

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0135747
Owner:	St. Joseph Properties
Address:	P.O. Box 997, St. Joseph, MO 64502
Continuing Authority:	HPI Products, Inc.
Address:	P.O. Box 997, St. Joseph, MO 64502
Facility Name:	HPI Products, Inc.
Facility Address:	317 West Florence Rd., St. Joseph, MO 64504
Legal Description:	See Page 2
Latitude/Longitude:	See Page 2
Receiving Stream:	See Page 2
First Classified Stream and ID:	See Page 2
USGS Basin & Sub-watershed No.:	See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

See description on page 2.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

October 23, 2009
Effective Date


Mark N. Templeton, Director, Department of Natural Resources

October 22, 2014
Expiration Date


Karl Fett, Regional Director, Kansas City Regional Office

FACILITY DESCRIPTION (continued)

Outfall #001 - Industry – SIC #2879 Pesticides and Agricultural Chemicals

Storm water runoff from operational containment area of facility engaged in pesticides and agricultural chemical distribution.
Actual flow is precipitation dependent.

Legal Description: SE ¼, SE ¼, Sec. 19, T57N, R35W, Buchanan County

Latitude/Longitude: +3944049/-09451443

Receiving Stream: Unnamed Tributary of the Missouri River (U)

First Classified Stream and ID: Missouri River (P) (00226)

USGS Basin & Sub-watershed No.: (10240011 – 050001)

Outfall #002 – Industry – SIC #2879 Pesticides and Agricultural Chemicals

Storm water runoff from secondary containment areas of facility engaged in pesticides and agricultural chemical distribution.
Actual flow is precipitation dependent.

Legal Description: SE ¼, SE ¼, Sec. 19, T57N, R35W, Buchanan County

Latitude/Longitude: +3944049/-09451443

Receiving Stream: Unnamed Tributary of the Missouri River (U)

First Classified Stream and ID: Missouri River (P) (00226)

USGS Basin & Sub-watershed No.: (10240011 – 050001)

Outfall #003 – Industry – SIC #2879 Pesticides and Agricultural Chemicals

Storm water runoff from grassy area north of storage tank dike.
Actual flow is precipitation dependent

Legal Description: SE ¼, SE ¼, Sec. 19, T57N, R35W, Buchanan County

Latitude/Longitude: +3944049/-09451443

Receiving Stream: Unnamed Tributary of the Missouri River (U)

First Classified Stream and ID: Missouri River (P) (00226)

USGS Basin & Sub-watershed No.: (10240011 – 050001)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 13	
					PERMIT NUMBER MO-0135747	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001 (Note 1, 2, and 3)</u>						
Flow	GPD	*		*	once/day	24 hr estimate
Chemical Oxygen Demand	mg/L	*		*	once/batch***	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/batch***	grab
Total Suspended Solids	mg/L	100		50	once/batch***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/batch***	grab
pH – Units	SU	**		**	once/batch***	grab
Ammonia as N	mg/L	*		*	once/batch***	grab
Temperature	°C	*		*	once/batch***	grab
Oil & Grease	mg/L	15		10	once/batch***	grab
2,4-D (a.k.a Dichlorophenoxyacetic acid)	µg/l	*		*	once/batch***	grab
Diazinon	µg/l	*		*	once/batch***	grab
Dicamba	µg/l	*		*	once/batch***	grab
Acetaldehyde	µg/l	*		*	once/batch***	grab
Dimethylamine	µg/l	*		*	once/batch***	grab
DiPropylene Glycol	µg/l	*		*	once/batch***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY****</u> ; THE FIRST REPORT IS DUE <u>January 28, 2010</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions			twice/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2010</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I. & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- *** For sampling frequency, See Note 1 and 2
- **** The quarterly monitoring report submittal schedule; batch samples collected in January, February, March are submitted by **April 28**, batch samples collected in April, May, June are submitted by **July 28**, batch samples collected in July, August, September are submitted by **October 28**, and batch samples collected in October, November, December are submitted by **January 28**.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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PERMIT NUMBER MO-0135747

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #002 (Note 1, 2, 3)</u>						
Flow	GPD	*		*	once/day	24 hr. estimate
Chemical Oxygen Demand	mg/L	*		*	once/batch***	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/batch***	grab
Total Suspended Solids	mg/L	100		50	once/batch***	grab
Settleable Solids	ml/L/hr	1.5		1.0	once/batch***	grab
pH – Units	SU	**		**	once/batch***	grab
Ammonia as N	mg/L	*		*	once/batch***	grab
Temperature	°C	*		*	once/batch***	grab
Oil & Grease	mg/L	15		10	once/batch***	grab
2,4-D (a.k.a Dichlorophenoxyacetic acid)	µg/l	*		*	once/batch***	grab
Diazinon	µg/l	*		*	once/batch***	grab
Dicamba	µg/l	*		*	once/batch***	grab
Acetaldehyde	µg/l	*		*	once/batch***	grab
Dimethylamine	µg/l	*		*	once/batch***	grab
DiPropylene Glycol	µg/l	*		*	once/batch***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY****; THE FIRST REPORT IS DUE January 28, 2010. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions	twice/year	grab
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MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2010.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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PERMIT NUMBER MO-0135747

