Federal Act, effluent data shall not be considered confidential.

4. Proper Operation and Maintenance

- a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.
- b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and/or other technology-based effluent limitations such as those in State of Tennessee Rule 0400-40-05-.09.

5. Treatment Facility Failure

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

8. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2. Permit Modification, Revocation, or Termination

- a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.
- b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions,

even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

- d. The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

3. Change of Ownership

This permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect the permit limits and conditions contained in the permit) by the permittee if:

- a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

Pursuant to the requirements of 40 CFR 122.61, concerning transfer of ownership, the permittee must provide the following information to the division in their formal notice of intent to transfer ownership: 1) the NPDES permit number of the subject permit; 2) the effective date of the proposed transfer; 3) the name and address of the transferor; 4) the name and address of the transferee; 5) the names of the responsible parties for both the transferor and transferee; 6) a statement that the transferee assumes responsibility for the subject NPDES permit; 7) a statement that the transferor relinquishes responsibility for the subject NPDES permit; 8) the signatures of the responsible parties for both the transferor and transferee pursuant to the requirements of 40 CFR 122.22(a), "Signatories to permit applications"; and, 9) a statement regarding any proposed modifications to the facility, its operations, or any other changes which might affect the permit limits and conditions contained in the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Resources in the appropriate regional Field Office within 24-hours from the time the permittee becomes aware of the circumstances. (The regional Field Office should be contacted for names and phone numbers of environmental response personnel).

A written submission must be provided within five calendar days of the time the permittee becomes aware of the circumstances, unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Sanitary Sewer Overflow

- a. "**Sanitary Sewer Overflow**" means the discharge to land or water of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.
- b. Sanitary Sewer Overflows are prohibited.

- c. The permittee shall operate the collection system so as to avoid sanitary sewer overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic sanitary sewer overflows (greater than 5 events per year) or would otherwise overload any portion of the system.
- d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the regional TDEC Field Office. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.
- e. In the event that more than five (5) sanitary sewer overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources field office staff to petition for a waiver based on mitigating evidence.

4. Upset

- a. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

- iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
- iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

- a. "**Bypass**" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b. Bypasses are prohibited unless the following 3 conditions are met:
 - i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There are not feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down-time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment down-time or preventative maintenance;
 - iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate environmental assistance center within 24-hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the Director, if possible, at least 10 days before the date of the bypass.
- c. Bypasses not exceeding limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are

prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

- a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.
- b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate regional Field Office within 24-hours by telephone. A written submission must be provided within 5 days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Except as provided in permit conditions for "**Bypass**," "**Overflow**," and "**Upset**," nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

PART III

OTHER REQUIREMENTS

A. TOXIC POLLUTANTS

The permittee shall notify the Division of Water Resources as soon as it knows or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 ug/l);
 - b. Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant(s) in the permit application in accordance with 122.21(g)(7); or
 - d. The level established by the Director in accordance with 122.44(f).
2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 ug/l);
 - b. One milligram per liter (1 mg/L) for antimony;
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 122.21(g)(7); or
 - d. The level established by the Director in accordance with 122.44(f).

B. REOPENER CLAUSE

If an applicable standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(B)(2), and 307(a)(2) and that effluent standard or limitation is more stringent than any

effluent limitation in the permit or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked and reissued to conform to that effluent standard or limitation.

C. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign(s) at each outfall and any bypass/overflow point in the collection system. For the purposes of this requirement, any bypass/overflow point that has discharged five (5) or more times in the last year must be so posted. The sign(s) should be clearly visible to the public from the bank and the receiving stream or from the nearest public property/right-of-way, if applicable. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Resources. The following is given as an example of the minimal amount of information that must be included on the sign:

<p>TREATED INDUSTRIAL WASTEWATER AND STORM WATER RUNOFF AOC, LLC (Permittee's Phone Number) NPDES Permit NO. TN0000442 TENNESSEE DIVISION OF WATER RESOURCES 1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Memphis</p>
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D. ANTIDEGRADATION

Pursuant to the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06, titled "Tennessee Antidegradation Statement," which prohibits the degradation of exceptional Tennessee waters and the increased discharges of substances that cause or contribute to impairment, the permittee shall further be required, pursuant to the terms and conditions of this permit, to comply with the effluent limitations and schedules of compliance required to implement applicable water quality standards, to comply with a State Water Quality Plan or other state or federal laws or regulations, or where practicable, to comply with a standard permitting no discharge of pollutants.

E. PROCESS WASH WATER

The facility shall test the wash water that is utilized to clean out the polyester resin process tanks for the parameters provided in the below chart. Additionally, the facility shall test pH and run an acute biomonitoring test. The effluent guideline pH range is 6.0-9.0. The limit for the acute biomonitoring test is 100%. The facility shall not release the wash water to the receiving stream until the lab results indicate that the wash water is below the calculated limits in the below chart and has passed the acute biomonitoring test. The facility shall maintain records at the facility of all wash water that was tested with the below calculations. On the

discharge monitoring reports, the facility shall report only the wash water test results that passed the below criteria and were sent to the stream. A discharge of the wastewater that has not passed all of the previous testing will be a violation of the permit.

Volume of Wash Water		Insert Volume of Wash Water		MGD							
Effluent characteristics	NSPS		NSPS		Water Quality Criteria		Water Quality Criteria		Reported Results		Results Below Standards (Y/N)
	Monthly average (Chronic)	Daily Maximum (Acute)	Monthly average (Chronic)	Daily Maximum (Acute)	Monthly average (Chronic)	Daily Maximum (Acute)	Monthly average (Chronic)	Daily Maximum (Acute)	Monthly average (Chronic)	Daily Maximum (Acute)	
	ug/L	ug/L	lb/day	lb/day	ug/L	ug/L	lb/day	lb/day	lb/day	lb/day	
BOD5	24	64	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
TSS	40	130	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Acenaphthene	19	47	Calculate	Calculate	990	1980	Calculate	Calculate	Calculate	Calculate	
Acenaphthylene	19	47	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Acrylonitrile	94	232	Calculate	Calculate	2.5	5	Calculate	Calculate	Calculate	Calculate	
Anthracene	19	47	Calculate	Calculate	40000	80000	Calculate	Calculate	Calculate	Calculate	
Benzene	57	134	Calculate	Calculate	510	1020	Calculate	Calculate	Calculate	Calculate	
Benzo(a)anthracene	19	47	Calculate	Calculate	0.2	0.4	Calculate	Calculate	Calculate	Calculate	
3,4-Benzofluoranthene	20	48	Calculate	Calculate	0.2	0.4	Calculate	Calculate	Calculate	Calculate	
Benzo(k)fluoranthene	19	47	Calculate	Calculate	0.2	0.4	Calculate	Calculate	Calculate	Calculate	
Benzo(a)pyrene	20	48	Calculate	Calculate	0.2	0.4	Calculate	Calculate	Calculate	Calculate	
Bis(2-ethylhexyl) phthalate	95	258	Calculate	Calculate	22	44	Calculate	Calculate	Calculate	Calculate	
Carbon Tetrachloride	142	380	Calculate	Calculate	16	32	Calculate	Calculate	Calculate	Calculate	
Chlorobenzene	142	380	Calculate	Calculate	1600	3200	Calculate	Calculate	Calculate	Calculate	
Chloroethane	110	295	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Chloroform	111	325	Calculate	Calculate	4700	9400	Calculate	Calculate	Calculate	Calculate	
Chrysene	19	47	Calculate	Calculate	0.2	0.4	Calculate	Calculate	Calculate	Calculate	
Di-n-butyl phthalate	20	43	Calculate	Calculate	4500	9200	Calculate	Calculate	Calculate	Calculate	
1,2-Dichlorobenzene	196	794	Calculate	Calculate	1300	2600	Calculate	Calculate	Calculate	Calculate	
1,3-Dichlorobenzene	142	380	Calculate	Calculate	960	1920	Calculate	Calculate	Calculate	Calculate	
1,4-Dichlorobenzene	142	380	Calculate	Calculate	190	380	Calculate	Calculate	Calculate	Calculate	
1,1-Dichloroethane	22	59	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
1,2-Dichloroethane	180	574	Calculate	Calculate	370	740	Calculate	Calculate	Calculate	Calculate	
1,1-Dichloroethylene	22	60	Calculate	Calculate	7100	14200	Calculate	Calculate	Calculate	Calculate	
1,2-trans-Dichloroethylene	25	66	Calculate	Calculate	10000	20000	Calculate	Calculate	Calculate	Calculate	
1,2-Dichloropropane	196	794	Calculate	Calculate	150	300	Calculate	Calculate	Calculate	Calculate	
1,3-Dichloropropylene	196	794	Calculate	Calculate	210	420	Calculate	Calculate	Calculate	Calculate	
Diethyl phthalate	46	113	Calculate	Calculate	44000	88000	Calculate	Calculate	Calculate	Calculate	
2,4-Dimethylphenol	19	47	Calculate	Calculate	850	1700	Calculate	Calculate	Calculate	Calculate	
Dimethyl phthalate	19	47	Calculate	Calculate	1100000	2200000	Calculate	Calculate	Calculate	Calculate	
4,6-Dinitro-o-cresol	78	277	Calculate	Calculate	280	560	Calculate	Calculate	Calculate	Calculate	
2,4-Dinitrophenol	1,207	4,291	Calculate	Calculate	5,300	10600	Calculate	Calculate	Calculate	Calculate	
Ethylbenzene	142	380	Calculate	Calculate	2100	4200	Calculate	Calculate	Calculate	Calculate	
Fluoranthene	22	54	Calculate	Calculate	140	280	Calculate	Calculate	Calculate	Calculate	
Fluorene	19	47	Calculate	Calculate	5300	10600	Calculate	Calculate	Calculate	Calculate	
Hexachlorobenzene	196	794	Calculate	Calculate	0.003	0.006	Calculate	Calculate	Calculate	Calculate	
Hexachlorobutadiene	142	380	Calculate	Calculate	180	360	Calculate	Calculate	Calculate	Calculate	
Hexachloroethane	196	794	Calculate	Calculate	33	66	Calculate	Calculate	Calculate	Calculate	
Methyl Chloride	110	295	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Methylene Chloride	36	170	Calculate	Calculate	5900	11800	Calculate	Calculate	Calculate	Calculate	
Naphthalene	19	47	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Nitrobenzene	2,237	6,402	Calculate	Calculate	690	1380	Calculate	Calculate	Calculate	Calculate	
2-Nitrophenol	65	231	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
4-Nitrophenol	162	576	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Phenanthrene	19	47	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Phenol	19	47	Calculate	Calculate	860000	1720000	Calculate	Calculate	Calculate	Calculate	
Pyrene	20	48	Calculate	Calculate	4000	8000	Calculate	Calculate	Calculate	Calculate	
Tetrachloroethylene	52	164	Calculate	Calculate	33	66	Calculate	Calculate	Calculate	Calculate	
Toluene	28	74	Calculate	Calculate	15000	30000	Calculate	Calculate	Calculate	Calculate	
Total Chromium	1,110	2,770	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
Chromium III	NA	NA	NA	NA	208	1597	NA	NA	NA	NA	
Chromium VI	NA	NA	NA	NA	11	16	NA	NA	NA	NA	
Total Copper	1,450	3,380	Calculate	Calculate	14	20	Calculate	Calculate	Calculate	Calculate	
Total Cyanide	420	1,200	Calculate	Calculate	5.2	22	Calculate	Calculate	Calculate	Calculate	
Total Lead	320	690	Calculate	Calculate	6.4	164	Calculate	Calculate	Calculate	Calculate	
Total Nickel	1,690	3,980	Calculate	Calculate	67	603	Calculate	Calculate	Calculate	Calculate	
Total Zinc ²	1,050	2,610	Calculate	Calculate	228	226	Calculate	Calculate	Calculate	Calculate	
1,2,4-Trichlorobenzene	196	794	Calculate	Calculate	70	140	Calculate	Calculate	Calculate	Calculate	
1,1,1-Trichloroethane	22	59	Calculate	Calculate	NA	NA	Calculate	Calculate	Calculate	Calculate	
1,1,2-Trichloroethane	32	127	Calculate	Calculate	160	320	Calculate	Calculate	Calculate	Calculate	
Trichloroethylene	26	69	Calculate	Calculate	300	600	Calculate	Calculate	Calculate	Calculate	
Vinyl Chloride	97	172	Calculate	Calculate	24	48	Calculate	Calculate	Calculate	Calculate	

* Calculate the allowable lb/day by the following formula (____ MGD X ____ (ug/L) X 8.34) / 1000 = ____ lb/day

F. BIOMONITORING REQUIREMENTS, ACUTE

The permittee shall conduct a 48-hour static acute toxicity test on two test species on the same samples of final effluent from the wash water internal monitoring point 01A (IMP 01A). The test species to be used are Water Fleas (*Ceriodaphnia dubia*) and Fathead Minnows (*Pimephales promelas*).

