OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
GENERAL WASTEWATER PERMIT FOR ROCK, SAND AND GRAVEL QUARRIES AND STONE CUTTING FACILITIES; TO CONSTRUCT OR OPERATE INDUSTRIAL WASTEWATER IMPOUNDMENTS; AND/OR TO LAND APPLY INDUSTRIAL WASTEWATER FOR DUST SUPPRESSION; AND/OR TO RECYCLE WASTEWATER AS WASH WATER OR COOLING WATER
GENERAL PERMIT No OKG95

GENERAL PROVISIONS

As provided by 27A O.S. §2-6-201 *et seq.* as amended, and the Rules of the Department of Environmental Quality (DEQ), operators of rock (including dimension stone), sand, and gravel quarries (excluding hydrofluoric acid (HF) flotation operations) (SIC Codes No. 1411, 1422, 1423, 1429, 1442 and 1446) and stone cutting facilities (SIC Code No. 3281) will be authorized to discharge wastewater, to construct and operate surface impoundments, to recycle wastewater for wash water or cooling water, and/or to land apply wastewater within the boundaries of the State of Oklahoma in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and/or IV hereof. This General Wastewater Disposal Permit (Permit) does not specify the disposal/treatment method(s) that the permittee must use. This Permit will regulate any combination of the above-listed wastewater disposal/treatment options and will cover both discharging and non-discharging (total retention) facilities.

Each facility will require an Authorization to Discharge and/or Dispose of Wastewater (Authorization) obtained from the Executive Director of DEQ. Owners or operators of facilities located within the boundaries of the State of Oklahoma must submit an application (DEQ form 606-OKG95) to DEQ to discharge and/or dispose of wastewater under this Permit and receive an Authorization prior to commencing such discharge and/or disposal. Owners or operators within the scope of this Permit who fail to submit an application to DEQ are not authorized to discharge and/or dispose of wastewater under this Permit.

This Permit shall not apply to discharging facilities that overlie a sensitive sole source groundwater basin or subbasin unless the facility meets the conditions described in 27A O.S. §2-6-111(A).

This Permit does not authorize discharge of wastewater to the following waters: Outstanding Resource Waters; High Quality Waters; Sensitive Public and Private Water Supplies including those with Reuse (SWS and SWSR); Cool Water Aquatic Communities; Trout Fisheries; Appendix 'B' Waters [OAC 252:730-5-25(c)(2)]; and within one (1) stream mile of a lake. An existing facility is not authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for Turbidity (Impairment ID 413) or pH (Impairment ID 441) for which a Total Maximum Daily Load (TMDL) has been performed and the result of the TMDL indicates that discharge limits more stringent than 45 mg/L for Total Suspended Solids (TSS) or pH limits more stringent than 6.5-9.0 standard units are required. A new facility is not authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for Turbidity (Impairment ID 413). However, a new facility may be authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for pH (Impairment ID 441) provided the facility adequately certifies the discharge will maintain a pH of 6.5-9.0 standard units.

For facilities requesting coverage under this Permit that discharge wastewater from washing vehicle(s)/equipment and maintenance areas or discharge wastewater containing oil-based products, the Permit will contain a limit for Oil and Grease of 15 mg/L. An existing facility is not authorized to discharge wastewater from washing vehicle(s)/equipment and maintenance areas or wastewater containing oil-based products to waters included in Oklahoma's 303(d) List of impaired water bodies listed for Oil and Grease (Impairment ID 317) for which a TMDL has been performed and the result of the TMDL indicates that discharge limits more stringent than 15 mg/L for Oil and Grease are required. A new facility may be authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for Oil and Grease (Impairment ID 317) provided the facility adequately certifies no wastewater from washing vehicle(s)/equipment and maintenance areas or wastewater containing oil-based products will be discharged.

If a facility discharges to a segment of a receiving waterbody that is not itself included in Oklahoma's 303(d) List, but is no more than one mile upstream of an impaired segment, then the discharge will be treated as though it were to the impaired segment.

For all facilities applying for coverage under this Permit, DEQ will determine whether the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service. If the facility is a new facility and the discharge is to a sensitive water, the facility will not be eligible for an Authorization under this Permit. If the facility is an existing facility and the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service, the facility will not be eligible for coverage under this Permit if there has been a change in the location of the discharge point or an increase in the volume of the discharge.

Quarries or stone cutting facilities that are currently permitted by DEQ through individual wastewater disposal permits may apply for coverage under this Permit no later than 180 days prior to the expiration of their current individual permits, or they may elect to continue coverage under their individual permits. New quarries or stone cutting facilities shall obtain authorization under this Permit or an individual permit prior to commencing any of the activities regulated by this Permit.

Effluent limitations contained in Part I will apply to discharges of process wastewater (including but not limited to transport water, wash water, scrubber water (crushers and classifiers), and contact cooling water) and associated stormwater runoff that becomes co-mingled with process wastewater associated with the following common activities:

- Mine dewatering of process wastewater and/or co-mingled stormwater;
- Sand and gravel suction dredging;
- Crushing/cutting stone to size;
- Washing processed stone and sand;
- Shaping and finishing stone;
- Washing vehicle(s)/equipment and maintenance areas; and
- Facility may at their option include all stormwater discharges under this Permit as process wastewater subject to effluent limitations, in lieu of coverage under the OKR05 Permit for Sector J.

Stormwater discharges that are not associated (non-contact) with these activities and are not co-mingled with the stormwater associated with these activities are subject to DEQ stormwater rules promulgated in the OPDES Storm Water Multi-Sector General Permit for Industrial Activities (MSGP), OKR05. Stormwater discharges regulated by the OKR05 for facilities as identified by the SIC Codes specified under Sector J are:

- All stormwater discharges from inactive quarries;
- Mine dewatering discharges composed entirely of stormwater or uncontaminated groundwater seepage from construction sand and gravel, industrial sand, and crushed stone mining from active and temporarily inactive quarries;
- All stormwater discharges from an active quarry, including plant runoff that does not co-mingle with process wastewater;
- All stormwater discharges from stockpiles from active and inactive quarries;
- All stormwater discharges from earth-disturbing activities conducted prior to active mining activities; and
- All stormwater discharges from sites undergoing reclamation.

At no time shall the effluent cause a violation of Oklahoma's Water Quality Standards (OWQS) in the receiving water.

Surface impoundments used for treatment and/or disposal of wastewater are authorized by this Permit in accordance with requirements for surface impoundments contained in Part I. Wastewater contained in surface impoundments may be recycled for use as stockpile wash water or cooling water. The wastewater may also be land applied for dust suppression on facility roadways and/or on stockpiles in accordance with requirements for land application contained in Part I.

The permittee shall comply with all provisions of this Permit and any Authorization issued pursuant to it.

Issuance of this Permit in no way or in any respect affects the permittee's civil or criminal responsibility regarding disposal of wastewater, except with respect to the permittee's legal responsibility under 27A O.S. §2-6-201 *et seq*. and DEQ Rules to obtain an Authorization under this Permit.

This Permit replaces and supersedes the previous permit issued on June 15, 2018.

The issuance date of this Permit is August 2, 2023.

This Permit shall become effective September 1, 2023.

This Permit and any Authorizations issued under it shall expire midnight August 31, 2028.

For Oklahoma Department of Environmental Quality

Carol Paden, P.E., Manager
Industrial Permits Section
Water Quality Division

Shellie R. Chard, Director
Water Quality Division

PART I
EFFLUENT LIMITATIONS, MONITORING AND OTHER REQUIREMENTS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from all outfalls as described in the Authorization. Wastewater discharges regulated by this Permit are process wastewater and associated stormwater runoff that becomes co-mingled with process wastewater associated with the following common activities: (1) mine dewatering of process wastewater and/or co-mingled stormwater; (2) sand and gravel suction dredging; (3) crushing/cutting stone to size; (4) washing processed stone and sand; (5) shaping and finishing stone; (6) washing vehicle(s)/equipment and maintenance areas; and (optionally) all stormwater discharges in lieu of coverage under the OKR05 Permit for Sector J. Where wastewaters associated with these activities are not discharged to Waters of the State, this section shall not be applicable.

Such discharges shall be limited and monitored by the permittee as specified in Tables 1 and 2 below. The effluent limitations listed in Table 1 shall become effective along with the monitoring requirements in Table 2.

