

FACT SHEET

FOR THE GENERAL WASTEWATER DISPOSAL PERMIT FOR MOBILE CONCRETE BATCH PLANTS TO OPERATE AT TEMPORARY JOB SITES AND TO CONSTRUCT TEMPORARY TOTAL RETENTION INDUSTRIAL WASTEWATER SURFACE IMPOUNDMENTS; AND/OR TO LAND APPLY INDUSTRIAL WASTEWATER FOR PURPOSES OF DUST SUPPRESSION.

DEQ Permit No.: OKG11MT

Applicant: Operators of Mobile Concrete Batch Plants in Oklahoma

Prepared and Issued By: Industrial Permits Section
Water Quality Division
Department of Environmental Quality
P. O. Box 1677
707 N. Robinson Ave.
Oklahoma City, OK 73101-1677

Permit Action: Renewal of a general permit to operate a mobile concrete batch plant and to construct temporary total retention surface impoundments and/or land application of wastewater

I. SCOPE OF PERMIT

The activities regulated by this General Permit Number OKG11MT (Permit) are the following activities at mobile concrete batch plants (SIC Code No. 3273): (1) operate the plant at temporary job sites, (2) construct and operate temporary industrial wastewater total retention surface impoundments; and/or (3) land application of industrial wastewater for dust suppression. This Permit will regulate any combination of the above-listed wastewater disposal/treatment options. Because of the short time that a mobile concrete batch plant will be located at a temporary job site, the DEQ has determined that the use of total retention surface impoundments is appropriate. If an Owner/Operator wishes to discharge industrial wastewater at a temporary job site it will be necessary to obtain an individual discharge permit.

Existing mobile concrete batch plants that are not currently permitted by the DEQ through individual wastewater disposal permits shall apply for coverage under this Permit within 90 days of the effective date of this Permit. New mobile concrete batch plants shall obtain a Permit prior to commencing any of the activities regulated by this Permit.

- Wastewater regulated by this Permit includes process wastewater and stormwater runoff associated with the following three common activities: (1) mix plant operation and clean-up (if dry brush cleanup methods are not utilized), (2) truck mixer drum washout and (3) external truck wash and oil spray down. Stormwater discharges that are not associated with these activities and are not commingled with the stormwater associated with these activities are not covered by this permit.
- Surface impoundments regulated by this Permit are any temporary total retention surface impoundments constructed at any mobile concrete batch plant temporary job site that contains wastewater associated with the activities described above.
- Land application of wastewater regulated by this Permit is the land application of wastewater associated with the activities described above. Land application shall be for dust suppression only, as described herein.

This permit does not specify the disposal/treatment method(s) that the permittee must use. If temporary total retention 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 have a five (5) year term. All Authorizations issued under the General Permit shall expire on the expiration date of the General Permit.

II. APPLICANT ACTIVITY

The following three common activities are the sources of wastewater at mobile concrete batch plants: (1) mix plant operations and clean-up, (2) truck mixer drum washout and (3) external truck wash and oil spray down.

The function of the mix plant is to combine gravel, crushed stone and sand (together known as aggregate), cement, water and admixtures to form fresh concrete. Typically, aggregate is received in bulk quantities by rail or truck. It is stored outside until it is conveyed to distribution bins for feeding into the mix plant.

There are two types of plants, central mix plants and transit mix plants. The central mix plant combines and mixes all ingredients, then loads the fresh concrete in the mixer drum on the truck or into a haul truck. The transit mix plant combines the dry ingredients and then loads the dry ingredients and water into the mixer drum on the truck where the final mixing occurs. A mobile concrete batch plant can perform both types of operations. Wastewater is generated from wash water and associated stormwater runoff from the mix plant (if dry brush cleanup methods are not utilized), truck mixer drum washout and/or ready-mix truck exteriors.

The function of the mixer drum washout activity is to rinse residual concrete from the inside of the truck's mixer drum or haul truck to prevent it from setting up in the drum. Wastewater is generated from the mixer drum washout activity and associated stormwater.

The function of the external truck wash is to clean external surfaces of the ready-mix trucks. Wastewater is generated from the washing activity and associated stormwater.

Mobile concrete batch plants shall utilize one or more of the following options to manage wastewater generated at temporary job sites; offsite wash facilities, temporary total retention surface impoundments, approved recycling methods, land application for dust suppression, and/or stockpile watering.

III. WASTEWATER CHARACTERISTICS

Wastewater characteristics for mobile concrete batch plants are based upon the potential pollutants generated from mix plant washdown, mixer drum washout and external truck washing.

