Ash Grove Cement Company
NPDES Permit Renewal

Introduction

Ash Grove Cement Company (Ash Grove) has retained CH2M HILL to provide National Pollutant Discharge Elimination system (NPDES) permitting assistance at its facility in Foreman, Arkansas. Ash Grove is currently permitted under NPDES permit AR0042846, which became effective October 1, 2001, and expires on September 30, 2006. This document is a renewal to the existing NPDES permit.

The outfalls associated with NPDES permit No. AR0042846 are: Outfall 001, the Fishing Lake; Outfall 002, the Coal Yard Sedimentation Pond; Outfall 003, the Process Water Pond; Outfall 003A, the CKD Landfill Sedimentation Pond, which discharges to Outfall 003; SW-1, stormwater outfall, and SW-2, stormwater outfall. These outfalls are described below.

Site Description

Ash Grove operates a manufacturing facility in Little River County in southwestern Arkansas, near the City of Foreman. The 1,983-acre facility produces Portland cement and masonry cement using raw materials quarried from the underlying geologic strata. The facility has been in operation since 1958. To supplement traditional fossil fuels used in the process, Ash Grove utilizes hazardous waste-derived fuel (HWDF) and operates a hazardous waste storage and treatment facility permitted by the Arkansas Department of Environmental Quality (ADEQ), Hazardous Waste Division, Permit No. 21-H.

All stormwater that contacts industrial process areas and wastewater generated within the plant flow into one of three retention basins on plant property. Each of the retention basins discharges via one of the permitted outfalls as described below.

Figure 1 is the site map of the facility that shows the property boundaries, each outfall and its drainage basin, and other information required on ADEQ Form 1.

Outfall Descriptions

The following briefly describes each of the permitted outfalls at the Ash Grove facility.

Outfall 001–Fishing Lake

Outfall 001 is located on the west side of the Fishing Lake. The discharge from this outfall consists of surface water runoff (i.e. stormwater) from the 146.1-acre drainage basin surrounding the Fishing Lake and water pumped from the active quarry. The water pumped from the quarry includes stormwater, washwater from a halo used to rinse the windshields and mirrors of large haul trucks, and washwater from rinsing mud off various vehicles. Additionally, within the drainage area for Outfall 001, there is an inactive, 15-acre CKD disposal site, which was used from 1959 through 1975 and is now covered with compacted soil overburden and vegetation, and an overburden stockpile area. Since the last

NPDES permit modification, the landfill adjacent to the Process Water Pond, Outfall 003, has been closed and a new landfill constructed north of Highway 108.

Outfall 001 discharges via unnamed tributaries to French Creek, a tributary to Walnut Bayou in the Red River Basin. A concrete low water crossing drains to the Process Water Pond (Outfall 003) when the Fishing Lake reaches a certain elevation to prevent overtopping.

Outfall 002–Coal Yard Sedimentation Pond

Stormwater runoff from the plant's coal storage area, located in the northwest portion of the property, and a small portion of the closed area of the plant's inactive CKD landfill is discharged through NPDES Outfall 002. This CKD landfill has been closed pursuant to the CAO LIS-01-100.The drainage area consist of approximately 8.2 acres, most of which is covered in vegetation. Bulk storage tanks for the liquid HWDF are located within the Outfall 002 drainage basin; however, secondary containment provided for the bulk storage tanks prevents stormwater run-on and run-off from this area. Runoff from this area is retained in the Coal Yard Sedimentation Pond before being discharged. Outfall 002 discharges to unnamed tributaries of French Creek, a tributary of Walnut Bayou in the Red River Basin.

Outfall 003–Process Water Pond

Outfall 003 is located on the southwest side of the plant's Process Water Pond. The Process Water Pond is the primary source of make-up water for the facility. The Outfall 003 drainage basin consist of approximately 468.4 acres (516.4 acres when including the Outfall 03A area as described below) and includes the following: the plant process area, raw material storage, salvage storage areas, the inactive CKD landfill, and CKD Landfill Sedimentation Pond.

A small sedimentation basin (Coal Washout Pond) and a sanitary wastewater treatment lagoon also discharge to the Process Water Pond. Portions of the stormwater runoff from the coal storage area and coal truck wash water are discharged into the Coal Washout Pond. Sanitary wastewater is discharged and treated in the Sanitary Treatment Lagoon.

Other sources of water discharged to the Process Water Pond are water from the chalk dryer air pollution control device (wet scrubber), non-contact cooling water, wash down water from process areas, and truck wash water from a cement transportation facility located on Ash Grove property. Internal drainage ditches are used to route stormwater and other water generated within the plant and the raw material storage areas to the Process Water Pond. As mentioned previously, the Fishing Lake, Outfall 001, discharges to the Process Water Pond during periods of heavy rainfall. Outfall 003 discharges to unnamed tributaries of French Creek, a tributary of Walnut Bayou in the Red River Basin.

Outfall 03A–CKD Landfill Sedimentation Pond

This internal outfall is the sedimentation/process pond for the CKD landfill located north of Highway 108. This pond has been sized to provide sufficient water to supply a pugmill located adjacent to the landfill and for use as a dust suppressant. The CKD coming from the plant is mixed with about 20 percent water before being placed in the landfill. With 350 tons per day of CKD being generated, approximately 17,000 gallons per day will be needed for

this process. Additionally, water will be taken from this pond for dust control on haul roads within the Landfill Area. Therefore, discharges from Outfall 03A will be limited to periods of extended wet weather. The discharge will flow over the spillway into an unnamed drainage ditch, under Highway 180, and into the main plant drainage ditch which flows in to the Process Water Pond, Outfall 003. The drainage area is approximately 48 acres.

SW-1–Stormwater Outfall

The drainage basin for this outfall is approximately 139 acres, and is located on the southern property boundary. Manufacturing activities are not conducted in this drainage basin. The area north of the Stormwater Outfall has been mined to the point that storm water flows to the bottom of the quarry.

SW-2–Stormwater Outfall

The drainage basin for this outfall is approximately 45 acres, and is located along the eastern property boundary. Manufacturing activities are not conducted in this drainage basin. Mining is being conducted in this area. The discharge from outfall SW-2 will continue for about one to two years until the elevation in the quarry is low enough to allow for storm water drainage back into the quarry.

Permit Application Forms

This NPDES permit modification application consists of ADEQ Form 1 (Attachment 1), EPA Form 2C (Attachment 2), and EPA Form 2F (Attachment 3). Ash Grove Cement Company is responsible for collecting samples from each outfall and obtaining appropriate analysis to include with the forms. However, the area is approximately 20 inches short of rainfall for 2005 so a discharge event has just recently been conducted at the outfalls. Samples were collected and analytical results are included for Outfalls 001, 002, and 003 for EPA Form 2C and EPA Form 2F. Priority Pollutant Scan (PPS) results are included for Outfalls 002 and 003. PPS results for Outfall 001 will be submitted as soon as they are received. Samples were not able to be collected for Outfall 03A.


Cr-20
Cr-155
Cr-56
Cr-162
33 41 11N, 94 25 25W
Cr-1
108
Little River-1
Little River 160
Cr-75
Two Reservoir
M C Jones Lake Number One
N
W
E
S
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Facility


Cr-155
Cr-20
Cr-56
162
33 41 0N, 94 25 30W
108
Little River-1
Little River-160
Two Reservoir
M C Jones Lake Number One
N
W
E
S
Cr-75
Cr-1
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Cr-20
33 41 30N, 94 25 30W
108
Little River 1
Cr-1
Cr-56
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