GENERAL PERMIT APPLICATION NUMBER WMGR097R011
HAZLETON CREEK PROPERTIES, LLC
PUBLIC COMMENT & RESPONSE DOCUMENT

APS No. 126057, AUTH No. 843263

December 2010

On July 31, 2010, the Department of Environmental Protection (DEP) began a sixty-day public comment period on an application for a residual waste general permit submitted by Hazleton Creek Properties, LLC (HCP). The application is for beneficial use of flue gas desulfurization (FGD) waste and coal ash in mine reclamation. Comments were received from the 25 commentators listed at the end of this document. Relevant comments derived from written comments received during the public comment period have been summarized below. Comments are representative of single or multiple commentators. Department responses are provided for each comment or grouping of comments.

1. **Comment:**

If approved, this permit would allow HCP to add FGD gypsum to a laundry list of materials – including coal ash, river dredge from Philadelphia, and construction and demolition waste from New Jersey and other states – which DEP has already approved to be dumped at this 277-acre site. (1-17)

The potential that all four substances – dredge, construction and demolition fines, FGD and fly ash, will be mixed together raises questions as to the safety of the project. The Department approved a prior permit for this site to allow dredge and coal ash to be placed in the same open mine pit without a liner. (18)

This is another permit application to place potentially toxic waste materials directly into the environment at a complex abandoned former mine that also served at times as a municipal waste landfill and as a notorious site of rampant illegal dumping. (20)

DEP conceded at the August 31, 2010, public informational meeting that DEP was aware of no scientific studies that have investigated the safety of the combination of materials that are under HCP's existing WMGR085, WMGR096 and WMGR097 authorizations and under proposed WMGR125. DEP could offer no evidence or information at the informational meeting to support the approval of HCP's proposal and that activities already underway at the site under the above general permits will not adversely impact human health or the environment in the event that this miasma of waste materials combines at and under the site. (20)

At the informational meeting, DEP officials were unable to provide relevant information, such as location of sites and quantities of FGD material and coal ash, in response to questions concerning previously issued authorizations under General Permits WMGR111 and WMGR052, which HCP asserts are similar to the proposed WMGR125 general permit. (20)

Response:

The area subject to HCP proposed to beneficially use FGD waste and coal ash, called "Unit A," is separate from and north of Units B and C, which are the areas covered under the other general permits under which HCP has already been permitted. The municipal landfills were not located in Unit A. The material proposed for beneficial use is not toxic.

The Department's role in the August 31, 2010, public informational meeting was to inform the public that an application was received, what was being proposed by HCP in the application, the general permitting procedure the Department will follow in processing the application and how to submit comments on the application. To allow sufficient time for public comment, the meeting was held at the midpoint of the comment period at the time when Department staff was only in the very early stage of technical review of HCP's application. To schedule the informational meeting at a time when the

Department's review of the application could be sufficiently completed to allow DEP staff to discuss technical aspects of the application or background research on similar projects would have meant scheduling the meeting after the close of the comment period. This would be contrary to one of our primary purposes – to give ample time for public comment after the meeting. To cover technical aspects of their proposal, the Department invited HCP and their representatives to participate in the informational meeting.

The detailed, site-specific information concerning General Permit Numbers WMGR111 and WMGR052 requested at the informational meeting is provided below.

General Permit Number WMGR052 authorizes beneficial use of "Low Permeability Cementitious Material" (a mixture of flue gas desulfurization (FGD) sludge, coal ash, and lime) for use as a construction material and for mine sealing, in mine fire and subsidence control, and for abandoned mine reclamation. General Permit Number WMGR111 authorizes processing (mixing or blending) at waste generation or mine sites of: (i) synthetic gypsum from forced oxidation flue gas desulfurization (FGD) systems generated at coal-fired electric power plants, (ii) coal ash, and (iii) approved alkaline agent to produce for beneficial use as a stabilized FGD-gypsum material, for mine reclamation purposes.

