

www.CroftonFirst.org

P.O. Box 3482 Crofton, MD 21114

Our Mission:

- Nurturing relationships/partnerships with local businesses, organizations and elected officials
- Offering a platform for community members to voice concerns about the direction of growth and development around our community
- Highlighting the environmental, social, moral and community impact of large scale non-strategic development within the community
- Acting to protect the community from inappropriate development, threats to local businesses, and damage to natural resources

OUTLINE

- **Site History**
- **Topics**
 - **Monitoring improvements are needed**
 - **Public Well Field**
 - **Radioactivity & Fly Ash**
 - **Fly Ash Re-disturbance**
 - **Nearby Business/Commercial Use Wells**
 - **Communication issues**

What can you do?

Some Highlights

(information from PPRP report and other sources)

Fly-ash: Waste from combustion coal burning

1995: Fly ash dumping starts in “Turner” pit

June 1999: First signs of aquifer contamination above 500 mg/L permit limit for Sulfate

Nov 1999: Waugh Chapel report: “Model results show that peak sulfate concentration predicted to be about 245 mg/L or less at property boundary, occurring 32 years ...”

2000: Fly ash dumping starts in “Waugh Chapel” pit by 2002, > 500 mg/L Sulfate observed

2004: Turner pit remediation “pump and treat” system installed

Oct 2006: WC monitoring now show Sulfates up to 4,480 mg/L, bottled water being supplied to residents on Summerfield

Fall 2007: Fly-ash dumping stops. MDE enters into a “Consent Decree” with Constellation and BBSS to require clean-up, provide clean water, allows for further fly-ash dumping at the site with a liner
<http://www.mde.state.md.us/CitizensInfoCenter/Health/flyash.asp>