TABLE 1
EFFLUENT LIMITATIONS FOR ALL OUTFALLS

Parameters	Discharge Limitations			
	Mass Loadings Limits (lbs/day unless otherwise specified)		Concentration Limits (mg/L unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow STORET: 50050	Report MGD	Report MGD	---	---
Oil and Grease [(1)] STORET: 00556	---	---	---	15
Total Suspended Solids STORET: 00530	---	---	25 [(2)]	45
Temperature [(3)] STORET: 00010	---	---	---	Report °C
pH STORET: 00400	---	---	Between 6.5 - 9.0 standard units	

(1) Oil and Grease limits apply only if wash water is generated from the cleaning of equipment or if a facility uses an oil-based product that enters any impoundment that discharges from the permitted facility.
(2) TSS monthly average limits only apply to industrial sand and gravel facilities (SIC code 1446).
(3) Temperature requirements only apply to dimension stone and stone cutting facilities whose wastewater includes equipment cooling water.

TABLE 2
MONITORING REQUIREMENTS FOR ALL OUTFALLS

Parameters	Monitoring Requirements	
	Measurement Frequency [(1)]	Sample Type
Flow	1/Month	Estimate
Oil and Grease	1/Month	Grab
Total Suspended Solids	1/Month	Grab
Temperature	1/Month	Grab
pH	1/Month	Grab

(1) When discharging

NOTE: See Parts II and III for Additional Requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses. Surface Waters of the State shall be maintained free from oil and grease and taste and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall locations as described in the Authorization.

B. REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III.E.4 of the Permit. Monitoring results obtained during the previous month shall be summarized and electronically reported on an electronic Discharge Monitoring Report (eDMR) form due to DEQ, Water Quality Division, Wastewater Compliance Tracking Section no later than the 15th day of the month following the completed monthly test. If no discharge occurs during the reporting period, an eDMR form stating "No Discharge" shall be electronically submitted according to the above schedule. Instructions on how to register as a Preparer or Signatory for eDMRs, as well as how to prepare and submit eDMRs, can be found on DEQ's website at http://www.deq.state.ok.us/wqdnew/ereporting/index.html. Assistance is also available by contacting DEQ at (405) 702-8100 or deqreporting@deq.ok.gov.

C. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule: None.

D. SURFACE IMPOUNDMENTS

The use of surface impoundments for treatment and/or disposal of wastewater are not required by this Permit for rock, sand, and gravel facilities. Due to heat additions from cooling water, dimension stone and stone cutting facilities are required to have a surface impoundment prior to discharging. Where surface impoundments are used, they are authorized in this Permit, subject to additional state requirements as specified below and in the Authorization, in accordance with OAC 252:616.

1. Construction Requirements

Impoundments shall be constructed and maintained in accordance with OAC 252:616-7-1.

2. Wastewater Classification

The wastewater generated from routine operations of rock, sand, and gravel quarries and stone cutting facilities is classified as Class III wastewater in accordance with OAC 252:616-1-2.

3. Liner Requirements

Liner materials and construction shall be in compliance with requirements of OAC 252:616-7-1(9) and OAC 252:616-7-2 through OAC 252:616-7-7.

4. Depth to Groundwater (OAC 252:616-7-1(4))

Surface impoundments as required by OAC 252:616-7-1(4) are required to be located such that the base of the liner is at least (15) feet above historic maximum groundwater table. Since the wastewater from the activities covered by this Permit is classified as Class III, this requirement may be waived in accordance with OAC 252:616-7-1(4)(B).

5. Freeboard Requirements (OAC 252:616-7-1(7))

A minimum freeboard of two (2) foot shall be maintained on all flow-through surface impoundments and all surface impoundments that are equipped to transfer process wastewater to a permitted outfall or other permitted surface impoundments. A minimum freeboard of one (1) foot shall be maintained on all flow-through surface impoundments constructed with a concrete liner in accordance with OAC 252:616-7.

A minimum freeboard of three (3) feet shall be maintained on all total retention surface impoundments that are not equipped to transfer process wastewater to a permitted outfall or other permitted surface impoundments. A minimum freeboard of two (2) feet shall be maintained on all total retention surface impoundments constructed with a concrete liner in accordance with OAC 252:616-7

6. Other Specific Requirements

a. Wastewater contained in surface impoundments may be recycled for use in dust suppression, stockpile watering wash water, or cooling water.

b. Surface impoundments shall be maintained free of oil and grease, as evidenced by visible sheen on the wastewater or by adhered oil and grease on the sides of the impoundments.

c. At such time as surface impoundments are to be permanently taken out of service or at such time as the contents of surface impoundments pose a risk to the environment or Waters of the State, the owner or operator of the facility shall follow all closure requirements contained in OAC 252:616-13.

d. In all other respects, surface impoundments shall be subject to standard conditions for surface impoundments contained in OAC 252:616, Subchapters 5, 7, and 13, including but not limited to requirements for construction, operation, maintenance, monitoring, and closure.

e. The Permit may be reopened to implement and/or require impoundment modifications, additions, extensions, and/or operational changes; additional monitoring and reporting (including but not necessarily limited to soil sampling); reclassification of wastes; sludge management plans; best management practices; closure plans; remediation and/or remediation plans; monitoring wells and/or subsurface monitoring plans; and/or other appropriate actions.

7. Exceptions

a. Sand and Gravel Dredging Facilities

In accordance with OAC 252:616-3-1(b), wastewater impoundments at sand and gravel dredging facilities are not subject to the permitting requirements of OAC 252:616, unless wastewater other than that generated from washing sand and gravel is contained in the impoundment.

b. Quarry Pits

Quarry pits are open air mines in which rock, sand, and/or gravel has been excavated from the ground. Quarry pits are not principally constructed to store wastewater, though they are frequently used for wastewater storage and solids settling once mining in the pit has been completed. Some requirements in OAC 252:616 are not appropriate for application to quarry pits due to their differences from impoundments specifically constructed to store wastewater.

Many of the impoundment construction requirements in OAC 252:616 cannot be feasibly applied to quarry pits. In particular, requirements for side slope, depth to groundwater, and liner type are not feasible to implement. Quarry pits often have steeply sloping, near-vertical sides, directly intersect groundwater, and are too large and irregularly shaped to line.

Closure requirements are also not appropriate for quarry pits as pit closure/reclamation is regulated by the Oklahoma Department of Mines.

However, it is also inappropriate to simply give quarry pits a blanket exemption from OAC 252:616. Some rules, such as the requirement to prevent discharges from an impoundment unless specifically authorized to do so, can still be reasonably applied to quarry pits.

Therefore, it is DEQ's determination that all quarry pits shall remain subject to the following provisions of OAC 252:616:

- OAC 252:616-5-1(c) – Site Security
- OAC 252:616-5-1(d) – Site Protection
- OAC 252:616-7-1(7) – Freeboard

DEQ may apply the following provisions of OAC 252:616 to quarry pits on a case-by-case basis:

- OAC 252:616-5-1(a) – Location and Construction
- OAC 252:616-5-1(b) – Separation Distances
- OAC 252:616-5-1(g) – Site-Specific Requirements
- OAC 252:616-5-2 – Maintenance and Operation Plan
- OAC 252:616-5-3 – Reporting
- OAC 252:616-5-4 – Monitoring

Quarry pits will not be required to meet the other requirements of OAC 252:616, including construction and closure requirements.

Authorizations issued under this Permit will distinguish between quarry pits and other impoundments, and will indicate which parts of OAC 252:616 the quarry pit(s) will be required to meet.

E. TANK SYSTEMS

The use of underground tank systems to manage process wastewater for treatment and/or disposal of process wastewater is authorized by this Permit, subject to additional state requirements as specified below and in the Authorization, in accordance with OAC 252:616-9.

1. Authorized Use of Tank Systems (OAC 252:616-9-1)

The use of tank systems for all wastewater classifications is authorized as follows:

a. Tank systems without lateral lines can be used for the treatment of Class I, II, III, and V wastewater.

b. Tank systems with lateral lines are subject to the Underground Injection Control permitting process.

2. Tank System Materials (OAC 252:616-9-2)

Tank systems may be constructed of concrete, metal, plastic, or fiberglass in accordance with OAC 252:616-9-2.

3. Tank System Requirements (OAC 252:616-9-3)

Tank systems must be constructed in accordance with OAC 252:616-9-3.

4. Other Specific Requirements

a. At such time as subsurface tank systems are to be permanently taken out of service or at such time as the contents of subsurface tank systems pose a risk to the environment or Waters of the State, the owner or operator of the facility shall follow all closure requirements contained in OAC 252:616-13.

b. In all other respects, subsurface tank systems shall be subject to standard conditions for subsurface tank systems contained in OAC 252:616, Subchapters 5, 9 and 13, including but not limited to requirements for construction, operation, maintenance, monitoring, and closure.

