

**CROFTON FIRST**

P.O. Box 3482

Crofton, MD 21114

[www.CroftonFirst.org](http://www.CroftonFirst.org)

26 February 2008

Stephen Pattison, Assistant Secretary  
Maryland Department of the Environment  
1800 Washington Boulevard  
Baltimore, MD 21230

**SUBJECT: Proposed Coal Combustion Byproducts ("Fly Ash")**

Mr. Stephen Pattison:

Crofton First is a non-profit all-volunteer organization. We represent the interests of numerous citizens who live along the Route 3 corridor in Anne Arundel County, including residents who have had to live with the very serious consequences of fly-ash contamination resulting from irresponsible disposal of the material in our community.

Please note that our broad-scope Public Access Information (PIA) request submitted 13 December 2007 to the Department of Natural Resources (DNR) has been delayed. The denial letter we received indicates that MDE has caused further review by taking control of the release of this material. To date, we have no indication from MDE when their review of this material will be complete, or if it will ever be released, after waiting for ~70 days. The requested materials are relevant to understanding of the Gambrills site in relation to the existing and proposed regulatory schemes.

In this letter we direct your attention to several areas of concern with the proposed regulations as presented in the Notice of Proposed Action, Maryland Register, Vol. 34, Issue 26, Friday, December 21, 2007, pages 2287 to 2298. The proposed regulations do not adequately protect public health. We respectfully urge Maryland Department of the Environment to enact improved regulatory

controls, and also support the adoption of statutory efforts to allow for an adequate regulatory regime. Regrettably, MDE along with industry representatives have encouraged legislators to vote against potentially effective statutory actions most recently under HB388, arguing the MDE regulatory process by itself could or would be adequate. We respectfully disagree, since we believe a regulatory scheme without a statutory framework will not protect the public interest as effectively.

With respect to the proposed regulations, we have divided this letter into the following subject areas:

1. Beneficial Use
2. Airborne particulate matter
3. Permitting, public participation and notification
4. Site Requirements
5. Improved engineering requirements
6. Re-disturbance of site or restart of existing operations
7. Monitoring and Closure
8. Drinking Water Supply
9. Radioactive Elements in Fly Ash
10. Summary

In this letter we use term "fly ash" interchangeably with Coal Combustion Byproducts.

**1. Beneficial Use (see p. 2289, 26.04.10 (.02 Definitions) B(2)(a):**

We agree with Environment Maryland's position that the definition for "beneficial use" should not involve disposal of fly ash in any situation in which it comes into direct contact with the environment in "free-form." The use should be evaluated further as possibly beneficial only when a bonding agent of some kind is used to properly bind the material to prevent unacceptable exposure. Uses for landfill, structural/building fill, soil improvement, agriculture, soil conditioning, or land reclamation should not be considered beneficial. Even with a bonding agent, we still have questions for some uses such as in carpeting, where exposure risk is increased due to high levels of frictional wear and routine human contact. The use of fly ash as a beneficial use in cinder block, concrete, and asphalt would appear to be acceptable beneficial uses since a bonding agent is utilized and physical/frictional contact is minimal.

## 2. Airborne particulate matter

(see p. 2290, 26.04.10, .03 General Restrictions (B)(3))

As noted in multiple public venues, the exposure to fugitive dust from fly ash operations is a major concern. Despite controls required at the Gambrills site, photographs submitted and direct observations of dust plumes emanating from the site illustrate the need for better enforcement and improved controls for fugitive dust. The potential for significant exposure is immense, since up to 1,000 tons a day of material is being dumped, day after day, week after week, over a multi-year period of time. In the case at Gambrills, immediately adjacent to the pits is a high-density age-restricted condominium community, more than 400 units with buildings as close as ~90 feet to the fly ash site. A children's playground, schools, as well as outdoor restaurant seating are part of the activities that abut the Gambrills fly ash site. Residential homes surround all sides of the site, and we have learned of a variety of descriptions of dust issues, including homes being power-washed over the years for free in attempt to appease homeowner dust concerns. Regrettably, this issue seems to be treated as a "nuisance" issue rather than being recognized as a legitimate health concern that needs to be properly characterized and monitored.

More recently, enforcement for dust control at the Gambrills site involves "visual" inspections which cannot provide quantitative results, and have proven unsatisfactory to local residents. Proposed regulations call for "reasonable precautions" (p. 2290, 26.04.10, .03 B(3)) to be taken and even then measures under COMAR 26.11.06.03C and D only apply when MDE decides they are appropriate. The proposed definition being used is inadequately defined and leaves necessary controls as an option to government regulators. We strongly urge more stringent and effective definitions as requirements.