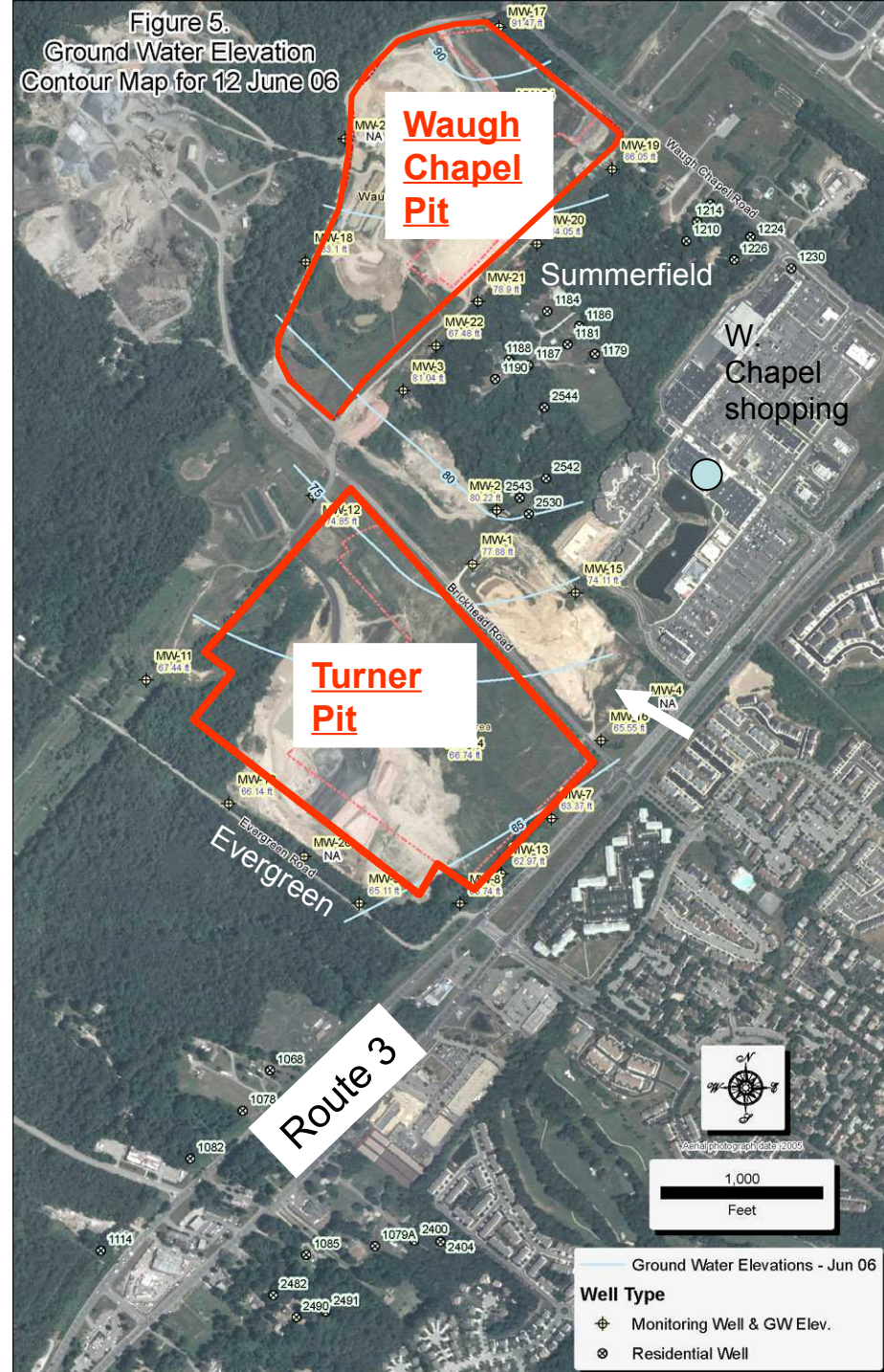
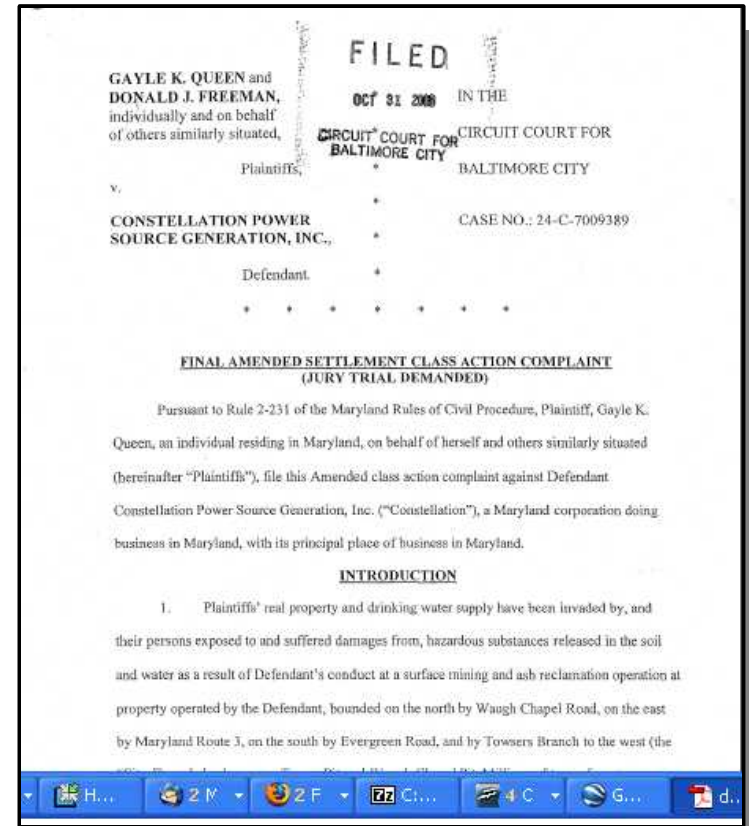


Figure from PPRP report, p. 15
http://esm.versar.com/pprp/bibliography/PPRP_142/PPRP-142.pdf

Since the Consent Decree

- **Summer 2008** : Constellation present remediation report to public
- **Fall 2008**: Waugh Chapel permit renewal
 - CF filed appeal due to fly ash dumping language
- **Dec 2008**: Class action “55 million” settlement:
 - Provides protections for nearby well-owners and adjacent condo owners
 - 84 homes to get public water
 - ~10 million trust fund for well owners
 - ~0.5 million to adjacent condo community improvements
 - No more fly ash dumping by Constellation at the site
- **April 2009**: Public water lines to Summerfield



