

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, RSMo as amended, hereinafter, the Law) and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MO-G500000

Owner: <name>
Address: <address>

Continuing Authority: <name or same as above>
Address: <address or same as above>

Facility Name: <name>
Facility Address: <physical address>

Legal Description: <1/4, 1/4, 1/4, Sec. xx, TxxN, RxxW <county>County
UTM Coordinates: X=, Y=

Receiving Stream: <receiving stream> <C, P, L1, L2, L3>
First Classified Stream and ID: <1st classified stream> <C, P, etc.> <ID number> 303(d) List
USGS Basin & Sub-watershed No.: <USGS HUC 14#>

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

FACILITY DESCRIPTION

All Outfalls - SIC Codes 1442; 1446

Process wastewater, mine dewatering, and stormwater discharges associated with sand and gravel mining/dredging, processing, and stockpiles.

This permit authorizes only process wastewater and/or stormwater 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 RSMo § 621.250, 640.013, and 644.051.6; 10 CSR 20-1.020 and 20-6.020.

May 23, 2017
Effective Date


Steven Feeler, Acting Director, Department of Environmental Quality

May 22, 2022
Expiration Date


David J. Lamb, Acting Director, Water Protection Program

APPLICABILITY

1. This Missouri State Operating Permit (permit) authorizes the discharge of process wastewater, mine dewatering, and stormwater discharges from commercial construction sand and gravel mining/dredging, processing, and stockpiles to waters of the state of Missouri from facilities with the primary Standard Industrial Classification (SIC) Codes(s):

<u>SIC Code</u>	<u>NAICS</u>	<u>Activity</u>
1442	212321	Construction Sand and Gravel
1446	212322	Industrial Sand

or facilities that the Missouri Department of Natural Resources (department) determines are similar to facilities that are under the above SIC Codes.

2. This permit applies only to discharges originating from the mining/dredging of sand and gravel and incidental materials associated with the mining/dredging of sand and gravel.
3. For the purposes of this permit, a sand and gravel mine is defined as the open mining/dredging pit or strip, any sedimentation basins, topsoil, overburden, stockpile areas, loading areas, unloading areas, washing facilities, hauling roads, and any other disturbed areas associated with the mining/dredging activity not otherwise covered by another permit. Stockpiles remote from the mine are considered part of the mine and are subject to this permit.
4. In-stream mine sites or gravel bar harvesting operations located within the high banks of a stream do not require an operating permit from The Water Protection Program so long as the operator conducts sand and gravel mining (not washing) in strict adherence to Land Reclamation Program’s Sand and Gravel Excavation Plan found at 10 CSR 40-10.050 (14). In accordance with the Memorandum of Understanding between the Land Reclamation and Water Protection Programs, these operations are only exempt as long as they do not stockpile materials within the stream banks. If a gravel bar mining site is inspected and found to not be meeting the requirements of the Sand and Gravel Excavation Plan, or if they have been granted a waiver to stockpile materials within the stream banks, then the department will require the operator to obtain this permit or a site specific permit and perform monitoring.
5. Certain facilities may also be required to obtain the U.S. Corps of Engineers (USACE) general permit (GP)-34M, *Sand and Gravel Excavation Activities*. All permittees should check with the USACE before beginning operations.
6. Private individuals who mine sand and gravel for their personal use are exempt from this permit. Political subdivisions that mine sand and gravel for public projects and utilize their own personnel and equipment are also exempt from this permit.
7. For the purposes of this permit, process wastewater is defined as any water used in the slurry transport of mined material, air emissions control, equipment and vehicle washing, separation processes (e.g. flotation, heavy media separation), or processing exclusive of mining/dredging. It also includes any water (e.g., stormwater, groundwater seepage) which becomes commingled with such wastewater in a pit, pond, lagoon, mine, or other facility used for treatment of such wastewater. Such discharges are deemed to be process wastewater discharge even if it occurs during a precipitation event. Process wastewater discharges are subject to treatment processes, as necessary, to comply with the effluent limitations in this permit. This permit does not authorize the discharge of waters with added detergents, additives, cleaners, or solvents. For the purpose of this permit, coagulants and flocculants are not considered to be “additives” and may be added to wastewater in accordance with manufacturer’s instructions in order to meet permit requirements.
8. For the purposes of this permit, mine dewatering is defined as any water (e.g., stormwater, groundwater seepage) that is impounded or that collects in a pit or mine and is pumped, drained, or otherwise removed from the mine through the efforts of the mine operator. This term also includes wet pit overflows caused solely by direct rainfall and ground water seepage. However, if a mine is also used for the treatment of process wastewater or is otherwise comingled with process wastewater, discharges of comingled water (process wastewater, stormwater, and/or groundwater seepage) from the mine shall be deemed discharges of process wastewater.
9. For the purposes of this permit, stormwater is defined as rainfall runoff, runoff from frozen precipitation, and surface runoff and drainage.
10. Co-located Industrial Activities: A facility may obtain authorization under this general permit if the facility has one or more of the SIC Codes listed as applicable to this permit. If these facilities have additional activities that are described by a secondary SIC code that is listed above, then these additional activities are described as co-located industrial activities. Stormwater and applicable wastewater discharges from co-located industrial activities may be authorized under this general permit provided that the facility complies with all of the sector specific requirements defined in this general permit for each of these co-located activities. The sector specific requirements apply only to the portion of the facility where that specific sector of activity occurs, except where runoff from different activities combines before leaving the property. In cases where these discharges are comingled, the most stringent monitoring requirements and effluent limitations for the comingled discharge must be met.

