

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, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0136221

Owner: National Beef Leathers, LLC.  
Address: 205 Florence Road, St. Joseph, MO 64504

Continuing Authority: National Beef Leathers, LLC.  
Address: 205 Florence Road, St. Joseph, MO 64504

Facility Name: National Beef Leathers Tanning Facility  
Facility Address: 205 Florence Road, St. Joseph, MO 64504

Legal Description: See Page Two  
UTM Coordinates: See Page Two  
Receiving Stream: See Page Two  
First Classified Stream and ID: See Page Two  
USGS Basin & Sub-watershed No.: See Page Two

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 Page Two (2). The facility processes hides from National Beef's beef processing facilities using the wet blue process. Formerly known as Prime Tanning, National Beef bought the facility in 2009.

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.

June 26, 2012  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 25, 2017  
Expiration Date

John Madros, Director, Water Protection Program

Facility Description (continued)

Outfall #001 - Stormwater runoff only from leather tanning operations- SIC #3111

Legal Description: SE ¼, SW ¼, SW ¼, Sec. 20, T57N, R35W, Buchanan County

UTM Coordinates: x= 340858; y= 4399904

Receiving Stream: Unnamed Tributary to Missouri River (U)

First Classified Stream and ID: Missouri River (P) (0226) 303(d) List

USGS Basin & Sub-watershed No.: (10240011 – 0106)

Does not cover land application of biosolids/sludge.

Design flow is precipitation dependant.

Actual flow is precipitation dependant.

Outfall #002 - Stormwater runoff only from leather tanning operations- SIC #3111

Legal Description: SE ¼, SW ¼, SW ¼, Sec. 20, T57N, R35W, Buchanan County

UTM Coordinates: x= 340589; y= 4399901

Receiving Stream: Unnamed Tributary to Missouri River (U)

First Classified Stream and ID: Missouri River (P) (0226) 303(d) List

USGS Basin & Sub-watershed No.: (10240011 – 0106)

Does not cover land application of biosolids/sludge.

Design flow is precipitation dependant.

Actual flow is precipitation dependant.

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until 364 days after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls 001 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr estimate
Precipitation	inches	*		*	once/quarter***	24 hr. total
Temperature	°C	*		*	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Chemical Oxygen Demand (COD)	mg/L	*		*	once/quarter***	grab
Total Suspended Solids (TSS)	mg/L	*		*	once/quarter***	grab
Oil & Grease	mg/L	*		*	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Total Nitrogen	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Hardness	mg/L	*		*	once/quarter***	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Total Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cyanide, Amenable to Chlorination (Note 2)	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Phenol, Total	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2012.

<u>Outfall # 001</u> Whole Effluent Toxicity (WET) Test	% Survival	See Special Condition # 9	once/year	grab
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MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2013.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED OCTOBER 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PAGE NUMBER 4 of 11

PERMIT NUMBER MO-0136221

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 **1 year from the effective date** of this permit 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>Outfalls 001 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr estimate
Precipitation	inches	*		*	once/quarter***	24 hr. total
Temperature	°C	*		*	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Chemical Oxygen Demand (COD)	mg/L	120		90	once/quarter***	grab
Total Suspended Solids (TSS)	mg/L	100		50	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Total Nitrogen	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Hardness	mg/L	*		*	once/quarter***	grab
Aluminum, Total Recoverable	µg/L	749		373	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	33		16	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Total Dissolved	µg/L	15		7	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	22		11	once/quarter***	grab
Cyanide, Amenable to Chlorination (Note 2)	µg/L	22		11	once/quarter***	grab
Iron, Total Recoverable	µg/L	1639		817	once/quarter***	grab
Lead, Total Recoverable	µg/L	151		75	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Phenol, Total	µg/L	164		82	once/quarter***	grab
Zinc, Total Recoverable	µg/L	180		90	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2013.

<u>Outfall # 001</u> Whole Effluent Toxicity (WET) Test	% Survival	See Special Condition # 9	once/year	grab
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MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2013.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED OCTOBER 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>	PAGE NUMBER 5 of 11
	PERMIT NUMBER MO-0136221

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OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls 002 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr estimate
pH	SU	**		**	once/quarter***	grab
Chemical Oxygen Demand (COD)	mg/L	*		*	once/quarter***	grab
Total Suspended Solids (TSS)	mg/L	*		*	once/quarter***	grab
Oil & Grease	mg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Total Dissolved	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2012.