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003</u>						
Flow	GPD	*		*	once/day	24 hr. estimate
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/month	grab
Total Suspended Solids	mg/L	100		50	once/month	grab
Settleable Solids	ml/L/hr	1.5		1.0	once/month	grab
pH – Units	SU	**		**	once/month	grab
Ammonia as N	mg/L	*		*	once/month	grab
Temperature	°C	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE December 28, 2009. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I. & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

Note 1 and 2 – Discharges of storm water from Secondary and Operational containment areas:

Prior to discharge, the permittee shall collect a sample of each batch of water from any secondary containment area and operational containment area that is used for bulk agrichemical handling systems. If the containment area is constructed of concrete, the discharge samples shall be analyzed for the bulk agrichemicals stored or handled in the respective area within the last year prior to the discharge. If the containment area is constructed of soil and clays or other permeable materials, the discharge samples shall be analyzed for the bulk agrichemicals stored or handled in the respective area within the last three years prior to the discharge. If the discharge sample results exceed the discharge limitations specified in the permit, a discharge is not authorized and to do so would be a violation.

If the analysis of three consecutive samples, taken at rain events separated by 72 hours of dry weather, do not show contamination from a discontinued or no-longer-used product that has been used at any time in the previous year if the containment is of concrete or in the previous three years if the containment is of soil and clays or other permeable materials, then the permittee is no longer required to test for that chemical. If use of the product is renewed, then the requirements for sampling would then again be in effect.

Captured water may be used for dilution of agrichemicals to be applied to the land without analysis provided such applications are otherwise lawful.

Note 3 – HPI Products shall not discharge any storm water pumped from Florence Rd and mixed with water in the secondary or operational containment without the appropriate sampling.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. The physical components of the facility shall conform to 10 CSR 20-8.500, secondary containment for agrichemical facilities. This includes an air gap separation or reduced pressure principle backflow prevention assembly in the water supply line that serves the agrichemical facility [10 CSR 20-8.500(10)].
3. All personnel involved in handling, mixing, or storage of agrichemicals shall be provided training by the owner in the proper methods of handling, mixing, and storage of agrichemicals. Proof of training may consist of documentation of dates of training, personnel attending, and subject matter. Documentation of training under programs that provide training in proper methods of handling, mixing, and storage of agrichemicals may suffice to meet this requirement.
4. All paint, solvents, petroleum products and petroleum waste products (except fuels), spray additives, and unsecured storage containers (such as drums, cans or cartons) shall be stored so that these materials are not exposed to storm water. A secure container shall be deemed to be a container with a lid that has never been opened since it was originally sealed or a container that is designed in such a way as to prevent the contents from being exposed to storm water.
5. Spill prevention, control and/or management shall be provided sufficient to prevent any spills of pollutants from entering a water of the state. Any spills of bulk agrichemicals in any secondary containment area or operational containment area should be removed in such a manner to prevent any release of agrichemicals to waters of the state in violation of any applicable law or the effluent limits specified herein. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
6. An individual shall be designated by the permittee as responsible for environmental matters. Once a month on workdays, staff of the permitted facility shall inspect the facility in general and all structures that function to prevent pollution of storm water or to remove pollutants from storm water to ensure that all Best Management Practices are continually implemented and effective. Repairs to maintain effectiveness shall be made promptly. A log of such inspections shall be kept on site and made available to staff of the Department of Natural Resources for viewing upon request.
7. There shall be no open burning on site of containers, cartons, and other trade waste.
8. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.

C. SPECIAL CONDITIONS (continued)

The SWPPP must include the following:

- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #9 below.
- (b) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
- (c) A provision for designating an individual to be responsible for environmental matters.
- (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

9. Permittee shall adhere to the following minimum Best Management Practices:

- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
- (f) Provide curbing or berming of the enclosed loading/unloading docks located on Florence Road to prevent stormwater runoff from entering the transfer area.

10. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

11. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

12. All outfalls must be clearly marked in the field.

13. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

14. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

15. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

16. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

17. WET TEST REQUIREMENTS

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	LC50%*	FREQUENCY	SAMPLE TYPE	MONTH
001, 002	100%	>100%	Twice/Year	Grab	Any, but report by January 28 th of the next year.

* LC50 = AEC / 0.3.

Dilution Series						
100%	50%	25%	12.5%	6.25%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - (a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
 - (b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
 - (c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.
 - (d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
 - (e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.

C. SPECIAL CONDITIONS (continued)

- (f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - (h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
 - (i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
 - (j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
 - (k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
 - (l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
- (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
 - (3) If the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met:
 - (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
 - (4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.
 - (5) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
 - (6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
 - (7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
 - (8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
 - (9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
 - (10) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) PASS/FAIL procedure and effluent limitations:
 - (1) To pass a multiple-dilution test:
 - (i) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC₅₀ concentration for the most sensitive of the test organisms; **OR**,

C. SPECIAL CONDITIONS (continued)

- (ii) For facilities with an AEC greater than 30%, the LC50 concentration must be greater than 100%; **AND**,
- (iii) All effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.