11. Co-located Industrial Facilities: A facility operator may obtain authorization under this general permit if the facility meets one or more of the SIC Codes listed as applicable to this permit. Multiple industrial facilities may be described as co-located if they have different operators but lie within a common property boundary and each facility conducts industrial activities described herein. If authorization under this general permit is sought, the operator of each co-located facility may individually obtain authorization to discharge under this general permit. If individual coverage is sought, each co-located facility will then be issued a unique permit authorization number.
12. Industrial mining and processing of fracturing sand in facilities engaged in activities similar in nature to rock quarries such as underground mining, pulverizing and blasting are not covered by this permit and must apply for MO-G490000. Construction sand and gravel (SIC 1442) is defined as sand, gravel or aggregate that has been dredged or mined from open pits and then washed, screened or otherwise prepared for construction uses. Any industrial sand facilities engaged in the dredging or mining of sand from open pits shall apply for the MO-G500000 general permit.
13. This permit does not authorize the mining/dredging activity, only water discharges that result from the activity. This permit must be obtained prior to commencing any mining/dredging operations. A permit authorizing the mining/dredging activities must also be obtained from the Land Reclamation Program, which can be contacted at 573-751-4041 and/or the USACE's Regulatory Branches in the Kansas City District at (816) 389-3990, Little Rock District at (501) 324-5295, Rock Island District at (309) 794-5351, St. Louis District at (314) 331-8575, or Memphis District at (901) 544-3473.
14. This permit does not authorize in-stream washing of sand or gravel.
15. This permit does not authorize process wastewater and stormwater discharges:
 - (a) Within 100 feet of a Class W¹ or mitigated wetland;
 - (b) Within 100 feet upstream of streams, lakes, or reservoirs with the designated use of drinking water supply;
 - (c) Within 2 miles upstream of streams, lakes, or reservoirs identified as critical habitat for endangered species¹;
 - (d) Within 2 miles upstream of biocriteria reference locations;
 - (e) Within 1,000 feet of an Outstanding State Resource Water (OSRW)¹.
16. For facilities within the watershed of an Outstanding National Resource Water (ONRW)¹, which includes the Ozark National Scenic Riverways and the Wild and Scenic Rivers System, or within 1,000 feet of an OSRW, this permit:
 - (a) Authorizes no-discharge facilities [as defined in 10 CSR 20-6.015(1)(B)7.] to operate. Any discharge from a no-discharge facility will be considered a violation of this permit unless a catastrophic or chronic storm event [as defined in 10 CSR 20-6.015(1)(B)] occurs. In the event of a catastrophic or chronic storm event, the no-discharge facility is authorized to release only the amount of stormwater required to prevent damage to the facility or established Best Management Practices (BMPs).
 - (b) Authorizes stormwater discharge facilities to operate and continue to discharge stormwater so long as the benchmarks set forth in this permit are not exceeded. Should a benchmark be exceeded, the discharge is considered to cause degradation in water quality of the outstanding resource water and the facility must take corrective action to meet the benchmarks. OSRWs and ONRWs are protected against any degradation in quality as defined in 10 CSR 20-7.015(6)(B) and 7.031(3)(C). Failure to take corrective action to address a benchmark exceedance and failure to make tangible progress towards achieving compliance with the benchmarks is a permit violation. More detailed requirements concerning stormwater discharges are found in the Stormwater Requirement section of this permit. If exceedances of benchmarks continue to occur, the department may require the facility to operate as a no-discharge facility under this permit or to apply for a site-specific permit.
 - (c) Does not authorize discharge of process wastewater or mine dewatering per 10 CSR 20-7.015(6).
17. The department may require any facility authorized by a general permit to apply for a site-specific permit [10 CSR 20-6.010(13)(C)]. Cases where a site-specific permit may be required include, but are not limited to, the following:
 - (a) The discharge(s) is a significant contributor of a pollutant(s) which impairs the beneficial uses of the receiving stream;
 - (b) The discharger is not in compliance with the conditions of the general permit; or
 - (c) A Total Maximum Daily Load (TMDL) containing requirements applicable to the discharge(s) is approved.
18. Facilities that are located within the watershed of an impaired water as designated on the 305(b) Report must be evaluated on a case-by-case basis for inclusion under this permit. Missouri's impaired waters can be found at www.dnr.mo.gov/env/wpp/waterquality/index.html. Facilities that are found to be discharging the listed pollutant(s) of concern for any impaired water may be required to obtain a site-specific permit.

¹ Identified or described in 10 CSR 20-7. These regulations are available at many libraries and online at www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp, or may be purchased from the department by calling the department's Water Protection Program.

19. If a facility covered under a current general permit desires to apply for a site-specific permit, the facility may do so by contacting the department for application requirements and procedures.
20. Facilities covered under a current site-specific permit who desire to apply for inclusion under this general permit may contact the department for application requirements and procedures.
21. The following are allowable non-stormwater discharges authorized under this permit:
 - (a) Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
 - (b) Irrigation drainage;
 - (c) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
 - (d) Routine external building wash down that does not use detergents;
 - (e) Uncontaminated ground water or spring water; and
 - (f) Foundation or footing drains where flows are not contaminated with process materials.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR NON-STORMWATER DISCHARGES

TABLE A		FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. These final effluent limitations shall be effective at issuance of the Master General Permit. Such discharges shall be controlled, limited, and monitored by the facility as specified below:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
Non-Stormwater Discharges		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
Process Wastewater and Mine Dewatering for Construction Sand and Gravel Facilities-SIC1442 (Note 1)						
Limit Set: CS						
Flow	mgd	*		*	once/quarter***	24 hr. estimate
Settleable Solids	ml/L/hr	1.5		1.0	once/quarter***	grab
Oil and Grease	mg/L	15		10	once/quarter***	grab
pH**	SU	6.5 - 9.0		6.5 - 9.0	once/quarter***	grab
Total Suspended Solids	mg/L	110		70	once/quarter***	grab
Process Wastewater and Mine Dewatering for Industrial Sand Facilities-SIC 1446 (Note 1)						
Limit Set: IS						
Flow	mgd	*		*	once/quarter***	24 hr. estimate
Settleable Solids	ml/L/hr	1.5		1.0	once/quarter***	grab
Oil and Grease	mg/L	15		10	once/quarter***	grab
pH**	SU	6.5 - 9.0		6.5 - 9.0	once/quarter***	grab
Total Suspended Solids	mg/L	45		25	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. SHOULD A WAIVER TO eDMR BE GRANTED BY THE DEPARTMENT, PAPER REPORTS SHALL BE SUBMITTED IN A TIMELY MANNER TO THE APPROPRIATE REGIONAL OFFICE. THE FIRST REPORT IS DUE <u>MONTH 28, YEAR</u> . IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.						

Note 1: If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table A. Report as no-discharge when a discharge does not occur during the reporting period. If multiple samples are collected and analyzed during a quarter, the multiple samples are not to be averaged at intervals exceeding one calendar month (excluding pH which is not to be averaged).

- * Monitoring requirement only.
- ** pH is measured in standard units and is not to be averaged.

Table B	Sample and Reporting Schedule 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

