

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-0129518

Owner: Holcim (US) Inc.
Address: 2942 U.S. Highway 61, Bloomsdale, MO 63627

Continuing Authority: Same as above
Address: Same as above

Facility Name: Holcim, St. Genevieve Plant
Address: 2942 U.S. Highway 61, Bloomsdale, MO 63627

Legal Description: 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 Cement plant with associated limestone quarry. SIC #1422/3241

See 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.

September 25, 2009
Effective Date


Mark N. Templeton, Director, Department of Natural Resources

September 24, 2014
Expiration Date


Leanne Tippet-Moody, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall: #001 Raddy Hollow (Limestone Mining Settling Basin and drainage from Access Road)

SW ¼, NE ¼, Sec. 9, T39N, R7E, Ste. Genevieve County
Latitude/Longitude +3806275/-09015392
(a portion was previously under General Permit MO-G490778)
Settling basin/storm water runoff.
Receiving Stream: Isle du Bois Creek
First Classified Stream and ID: Isle du Bois Creek (P) 01734
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is 24.0 MGD (based on 10-year/24 hr event)
Actual Flow dependent on rainfall.

Outfall: #002 (Cement Plant Site Settling Basin and drainage from Access Road)

SE ¼, SE ¼, Sec. 4, T39N, R7E, Ste. Genevieve County
Latitude/Longitude +3806540/-09015226
Settling basin/storm water runoff.
Receiving Stream: Isle du Bois Creek
First Classified Stream and ID: Isle du Bois Creek (P) 01734
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is 10.0 MGD (based on 10 year/24 hr event)
Actual Flow dependent on rainfall.

Outfall: #003 (Harbor Recycle Water Settling Basin and Fill Site)

SW ¼, NE ¼, Sec. 10, T39N, R7E, Ste. Genevieve
Latitude/Longitude +3806164/-09014352
(this outfall receives drainage from both the North and South Old Quarry Hollows)
Settling basin/storm water runoff.
Receiving Stream: Mississippi River
First Classified Stream and ID: Mississippi River (P) 01707
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is 19.44 MGD (based on 10-year/24 hr event)
Actual Flow dependent on rainfall.

Outfall: #004 (Harbor Construction) Construction is complete and this outfall has been removed from the permit.

SE ¼, SW ¼, Sec. 3, T39N, R7E, Ste. Genevieve
(this outfall encompasses the general area of the harbor site)

Outfall: #005 (Topsoil Storage Area and drainage from Access Road)

NE ¼, NE ¼, Sec. 17, T39N, R7E, Ste. Genevieve
Latitude/Longitude +3805561/-09016195
Storm water runoff controlled by BMPs.
Receiving Stream: Tributary to Isle du Bois Creek
First Classified Stream and ID: Isle du Bois Creek (P) 01734
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is 5.97 MGD (based on 10-year/24 hr event)
Actual Flow dependent on rainfall.

Outfall: #006 (Van Behren Hollow temporary Storm water runoff from quarry)

NE ¼, SW ¼, Sec.9, T39N, R7E, Ste. Genevieve
Latitude/Longitude +3806198/-09016013
Storm water runoff controlled by BMPs.
Receiving Stream: Tributary to Isle du Bois Creek
First Classified Stream and ID: Isle du Bois Creek (P) 01734
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is unknown
Actual Flow dependent on rainfall.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0129518

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. Two additional outfalls are listed requiring best management practices for storm water control. 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		MON-THLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001 and #002</u> (Note 1)						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Total Suspended Solids	mg/L	75		50	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Precipitation	inches/day	****		****	once/day	24 hr. total
Oil and Grease	mg/L	15		10	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
<u>Outfall #001, 002, 005, and 006</u> (Note 2)						
Site Inspection*****	visit				once/quarter	visual

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.