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 **1 year from the effective date of this permit** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls 002 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr estimate
pH	SU	**		**	once/quarter***	grab
Chemical Oxygen Demand (COD)	mg/L	120		90	once/quarter***	grab
Total Suspended Solids (TSS)	mg/L	100		50	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium VI, Total Dissolved	µg/L	15		7	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2013.

### B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I STANDARD CONDITIONS DATED OCTOBER 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

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.

\*\*\* See table below for quarterly sampling

Sample discharge at least once for the months of:	Report is due:
January, February, March (1st Quarter)	April 28
April, May, June (2nd Quarter)	July 28
July, August, September (3rd Quarter)	October 28
October, November, December (4th Quarter)	January 28

Note 1 – Storm water samples shall be collected within the first 60 minutes of storm events of 0.1 inches or greater, that result in a discharge. Storm events include rainfall as well as run-off from the melting of frozen precipitation.

Note 2 - This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved methods. The department has determined the current acceptable ML for Cyanide amenable to Chlorination to be 16 µg/L when using the Cyanide by Automated Colorimetric Method #335.3 from the U.S.EPA National Exposure Research Laboratory. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 16 µg/L will be considered violations of the permit and values less than the minimum quantification level of 16 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of Cyanide in excess of the effluent limits stated in the permit.

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. All outfalls must be clearly marked in the field.

3. 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.
- (c) That the effluent limit established in part A of the permit will be exceeded.

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

C. SPECIAL CONDITIONS(continued)

5. 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.

6. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and a copy of the SWPPP must be sent to the Kansas City Regional Office upon development within 30 days of permit issuance. 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: Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

The SWPPP must include the following:

- (a) An assessment of all storm water discharges associated with this facility. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
- (b) 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 #7 below. The permittee is encouraged to employ any additional BMPs determined to be effective in improving the quality of storm water discharged from the facility.
- (c) A structured analysis and evaluation of BMPs that are reasonable and cost effective. The evaluation should include practices that are designed to be 1) non-degrading 2) less degrading, or 3) degrading water quality. The chosen BMPs will be the most reasonable and cost effective while ensuring that the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why “no discharge” or “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the Antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(2).
- (d) 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, and corrective measures that will be taken. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
- (e) The Kansas City Regional Office must be notified within fifteen (15) days by letter of any corrections of deficiencies. Deficiencies that consist of minor repairs or maintenance must be corrected within seven (7) days. Deficiencies that require additional time or installation of a treatment device to correct should be detailed in the written notification. Any corrective measure that necessitates major construction may also need a construction permit.
- (f) A provision for designating an individual to be responsible for environmental matters.
- (g) 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.
- (h) For the area draining to the Combined Sewer System, the permittee shall to the extent possible insure materials are covered to prevent contaminated stormwater runoff. The SWPPP shall include a reference to the pretreatment permit stormwater requirements and the best management practices used.

The Best Management Practices chosen through the Alternatives Analysis must be implemented and maintained at the facility. Failure to implement and maintain the chosen alternatives is a permit violation.

C. SPECIAL CONDITIONS(continued)

7. 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 solid waste 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) The purpose of the SWPPP and the BMPs listed therein is to prevent pollutants from entering waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR20-2.010(56)] of waters of the state, and corrective action means the facility took steps to eliminate the deficiency.
8. 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.

9. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	once/year	grab	Any but report in January

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.
    - (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.

C. SPECIAL CONDITIONS(continued)

9. WET test (continued)

- (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:
    - (a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
    - (b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
  - (4) 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.
  - (5) 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.
  - (6) 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.
  - (7) 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.
- (b) PASS/FAIL procedure and effluent limitations:
- (1) To pass a multiple-dilution test:
    - (a) 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 LC<sub>50</sub> concentration for the most sensitive of the test organisms; **OR**,
    - (b) For facilities with an AEC greater than 30%, the LC<sub>50</sub> concentration must be greater than 100%; **AND**,
    - (c) 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.