F. LAND APPLICATION AND BENEFICIAL REUSE OF WASTEWATER

Land application of process wastewater for dust suppression or stockpile watering and/or reuse of process wastewater for rock washing or cooling water is authorized by this Permit, and is subject to the requirements as specified below and in the Authorization, in accordance with OAC 252:616-11.

1. Process wastewater that is reused or land applied for dust suppression must be classified as Class III wastewater in accordance with OAC 252:616-1-2.

2. Process wastewater to be land applied for dust suppression shall be free of visible sheen of oil or globules of oil or grease.

3. The process wastewater to be land applied for dust suppression shall be visually inspected prior to land application.

4. Process wastewater that is recycled is exempt from monitoring requirements.

5. There shall be no land application of process wastewater for dust suppression in areas where the depth to the maximum seasonal groundwater level is less than two (2) feet in accordance with OAC 252:616-5-1(b)(2)(E).

6. There shall be no land application of process wastewater for dust suppression during periods of precipitation or when soil is saturated or frozen.

7. There shall be no runoff of process wastewater used for dust suppression.

G. DISPOSAL OF OTHER SOLIDS

Solids, sludges, or other pollutants other than recyclable material, removed in the course of treatment or control of wastewater shall be disposed of in a state-approved industrial waste disposal site or to a company for recycling. If any such industrial wastes are removed from the facility, the permittee shall keep accurate records that include the following information:

1. Name and address of company hauling waste.

2. The type and amount of waste hauled.

3. The final disposal site of waste hauled.

Upon request, the above records shall be made available to DEQ's staff for review. These records shall be kept for a minimum of three (3) years.

PART II
OTHER PERMIT REQUIREMENTS

A. Regulatory Notice

The permittee is hereby given notice that this Permit is in all respects subject to compliance with and actions under any and all applicable and relevant terms, conditions, provisions, and requirements, and any and all amendments of the laws of the State of Oklahoma, the rules of DEQ, and Oklahoma's Water Quality Standards. The absence of any express reference within this Permit of any particular statutory requirement, rule(s), regulation(s), or standard(s) shall in no respect be deemed or construed to exempt or preclude the application of such requirement, rule(s), regulation(s), or standard(s) to this Permit or the permittee. By the Director's approval, grant, and issuance of this Permit, permittee acknowledges receipt of true, correct, and current copies of Oklahoma's Water Quality Standards, and the rules of DEQ, provided, however, that permittee further acknowledges that any and all amendments thereto shall become part of this Permit.

B. Reopener Clause

This Permit may be reopened for modification, revocation, and/or reissuance to require additional monitoring and/or effluent limitations where actual or potential exceedances of state water quality criteria are determined or when required by changes to technology-based limits. Modification, revocation, and/or reissuance of the Permit shall follow regulations listed at 40 C.F.R. § 124.5.

C. Accredited Laboratory

All laboratory analyses of the parameters specified in this Permit must be performed by a laboratory accredited, by DEQ, for those parameters.

D. Analytical Requirements

Unless otherwise specified in this Permit, monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 C.F.R. Part 136 in effect on the effective date of this Permit. Appendices A, B, and C to 40 C.F.R. Part 136 are specifically referenced as part of this requirement. Amendments to 40 C.F.R. Part 136 promulgated after the effective date of this Permit shall supersede these requirements as applicable.

E. Specific Requirements for Dimension Stone and Stone Cutting Facilities

Dimension stone quarries and stone cutting facilities that discharge will be required to install a surface impoundment or tank system prior to the discharge to meet the temperature requirements.

F. Individual Permits

1. Any permittee authorized by this Permit may request to be excluded from the coverage of this Permit by applying for an individual permit. The permittee shall submit the appropriate OPDES application forms together with the reasons supporting the request to the Water Quality Division.

2. When an individual OPDES permit is issued to a permittee otherwise subject to this Permit, the applicability of this Permit to that owner or permittee is automatically terminated on the effective date of the individual permit.

3. As described in the General Provisions of this Permit, a rock, sand, or gravel quarry or stone cutting facility excluded from coverage under this Permit solely because it already has an individual permit may request that the

individual permit be revoked and that the facility be covered by this Permit. Upon revocation of the individual permit, this Permit shall apply to the facility.

G. Minimum Quantification Level (MQL)

If any individual analytical test result taken for compliance with this Permit is less than the corresponding minimum quantification level listed in OAC 252:690, Appendix B, a value of zero (0) may be used for that individual result for the electronic Discharge Monitoring Report (eDMR) calculations and reporting requirements.

POLLUTANT	MQL (mg/L)
Oil and Grease	5

The permittee may develop an effluent and/or upstream specific method detection limit (MDL) in accordance with Appendix B to 40 C.F.R. Part 136. For any pollutant for which the permittee determines an effluent and/or upstream specific MDL, the permittee shall send to DEQ, Water Quality Division, Industrial Permits Section, a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent and/or upstream specific MDL was correctly calculated. An effluent and/or upstream specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$MQL = 3.3 \times MDL$$

Upon written approval by the Industrial Permits Section, the effluent and/or upstream specific MQL may be utilized by the permittee for all future electronic Discharge Monitoring Report (eDMR) calculations and reporting requirements.

H. Definitions

1. The term “active quarry” means any activity related to the extraction, removal or recovery, and beneficiation of non-metallic minerals from the earth; removal of overburden and waste rock to expose mineable minerals; and site reclamation and closure activities. All such activities occur within the active quarry area.

2. The term "active quarry area" means the area on or beneath land that is used or disturbed by activity related to the extraction, removal, or recovery of rock, sand, or gravel from its natural deposit(s).

3. The term “inactive quarry” means a site or portion of a site where mineral mining and/or milling occurred in the past but there are no active mining operations occurring as defined above. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an OPDES industrial stormwater permit.

4. The term “temporarily inactive quarry” means a site or portion of a site where non-metallic mineral mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable state or federal agency.

5. The term “quarry pit” means an open to air mine in which rock, sand, and/or gravel have been excavated from the ground.

6. The term “mine dewatering” means any water that is impounded or that collects in the 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 discharges of process generated wastewater, discharges of co-mingled water from the facilities shall be deemed discharges of process generated wastewater.

7. The term "process generated wastewater" means any wastewater used in the slurry transport of mined material, air emissions control, or processing exclusive of mining. "Process generated wastewater" also refers to any other water which becomes co-mingled with such wastewater in a pit, pond, lagoon, mine, or other facility used for treatment of such wastewater. The term does not include wastewater used for the suction dredging of deposits in a body of water and returned directly to the body of water without being used for other purposes or combined with other wastewater.

8. The term "stormwater" refers to stormwater runoff, snow melt runoff, and surface runoff and drainage.

9. The term "stormwater runoff associated with industrial activity" as described in 40 C.F.R. § 122.26(b)(14) means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw material storage areas at an industrial plant. This paragraph of the rule also states "For the categories of industries identified in this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product."

10. The term "plant runoff" refers to stormwater that has come in contact with storage piles, process equipment and dusts that are emitted during processing without co-mingling with process wastewater.

11. The term "10-year 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years.

12. The term "maintenance areas" refers to permanent and temporary maintenance areas. When possible, maintenance activities shall be located inside or protected with storm resistant coverings. In lieu of locating maintenance activities inside or under protective coverings, Best Management Practices (BMPs) shall be in place to ensure minimized pollutant discharges, including but not limited to spills, leaks, and contaminated run-off. Stormwater runoff from maintenance areas is not considered process wastewater.

13. The term "lake" refers to an impoundment of waters of the state over 50 acre-feet in volume which is either: (i) owned or operated by federal, state, county, or local government or (ii) appears in Oklahoma's Clean Lakes Inventory. Surface impoundments which are used as a treatment works for the purpose of treating, stabilizing, or holding wastes are excluded from this definition.