The measured endpoint for toxicity will be the concentration causing 50% lethality (LC50) of the test organisms. The LC50 shall be determined based on a 50% lethality as compared to the controls.

Test shall be conducted and its results reported based on appropriate replicates of a total of five serial dilutions and a control, using the percent effluent dilutions as presented in the following table:

Serial Dilutions for Whole Effluent Toxicity (WET) Testing					
Permit Limit (PL)	0.50 X PL	0.25 X PL	0.125 X PL	0.0625 X PL	Control
% effluent					
100	50	25	12.5	6.25	0

The dilution/control water used will be a moderately hard water as described in [Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms](#), EPA-821-R-02-012 (or the most current edition). Results from an acute standard reference toxicant quality assurance test for each species tested shall be submitted with the discharge monitoring report. Reference toxicant tests shall be conducted as required in EPA-821-R-02-012 (or the most current edition). Additionally, the analysis of this multi-concentration test shall include review of the concentration-response relationship to ensure that calculated test results are interpreted appropriately.

Toxicity will be demonstrated if the LC50 is less than or equal to the permit limit indicated for each outfall in the above table(s). Toxicity demonstrated by the tests specified herein constitutes a violation of this permit.

All tests will be conducted using four separate grab samples of final effluent, to be used in four separate tests, and shall be collected at evenly spaced (6-hour) intervals over a 24-hour period. If, in any control more than 10% of the test organisms die in 48 hours, the test (control and effluent) is considered invalid and the test shall be repeated within 30 days of the date the initial test is invalidated. Furthermore, if the results do not meet the acceptability criteria as defined in [Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms](#), EPA-821-R-02-012, or if the required concentration-response review fails to yield a valid relationship per guidance contained in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing, EPA-821-B-00-004 (or the most current edition), that test shall be repeated. Any test initiated but

terminated before completion must also be reported along with a complete explanation for the termination.

The toxicity tests specified herein shall be conducted once per discharge (1/Discharge) for the wash water from Internal Monitoring Point 01A and begin no later than 60 days from the effective date of this permit.

In the event of a test failure, the permittee must start a follow-up test within 2 weeks and submit results from a follow-up test within 30 days from obtaining initial WET testing results. The follow-up test must be conducted using the same serial dilutions as presented in the corresponding table(s) above. **The follow-up test will not negate an initial failed test. In addition, the failure of a follow-up test will constitute a separate permit violation which must also be reported.**

In the event of 2 consecutive test failures or 3 test failures within a 12 month period for the same outfall, the permittee must initiate a Toxicity Identification Evaluation/Toxicity Reduction Evaluation (TIE/TRE) study within 30 days and so notify the division by letter. This notification shall include a schedule of activities for the initial investigation of that outfall. **During the term of the TIE/TRE study, the frequency of biomonitoring shall be once every three months.** Additionally, the permittee shall submit progress reports once every three months throughout the term of the TIE/TRE study. The toxicity must be reduced to allowable limits for that outfall within 2 years of initiation of the TIE/TRE study. Subsequent to the results obtained from the TIE/TRE studies, the permittee may request an extension of the TIE/TRE study period if necessary to conduct further analyses. The final determination of any extension period will be made at the discretion of the division.

The TIE/TRE study may be terminated at any time upon the completion and submission of 2 consecutive tests (for the same outfall) demonstrating compliance. Following the completion of TIE/TRE study, the frequency of monitoring will return to a regular schedule, as defined previously in this section as well in Part I of the permit. **During the course of the TIE/TRE study, the permittee will continue to conduct toxicity testing of the outfall being investigated at the frequency of once every three months but will not be required to perform follow-up tests for that outfall during the period of TIE/TRE study.**

Test procedures, quality assurance practices and determination of effluent lethality values will be made in accordance with [Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms](#), EPA-821-R-02-012, or the most current edition.

Results of all tests, reference toxicant information, copies of raw data sheets, statistical analysis and chemical analysis shall be compiled in a report. The report shall be written in accordance with [Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms](#), EPA-821-R-02-012, or the most current edition.

Two copies of biomonitoring reports (including follow-up reports) shall be submitted to the division. One copy of the report shall be submitted along with the discharge monitoring report (DMR). The second copy shall be submitted to the local Division of Water Resources office address:

**Environmental Field Office - Memphis
Division of Water Resources
8383 Wolf Lake Drive
Memphis, TN 38133**

G. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a wastewater system certified operator Grade I in accordance with the Water Environmental Health Act of 1984.

PART IV

BEST MANAGEMENT PRACTICES CONDITIONS

A. GENERAL CONDITIONS

For purposes of this part, the terms "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act, oil, as defined in Section 311(a)(1) of the Act, and any substance listed as hazardous under Section 311 of the Act. The permittee shall develop and implement a Best Management Practices (BMP) plan which prevents, or minimizes the potential for, the release of pollutants (including oil and grease) from *ancillary activities*, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State of Tennessee through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

B. GENERAL REQUIREMENTS

The BMP program shall:

1. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps;
2. Establish specific objectives for the control of toxic and hazardous pollutants:
 - a. Each facility component or system shall be examined for its potential for causing a release of significant amounts of toxic or hazardous pollutants to waters of the State of Tennessee due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.;
 - b. Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or

other circumstances to result in significant amounts of toxic or hazardous pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of toxic or hazardous pollutants which could be discharged from the facility as a result of each condition or circumstance;

3. Establish specific best management practices to meet the objectives identified under section B.2. contained herein, addressing each component or system capable of causing a release of significant amounts of toxic or hazardous pollutants to the waters of the State of Tennessee;
4. The BMP program:
 - a. May reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under section 311 of the Act and Title [40 CFR part 112](#), and may incorporate any part of such plans into the BMP program by reference;
 - b. Shall assure the proper management of solid and hazardous waste in accordance with regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) (40 U.S.C. §6901, et. seq.). Management practices required under RCRA regulations shall be expressly incorporated into the BMP program; and,
 - c. Shall address the following points for the ancillary activities listed in section A.1.:
 - i. Statement of policy;
 - ii. Spill Control Committee: responsible for BMP program implementation and subsequent review and updating;
 - iii. Material inventory: identification of all sources and quantities of toxic and hazardous substances handled or produced, including plant drawings and plot plans, materials flow diagrams, physical, chemical, toxicological, and health information on toxic and hazardous substances, and investigation and evaluation of new materials;
 - iv. Material compatibility: evaluation of process changes or revisions for materials compatibility, review of properties of chemicals handled and materials of construction, evaluation of means of chemical disposal and incompatibility, cleansing of vessels and transfer lines, and use of proper coatings and cathodic protection on buried pipelines if required;
 - v. Employee training: meetings to be held at frequent intervals, spill drills, adequate job training, transmission of information on past spills and causes, informing employees of BMP program components, training in cleanup procedures, and review and interface with safety program;
 - vi. Reporting and notification procedures: maintenance of records of spills through formal reports for internal review, notification as

required by law to governmental and environmental agencies in the event of a spill, and procedures for notifying the appropriate plant personnel;

- vii. Visual inspections: routine inspections with visual observations of storage facilities, transfer pipelines, and loading and unloading areas, detailed inspections of pipes, pumps, valves, fittings, tank corrosion, tank support and foundation deterioration, etc.;
- viii. Preventive maintenance: identification of equipment and systems to which the preventive maintenance program should apply, periodic inspection and testing of such equipment and systems, appropriate adjustment, repair, or replacement of parts, and maintenance of preventive maintenance records;
- ix. Good housekeeping: neat and orderly storage of chemicals, prompt removal of small spillage, regular garbage pickup, maintenance of dry and clean floors, proper pathways and walkways, minimum accumulation of liquid and solid chemicals on the ground or floor in a building, and stimulation of employee interest in good housekeeping;
- x. Security: plant patrols, fencing, good lighting, traffic control, controlled access where appropriate, visitor passes, locked entrances, locks on drain valves and pumps for chemical storage tanks, and television monitoring.

Note: Additional technical information on BMPs and the elements of a BMP program is contained in EPA publications entitled "Guidance Manual for Developing Best Management Practices (BMP)" (EPA 833-B-93-004) and "Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices" (EPA 832-R-92-006).

C. DOCUMENTATION

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the permit issuing authority upon request.

D. BMP PLAN MODIFICATION

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility, which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

E. MODIFICATION FOR INEFFECTIVENESS

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and requirements under section B, the permit shall be subject to modification pursuant to 40 CFR 122.62 or 122.63 to incorporate revised BMP requirements. Any such permit modification shall

be subject to review in accordance with the procedures for permit appeals set forth in accordance with 69-3-110, Tennessee Code Annotated.

F. COMPLIANCE SCHEDULE

Unless the permittee is otherwise authorized by the division in writing, the BMP Plan shall be completed as follows:

1. The plan shall be updated and available for review within 30 days after permit effective date.
2. The permittee shall begin implementation of the updated BMP Plan as soon as possible, but not later than 60 days after permit coverage. Where new construction is necessary to implement the management plan, a construction schedule shall be included. Construction shall be completed as soon as possible.
3. The permittee shall fully complete the updated BMP Plan, including all necessary construction, and be in full compliance with the Act, within six months following initial implementation of the Plan.

**ADDENDUM TO RATIONALE
AOC, LLC
PERMIT NO. TN0000442**

January 7, 2020
Addendum prepared by: Miss Julie Harse

The facility submitted a letter from the plant manager on October 18, 2019 requesting that the ammonia limit be removed from the permit. The letter included a data set from January 2017 to August 2019 of thirty-two data points. The data values were less than 10% of the permit limit. The ammonia limits will be removed from the permit in this modification.

**ADDENDUM TO RATIONALE
AOC, LLC
PERMIT NO. TN0000442**

June 18, 2018
Addendum prepared by: Miss Julie Harse

The review by EPA resulted in two comments on the draft permit. EPA requested clarification on the titles of the XML tables. They also wanted to confirm that the treated sanitary wastewater was not a separate outfall but included in the final discharge of cooling water. The additional titles were added to the final document for clarification. Also the facility was contacted to verify that the treated sanitary wastewater was being discharged out of the same outfall as the cooling water. The facility sent an email confirming this fact.

**ADDENDUM TO RATIONALE
AOC, LLC
PERMIT NO. TN0000442**

May 24, 2018
Addendum prepared by: Miss Julie Harse

In the draft permit rationale, the parameter zinc in the table for Internal Monitoring Point 01A had a footnote reference "2". There should not be a footnote "2" for this parameter. This was a typographical error.