PERMIT REQUIREMENTS

1. Electronic Discharge Monitoring Report (eDMR) Submission System.
Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally-consistent set of data about the NPDES program. All general permit covered facilities under this master general permit shall comply with the department's requirements for electronic reporting.
 - (a) Discharge Monitoring Reporting Requirements.
 - (1) Application to participate in the department's eDMR system is required as part of the application for general permit coverage in order to constitute a complete permit application and may be accessed at dnr.mo.gov/env/wpp/edmr.htm.
 - (2) The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
 - (b) Other actions. The following shall be submitted electronically after such a system has been made available by the department:
 - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs);
 - (3) No Exposure Certifications (NOEs); and
 - (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs).
 - (c) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
 - (d) Waivers from Electronic Reporting.
 - (1) The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127.
 - (2) The permittee may obtain a temporary or permanent electronic reporting waiver by first submitting an eDMR Waiver Request Form (Form 780-2692): <http://dnr.mo.gov/forms/780-2692-f.pdf>, by contacting the appropriate permitting office or emailing edmr@dnr.mo.gov. The department will either approve or deny this electronic reporting waiver request within 120 calendar days of receipt.
 - (3) Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.
2. Facilities shall manage materials (products, stockpiles, waste piles, etc.) to aid in the prevention of these materials being transported off-site or into a water of the state during a high water event.
3. Facilities shall take precautions to ensure activities do not cause or contribute to an alteration of the stream channel. Stream channel alterations require review by the USACE under Section 404 of the federal Clean Water Act (CWA) and by the department under Section 401 of the federal CWA.
4. The discharge shall not contain floating solids or visible foam in other than trace amounts.
5. All outfalls and land application areas must be clearly marked in the field when practicable. Outfall and land application signage shall be clearly visible from both land and water perspectives where applicable. Gravel bar areas operated in strict adherence to the Land Reclamation Program's Sand and Gravel Excavation Plan [10 CSR 40-10.050 (14)] do not require monitoring for process wastewater .
6. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (Section 644.055, RSMo). The fees can be found at 10 CSR 20-6.011.
7. Compliance with all conditions in this permit and those in Standard Conditions Part I dated August 1, 2014, is required. At no time shall any discharge result in a violation of Water Quality Standards [10 CSR 20-7.031].
8. Compliance with all requirements in this permit does not supersede nor remove liability for compliance with city, county or other local ordinances. It is the responsibility of the facility operator to know whether or not there are local ordinances applying to their operation.
9. The permittee shall at all times properly maintain and operate all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.
10. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, termination, or notice to the department of planned changes or anticipated non-compliance does not stay any permit condition.
11. This permit does not convey any property rights of any sort, nor any exclusive privilege.

12. The permittee shall give notice to the department as soon as possible of any planned physical alterations, changes in process or additions to the size of the permitted facility when:
 - (a) The alteration or addition could significantly change the nature or increase the quantity of pollutants. This notification applies to pollutants subject to the effluent limitations of this permit as well as new pollutants that are different from pollutants listed in this permit; or
 - (b) The alteration or addition results in a significant change in disposal practices and may justify the application of permit conditions that are different from or absent in the current permit.

BENCHMARKS FOR STORMWATER DISCHARGES

TABLE C		BENCHMARKS FOR ALL FACILITIES		
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The benchmarks shall become effective upon issuance of the permit and remain in effect until the expiration of the permit. Such discharges shall be controlled, and limited, by the facility as specified below:				
DISCHARGE PARAMETER(S)	UNITS	DAILY MAXIMUM	BENCHMARK	SAMPLE TYPE
Stormwater Discharges for All Facilities				
Oil and Grease	mg/L		10	grab
pH**	SU		6.5 - 9.0	grab
Total Suspended Solids	mg/L		100	grab

STORMWATER REQUIREMENTS

1. The department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or evidence of off-site impacts from activities at the facility. If such an action is needed, the department will specify in writing the sampling requirements, including such information as location and extent. It is a violation of this permit to fail to comply with said written notification to sample.
2. When evaluating BMPS, stormwater samples should be collected within the first 60 minutes of discharge occurring as a result of precipitation events of 0.1 inches or greater within a 24-hour period. Samples should be collected from an active discharge and should not be taken from standing pools. Precipitation events include rainfall as well as run-off from the melting of frozen precipitation. Local weather stations and on-site gauges are two methods for obtaining local precipitation amounts.
3. The results of all samples from a stormwater discharge that are collected and analyzed must be retained for a period of five (5) years and made available to the department upon request.
4. This permit stipulates pollutant benchmarks applicable to the facility's discharge. Benchmarks are considered necessary to protect existing water quality and every effort should be made to meet benchmarks during discharges resulting from a precipitation event up to and including the 10-year, 24-hour rain event. Benchmarks do not constitute direct numeric effluent limitations; therefore, not meeting a benchmark is not a permit violation. Failure to address a benchmark exceedance with improved BMPs and failure to make tangible progress toward meeting benchmarks is a permit violation. The 10-year, 24-hour rain event information may be found at: http://www.nws.noaa.gov/oh/hdsc/PF_documents/TechnicalPaper_No40.pdf or http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume8.pdf.

If the efforts taken by the facility are not sufficient and a benchmark cannot be met the facility may demonstrate to the department that a benchmark value is not achievable. The demonstration must include rationale and supporting documentation and must show that a benchmark value cannot be achieved through the application of BMPs that represent available technology. Additionally, the demonstration must show that the benchmark is not feasible because no further pollutant reductions are technologically available or economically practicable in light of best industry practices. This demonstration must be presented to the department for review and approval.

5. When applying for coverage under this permit, the facility shall develop a SWPPP. The facility shall select, install, use, operate, and maintain the BMPs 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*, (EPA 833-B-09-002) published by the United States Environmental Protection Agency (EPA) in February 2009 (www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf). The selection of control measures that prevent or reduce the discharge of pollutants in stormwater shall be specified in the SWPPP. The SWPPP shall identify the BMPs that are reasonable and effective, taking into account environmental impacts and costs. This analysis must document why no discharge or no exposure options are not feasible at the facility. This selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of Antidegradation [10 CSR 20-7.031(3) and 10 CSR 20-7.015(9)(A)5.]. Failure to implement and maintain the chosen alternatives is a permit violation. Existing facilities with established SWPPPs and BMPs need not conduct an additional alternatives analysis unless new BMPs are established to address benchmark deviations.

New Facilities:

- (a) New facilities that are being issued coverage under this general permit for the first time, the SWPPP must be prepared within sixty (60) days and implemented within one hundred eighty (180) days of the permit issuance.
- (b) Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
- (c) The SWPPP must be kept on-site and be made readily available to the department upon request. The SWPPP should not be sent to the department unless specifically requested.

Existing and Expanding Facilities :

- (a) An existing facility was required to prepare a SWPPP for coverage under a previous version of this permit. The existing SWPPP for the facility must be reviewed, revised as necessary and implemented within 30 days of reissuance of coverage. The general permit requires all facilities to develop and maintain a SWPPP. Expanding facilities are required to review and revise the SWPPP as necessary to account for the facility expansion. Once expansion occurs the revised SWPPP must be implemented within 30 days of permit modification.
- (b) Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
- (c) The SWPPP must be kept on-site or be made readily available to the department upon request. The SWPPP should not be sent to the department unless specifically requested.