FACT SHEET

GENERAL WASTEWATER PERMIT FOR ROCK, SAND, AND GRAVEL QUARRIES AND STONE CUTTING FACILITIES; TO CONSTRUCT OR OPERATE INDUSTRIAL WASTEWATER SURFACE IMPOUNDMENTS; AND/OR TO LAND APPLY INDUSTRIAL WASTEWATER FOR DUST SUPPRESSION; OR TO RECYCLE WASTEWATER AS WASH WATER OR COOLING WATER
GENERAL PERMIT No. OKG95

DEQ Permit No.:	OKG95
Applicant:	Operators of Rock, Sand, or Gravel Quarry Plants, Dimension Stone Quarry Plants and Stone Cutting Facilities in Oklahoma
Prepared By:	Matthew Butner, P.E. Industrial Permits Section Water Quality Division
Issued By:	Department of Environmental Quality P. O. Box 1677 707 N. Robinson Ave. Oklahoma City, OK 73101-1677
Permit Action:	Renewal of a general permit for rock, sand, and gravel quarries, dimension stone quarries and stone cutting facilities; to discharge wastewater, and/or to construct or operate industrial wastewater surface impoundments; and/or to land apply industrial wastewater for dust suppression; and/or to recycle wastewater as wash water or cooling water
Chronology:	• 06/09/2023: Statewide public notice by DEQ • 06/01/2023: Public notice in The Journal Record • 06/15/2018: Previous OKG95 General Permit issued

I. SCOPE OF PERMIT

The activities regulated by this General Permit Number OKG95 (Permit) are the following activities at Rock, Sand, or Gravel Quarries (SIC Codes No. 1422, 1423, 1429,1442 and 1446 excluding hydrofluoric acid (HF) flotation operations), Dimension Stone Quarries (SIC Code No. 1411) and Stone Cutting Facilities (SIC Code No. 3281): (1) discharge of industrial wastewater to Waters of the State/United States; (2) construction or operation of industrial surface impoundments; (3) land application of industrial wastewater for dust suppression; or (4) recycling of wastewater as wash water or cooling water. This Permit will regulate any combination of the above-listed wastewater disposal/treatment options and will cover both discharging and non-discharging (total retention) facilities.

This Permit does not authorize discharge of wastewater to the following waters: Outstanding Resource Waters; High Quality Waters; Sensitive Public and Private Water Supplies including those with Reuse (SWS and SWSR); Cool Water Aquatic Communities; Trout Fisheries; Appendix 'B' Waters [OAC 252:730-5-25(c)(2)]; and within one (1) stream mile of a lake[(1)]. An existing facility is not authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for Turbidity (Impairment ID 413) or pH (Impairment ID 441) for which a Total Maximum Daily Load (TMDL) has been performed and the result of the TMDL indicates that discharge limits more stringent than 45 mg/L for Total Suspended Solids (TSS) or pH limits more stringent than 6.5-9.0 standard units are required. A new facility is not authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for Turbidity (Impairment ID 413). However, a new facility may be authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for pH (Impairment ID 441) provided the facility adequately certifies the discharge will maintain a pH of 6.5-9.0 standard units.

For facilities requesting coverage under this Permit that discharge wastewater from washing vehicle(s)/equipment washing and maintenance areas or discharge wastewater containing oil-based products, the Permit will contain a limit for Oil and Grease of 15 mg/L. An existing facility is not authorized to discharge wastewater from vehicle(s)/equipment washing and maintenance areas or wastewater containing oil-based products to waters included in Oklahoma's 303(d) List of impaired water bodies listed for Oil and Grease (Impairment ID 317) for which a TMDL has been performed and the result of the TMDL indicates that discharge limits more stringent than 15 mg/L for Oil and Grease are required. A new facility may be authorized to discharge to a receiving stream included in Oklahoma's 303(d) List of impaired water bodies listed for Oil and Grease (Impairment ID 317) provided the facility adequately certifies no wastewater from washing vehicle(s)/equipment and maintenance areas or wastewater containing oil-based products will be discharged.

For all facilities applying for coverage under this Permit, DEQ will determine whether the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service. If the facility is a new facility and the discharge is to a sensitive water, the facility will not be eligible for an Authorization under this Permit. If the facility is an existing facility and the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service, the facility will not be eligible for coverage under this Permit if there has been a change in the location of the discharge point or an increase in the volume of the discharge.

Quarries or stone cutting facilities that are currently permitted by the Oklahoma Department of Environmental Quality (DEQ) through an individual wastewater disposal permit may apply for coverage under this Permit no later than 180 days prior to the expiration of their current individual permits, or they may elect to continue coverage under their individual permits. New quarries or stone cutting facilities shall apply for coverage under this Permit or an individual permit at least 90 days prior to commencing any of the activities regulated by this Permit.

Wastewater discharges regulated by this Permit are process wastewater (including but not limited to mine dewatering water, transport water, wash water, scrubber water (crusher or classifiers), and contact cooling water) and associated stormwater runoff that becomes co-mingled with process wastewater associated with the following common activities: mine dewatering of process wastewater and/or co-mingled stormwater; sand and gravel dredging; crushing/cutting stone to size; washing processed stone and sand; washing vehicle(s)/equipment and maintenance areas; or shaping and finishing stone. The wastewater generated at these quarries consists of runoff from the rock and sand crushing/washing process, washing vehicle(s)/equipment and maintenance areas, and stormwater runoff from the active quarry direct contact[(2)]. In addition, the wastewater generated at stone cutting facilities and dimension stone quarries consists of wastewater used to cool the cutting tools. At no time shall the effluent cause a violation of Oklahoma's Water Quality Standards (OWQS) in the receiving water. Stormwater discharges that are not associated (non-contact) with these activities and are not co-mingled with the stormwater associated with these activities are subject to DEQ stormwater rules promulgated in the OPDES Storm Water Multi-Sector General Permit for Industrial Activities (MSGP), OKR05. Optionally, the facility may elect to cover all stormwater discharges under this Permit as process wastewater subject to effluent limitations, in lieu of coverage under the OKR05 Permit.

Surface impoundments regulated by this Permit include any surface impoundments at any facility that contain wastewater associated with the activities described above.

Land application of wastewater regulated by this Permit involves wastewater associated with the activities described above or stormwater subject to the MSGP. Land application shall be for dust suppression only on facility roadways and/or on stockpiles.

This Permit does not specify the disposal/treatment method(s) that the permittee must use. If surface impoundments and/or land application are used for wastewater treatment and/or disposal, the surface impoundments and/or land application shall be regulated by this Permit in accordance with DEQ Rules OAC 252:616.

This Permit shall not apply to discharging facilities that overlie a sensitive sole source groundwater basin or subbasin unless the facility meets the conditions described in 27A O.S. §2-6-111(A).

(1) For the purposes of this Permit, "lake" means an impoundment of waters of the state over 50 acre-feet in volume which is either: (i) owned or operated by federal, state, county, or local government or (ii) appears in Oklahoma's Clean Lakes Inventory. Surface impoundments which are used as a treatment works for the purpose of treating, stabilizing or holding wastes are excluded from this definition.

(2) For purposes of this Permit, "stormwater runoff associated with industrial activity" as described in 40 C.F.R. § 122.26(b)(14) means the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing, or raw material storage areas at an industrial plant. This paragraph of the rule also states:

> "For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product."

II. APPLICANT ACTIVITY

The following common activities are the sources of wastewater at quarries: mine dewatering of process wastewater and/or co-mingled stormwater, sand and gravel dredging, crushing/cutting stone to size (wet process), washing processed stone or sand, and washing vehicle(s)/equipment and maintenance areas. The wastewater generated at these quarries consists of wastewater from the above activities and stormwater runoff from the active quarry.

The following common activities are the sources of wastewater at stone cutting and finishing facilities: stone cutting, shaping and finishing.

Quarries and stone cutting facilities utilize one or more of the following methods to dispose of wastewater: discharge, total retention via surface impoundments, recycle, dust suppression, and/or stockpile watering. Treatment for wastewater is typically by surface impoundments or filter media to provide detention time for settling or filtration.

III. RECEIVING WATERBODY INFORMATION

Discharging quarries and stone cutting facilities covered by this Permit will be discharging to various Waters of the State/United States. These waters will have varying beneficial uses as designated by the Oklahoma Water Quality Standards. This Permit will cover discharges to Waters of the State/United States with any or all of the following designated beneficial uses as listed in OAC 252, Chapter 730:

- Public and Private Water Supplies (OAC 252:730-5-10);
- Emergency Public and Private Water Supplies (OAC 252:730-5-11);
- Fish and Wildlife Propagation (OAC 252:730-5-12);
- Agriculture/Livestock and Irrigation (OAC 252:730-5-13);
- Primary Body Contact Recreation (OAC 252:730-5-16);
- Secondary Body Contact Recreation (OAC 252:730-5-17);
- Navigation (OAC 252:730-5-18);
- Aesthetics (OAC 252:730-5-19); and
- Fish Consumption (OAC 252:730-5-20)

This Permit will not regulate discharges to Waters of the State designated with any of the following additional limitations:

- Outstanding Resource Waters (OAC 252:730-5-25(c)(1));
- Appendix B Waters (OAC 252:730-5-25(c)(2));
- High Quality Waters (OAC 252:730-5-25(c)(3));
- Sensitive Public and Private Water Supplies including those with Reuse [SWS and SWSR] (OAC 252:730-5-25(c)(4) and (8));
- Cool Water Aquatic Community (OAC 252:730-5-12(d));
- Trout Fisheries (OAC 252:730-5-12(e)); or
- Within one (1) stream mile of a lake.