The companies operating under General Permit Number WMGR052, beneficial use site and quantities used are as follows:

Orion Power Midwest
Project Locations:

Percy Mine	Rostraver	Labelle
Union Twp	Rostraver Twp	Luzerne Township
Fayette Cnty	Westmoreland Cnty	Fayette County
98,136 tons	123,605 tons	953,531 tons

Cheswick
Springdale Boro
Allegheny Cnty
3,594 tons

Allegheny Energy Supply Co.
Project Location:
Labelle Coal Preparation Plant
Luzerne Township
Fayette County
2,314,641 tons

Forward Industrial Development Corporation
Former Suchko Tire Processing Center
Forward Township
Allegheny County.

Permitted to utilize 248,000 tons (This project has not started yet.)

The company operating under General Permit Number WMGR111, beneficial use site and quantities used are as follows:

PPL Generating
Burnside #10 Basin Operation
Coal Township
Northumberland County
1,483 tons

2. Comment:

This experimental and potentially toxic combinations of materials has never been tested anywhere in the world, and when leaked into the ground, could lead to direct contamination of my water supply. Hazleton is not a laboratory for a giant science experiment. Neither DEP nor HCP has shown that these materials are safe for the public. (1-18)

The beneficial use of FGD materials in mine land reclamation has yet to be proven safe in any demonstration project in PA or anywhere else. A search of DEP permits WMGR052 and WMGR111, the two other beneficial use permits employing FGD products, seem to indicate there are no actual FGD mine land reclamation projects underway using these permits. (22)

It would appear that the Department conducted no research of its own regarding the efficacy of using FGD material as construction material, as structural fill, or as material for the reclamation of mine lands. In contrast, the Bark Camp Mine Demonstration Project was used by the Department for the purpose of examining the potential threats arising from the beneficial use of mixing coal ash with dredge materials. (24)

Response:

The materials proposed for beneficial use under General Permit Application Number WMGR125 are not toxic or experimental and have been successfully beneficially used. In fact, companies have been using FGD waste and coal ash in PA under both General Permit Numbers WMGR052 and WMGR111 for reclamation of mine lands. (See response to Comment 1.)

When DEP issues a general permit for beneficial use of waste, it imposes chemical limits based on fate and transport modeling and risk assessment to ensure the public and the environment are protected.

The Department often uses research conducted on behalf of the applicant or others to support the development of general permits.

3. Comment:

This permit would not require HCP to install a liner, leachate collection system, or additional testing wells to ensure the water supply is protected from potential toxic chemicals that could seep into our groundwater. (1-17)

No liner is proposed or currently exists in the proposed placement area. We continue to believe that groundwater and surface water monitoring is inadequate to detect off-site migration of all contamination from the potentially toxic soup of waste materials that have already been approved for placement at this mine site, whether or not this new application is approved. The Department should not approve HCP's application until HCP agrees to install a liner and leachate collection and treatment system and installs additional groundwater monitoring wells. (20)

Response:

Testing of materials prior to placement and strict chemical limits ensure the protection of public health and safety without the need for a liner and leachate collection system. The material is not toxic.

DEP has already approved a groundwater monitoring plan for the entire 277-acre site that includes the 53 acres subject to this application.

4. Comment:

The Department ignored calls for liners, water treatment systems and other environmental protections against potential contamination to groundwater (when it issued General Permit Number WMGR097R011). The failure of HCP to commit to installing a liner creates a great risk to the health and safety of the citizens of Hazleton. (18)

Response:

When developing a general permit for beneficial use of materials, the Department includes a testing protocol with strict chemical limits that ensure the protection of public health and safety without the use the need for liners and leachate treatment systems.

5. Comment:

The Tennessee Valley Authority eliminated the Hazleton site from consideration, as they were unable to commit to installing a liner for placement of the ash material. (18)

Response:

There was never an official application to bring TVA coal ash waste material to HCP. Based on general knowledge, the ash from the failure of the TVA impoundment did not

meet PA's requirements for beneficial use of coal ash. It would never have been allowed to be placed at the Hazleton site.