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS	MONITORING REQUIREMENTS	
<u>Outfalls #001 and #002</u>				
Whole Effluent Toxicity (WET) Test	LC50	See Special Condition 11	once/year	grab

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 Part I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0129518

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 MAXI-MUM		MON-THLY AVER-AGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall # 003</u> ***** (Note 1)						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Settleable Solids	ml/L/hr	1.5		1.0	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Precipitation	inches/day	****		****	once/day	24 hr. total
Oil and Grease	mg/L	15		10	once/quarter**	grab
Site Inspection*****	visit				once/quarter	visual

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.

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.
- ** Once/quarter when a discharge occurs. Samples must be collected during, or immediately following a 24-hour rainfall event of one inch or greater. If a discharge does not occur during the report period, then the permittee will report "no discharge".
- *** 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.
- **** Permittee shall maintain a precipitation event log for the permitted site. The log shall include the amount and duration of precipitation. A summary sheet showing all events shall be submitted with the Quarterly Discharge Monitoring Report.
- ***** Mississippi flood water is considered as no flow, so outfall #003 need not be sampled when this water flows back to river.
- ***** The Permittee shall conduct at least a quarterly inspection of the Topsoil Storage Area to determine the effectiveness of the BMPs prescribed by the SWPPP developed for these sites and make any necessary changes in the SWPPP to comply with the terms of Special Condition C.7 of this permit.

Note 1 - Effluent limits are based on a design sufficient to provide adequate treatment for storm water resulting from a rainfall (design storm) equal to or less than a one (1) in ten (10) year/twenty-four (24) hour event. Holcim (US) Inc. shall be responsible for ensuring all discharges comply with the limits contained in Table A that result from a design storm of this magnitude or less as measured at the site's rainfall monitoring station.

Note 2 - See Special Condition #10.

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.

4. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant discharged under this permit, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (a) 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;
 - (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (e) There shall be no significant human health hazard from incidental contact with the water;
 - (f) There shall be no acute toxicity to livestock or wildlife watering;
 - (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (h) 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.
5. Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.
6. 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.
7. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provisions of RCRA and CERCLA.
8. Staff of the permitted facility shall inspect any structures that function to prevent pollution of storm water or to remove pollutants from storm water and of the facility in general to ensure that any Best Management Practices are continually implemented and effective.
9. All paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) shall be stored so that these materials are not exposed to storm water. Sufficient practices of spill prevention, control, and/or management shall be provided to prevent any spills of these pollutants from entering a water 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.
10. The holder of this permit must develop (or update for this permit renewal) and implement a Storm Water Pollution Prevention Plan (SWPPP) that reduces pollution from the Topsoil Storage Area, Harbor Construction Area, and Access Road, and that
 - (a) Incorporates required practices identified below,
 - (b) Incorporates erosion control practices specific to site conditions, and
 - (c) Provides for maintenance and adherence to the plan.

The permittee has already developed a SWPPP that is specific to the land disturbance activities at the site for the last permit cycle. This plan must be updated within three (3) months of the issuance of this permit to include any new items. However, the plan should not be submitted to the department unless specifically requested.

The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this permit throughout the term of the land disturbance project.

The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices (BMPs) in order to reduce the amount of sediment and other pollutants in storm water discharges associated with the land disturbance activities during construction of the Topsoil Storage Area and Harbor Construction Area; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of this permit.

The permittee shall select, install, use, operate, and maintain the BMPs in accordance with the concepts and methods described in the following documents:

- (a) **Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices**, (Document number EPA 832-R-92-005) published by the United States Environmental Protection Agency (USEPA) in 1992. **This manual is available at The USEPA Internet site:** http://cfpubl.epa.gov/npdes/pubs.cfm?program_id=0 (searching under Publications/Policy and Guidance Documents).
- (b) **Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri**, published by the Missouri Department of Natural Resources in November 1995.