All mobile concrete batch plants handle and store nonmetallic minerals. The minerals are often stored outdoors until they are utilized in the industrial processes. Handling, storage and use of these minerals in the industrial processes results in the potential for their presence in process wastewaters and associated stormwater, resulting in potential for high Total Suspended Solids (TSS) levels if the wastewater is left untreated. In addition, since many of the minerals processed are calcareous, such as limestone, the presence of these minerals can elevate the pH of the wastewater. Wastewater from mix plant washdown and associated stormwater has the potential to contain suspended solids from spilled cement and sand solids, and fugitive dust resulting from mix plant operation. The washdown water prevents the concrete from setting up and fouling the process area and drains, thus producing a wastewater high in suspended solids. Due to contact with these materials, the wastewater may also display elevated pH levels. Oil and grease is also a potential pollutant of concern due to the operation in the mix plant area of mix plant equipment and trucks that require oil in their operation and maintenance.

Wastewater from mixer drum washout and associated stormwater has the potential to contain suspended solids, since the washout water comes from thinning the concrete left in the drums at the end of the work day to prevent it from setting up in the mixer drum. Thinning this mixture results in a wastewater high in cement and sand solids that are not bound together. Due to contact with these materials, the wastewater may also display elevated pH levels. Oil and grease is also a potential pollutant of concern due to the presence of residual oil on the trucks and associated mechanisms of the truck. Wastewater from external truck washing and associated stormwater has the potential to contain suspended solids and elevated pH levels from concrete dust and road grime. Oil and grease is also a potential pollutant of concern due to the presence of residual oil on the trucks.

Based on the description of the processes at mobile concrete batch plants, the pollutants of concern are TSS, small amounts of Oil and Grease, and pH. Therefore, in accordance with OAC 252:616-1-2, the wastewater generated from mobile concrete batch plants is considered class III wastewater. Wastewater includes water generated from the above mentioned activities and any stormwater that comes into contact with these activities. Once the stormwater comes into contact with wastewater, it will be considered and treated as wastewater. Also, any stormwater that falls into the temporary surface impoundments will be considered and treated as wastewater.

IV. SURFACE IMPOUNDMENTS

The use of temporary surface impoundments for treatment and/or disposal of wastewater at mobile concrete batch plants is authorized, subject to additional State requirements as specified below and in General Permit No. OKG11MT, in accordance with OAC 252:616.

A. Engineer Required

In accordance with OAC 252:616-1-3, "Pursuant to 59 O.S., § 475.2 and a ruling by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors, the design and closure activities required by this chapter constitute the practice of engineering and thus, require the seal and signature of an engineer registered to practice in the State of Oklahoma." It is the Best Professional Judgement (BPJ) of the permit writer that the requirements of the general permit do not constitute the practice of engineering based on temporary status, class III wastewater, liner requirements, recycle/reuse of wastewater, use of wastewater for on-site dust suppression, and the closure plan requirements stated in the general permit.

B. Wastewater Classification

The wastewater generated from routine operations of mobile concrete batch plants is classified as Class III wastewater in accordance with OAC 252:616-1-2.

C. Construction Requirements

Impoundments shall be constructed and maintained in accordance with OAC 252:616-7-1. Since the impoundment(s) to be constructed are temporary, the DEQ has concluded that this rule can be interpreted to allow dikes to be constructed with 1:2 (1 vertical to 2 horizontal) slopes for job sites where the impoundment will be used for less than 180 days. For those sites that the impoundments will be used for greater than 180 days, a 1:3 slope must be used.

Because the dyke height will be low the DEQ has also concluded that it is not necessary to construct dikes with flat tops in order to inspect the dykes for erosion.

D. Liner Requirements

An excavated soil liner may be used for temporary total retention surface impoundments. Liner materials and construction shall be in compliance with requirements of OAC 252:616-7-1(8) and (9) and OAC 252:616-7-2 and 7-3.

E. Other Specific Requirements

Wastewater contained in total retention surface impoundments may be recycled for use in concrete make-up or wash water.

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

Since the impoundment(s) to be constructed are temporary, the DEQ has concluded that this rule can be interpreted to allow impoundments to be operated with a minimum freeboard of one (1) foot on all temporary total retention surface impoundments when the temporary job site will be utilized for less than 180 days. If the water level reaches the 1 foot freeboard requirement, another impoundment must be constructed.