6. Comment:

With the failure of DEP to assess appropriate bonding requirements for this permit, it is clear the taxpayers of the Hazleton area will be on the hook for clean-up costs if the developer is unable to follow through with the reclamation or something happens to contaminate our water or creates an environmental hazard. (1-17)

The bonding requirements are only for the continuation of water monitoring, and they fail to set aside funds for proper remediation if water quality is affected, thereby leaving the Commonwealth – and the taxpayers – responsible for any problems at the site. This is a particularly acute problem in this project, because HCP is a limited liability corporation. (18)

Response:

When DEP issues a general permit for beneficial use, it is with the clear expectation that the safeguards built into the permit are protective of the public's health and safety. If necessary due to monitoring or inspections, DEP has the authority to require additional financial assurance at that time.

7. Comment:

The Hazleton Redevelopment Authority (HRA), the owner of the land, was asked if they gave permission for this permit and they said they did not and were not required to do so. This is part of the permit process and, therefore, the permit is incomplete. (17)

Response:

An applicant for a general permit is required to obtain a contractual consent from the landowner giving permission for the company and DEP to enter the land. The property owner neither is required to nor has the authority to approve the permit. HRA gave their consent for HCP to operate on the entire 277-acre site as part of another general permit.

8. Comment:

The area where the material is being dumped has extensive underground mining. No studies have been done to determine if the weight of this material as well as everything being dumped will cause these mines to collapse causing problems on the surface. (17)

Response:

Based on DEP's experience with mine reclamation projects, collapse of underground mines due to the weight of beneficially used materials is not expected to be a problem at this site.

9. Comment:

There has been no study showing how the water underground will flow and is mostly conjecture. As such, there may not be enough points where the water will be tested. (17)

Response:

This site is underlain by underground mining and drainage tunnels. The drainage tunnels are designed to drain water from the site and control the specific direction of that flow. The location of the monitoring points selected in the enhanced groundwater monitoring plan were selected as the most appropriate sites to capture any releases from the site. The monitoring points are suitable monitoring points for this specific project.

10. Comment:

The only downgradient well is MW-10, which according to drilling records is cased off at 422 feet. There is no evaluation of water bearing zones lower than 422 feet. Each water bearing zone should be monitored. (21)

Response:

The casing prevents water from entering the well. Therefore, MW-10 monitors water bearing zones below 422 feet, not above that level.

11. Comment:

MW-9 was used to confirm the Buck Mountain mine pool; however, it is only up gradient of MW-10. MW-11 is not monitoring the site specific mine pool. It can only show underlying formations and water recharging in this area. MW-12 has four watering zones and sulfur was detected at 463 feet, but the upper zones were not sampled. MW-10 is not capable of monitoring both the Hazleton syncline mine pool and the confirmed Buck Mountain mine pool. (21)

Response:

MW-9 is located in the Mammoth Pit and will provide data concerning materials HCP will place in this area of the site. MW-11 and MW-12 are upgradient wells whose purpose is to monitor water at the site that is not impacted by activities at the site. It was determined that water flowing from any activities on the entire 277-acre site will pass through the area where MW-10 is located and that monitoring well would be capable of detecting any impacts on groundwater.

12. Comment:

The presence of arsenic found in MW-10 has increased from August of 2008 through January 2009. This, combined with increasing pH in MW-10, indicates historic contamination is moving due to activity on the site or fill leaching arsenic to the subsurface. (21)

Response:

The minute increase in arsenic levels from 0.002 to 0.004 mg/L during this period is insignificant. All samples taken at MW-10 after that time period were non-detect. While the pH data from MW-10 do not show a clear trend, an increase in the pH of acidic groundwater is desirable at sites that have been impacted by coal mining.

13. Comment:

It is very possible the contamination in the residential wells along Route 309 comes from the site. (21)

Response:

The wells along Route 39 are upgradient of the placement site and not affected by the site.

