

FACT SHEET

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 SURFACE IMPOUNDMENTS; AND/OR TO LAND APPLY WASTEWATER FOR DUST SUPPRESSION PURPOSES.

DEQ Permit Number: OKG11MT

Applicant: Owners or Operators of Mobile Concrete Batch Plants in the State of Oklahoma

Issuing Office: Industrial Permits Section
Oklahoma Department of Environmental Quality
Water Quality Division
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Date Prepared: December 7, 2016

Permit Action: Renewal of a general permit to operate a mobile concrete batch plant, to construct temporary total retention surface impoundment(s), and to land apply wastewater for dust suppression purposes

I. SCOPE OF PERMIT

The activities regulated by this General Permit Number OKG11MT (Permit) are the following activities at mobile concrete batch plants: (1) operation of the plant at temporary job sites, (2) construction and operation of temporary total retention impoundment(s) containing industrial wastewater, and (3) land application of industrial wastewater for dust suppression purposes. This permit will regulate any combination of the aforementioned wastewater disposal, treatment, and reuse options at facilities that operate under Standard Industrial Classification (SIC) Code 3273: Ready-Mixed Concrete. Because of the short time that a mobile concrete batch plant will be located at a temporary job site, the Oklahoma Department of Environmental Quality (DEQ) has determined that the use of total retention surface impoundment(s) may be more appropriate than obtaining an individual discharge permit. If owners and/or operators intend to discharge industrial wastewater from temporary job sites to waters of the State, they will be required to obtain an individual discharge permit.

Existing mobile concrete batch plants that are not currently permitted by DEQ or that were authorized for coverage under the 2012 OKG11MT General Permit shall apply for coverage under this Permit within 90 days of the effective date of this Permit. New mobile concrete batch plants shall obtain coverage under this Permit before 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 cleanup (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 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 sites that contain 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, or reuse method(s) that the permittee must use. If temporary total retention surface impoundment(s) and/or land application are used for wastewater treatment, disposal, or reuse, then the surface impoundment(s) and/or land application shall be regulated by this Permit in accordance with DEQ Rules in OAC 252:616.

This Permit shall have a five (5) year term. All Authorizations issued under this Permit shall expire on the expiration date of this Permit.

II. APPLICANT ACTIVITY

The following three common activities are the sources of wastewater at mobile concrete batch plants: (1) mix plant operations and cleanup, (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 the 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 a truck or into a haul truck. The transit 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 from both types of plants 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 inside the drum. The function of the external truck wash is to clean external surfaces of the ready-mix trucks.

Mobile concrete batch plants shall utilize one or more of the following options to manage wastewater generated at temporary job sites: off-site 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 process. Handling, storage, and use of these minerals in the industrial processes results in the potential for their presence in process wastewater and associated stormwater, resulting in potential for higher concentration of total suspended solids (TSS) if the wastewater is not treated. 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, and from 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 display elevated pH levels. Oil and grease is also a potential pollutant of concern due to the operation in the 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 wastewater high in cement and sand solids that are not bound together. Due to contact with these materials, the wastewater may display an elevated pH. 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 trucks.

Wastewater generated 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, oil and grease, and pH. Therefore, in accordance with OAC 252:616-1-2, the wastewater generated from mobile concrete batch plants is classified as 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. Any stormwater that falls into the temporary surface impoundments will be considered and treated as wastewater.

IV. SURFACE IMPOUNDMENTS

The use of temporary surface impoundment(s) for treatment and/or disposal of wastewater at mobile concrete batch plant sites is authorized, subject to additional State requirements as specified below, in accordance with OAC 252:616.

A. Engineer Requirement

OAC 252:616-1-3 states: "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 onsite 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

All surface impoundments shall be constructed and maintained in accordance with OAC 252:616-7-1. Since the impoundment(s) to be constructed are temporary, 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 side slope must be constructed and maintained. Because the berm height will be low it is not necessary to construct berms with flat tops in order to inspect the berms for erosion.

D. Depth to Groundwater

OAC 252:616-7-1(4) states that the bottom of all surface impoundments shall be at least 15 feet above groundwater, and OAC 252:616-7-1(4)(B) states that if a distance of 15 feet is not possible, then DEQ may approve a lesser distance based on the wastewater classification and liner type. Specific conditions shall be defined in individual Authorizations.

E. Liner Requirements

As the wastewater being retained is considered Class III, a native 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.

Concrete liners are also allowable at mobile concrete batch plants. A concrete liner must be constructed in compliance with the requirements of OAC 252:616-7-1(8) and (9) and OAC 252:616-7-7.

F. Freeboard Requirements

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

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 three (3) feet freeboard requirement, wastewater and/or solids must be removed from the impoundment, or another impoundment must be constructed.