For all facilities the SWPPP must include the following:

- (a) An assessment of all stormwater discharges associated with the facility, facility activities, and facility materials. This assessment 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 BMPs and a narrative explaining how the BMPs will be implemented to control and minimize the amount of potential contaminants that enter stormwater.
- (c) A schedule for monthly site inspections and a brief written report, which includes the name of the inspector, the signature of the inspector, and the date. The inspections must include observation and analysis of BMP effectiveness, deficiencies, and corrective action that will be taken. Deficiencies must be corrected as soon as possible, but not longer than seven (7) days from discovery and must be documented in the inspection report. The facility may submit a written request to the department justifying additional time, if necessary, to complete corrective action. The purpose of the SWPPP and the BMPs listed therein is to prevent pollution [10 CSR 20-2.010(56)] of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution of waters of the state or meeting effluent limitations of this permit. Corrective action means the facility took steps to eliminate the deficiency. Inspection reports must be kept with the SWPPP and must be made available to the department upon request.
- (d) A provision for designating an individual to be responsible for environmental matters.
- (e) A provision for providing training to all personnel involved in material handling, material storage, and housekeeping of areas having materials exposed to stormwater. Proof of training must be made available to the department upon request.
- (f) A provision for evaluating effluent limitations established in this permit.

6. The following minimum BMPs must be implemented at all facilities:

- (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 stormwater from these substances.
- (b) Provide collection facilities on-site and arrange for proper disposal of waste products including, but not limited to, petroleum waste products, solid waste, de-icing/anti-icing products, and solvents.
- (c) Store all paints, solvents, petroleum products, petroleum waste products in storage containers (such as drums, cans, or cartons) so that these materials, and the storage containers themselves (where possible), are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged as stormwater under this permit. Commingled water must be discharged as process wastewater and meet applicable effluent limitations. Provide spill prevention, control, and countermeasures to prevent any spill 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 prevent the contamination of groundwater.

- (d) Provide sediment and erosion control sufficient to prevent sediment loss off of the property, pollution of waters of the state, and to comply with the conditions of this permit, Missouri Clean Water Law, and the CWA. This may require the use of silt fences, sediment basins or other treatment structures.
- (e) Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.

LAND APPLICATION MONITORING REQUIREMENTS

(ATTENTION: If a facility does not land apply, this section is not applicable.)

TABLE E		LAND APPLICATION MONITORING REQUIREMENTS				
The facility is authorized to conduct land application of process wastewater, mine dewatering and/or stormwater as specified in this permit. If the facility chooses land application, it shall be controlled, limited, and monitored by the facility as specified below:						
Monitoring Requirements for Land Application Facilities (Note 1)						
PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
Limit Set: SB						
Storage Basin Operational Monitoring						
Storage Basin Freeboard (Note 2)	feet	*			once/month	measured
PARAMETER(S)	UNITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
Limit Set: LA						
Precipitation	inches	*			daily	total
Land Application Operational Monitoring (Note 3)						
Irrigation Period	hours	*			daily**	total
Volume Irrigated	gallons	*			daily**	total
Application Area	acres	*			daily**	total
Application Rate	inches	*			daily**	total
Process Wastewater Land Applied (Note 3 and Note 4)						
Oil and Grease	mg/L	*			once/year	grab
LAND APPLICATION MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. SHOULD A WAIVER TO eDMR BE GRANTED BY THE DEPARTMENT, PAPER REPORTS SHALL BE SUBMITTED IN A TIMELY MANNER TO THE APPROPRIATE REGIONAL OFFICE. THE FIRST REPORT IS DUE <u>MONTH 28, 20XX</u> . IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.						

* Monitoring requirement only.

** Land application operational monitoring will occur daily when land application is taking place.

Note 1 - This table applies to no-discharge, land application facilities (any facility that chooses to land apply process wastewater rather than discharge). Land application can be an alternative to treatment and discharge of process wastewater, but must be conducted in accordance with the Land Application Requirements of this permit. Facilities within the watershed of an ONRW must land apply process wastes or discharge to a wastewater treatment system rather than discharge. If a facility never land applies wastewater it does not need to report.

Note 2 - Storage basin freeboard shall be reported as storage basin water level in feet below the overflow level.

Note 3 - If the facility practices land application but land application does not occur during the report period, report as "no discharge."

Note 4 - Process wastewater that is land applied shall be sampled at the irrigation pump, wet well, or application vehicle.

LAND APPLICATION REQUIREMENTS

(ATTENTION: THESE REQUIREMENTS ONLY APPLY TO FACILITIES THAT LAND APPLY)

1. A facility may operate as a no-discharge facility and land apply wastewater. If a facility does not land apply wastewater the land application requirements do not apply.
2. Facilities that know they will land apply process wastewater shall notify the department by so noting on their application. Facilities that decide to land apply after the permit is issued shall notify the department and shall have their permit modified to allow land application. Permit modification fees may apply.

3. Land application of wastewater:
 - (a) Shall not result in a discharge of wastewater from land application fields;
 - (b) Shall not occur during frozen, snow covered, or saturated soil conditions, or when a forecasted precipitation event is likely to produce runoff within 24 hours of land application;
 - (c) Shall occur only during daylight hours;
 - (d) Shall not be land applied within thirty (30) days prior to crop harvesting or grazing by cattle;
 - (e) Shall not exceed 0.25 inches/hour; 1.0 inches/day; 3.0 inches/week; and 40 inches/year;
 - (f) Shall not occur on slopes exceeding 20 percent (%). Land application on slopes exceeding 10 percent (%) must be applied at ½ the rate specified in (e);
 - (g) Shall not cause surface ponding or runoff of wastewater from the application site during land application; and
 - (h) Shall not occur within:
 - (1) 50 feet of the property line or public road;
 - (2) 300 feet up gradient of a public or privately owned drinking water impoundment or intake or water supply well, including those not located on property;
 - (3) 150 feet of an occupied residence, public building, or public use area; and
 - (4) 300 feet of a sinkhole, or other direct conduit to groundwater.
4. All land application systems shall be operated so as to provide uniform distribution of process wastewater over the entire irrigation site.
5. For row crop irrigation, a complete ground cover of vegetation shall be maintained on the land application or vegetation should be established as soon as practicable after waste incorporation within the normal crop planting and harvesting season.
6. The land application site and system shall be visually inspected at least hourly during land application to check for runoff and equipment malfunctions. A log of inspections shall be kept and made available to the department upon request.
7. Process wastewater may be applied at agronomic rates for use as soil amendment. There shall be no land application of any pollutant in sufficient amounts to cause harm to the soil structure or productivity, or cause stress or toxicity to plant life.
8. These requirements do not supersede nor remove liability for compliance with county and other local ordinances.
9. Records shall be maintained and summarized into an annual operating report, which shall be retained in a readily available location on site and shall be produced upon request by the department. The summarized annual operating report is in addition to the reporting requirements listed in Table E.
 - (a) No-discharge Land Application Facilities - The summarized annual report shall include the following:
 - (1) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
 - (2) The number of days the storage basin(s) has discharged during the year, the discharge flow, the reasons discharge occurred, and effluent analysis performed;
 - (3) A summary of the land application operations including freeboard at the start and end of the year, the number of days of land application for each month, the total gallons land applied, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility, a summary of testing results for process wastewater; and
 - (4) A summary of any problems or deficiencies encountered, corrective action taken and improvements planned.