The permittee is not limited to the use of these guidance manuals. Other commonly accepted publications may be used for guidance and must be referenced in the SWPPP if used. In addition, the permittee is not limited to the use of BMPs identified in these manuals. However, any alternative BMPs should be justified by site conditions and described in the SWPPP.

11. MULTIPLE-dilution acute Whole Effluent Toxicity Test

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	LC50%*	FREQUENCY	SAMPLE TYPE	MONTH
#001 and #002	10%	33.3%	annual	grab	Any, but report in January

* LC50 = AEC / 0.3.

Dilution Series						
40%	20%	10%	5%	2.5%	(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.

- (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) 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:
 - (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 LC₅₀ concentration for the most sensitive of the test organisms; **OR**,
 - (b) For facilities with an AEC greater than 30%, the LC₅₀ 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. 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:
 - (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, 1/2 AEC and 1/4 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.

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 THE PURPOSE OF RENEWAL OF MO-0129514
HOLCIM, ST. GENEVIEVE PLANT

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, Cement Producer
Facility SIC Code(s): 3559

Facility Description:
Cement Producer

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

No

Application Date: 09/21/2008
Expiration Date: 01/22/09

Last Inspection: 6-2-2009 In Compliance Non Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	Dependent on Precipitation	Settling Basin	Storm Water	0.1
#002	“	Settling Basin	Storm Water	0.1
#003	“	Settling Basin	Storm Water	0.2
#004	eliminated	-	-	-
#005	“	Best Management Practices	Storm Water	0.4
#006	“	Best Management Practices	Storm Water	0.2

Outfall: #001 Raddy Hollow (Limestone Mining Settling Basin and drainage from Access Road)

SW ¼, NE ¼, Sec. 9, T39N, R7E, Ste. Genevieve County
 (a portion was previously under General Permit MO-G490778)
 Settling basin/storm water runoff.
 Receiving Stream: Isle du Bois Creek
 First Classified Stream and ID: Isle du Bois Creek (P) 01734
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is 24.0 MGD (based on 10-year/24 hr event)
 Actual Flow dependent on rainfall.

Outfall: #002 (Cement Plant Site Settling Basin and drainage from Access Road)

SE ¼, SE ¼, Sec. 4, T39N, R7E, Ste. Genevieve County
 Settling basin/storm water runoff.
 Receiving Stream: Isle du Bois Creek
 First Classified Stream and ID: Isle du Bois Creek (P) 01734
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is 10.0 MGD (based on 10 year/24 hr event)
 Actual Flow dependent on rainfall.

Outfall: #003 (Harbor Recycle Water Settling Basin and Fill Site)

SW ¼, NE ¼, Sec. 10, T39N, R7E, Ste. Genevieve
 (this outfall receives drainage from both the North and South Old Quarry Hollows)
 Settling basin/storm water runoff.
 Receiving Stream: Mississippi River
 First Classified Stream and ID: Mississippi River (P) 01707
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is 19.44 MGD (based on 10-year/24 hr event)
 Actual Flow dependent on rainfall.

Outfall: #004 (Harbor Construction) This outfall no longer exists and has been removed from permit.

SE ¼, SW ¼, Sec. 3, T39N, R7E, Ste. Genevieve
 (this outfall encompasses the general area of the harbor site)
 Storm water runoff controlled through BMPs.

Outfall: #005 (Topsoil Storage Area and drainage from Access Road)

NW ¼, NW ¼, Sec. 16, T39N, R7E, Ste. Genevieve
 Storm water runoff controlled by BMPs.
 Receiving Stream: Tributary to Isle du Bois Creek
 First Classified Stream and ID: Isle du Bois Creek (P) 01734
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is 5.97 MGD (based on 10-year/24 hr event)
 Actual Flow dependent on rainfall.