(c) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) All tests, including repeat tests for previous failures, shall include both test species listed below.
- (3) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
- (4) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
- (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (6) Multiple-dilution tests will be run with:
 - (i) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
 - (ii) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - (iii) Reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

SUMMARY OF TEST METHODOLOGY FOR ACUTE WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls

D. SCHEDULE OF COMPLIANCE

1. After one year following the issuance of this permit (which would be October 23, 2010), the permittee shall submit an engineering report documenting compliance with or design and construction of proper secondary and operational containment for the Agrichemical Facility as required by 10 CSR 20-8.500.
2. If, after review of the engineering report by the department, it is deemed that the facility is not in compliance with 10 CSR 20-8.500, sufficient upgrades to the facility shall be necessary to ensure that water quality standards are not violated. If upgrades are deemed necessary, the permittee shall submit a construction permit, with associated engineering plans, to upgrade the facility no later than twelve (12) months after the engineering report is due. A completed application for a construction permit, and one copy each of an engineering report, plans and specifications prepared by a professional engineer registered in the State of Missouri should be sent to the Missouri Department of Natural Resources, Kansas City Regional Office, 500 Northeast Colbern Road, Lee's Summit, MO 64086, for providing improvements to the facility to comply with 10 CSR 20-8.500.
3. If the department, after reviewing the engineering report, determines that the facility is in compliance with 10 CSR 20-8.500 then the permittee will not be required to modify the facility.
4. If the permittee will fail to meet any of the dates above, the permittee shall notify the Department in writing of the reason for non compliance no later than 14 days following each interim date.
5. Within fifteen (15) calendar days of receipt of any request for additional information or changes in the engineering report, plans or specifications, respond and if necessary submit engineering modifications to the department's address as shown in Paragraph D.2 above.
6. Within 6 months of issuance of the construction permit, construct the necessary upgrades to the facility to comply with 10 CSR 20-8.500.
7. Within fifteen (15) calendar days of completion of construction of wastewater treatment facility improvements, submit a Statement of Work Completed form, signed, sealed, and dated by a professional engineer registered in the State of Missouri certifying that the project has been completed substantially in accordance with the approved plans and specifications to the department's address shown in Paragraph D.2 above.
8. The permittee shall submit a Storm Water Pollution Prevention Plan (SWPPP) within 90 days of permit issuance (which would be January 21, 2010) to the department's address shown in Paragraph D.2 above.

E. REPORTING OF EFFLUENT VIOLATIONS

If any of the sampling results from any of the outfalls show any violation of the permit discharge limitations, written notification shall be made to the Department of Natural Resources within five (5) days of notification of analytical results. Notification shall indicate the date(s) of sample collection, the analytical results, and permit number, and shall include a statement concerning the revisions or modifications in management practices that are being implemented to address the violation of the limitations that occurred.

After a violation has been reported, a sample of storm water runoff resulting from the next rainfall greater than 0.1 inches shall be collected at outfall(s) for which the violation occurred. Analytical results of this sample shall be submitted in writing to the Department of Natural Resources (this paragraph supersedes Part I, Section B: e.A. Noncompliance Notification).

F. RECORDS, RETENTION AND RECORDING

All sampling data shall be maintained by the permittee for a period of five (5) years and shall be supplied to the Department of Natural Resources upon request (supersedes Part I, Section A:7. Records Retention). A copy of all of the sampling data must be submitted with an application for reissuance of this permit.

G. PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

H. PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

I. TERMINATION

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

J. DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF MODIFICATION
OF
MO-0135747
HPI PRODUCTS INC.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for:

- Major
- Minor
- Industrial Facility
- Variance
- Master General Permit
- General Permit Covered Facility
- And/or permit with widespread public interest

Part I – Facility Information

Facility Type: Industrial
Facility SIC Code(s): 2879

Facility Description:

The HPI Products, Inc. facility located at 317 West Florence Road, St. Joseph, Missouri is a formulating, packaging and repackaging agricultural and consumer herbicides and pesticides.

The plant located at 317 Florence Road originally began operation in 1956 by Agchem Products as a herbicide formulation facility on a parcel of 7.84 acres. The facility was purchased by Union Carbide around 1975. Union Carbide sold the formulation facility and approximately 2.5 acres, to Rhone-Poulenc in 1986. Union Carbide retained the remaining 5.34 acres. In 1997 Rhone-Poulenc sold the facility to Nufarm, Inc. HPI Products, Inc. purchased the plant from Nufarm, Inc. on October 15, 2001.

The Florence Road plant is located in a low-lying area immediately north of the St. Joseph municipal water treatment plant. With the exception of a small grassy area north of the storage tank dike and the railroad siding, the entire plant site is hard surfaced with either metal building skin, concrete or asphalt. A series of inlets collect storm water which flows to a collection pit located under a pump house in the northeast corner of the facility. Storm water is pumped from the collection pit and discharged approximately 300 feet north on property owned by Union Carbide. From the point of discharge, storm water flows to the Missouri River via an unnamed tributary. This is the only outfall from the plant. The lift pump is manually controlled.

Storm water is collected within three separate areas; the operational area, secondary containment and the grassy area behind the storage tank dike. The operational area includes the 52,000 ft² production building (i.e., roof drains), the 24,800 ft² driveways and 20,700 ft² area along Florence Road (i.e., front of building with enclosed loading docks). The three areas of secondary containment includes the

10,500 ft² storage tank farm, 500 ft² truck load pad, and 9,000 ft² catchment basin for the rail unloading area. In the past storm water flooding Florence Road, in front of the HPI facility, was pumped into either the operational or secondary containment areas and mixing with other storm water and then discharged through the facility's outfall. This procedure will no longer be allowed at the facility. The grassy area behind the storage tank farm is 6,000 ft².

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

Yes

As a result of environmental inspections performed by Missouri Department of Natural Resources and the Environmental Protection Agency Region 7 and notice of violations issued, HPI Products was directed to seek a site specific storm water permit to replace the Multi-Sector General Permit MO-R240601.