Specifically, proposed regulations should explicitly include:

- Prevention of interference with attainment or maintenance of ambient air quality standards at any offsite location based on maximum potential emissions
- Permit application to include description and frequency of practices that will be employed to comply with air quality regulations to specifically prevent a condition of air pollution

- For sites bordering or within 2,000 feet of residential properties, require permit application to include monitoring of particulate concentrations in ambient air at multiple locations along the site perimeter
- Water truck and watering methods shall be available according to the regulations, but also applied to prevent the release of dust from operations. If the water method is not effective in suppressing dust, then operations must stop.
- Water conditioning of the fly ash is mentioned in the regulations prior to leaving the generating facility. Specific criteria should be considered to ensure effectiveness of moisture content as it relates to fugitive dust control, and verification at both the leaving (generating) station and at the receiving facility, so that dust generation can be more effectively controlled and monitored.

### **3. Permitting, public participation and notification**

At the Gambrills location, residents felt left out of the process, and to date, community access and comment opportunity during the sequence of events throughout the multi-year Gambrills contamination problem have been extremely limited. More recently since Fall 2007, MDE officials have participated in three community meetings sponsored by Crofton First. We are concerned however, that MDE has yet to provide Consent Decree submittals and Gambrills site reports in a proactive manner in a local library or on the internet. We have also requested MDE officials to provide a brief monthly report to citizens to communicate progress at the Gambrills site. We believe that government transparency, pro-active information release, and regular communication are paramount for any health hazard and clean-up situation.

We are still unclear why it took the efforts by the local County Health office to independently carry-out well testing to reveal the extensive impact to private wells surrounding the site in late 2006, when for years MDE and Constellation were aware of monitoring well results with significant violations of federal drinking water standards. Regrettably, MDE and Constellation continued with more fly ash dumping for years knowing the pits were continuing to leak heavy metals into the groundwater. This sequence of the events is quite disturbing to the public, and suggests not only a regulatory, but also a close examination of

enforcement issues. We hope this experience will result in all necessary statutory, regulatory, and enforcement changes so that no community is subjected fly ash contamination.

With respect proposed regulations, suggested provisions to improve permitting public participation and notification include:

- Provision for permit application specific for fly ash disposal, which is subject to public notification, comment, and hearing. Although its has been pointed out that regulations reference other permitting steps that include public notice and hearing opportunity, we prefer proposed regulations explicitly state public participation rights for fly ash disposal, even if it may be duplicative elsewhere in the regulations.
- Clear and unambiguous requirement to temporarily halt any further fly ash dumping once environmental monitoring reveals probable contamination of any water, or air quality standards due to fly ash. Further disposal of fly ash should not resume at the contaminated location until the site is fully remediated and all air and water quality standards are met.
- Department must be fully funded, with adequate staff, equipment (including air testing), and established protocols to effectively implement any new statutory and regulatory protections before any new permit application, or expansion of existing fly ash disposal be considered.
- Increase in permitting fees to offset new application review, monitoring, and enforcements costs should be implemented.
- Notification of near-by well owners of any persistent water quality exceedence that extends beyond a 30-day re-sampling period. While the proposed regulations provide for notification of MDE, nearby well-owners should also deserve notice for any non-compliant events.
- Public access and/or public reporting should be automatically provided on all water and air exceedence data, with any interpretive studies and quarterly reports to be placed in a local library near the site, or made available on the internet.

- Use of supplemental government laboratory tests for periodic independent testing and validation of industry self-reported data. In cases where aquifer contamination is discovered and could threaten drinking water wells, independent, supplemental government testing should be increased to ensure validity of polluter-reported data.

#### **4. Site Requirements:**

Selection of a fly ash disposal site is especially important, and we believe the regulations should have specific minimum requirements before a site can be considered for a permit. In the case of Gambrills, fly ash disposal occurred in a coarse highly transmissive and permeable soil, in close proximity to private wells, residential condominium complex, open-air restaurant dining, children's playground, and two schools. We suggest that site requirements include:

- Prevention of placement of fly ash within 800 feet of any residential or school building currently occupied or anticipated to be occupied (i.e. under construction, or in planning process) or any well used for drinking water.
- Evaluation to determine the degree of future growth allowed under current zoning and long-range planning surrounding site, with exposure impact studies (air and water) to consider maximum full-growth scenarios for anticipated human exposure and potential water impacts.
- Consider maximum accidental contamination hazard levels either from structural or geotechnical collapse, failure of equipment, power loss, large-scale storm events. Site design should incorporate fail-safe mechanisms for leachate collection and stormwater overflows.
- Sites on top of an existing impaired aquifer that is already known to be contaminated, or a site with already established air quality degradation due to industrial operations should not be used as a site for fly ash disposal.
- Prior to site establishment, plan should be carried out to characterize baseline aquifer characteristics, and identification of any aquifer influences from near-by sources.

- Avoid soil and lithologic geologic strata that have high permeability and infiltration rates, as are present with gravelly soils. As gravel mines tend to be near if not directly in contact with surface water, and would be a very porous medium (due to gravel that is being mined) that in particular these sites be avoided.

#### **5. Improved engineering requirements (permeability, compaction standards, and improved membrane thickness for cap).**

Under separate cover, Environment Maryland has identified additional engineering requirements as needed to properly protect the groundwater quality. These include issues with compaction, permeability, base preparation, and improved permeability cap. We have reviewed these recommendations, and support their adoption by MDE.