RATIONALE

AOC, LLC
NPDES PERMIT NO. TN0000442
Collierville, Fayette County, Tennessee

Permit Writer: Miss Julie Harse

I. DISCHARGER

AOC, LLC
860 Highway 57 East
Collierville, Fayette County, Tennessee
Site Longitude: -89.626724, Site Latitude: 35.046457

Official Contact Person:
Mr. Skip Swanner
Plant Manager
(901) 854-2800

Nature of Business:
Plastics Material Synthetic Resins, and Nonvulcanizable
Elastomers

SIC Code(s):	2821
Industrial Classification:	Primary
Discharger Rating:	Minor

PRIMARY INDUSTRY CATEGORY means any industry category listed in the NRDC Settlement Agreement (Natural Resources Defense Council v. Train, 8 ERC 2120 [D.D.C. 1976], modified 12 ERC 1833 [D.D.C. 1979]).

II. PERMIT STATUS

Issued July 01, 2013
Last modified September 22, 2017
Expired June 30, 2018
Application for renewal received January 03, 2013

Watershed Scheduling

Environmental Field Office: Memphis
Hydrocode: 08010210 Watershed Group: 3
Watershed Identification: Wolf
Target Reissuance Year: 2023

III. FACILITY DISCHARGES AND RECEIVING WATERS

AOC, LLC discharges treated sanitary wastewater (via Internal Monitoring Point 006), intermittent process wash water (via Internal Monitoring Point 01A), steam condensate, non-contact cooling water and storm water runoff from Outfall 001 to unnamed tributary at mile 2.2 to Wolf River at mile 33.3. Appendix 1 summarizes facility discharges and the receiving stream information for Outfall 001.

Storm water discharges associated with the industrial activity of this facility are covered by the Tennessee Multi-Sector General Storm Water Permit TNR051544. Storm water concerns associated with this facility are covered in this general permit and will, therefore, not be addressed in the new permit.

IV. APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

The facility has requested to send batches of wash water from polyester resin process tanks to Outfall 001 approximately four times a year. Since the water comes into direct contact with the manufacturing process materials, the water will need to be tested for the applicable effluent guideline parameters. The sampling results will be compared to the effluent guidelines and the applicable water quality standards. If the sampling results are below the effluent guidelines, water quality criteria and pass the acute biomonitoring test then the facility may release the wash water to the receiving stream.

The applicable federal effluent guideline is 40 CFR 414 Organic Chemicals, Plastics, and Synthetic Fibers Subpart D (Thermoplastic Resins). The new source performance standards will be applied to the wash water. Part 414.44 requires the amount of wastewater to be multiplied by the following concentrations for BOD5 and TSS. Additionally, the pH range should be between 6.0-9.0 SU.

V. PREVIOUS PERMIT LIMITS AND MONITORING REQUIREMENTS

Appendix 3 lists the permit limitations and monitoring requirements as defined in the previous permit.

VI. HISTORICAL MONITORING AND INSPECTION

During the previous permit term, AOC, LLC did not have any appreciable difficulty in meeting effluent limitations as outlined in the previous permit. A summary of the data reported on Discharge Monitoring Report forms during the previous permit term is summarized in Appendix 4.

During the previous permit term, the Division's personnel from the Memphis Environmental Field Office performed a Compliance Evaluation Inspection (CEI) of the AOC, LLC. The CEI was performed by Maylynn Wilbert on February 24, 2017. The inspection determined that the facility was out of compliance due to some minor deficiencies relative to the facility's sampling forms/records and SWPPP/BMP plan. The inspection report can be obtained from the division's public dataviewer at the following link:

http://environment-online.tn.gov:8080/pls/enf_reports/f?p=9034:34051::NO:34051:P34051_PERMIT_NUMBER:T N0000442

VII. NEW PERMIT LIMITS AND MONITORING REQUIREMENTS

The proposed new permit limits have been selected by determining a technology-based limit and evaluating if that limit protects the water quality of the receiving stream. If the technology-based limit would cause violations of water quality, the water quality-based limit is chosen. The technology-based limit is determined from EPA effluent limitations guidelines if applicable (see Part IV); or from State of Tennessee maximum effluent limits for effluent limited segments per Rule 0400-40-05-.08. Note that in general, the term “anti-backsliding” refers to a statutory provision that prohibits the renewal, reissuance, or modification of an existing NPDES permit that contains effluents limits, permit conditions, or standards that are less stringent than those established in the previous permit.

Internal Monitoring Point 01A

The facility has requested to send batches of wash water from polyester resin process tanks to Outfall 001 approximately four times a year. Since the water comes into direct contact with the manufacturing process materials, the water will need to be tested for the applicable effluent guideline parameters. The sampling results will be compared to the effluent guidelines and the applicable water quality standards. If the sampling results are below the effluent guidelines, water quality criteria and pass the acute biomonitoring test then the facility may release the wash water to the receiving stream.

The applicable federal effluent guideline is 40 CFR 414 Organic Chemicals, Plastics, and Synthetic Fibers Subpart D (Thermoplastic Resins). The new source performance standards will be applied to the wash water. Part 414.44 requires the amount of wastewater to be multiplied by the following concentrations for BOD5 and TSS. Additionally, the pH range should be between 6.0-9.0 SU.

Effluent characteristics	NSPS ¹	
	Maximum for any one day	Maximum for monthly average
BOD5	64	24
TSS	130	40
pH	(²)	(²)

¹All units except pH are milligrams per liter.

²Within the range of 6.0 to 9.0 at all times.

Subpart D requires the facility to meet the requirements of Subpart J—Direct Discharge Point Sources That Do Not Use End-of-Pipe Biological Treatment. Part 414.101 requires the amount of wastewater to be multiplied by the following concentrations for the following parameters.

Effluent characteristics	BAT effluent limitations and NSPS ¹	
	Maximum for any one day	Maximum for monthly average
Acenaphthene	47	19
Acenaphthylene	47	19
Acrylonitrile	232	94
Anthracene	47	19
Benzene	134	57
Benzo(a)anthracene	47	19
3,4-Benzofluoranthene	48	20
Benzo(k)fluoranthene	47	19
Benzo(a)pyrene	48	20
Bis(2-ethylhexyl) phthalate	258	95
Carbon Tetrachloride	380	142
Chlorobenzene	380	142
Chloroethane	295	110
Chloroform	325	111
Chrysene	47	19
Di-n-butyl phthalate	43	20
1,2-Dichlorobenzene	794	196
1,3-Dichlorobenzene	380	142
1,4-Dichlorobenzene	380	142
1,1-Dichloroethane	59	22
1,2-Dichloroethane	574	180
1,1-Dichloroethylene	60	22
1,2-trans-Dichloroethylene	66	25
1,2-Dichloropropane	794	196
1,3-Dichloropropylene	794	196
Diethyl phthalate	113	46
2,4-Dimethylphenol	47	19
Dimethyl phthalate	47	19

4,6-Dinitro-o-cresol	277	78
2,4-Dinitrophenol	4,291	1,207
Ethylbenzene	380	142
Fluoranthene	54	22
Fluorene	47	19
Hexachlorobenzene	794	196
Hexachlorobutadiene	380	142
Hexachloroethane	794	196
Methyl Chloride	295	110
Methylene Chloride	170	36
Naphthalene	47	19
Nitrobenzene	6,402	2,237
2-Nitrophenol	231	65
4-Nitrophenol	576	162
Phenanthrene	47	19
Phenol	47	19
Pyrene	48	20
Tetrachloroethylene	164	52
Toluene	74	28
Total Chromium	2,770	1,110
Total Copper	3,380	1,450
Total Cyanide	1,200	420
Total Lead	690	320
Total Nickel	3,980	1,690
Total Zinc ²	2,610	1,050
1,2,4-Trichlorobenzene	794	196
1,1,1-Trichloroethane	59	22
1,1,2-Trichloroethane	127	32
Trichloroethylene	69	26
Vinyl Chloride	172	97

¹All units are micrograms per liter.

Additionally, the toxics reduction public summary report was included in the previous permit modification submittal. The report listed the following toxic substances: methanol, xylenes, styrene, ethylene glycol, maleic anhydride, acetone, acetaldehyde, methyl methacrylate, phthalic anhydride, PM10 and PM25. Since the division does not have water quality criteria for all of these particular chemicals, the facility will continue to be required to perform an acute toxicity biomonitoring test with a limit of 100%.

Since the facility discharges to a stream with a low flow of 0 MGD, the facility will be required meet the water quality standards at the outfall point. The water quality calculations are provided on the following page.

2013 WQC

WATER QUALITY CALCULATIONS FOR METALS AND OTHER TOXIC SUBSTANCES
WATER QUALITY BASED EFFLUENT CALCULATIONS
OUTFALL 001

FACILITY: AOC PERMIT #: TN0000442 DATE: 4/30/2018 CALC BY: JAH

non-regulated stream worksheet (7Q10)

Stream (7Q10)	Stream (30Q5)	Waste Flow	Ttl. Susp. Solids	Hardness (as CaCO3)	Margin of Safety
[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]
0	0	0.1	10	50	100

PARAMETER	1 Stream Bckgrnd. Conc. [ug/l]	2 Fish/Aqua. Life (F & AL) WQC lab conditions Chronic [ug/l]	3 Acute [ug/l]	4 Fraction Dissolved [Fraction]	5 F & AL- instream allowable ambient conditions (Tot) [ug/l]	6 Acute [ug/l]	7 Calc. Effluent Concentration based on F & AL Chronic [ug/l]	8 Acute [ug/l]	9 In-Stream Criteria Organisms [ug/l]	10 Water/Organisms [ug/l]	11 DWS [ug/l]	12 Calc. Effluent Concentration ** Organisms [ug/l]	13 Water/Organisms [ug/l]	14 DWS [ug/l]
Copper (a,b)	0.000	4.953	6.994	0.348	14.249	20.121	14.25	20.12	N/A			N/A		
Chromium III	0.000	42.011	322.962	0.202	207.702	1596.730	207.70	1596.73	N/A			N/A		
Chromium VI	0.000	11.000	16.000	1.000	11.000	16.000	11.00	16.00	N/A			N/A		
Chromium, Total	0.000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			N/A		
Nickel (a,b)	0.000	28.933	260.491	0.432	66.924	602.541	66.92	602.54	4600.0			4600.00		
Cadmium (a,b)	0.000	0.152	1.026	0.252	0.602	4.063	0.60	4.06	N/A			N/A		
Lead (a,b)	0.000	1.174	30.136	0.184	6.386	163.870	6.39	163.87	N/A			N/A		
Mercury (T) (c)	0.000	0.770	1.400	1.000	0.770	1.400	0.77	1.40	0.051			0.05		
Silver (a,b,e)	0.000	N/A	0.976	1.000	N/A	0.976	N/A	0.98	N/A			N/A		
Zinc (a,b)	0.000	65.664	65.132	0.288	228.010	226.160	228.01	226.16	26000.0			26000.00		
Cyanide (d)	0.000	5.200	22.000	1.000	5.200	22.000	5.20	22.00	140.0			140.00		
Toluene	0.000								15000.0			15000.00		
Benzene	0.000								510.0			510.00		
1,1,1 Trichloroethane	0.000								N/A			N/A		
Ethylbenzene	0.000								2100.0			2100.00		
Carbon Tetrachloride	0.000								16.0			16.00		
Chloroform	0.000								4700.0			4700.00		
Tetrachloroethylene	0.000								33.0			33.00		
Trichloroethylene	0.000								300.0			300.00		
1,2 trans Dichloroethylene	0.000								10000.0			N/A		
Methylene Chloride	0.000								5900.0			5900.00		
Total Phenols	0.000								860000.0			860000.00		
Naphthalene	0.000								N/A			N/A		
Total Phthalates	0.000								N/A			N/A		
Chlorine (T. Res.)	5.500	11.000	19.000	1.000	11.000	19.000	11.00	19.00	N/A			N/A		

- a Denotes metals for which Fish & Aquatic Life Criteria are expressed as a function of total hardness.
b The criteria for this metal is in the dissolved form at lab conditions. The calculated effluent concentration is in the total recoverable form.
c The chronic criteria for mercury is not converted to dissolved, since it is based on fish tissue data rather than toxicity.
d The criteria for this parameter is in the total form.
e Silver limit is daily max if column 8 is most stringent.
f When columns 7 or 8 result in a negative number, use results from columns 5 or 6, respectively.
g When columns 12, 13 or 14 result in a negative number, use results from columns 9, 10 or 11, respectively, as applicable.