STORAGE BASIN REQUIREMENTS ASSOCIATED WITH LAND APPLICATION

1. No-discharge Systems: The minimum and maximum operating water levels for the storage basin shall be clearly marked. Each basin shall be operated so that the minimum freeboard is no less than two feet below the Emergency Spillway except due to exceedances of the 10-year, 24-hour storm events according to National Weather Service data http://www.nws.noaa.gov/oh/hdsc/PF_documents/TechnicalPaper_No40.pdf or http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume8.pdf. Process wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage basin(s) shall be lowered to the minimum operating level prior to each winter by November 30.
2. Storage basins shall have an emergency spillway to protect the structural integrity of the infrastructure during operation at near-full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. It is a violation of this permit to place material in the emergency spillway or otherwise cause it to cease to function properly, as this may result in a catastrophic failure of the storage basin.
3. The storage basin berms shall be mowed and kept free of any trees, animal dens, or other potential sources of damage to the berms.

4. Any unauthorized discharge from the storage basin shall be reported to the appropriate department regional office as soon as possible but always within 24 hours of the facility becoming aware of the discharge. Regional office information may be found at: <http://dnr.mo.gov/regions/index.html>.

STANDARD CONDITIONS

1. In addition to specified conditions stated herein, this permit is subject to the attached Standard Conditions Part I dated August 01, 2014, and hereby incorporated as though fully set forth herein.
2. Water Quality Standards
 - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of Missouri Water Quality Standards (10 CSR 20-7.031), including both specific and general criteria.
 - (b) 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, 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 Solid Waste Law, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247, RSMo.
3. Changes in Discharges of Toxic Substances

The facility shall notify the department as soon as it knows or has reason to believe:

 - (a) That an 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;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,5-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application; or
 - (6) The notification level established by the department in accordance with 40 CFR 122.44(f).
 - (b) That the facility has begun or is expected to begin to use or manufacture as an intermediate product, by-product, final product, or waste product any toxic pollutant which was not reported in the permit application.
 - (1) Toxic pollutants shall consist of, but are not limited to pollutants listed in 10 CSR 20-7.031 Table A or 40 CFR 122 Appendix D.
4. 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 Section 301(b)(2)(C) and (D), 304(b)(2)(A) and (B), and 307(a)(2) of the CWA, if the effluent standard or limitation issued or approved:
 - (1) Contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
 - (2) Controls any pollutant not limited in this permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a wasteload allocation study, toxicity test, or other information indicates changes are necessary to assure compliance with Missouri Water Quality Standards (10 CSR 20-7.031).
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, an effluent limitation derived from a TMDL is developed for the receiving waters, which would then be included in a list of waters of the state not fully achieving Missouri Water Quality Standards.

The permit, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

PERMIT RENEWAL

Unless terminated, the permittee shall submit an application for the renewal of this permit by submitting *Form E-Application for General Permit Under Missouri Clean Water Law* <http://dnr.mo.gov/forms/780-0795-f.pdf> no later than thirty (30) days prior to the permit's expiration date if they wish to continue an activity regulated by this permit after permit expiration. If a renewal application is not received 30 days prior to the expiration date of the permit, the permittee may be required to apply for and obtain a new permit. As part of the complete application and as required by the federal NPDES eReporting rule, participation in the department's Electronic Discharge Monitoring Report Submission System (eDMR) will be required. Facilities already participating in eDMR need not re-apply upon renewal. More information can be found at: <http://dnr.mo.gov/env/wpp/edmr.htm>. Failure to apply for renewal of a permit may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

PERMIT TRANSFER

This permit may not be transferred to a new owner in any fashion except by submitting an *Application for Transfer of Operating Permit* <http://dnr.mo.gov/forms/780-1517-f.pdf> signed by the seller and buyer of the facility along with the appropriate modification fee. In some cases, revocation and reissuance may be necessary. Facilities with transfers carried out without proper notice to the department will be considered to be operating without a permit and may be assessed an administrative penalty.

PERMIT TERMINATION

The permittee shall apply for permit termination when activities covered by this permit have ceased and no significant materials (as defined by 10 CSR 20-6.200(1)(C)27.) remain on the property or if on the property, are stored in such a way as to have no potential for pollution. Proper closure of any storage structure is required prior to permit termination. In order to terminate this permit, the permittee shall notify the appropriate department regional office by completing and submitting *Form H- Request for Termination of a General Permit* <http://dnr.mo.gov/forms/780-1409-f.pdf> . The regional office may require inspection of the premises prior to granting termination of a permit.

Missouri Department of Natural Resources Fact Sheet MO-G500000 Mined/Dredged Sand and Gravel Processing

The Federal Water Pollution Control Act [Clean Water Act (CWA)] Section 402 of 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 stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the CWA). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (permit) are issued by the Missouri Department of Natural Resources (department) under an approved program, operated in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law Section 644 as amended). Permits are issued for a period of five (5) years unless otherwise specified.

Per 40 CFR 124.56, 40 CFR 124.8, and 10 CSR 20-6.020(1)(A)2., a Fact Sheet 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 permit. A Fact Sheet is not an enforceable part of a permit.

This Fact Sheet is for a:

- Master General Permit

Summary of Changes:

Participation in the department's Electronic Discharge Monitoring Report (eDMR) System is now required for all facilities.

Language throughout the permit has been update to reflect the most current permit language found in MGPs.

Effluent limits and monitoring frequency have been retained from the previous permit for construction sand and gravel facilities (SIC 1442) as they are believed to be sufficiently protective of water quality.

This permit establishes the limit of 45 mg/L as a daily maximum and 25 mg/L as a monthly average for TSS for industrial sand facilities. These limits apply to both process wastewater and mine dewatering discharges associated with SIC Code 1446. For more discussion of the new effluent limitations, see Part IV- Effluent Limits Determinations beginning on page 5 of this Fact Sheet.

Benchmarks have been changed from the previous version of the permit, which had a benchmark for Settleable Solids and no TSS benchmark for stormwater. The new permit establishes a benchmark of 100 mg/L for Total Suspended Solids.

Setbacks have been lowered to 100 feet with regard to wetlands and the 1000 foot setback from losing streams has been removed. The Missouri Water Quality Standards do not contain differing standards for losing streams as it pertains to the pollutants of concern associated with the facilities discharging under this general permit. Technology-based requirements for the discharges authorized under this general permit do not differ when discharging to a losing stream versus a gaining stream. Setbacks for an OSRW is reduced from 2 miles to 1000 feet to match other master general permits.