#### **6. Re-disturbance of site or restart of existing operations**

In the case of a "closed" fly ash site, regulatory requirements need to provide more specific controls for re-disturbance or proposed restart of disposal operations under existing permits. Existing fly ash sites are a known threat to existing communities, since operations have occurred under an inadequate regulatory and control regime. As a result, careful attention and a high level of scrutiny must occur for reactivating or re-disturbing known problematic sites, such as the one in Gambrills. We recommend consideration of the following:

- Operations at all Maryland sites prior to April 1, 2008 should be evaluated for adequate water and air quality controls.
- For sites with > 100,000 tons of fly ash present, a public notification, and hearing should be carried out for cases involving development activities with a cumulative disturbance of > 8 tons of fly ash, in order to review and adequately protect against further degradation of the environment. This review should include a detailed justification, geotechnical, stormwater, hydrological and fugitive dust review to ensure activities comply with all new standards and requirements, and demonstrate that further degradation of the environment will not occur.

- For any prior permitted site not receiving fly ash for more than 5 months prior to April 1, 2008 should be treated as a suspended activity, until a new application is submitted, reviewed, and approved for future disposal following all new regulatory requirements and procedures.

#### **7. Monitoring and Closure (See: p. 2298, 26.21.04, .09 (A-H))**

In the proposed regulations, 5 year term is noted for the post closure monitoring and maintenance of a site. Exposure or failure to maintain engineering controls is needed to prevent long term impacts, as failure to implement sound maintenance will result in eventual failure and contamination of the environment. Consequently, maintenance and monitoring must be adapted for a long-term plan that runs with the land, with specific responsibilities to be conveyed forward to all future land-owners for as long as the potential for an environmental hazard exists.

#### **8. Drinking Water Supply, (See: p. 2298, 26.21.04, .10 A-C)**

In this section, well owners within 300 feet of a contaminated well, drawing water from the same source, should also be provided with a temporary and eventual permanent, potable water supply regardless if the well can be proven to be "affected" or not. Experience at the Gambrills site has shown that contamination is highly variable over time and location, and proximity to sub-surface contamination should be adequate to justify basic drinking water protections.

Drinking water protection should also extend well beyond the proposed 5-year period after site closure.

#### **9. Radioactive Elements in Fly Ash**

As presented in a fact sheet issued by the USGS (#163-97, see: <http://pubs.usgs.gov/fs/1997/fs163-97/FS-163-97.html>) , fly ash contains radioactive components. As indicated in the document,

"The average ash yield of coal burned in the United States is approximately 10 weight percent. Therefore, the concentration of most



radioactive elements in solid combustion wastes will be approximately 10 times the concentration in the original coal."

Later in the document,

"In fly ash, the uranium is more concentrated in the finer sized particles. If during coal combustion some uranium is concentrated on ash surfaces as a condensate, then this surface-bound uranium is potentially more susceptible to leaching."

Although the conclusions later in the document indicate that radioactivity in fly ash is not generally considered a problem, this information was based on past studies and generalized assumptions that may be out of date, or based on lack of understanding of the hazards now understood with fly ash. In addition, the radioelement composition of a particular coal ash is dependent on its source. So, whether the USGS study had low or high quantities, inferences to specific sites in Maryland are presumptive. Therefore, we request MDE to review uranium, radium, and other radioelement impacts for the Gambrills site, and in conjunction with the latest research, review any relevance to monitoring and testing requirements for the proposed regulations. We believe this issue should be examined both from inhalation of fugitive dust as well as water quality perspectives.

## 10. Summary

In closing, Crofton First has a continuing interest in the development and implementation of fly ash regulations in order to properly protect the public and the environment. Regrettably, our community has had to not only suffer the consequences of poor fly ash management, but may face more fly ash dumping at the same site, as MDE has allowed this possibility under a Consent Decree. To this end we strongly urge MDE to take careful and full consideration of citizen input and experiences in light of the very difficult situation our community has faced. Additionally, we also urge MDE support for passage of statutory protections. Regulatory changes can make a big difference, but can be further enhanced with appropriate legislative action. Finally, we would like to reiterate our concern that MDE has caused a delay in access to critical records we perceive as necessary to fully understand what happened at Gambrills in light of existing and proposed regulations. Despite submittal of our PIA request over 2 months ago to the Department of Natural Resources (DNR), we have been told

that MDE has taken control of this request. To date, we have heard nothing from MDE about the access status of these particular DNR files. We believe that MDE should cooperate with the file access request, so that critical information regarding this public health hazard can be better understood.

Sincerely,

CROFTON FIRST  
Timothy A. Berkoff  
Environment and Zoning Chair

CC:  
County Executive John Leopold  
County Health Officer Fran Phillips  
County Councilman James Benoit  
County Councilman Ed Reilly  
State Delegate James King  
State Delegate Tony McConkey  
State Environmental Matters Committee Chair Maggie McIntosh