* Domestic supply not included in river use so pick from columns 7, 8 or 12.

** Water Quality criteria for stream use classifications other than Fish & Aquatic Life are based on the 30Q5 flow.

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Stream (7Q10)	Stream (30Q5)	Waste Flow	Ttl. Susp. Solids	Hardness (as CaCO3)	Margin of Safety
[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]
0	0	0.1	10	50	100

PARAMETER	1	2		3	5		6	7		8	9	10	11	12	13	14
	Stream Bckgmd. Conc.	Detection Levels		WQC RDL	Fish/Aqua. Life Water Quality Criteria			Calculated Effluent Concentration			Human Health Water Quality Criteria (30Q5)					
	[ug/l]	Scan	MDL	*EPA MDL	Chronic	Acute		Chronic	Acute		In-Stream Criteria		DWS	Calculated Effluent Concentration		
		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]		[ug/l]	[ug/l]		Organisms	Water/Org	[ug/l]	Organisms	Water/Org	DWS
ANTIMONY			3.8	3.0							640.0	5.0		640.0	5.0	
ARSENIC			1.0	1.0	150.0	340.0		150.0	340.0		10.0			10.0		
BERYLLIUM			2.0	1.0									4.0			4.0
SELENIUM			5.0	2.0	5.0	20.0		5.0	20.0							
THALLIUM			5.0	*							0.47	0.24	2.0	0.5	0.2	2.0
ACROLEIN	0.0	50.0	1.0								290.0			290.0		
ACRYLONITRILE	0.0	50.0	1.0								2.5	0.51		2.5	0.5	
BENZENE	0.0	1.0	1.0								510.0			510.0		
BROMOFORM	0.0	1.0	1.0								1400.0	43.0		1400.0	43.0	
CARBON TETRACHLORIDE	0.0	1.0	1.0								16.0			16.0		
CHLOROBENZENE	0.0	1.0	*								1600.0	130.0		1600.0	130.0	
CHLORODIBROMO-METHANE	0.0	1.0	*								130.0			130.0		
CHLOROETHANE	0.0	1.0	*													
2-CHLORO-ETHYL VINYL ETHER	0.0	1.0	*													
CHLOROFORM	0.0	5.0	0.5								4700.0	57.0		4700.0	57.0	
DICHLOROBROMO-METHANE	0.0	1.0	1.0								170.0			170.0		
1,1-DICHLOROETHANE	0.0	1.0	1.0								NA	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	0.0	1.0	1.0								370.0			370.0		
TRANS 1,2-DICHLORO-ETHYLENE	0.0	1.0	*								10000	140.0	100.0	10000.0	140.0	100.0
1,1-DICHLOROETHYLENE	0.0	1.0	1.0													
1,2-DICHLOROPROPANE	0.0	1.0	*								150.0	5.0	5.0	150.0	5.0	5.0
1,3-DICHLORO-PROPYLENE	0.0	1.0	1.0								210.0	3.4		210.0		
ETHYLBENZENE	0.0	1.0	1.0								2100	530.0	700.0	2100.0	530.0	700.0
METHYL BROMIDE	0.0	1.0	*								1500.0			1500.0		
METHYL CHLORIDE	0.0	1.0	1.0													
METHYLENE CHLORIDE	0.0	5.0	1.0								5900.0			5900.0		
1,1,2,2-TETRACHLORO-ETHANE	0.0	1.0	0.5								40.0	1.7		40.0	1.7	
TETRACHLORO-ETHYLENE	0.0	1.0	0.5								33.0			33.0		
TOLUENE	0.0	1.0	1.0								15000	1300.0	1000.0	15000.0	1300.0	1000.0
1,1,1-TRICHLOROETHANE	0.0	1.0	1.0													
1,1,2-TRICHLOROETHANE	0.0	1.0	0.2								160.0	5.9	5.0	160.0	5.9	5.0
TRICHLOROETHYLENE	0.0	1.0	1.0								300.0			300.0		
VINYL CHLORIDE	0.0	1.0	2.0								24.0	0.25	2.0	24.0	0.3	2.0
P-CHLORO-M-CRESOL	0.0	10.0	*													
2-CHLOROPHENOL	0.0	10.0	*								150.0	91.0		150.0	91.0	
2,4-DICHLOROPHENOL	0.0	10.0	*								290.0			290.0		
2,4-DIMETHYLPHENOL	0.0	10.0	*								850.0	389.9		850.0	389.9	
4,6-DINITRO-O-CRESOL	0.0	10.0	24.0								280.0			280.0		
2,4-DINITROPHENOL	0.0	10.0	42.0								5300.0	65.6		5300.0	65.6	
2-NITROPHENOL	0.0	10.0	*													
4-NITROPHENOL	0.0	10.0	*													
PENTACHLOROPHENOL	0.0	10.0	5.0		15	19		15.0	19.0		30.0			30.0		
PHENOL	0.0	10.0	*								1700000	21000.0		1700000.0	21000.0	
2,4,6-TRICHLOROPHENOL	0.0	10.0	2.7								24.0			24.0		
ACENAPHTHENE	0.0	10.0	*								990.0	670.0		990.0	670.0	
ACENAPHTHYLENE	0.0	10.0	2.3													
ANTHRACENE	0.0	10.0	0.7								40000	6300.0		40000.0	6300.0	

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[MGD]	[MGD]	[MGD]	[mg/l]	[mg/l]	[%]
0	0	0.1	10	50	100

PARAMETER	1	2	3	5	6	7	8	9	10	11	12	13	14
	Stream Bckgmd. Conc. [ug/l]	Detection Levels		Fish/Aqua. Life Water Quality Criteria		Calculated Effluent Concentration		Human Health Water Quality Criteria (30Q5)					
		Scan MDL [ug/l]	WQC RDL *EPA MDL [ug/l]	Chronic [ug/l]	Acute [ug/l]	Chronic [ug/l]	Acute [ug/l]	In-Stream Criteria		Calculated Effluent Concentration			
								Organisms [ug/l]	Water/Org [ug/l]	DWS [ug/l]	Organisms [ug/l]	Water/Org [ug/l]	DWS [ug/l]
BENZIDINE	0.0	50.0	*					0.0020			0.002		
BENZO(A)ANTHRACENE	0.0	10.0	0.3					0.18	0.038		0.2	0.0	
BENZO(A)PYRENE	0.0	10.0	0.3					0.18	0.038		0.2	0.0	
3,4 BENZO-FLUORANTHENE	0.0	10.0	0.3					0.18	0.038		0.2	0.0	
BENZO(GH)PERYLENE	0.0	10.0	*										
BENZO(K)FLUORANTHENE	0.0	10.0	0.3					0.18	0.038		0.2	0.0	
BIS (2-CHLOROETHOXY) METHANE	0.0	10.0	*										
BIS (2-CHLOROETHYL)-ETHER	0.0	10.0	1.0					5.3	0.30		5.3	0.3	
BIS (2-CHLOROISO-PROPYL) ETHER	0.0	10.0	*					65000			65000.0		
BIS (2-ETHYLHEXYL) PHTHALATE	0.0	10.0	2.5					22.0	12.0	6.0	22.0	12.0	6.0
4-BROMOPHENYL PHENYL ETHER	0.0	10.0	*										
BUTYL BENZYL PHTHALATE	0.0	10.0	*					1900.0	1500.0		1900.0	1500.0	
2-CHLORONAPHTHALENE	0.0	10.0	*					1600.0			1600.0		
4-CHLORPHENYL PHENYL ETHER	0.0	10.0	*										
CHRYSENE	0.0	10.0	2.5					0.18			0.2		
DI-N-BUTYL PHTHALATE	0.0	10.0	2.5					4500.0	2000.0		4500.0	2000.0	
DI-N-OCTYL PHTHALATE	0.0	10.0	*										
DIBENZO(A,H) ANTHRACENE	0.0	10.0	*					0.18	0.038		0.2	0.0	
1,2-DICHLOROBENZENE	0.0	1.0	2.0					1300.0	420.0		1300.0		
1,3-DICHLOROBENZENE	0.0	5.0	2.0					960.0	320.0		960.0	320.0	
1,4-DICHLOROBENZENE	0.0	5.0	2.0					190.0	63.0		190.0		
3,3-DICHLOROBENZIDINE	0.0	10.0	*					0.28	0.2		0.3	0.2	
DIETHYL PHTHALATE	0.0	10.0	1.9					44000			44000.0		
DIMETHYL PHTHALATE	0.0	10.0	1.6					1100000	270000.0		1100000.0	270000.0	
2,4-DINITROTOLUENE	0.0	10.0	1.0					34.0			34.0		
2,6-DINITROTOLUENE	0.0	10.0	*										
1,2-DIPHENYLHYDRAZINE	0.0	10.0	*					2.0			2.0		
FLUORANTHENE	0.0	10.0	2.2					140.0	130.0		140.0	130.0	
FLUORENE	0.0	10.0	0.3					5300.0			5300.0		
HEXACHLOROBENZENE	0.0	10.0	1.9					0.0029	0.0028	1.0	0.003	0.0	1.0
HEXACHLOROBUTADIENE	0.0	10.0	5.0					180.0			180.0		
HEXACHLOROCYCLO-PENTADIENE	0.0	10.0	*					1100.0	40.0	50.0	1100.0	40.0	50.0
HEXACHLOROETHANE	0.0	10.0	0.5					33.0			33.0		
INDENO(1,2,3-CD)PYRENE	0.0	10.0	*					0.18	0.038		0.2	0.0	
ISOPHORONE	0.0	10.0	*					9600			9600.0		
NAPHTHALENE	0.0	10.0	*										
NITROBENZENE	0.0	10.0	10.0					690.0			690.0		
N-NITROSODI-N-PROPYLAMINE	0.0	10.0	*					5.1	0.050		5.1	0.1	
N-NITROSODI- METHYLAMINE	0.0	10.0	*					30.0			30.0		
N-NITROSODI-PHENYLAMINE	0.0	10.0	*					60.0	35.0		60.0	35.0	
PHENANTHRENE	0.0	10.0	0.7										
PYRENE	0.0	10.0	0.3					4000.0	830.0		4000.0	830.0	
1,2,4-TRICHLOROBENZENE	0.0		*					70.0	35.0		70.0		

Internal Monitoring Point 006

The internal monitoring point is for the sanitary discharge and will be limited by the following parameters.

Flow

Monitoring of flow quantifies the load of pollutants to the stream. Flow shall be reported in Million Gallons per Day (MGD) and monitored at the time of sample collection.

Total Suspended Solids (TSS) and Settleable Solids

The State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [Chapter 0400-40-03-.03(3) (c)] state there shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life in the receiving stream.

Total Suspended Solids is a general indicator of the quality of a wastewater and will be limited in this permit. The technology-based limits for domestic wastewater treatment plants are 30 mg/L for a monthly average concentration and 45 mg/L for a daily maximum concentration. The permit writer believes the previous permit limits will provide protection of water quality in the receiving stream. Considering the nature of wastewater collection and discharge system, the sample type will be grab.

Settleable solids is a general indicator of the quality of a wastewater and will be limited in this permit. The previous permit limit is a technology based number that was based on the permit writer's best professional judgment. The previous permit limits will continue to be required in the new permit. The monitoring frequency will be twice a week and the sample type will be grab.