Quarries or stone cutting facilities located along receiving waters with these additional limitations shall either apply for coverage as non-discharging (total retention) facilities under this Permit or shall apply for an individual discharge permit. Depending on the additional limitations applicable, quarries or stone cutting facilities located along these receiving waters may be prohibited from any new point source discharge or increased loading from an existing discharge, in accordance with Oklahoma's anti-degradation policy statement (OAC 252:730-5-25). Such facilities will still be eligible for coverage under this Permit as non-discharging (total retention) facilities.

IV. DISCHARGE INFORMATION

A. DISCHARGE LOCATION

For each proposed outfall, the discharge location shall be specified in the application and the Authorization to discharge under this Permit. The discharge locations shall be specified to within ten acres by use of legal description and specified by latitudes and longitudes.

B. DISCHARGE DESCRIPTION

Wastewater discharges regulated by this Permit are process wastewater (including but not limited to mine dewatering water, transport water, wash water, scrubber water (crusher or classifiers), and contact cooling water) and co-mingled stormwater runoff from the following common activities: mining of stone (including dimension stone), sand, or gravel; sand and gravel dredging; crushing/cutting stone to size (wet process); washing of processed stone and sand; or shaping and finishing of stone.

C. WASTEWATER CHARACTERISTICS

Wastewater characteristics for quarries (including dimension stone) and stone cutting facilities are based upon the potential pollutants generated from mine dewatering, slurry transport of sand and gravel, crushing/cutting stone to size (wet process), washing processed stone and sand, shaping and finishing stone, and washing vehicle(s)/equipment and maintenance areas.

Process wastewater from these activities, and the associated stormwater runoff, have the potential to contain suspended solids and fugitive dust resulting from the mining operation. Due to contact with these materials, the wastewater may display elevated pH levels. Oil and grease is also a potential pollutant of concern when the cleaning of mining equipment or vehicle(s) occurs at the facility site or if the facility uses an oil-based product during the cutting/shaping of stone.

V. RATIONALE FOR DETERMINING DISCHARGE PERMIT LIMITS

The following sections set forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 C.F.R. § 122.44 and the Oklahoma Pollutant Discharge Elimination System Act (OPDES), OAC 252:606-5-2, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 C.F.R. § 122.44 and reasons why they are applicable or an explanation of how the alternative effluent limitations were developed.

In accordance with regulations promulgated at 40 C.F.R. § 122.44(d), the draft permit limits are based on the more stringent of technology-based limitations or applicable water quality-based limitations.

A. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

1. General Comments

Regulations promulgated in 40 C.F.R. § 122.44(a) and OAC 252:606-5-2(a)(1) require technology-based effluent limitations to be placed in OPDES permits based on effluent limitations guidelines, where applicable, on Best Professional Judgment (BPJ) in the absence of guidelines, or on a combination of the two.

2. Applicable Effluent Limitations Guidelines (ELG's)

Technology-based effluent limitations guidelines for discharges from rock quarries and crushed stone subcategories are covered under:

- 40 C.F.R. § 436.22 - Mineral Mining and Processing Point Source Category
  Subpart B - Crushed Stone Subcategory

Effluent Limitations Guidelines for Discharges of Process Generated Waste Water Pollutants from Facilities that Recycle Waste Water for Use in Processing:

BPT [1] Effluent Limitations		
Effluent Characteristic	**Maximum for any 1 day**	**Average of daily values for 30 consecutive days shall not exceed-**
pH……	Within the range 6.0 to 9.0 when discharging	

[1] Best practicable control technology currently available

Effluent Limitations Guidelines for Mine Dewatering Discharges:

BPT Effluent Limitations		
Effluent Characteristic	**Maximum for any 1 day**	**Average of daily values for 30 consecutive days shall not exceed-**
pH……	Within the range 6.0 to 9.0 when discharging	

- 40 C.F.R. § 436.32 - Mineral Mining and Processing Point Source Category
  Subpart C – Construction Sand and Gravel Subcategory

Effluent Limitations Guidelines for Discharges of Process Generated Waste Water
Pollutants from Facilities that Recycle Waste Water for Use in Processing:

BPT Effluent Limitations		
Effluent Characteristic	**Maximum for any 1 day**	**Average of daily values for 30 consecutive days shall not exceed-**
pH……	Within the range 6.0 to 9.0 when discharging	

Effluent Limitations Guidelines for Mine Dewatering Discharges:

BPT Effluent Limitations		
Effluent Characteristic	**Maximum for any 1 day**	**Average of daily values for 30 consecutive days shall not exceed-**
pH……	Within the range 6.0 to 9.0 when discharging	

- 40 C.F.R. § 436.42 - Mineral Mining and Processing Point Source Category
  Subpart D – Industrial Sand and Gravel Subcategory

Effluent Limitations Guidelines for Discharges of Process Generated Waste Water
Pollutants from Facilities that Recycle Waste Water for Use in Processing (Excluding HF Flotation Operations):

BPT Effluent Limitations		
Effluent Characteristic	**Maximum for any 1 day**	**Average of daily values for 30 consecutive days shall not exceed-**
TSS	45 mg/L	25 mg/L
pH……	Within the range 6.0 to 9.0 when discharging	

Effluent Limitations Guidelines for Mine Dewatering Discharges:

BPT Effluent Limitations		
Effluent Characteristic	**Maximum for any 1 day**	**Average of daily values for 30 consecutive days shall not exceed-**
TSS	45 mg/L	25 mg/L
pH……	Within the range 6.0 to 9.0 when discharging	

Process generated wastewater from facilities employing HF Flotation is not covered under this Permit.

Technology-Based Effluent limitations guidelines (ELGs) have not been promulgated for dimensional stone or stone cutting facilities.

3. Best Professional Judgment (BPJ)

The BPJ parameters included for all outfalls covered by this Permit are Total Suspended Solids (TSS) and Oil & Grease. Since discharges at these facilities can be intermittent and highly variable, mass loading limits are not included in the permit, based on BPJ.

a. Total Suspended Solids – The permit limit of 45 mg/L daily maximum for total suspended solids is BPJ based on previously issued general and individual discharge permits for these types of facilities.

b. Oil & Grease – The permit limit of 15 mg/L daily maximum for oil and grease is BPJ based on previously issued general and individual discharge permits for this type of facility. Oil and grease limits apply only if wash water from the cleaning of mining equipment or wash water from a stone cutting facility that uses an oil-based product enters any impoundment that discharges from the permitted facility.

B. WATER-QUALITY-BASED EFFLUENT LIMITATIONS AND/OR CONDITIONS

1. General Comments

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." A permit that contains technology-based permit limits alone may not adequately protect the quality of the receiving stream. Thus, additional water quality-based effluent limitations and/or conditions are considered in the permit using state narrative and numerical water quality standards (Oklahoma's Water Quality Standards, as amended, OAC 252:730). This is to ensure that no point source discharge (1) results in in-stream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard; or (3) results in aquatic bioaccumulation which threatens human health.

2. Water Quality Standards Requirements

The narrative and numerical stream standards are provided in Oklahoma’s Water Quality Standards, Oklahoma Department of Environmental Quality.

a. Public and Private Water Supplies (OAC 252:730-5-10)

Based on the nature of the wastewater as described in Part IV.C above, and on information contained in past applications for individual discharge permits, the wastewater which will be discharged through the proposed outfalls should not contain substances listed in Raw Water Numerical Criteria (252:730-5-10(1)) and Water Column Criteria to protect for the Consumption of Fish Flesh and Water (252:730-5-10(6)) at levels which would have reasonable potential to violate numerical criteria. Thus additional permit action is not necessary for this beneficial use.

Where actual or potential exceedances of state water quality criteria are determined to be the result of the facility’s discharge to the receiving water(s), DEQ may determine that the facility is no longer eligible for coverage under this Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

b. Fish and Wildlife Propagation (OAC 252:730-5-12)

(1) Dissolved Oxygen

OAC 252:730-5-12(f)(1)(A) states, “Dissolved oxygen (DO) criteria are designed to protect the diverse aquatic communities of Oklahoma.” Based on the nature of the wastewater, the wastewater should not

contain oxygen demanding substances at levels which would have reasonable potential to violate numerical criteria. Therefore, no permit limit or monitoring requirement is imposed for this criterion.