Front page copy of class action filing

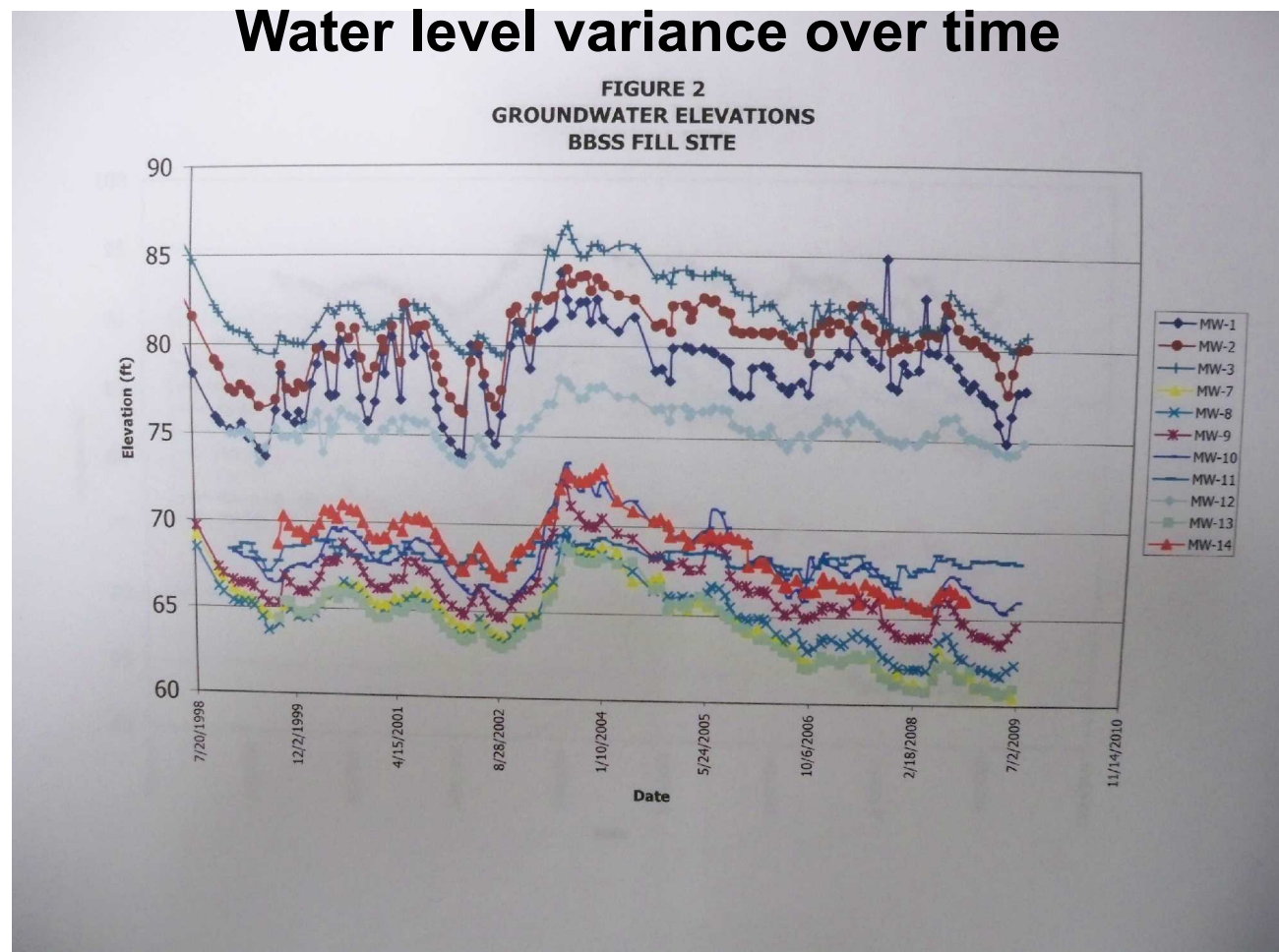
Water intrusion into the fly ash

MDE permits require vertical separation between fly ash and water table

Water table variability complicates this

Subsurface lateral water movement also contributes to aquifer contamination

A shopping center “cap” by itself will not resolve the contamination problem



Trend analysis plot in MDE file, submitted by Constellation Energy

Size & Shape of Contamination Not Understood

- Off-site monitoring wells to fully delineate the contamination have not been established
- Models for this site have historically been wrong about plume size and shape
- More monitoring wells are needed to properly delineate the size & shape of the contamination plume
- “Capture Zone” highly speculative without sound empirical data

Water level contour map in MDE file, submitted by Constellation Energy



Public Well Field

- Public water source for the area is ~ 1 mile down-gradient from the site
- Public water is drawn from aquifer below the one known to be contaminated (Magothy). To date, no known reported impacts according to gov officials
- However from PPRP report: some vertical leakage is expected to occur between aquifers