C. SPECIAL CONDITIONS(continued)

(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 "Allowable 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) Unless otherwise specified above, multiple-dilution tests will be run with:
  - (a) 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, ½ AEC and ¼ AEC;
  - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
  - (c) 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.

D. SCHEDULE OF COMPLIANCE FOR ESTABLISHING OUTFALL 002 LOCATION

1. Within sixty (60) days of permit issuance, provide to the Department with the final legal description, along with the latitude and longitude coordinates for Outfall 002.

## 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

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR MO-0136221**  
**NATIONAL BEEF LEATHER, LLC.**

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 an Industrial Facility ; and/or permit with widespread public interest .

**Part I – Facility Information**

Facility Type: IND  
Facility SIC Code(s): 3111

Application Date: 11/18/2009  
Expiration Date: NA  
Last Inspection: 04/29/2009-05/04/2009

**Facility Description:**

National Beef Leathers acquired the tanning facility and other assets from Prime Tanning Corp. in March 2009. The permittee uses wet blue tanning process, which involves the use of chromium, to produce the material necessary for leather manufactures. According to the stormwater permit application, National Beef Leather's site is approximately 24.3 acres, with 9.3 acres draining to the City of St. Joseph's Combined Sewer System, and another 15 acres draining to Outfall 001. Of the acreage draining to Outfall 001, 10.9 acres is impervious, 3.4 acres is pervious, and 0.7 acres is semi-pervious. On the east side of US Highway 759, National Beef stores finished hides. Outfall 002 is stormwater runoff from the storage area on the east side of highway US 759. The drainage area of the storage area is estimated to be an acre and mostly impervious.

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

Yes

This is the second public notice of the draft permit. This draft includes a year schedule of compliance to allow the facility time to establish best management practices to meet the numeric water quality based effluent limits. Also, this facility separates the sampling parameters of Outfall 002 from Outfall 001, as Outfall 002 is storage of finished hides only. The parameters in Outfall 002 are the parameters identified in the Effluent Limit Guidelines for Wet Blue Tanning Operations, 40 CFR 425.

Under previous owners, in 2003 it was determined by the City of St. Joseph, Prime Tanning, and DNR that stormwater from the facility went to St. Joseph's combined sewer system. The stormwater permit issued to Prime Tanning at that time was terminated in 2005 with the understanding that all stormwater was going to St. Joseph's system. Upon the April 29, 2009 inspection and subsequent dye tracing done by the department it was discovered that a portion of the stormwater does not go to St. Joseph, but to an unnamed tributary to the Missouri River. The stormwater flows through a City of St. Joseph stormwater ditch located at the SE corner of the property, north of Florence Road and west of Stockyards Expressway. From there the stormwater flows along a Missouri DOT right of way to an unnamed tributary to the Missouri River.

The categorical standards for Leather Tanning and Finishing in 40 CFR 425 applies to production processes. Wastewater from the production processes are sent to St. Joseph’s WWTF (MO-0023043). Some stormwater from the facility discharges into St. Joseph’s combined sewer system. For the stormwater discharges covered in this permit, the water discharges to an unnamed tributary of the Missouri River. For stormwater discharges, acute criteria was used to determine effluent limits, except where only chronic criteria was available. See Section V- Effluent Limit Determination for the derivation and discussion of effluent limits. Effluent parameters and limits were developed based on:

- National Beef’s monitoring and sampling on October 29, 2009 and stormwater permit application.
- MDNR’s sampling on April 29, 2009.
- EPA’s guidance on the Leather Tanning Industry and stormwater permits.
- MDNR best professional judgment and in conjunction with other stormwater permits in the state.

The facility will control stormwater runoff through a series of best management practices either already in place or to be developed in their stormwater pollution prevention plan (SWPPP), which includes the antidegradation analysis.