(2) Temperature

OAC 252:730-5-12(f)(2)(A) states, "At no time shall heat be added to any surface water in excess of the amount that will raise the temperature of the receiving water more than 2.8°C at the edge of the mixing zone." For rock, sand, and gravel quarries, since heat is not added to the wastewater being discharged and the fact that the discharge should essentially be at ambient temperature, there is no reasonable potential to violate temperature criterion. Therefore, no permit limit or monitoring requirement is imposed for this criterion. For dimension stone quarries and stone cutting facilities, heat could be added from cooling of the saw blades or wire. The heat added should be minimal and the Permit will require these facilities to have an impoundment or tank prior to discharging. Additionally, the Permit will contain a monitoring requirement for this criterion for dimension stone quarries and stone cutting facilities.

(3) pH

OAC 252:730-5-12(f)(3) states, "The pH values shall be between 6.5 and 9.0 in waters designated for fish and wildlife propagation; unless pH values outside that range are due to natural conditions." Therefore, the draft permit establishes a lower pH limit of 6.5 standard units and an upper limit of 9.0 standard units.

(4) Oil and Grease

OAC 252:730-5-12(f)(4) states "All waters having the designated beneficial use of any subcategory of Fish and Wildlife Propagation shall be maintained free of oil and grease to prevent a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses or which cause deleterious effects to the biota." A narrative (water quality-based) condition requiring conformance to OAC 252:730-5-12(f)(4) is included in the draft permit. In addition, the technology-based limit of 15 mg/L for oil and grease should help ensure that the narrative criteria are maintained. Numerical oil and grease limits apply only if wash water from the cleaning of equipment or if a facility uses an oil-based product that enters any impoundment that is discharged from the permitted facility.

(5) Biological Criteria

OAC 252:730-5-12(f)(5)(A) states, "Aquatic life in all water bodies with the beneficial use designation of Fish and Wildlife Propagation (excluding waters designated 'Trout, put-and-take') shall not exhibit degraded conditions." Based on the nature of the wastewater, the treated wastewater is not expected to degrade the diversity, similarity, community structure, species tolerance, trophic structure, dominant species, indices of biotic integrity, indices of well-being, or other measures. Therefore, no permit limit or monitoring requirement is imposed for this criterion.

(6) Toxic Substances

OAC 252:730-5-12(f)(6)(A) states, "Surface Waters of the State shall not exhibit acute toxicity and shall not exhibit chronic toxicity outside the chronic regulatory mixing zone." Based on previous permit applications, the discharge does not contain toxic substances at levels that could result in acute or chronic toxicity to fish or wildlife. Since the facility is a minor discharger, whole effluent toxicity (WET) testing is not required.

(7) Turbidity/Sediments

Discharges to surface waters that have a beneficial use of Cool Water Aquatic Community, Trout Fishers or are within 1 stream mile of a lake are not authorized under this Permit. OAC 252:730-5-12(f)(7) states that turbidity from other than natural sources shall be restricted so as not to exceed the numeric limit of 50 NTUs for surface waters that have a beneficial use of Warm Water Aquatic Community. OAC 252:730-5-12-(f)(8) states, "Concentrations or loads of suspended or bedded sediments that are caused by human activity shall not impair the Fish and Wildlife Propagation use or any subcategory thereof." The draft permit includes a technology-based limitation for TSS (a daily maximum limit of 45 mg/L) and a water quality-based narrative requirement for suspended solids. It is the BPJ of the permit writer that limitations on TSS and suspended solids should adequately control turbidity in the facility's discharge.

c. Agriculture/Livestock and Irrigation (OAC 252:730-5-13)

Based on the nature of the wastewater as described in Part IV.C above and on information contained in past applications for individual discharge permits, the wastewater which will be discharged through the proposed outfalls should not contain substances (chloride, sulfate, and total dissolved solids) listed in Appendix F of OWQS, as amended, at levels which would have reasonable potential to violate numerical criteria. Thus, additional permit action is not necessary for this beneficial use.

Where actual or potential exceedances of state water quality criteria are determined to be the result of the facility's discharge to the receiving water(s), DEQ may determine that the facility is no longer eligible for coverage under this Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

d. Primary Body Contact Recreation (OAC 252:730-5-16)

Based on the nature of the wastewater as described in Part IV.C above, and on information contained in past applications for individual discharge permits, wastewater discharged through the proposed outfalls should not contain coliform bacteria, Escherichia coli, and Enterococci at significant levels. Thus, permit action is not necessary for this beneficial use.

OAC 252:730-5-16(a) states "The water shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings." The draft permit will contain a narrative stating the prohibition of these conditions.

e. Secondary Body Contact Recreation (OAC 252:730-5-17)

OAC 252:730-5-17(d) states "Waters so designated shall be maintained to be free from human pathogens in numbers which may produce adverse health effects in humans." As stated above, wastewater discharged through the proposed outfalls should not contain coliform bacteria, Escherichia coli, and Enterococci at significant levels. Thus, permit action is not necessary for this beneficial use.

f. Navigation (OAC 252:730-5-18)

This beneficial use is generally more dependent upon quantity than quality of water. Thus, permit action is not necessary for this beneficial use.

g. Protection of Aesthetics Use (OAC 252:730-5-19)

Aesthetics use is determined in accordance with OAC 252:730-5-19(a), which states, "the surface waters of the state must be free from floating materials and suspended substances that produce objectionable color and turbidity." A narrative requirement is established in the draft permit to prohibit the discharge of floating solids or visible foam in other than trace amounts. In addition, the technology-based numerical effluent limitations of a 45 mg/L daily maximum for TSS should also help to maintain the narrative water quality criteria for TSS.

h. Fish Consumption (OAC 252:730-5-20)

Based on the nature of the wastewater as described in Part IV.C above, and on information contained in past applications for individual discharge permits, the wastewater which will be discharged through the proposed outfalls should not contain substances listed in (OAC 252:730-5-20(b)), Water Column Criteria to Protect for the Consumption of Fish Flesh, at levels which would have reasonable potential to violate numerical criteria. Thus, permit action is not necessary for this beneficial use.

Where actual or potential exceedances of state water quality criteria are determined to be the result of the facility's discharge to the receiving water(s), DEQ may determine that the facility is no longer eligible for coverage under this Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

C. 303(d) LISTING STATUS

1. 303(d) List-Related Permitting Actions

Existing Facilities: Discharge of pollutants into a stream identified on the state 303(d) list as an impaired stream for either Turbidity (Impairment ID 413) or pH (Impairment ID 441) is not authorized under this Permit if a TMDL has been performed and the result of the TMDL indicates that discharge limits more stringent than 45 mg/L for Total Suspended Solids (TSS) or pH more stringent than 6.5-9.0 standard units are required. Discharge of wastewater from washing vehicle(s)/equipment and maintenance areas or wastewater containing oil-based products into a stream identified on the state 303(d) list as an impaired stream for Oil and Grease (Impairment ID 317) is not authorized under this Permit if a TMDL has been performed and the result of the TMDL indicates that discharge limits more stringent than 15 mg/L for Oil and Grease are required.

New Facilities: Discharge of pollutants into a stream identified on the state 303(d) list as an impaired stream for Turbidity (Impairment ID 413) is not authorized under this Permit. However, discharge of pollutants into a stream identified on the state 303(d) list as an impaired stream for pH (Impairment ID 441) may be authorized provided the facility adequately certifies the discharge will maintain a pH of 6.5-9.0 standard units. Discharge of wastewater from washing vehicle(s)/equipment and maintenance areas or wastewater containing oil-based products into a stream identified on the state 303(d) list as an impaired stream for Oil and Grease (Impairment ID 317) is not authorized under this Permit unless the facility adequately certifies no wastewater from washing vehicle(s)/equipment and maintenance areas or wastewater containing oil-based products will be discharged.

2. Proximity of Discharges to 303(d)-Listed Waterbodies

If a facility discharges to a segment of a receiving waterbody that is not itself listed as impaired, but is no more than one mile upstream of an impaired segment, then the discharge will be treated as though it were to the impaired segment.

3. Reopener Clause

The draft permit also contains a reopener clause should any 303(d) list permitting actions be required in the future.

D. ENDANGERED SPECIES ACT

For existing facilities, DEQ has concluded that issuance of this Permit is unlikely to adversely affect any endangered or candidate species or the critical habitat. The effluent limitations established in the Permit ensure protection of aquatic life and maintenance of the receiving stream as aquatic habitat.