Outfall: #006 (Van Behren Hollow temporary Storm water runoff from quarry)
 NE ¼, SW ¼, Sec. 9, T39N, R7E, Ste. Genevieve
 Storm water runoff controlled by BMPs.
 Receiving Stream: Tributary to Isle du Bois Creek
 First Classified Stream and ID: Isle du Bois Creek (P) 01734
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is unknown
 Actual Flow dependent on rainfall.

Receiving Water Body's Water Quality & Facility Performance History:
 There have been no effluent limit violations.

Comments:

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:

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**
Isle Du Bois Creek	P	01734	LWW,AQL, WBC-B	07140101	OMSMO
Mississippi River	P	01707	IRR, LWW, AQL, SCR, DWS, IND, WBC***		

* - 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
Isle Du Bois Creek		0.1	
Mississippi River		52,232	

ISLE DU BOIS MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)...]		ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(A)...]	
7Q10	30Q10	1Q10	7Q10
0.025			0.0025

MISSISSIPPI RIVER MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)...]		ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(A)...]	
7Q10	30Q10	1Q10	7Q10
13,058			1306

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.



Renewal 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.

Not Applicable

The permittee/facility is not currently under Water Protection Program enforcement action.

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.

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.

Not Applicable

This permit does not contain a SOC.

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.

Not applicable :

At this time, the permittee is not required to conduct WET test for this facility.

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

Not applicable :

Mississippi River is not listed on the 2008 Missouri 303(d) List for Lead and Zinc.

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

Part V – Effluent Limits Determination

Outfall: #001 Raddy Hollow (Limestone Mining Settling Basin and drainage from Access Road)

SW ¼, NE ¼, Sec. 9, T39N, R7E, Ste. Genevieve County
(a portion was previously under General Permit MO-G490778)
Settling basin/storm water runoff.
Receiving Stream: Isle du Bois Creek
First Classified Stream and ID: Isle du Bois Creek (P) 01734
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is 24.0 MGD (based on 10-year/24 hr event)
Actual Flow dependent on rainfall.

Outfall: #002 (Cement Plant Site Settling Basin and drainage from Access Road)

SE ¼, SE ¼, Sec. 4, T39N, R7E, Ste. Genevieve County
Settling basin/storm water runoff.
Receiving Stream: Isle du Bois Creek
First Classified Stream and ID: Isle du Bois Creek (P) 01734
USGS Basin & Sub-watershed No.: 07140101-230001
Design flow is 10.0 MGD (based on 10 year/24 hr event)
Actual Flow dependent on rainfall.

OUTFALL #001AND #002

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXI-MUM		MONTH-LY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	NO	SAME
TSS	MG/L	1	75		50	NO	SAME
SS	ML/L/HR	1	1.5		1.0	YES	NONE
pH	SU	1	6.5-9		6.5-9	YES	6-9
CHLORIDE	MG/L					YES	REMOVED
OIL & GREASE (MG/L)	MG/L	1	15		10	YES	SAME
WET TEST	LC50	1				YES	ADDED
PRECIPITATION	INCHES/D AY	1	*		*	NO	SAME
MONITORING FREQUENCY	Same as previous permit, but now triggered by 1.0 inch precipitation						

*- Monitoring requirement only.

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 AND #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.
- **Total Suspended Solids (TSS).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **pH.** Effluent limitations have been changed to 6.5-9 from 6-9 as per 10 CSR 20-7.031 (4) (E).
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Chloride .** Removed due to no detection in 5 years therefore no reasonable potential for exceedance.
- **Settleable Solids (SS).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Whole Effluent Toxicity Testing.** Calculation of LC50 limit

#001

$$AEC\% = \text{outfall design flow cfs} / (\text{ZID cfs} + \text{outfall design flow cfs})$$

$$LC50 = AEC\% / 0.3$$

Example: $AEC\% = 36 \text{ cfs} / (1306 \text{ cfs} + 36 \text{ cfs}) = 0.0268 = 2.68\%$, use 10% minimum unless diffusers in place.