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	varies	BMP’s	Stormwater	~0.50
002	varies	BMP’s	Stormwater	~0.75

**Outfall #001-** Stormwater runoff from the production site, SIC #3111

Legal Description: SW ¼, SW ¼, SW ¼, Sec. 20, T57N, R35W  
 UTM Coordinates: x= 340858; y= 4399904  
 Latitude/Longitude: +39.735516/-94.859798 (interpolated from map)  
 Receiving Stream: Name Unnamed Tributary to Missouri River  
 First Classified Stream and ID: Missouri River (P) (0226)  
 USGS Basin & Sub-watershed No.: (10240011 – 050001)

**Outfall #002-** Stormwater runoff from storage area, SIC#3111

Legal Description: SW ¼, SW ¼, SW ¼, Sec. 20, T57N, R35W  
 UTM Coordinates: x= 340589; y= 4399901(interpolated from map)  
 Latitude/Longitude: + 39.735442/ -94.858004  
 Receiving Stream: Unnamed Tributary to Missouri River  
 First Classified Stream and ID: Missouri River (P) (0226)  
 USGS Basin & Sub-watershed No.: (10240011 – 050001)

**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.

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 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)]
- 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 1<sup>st</sup> 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	0226	AQL, DWS, IND, IRR, LWW, SCR, WBC(B)***		

\* - 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
Missouri River (P)*	8,241.2	11,070.7	16,298.4

\* Missouri River low flow values from USGS station # 6818000 at St. Joseph, MO.

**MIXING CONSIDERATIONS TABLE:**

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.

New facility, 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.

New and/or expanded discharge. As this is a stormwater only permit, the Antidegradation Analysis must be completed in the Stormwater Pollution Prevention Plan (SWPPP). In the SWPPP, the permittee must provide a structured analysis and evaluation of best management practices. The evaluation should include practices that are designed to be 1) non-degrading 2) less degrading, or 3) degrading water quality. The chosen BMPs will be the most reasonable and cost effective while ensuring that the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the Antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(2).

**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. This is a stormwater only permit. It does not cover land application of biosolids/sludge. If the permittee wants to land apply biosolids/sludge, the permit will need modified.

**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 As a result of the April 2009 inspection, National Beef was required to submit an application for a stormwater permit for the stormwater that does not enter St. Joseph's combined sewer system. MDNR issued a Notice of Violation on May 5, 2009 on the May 1, 2009 inspection. On June 30, 2009, DNR revoked National Beef's exemption for land application. The enforcement action will conclude with the issuance of this permit.

**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.

Not Applicable The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program. For process wastewater, the permittee is part of the approved St. Joseph Pretreatment Program, as process wastewater goes to the St. Joseph WWTP, MO-0023043. The facility's pretreatment permit number from St. Joseph is 12-99-04.

**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. Independent application of sampling results from three sampling events was used.

**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 (BOD<sub>5</sub>) 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](http://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 systems 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 time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)]. The facility has been granted one year from permit issuance to be in compliance with the final effluent limits proposed. This will allow the facility to evaluate their SWPP to determine if the BMPs in place will meet effluent limits or if the BMPs need changed. The evaluation of the effectiveness of the BMPs is demonstrated by the numeric water quality based effluent limits, see EPA's November 12, 2010 Revisions to the November 22,2002 Memorandum Establishing Total Maximum Daily Load (TMDL) Wasteload Memo on TMDL implementation in Stormwater Permits, which is available online at: [http://www.epa.gov/npdes/pubs/establishingtmdlwla\\_revision.pdf](http://www.epa.gov/npdes/pubs/establishingtmdlwla_revision.pdf).

**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 *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], 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. The SWPPP must be developed and implemented upon permit issuance.

**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.

**Applicable** Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration  
C<sub>s</sub> = upstream concentration  
Q<sub>s</sub> = upstream flow  
C<sub>e</sub> = effluent concentration  
Q<sub>e</sub> = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration). Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

**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**

Under the federal 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 (NPDES). WET testing are also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. **WET test will be required by all facilities meeting the following criteria:**

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

**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**

The Missouri River is listed on the 2002 Missouri 303(d) List for chlordane and PCBs. EPA approved the TMDL on November 3, 2006. The Missouri River is on the 2010 Missouri 303(d) List for Bacteria.

- 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.