No

Application Date: 01/12/09

Expiration Date: 11/13/08

Last Inspection: 07/18/07

In Compliance

Non Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	N/A	None	Storm Water	0.29
002	N/A	None	Storm Water	0.29
003	N/A	None	Storm Water	0.29

Outfall #001, Outfall #002, Outfall #003

Legal Description: SE ¼, SE ¼, Sec. 19, T57N, R35W, Buchanan County

Latitude/Longitude: +3944049/-09451443

Receiving Stream: Unnamed Tributary of the Missouri River (U)

First Classified Stream and ID: Missouri River (P) (00226)

USGS Basin & Sub-watershed No.: (10240011-050001)

Receiving Water Body's Water Quality & Facility Performance History:

July 18, 2007 The Missouri Department of Natural Resources issued a Notice of Violation to HPI Products Inc. MSOP, MOR240601, 317 Florence Road, St. Joseph, MO 64502. The violation included the following:

- Failed to submit discharge monitoring reports as required in part "A" of MSOP MOR240601,
- Facility routinely discharges stormwater from operational and secondary containment areas without testing or reporting,
- Facility fails to operate and maintain facility to comply with the Missouri Clean Water Law and applicable permit conditions,
- Stormwater is automatically pumped from regulated containment areas without regard to testing as required,
- Facility failed to properly perform and document inspections and corrective actions needed or taken to properly administer SWPPP & BMPs as required by MSOP MOR240601, and
- Facility does not properly train or document employee training in the proper methods of handling, mixing and storage of agrichemicals as required.

On July 18, 2007 the United States Environmental Protection Agency identified the following potential NPDES Permit Violations.

- Evidence of spill on the northeast side of facility which drains into the storm water drain.
- Evidence of spills in several areas inside the facility, where no secondary containment exists.
- Violation of item "5" of the NPDES Permit #MOR240601. No monthly inspection and no logs or records of inspections.
- No spill prevention control or management plan as required by Item "4" of the NPDES Permit #MOR240601.
- No report as "no-discharge" as required by item "8" of NPDES Permit #MOR240601.
- No report of actual spills sent to MDNR or City as required by standard conditions of NPDES permit.
- Facility failed to sample prior to discharge from the pump house located at north east corner of the facility.
- Facility failed to comply with Section D "Pretreatment Requirements" as indicated in Permit No. 01-02-01 City of Saint Joseph Wastewater Plant.

- Facility is considered a “No Discharge” facility; according to pretreatment categorical standard. 40 CFR 455.40-455.41, 455.46 open drains are exposed to uncontained production areas inside the building and open drain exposed to uncontained storage and operational areas. Located on dock near dumpster.

Since 2001, only four discharge monitoring reports were submitted for this facility.

Oct 2001 – Sept 2002	Oct 2005 – Sept 2006	Parameters	Oct 2006 – Sept 2007	Parameters	Oct 2007 – Sept 2008
No Discharge	No Discharge	2,4-Dichlorophenoxyacetic Acid	50,000 ppb (MDL)	BOD	30 mg/L
		Silvex (2,4,5-TP)	50,000 ppb (MDL)	COD	36 mg/L
		2,4,5-Trichlorophenoxyacetic Acid	50,000 ppb (MDL)	TOC	17.7 mg/L
		Gamma-BHC	0.25 ppb (MDL)	TSS	25 mg/L
		Heptachlor	0.25 ppb (MDL)	Ammonia	2.73 mg/L
		Heptachlor Epoxide	0.25 ppb (MDL)	pH	7.83
		Endrin	0.5 ppb (MDL)	Acetaldehyde	10 ppm (MDL)
		Methoxychlor	2.5 ppb (MDL)	Diazinon	0.2 ppb (MDL)
		Chlordane	2.5 ppb (MDL)	Dimethylamine	10 ppm (MDL)
		Toxaphene	5 ppb (MDL)	2,4-D	120 ppb
		Sulfide	1.0 ppm (MDL)	Dicamba	30 ppb
		pH	12.5		
		Arsenic	0.10 ppm (MDL)		
		Barium	0.10 ppm (MDL)		
		Cadmium	0.050 ppm (MDL)		
		Chromium	0.10 ppm (MDL)		
		Lead	0.10 ppm (MDL)		
		Selenium	0.10 ppm (MDL)		
		Silver	0.10 ppm (MDL)		
		Mercury	0.002 ppb (MDL)		

MDL – minimum detection limit
 ppm – parts per million
 ppb – parts per billion

Comments:

The HPI Products Inc. facility on 317 W Florence Rd, St. Joseph, Missouri is used for formulating, packaging and repackaging agricultural and consumer herbicides and pesticides. Ingredients are brought in by truck and rail. Packaged dry and liquid ingredients are brought in by box truck and unloaded by forklift at the loading dock in the production building. No packaged chemicals are stored outside. Only clean, empty containers (e.g. totes, mini-bulks, etc.) are temporarily stored outside prior to filling. Bulk liquid ingredients are brought in by tank cars and tank trucks and transferred into storage tanks.

HPI Products must implement a storm water pollution prevention plan with sampling and analysis plan to prevent contaminated storm water from impacting the water quality of the receiving stream.