E.coli

Facilities that discharge sanitary water are required to meet instream coliform standards at the discharge point. The new permit will require the recreational water quality criteria of 126 colonies per 100 mL for the geometric mean and 941 colonies per 100 mL for the daily maximum. The monitoring frequency will be twice a month and the sample type will be grab.

pH

According to the State of Tennessee Water Quality Standards [Chapter 0400-40-03-.03(3) (b)], the pH for the protection of Fish and Aquatic Life shall lie within the range of 6.0 to 9.0 for wadeable streams and shall not fluctuate more than 1.0 unit in this range over a period of 24-hours. The effluent limitation for pH will be retained in a range 6.0 to 9.0 and the sample type will be grab.

Total Residual Chlorine

Wastewater treatment with chlorine involves mixing chlorine gas with water to produce free available chlorine (HOCl and OCl). The free available chlorine reacts with certain pollutants such as ammonia and coliform and converts the free available chlorine to chloramines. The amount of chlorine converted to chloramines is based on the contact time, pH and temperature of the wastewater. A properly designed system will maximize the breakdown and disinfection of pollutants and minimize the free available chlorine at the exit of the treatment system. The total residual chlorine concentration of 2 mg/L at the treatment system exit is an obtainable design parameter that is consistently applied to NPDES permits. The daily maximum concentration permit limit of 2 mg/L will be applied based on the permit writer's judgment of reasonable treatment.

Dissolved Oxygen

The water quality criteria require a minimum instream dissolved oxygen of 5.0 mg/L. The previous permit limit of 3.0 mg/L as a minimum dissolved oxygen concentration will be required to ensure that the sanitary wastewater does not cause a drop in the dissolved oxygen concentration of the total combined effluent.

BOD₅ and Ammonia as N

The BOD₅ and ammonia parameters are limited at the internal monitoring point because high concentrations of either pollutant to the receiving stream can reduce the instream dissolved oxygen concentration below the minimum 5.0 mg/L. The limits at Internal Monitoring Point 006 are best professional judgment numbers that will continue to be required in the new permit. The sampling frequency will be twice a month and the sample type will be grab.

Outfall 001

Flow

Monitoring of flow quantifies the load of pollutants to the stream. Flow shall be reported in Million Gallons per Day (MGD) and monitored at the time of sample collection.

pH

According to the State of Tennessee Water Quality Standards [Chapter 0400-40-03-.03(3) (b)], the pH for the protection of Fish and Aquatic Life shall lie within the range of 6.0 to 9.0 for wadeable streams and shall not fluctuate more than 1.0 unit in this range over a period of 24-hours. The effluent limitation for pH will be retained in a range 6.0 to 9.0 and the sample type will be grab.

Total Suspended Solids (TSS)

The State of Tennessee Water Quality Standards for the protection of Fish & Aquatic Life [Chapter 0400-40-03-.03(3) (c)] state there shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits or sludge banks of such size or character that may be detrimental to fish and aquatic life in the receiving stream.

Total Suspended Solids is a general indicator of the quality of a wastewater and will be limited in this permit. The technology-based limits for wastewater streams such as non-contact cooling water are 30 mg/L for a monthly average concentration and 45 mg/L for a daily maximum concentration. The new permit will continue to have a monthly average concentration of 30 mg/L and a daily maximum concentration of 45 mg/L. Considering the nature of wastewater collection and discharge system, the sample type will be grab.

BOD₅

Since non-contact cooling water and steam condensate typically have concentrations of oxygen demanding pollutants that are lower than sanitary wastewater, the new permit will require a monthly average concentration of 20 mg/l and a daily maximum concentration of 30 mg/L.

Ammonia as N

The State utilizes the EPA document, 1999 Update to Ambient Water Quality Criteria for Ammonia and assumed temperatures of 30°C and 20°C and stream pH of 8 to derive an allowable instream protection value. A mass balance with plant and stream flows and this allowable value determines the monthly average permit limit. Seasonal limits may also be allowed due to ambient temperature variations between the summer and winter seasons.

30°C and stream pH of 8,

$$CCC = \frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} * \text{Min} (2.85, 1.45 * 10^{0.028 * (25 - T)})$$

$$CCC = 0.8969 \text{ mg/l}$$

$$\frac{(0.0 \text{ MGD})(0.1 \text{ mg/l}) + (1.08 \text{ MGD})(x \text{ mg/l})}{(0.0 + 1.08) \text{ MGD}} = 0.90 \text{ mg/l}$$

$$x = 0.90 \text{ mg/l}$$

20°C and stream pH of 8,

$$CCC = \frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} * \text{Min} (2.85, 1.45 * 10^{0.028 * (25 - T)})$$

$$CCC = 1.709 \text{ mg/l}$$

$$\frac{(0 \text{ MGD})(0.1 \text{ mg/l}) + (1.08 \text{ MGD})(x \text{ mg/l})}{(0 + 1.08) \text{ MGD}} = 1.7 \text{ mg/l}$$

$$x = 1.7 \text{ mg/l}$$

where:

CCC	=	Allowable instream NH ₃ chronic criterion (mg/l)
0.0	=	7Q10 flow of receiving stream (MGD)
0.1	=	Assumed/Measured instream NH ₃ (mg/l)
1.08	=	Long term average flow of facility (MGD)
x	=	Allowable facility discharge of NH ₃ (mg/l)

In this case, limiting ammonia to prevent toxicity is necessary at ambient conditions. The new permit will require ammonia monthly average limits of 0.9 mg/l (summer) and 1.7 mg/l (winter).

VIII. BIOMONITORING REQUIREMENTS, ACUTE

The discharge of wash water from IMP 01A may contain several different pollutants, the combined effect of which has a reasonable potential to be detrimental to fish and aquatic life. The Tennessee Water Quality Standards criteria stipulates that *"The waters shall not contain toxic substances, whether alone or in combination with other substances, which will produce toxic conditions..."*.

Since the permittee discharges to a stream with low critical flow conditions, there is a concern for toxicity effects of the discharge on the receiving stream, which is relatively unknown. Biomonitoring will provide information relative to the toxicity of the discharge. Calculation of toxicity limits is as follows:

$$DF = \frac{Q_s + Q_w}{Q_w} = \text{Dilution Factor}$$

where **Q_s** is a receiving stream low flow (7Q10 estimated at 0 MGD) and Q_w varies based on the volume of wash water. Therefore,

$$DF = \frac{0 + \text{Varies}}{\text{Varies}} = 1$$

Since the calculated dilution factor is less than 500:1, and assuming immediate and complete mixing, protection of the stream from acute effects requires:

Protection of aquatic life from acute effects requires:

$$LC_{50} \text{ of the wastewater must be } \geq \frac{100\%}{DF \times 0.3} = \text{Lethal concentration}$$

$$LC_{50} \text{ of the wastewater must be } \geq \frac{100\%}{1 \times 0.3} = 100$$

when the dilution factor is ≤ 3.33 , LC50= 100%

Therefore, WET testing will be required on 100% effluent. The toxicity tests specified herein shall be conducted on every batch discharge (1/Batche) for IMP 01A. If toxicity is demonstrated in any of the effluent samples specified above, a discharge of the wastewater that failed the testing will be a violation of this permit.

IX. ANTIDegradation

Tennessee's Antidegradation Statement is found in the Rules of the Tennessee Department of Environment and Conservation, Chapter 0400-40-03-.06. It is the purpose of Tennessee's standards to fully protect existing uses of all surface waters as established under the Act. Stream determinations for this permit action are associated with the waterbody segment identified by the division as segment ID# TN08010210004_0600. At the time of this draft permit, the division has not assessed the unnamed tributary. The Department has maintained, and shall continue to assess, the water quality of the stream to assure that the water quality is adequate to protect the existing uses of the stream fully, and to assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

ID305b (GIS Link) : <u>TN08010210004_0600</u> , Use Desc : Fish and Aquatic Life							
Water Name	Location Description	Cause Name	Source Name	Attainment Desc	Assmnt Date	User Flag	Current cycle
Unnamed Trib to Wolf River	Unnamed trib to Wolf River (just East of Collierville) from Wolf River to headwaters. Ecoregion 74b Fayette County Shelby County	-	-	Not Assessed	-	-	2017
ID305b (GIS Link) : <u>TN08010210004_0600</u> , Use Desc : Irrigation							
Water Name	Location Description	Cause Name	Source Name	Attainment Desc	Assmnt Date	User Flag	Current cycle
Unnamed Trib to Wolf River	Unnamed trib to Wolf River (just East of Collierville) from Wolf River to headwaters. Ecoregion 74b Fayette County Shelby County	-	-	Not Assessed	-	-	2017
ID305b (GIS Link) : <u>TN08010210004_0600</u> , Use Desc : Livestock Watering and Wildlife							
Water Name	Location Description	Cause Name	Source Name	Attainment Desc	Assmnt Date	User Flag	Current cycle
Unnamed Trib to Wolf River	Unnamed trib to Wolf River (just East of Collierville) from Wolf River to headwaters. Ecoregion 74b Fayette County Shelby County	-	-	Not Assessed	-	-	2017
ID305b (GIS Link) : <u>TN08010210004_0600</u> , Use Desc : Recreation							
Water Name	Location Description	Cause Name	Source Name	Attainment Desc	Assmnt Date	User Flag	Current cycle
Unnamed Trib to Wolf River	Unnamed trib to Wolf River (just East of Collierville) from Wolf River to headwaters. Ecoregion 74b Fayette County Shelby County	-	-	Not Assessed	-	-	2017

X. ELECTRONIC REPORTING

Starting on December 21, 2016, all Individual NPDES Permit holders will be required to submit Discharge Monitoring Reports (DMRs) electronically through NetDMR. Prior to 21 December 2016, the permittee may elect to electronically submit DMRs instead of mailing paper DMRs.

EPA published the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, which will modernize Clean Water Act reporting for municipalities, industries and other facilities. The rule was published in the Federal Register on October 22, 2015 and became effective on December 22, 2015. The rule replaces most paper-based NPDES reporting requirements with electronic reporting.

More information is available at <http://www.tn.gov/environment/topic/wr-netdmr-and-electronic-reporting>:

- Getting Started on NetDMR,
- Electronic reporting schedule,
- Training Opportunities,
- NetDMR User Guide and other supporting information

XI. PERMIT DURATION

The proposed limitations meet the requirements of Section 301(b)(2)(A), (C), (D), (E), and (F) of the Clean Water Act as amended. It is the intent of the division to organize the future issuance and expiration of this particular permit such that other permits located in the same watershed and group within the State of Tennessee will be set for issuance and expiration at the same time. In order to meet the target reissuance date for the Wolf watershed and following the directives for the Watershed Management Program initiated in January, 1996, the permit will be issued to expire in 2023.

APPENDIX 1

FACILITY DISCHARGES AND RECEIVING WATERS

IMP 006					
LONGITUDE	LATITUDE				
-89.625000	35.041667				

FLOW (MGD)	DISCHARGE SOURCE
0.00100	Sewage treatment/Domestic wastewater
	TREATMENT: Aerobic Digestion, Chlorine Treatment/Removal, Settling, Aeration.
0.001	TOTAL DISCHARGE

RECEIVING STREAM			
DISCHARGE ROUTE			
Unnamed tributary at mile 2.2 to Wolf River at mile 33.3 (via Outfall 001)			
STREAM LOW FLOW (CFS)	7Q10	1Q10	30Q5
(MGD)	NA	N/A	N/A

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH	RECREATION	IRRIGATION	LW&W	DOMESTIC
X	X	X	X	
INDUSTRIAL	NAVIGATION			

IMP 01A					
LONGITUDE	LATITUDE				
-89.625000	35.041667				

FLOW (MGD)	DISCHARGE SOURCE
Varies	Washwater from tank cleaning
0.000	TOTAL DISCHARGE

RECEIVING STREAM			
DISCHARGE ROUTE			
Unnamed tributary at mile 2.2 to Wolf River at mile 33.3 (via Outfall 001)			
STREAM LOW FLOW (CFS)	7Q10	1Q10	30Q5
(MGD)	NA	N/A	N/A

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH	RECREATION	IRRIGATION	LW&W	DOMESTIC
X	X	X	X	
INDUSTRIAL	NAVIGATION			

OUTFALL 001					
LONGITUDE	LATITUDE				
-89.625000	35.041667				

FLOW (MGD)	DISCHARGE SOURCE
0.0234	Steam condensate
0.8186	Non-contact cooling water
0.6565	Storm water runoff
0.00100	Sewage treatment/Domestic wastewater
Varies	Wash water from tank cleaning
1.500	TOTAL DISCHARGE

RECEIVING STREAM			
DISCHARGE ROUTE			
Unnamed tributary at mile 2.2 to Wolf River at mile 33.3			
STREAM LOW FLOW (CFS)	7Q10	1Q10	30Q5
(MGD)	0.000	N/A	N/A

STREAM USE CLASSIFICATIONS (WATER QUALITY)				
FISH	RECREATION	IRRIGATION	LW&W	DOMESTIC
X	X	X	X	
INDUSTRIAL	NAVIGATION			

APPENDIX 2

APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

The applicable federal effluent guideline is 40 CFR 414 Organic Chemicals, Plastics, and Synthetic Fibers Subpart D (Thermoplastic Resins). The new source performance standards will be applied to the wash water. Part 414.44 requires the amount of wastewater to be multiplied by the following concentrations for BOD5 and TSS. Additionally, the pH range should be between 6.0-9.0 SU.