**Part V – Effluent Limits Determination**

***Outfall #001 – Main Facility Outfall Effluent Limitations Table:***

PARAMETER(S)	UNITS	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE
Flow	MGD	1	*		*
Precipitation	inches	9	*		*
Temperature	°C	2	*		*
pH	SU	2	**		**
Chemical Oxygen Demand (COD)	mg/L	9	120		90
Total Suspended Solids (TSS)	mg/L	9	100		50
Oil & Grease	mg/L	2	15		10
Ammonia as N	mg/L	5,9	*		*
Sulfate	mg/L	9	*		*
Total Nitrogen	mg/L	9	*		*
Total Phosphorus	mg/L	9	*		*
Hardness	mg/L	1,9	*		*
Aluminum, Total Recoverable	µg/L	2,3	749		373
Arsenic, Total Recoverable	µg/L	2,3	33		16
Barium, Total Recoverable	µg/L	2,3,9	*		*
Chromium III, Total Recoverable	µg/L	2,3	*		*
Chromium VI, Total Dissolved	µg/L	2,3	15		7
Cobalt, Total Recoverable	µg/L	2,3,9	*		*
Copper, Total Recoverable	µg/L	2,3	22		11
Cyanide, Amenable to Chlorination	µg/L	2,3	22		11
Iron, Total Recoverable	µg/L	2,3	1639		817
Lead, Total Recoverable	µg/L	2,3	151		75
Manganese, Total Recoverable	µg/L	9	*		*
Phenol, Total	µg/L	2,3	164		82
Zinc, Total Recoverable	µg/L	2,3	180		90
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.

\*\* - 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.

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.
- **Precipitation.** This discharge is dependant on precipitation received and thus is intermittent. Precipitation data is necessary to determine discharge events.
- **Chemical Oxygen Demand (COD).** In the absence of effluent regulation and to protect water quality standards, Best Professional Judgment used to set effluent limits consistent with other industrial stormwater facilities. Maximum daily limit of 120mg/L and Average Monthly limit of 90 mg/L.
- **Total Suspended Solids (TSS).** 40 CFR 425 is the effluent limit guidelines for the leather tanning industry, which gives an effluent limit based on production for total suspended solids. The effluent limit guidelines do not provide an allowance for stormwater. Using best professional judgment, in conjunction with the TSS requirement in 40 CFR 425 and consistent with other stormwater permits in the state, the effluent limits are: Maximum daily limit of 100 mg/L and Average Monthly limit of 50 mg/L.
- **Oil & Grease.** There is an ELG in 40 CFR 425 for oil and grease in production process wastewater. There is not an ELG allowance for stormwater. In 10 CSR 20-7.031 Table A, there is an effluent limit provided for oil and grease, as it is a conventional pollutant. The effluent limitations for protection of aquatic life are 10 mg/L monthly average, 15 mg/L daily maximum.
- **pH.** Categorical limits in 40 CFR 425 require the discharge to be between 6.0-9.0 standard units. 10 CSR 20-7.031(4)(E) requires that discharges be between 6.5-9.0 standard units. Therefore the pH limits are set at 6.5-9.0 standard units.
- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature
- **Total Ammonia Nitrogen.** Monitoring requirement only. Monitoring for ammonia is included to determine whether “reasonable potential” to exceed water quality standards exists. The department will review the submitted ammonia data to determine if limitations will be required or if the parameter can be removed from the permit. Ammonia monitoring based on site map showing an ammonium sulfate building was onsite.
- **Sulfate.** Monitoring requirement only. Monitoring for sulfate is included to determine whether “reasonable potential” to exceed water quality standards exists. The department will review the submitted sulfate data to determine if limitations will be required or if the parameter can be removed from the permit. Sulfate monitoring based on site map showing an ammonium sulfate building on site.
- **Total Phosphorus.** Monitoring requirement only. Monitoring for phosphorus is included to determine whether “reasonable potential” to exceed water quality standards exists. Using best professional judgment, the sampling submitted and review of other leather tanning facilities NPDES permits in the country, monitoring is required. The department is in the process of developing nutrient criteria for streams and rivers and upon renewal the department will review the submitted total phosphorus data to determine if limitations will be required or if the parameter can be removed from the permit.