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
 - Municipalities
 - Public Sewer District
 - County
 - Public Water Supply Districts
 - Private sewer company regulated by the Public Service Commission

State or Federal agencies

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]
- Lake or Reservoir [10 CSR 20-7.015(3)]
- Losing [10 CSR 20-7.015(4)]
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]
- Special Stream [10 CSR 20-7.015(6)]
- Subsurface Water [10 CSR 20-7.015(7)]
- All Other Waters [10 CSR 20-7.015(8)]

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to Missouri River	U	-	General Criteria	10240011	Central Plains/ Nishnabotna/Platte
Missouri River	P	226	IRR, LWW, AQL, WBC(B), SCR, DWS, IND ***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

** - Ecological Drainage Unit

*** - UAA has not been conducted.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed tributary to Missouri River (U)	0.0	0.0	0.0

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable

The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

All limits in this Factsheet are at least as protective as those previously established; therefore, backsliding does not apply.

ANTIDegradation:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

HPI is applying for a site specific operating permit to replace the general Missouri State Operating Permit MOR240601, no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the department.

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

Not Applicable

This condition is not applicable to the permittee for this specific facility.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Applicable

The permittee/facility is currently under enforcement action due to

July 18, 2007 The Missouri Department of Natural Resources issued a Notice of Violation to HPI Products Inc. MSOP, MOR240601, 317 Florence Road, St. Joseph, MO 64502. The violation included the following:

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- Facility fails to operate and maintain facility to comply with the Missouri Clean Water Law and applicable permit conditions,
- Stormwater is automatically pumped from regulated containment areas without regard to testing as required,

- Facility failed to properly perform and document inspections and corrective actions needed or taken to properly administer SWPPP & BMPs as required by MSOP MOR240601, and
- Facility does not properly train or document employee training in the proper methods of handling, mixing and storage of agrichemicals as required.

On July 18, 2007 the United States Environmental Protection Agency identified the following potential NPDES Permit Violations.

- Evidence of spill on the northeast side of facility which drains into the storm water drain.
- Evidence of spills in several areas inside the facility, where no secondary containment exists.
- Violation of item “5” of the NPDES Permit #MOR240601. No monthly inspection and no logs or records of inspections.
- No spill prevention control or management plan as required by Item “4” of the NPDES Permit #MOR240601.
- No report as “no-discharge” as required by item “8” of NPDES Permit #MOR240601.
- No report of actual spills sent to MDNR or City as required by standard conditions of NPDES permit.
- Facility failed to sample prior to discharge from the pump house located at north east corner of the facility.
- Facility failed to comply with Section D “Pretreatment Requirements” as indicated in Permit No. 01-02-01 City of Saint Joseph Wastewater Plant.
- Facility is considered a “No Discharge” facility; according to pretreatment categorical standard. 40 CFR 455.40-455.41, 455.46 open drains are exposed to uncontained production areas inside the building and open drain exposed to uncontained storage and operational areas. Located on dock near dumpster.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee’s pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

Not Applicable

The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Not Applicable

A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency’s (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm.

Not Applicable

Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW & INFILTRATION (I&I) – PREVENTION/REDUCTION:

Sanitary Sewer Systems (SSSs) are municipal wastewater collection system that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and storm water (i.e. I&I), to a POTW. SSSs are not designed to collect large amounts of storm water runoff from precipitation events.

Untreated or partially treated discharges from SSSs are commonly referred to as SSOs. SSOs have a variety of causes including blockages, line breaks, sewer defects that allow excess storm water and ground water to overload the system, lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. A SSOs is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. SSSs can back up into buildings, including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, they are considered SSOs.

Not Applicable

This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Applicable

The HPI Products Inc. facility on 317 W Florence Rd, St. Joseph, Missouri is used for formulating, packaging and repackaging agricultural and consumer herbicides and pesticides. The department is going to require an engineering report to insure compliance with or design and construction of proper secondary and operational containment for the agrichemical facility as required by 10 CSR 20-8.500. The department is also going to require the submittal of a storm water pollution prevention plan (SWPPP).

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable

A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable

This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the department to release into a given stream after the department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Not Applicable

Wasteload allocations were not calculated.

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable

A WLA study was either not submitted or determined not applicable by department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable

In accordance with the Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System. Furthermore, WET testing is a means by which the department determines that [10 CSR 20-7.031(3)(D, F, & G)] are being met by the permitted facility. In addition to justification for the WET testing, WET tests are required under [10 CSR 20-6.010(8)(A)4] to be performed by specialists who are properly trained in conducting the test according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136]. WET test will be required by all facilities meeting the following criteria:

Facility is a designated Major.

Facility continuously or routinely exceeds its design flow.

Facility (industrial) that alters its production process throughout the year.

Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)

Facility is a municipality or domestic discharger with a Design Flow > 22,500 gpd.

Other - Please justify

The HPI Products Inc. facility on 317 W Florence Rd, St. Joseph, Missouri is used for formulating, packaging and repackaging agricultural and consumer herbicides and pesticides. This is a batch operation so what is produced during the year changes to the needs of the customers. The facility has a tank farm with the largest capacity tank of 50,000 gallons along with rail car and truck unloading pads. The secondary containment dike for the tank farm can hold 90,000 gallons.

In the past stormwater has routinely discharged from both the operational and secondary containment areas without testing or reporting.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Applicable

Missouri River is listed on the 2002 Missouri 303(d) List for Chlordane and Polychlorinated Biphenyls.

The facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of the reference waterbody.

TMDL for Chlordane and Polychlorinated Biphenyls in the Missouri River was approved by EPA on November 3, 2006.