RECOMMENDATION: Conduct “worse-case” public water impact study, implement sentinel well monitoring specifically to protect public well field and take action to address the issue as needed





DNR 12-6182007-221
PPRP-142

PPRP

Assessment of Water Quality Impacts
Associated with Use of Coal Combustion Products
as Structural Fill at the BBSS Site

June 2007

MARYLAND POWER PLANT
RESEARCH PROGRAM

Some Example issues from DNR consultant report, June 2007:

P16: “Although the Crofton Meadows pumping is from aquifers underlying the Magothy formation, ground water from the Magothy is being captured as a result of vertical leakage into the Patapsco.”

P 40: “Sulfate concentrations are elevated above background levels in ground water nearly 3,500 feet downgradient for the Waugh Chapel Pit.”

P46: “The leaching data and calculations indicate that the fly ash, if wet, will continue to leach sulfate and metals at concentrations above regional water quality for tens to hundreds of years.”

Radioactive Elements in Coal and Fly Ash

- Images from USGS, see fact sheet:

<http://pubs.usgs.gov/fs/1997/fs163-97/FS-163-97.html>

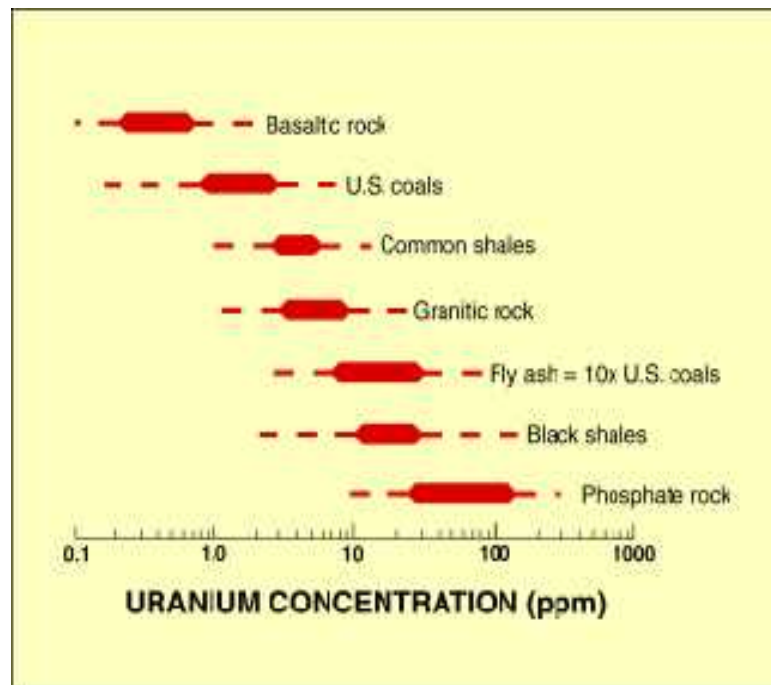


Figure 2. Typical range of uranium concentration in coal, fly ash, and a variety of common rocks.