- **Total Nitrogen.** Monitoring requirement only. Monitoring for total nitrogen is included to determine whether “reasonable potential” to exceed water quality standards exists. Using best professional judgment, the sampling submitted and review of other leather tanning facilities NPDES permits in the country, monitoring is required. The department is in the process of developing nutrient criteria for streams and rivers and upon renewal the department will review the submitted total nitrogen data to determine if limitations will be required or if the parameter can be removed from the permit.
- **Cyanide, Amenable to Chlorination.** Protection of Aquatic Life CMC = 22 µg/L, Background CN = 0 µg/L Stormwater permit, acute criteria applicable. No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, it was discovered to be present at or near the water quality standard.

Acute WLA = 22 µg/L

LTA<sub>a</sub> = 22 (0.321) = 7.1 µg/L

[CV = 0.6, 99<sup>th</sup> Percentile]

MDL = 7.1 (3.11) = 22 µg/L

[CV = 0.6, 99<sup>th</sup> Percentile]

AML = 7.1 (1.55) = 11 µg/L

[CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

The effluent limitation above is below the minimum quantification level (ML) of the most common and practical EPA approved methods. The department has determined that current acceptable ML for Cyanide, Amendable to Chlorination to be 16 µg/L when using the Cyanide by Automated Colorimetric Method #335.3 from the U.S.EPA National Exposure Research Laboratory.

- **Phenol, Total.** Protection of Aquatic Life Chronic Criteria = 100 µg/L, No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, it was discovered to be present at or near the water quality standard.

WLA Chronic = 100 µg/L

LTA<sub>c</sub> = 100 (0.527) = 52.7 µg/L

[CV = 0.6, 99<sup>th</sup> Percentile]

MDL = 52.7 (3.11) = 164 µg/L

[CV = 0.6, 99<sup>th</sup> Percentile]

AML = 52.7 (1.55) = 82 µg/L

[CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Hardness as CaO<sub>3</sub>.** Lead is hardness dependant. Monitoring requirement only.

### Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and water hardness = 162 mg/L.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the department, partitioning evaluations may be considered and site-specific translators developed.

METALS	CONVERSION FACTORS	
	ACUTE	CHRONIC
ALUMINUM	NA	NA
ARSENIC	NA	NA
BARIUM	NA	NA
COBALT	NA	NA
COPPER	0.960	0.960
IRON	NA	NA
LEAD	0.721	0.721
MANGANESE	NA	NA
ZINC	0.980	0.980

Conversion factor for Pb is hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 162 mg/L.

- **Aluminum, Total Recoverable.** Protection of Aquatic Life Acute Criteria (CCC) = 750 µg/L. No mixing considerations allowed; therefore, WLA<sub>c</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, it was discovered to be present at or near the water quality standard.

WLA Acute = 750 µg/L

LTA<sub>a</sub> = 750(0.321) = 240.8 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 MDL = 240.8 (3.11) = 749 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 AML = 240.8 (1.55) = 373 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Arsenic, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 20 µg/L. No mixing considerations allowed; therefore, WLA<sub>c</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, it was discovered to be present at or near the water quality standard.

WLA Chronic = 20 µg/L

LTA<sub>c</sub> = 20 (0.527) = 10.54 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 MDL = 10.54 (3.11) = 33 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 AML = 10.54 (1.55) = 16 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Barium, Total Recoverable.** Monitoring requirement only, because when sampling was performed barium was present above the detection limit but below water quality standards. Monitoring for barium is included to determine whether “reasonable potential” to exceed water quality standards exists. The department will review the submitted barium data to determine if limitations will be required or if the parameter can be removed from the permit. Protection of Drinking Water Supply Chronic Criteria = 2,000 µg/L.
- **Chromium III, Total Recoverable.** Monitoring requirement only. Protection of Aquatic Life Chronic Criteria = 1.0 µg/L, Acute Criteria = 845.9 µg/L. Stormwater permit, acute criteria applicable. 40 CFR 425 is the effluent limit guidelines for the leather tanning industry, which gives an effluent limit based on production for total chromium. DNR separates total chromium into its trivalent and Hexavalent forms. The department will review submitted Chromium III data to determine if “reasonable potential” exists.

- **Chromium VI, Total Dissolved.** Protection of Aquatic Life Chronic Criteria = 10 µg/L, Acute Criteria = 15 µg/L. Stormwater permit, acute criteria applicable. No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. 40 CFR 425 is the effluent limit guidelines for leather tanning industry, which gives an effluent limit based on production for total chromium. DNR separates total chromium into its trivalent and Hexavalent forms. As this is a stormwater only permit, effluent limits given based on the ELG, but with WQBEL as there is not an allowance in the ELGs for stormwater.