Part V – Effluent Limits Determination

Outfall #001 – Storm water runoff from operational containment area.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	N	N/A
BOD ₅	MG/L	9	45		30	N	N/A
COD	MG/L	9	*		*	N	N/A
TSS	MG/L	9	100		50	N	N/A
pH	SU	2	6.5-9.0		6.5-9.0	N	N/A
SETTLABLE SOLIDS	ML/L/HR	9	1.5		1.0	N	N/A
TEMPERATURE	°C	2/5	*		*	N	N/A
AMMONIA AS N	MG/L	2/5	*		*	N	N/A
OIL & GREASE	MG/L	2	15		10	N	N/A
2,4-D (A.K.A DICHLOROPHOENOXYACETIC ACID)	µg/L	9	*		*	N	N/A
DIAZINON	µg/L	9	*		*	N	N/A
DICAMBA	µg/L	9	*		*	N	N/A
ACETALDEHYDE	µg/L	9	*		*	N	N/A
DIMETHYLAMINE	µg/L	9	*		*	N	N/A
DIPROPYLENE GLYCOL	µg/L	9	*		*	N	N/A
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.

N/A – not applicable

Basis for Limitations Codes:

- | | |
|--|------------------------------------|
| 1. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model |
| 3. Water Quality Based Effluent Limits | 9. Best Professional Judgment |
| 4. Lagoon Policy | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy | 11. WET Test Policy |
| 6. Dissolved Oxygen Policy | 12. Antidegradation Review |

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅).** Based on best professional judgment, the BOD₅ Effluent Limit is established at 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average for industrial stormwater effluent limits. The BOD₅ will be collected to determine a ratio of BOD₅ to COD.

- **Chemical Oxygen Demand (COD)**. Based on best professional judgment, the COD effluent limit is established as monitoring only to develop a relationship between the BOD₅ and COD. The COD and BOD₅ results will be used to determine the affect the industrial stormwater discharge has on the water quality of the receiving stream. COD is defined as the total measurement of all chemicals in the water that can be oxidized while BOD₅ measures the amount of food (or organic carbon) that bacteria can oxidized. BOD₅ is a portion of COD so by sampling both parameters for the life of the permit it will allow for the development of a relationship between the two parameters.
- **Total Suspended Solids (TSS)**. Based on professional judgment, the TSS Effluent Limit is established at 100 mg/L as a Daily Average and 50 mg/L as a Monthly Average for industrial stormwater effluent limits.
- **pH**. The pH Effluent Limit is established at 6.5 to 9.0 for industrial stormwater effluent limits in accordance with 10 CSR 20-7.031(4)(E).
- **Temperature**. Monitoring requirement due to the toxicity of Ammonia varies by temperature.
- **Total Ammonia Nitrogen**. Monitoring only requirement. Ammonia was detected at 2.73 mg/L in the grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for ammonia is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Settleable Solids (SS)**. Based on professional judgement, the SS Effluent Limit is established at 1.5 ml/L/hr as a Daily Average and 1.0 ml/L/hr as a Monthly Average for industrial stormwater effluent limits.
- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **2,4-D (a.k.a Dichlorophenoxyacetic acid)**. Monitoring only requirement. 2,4-D was handled in the past two (2) years and was detected at 120 µg/L in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for 2,4-D is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Diazinon**. Monitoring only requirement. Diazinon was handled in the past two (2) years and was not detected in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Diazinon is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Dicamba**. Monitoring only requirement. Dicamba was handled in the past two (2) years and was detected at 30 µg/L in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Dicamba is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Acetaldehyde**. Monitoring only requirement. Acetaldehyde was handled in the past two (2) years and was not detected in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Acetaldehyde is included to determine whether Acetaldehyde is being released in the storm water discharge. In accordance with 10 CSR 20-7.031(4)(B)3. Other potentially toxic substances for which sufficient toxicity data are not available may not be released to waters of the state until safe levels are demonstrated through adequate bioassay studies.
- **Dimethylamine**. Monitoring only requirement. Dimethylamine was handled in the past two (2) years and was not detected in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Dimethylamine is included to determine whether Dimethylamine is being released in the storm water discharge. In accordance with 10 CSR 20-7.031(4)(B)3. Other potentially toxic substances for which sufficient toxicity data are not available may not be released to waters of the state until safe levels are demonstrated through adequate bioassay studies.
- **DiPropylene Glycol**. Monitoring only requirement. DiPropylene Glycol is the only ingredient delivered by rail car. As only limited stormwater sampling has been completed and DiPropylene Glycol was not sampled for in the stormwater grab sample collected on September 4, 2008, it is being included to determine whether or not DiPropylene Glycol is being released in the storm water discharge. In accordance with 10 CSR 20-7.031(4)(B)3. Other potentially toxic substances for which sufficient toxicity data are not available may not be released to waters of the state until safe levels are demonstrated through adequate bioassay studies.
- **WET Test**. WET Testing schedules and intervals are established in accordance with the department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute

No less than TWICE/YEAR

Facility is subject to production processes alterations throughout the year.

Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

Facility has been granted seasonal relief of numeric limitations.