A significant change is that while maintaining coverage for sand and gravel washing, the revised permit also covers processing activities such as pit dewatering, sorting and storage, etc. Industrial Sand Mining (SIC 1446) permitting has been split between this permit and the MO-G490000 according to activities carried out by these facilities. Industrial sand facilities engaged in activities similar to construction sand facilities (i.e., dredging and open pit mining) will be covered under MO-G500000. Industrial sand and fracturing sand facilities that are engaged in activities carried out by rock quarry operations (i.e., underground mining, grinding, pulverizing and blasting) will be covered under MO-G490000.

Land application requirements have been added to this general permit to provide the option to land apply process wastewaters in order to be able to operate sand and gravel mining facilities within the watershed of an Outstanding National Resource Waterway (ONRW) and within 1,000 feet of OSRWs. Much of the state's sand and gravel repositories are in the Ozarks and often within these areas.

Clarification: Mine dewatering and process wastewater are two separate discharge types and samples must be collected for each type of discharge. If discharges are comingled, then such discharge is considered to be process wastewater and no additional monitoring is required for mine dewatering. The definitions of each discharge type can be found in the applicability section of this permit.

Part I - Facility Information

Facility Type:	Industrial
Facility SIC Code(s):	1442, 1446
Facility Description:	Process wastewater, mine dewatering, and stormwater discharges associated with sand and gravel mining/dredging, processing, and stockpiles (with the exclusion of fracking sand.)

Part II - Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

Per Missouri 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 and Discussion of Limits section. This permit applies to facilities discharging to the following water body categories:

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

Missouri Water Quality Standards (10 CSR 20-7.031) 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 shall be maintained in accordance with 10 CSR 20-7.031(4). The effluent limitations established by this permit are intended to be protective of all streams that fall within the categories of receiving water bodies indicated above. A general permit does not take into consideration site-specific conditions.

MIXING CONSIDERATIONS:

This permit applies to receiving streams of varying low flow conditions. Therefore, the effluent limitations must be based on the smallest low flow streams considered, which includes waters without designated uses. As such, no mixing is allowed.

- Not Applicable: Mixing Zone [10 CSR 20-7.031(5)(A)4.B.(I)(a)]
- Not Applicable: Zone of Initial Dilution [10 CSR 20-7.031(5)(A)4.B.(I)(b)]

RECEIVING STREAM MONITORING REQUIREMENTS:

There are no receiving water monitoring requirements recommended at this time.

Part III - Rationale and Derivation of Effluent Limitations and Permit Conditions

ANTI-BACKSLIDING:

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

- Applicable: Backsliding proposed in this permit conforms to the anti-backsliding provisions of Section 402 (o) of the CWA and 40 CFR 122.44. The department has determined that technical mistakes were made in the previous permit [CWA 402(o)(2)(B)(ii)]. The Settleable Solids effluent limitation and benchmark have been removed because the department has determined that Total Suspended Solids (TSS) analysis is sufficient to assess the quantity of solids in the discharges based on Missouri's soil types. For TSS, the permit benchmark value is consistently achieved in stormwater discharges by a variety of industries with Stormwater Pollution Prevention Plans (SWPPPs) and is deemed protective of instream water quality. These values are also applied as benchmarks in EPA's Multi-Sector General Permit for facilities with one or more of the SIC codes in this permit. The effluent limitation for TSS has been reduced for Industrial Sand (SIC 1446) facilities to bring it into line with EPA effluent limit guidelines for that sector..

ANTIDegradation:

Antidegradation policies ensure protection of water quality for a particular water body on a pollutant by pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as Outstanding National Resource Waters (ONRW) or Outstanding State Resource Waters (OSRW) [10 CSR 20-7.031(3)(C)]. Antidegradation policies are adopted to minimize adverse effects on water. The department has determined that the best avenue forward for implementing the Antidegradation requirements into general permits is by requiring the appropriate development and maintenance of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must identify all Best Management Practices (BMPs) that are reasonable and effective, taking into account environmental impacts and costs. This analysis must document why no discharge or no exposure options are not feasible at the facility. This selection and documentation of appropriate control measures will then serve as the analysis of alternatives and fulfill the requirements of the Antidegradation Rule and Implementation Procedure 10 CSR 20-7.031(3) and 10 CSR 20-7.015(9)(A)5.

Any facility seeking coverage under this permit, which undergoes expansion or discharges a new pollutant of concern, must update their SWPPP and select new BMPs that are reasonable and cost effective. New facilities seeking coverage under this permit are

required to develop a SWPPP that includes this analysis and documentation of appropriate BMPs. Renewal of coverage for a facility requires a review of the SWPPP to assure that the selected BMPs continue to be appropriate.

- Applicable: The pollutants of concern in this permit are listed in Table A, C, D, and E of this permit. Compliance with the effluent limitations established in this permit for the protection of General Criteria, along with the evaluation and implementation of BMPs as documented in the SWPPP, meets the requirements of Missouri's Antidegradation Review [10 CSR 20-7.031(3), 10 CSR 20-7.031 Table A, and 10 CSR 20-7.015(9)(A)5.].

BENCHMARKS:

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks give the facility a means to measure the efficacy of BMPs and to replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to address a benchmark violation with improved BMPs is a permit violation. The 10-year, 24-hour rain event information may be found at: http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume8.pdf.

Benchmark data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the limitations of the permit. This assures that water quality is protected without placing undue restriction on small businesses.

If data becomes available that indicates existing water quality will be protected by alternative benchmarks or by adding sampling frequency specific to this industry, the department will propose to incorporate those benchmarks into this general operating permit as part of a general operating permit modification. Such data must be approved by the department as appropriate and representative before it can be considered.

- Applicable; This facility has stormwater-only outfalls with benchmark constraints. The benchmarks listed are consistently achieved in stormwater discharges by a variety of other industries with SWPPPs and is deemed protective of instream water quality and aquatic life.

PUBLIC NOTICE OF COVERAGE FOR AN INDIVIDUAL FACILITY:

Public Notice of reissuance of coverage is not required unless the facility has been found to be in significant noncompliance [10 CSR 20-6.020(1)(C)4.]. The need for an individual public notification process shall be determined and identified in the permit [10 CSR 20-6.020(1)(C)5.].

- Not Applicable: Public Notice is not required for issuance of coverage under this permit to individual facilities for the first time.

SCHEDULE OF COMPLIANCE (SOC):

Per § 644.051, RSMo., a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. An SOC includes 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. *See also* Section 502 (17) of the Clean Water Act, and 40 CFR 122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, an SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

- Not Applicable: This permit does not allow for a schedule of compliance. Updated values for TSS for SIC 1446 Industrial Sand Facilities are Technology Based Effluent Limits (TBEL) per 40 CFR 436.42 and as such are prohibited from application of a Schedule of Compliance.