G. Other Specific Requirements

1. Wastewater contained in total retention surface impoundments may be recycled for use in concrete make-up, wash water, and/or dust suppression.
2. There shall not be any visible sheen of oil at any time in the surface impoundment(s).
3. Pursuant to OAC 252:616-5-1, industrial wastewater systems shall not be located in floodways. If any surface impoundment(s) is/are located in a flood plain, the permittee shall ensure that the crest elevation of the dikes/berms is at least one foot above the 100-year flood elevation in accordance with OAC 252:616-5-1.
4. The permittee shall restrict access to industrial wastewater system sites by fences, secured gates, or other reasonable means in accordance with OAC 252:616-5-1(c). The permittee shall also post a sign listing the name of the operator, an emergency phone number, and the DEQ permit number.

V. LAND APPLICATION AND BENEFICIAL REUSE OF WASTEWATER

Land application of Class III wastewater from the purpose of dust suppression at mobile concrete batch plants is authorized, subject to additional State requirements as specified below:

- A. The wastewater to be land applied shall be free from visible sheen of oil or globules of oil or grease and shall have a pH of between 6.5 s.u. and 9.0 s.u.
- B. The wastewater to be land applied for dust suppression shall be visually inspected prior to land application. An inspection log shall be maintained at the site and made available to DEQ personnel upon request.
- C. There shall be no land application of wastewater 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).
- D. There shall be no land application of wastewater during periods of precipitation or when soil is saturated or frozen.

- E. There shall be no runoff of wastewater from the land application site(s).
- F. The permittee shall keep a logbook which records the time and date, the source and the volume of wastewater used, and the area to which the wastewater was applied. This log book shall be maintained at the site and made available to DEQ personnel upon request.

Wastewater recycled into the concrete mixture is exempt from monitoring requirements.

VI. RECYCLABLE CONCRETE MATERIAL AND DISPOSAL OF OTHER SOLIDS

Recyclable concrete material recovered from the scatter pile, impoundment(s), and/or any other means may be removed from the facility or used by the applicant at the permitted facility at any time. No records are required.

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 a closure plan to DEQ that describes a generic methodology that will be used for the closure of surface impoundment(s) at each temporary job site.

The plan shall be submitted and receive DEQ approval prior to the issuance of an Authorization. The permittee may submit a plan concurrently with the initial Authorization application. This plan is intended to meet the requirements of OAC 252:616-13-3. It is the BPJ of the permit writer that a professional engineer is not required to design and prepare the plan if it contains the following information.

The plan shall include at minimum the following information:

A. Background:

Describe the activities that took place at the site during the life of the impoundment(s).

B. Proposed Closure Activities:

Indicate what will be done with the wastewater and sludge remaining in the impoundment(s):

1) Wastewater in the surface impoundment(s):

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

- Allowed to evaporate
- Pumped out and disposed of at a POTW
- Used in an industrial process
- Used for dust suppression at the job site

2) Sludge in the surface impoundment(s):

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

- Removed and taken to a landfill
- Removed and taken to a company for recycling
- Left 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 and compaction to be employed.

D. Disposal:

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

E. Certification of Closure:

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

The owner/operator of a mobile concrete batch plant must close all surface impoundments at a temporary job site in accordance with the approved closure plan within *fifteen (15) days* of moving/relocating the batch plant to a new job site or temporary location.

VIII. RELOCATION NOTIFICATION

The permittee shall notify DEQ within *seven (7) days* each time the mobile concrete batch plant is moved to a new location in Oklahoma. The notification shall state the complete address and legal location of the site where the mobile concrete batch plant is to be located, an estimate on how long the plan is expected to be at the site, and if any surface impoundments will be used at the new job site.

The notification document shall include a complete **Form 616-G11MTR** for the new job site each time the mobile concrete batch plant is moved.

If the mobile concrete batch plant is relocating to a temporary job site that is not located in Oklahoma, the permittee shall submit written notification to DEQ that the plant has been moved to a job site outside of the state. At such time as the plant moves back to a job site that is in Oklahoma, the permittee shall notify DEQ as described in the preceding paragraphs.

IX. ACKNOWLEDGEMENT

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

X. ADMINISTRATIVE RECORD

The following sources were used to prepare this General 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. CLEAN WATER ACT CITATIONS

- Section 301(a), 301(b), and 402(a)

C. FEDERAL RULES AND REGULATIONS

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

D. STATE LAW, STANDARDS, AND RULES AND REGULATIONS

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

XI. REVIEW BY THE OTHER AGENCIES AND FINAL DETERMINATION

A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers, Oklahoma Conservation Commission, and to the Regional Director of the U.S. Fish and Wildlife Service upon publication of said notice. If comments are received from these agencies or from other State or Federal agencies with jurisdiction over fish, wildlife, or public health, the permit may be denied or additional conditions may be included in accordance with regulations promulgated under 40 CFR 124.59.

The public notice describes the procedures for the formulation of final determinations.