## ASH GROVE CEMENT COMPANY

4343 HIGHWAY 108 WEST FOREMAN, ARKANSAS 71836 PHONE 870-542-3017 FAX 870-542-3026

KEITH BYERLY ENVIRONMENTAL MANAGER

November 15, 2010

Mr. Steve Drown Chief, Water Division Arkansas Department of Environmental Quality 5301 Northshore Drive North Little Rock, AR 72118-5317

Subject:

**Ash Grove Cement Company** 

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Several weeks ago our consultant engineer, Bob Blanz, met with you and Mo Shafii to discuss several matters including the internal outfall # 03A-A in the referenced permit. Following the discussion, it was suggested that Ash Grove submit a letter explaining the issue and proposed actions and ADEQ would make a determination of whether a permit modification would be needed.

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Ash Grove completed construction of a new cement kiln replacing the old "wet process" kilns with a single pre-calcining kiln. The resulting cement kiln dust (CKD) captured in the air pollution control devices is transferred to the permit Class 3N landfill on site The internal process pond captures runoff from the landfill and functions to control sediment. Water in the sedimentation pond is used to optimize the moisture content of the CKD to facilitate compaction in the landfill. Should a discharge from the sedimentation pond occur, it would flow through internal outfall 03A-A into the process water pond, which discharges through outfall 003. Outfall 03A-A has NPDES permit limits of 50 mg/L for TSS and 6.0 to 9.0 s.u. limits for pH.

CKD from the pre-calcining process has a higher free lime content than the old wet process CKD. As a result the pH in the landfill sedimentation pond has risen and there is concern that it may exceed 9.0 s.u. should a discharge occur from 003A. Of course, if a discharge did occur, it would enter the much larger process water pond, be buffered, and appear as effluent in outfall 003. Nevertheless, Ash Grove is prepared to take precaution to avoid a pH exceedence from outfall 03A-A and has developed a contingency plan as outlined below.

Should it become apparent that a discharge from outfall 003A is imminent, Ash Grove proposes to manually apply carbon dioxide (either solid or liquid  $CO_2$ ) to the landfill sedimentation pond. This will, in effect, add a weak carbonic acid to the water and buffer the pH. The amount of dry ice needed will depend in part on the pH of the water and the level of the pond. Dry ice is available in 50 pound blocks and would be dispersed in a grid pattern throughout the pond. It would sink to the bottom and basically melt releasing the  $CO_2$  and buffering the pH. Liquid carbon dioxide would be distributed throughout the pond.

Should the application of carbon dioxide be necessary, it is believed to be a temporary solution until the exposed CKD cells can be closed and a clay cover installed in accordance with the solid waste permit requirements.

Ash Grove appreciates you consideration of this request and looks forward to your response. If you have any questions or desire additional information, please do not hesitate to contact Mr. Keith Byerly at (870) 542-3017.

Sincerely,

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**CERTIFIED MAIL** 

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