SETBACKS:

Setbacks are common elements of permits and are established to provide a margin of safety in order to protect the receiving water from accidents, spills, unusual events, etc. The setback from wetlands has been lowered from 1,000 feet to 100 feet. The department has determined that adherence to effluent limitations in this permit will adequately protect water quality in wetlands with a setback of 100 feet. The 1000 foot setback from losing streams has been removed. The Missouri Water Quality Standards do not contain differing standards for losing streams as it pertains to the pollutants of concern associated with the facilities discharging under this general permit. Technology-based requirements for the discharges authorized under this general permit do not differ when discharging to a losing stream versus a gaining stream. Setbacks for an OSRW is reduced from 2 miles to 1000 feet to match other master general permits.

SPILL REPORTING:

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. <http://dnr.mo.gov/env/esp/spillbill.htm>

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) Best Management Practices (BMPs) must be used 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 stormwater 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 waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater 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 stormwater discharges.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as needing better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate pollution of stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure that will assist in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures that have been determined to be adequate to achieve the benchmark values discussed above.

The facility will evaluate and inspect the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation should be done at least once per month but should be conducted more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

If failures continue to occur and the permittee feels there are no practicable or cost-effective BMPs that will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: <http://dnr.mo.gov/forms/index.html>.

- 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.

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

WASTELOAD ALLOCATIONS (WLA) FOR EFFLUENT LIMITATIONS:

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: WLA are not required at this time, thus no calculations were completed.

WATER QUALITY STANDARDS:

Per 10 CSR 20-7.031(4), 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 include in each NPDES permit conditions to achieve water quality established under Section 303 of the CWA, including state narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

Per 10 CSR 20-7.031(1)(FF), a toxicity test conducted under specified laboratory conditions on a specific indicator organism; and per 40 CFR Section 122.2, the aggregate toxic effect of an effluent measured directly by a toxicity 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 facility is not required to conduct a WET test.

Part IV - Effluent Limitations Determination

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this permit.

PROCESS WASTEWATER AND MINE DEWATERING EFFLUENT LIMITATIONS FOR TABLE A:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
CONSTRUCTION SAND AND GRAVEL (SIC 1442)							
FLOW	mgd	1	*		*	NO	
SETTLABLE SOLIDS	ml/L/hr	9	1.5		1.0		
OIL AND GREASE	mg/L	2, 3	15		10	NO	
pH	SU	1, 2	6.5 - 9.0		6.5 - 9.0	NO	
TOTAL SUSPENDED SOLIDS	mg/L	9	110		70	NO	
INDUSTRIAL SAND (SIC 1446)							
FLOW	mgd	1	*		*	NO	
SETTLABLE SOLIDS	ml/L/hr	9	1.5		1.0		
OIL AND GREASE	mg/L	2, 3	15		10	NO	
pH	SU	1, 2	6.5 - 9.0		6.5 - 9.0	NO	
TOTAL SUSPENDED SOLIDS	mg/L	1, 9	45		25	YES	110 DAILY MAXIMUM; 70 MONTHLY AVERAGE

* Monitoring requirement only

Basis for Limitations Codes:

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

DERIVATION AND DISCUSSION OF LIMITATIONS:

The CWA requires that all NPDES discharges to Waters of the U.S. contain technology-based or water-quality based effluent limitations, whichever is more stringent. When the EPA has not established industry specific technology based Effluent Limitation Guidelines, Missouri uses EPA's *Technical Support Document for Water Quality Based Toxics Control (TSD)* method for calculating site-specific water-quality based effluent limitations. The TSD method is based on assumptions and statistics that apply to continuous discharges, not intermittent stormwater discharges and do not apply to this permit. Thus, it is the department's policy to consult the

EPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) or other applicable documents or guidance.

- **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 facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the department, which may require the submittal of a permit modification.
- **Settleable Solids:** Settleable solids are a common constituent of discharges from the types of industrial activities carried out by the facilities covered under this permit. Effluent limitations are necessary to protect narrative criteria, 10 CSR 20-7.031(4). This limit is achievable based on the technology available such as settling tanks or basins. The existing effluent limitations are deemed protective and are carried over from the previous permit.
- **Oil and Grease:** This permit has water quality based effluent limitations of 15 mg/L daily maximum and 10 mg/L monthly average for the protection of aquatic life per 10 CSR 20-7.031. Oil and Grease is a conventional pollutant, in accordance with 10 CSR 20-7.031 Table A: Criteria for Designated Uses; 10 mg/L monthly average (chronic standard). The daily maximum was calculated using the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001). Section 5.4.2 indicates the waste load allocation can be set to the chronic standard. When the chronic standard is multiplied by 1.5, the daily maximum can be calculated. Hence, $10 * 1.5 = 15$ mg/L for the daily maximum. The existing effluent limitations are carried over from the previous permit.
- **pH:** pH is not to be averaged. The federal effluent limitations contain technology standards of 6.0-9.0 SU for pH in both construction sand and gravel and industrial sand wastewater discharges. The state water quality standard for pH is 6.5-9.0 SU. In accordance with the Clean Water Act section 301(b)(1)(C), the more stringent standard must be applied to the permit. The technology standard found in the federal ELG is not protective of state water quality standards. Therefore, the state water quality standard 6.5-9.0 SU will be carried over from the previous permit and implemented in this permit
- **Total Suspended Solids:** Effluent limitations for each type of receiving water body were set according to 10 CSR 20-7.015(2)-(8) and are considered necessary for protection of Water Quality Standards 10 CSR 20-7.031(4). Furthermore, process wastewater/ mine dewatering has been subdivided into Construction Sand and Gravel (SIC 1442) and Industrial Sand (SIC 1446). For SIC code 1446, 40 CFR 436.42 *Development Document for Effluent Limitations Guidelines and Standards for the Mineral Mining and Processing Industry Point Source Category* (July 1979); and *Technical Support Document for the 2004 Effluent Guidelines Program Plan* (EPA-821-R-04-014)] establishes the limit of 45 mg/L as a daily maximum and 25 mg/L as a monthly average for TSS in this permit. These limits apply to both process wastewater and mine dewatering discharges associated with SIC Code 1446. There are no federal ELGs for TSS associated with SIC Code 1442. Therefore, it is the department's best professional judgment to implement the previous permit limits of 110 mg/L as a daily maximum and 70 mg/L as a monthly average in this permit. The department has determined that these values are protective of state general criteria cited above and technologically achievable.

SAMPLING FREQUENCY:

Sampling frequency is established in accordance with department policy. Effluent limitations are expressed in a daily maximum and a monthly average. Quarterly monitoring is required. Results from samples may be submitted as both the daily maximum and the monthly average. If the facility collects multiple samples during any month, the permit requires the facility to submit a monthly average. If no discharges occur during a sampling period, report as "no discharge."