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

• **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	ONCE/QUARTER
BOD ₅	ONCE/BATCH	ONCE/QUARTER
COD	ONCE/BATCH	ONCE/QUARTER
TSS	ONCE/BATCH	ONCE/QUARTER
SS	ONCE/BATCH	ONCE/QUARTER
pH	ONCE/BATCH	ONCE/QUARTER
TEMPERATURE	ONCE/BATCH	ONCE/QUARTER
AMMONIA AS N	ONCE/BATCH	ONCE/QUARTER
OIL & GREASE	ONCE/BATCH	ONCE/QUARTER
2,4-D (A.K.A DICHLOROPHENOXYACETIC ACID)	ONCE/BATCH	ONCE/QUARTER
DIAZINON	ONCE/BATCH	ONCE/QUARTER
DICAMBA	ONCE/BATCH	ONCE/QUARTER
ACETALDEHYDE	ONCE/BATCH	ONCE/QUARTER
DIMETHYLAMINE	ONCE/BATCH	ONCE/QUARTER
DIPROPYLENE GLYCOL	ONCE/BATCH	ONCE/QUARTER

Outfall #002 – Storm water runoff from secondary containment area.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	N	N/A
BOD ₅	MG/L	9	45		30	N	N/A
COD	MG/L	9	*		*	N	N/A
TSS	MG/L	9	100		50	N	N/A
pH	SU	2	6.5-9.0		6.5-9.0	N	N/A
SETTLABLE SOLIDS	ML/L/HR	9	1.5		1.0	N	N/A
TEMPERATURE	°C	2/5	*		*	N	N/A
AMMONIA AS N	MG/L	2/5	*		*	N	N/A
OIL & GREASE	MG/L	2	15		10	N	N/A
2,4-D (A.K.A DICHLOROPHENOXYACETIC ACID)	µg/L	9	*		*	N	N/A
DIAZINON	µg/L	9	*		*	N	N/A
DICAMBA	µg/L	9	*		*	N	N/A
ACETALDEHYDE	µg/L	9	*		*	N	N/A
DIMETHYLAMINE	µg/L	9	*		*	N	N/A
DIPROPYLENE GLYCOL	µg/L	9	*		*	N	N/A
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.

N/A – not applicable

Basis for Limitations Codes:

- | | |
|--|------------------------------------|
| 7. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 8. Water Quality Standard (includes RPA) | 8. Water Quality Model |
| 9. Water Quality Based Effluent Limits | 9. Best Professional Judgment |
| 10. Lagoon Policy | 10. TMDL or Permit in lieu of TMDL |
| 11. Ammonia Policy | 11. WET Test Policy |
| 12. Dissolved Oxygen Policy | 12. Antidegradation Review |

OUTFALL #002 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅).** Based on best professional judgment, the BOD₅ Effluent Limit is established at 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average for industrial stormwater effluent limits. The BOD₅ will be collected to determine a ratio of BOD₅ to COD.
- **Chemical Oxygen Demand (COD).** Based on best professional judgment, the COD effluent limit is established as monitoring only to develop a relationship between the BOD₅ and COD. The COD and BOD₅ results will be used to determine the affect the industrial stormwater discharge has on the water quality of the receiving stream. COD is defined as the total measurement of all chemicals in the water that can be oxidized while BOD₅ measures the amount of food (or organic carbon) that bacteria can oxidized. BOD₅ is a portion of COD so by sampling both parameters for the life of the permit it will allow for the development of a relationship between the two parameters.
- **Total Suspended Solids (TSS).** Based on professional judgment, the TSS Effluent Limit is established at 100 mg/L as a Daily Average and 50 mg/L as a Monthly Average for industrial stormwater effluent limits.
- **pH.** The pH Effluent Limit is established at 6.5 to 9.0 for industrial stormwater effluent limits in accordance with 10 CSR 20-7.031(4)(E).
- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature.
- **Total Ammonia Nitrogen.** Monitoring only requirement. Ammonia was detected at 2.73 mg/L in the grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for ammonia is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Settleable Solids (SS).** Based on professional judgement, the SS Effluent Limit is established at 1.5 ml/L/hr as a Daily Average and 1.0 ml/L/hr as a Monthly Average for industrial stormwater effluent limits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **2,4-D (a.k.a Dichlorophenoxyacetic acid).** Monitoring only requirement. 2,4-D was handled in the past two (2) years and was detected at 120 µg/L in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for 2,4-D is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Diazinon.** Monitoring only requirement. Diazinon was handled in the past two (2) years and was not detected in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Diazinon is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Dicamba.** Monitoring only requirement. Dicamba was handled in the past two (2) years and was detected at 30 µg/L in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Dicamba is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Acetaldehyde.** Monitoring only requirement. Acetaldehyde was handled in the past two (2) years and was not detected in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Acetaldehyde is included to determine whether Acetaldehyde is being released in the storm water discharge. In accordance with 10 CSR 20-7.031(4)(B)3. Other potentially toxic substances for which sufficient toxicity data are not available may not be released to waters of the state until safe levels are demonstrated through adequate bioassay studies.

- **Dimethylamine.** Monitoring only requirement. Dimethylamine was handled in the past two (2) years and was not detected in the stormwater grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for Dimethylamine is included to determine whether Dimethylamine is being released in the storm water discharge. In accordance with 10 CSR 20-7.031(4)(B)3. Other potentially toxic substances for which sufficient toxicity data are not available may not be released to waters of the state until safe levels are demonstrated through adequate bioassay studies.
- **DiPropylene Glycol.** Monitoring only requirement. DiPropylene Glycol is the only ingredient delivered by rail car. As only limited stormwater sampling has been completed and DiPropylene Glycol was not sampled for in the stormwater grab sample collected on September 4, 2008, it is being included to determine whether DiPropylene Glycol is being released in the storm water discharge. In accordance with 10 CSR 20-7.031(4)(B)3. Other potentially toxic substances for which sufficient toxicity data are not available may not be released to waters of the state until safe levels are demonstrated through adequate bioassay studies.
- **WET Test.** WET Testing schedules and intervals are established in accordance with the department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute

No less than TWICE/YEAR

Facility is subject to production processes alterations throughout the year.

Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

Facility has been granted seasonal relief of numeric limitations.

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	ONCE/QUARTER
BOD ₅	ONCE/BATCH	ONCE/QUARTER
COD	ONCE/BATCH	ONCE/QUARTER
TSS	ONCE/BATCH	ONCE/QUARTER
SS	ONCE/BATCH	ONCE/QUARTER
pH	ONCE/BATCH	ONCE/QUARTER
TEMPERATURE	ONCE/BATCH	ONCE/QUARTER
AMMONIA AS N	ONCE/BATCH	ONCE/QUARTER
OIL & GREASE	ONCE/BATCH	ONCE/QUARTER
2,4-D (A.K.A DICHLOROPHENOXYACETIC ACID)	ONCE/BATCH	ONCE/QUARTER
DIAZINON	ONCE/BATCH	ONCE/QUARTER
DICAMBA	ONCE/BATCH	ONCE/QUARTER
ACETALDEHYDE	ONCE/BATCH	ONCE/QUARTER
DIMETHYLAMINE	ONCE/BATCH	ONCE/QUARTER
DIPROPYLENE GLYCOL	ONCE/BATCH	ONCE/QUARTER

Outfall #003 – Storm water runoff from grassy area north of tank farm.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	N	N/A
BOD ₅	MG/L	9	45		30	N	N/A
COD	MG/L	9	*		*	N	N/A
TSS	MG/L	9	100		50	N	N/A
pH	SU	2	6.5-9.0		6.5-9.0	N	N/A
SETTLABLE SOLIDS	ML/L/HR	9	1.5		1.0	N	N/A
TEMPERATURE	°C	2/5	*		*	N	N/A
AMMONIA AS N	MG/L	2/5	*		*	N	N/A
OIL & GREASE (MG/L)	MG/L	2	15		10	N	N/A
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.

N/A – not applicable

Basis for Limitations Codes:

- | | |
|---|------------------------------------|
| 13. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 14. Water Quality Standard (includes RPA) | 8. Water Quality Model |
| 15. Water Quality Based Effluent Limits | 9. Best Professional Judgment |
| 16. Lagoon Policy | 10. TMDL or Permit in lieu of TMDL |
| 17. Ammonia Policy | 11. WET Test Policy |
| 18. Dissolved Oxygen Policy | 12. Antidegradation Review |

OUTFALL #003 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅).** Based on best professional judgment, the BOD₅ Effluent Limit is established at 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average for industrial stormwater effluent limits. The BOD₅ will be collected to determine a ratio of BOD₅ to COD.
- **Chemical Oxygen Demand (COD).** Based on best professional judgment, the COD effluent limit is established as monitoring only to develop a relationship between the BOD₅ and COD. The COD and BOD₅ results will be used to determine the affect the industrial stormwater discharge has on the water quality of the receiving stream. COD is defined as the total measurement of all chemicals in the water that can be oxidized while BOD₅ measures the amount of food (or organic carbon) that bacteria can oxidized. BOD₅ is a portion of COD so by sampling both parameters for the life of the permit it will allow for the development of a relationship between the two parameters.
- **Total Suspended Solids (TSS).** Based on professional judgment, the TSS Effluent Limit is established at 100 mg/L as a Daily Average and 50 mg/L as a Monthly Average for industrial stormwater effluent limits.
- **pH.** The pH Effluent Limit is established at 6.5 to 9.0 for industrial stormwater effluent limits in accordance with 10 CSR 20-7.031(4)(E).
- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature.
- **Total Ammonia Nitrogen.** Monitoring only requirement. Ammonia was detected at 2.73 mg/L in the grab sample collected on September 4, 2008. As only limited stormwater sampling has been completed, monitoring for ammonia is included to determine whether a “Reasonable Potential” to exceed Missouri Water Quality Standards exists.
- **Settleable Solids (SS).** Based on professional judgement, the SS Effluent Limit is established at 1.5 ml/L/hr as a Daily Average and 1.0 ml/L/hr as a Monthly Average for industrial stormwater effluent limits.

- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	ONCE/MONTH
BOD ₅	ONCE/MONTH	ONCE/MONTH
COD	ONCE/MONTH	ONCE/MONTH
TSS	ONCE/MONTH	ONCE/MONTH
SS	ONCE/MONTH	ONCE/MONTH
PH	ONCE/MONTH	ONCE/MONTH
TEMPERATURE	ONCE/MONTH	ONCE/MONTH
AMMONIA AS N	ONCE/MONTH	ONCE/MONTH
OIL & GREASE	ONCE/MONTH	ONCE/MONTH

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:

The department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

The Public Notice period for this operating permit was from September 4, 2009 to October 7, 2009. No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: AUGUST 31, 2009

COMPLETED BY:

SCOTT F. HONIG, P.E., ENVIRONMENTAL ENGINEER II
KANSAS CITY REGIONAL OFFICE
(816) 622-7011
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Part VII – Appendices

APPENDIX A – HPI FACILITY, ST. JOSEPH, MO