Acute WLA = 15 µg/L

LTA<sub>a</sub> = 15 (0.321) = 4.8 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
MDL = 4.8 (3.11) = 15 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
AML = 4.8 (1.55) = 7 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Cobalt, Total Recoverable.** Monitoring requirement only because when sampling was performed cobalt was present above the detection limit but below water quality standards. Monitoring for cobalt is included to determine whether “reasonable potential” to exceed water quality standards exists. The department will review the submitted cobalt data to determine if limitations will be required or if the parameter can be removed from the permit. Protection of Livestock Wildlife Watering Chronic Criteria = 1,000 µg/L.

- **Copper, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 13.52 µg/L, Acute Criteria = 21.2 µg/L. Stormwater permit, acute criteria applicable. No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, copper was discovered to be present at or near the water quality standard.

WLA Acute = 21.2/0.960 = 22.0 µg/L

LTA<sub>a</sub> = 22 (0.321) = 7.06 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
MDL = 7.06 (3.11) = 22.0 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
AML = 7.06 (1.55) = 11.0 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Iron, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 1,000 µg/L, No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, iron was discovered to be present at or near the water quality standard.

WLA Chronic = 1,000 µg/L

LTA<sub>c</sub> = 1000 (0.527) = 527 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
MDL = 527 (3.11) = 1639 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
AML = 527 (1.55) = 817 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Lead, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 4.24 µg/L, Acute Criteria = 108.69 µg/L. Stormwater permit, acute criteria applicable. No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, lead was discovered to be present at or near the water quality standard.

WLA Acute = 108.69/0.721 = 150.8 µg/L

LTA<sub>a</sub> = 150.8 (0.321) = **48.4** µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
MDL = 48.4 (3.11) = 151 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
AML = 48.4 (1.55) = 75 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Manganese, Total Recoverable** Monitoring requirement only. Manganese is a strong oxidizer, with the ability to form many compounds, such as manganese sulfate. The department will review the submitted manganese data to determine if limitations will be required or if the parameter can be removed from the permit.

- **Zinc, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 176.7 µg/L, Acute Criteria = 176.7 µg/L. Stormwater permit, acute criteria applicable. No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. WQBEL required because upon sampling completed by DNR and/or NBL, zinc was discovered to be present at or near the water quality standard.

WLA Acute = 176.7/0.980 = 180.3 µg/L

LTA<sub>a</sub> = 180.3 (0.321) = **57.8** µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
MDL = 57.8 (3.11) = 180 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
AML = 57.8 (1.55) = 90 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **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*. WET testing is normally required during periods of lowest flow, however this is a permit for an industrial facility to have stormwater discharges, which occur during periods of high flow. The WET testing is being required due to the variety of pollutants discovered during sampling and the large size of the area draining to Outfall 001. The 15 acres draining to Outfall 001 contain the sludge storage area, the historic storage of ammonium sulfate and other buildings/areas of use in the production of tanning hides. Due to the variety of potential pollutants of concern present in the testing, annual WET testing is required. WET testing is required for Outfall 001 only.

Acute

No less than ONCE/YEAR

Facility has Water Quality-based effluent limitations for toxic substances (other than NH3).

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified streams are 100%, 50%, 25%, 12.5%, & 6.25%.

- **Minimum Sampling and Reporting Frequency Requirements.** Sampling shall occur at least once a quarter for parameters. WET testing is once per year with reporting in January. Grab samples are appropriate as this is a stormwater permit and discharges are intermittent. As this is a new stormwater permit, sampling and reporting shall occur quarterly to satisfy the department’s need for informational data to ensure the discharge is not causing or having a prolonged negative impact on the receiving streams.