In addition a minimum freeboard of three (3) feet shall be maintained on all temporary total retention surface impoundments when the temporary job site will be utilized for greater than 180 days. If the water level reaches the 3 foot freeboard requirement, another impoundment must be constructed.

V. LAND APPLICATION AND BENEFICIAL REUSE OF WASTEWATER

Land application of wastewater for dust suppression only at mobile concrete batch plants is authorized, subject to additional State requirements as specified below and in General Permit OKG11MT, in accordance with OAC 252:616-11.

The wastewater covered under this authorization is classified as Class III wastewater in accordance with OAC 252:616-1-2. To maintain this classification, the wastewater to be land applied shall be free of visible sheen of oil or globules of oil or grease. The wastewater to be land applied shall be visually inspected prior to land application. An inspection log shall be maintained at the site and made available to DEQ upon request. Wastewater recycled into the concrete mixture is exempt from monitoring requirements.

There shall be no land application of wastewater during periods of precipitation or when soil is saturated or frozen.

There shall be no runoff of wastewater from the land application sites.

VI. RECYCLABLE CONCRETE MATERIAL AND DISPOSAL OF OTHER SOLIDS

Recyclable concrete material recovered from the scatter pile, impoundments and/or other means may be removed from the facility, provided that an accurate record is kept which includes the following: name and address of company or individual receiving the material, date material was received, and approximate location where material will be recycled.

Recyclable concrete material may be used by the permittee, at the job site, at any time. No records are required.

Solids, sludges, filter backwash, or other pollutants other than recyclable concrete material, removed in the course of treatment or control of wastewater shall be disposed of in a State-approved 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:

- a. Name and address of company hauling waste;
- b. The type and amount of waste hauled; and
- c. The final disposal site of waste hauled.

Upon request, the above records shall be made available to the DEQ's staff for review.

VII. CLOSURE REQUIREMENTS

Each owner/operator of a mobile concrete batch plant requesting to be authorized pursuant to the terms and conditions of this General permit shall submit and receive approval of a Closure Plan (Plan) that describes a generic methodology that will be used for the closure of impoundment(s) at each temporary job site. The Plan shall be submitted and receive DEQ approval prior to the issuance of an Authorization. Submittal of the Plan may be concurrent with the submittal of the initial Authorization application. This Plan is intended to meet the requirements of OAC 252:616-13-3. If the closure plan contains the following information, it is BPJ of the permit writer that a professional engineer is not required to design the closure plan.

The Plan shall include at a minimum the following information:

a. Background:

Describe the activity that took place at the site during the life of the impoundment.

b. Proposed closure activities:

(1) Wastewater: The following options are available for any wastewater remaining in the impoundment at the time of closure:

- allowed to evaporate
- pumped out and disposed of at a POTW
- used in industrial process
- used for dust suppression onsite

(2) Sludge: The following options are available for any sludge remaining in the impoundment at the time of closure:

- removed and taken to landfill
- removed and taken to a company for recycling
- leave in place

c. Backfill

Include a discussion of the material to be used as backfill, sampling used to determine the characteristics of the backfill material, and the method of placement to be employed.

d. Disposal

Describe the disposal method and or recycle/reuse of any material associated with the impoundment, i.e piping, liner material, etc.

e. Certification of Closure

Within ten (10) days after closure of all temporary impoundments, the owner/operator of the mobile cement batch plant shall submit an affidavit of closure to the DEQ certifying that all impoundments were closed in accordance with the requirements of OAC 252:616-13 and the approved Plan.

VIII. RELOCATION NOTIFICATION

The permittee shall notify the DEQ within seven (7) days each time the mobile concrete batch plant is moved to a new location. The notification shall state the name and location of the site where the mobile concrete batch plant is to be located, an estimate on how long the plant is expected to be at the site and if impoundments will be used at the site. If impoundments will be utilized at the new location, the notification document shall include a completed Form 616-G11MTR for the new job site.

IX. ACKNOWLEDGEMENT

Within seven (7) days after receipt of a relocation notification, the DEQ will provide a written statement acknowledging receipt of the notification.

X. 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

- General Permit and fact sheet for mobile concrete batch plants (OKG11MT)

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

- Section 301 and 402(a)

C. FEDERAL RULES AND REGULATIONS

- 40 CFR, in particular, Parts 122, 124, 136

D. STATE LAW, STANDARDS, AND RULES AND REGULATIONS

- Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. Supp., §2-6-201, et.seq
- OAC 252:606, OAC 252:616