Effluent characteristics	NSPS ¹	
	Maximum for any one day	Maximum for monthly average
BOD5	64	24
TSS	130	40
pH	(²)	(²)

¹All units except pH are milligrams per liter.

²Within the range of 6.0 to 9.0 at all times.

Subpart D requires the facility to meet the requirements of Subpart J—Direct Discharge Point Sources That Do Not Use End-of-Pipe Biological Treatment. Part 414.101 requires the amount of wastewater to be multiplied by the following concentrations for the following parameters.

Effluent characteristics	BAT effluent limitations and NSPS ¹	
	Maximum for any one day	Maximum for monthly average
Acenaphthene	47	19
Acenaphthylene	47	19
Acrylonitrile	232	94
Anthracene	47	19
Benzene	134	57
Benzo(a)anthracene	47	19
3,4-Benzofluoranthene	48	20
Benzo(k)fluoranthene	47	19
Benzo(a)pyrene	48	20
Bis(2-ethylhexyl) phthalate	258	95
Carbon Tetrachloride	380	142
Chlorobenzene	380	142
Chloroethane	295	110

Chloroform	325	111
Chrysene	47	19
Di-n-butyl phthalate	43	20
1,2-Dichlorobenzene	794	196
1,3-Dichlorobenzene	380	142
1,4-Dichlorobenzene	380	142
1,1-Dichloroethane	59	22
1,2-Dichloroethane	574	180
1,1-Dichloroethylene	60	22
1,2-trans-Dichloroethylene	66	25
1,2-Dichloropropane	794	196
1,3-Dichloropropylene	794	196
Diethyl phthalate	113	46
2,4-Dimethylphenol	47	19
Dimethyl phthalate	47	19
4,6-Dinitro-o-cresol	277	78
2,4-Dinitrophenol	4,291	1,207
Ethylbenzene	380	142
Fluoranthene	54	22
Fluorene	47	19
Hexachlorobenzene	794	196
Hexachlorobutadiene	380	142
Hexachloroethane	794	196
Methyl Chloride	295	110
Methylene Chloride	170	36
Naphthalene	47	19
Nitrobenzene	6,402	2,237
2-Nitrophenol	231	65
4-Nitrophenol	576	162
Phenanthrene	47	19
Phenol	47	19
Pyrene	48	20


Tetrachloroethylene	164	52
Toluene	74	28
Total Chromium	2,770	1,110
Total Copper	3,380	1,450
Total Cyanide	1,200	420
Total Lead	690	320
Total Nickel	3,980	1,690
Total Zinc ²	2,610	1,050
1,2,4-Trichlorobenzene	794	196
1,1,1-Trichloroethane	59	22
1,1,2-Trichloroethane	127	32
Trichloroethylene	69	26
Vinyl Chloride	172	97

¹All units are micrograms per liter.

APPENDIX 3

PREVIOUS PERMIT LIMITS AND MONITORING REQUIREMENTS

Description : External Outfall, Number : 006, Monitoring : Effluent Gross, Season : All Year


Parameter 	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C	<=	30	mg/L	Grab	Twice Every Month	Daily Maximum
BOD, 5-day, 20 C	<=	20	mg/L	Grab	Twice Every Month	Monthly Average
Chlorine, total residual (TRC)***	<=	2	mg/L	Grab	Two Per Week	Daily Maximum
E. coli, MTEC-MF**	<=	941	CFU/100mL	Grab	Twice Every Month	Maximum
E. coli, MTEC-MF**	<=	126	CFU/100mL	Grab	Twice Every Month	Geometric Mean
Flow*	Report	-	Mgal/d	Instantaneous	Two Per Week	Monthly Average
Flow*	Report	-	Mgal/d	Instantaneous	Two Per Week	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	10	mg/L	Grab	Twice Every Month	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	5	mg/L	Grab	Twice Every Month	Monthly Average
Oxygen, dissolved (DO)	>=	3	mg/L	Grab	Two Per Week	Minimum
Settleable Solids	<=	.5	mL/L	Grab	Two Per Week	Daily Maximum
Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Twice Every Month	Monthly Average
Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Twice Every Month	Daily Maximum
pH***	>=	6	SU	Grab	Two Per Week	Minimum
pH***	<=	9	SU	Grab	Two Per Week	Maximum

* Flow shall be reported in Million Gallons per Day (MGD).

** The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The E. coli monitoring requirement for this permit shall require the permittee to report the geometric mean and maximum values.

*** pH and TRC analyses shall be performed within fifteen (15) minutes of sample collection.

Description : Internal Outfall, Number : 01A, Monitoring : Effluent Gross, Season : All Year

Parameter 	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
1,1,1-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,1,1-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,1,2-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,1,2-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,1-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,1-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,1-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,1-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,2,4-Trichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,2,4-Trichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,2-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,2-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,2-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,2-Dichloropropane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,2-Dichloropropane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,3-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,3-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,3-Dichloropropene, total weight	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
1,3-Dichloropropene, total weight	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,4-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
1,4-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
2,4-Dimethylphenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum


2,4-Dimethylphenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
2,4-Dinitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
2,4-Dinitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
2-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
2-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
3,4-Benzofluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
3,4-Benzofluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
4,6-Dinitro-o-cresol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
4,6-Dinitro-o-cresol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
4-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
4-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Acenaphthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Acenaphthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Acenaphthylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Acenaphthylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Acrylonitrile	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Acrylonitrile	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Anthracene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Anthracene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
BOD, 5-day, 20 C	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
BOD, 5-day, 20 C	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Benzene, dissolved	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Benzene, dissolved	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Benzo(a)anthracene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

Benzo(a)anthracene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Benzo(a)pyrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Benzo(a)pyrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Benzo(k)fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Benzo(k)fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Bis(2-ethylhexyl) phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Bis(2-ethylhexyl) phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Carbon tetrachloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Carbon tetrachloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Chlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Chloroform	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chromium, hexavalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Chromium, hexavalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chromium, total (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Chromium, total (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chromium, trivalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Chromium, trivalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Chrysene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Chrysene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Copper, total (as Cu)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Copper, total (as Cu)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

Cyanide, total (as CN)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Cyanide, total (as CN)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Di-n-butyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Di-n-butyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Diethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Diethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Dimethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Dimethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Ethylbenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Ethylbenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Flow	Report	-	Mgal/d	Grab	Once Per Discharge	Daily Maximum
Flow	Report	-	Mgal/d	Grab	Once Per Discharge	Monthly Average
Fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Fluorene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Fluorene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Hexachlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Hexachlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Hexachlorobutadiene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Hexachlorobutadiene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Hexachloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Hexachloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
LC50 Static 48Hr Acute Ceriodaphnia	Report	-	%	Grab	Once Per Discharge	Value
LC50 Static 48Hr Acute Pimephales	Report	-	%	Grab	Once Per Discharge	Value

Lead, total (as Pb)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Lead, total (as Pb)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Methyl chloride (Chloromethane)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Methyl chloride (Chloromethane)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Methylene chloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Methylene chloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

Description : Internal Outfall, Number : 01A, Monitoring : Effluent Gross, Season : All Year

Parameter 	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Naphthalene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Naphthalene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Nickel, total (as Ni)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Nickel, total (as Ni)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Nitrobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Nitrobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Phenanthrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Phenanthrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Phenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Phenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Pyrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Pyrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Tetrachloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Tetrachloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Toluene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Toluene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Trichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Trichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Vinyl chloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
Vinyl chloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Zinc, total (as Zn)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
Zinc, total (as Zn)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
trans-1,2-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
trans-1,2-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average

* Flow shall be reported in Million Gallons per Day (MGD).

** pH analyses shall be performed within fifteen (15) minutes of sample collection.

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : All Year

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
BOD, 5-day, 20 C	<=	30	mg/L	Grab	Monthly	Daily Maximum
BOD, 5-day, 20 C	<=	20	mg/L	Grab	Monthly	Monthly Average
Flow	Report	-	Mgal/d	Instantaneous	Continuous	Daily Maximum
Flow	Report	-	Mgal/d	Instantaneous	Continuous	Monthly Average
Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Weekly	Daily Maximum
Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Weekly	Monthly Average
pH	>=	6	SU	Grab	Two Per Week	Minimum
pH	<=	9	SU	Grab	Two Per Week	Maximum

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : Summer

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
Nitrogen, Ammonia total (as N)	<=	2	mg/L	Grab	Twice Every Month	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	.9	mg/L	Grab	Twice Every Month	Monthly Average

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : Winter

Parameter	Qualifier	Value	Unit	Sample Type	Frequency	Statistical Base
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Nitrogen, Ammonia total (as N)	<=	2	mg/L	Grab	Twice Every Month	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	1.7	mg/L	Grab	Twice Every Month	Monthly Avera

* Flow shall be reported in Million Gallons per Day (MGD).

** pH and TRC analyses shall be performed within fifteen (15) minutes of sample collection.

*** Must be monitored at a point below the confluence of Discharges 001 and 006, but prior to entering the unnamed tributary.