For new facilities, if the discharge is to an area designated as sensitive by the U.S. Fish and Wildlife Service, the facility will not be eligible for an Authorization under this Permit. Also, existing facilities that discharge into an area designated as sensitive by the U.S. Fish and Wildlife Service that propose a new outfall or an increase in flow to an existing outfall will not be eligible for an Authorization under this Permit.

E. REOPENER CLAUSE

This Permit may be reopened for modification or revocation and reissuance to require additional monitoring and/or effluent limitations where actual of potential exceedances or state water quality criteria are determined, or when required by changes to Technology-Based limits. Modification or revocation and reissuance of the Permit shall follow regulations listed at 40 C.F.R. § 124.5.

VI. DRAFT PERMIT LIMITS AND OTHER REQUIREMENTS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The effluent limitations listed in Table 1 will apply to discharges of process wastewater and associated stormwater runoff that co-mingle with process wastewater associated with the following common activities: mine dewatering of process wastewater and/or co-mingled stormwater; sand and gravel suction dredging; crushing/cutting stone to size; washing processed stone or sand; shaping and finishing stone; washing vehicle(s)/equipment and maintenance areas; and (optionally) all stormwater discharges in lieu of coverage under the OKR05 Permit for Sector J.

TABLE 1
EFFLUENT LIMITATIONS

Parameters	Technology-based		Water-Quality-based		Draft Permit	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Flow (MGD)	---	Report	---	---	---	Report
Oil and Grease [1]	---	15 mg/L	---	---	---	15 mg/L
TSS	25 mg/L [2]	45 mg/L	---	---	25 mg/L [2]	45 mg/L
Temperature (°C) [3]	---	Report	---	---	---	Report
pH	between 6.0 - 9.0 s.u.		between 6.5 - 9.0 s.u.		between 6.5 - 9.0 s.u.	

[1] Oil and Grease limits apply only if wash water from the cleaning of equipment or if a facility uses an oil-based product that enters any impoundment that is discharged from the permitted facility.

[2] TSS monthly average limits only apply to industrial sand and gravel facilities (SIC code 1446).

[3] Temperature requirements only apply to dimension stone and stone cutting facilities whose wastewater includes equipment cooling water.

The effluent limitations listed in Table 1 shall become effective along with the monitoring requirements in Table 2.

TABLE 2
MONITORING REQUIREMENTS

Parameters	Measurement Frequency [1]	Sample Type
Flow	1/Month	Estimate
Oil and Grease	1/Month	Grab
TSS	1/Month	Grab
Temperature	1/Month	Grab
pH	1/Month	Grab

[1] When discharging

B. Reporting of Monitoring Results

Monitoring results shall be reported in accordance with the provisions of Part III.E.4 of the Permit. Monitoring results obtained during the previous month shall be summarized and electronically reported on an electronic Discharge Monitoring Report (eDMR) form due to DEQ, Water Quality Division, Wastewater Compliance Tracking Section no later than the 15th day of the month following the completed monthly test. If no discharge occurs during the reporting period, an eDMR form stating "No Discharge" shall be electronically submitted according to the above schedule. Instructions on how to register as a Preparer or Signatory for eDMRs, as well as how to prepare and submit eDMRs, can be found on DEQ's website at http://www.deq.state.ok.us/wqdnew/ereporting/index.html. Assistance is also available by contacting DEQ at (405) 702-8100 or deqreporting@deq.ok.gov.

C. Surface Impoundments

The use of surface impoundments for treatment and/or disposal of wastewater are not required by this Permit. However, use of impoundments is a common industry practice in Oklahoma. Where impoundments are used, they are authorized in this Permit, subject to additional state requirements as specified below and in the Permit and Authorization, in accordance with OAC 252:616.

1. Construction Requirements

Impoundments shall be constructed and maintained in accordance with OAC 252:616-7-1.

2. Wastewater Classification

The wastewater generated from routine operations of rock (including dimension stone), sand, and gravel quarries and stone cutting facilities is classified as Class III wastewater in accordance with OAC 252:616-1-2.

3. Liner Requirements

Liner materials and construction shall be in compliance with requirements of OAC 252:616-7-1(9) and OAC 252:616-7-2 through OAC 252:616-7-7.

4. Freeboard Requirements (OAC 252:616-7-1(7))

A minimum freeboard of two (2) foot shall be maintained on all flow-through surface impoundments and all surface impoundments that are equipped to transfer process wastewater to a permitted outfall or other permitted surface impoundments. However, a minimum freeboard of one (1) foot shall be maintained on all flow-through surface impoundments constructed with a concrete liner in accordance with OAC 252:616-7.

A minimum freeboard of three (3) feet shall be maintained on all total retention surface impoundments that are not equipped to transfer process wastewater to a permitted outfall or other permitted surface impoundments. However, a minimum freeboard of two (2) feet shall be maintained on all total retention surface impoundments constructed with a concrete liner in accordance with OAC 252:616-7.

5. Depth to Groundwater (OAC 252: 616-7-1(4))

Surface impoundments as required by OAC 252:616-7-1(4) are required to be located such that the base of the liner is at least (15) feet above historic maximum groundwater table. Since the wastewater from the activities covered by this Permit is classified as Class III, this requirement may be waived in the authorization in accordance with OAC 252:616-7-1(4)(B).

6. Other Specific Requirements

a. Wastewater contained in surface impoundments may be recycled for use in dust suppression, stockpile watering wash water, or cooling water.

b. Surface impoundments shall be maintained free of oil and grease, as evidenced by visible sheen on the wastewater or by adhered oil and grease on the sides of the impoundments.

c. At such time as surface impoundments are to be permanently taken out of service or at such time as the contents of surface impoundments pose a risk to the environment or Waters of the State, the owner or operator of the facility shall follow all closure requirements contained in OAC 252:616-13.

d. In all other respects, surface impoundments shall be subject to standard conditions for surface impoundments contained in OAC 252:616, Subchapters 5, 7, and 13, including but not limited to requirements for construction, operation, maintenance, monitoring and closure.

e. The Permit may be reopened to implement and/or require impoundment modifications, additions, extensions, and/or operational changes; additional monitoring and reporting (including but not necessarily limited to soil sampling); reclassification of wastes; sludge management plans; best management practices; closure plans; remediation and/or remediation plans; monitoring wells and/or subsurface monitoring plans; and/or other appropriate actions.

7. Exceptions

a. Sand and Gravel Dredging Facilities

In accordance with OAC 252:616-3-1(b), wastewater impoundments at sand and gravel dredging facilities are not subject to the permitting requirements of OAC 252:616, unless wastewater other than that generated from washing sand and gravel is contained in the impoundment.

b. Quarry Pits

Quarry pits are open air mines in which rock, sand, and/or gravel has been excavated from the ground. Quarry pits are not principally constructed to store wastewater, though they are frequently used for wastewater storage and solids settling once mining in the pit has been completed. Some requirements in OAC 252:616 are not appropriate for application to quarry pits due to their differences from impoundments specifically constructed to store wastewater.

Many of the impoundment construction requirements in OAC 252:616 cannot be feasibly applied to quarry pits. In particular, requirements for side slope, depth to groundwater, and liner type are not feasible to implement. Quarry pits often have steeply sloping, near-vertical sides, directly intersect groundwater, and are too large and irregularly shaped to line.

Closure requirements are also not appropriate for quarry pits as pit closure/reclamation is regulated by the Oklahoma Department of Mines.

However, it is also inappropriate to simply give quarry pits a blanket exemption from OAC 252:616. Some rules, such as the requirement to prevent discharges from an impoundment unless specifically authorized to do so, can still be reasonably applied to quarry pits.

Therefore, it is DEQ's determination that all quarry pits shall remain subject to the following provisions of OAC 252:616:

- OAC 252:616-5-1(c) – Site Security
- OAC 252:616-5-1(d) – Site Protection
- OAC 252:616-7-1(7) – Freeboard

DEQ may apply the following provisions of OAC 252:616 to quarry pits on a case-by-case basis:

- OAC 252:616-5-1(a) – Location and Construction
- OAC 252:616-5-1(b) – Separation Distances
- OAC 252:616-5-1(g) – Site-Specific Requirements
- OAC 252:616-5-2 – Maintenance and Operation Plan
- OAC 252:616-5-3 – Reporting
- OAC 252:616-5-4 – Monitoring

Quarry pits will not be required to meet the other requirements of OAC 252:616, including construction and closure requirements.