$LC50\% = 10\% / 0.3 = 33.3\%$

#002

$AEC\% = \text{outfall design flow cfs} / (\text{ZID cfs} + \text{outfall design flow cfs})$

$LC50 = AEC\% / 0.3$

Example: $AEC\% = 15.5 \text{ cfs} / (1306 \text{ cfs} + 15.5 \text{ cfs}) = 0.0117 = 1.17\%$, use 10% minimum unless diffusers in place.

$LC50\% = 10\% / 0.3 = 33.3\%$

Outfall: #003 (Harbor Recycle Water Settling Basin and Fill Site)
 SW ¼, NE ¼, Sec. 10, T39N, R7E, Ste. Genevieve
 (this outfall receives drainage from both the North and South Old Quarry Hollows)
 Settling basin/storm water runoff.
 Receiving Stream: Mississippi River
 First Classified Stream and ID: Mississippi River (P) 01707
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is 19.44 MGD (based on 10-year/24 hr event)
 Actual Flow dependent on rainfall.

OUTFALL #003

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	MONTH-LY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*	*	NO	SAME
TSS	MG/L	1	75	50	YES	REMOVED
SS	ML/L/HR	1	1.5	1.0	YES	NONE
pH	SU	1	6.5-9	6.5-9	YES	6-9
CHLORIDE	MG/L	1	*	*	YES	REMOVED
OIL & GREASE (MG/L)	MG/L	1	15	10	NO	SAME
PRECIPITATION	INCHES/DAY	1	*	*	NO	SAME
MONITORING FREQUENCY	Same as previous permit, but now triggered by 1.0 inch precipitation					

*- Monitoring requirement only.

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 #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.
- **Total Suspended Solids (TSS).** This limit has been removed
- **pH.** Effluent limitations have been changed to 6.5-9 from 6-9 as per 10 CSR 20-7.031 (4) (E).
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **Chloride** . Removed due to no detection in 5 years therefore lack of reasonable potential for exceedance.
- **Settleable Solids (SS)**. Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.

Outfall: #005 (Topsoil Storage Area and drainage from Access Road)
 NW ¼, NW ¼, Sec. 16, T39N, R7E, Ste. Genevieve
 Storm water runoff controlled by BMPs.
 Receiving Stream: Tributary to Isle du Bois Creek
 First Classified Stream and ID: Isle du Bois Creek (P) 01734
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is 5.97 MGD (based on 10-year/24 hr event)
 Actual Flow dependent on rainfall.

Outfall: #006 (Van Behren Hollow temporary Storm water runoff from quarry)
 NE ¼, SW ¼, Sec. 9, T39N, R7E, Ste. Genevieve
 Storm water runoff controlled by BMPs.
 Receiving Stream: Tributary to Isle du Bois Creek
 First Classified Stream and ID: Isle du Bois Creek (P) 01734
 USGS Basin & Sub-watershed No.: 07140101-230001
 Design flow is unknown
 Actual Flow dependent on rainfall.

OUTFALL #005 AND #006

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
CHLORIDE	MG/L	1	*		*	YES	REMOVED
BEST MANAGEMENT PRACTICES	As specified in permit						
MONITORING FREQUENCY	Same as previous permit						

* Monitoring requirement only.

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 #005 AND #006, – DERIVATION AND DISCUSSION OF LIMITS:

- **Chloride**. Removed due to non detection in 5 years.

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 is tentatively schedule to begin on July 10, 2009 or is in process.

The Public Notice period for this operating permit was from (DATE) to (DATE). Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. (Please explain). (Also if applicable – 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 (DATE) or is in process.

The Public Notice period for this operating permit was from (DATE) to (DATE). 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: JUNE 5, 2009

COMPLETED BY:

**TIM STALLMAN, ENVIRONMENTAL SPECIALIST
NPDES AND STORM WATER PERMITS UNIT
PERMITTING AND ENGINEERING SECTION
WATER PROTECTION PROGRAM**