APPENDIX 4

HISTORICAL MONITORING AND PERMIT EXCEEDANCES

IMP 006	Flow		BOD5		TSS		Ammonia as N		Ecoli		Settleable Solids	Dissolved Oxygen	Total Residual Chlorine	pH	
	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Daily Max. Conc.	Daily Min. Conc.	Daily Max. Conc.	Daily Min. Conc.	Daily Max. Conc.
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	#/100 ml	#/100 ml	mg/L	mg/L	mg/L	SU	SU
07/31/2013	0.001	0.001	15	23	5	5	0.06	0.06	4	4	0.1	7.2	0.28	7.2	8.8
08/31/2013	0.007	0.061	9	17	7	8	0.06	0.07	17	18	BDL	7.8	0.60	7.8	8.7
09/30/2013	0.001	0.002	18	19	2	2	0.05	0.05	1	1	BDL	7.3	0.46	7.7	8.7
10/31/2013	0.001	0.001	342	4	2	2	0.05	0.05	6	10	BDL	7.5	0.36	8.1	8.1
11/30/2013	0.001	0.001	13	14	4	4	0.04	0.05	2	3	0.1	11.4	0.39	7.6	8.3
12/31/2013	0.001	0.002	8	10	3	3	0.05	0.05	2	2	BDL	10.6	0.65	7.4	8.2
01/31/2014	0.001	0.002	9	10	1	1	0.05	0.05	1	2	BDL	8.2	0.36	7.7	8.3
02/28/2014	0.001	0.002	6	8	4	6	0.05	0.05	7	12	BDL	11.2	0.39	8.1	8.2
03/31/2014	0.001	0.001	7	10	3	4	0.05	0.05	1	1	0.2	11.2	0.39	8.1	8.3
04/30/2014	0.001	0.001	8	10	4	5	0.05	0.05	1	1	0.2	11.5	0.39	8.0	8.3
05/31/2014	0.001	0.001	8	10	4	5	0.05	0.05	1	1	BDL	11.3	0.38	8.0	8.5
06/30/2014	0.001	0.001	8	10	2	2	0.05	0.05	2	4	0.1	5.5	0.36	7.9	8.2
07/31/2014	0.001	0.001	3	3	2	3	0.05	0.05	2	6	BDL	5.7	0.38	6.7	7.7
08/31/2014	0.001	0.001	5	9	2	2	0.05	0.05	4	6	BDL	6.1	0.36	7.0	8.1
09/30/2014	0.001	0.001	2	2	3	3	0.05	0.05	1	2	BDL	7.5	0.39	7.6	8.2
10/31/2014	0.001	0.003	3	5	2	3	0.05	0.05	4	4	BDL	8.5	0.46	8.0	8.4
11/30/2014	0.002	0.003	4	5	3	4	0.05	0.05	1	1	BDL	8.1	0.36	8.0	8.3
12/31/2014	0.001	0.002	9	9	1	1	0.06	0.06	1	1	BDL	8.9	0.36	7.9	8.3
01/31/2015	0.001	0.002	8	8	3	3	0.05	0.05	1	1	BDL	8.1	0.32	8.1	8.5
02/28/2015	0.001	0.002	6	8	4	6	0.05	0.05	2	2	BDL	11.2	0.39	8.0	8.3
03/31/2015	0.001	0.002	7	8	5	6	0.05	0.05	1	1	BDL	11.2	0.36	7.0	8.0
04/30/2015	0.001	0.002	8	8	4	4	0.05	0.05	1	2	0.1	11.0	0.45	8.0	8.2
05/31/2015	0.000	0.001	6	8	5	6	0.05	0.05	1	1	BDL	7.7	0.33	7.8	8.1
06/30/2015	0.000	0.001	6	6	3	4	0.04	0.04	1	1	BDL	7.4	0.36	7.7	8.1
07/31/2015	0.000	0.001	11	13	4	6	0.04	0.05	1	1	BDL	7.4	0.33	8.1	8.2
08/31/2015	0.001	0.003	12	14	3	4	0.05	0.05	1	1	0.1	7.4	0.33	8.1	8.4
09/30/2015	0.001	0.001	6	10	2	3	0.05	0.05	1	1	0.1	4.6	0.36	7.4	8.2
10/31/2015	0.001	0.001	1	3	3	4	0.05	0.05	1	1	0.1	8.3	0.34	7.2	8.1
11/30/2015	0.002	0.005	10	12	3	3	0.05	0.06	1	1	0.1	8.1	0.36	8.0	8.3
12/31/2015	0.001	0.001	9	12	3	3	0.05	0.05	1	1	0.1	10.4	0.38	7.6	8.2
01/31/2016			2	3	4	5	0.05	0.05	1	1	0.1	12.4	0.32	6.2	7.6
02/29/2016	0.001	0.001	2	2	3	3	0.04	0.05	2	2	0.1	7.5	0.36	7.1	8.0
03/31/2016	0.001	0.001	2	2	2	3	0.04	0.04	2	2	0.1	7.9	0.36	7.1	7.7
04/30/2016	0.001	0.001	6	7	5	5	0.05	0.05	1	1	0.1	11.5	0.28	7.0	8.2
05/31/2016	0.001	0.001	6	7	5	5	0.05	0.05	1	1	0.1	11.3	0.38	8.0	8.5
06/30/2016	0.001	0.001	2	2	2	2	0.05	0.05	1	1	0.1	7.2	0.45	7.3	8.0
07/31/2016	0.001	0.001	2	3	3	4	0.05	0.05	1	1	0.1	7.2	0.45	7.3	8.0
08/31/2016	0.001	0.001	3	4	2	2	0.04	0.05	1	1	0.1	7.5	0.33	7.2	8.0
09/30/2016	0.001	0.006	1	2	3	4	0.05	0.05	1	1	0.1	7.7	0.33	8.1	8.6
10/31/2016	0.001	0.003	1	1	3	3	0.05	0.05	1	1	0.1	7.8	0.35	8.0	8.2
11/30/2016	0.001	0.002	2	5	2	3	0.05	0.05	1	2	0.1	10.2	0.33	7.6	8.4
12/31/2016	0.001	0.005	1	2	4	5	0.04	0.05	1	1	0.1	11.4	0.33	7.7	8.2
01/31/2017	0.001	0.001	2	2	3	4	0.04	0.05	1	1	0.1	11.4	0.33	7.8	8.2
02/28/2017	0.001	0.001	1	1	3	3	0.05	0.05	1	1	0.1	8.3	0.32	8.1	8.5
03/31/2017	0.001	0.002	1	3	3	5	0.05	0.05	1	1	0.1	7.9	0.33	7.9	8.2
04/30/2017	0.001	0.001	4	4	2	2	0.05	0.05	1	1	0.1	8.1	0.33	8.2	8.2
05/31/2017	0.001	0.001	7	7	5	5	0.05	0.05	1	1	0.1	11.3	0.38	7.5	8.5
06/30/2017	0.001	0.002	6	7	3	3	0.05	0.05	1	1	0.1	11.0	0.33	7.2	8.5
07/31/2017	0.001	0.002	5	9	4	6	0.05	0.05	1	1	0.1	7.2	0.33	7.7	8.2
08/31/2017	0.001	0.002	1	1	3	4	0.05	0.05	1	1	0.1	8.0	0.34	7.8	8.0
09/30/2017	0.002	0.004	3	6	3	3	0.05	0.05	1	1	0.1	7.2	0.33	7.2	7.9
10/31/2017	0.001	0.001	2	3	3	4	0.05	0.05	2	6	0.1	11.6	0.33	7.8	8.0
11/30/2017	0.001	0.006	2	2	4	7	0.05	0.05	1	1	0.1	12.0	0.33	7.8	8.1
12/31/2017	0.001	0.002	3	5	5	6	0.04	0.05	1	1	0.1	12.5	0.28	7.8	8.2
01/31/2018	0.000	0.001	2	3	3	4	0.05	0.05	1	1	0.1	7.2	0.33	7.5	8.2
02/28/2018	0.001	0.002	2	4	3	4	0.07	0.09	1	1	0.1	10.6	0.33	7.1	8.1
03/31/2018	0.001	0.003	2	4	4	6	0.06	0.07	1	1	0.1	11.2	0.33	7.1	7.8
Standard Dev.	0.001	0.008	45	5	1	1	0.00	0.01	2	3	0.02	2.0	0.06	0.4	0.2
Minimum	0.000	0.001	1	1	1	1	0.04	0.04	1	1	0.10	4.6	0.28	6.2	
Maximum	0.007	0.061	342	23	7	8	0.07	0.09	17	18	0.20	12.5	0.65		8.8
Average	0.001	0.003	11	7	3	4	0.05	0.05	2	2	0.11	9.0	0.37	7.6	8.2
Permit Limit	Report	Report	20	30	30	45	5	10	126/100 ml	941/100 ml	0.5	3.0	2.00	6.0	9.0
Count	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57

Outfall 001										
	Flow		BOD5		TSS		Ammonia as N		pH	
	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Monthly Average Conc.	Daily Max. Conc.	Daily Min. Conc.	Daily Max. Conc.
Date	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	SU
07/31/2013	0.41	5.17	5	5	2	2	0.016	0.02	7.1	7.8
08/31/2013	0.42	8.14	0	0	1	1	0.031	0.034	7.0	7.0
09/30/2013	0.04	8.12	3	3	1	1	0.016	0.018	7.2	7.3
10/31/2013	0.67	2.38	1	1	1	3	0.018	0.019	7.4	7.8
11/30/2013	0.82	2.69	5	5	1	2	0.017	0.018	7.1	8.3
12/31/2013	0.82	2.62	4	4	1	2	0.017	0.018	7.8	8.5
01/31/2014	0.78	2.46	3	3	2	3	0.014	0.016	6.8	7.6
02/28/2014	0.78	6.96	6	6	1	2	0.017	0.019	7.0	7.1
03/31/2014	1.09	2.88	7	7	1	2	0.016	0.016	7.1	7.2
04/30/2014	1.29	3.28	7	7	1	2	0.018	0.019	7.1	7.2
05/31/2014	1.16	3.08	7	7	1	2	0.016	0.016	7.1	7.2
06/30/2014	1.34	0.50	6	6	2	3	0.02	0.026	6.8	7.2
07/31/2014	1.16	3.28	6	6	1	2	0.017	0.019	7.1	7.2
08/31/2014	1.22	3.22	7	7	1	2	0.018	0.019	7.1	7.3
09/30/2014	0.85	3.76	6	6	1	3	0.019	0.019	7.1	7.3
10/31/2014	1.16	3.33	6	6	1	2	0.019	0.02	7.1	7.5
11/30/2014	1.25	3.18	6	6	1	1	0.017	0.019	6.5	7.6
12/31/2014	0.51	2.88	3	3	2	3	0.016	0.017	6.8	7.7
01/31/2015	0.96	2.53	5	5	2	3	0.017	0.019	6.9	7.2
02/28/2015	1.07	2.93	5	5	1	2	0.016	0.018	7.0	7.3
03/31/2015	1.28	2.90	5	5	2	2	0.016	0.017	7.1	7.6
04/30/2015	1.04	2.84	12	12	2	2	0.016	0.02	7.2	7.7
05/31/2015	1.08	3.75	9	9	2	3	0.016	0.018	6.9	7.4
06/30/2015	3.17	0.19	9	9	1	2	0.017	0.019	6.9	7.2
07/31/2015	1.10	3.82	8	8	1	2	0.016	0.017	7.3	7.5
08/31/2015	1.09	2.82	8	8	2	3	0.017	0.018	7.1	7.5
09/30/2015	0.99	4.63	3	3	1	2	0.016	0.016	7.2	7.5
10/31/2015	0.87	2.54	1	1	1	1	0.016	0.017	7.1	7.2
11/30/2015	0.88	3.20	6	6	1	2	0.019	0.02	7.1	7.3
12/31/2015	0.74	2.54	6	6	1	2	0.017	0.018	7.0	7.2
01/31/2016	0.84	2.47	2	2	1	2	0.014	0.015	7.3	7.6
02/29/2016	2.47	0.14	7	7	1	1	0.016	0.016	7.1	7.5
03/31/2016	0.87	3.19	6	6	2	3	0.017	0.017	7.2	7.3
04/30/2016	0.91	2.44	7	7	1	2	0.017	0.018	7.1	7.2
05/31/2016	1.03	2.54	7	7	1	2	0.017	0.018	7.1	7.2
06/30/2016	0.91	2.44	2	2	1	2	0.018	0.019	7.2	7.7
07/31/2016	0.84	2.10	2	2	1	2	0.015	0.016	7.2	7.7
08/31/2016	0.86	2.97	2	2	1	2	0.017	0.019	7.1	7.3
09/30/2016	0.94	2.76	6	6	1	1	0.016	0.017	7.4	7.8
10/31/2016	0.89	2.42	6	6	1	3	0.017	0.02	7.2	7.4
11/30/2016	0.80	2.61	6	6	1	2	0.017	0.018	7.0	7.3
12/31/2016	0.68	2.47	6	6	1	2	0.016	0.019	7.1	7.2
01/31/2017	0.75	2.20	5	5	2	3	0.017	0.019	7.1	7.2
02/28/2017	0.75	2.20	5	5	1	1	0.018	0.019	7.5	7.6
03/31/2017	7.96	0.07	4	4	1	2	0.017	0.019	7.1	7.3
04/30/2017	0.82	4.03	7	7	2	3	0.016	0.017	7.0	7.0
05/31/2017	0.90	2.40	6	6	1	2	0.017	0.019	7.1	7.2
06/30/2017	0.71	2.56	7	7	2	3	0.016	0.016	7.1	7.2
07/31/2017	0.91	2.71	7	7	1	2	0.015	0.016	7.0	7.4
08/31/2017	0.97	5.18	6	6	2	3	0.015	0.016	7.0	7.0
09/30/2017	0.82	2.21	7	7	1	1	0.015	0.016	7.0	7.6
10/31/2017	0.80	2.29	7	7	1	2	0.019	0.019	7.0	7.4
11/30/2017	0.76	2.29	6	6	1	2	0.019	0.02	7.2	7.4
12/31/2017	0.77	2.34	7	7	1	3	0.014	0.015	7.2	7.4
01/31/2018	0.76	2.41	7	7	1	2	0.016	0.017	7.2	7.2
02/28/2018	1.24	2.69	6	6	1	2	0.014	0.016	7.1	7.4
03/31/2018	0.76	2.42	6	6	2	5	0.016	0.017	7.1	7.4
Standard Dev.	1.02	1.49	2	2	0	1	0.002	0.003	0.2	0.3
Minimum	0.04	0.07	0	0	1	1	0.014	0.015	6.5	
Maximum	7.96	8.14	12	12	2	5	0.031	0.034		8.5
Average	1.08	2.97	6	6	1	2	0.017	0.018	7.1	7.4
Permit Limit	Report	Report	22	49	36	117	0.9/1.7	2/2	6.0	9.0
Count	57	57	57	57	57	57	57	57	57	57