**OUTFALL #002 – DERIVATION AND DISCUSSION OF LIMITS:**  
**Outfall #002- Storage Area Outfall Effluent Limitations Table:**

PARAMETER(S)	UNITS	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE
Flow	MGD	1	*		*
Precipitation	inches	9	*		*
Temperature	°C	2	*		*
pH	SU	2	**		**
Chemical Oxygen Demand (COD)	mg/L	9	120		90
Total Suspended Solids (TSS)	mg/L	9	100		50
Oil & Grease	mg/L	2	15		10
Chromium III, Total Recoverable	µg/L	2,3	*		*
Chromium VI, Total Dissolved	µg/L	2,3	15		7
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.				

\* - 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.

**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         |

- **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.
- **Chemical Oxygen Demand (COD).** In the absence of effluent regulation and to protect water quality standards, Best Professional Judgment used to set effluent limits consistent with other industrial stormwater facilities. Maximum daily limit of 120mg/L and Average Monthly limit of 90 mg/L.
- **Total Suspended Solids (TSS).** 40 CFR 425 is the effluent limit guidelines for the leather tanning industry, which gives an effluent limit based on production for total suspended solids. The effluent limit guidelines do not provide an allowance for stormwater. Using best professional judgment, in conjunction with the TSS requirement in 40 CFR 425 and consistent with other stormwater permits in the state, the effluent limits are: Maximum daily limit of 100 mg/L and Average Monthly limit of 50 mg/L.
- **Oil & Grease.** There is an ELG in 40 CFR 425 for oil and grease in production process wastewater. There is not an ELG allowance for stormwater. In 10 CSR 20-7.031 Table A, there is an effluent limit provided for oil and grease, as it is a conventional pollutant. The effluent limitations for protection of aquatic life are 10 mg/L monthly average, 15 mg/L daily maximum.
- **pH.** Categorical limits in 40 CFR 425 require the discharge to be between 6.0-9.0 standard units. 10 CSR 20-7.031(4)(E) requires that discharges be between 6.5-9.0 standard units. Therefore the pH limits are set at 6.5-9.0 standard units.
- **Chromium III, Total Recoverable.** Monitoring requirement only. Protection of Aquatic Life Chronic Criteria = 1.0 µg/L, Acute Criteria = 845.9 µg/L. Stormwater permit, acute criteria applicable. 40 CFR 425 is the effluent limit guidelines for the leather tanning industry, which gives an effluent limit based on production for total chromium. DNR separates total chromium into its trivalent and Hexavalent forms. The department will review submitted Chromium III data to determine if “reasonable potential” exists.
- **Chromium VI, Total Dissolved.** Protection of Aquatic Life Chronic Criteria = 10 µg/L, Acute Criteria = 15 µg/L. Stormwater permit, acute criteria applicable. No mixing considerations allowed; therefore, WLA<sub>a</sub> = appropriate criterion. 40 CFR 425 is the effluent limit guidelines for leather tanning industry, which gives an effluent limit based on production for total chromium. DNR separates total chromium into its trivalent and Hexavalent forms. As this is a stormwater only permit, effluent limits given based on the ELG, but with WQBEL as there is not an allowance in the ELGs for stormwater.

Acute WLA= 15 µg/L

LTA<sub>a</sub> = 15 (0.321) = 4.8 µg/L

MDL = 4.8 (3.11) = 15 µg/L

AML = 4.8 (1.55) = 7 µg/L

[CV = 0.6, 99<sup>th</sup> Percentile]

[CV = 0.6, 99<sup>th</sup> Percentile]

[CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Minimum Sampling and Reporting Frequency Requirements.** Sampling shall occur at least once a quarter for parameters.. Grab samples are appropriate as this is a stormwater permit and discharges are intermittent. As this is a new permit, sampling and reporting shall occur quarterly to satisfy the department’s need for informational data to ensure the discharge is not causing or having a prolonged negative impact on the receiving streams.

## **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 10/29/2010 to 11/29/2010. Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. Separations of Outfall 002 parameters from Outfall 001 parameters, establishment of a schedule of compliance to meet Water Quality Based Effluent Limits are a few of the changes to the draft permit. Due to the major modifications of this permit, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin on 2/10/2011 or is in process

**DATE OF FACT SHEET:** MARCH 22, 2010, REVISED MAY 12, 2010; REVISED DECEMBER 29, 2010.

### **COMPLETED BY:**

LEASUE MEYERS, ENVIRONMENTAL ENGINEER II  
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