Authorizations issued under this Permit will distinguish between quarry pits and other impoundments, and will indicate which parts of OAC 252:616 the quarry pit(s) will be required to meet.

D. TANK SYSTEMS

The use of underground tank systems to manage process wastewater for treatment and/or disposal of process wastewater is authorized by this Permit, subject to additional state requirements as specified below and in the Authorization, in accordance with OAC 252:616-9.

1. Authorized Use of Tank Systems (OAC 252:616-9-1)

The use of tank systems for all wastewater classifications is authorized as follows:

a. Tank systems without lateral lines can be used for the treatment of Class I, II, III, and V wastewater.
b. Tank systems with lateral lines are subject to the Underground Injection Control permitting process.

2. Tank System Materials (OAC 252:616-9-2)

Tank systems may be constructed of concrete, metal, plastic, or fiberglass in accordance with OAC 252:616-9-2.

3. Tank System Requirements (OAC 252:616-9-3)

Tank systems must be constructed in accordance with OAC 252:616-9-3.

E. LAND APPLICATION AND BENEFICIAL REUSE OF WASTEWATER

Land application of process wastewater for dust suppression or stockpile watering and/or reuse of process wastewater for rock washing or cooling water is authorized by this Permit, and is subject to the requirements as specified below and in the Authorization, in accordance with OAC 252:616-11.

1. Process wastewater that is reused or land applied for dust suppression must be classified as Class III wastewater in accordance with OAC 252:616-1-2.
2. Process wastewater to be land applied for dust suppression shall be free of visible sheen of oil or globules of oil or grease.
3. The process wastewater to be land applied for dust suppression shall be visually inspected prior to land application.
4. Process wastewater that is recycled is exempt from monitoring requirements.
5. There shall be no land application of process wastewater for dust suppression in areas where the depth to the maximum seasonal groundwater level is less than two (2) feet in accordance with OAC 252:616-5-1(b)(2)(E).
6. There shall be no land application of process wastewater for dust suppression during periods of precipitation or when soil is saturated or frozen.
7. There shall be no runoff of process wastewater used for dust suppression.

F. DISPOSAL OF OTHER SOLIDS

Solids, sludges, or other pollutants other than recyclable material, removed in the course of treatment or control of wastewater shall be disposed of in a State-approved industrial waste disposal site or to a company for recycling. If any such industrial wastes are removed from the facility, the permittee shall keep accurate records that include the following information:

1. Name and address of company hauling waste.
2. The type and amount of waste hauled.
3. The final disposal site of waste hauled.

Upon request, the above records shall be made available to DEQ's staff for review. These records shall be kept for a minimum of three (3) years.

VII. CHANGES FROM PREVIOUS PERMIT

A. References to OAC 785:45 updated to OAC 252:730.

B. Requirements for quarry pits updated.

C. Requirements of 27A O.S. §2-6-111 implemented.

D. Minor formatting changes and corrections.

VIII. ADMINISTRATIVE RECORD

The following sources were used to prepare this Permit and constitute a part of the administrative record for this Permit:

A. DEQ RECORDS

- Industrial Permit files containing permits, applications and monitoring data for rock, sand, and gravel quarries.
- Fact Sheet and General Permit for Rock, Sand, and Gravel Quarries and Stone Cutting Facilities.

B. FEDERAL WATER POLLUTION CONTROL ACT (CLEAN WATER ACT), 33 U.S.C. 1251 et. seq.

- Section 301, 303, and 402(a).

C. FEDERAL RULES AND REGULATIONS

- 40 C.F.R., in particular, Parts 122, 124, 136, 436.

D. STATE LAW, STANDARDS, AND RULES AND REGULATIONS

- Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. Supp.
- OAC 252:606, OAC 252:616, OAC 252:690, OAC 252:730.
- DEQ stormwater rules promulgated in the OPDES Storm Water Multi-Sector General Permit for Industrial Activities (MSGP).
- Oklahoma's Water Quality Standards, as amended.
- Oklahoma Continuing Planning Process Document (CPP).

IX. REVIEW BY OTHER AGENCIES AND FINAL DETERMINATION

If comments are received from state or federal agencies with jurisdiction over fish, wildlife, or public health, additional conditions may be included in accordance with regulations promulgated under 40 C.F.R. § 124.59.

APPENDIX A

OKLAHOMA SENSITIVE WATERS AND WATERSHEDS HARBORING ENDANGERED AND THREATENED SPECIES AND THEIR CRITICAL HABITAT OF CONCERN

A. Sensitive waters and watersheds for federally listed species, as defined by the U.S. Fish and Wildlife Service.

1. *Grand (Neosho) River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Grand (Neosho) River above its confluence with Tar Creek. This corridor includes portions of Ottawa and Craig Counties.

2. *Cimarron River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Cimarron River from the US Hwy-77 Bridge in Logan County upstream to and including Beaver County. This corridor includes river segments in Beaver, Harper, Kingfisher, Logan, Major, Woods, and Woodward Counties.

3. *South Canadian River* – A 2-mile corridor (1 mile from each bank) of the main stem from the Eufaula Reservoir flood pool upstream to the northern border of Custer County. This corridor includes river segments in Blaine, Caddo, Canadian, Cleveland, Custer, Grady, Hughes, McClain, McIntosh, Pittsburg, Pontotoc, Pottawatomie, and Seminole Counties.

4. *Muddy Boggy Creek* – A 2-mile corridor (1 mile from each bank) of the main stem of the Muddy Boggy Creek which includes portions of Choctaw, Atoka, and Coal Counties.

5. *Kiamichi River* – The watershed of the Kiamichi River upstream from the Hugo Reservoir. This watershed includes portions of Pushmataha, Atoka, Pittsburg, Latimer, and LeFlore Counties.

6. *Little River* – The watershed of the Little River includes portions of LeFlore, Pushmataha and McCurtain Counties.

7. *Glover River* – The watershed of the Glover River includes portions of Pushmataha and McCurtain Counties.

8. *Mountain Fork River* – The watershed of the Mountain Fork River is above the Broken Bow Reservoir and includes portions of LeFlore and McCurtain Counties.

9. *Northeast HUC*-11 Watersheds - The watersheds are identified by the following 11-digit Hydrologic Unit Codes: 1107020206030, 11070206060, 11070207190, 11070208070, 11070209020, 11070209030, 11070209040, 11070209050, 11070209060*, 11070209070, 11070209100, 11070209110 and 11070209120. These watersheds include portions of Ottawa, Craig, Delaware, Mayes, Wagoner and Cherokee Counties.

   * This HUC does not contain a known Ozark cavefish cave. It was included because it is entirely surrounded by 11 digit HUCs with known Ozark cavefish caves; therefore, we assume that Ozark cavefishes likely occupy this portion of the watershed as well.

10. *Elk River* – A 2-mile corridor (1 mile from each bank) of the Elk River which includes portions of Delware County.

11. *Spring River* – A 2-mile corridor (1 mile from each bank) of the Spring River which includes portions of Ottawa County.

12. *Verdigris River* – A 2-mile corridor of the main steam from the dam of Lake Oologah to the confluence of the Arkansas River which includes river segments in Rogers, Wagoner, and Muskogee Counties.

B. Sensitive waters and watersheds for State listed species, as defined by the Oklahoma Department of Wildlife Conservation.

1. *Illinois River* – A ten-mile corridor (five miles from each bank within the watershed) of the main stem of the Illinois River above Tenkiller Reservoir. This corridor includes portions of Cherokee, Adair, Delaware, and Mayes Counties.

2. *Lee and Little Lee Creeks* – The watershed of Lee Creek and Little Lee Creek which includes portions of Sequoyah and Adair Counties.

Note: No sensitive endangered or threatened species occur in the following counties*:* Alfalfa, Beckham, Carter, Cimarron, Comanche, Garfield, Garvin, Grant, Greer, Johnston, Kiowa, Lincoln, Murray, Nowata, Okfuskee, Oklahoma, Okmulgee, Rogers, Stephens, Texas, Washington, or Washita.

Oklahoma Aquatic Resources of Concern for Federal & State Listed Species

as identified by the U.S. Fish & Wildlife Serveice and the Oklahoma Department of Wildlife Conservation

Text

Legend

- Spring River Corridor
- Glover River Watershed
- Illinois River Corridor
- Kiamichi River Watershed
- Lee & Little Lee Creek Watershed
- Little River Watershed
- Mountain Fork Watershed
- Elk River Corridor
- NE HUC-11 Watersheds
- Canadian River Corridor
- Cimarron River Corridor
- Neosho River Corridor
- Muddy Boggy Creek Corridor
- Verdigris River Corridor