NPDES ID(s): TN0000442
State: TN
Major/Minor Indicator:
Violation Date: 07/01/2013 -
Violation Type(s):

Environmental Protection Agency Integrated Compliance Information System Violations Report

Created Date: 09/15/2010
Refresh Date: 04/24/2018
t Version 1.5, Modified: 1/4/2017

TN0000442

Permittee Name: AOC L.L.C. - TN Plant	Primary SIC Code: 2821	Permit Issued: 07/01/2013
Permittee Address: 860 Hwy 57 E. Collierville, TN 38017	Primary SIC Desc: Plastics Materials And Resins	Permit Effective: 08/01/2013
Major/Minor Indicator: Minor	Primary NAICS	Permit Expired: 06/30/2018
Compliance Track. Status: On	Primary NAICS Desc:	Permit Status: Effective
DMR Non Receipt Flag: On	Cognizant Official:	
RNC Tracking Flag: On	Cognizant Offcl. Ph.:	
	Receiving Body: Wolf	

Facility Information

Facility Name: AOC, LLC DBA AOC TENNESSEE RESINS PLANT	County: Fayette	FRS ID: 110000911737
Facility Location: 860 HIGHWAY 57 EAST COLLIERVILLE TN 38017	Region: 04 05	Federal Facility Type of Ownership: N Privately Owned Facility
	State-Region:	

Effluent Violations

Violation Code	Monitoring Period End Date	Limit Set	Parameter	Mon. Loc.	Seas. ID	SNC Group	EA Identifier	Value Type/Stat. Base	Reported Value/Units	% Exceed.	Limit Value/Units	RNC Det. Code/ RNC Det. Date	RNC Res. Code/ RNC Res. Date
E90	10/31/2013	006-G	00310 - BOD, 5-day, 20 deg. C	1	0	1		C2 MO AVG	342 mg/l	1,610%	<=20 mg/l		

APPENDIX 5

NEW PERMIT LIMITS AND MONITORING REQUIREMENTS

Description : Internal Monitoring Point, Number : 01A, Monitoring : See Comments, Season : All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
00310	BOD, 5-day, 20 C	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
00400	pH	Report	-	SU	Grab	Once Per Discharge	Maximum
00400	pH	Report	-	SU	Grab	Once Per Discharge	Minimum
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
00530	Total Suspended Solids (TSS)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
00720	Cyanide, total (as CN)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
00720	Cyanide, total (as CN)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01032	Chromium, hexavalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01032	Chromium, hexavalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01034	Chromium, total (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01034	Chromium, total (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01042	Copper, total (as Cu)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01042	Copper, total (as Cu)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01051	Lead, total (as Pb)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01051	Lead, total (as Pb)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01067	Nickel, total (as Ni)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
01067	Nickel, total (as Ni)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01092	Zinc, total (as Zn)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
01092	Zinc, total (as Zn)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32102	Carbon tetrachloride	Report	-	mg/L	Grab	Once Per	Daily

						Discharge	Maximum
32102	Carbon tetrachloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
32103	1,2-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
32103	1,2-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32106	Chloroform	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
32106	Chloroform	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34010	Toluene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34010	Toluene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34200	Acenaphthylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34200	Acenaphthylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34205	Acenaphthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34205	Acenaphthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34215	Acrylonitrile	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34215	Acrylonitrile	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34220	Anthracene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34220	Anthracene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34235	Benzene, dissolved	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34235	Benzene, dissolved	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34242	Benzo(k)fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34242	Benzo(k)fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34247	Benzo(a)pyrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34247	Benzo(a)pyrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34301	Chlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34301	Chlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34320	Chrysene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

34320	Chrysene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34336	Diethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34336	Diethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34341	Dimethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34341	Dimethyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34371	Ethylbenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34371	Ethylbenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34376	Fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34376	Fluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34381	Fluorene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34381	Fluorene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34391	Hexachlorobutadiene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34391	Hexachlorobutadiene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34396	Hexachloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34396	Hexachloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34418	Methyl chloride (Chloromethane)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34418	Methyl chloride (Chloromethane)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34423	Methylene chloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34423	Methylene chloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34447	Nitrobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34447	Nitrobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34461	Phenanthrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34461	Phenanthrene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34469	Pyrene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34469	Pyrene	Report	-	mg/L	Grab	Once Per	Monthly

						Discharge	Average
34475	Tetrachloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34475	Tetrachloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34496	1,1-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34496	1,1-Dichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34501	1,1-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34501	1,1-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34506	1,1,1-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34506	1,1,1-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34511	1,1,2-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34511	1,1,2-Trichloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34526	Benzo(a)anthracene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34526	Benzo(a)anthracene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34536	1,2-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34536	1,2-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34541	1,2-Dichloropropane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34541	1,2-Dichloropropane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34546	trans-1,2-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34546	trans-1,2-Dichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34551	1,2,4-Trichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34551	1,2,4-Trichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34566	1,3-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34566	1,3-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34571	1,4-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34571	1,4-Dichlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum

34591	2-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34591	2-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34606	2,4-Dimethylphenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34606	2,4-Dimethylphenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34616	2,4-Dinitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34616	2,4-Dinitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34646	4-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34646	4-Nitrophenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34657	4,6-Dinitro-o-cresol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34657	4,6-Dinitro-o-cresol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34694	Phenol	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34694	Phenol	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
34696	Naphthalene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
34696	Naphthalene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39100	Bis(2-ethylhexyl) phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39100	Bis(2-ethylhexyl) phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39110	Di-n-butyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39110	Di-n-butyl phthalate	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39175	Vinyl chloride	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39175	Vinyl chloride	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39180	Trichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
39180	Trichloroethylene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39700	Hexachlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
39700	Hexachlorobenzene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
50050	Flow	Report	-	Mgal/d	Recorder	Continuous	Daily

							Maximum
50050	Flow	Report	-	Mgal/d	Recorder	Continuous	Monthly Average
51058	Chromium, trivalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
51058	Chromium, trivalent (as Cr)	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
77163	1,3-Dichloropropene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
77163	1,3-Dichloropropene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
79531	3,4-Benzofluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
79531	3,4-Benzofluoranthene	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
85811	Chloroethane	Report	-	mg/L	Grab	Once Per Discharge	Monthly Average
85811	Chloroethane	Report	-	mg/L	Grab	Once Per Discharge	Daily Maximum
TAA3B	LC50 Static 48Hr Acute Ceriodaphnia	Report	-	%	Grab	Once Per Discharge	Value
TAA6C	LC50 Static 48Hr Acute Pimephales promelas	Report	-	%	Grab	Once Per Discharge	Value

* Flow shall be reported in Million Gallons per Day (MGD).

** pH analyses shall be performed within fifteen (15) minutes of sample collection.

Description : External Outfall, Number : 006, Monitoring : Effluent Gross, Season : All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00300	Oxygen, dissolved (DO)	>=	3.0	mg/L	Grab	Two Per Week	Minimum
00310	BOD, 5-day, 20 C	<=	20	mg/L	Grab	Twice Every Month	Monthly Average
00310	BOD, 5-day, 20 C	<=	30	mg/L	Grab	Twice Every Month	Daily Maximum
00400	pH***	>=	6.0	SU	Grab	Two Per Week	Minimum
00400	pH***	<=	9.0	SU	Grab	Two Per Week	Maximum
00530	Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Twice Every Month	Monthly Average
00530	Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Twice Every Month	Daily Maximum
00545	Settleable Solids	<=	.5	mL/L	Grab	Two Per Week	Daily Maximum
00610	Nitrogen, Ammonia total (as N)	<=	10	mg/L	Grab	Twice Every Month	Daily Maximum
00610	Nitrogen, Ammonia total (as N)	<=	5	mg/L	Grab	Twice Every Month	Monthly Average
50050	Flow*	Report	-	Mgal/d	Instantaneous	Two Per Week	Daily Maximum
50050	Flow*	Report	-	Mgal/d	Instantaneous	Two Per Week	Monthly Average

50060	Chlorine, total residual (TRC)***	<=	2	mg/L	Grab	Two Per Week	Daily Maximum
51040	E. col**	<=	941	CFU/100mL	Grab	Twice Every Month	Daily Maximum
51040	E. coli**	<=	126	CFU/100mL	Grab	Twice Every Month	Geometric Mean

* Flow shall be reported in Million Gallons per Day (MGD).

** The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The E. coli monitoring requirement for this permit shall require the permittee to report the geometric mean and maximum values.

*** pH and TRC analyses shall be performed within fifteen (15) minutes of sample collection.

Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : All Year							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00310	BOD, 5-day, 20 C	<=	20	mg/L	Grab	Monthly	Monthly Average
00310	BOD, 5-day, 20 C	<=	30	mg/L	Grab	Monthly	Daily Maximum
00400	pH**	>=	6.0	SU	Grab	Two Per Week	Minimum
00400	pH**	<=	9.0	SU	Grab	Two Per Week	Maximum
00530	Total Suspended Solids (TSS)	<=	45	mg/L	Grab	Weekly	Daily Maximum
00530	Total Suspended Solids (TSS)	<=	30	mg/L	Grab	Weekly	Monthly Average
50050	Flow*	Report	-	Mgal/d	Instantaneous	Continuous	Daily Maximum
50050	Flow*	Report	-	Mgal/d	Instantaneous	Continuous	Monthly Average
Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : Summer							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00610	Nitrogen, Ammonia total (as N)	<=	0.9	mg/L	Grab	Twice Every Month	Monthly Average
00610	Nitrogen, Ammonia total (as N)	<=	1.8	mg/L	Grab	Twice Every Month	Daily Maximum
Description : External Outfall, Number : 001, Monitoring : Effluent Gross, Season : Winter							
Code	Parameter	Qualifier	Value	Unit	Sample Type	Monitoring Frequency	Statistical Base
00610	Nitrogen, Ammonia total (as N)	<=	3.42	mg/L	Grab	Twice Every Month	Daily Maximum
00610	Nitrogen, Ammonia total (as N)	<=	1.71	mg/L	Grab	Twice Every Month	Monthly Average

* Flow shall be reported in Million Gallons per Day (MGD).

** pH analyses shall be performed within fifteen (15) minutes of sample collection.

*** All parameters must be monitored at a point below the confluence of Discharges 001 and 006, but prior to entering the unnamed tributary.