Part V- Benchmarks

BENCHMARKS FOR TABLE C)

PARAMETER	UNIT	BASIS FOR BENCHMARK	BENCHMARK	MODIFIED	PREVIOUS PERMIT BENCHMARK
Oil & Grease	mg/L	2, 9	10	NO	
pH	SU	2	6.5 - 9.0	NO	
Total Suspended Solids	mg/L	9	100	YES	NEW BENCHMARK

Basis for Limitation Codes:

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

DERIVATION AND DISCUSSION OF BENCHMARKS

The CWA requires that all NPDES discharges to Waters of the U.S. contain technology-based or water-quality based effluent limitations, whichever is more stringent. When the EPA has not established industry specific technology based Effluent Limitation Guidelines, Missouri uses EPA's *Technical Support Document for Water Quality Based Toxics Control (TSD)* method for calculating site-specific water-quality based effluent limitations. The TSD method is based on assumptions and statistics that apply to continuous discharges, not intermittent stormwater discharges and thus do not apply to this permit. Thus, it is the department's policy to consult the EPA's *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP)* or other applicable documents or guidance.

- **Oil and Grease:** The benchmark for oil and grease was established using the water quality criteria as the target. 10 CSR 20-7.031 Table A: Criteria for Designated Uses, establishes a water quality criteria of 10 mg/L for oil and grease, which is applicable to all waters of the state at all times. Oil and grease is a conventional pollutant, therefore calculations for limit derivations such as those used for toxics are not applicable. Additionally, a benchmark set at the level of 10 mg/L is expected to be protective of general criteria [10 CSR 20-7.031(4)], which are applicable to all water of the state at all times. When oil and grease levels are above 10 mg/L, a visible sheen is expected to form on a waterbody and thus general criteria violations are anticipated to occur. As a result, a benchmark of 10 mg/L ensures that BMPs are functioning at a level where discharges are protective of general criteria.
- **pH:** The range is 6.5 – 9.0 Standard pH Units (SU) per 10 CSR 20-7.031(5)(E). pH is not to be averaged. This value is carried over from the previous permit.
- **Total Suspended Solids:** This permit has a benchmark of 100 mg/L, which has been determined to be feasible, affordable, and protective of water quality. This value is consistently achieved in stormwater discharges by a variety of other industries with SWPPPs and is deemed protective of instream water quality. The department's best professional judgement is that this value is protective of state general criteria cited above and technologically achievable.

Part VI - Land Application Requirements

Land application has been added to the permit to provide and options for facilities that wish to operate within the watershed of an Outstanding National Resource Water (ONRW) or within 1,000 feet of an OSRW. A majority of the sand and gravel deposits in the state of Missouri are in the Ozarks, and may be within the watershed of and ONRW. The option to land apply process wastewater and mine dewatering allows facilities to operate in a no discharge manner. Monitoring has been included to demonstrate proper operation of the facility. Low-rate land application does not have the potential to cause violations of water quality standards in surface or groundwater. This applies to no-discharge; land application facilities and any facility that chooses to land apply process wastewater rather than discharge. Land application must be conducted in accordance with the Land Application Requirements of this permit. A facility shall report "no discharge" on the Discharge Monitoring Report if the facility does not land apply during the monitoring period.

LAND APPLICATION REQUIREMENTS FOR TABLE E.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MINIMUM	SAMPLING FREQUENCY	MODIFIED	PREVIOUS PERMIT VALUES
STORAGE BASIN FREEBOARD	feet	4, 9	*	once/month	YES	New Requirement
PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	SAMPLING FREQUENCY	MODIFIED	PREVIOUS PERMIT VALUES
PRECIPITATION	inches	4, 9	*	daily	YES	New Requirement
IRRIGATION PERIOD	hours	4, 9	*	daily**	YES	New Requirement
VOLUME IRRIGATED	gallons	4, 9	*	daily**	YES	New Requirement
APPLICATION AREA	acres	4, 9	*	daily**	YES	New Requirement
APPLICATION RATE	inches	4, 9	*	daily**	YES	New Requirement
OIL AND GREASE	mg/L	4, 9	*	annually	YES	New Requirement

* Monitoring requirement only

** Land application operational monitoring will occur daily when land application is taking place.

Basis for Limitations Codes:

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

DERIVATION AND DISCUSSION OF REQUIREMENTS:**STORAGE BASIN:**

- **Freeboard:** Monitoring requirement only. In order to determine compliance with 10 CSR 20-8.020(15)(F)2., monitoring of freeboard in the storage basin is required.
- **Precipitation:** Monitoring requirement only. In order to determine compliance with 10 CSR 20-8.020(15)(F)2., monitoring of freeboard in the storage basin is required. Additionally, precipitation monitoring allows the permittee to operate the land application activity to prevent over application during saturated conditions that may result in a discharge.

APPLICATION FIELD(S):

- **Application Area:** Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the area will allow the permittee to ensure compliance with setback distances and prevent illicit discharges to waterbodies.
- **Application Rate:** Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the rate will allow the permittee to ensure appropriate permeability and plant uptake is occurring and will prevent soil saturation that may result in runoff and illicit discharges to waterbodies. This will also prevent sludge buildup that may clog soils, which likewise will cause runoff and illicit discharges of wastewater to waterbodies.
- **Irrigation Period:** Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the irrigation period will also ensure that soils do not get saturated and result in runoff and illicit discharges to waterbodies. This will also prevent sludge buildup that may clog soils, which likewise will cause runoff and illicit discharges of wastewater to waterbodies.
- **Volume Irrigated:** Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the volume irrigated will allow the permittee to ensure over application does not occur and that hydraulic loading is maintained within design levels. This will also help prevent runoff and illicit discharges due to soil saturation. This will also prevent sludge buildup that may clog soils, which likewise will cause runoff and illicit discharges of wastewater to waterbodies.

SAMPLING FREQUENCY:

Sampling frequency is established in accordance with department policy. Sampling and reporting frequencies were established to best monitor the land application system. The storage basins should be monitored more frequently than the wastewater sampling requirements in order to ensure the basins do not overflow. This is best achieved on a monthly basis. The wastewater and/or sludge being land applied shall be tested annually to ensure that the land application field is not being overloaded. Application activities shall be monitoring daily during application periods. This is required to ensure compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15) and to prevent illicit discharges from the land application fields. These frequencies are consistent with other land application permits issued in the state. If no discharges occur during a sampling period, report as “no discharge.”

Part VII - Administrative Requirements

On the basis of preliminary staff review and 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 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 or because of 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 facility must be notified of the denial in writing.

The department must give public notice of a pending permit or of a new or reissued Missouri State Operating Permit. The public comment period is a length of time not less than thirty (30) days following the date of the public notice, during which interested persons may submit written comments about the proposed permit.

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

The Public Notice period for this permit was held March 3, 2017, through April 3, 2017.

DATE OF FACT SHEET: February 16, 2017

COMPLETED BY:

SUSAN HIGGINS

ENVIRONMENTAL SPECIALIST

MISSOURI DEPARTMENT OF NATURAL RESOURCES

WATER PROTECTION PROGRAM

OPERATING PERMITS SECTION

573-526-1002

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