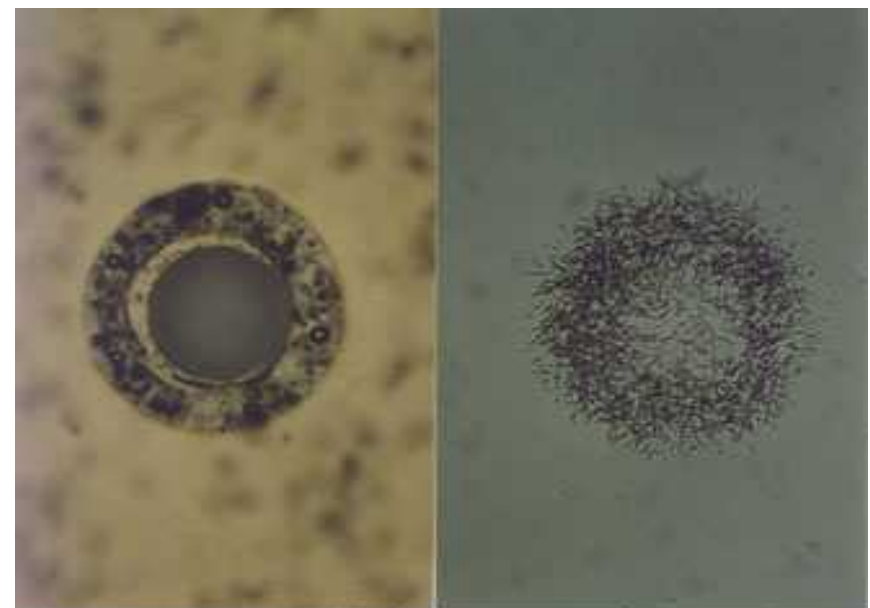


Figure 3. Photograph (left) of a hollow glassy fly ash particle (0.01 cm diameter) and its fission track radiograph (right). Uranium distribution and concentration are indicated by the location and density of dark linear fission tracks in the radiograph.

Crofton First has previously requested MDE to conduct radio-element testing at the BBSS site

Business Well Impacts

- ~84 residential well owners are protected by the Class action settlement
- A number of businesses have “private” wells near to and down-gradient from the site
- To date, Crofton First is unaware of any detailed plan to provide assistance & appropriate protections to business-owned wells that may be impacted



Fly Ash Re-disturbance

Photo provided by Greenberg Gibbons Commercial

- Substantial amount of fly ash will need to be disturbed for construction of WC south shopping
- According MDE docs, BBSS has requested:

75,000 tons of fly ash to be removed/disturbed for South Village construction

- Docs seen so far indicate removal & re-disposal on-site without following new state-wide fly ash regulations adopted by MDE
- Since 75,000 tons can be moved for a shopping center, should some portions of the fly ash closest to the water table be removed too?
- Construction procedures already approved by MDE, public never provided opportunity for comment



Example truck photo courtesy of <http://joemataresetrucking.com/>



75,000 tons = 3750 trucks!

Communication Issues

(background image is Constellation's web-page)

community
ashupdate

Constellation Energy's
Environmental Commitment

Community Outreach

Status of Remediation

Questions & Answers

News & Information

Facts About Coal Ash

Water Line Installation Update **NEW**

Filings & Documents

- **As of Oct 11, Constellation has not been updating the website with quarterly reports and other critical documents for 2009**
- **Monitoring well data is not being placed in local library, or any other publicly accessible location (other than MDE in Baltimore, which requires PIA paperwork filing)**
- **Last known BBSS fly ash community meeting is over 1.3 years ago, no known public meeting since by Constellation**
- **Details of fly ash re-disturbance/placement needs to be vetted with the community**

Web Sources of Info

- Crofton First fly ash website

http://www.croftonfirst.org/fly_ash.htm

- MDE website:

<http://www.mde.state.md.us/CitizensInfoCenter/Health/flyash.asp>

- Constellation Website:

<http://www.communityashupdate.com/>

- PPRP report:

http://esm.versar.com/pprp/bibliography/PPRP_142/PPRP-142.pdf

- USGS fly ash radio-element composition

- <http://pubs.usgs.gov/fs/1997/fs163-97/FS-163-97.html>