14. Comment:

I would like to know if the Department conducts thorough background reviews on applicants, including an audit of the applicant's financial standing and a review of any prior or potential criminal or legal problems pertaining to the company and/or its owners? (18)

Response:

The Department conducts thorough background reviews on each applicant's compliance with environmental laws and permits. The Department does not have the authority to consider an applicant's financial standing or prior or potential criminal or legal problems.

15. Comment:

With new reports about the reliability and safety of fly ash disposal, DEP should proceed cautiously when considering permits for experimental use of fly ash until the Environmental Protection Agency (EPA) determines the material is safe. (18)

The EPA is presently reviewing regulations concerning the beneficial use and disposal of coal combustion byproducts. In addition, evidence of contamination to the environment from past disposal and beneficial use practices indicates that granting any beneficial use

permit in PA prior to the EPA review is premature and puts the environment at risk. (22, 25)

In reviewing HCP's application, the Department needs to take into consideration what is going on at EPA, the Office of Surface Mining (OSM) and the electric utility industry with regard to disposal of FGD material. (24)

Response:

The Department has over 25 years of experience with successful beneficial use of coal ash to reclaim mine sites, including many years of water quality monitoring, and does not consider coal ash beneficial use to be experimental or unsafe.

The focus of EPA's current proposed rulemaking is mainly on disposal of coal combustion byproducts. While it does cover some types of beneficial use, it expressly does not apply to beneficial use for mine reclamation.

DEP is keeping track of federal efforts by EPA and OSM in developing requirements for beneficial use of coal combustion byproducts at mine sites. It is our understanding that these federal efforts will begin once EPA promulgates final regulations on the disposal of coal combustion byproducts. It will likely be several years before this happens.

16. Comment:

It is my understanding that the FGD material is also known as synthetic gypsum. I contacted the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) and requested that they provide me with an assessment of the latest permit application by HCP. ATSDR raises concerns about the degradation of gypsum-containing materials. Specifically, ATSDR notes that anaerobic degradation of these materials generates hydrogen sulfide, and human exposure to hydrogen sulfide is of concern to the agency. ATSDR notes that once the process of hydrogen sulfide generation begins, it is very difficult to control in landfills that do not have liners, leachate collection and treatment systems and daily cover requirements. (19)

HCP's consultant stated that (dry) FGD material is not chemically similar to construction wallboard. However, much of the gypsum for wallboard is derived from FGD and flyash material. It would seem technically logical to consider possible hydrogen sulfide releases and possibly other vapor intrusion issues. (25)

Response:

ATSDR's concerns about hydrogen sulfide are based on their experience with construction and demolition (C&D) waste landfills. In C&D landfills, sulfate in gypsum can be reduced to sulfide under anaerobic conditions and organic matter to methane and organic acids. These acids can react with sulfide to produce hydrogen sulfide.

The situation with HCP's proposal is quite different than found in C&D waste in that coal ash and FGD waste will not have significant amounts of organic matter. As stated in others' responses in this document, the placement location in HCP's proposal is Unit A, whereas the other general permits under which HCP is authorized to operate allow placement in Units B and C only. Even if sulfate is reduced to sulfide at the site, organic acids will not be produced due to the lack of organic matter. Without acids, sulfides will not be converted into the volatile hydrogen sulfide.

The FGD gypsum used in wall board manufacturing is generated by a "forced oxidation" process. This is quite different than the process used to generate the dry FGD waste that is the subject of HCP's application. While the dry FGD waste does contain some gypsum, it is much less than FGD waste generated using forced oxidation.

17. Comment:

The National Research Council (NRC) of the National Academies of Science published a 2006 report, "Managing Coal Combustion Residues in Mines" that makes it clear that the safety of using coal combustion residues, such as coal ash and FGD materials, for reclamation of abandoned mines has not been firmly established. NRC warns that "comparably little is known about the potential for minefilling to degrade the quality of groundwater and/or surface waters, particularly over long periods of time." (20)

Response:

The Department is well aware of the NRC report and has included many of their suggestions in our "Beneficial Use of Coal Ash" final regulatory package.

Coal ash has been successfully beneficially used for mine reclamation in Pennsylvania for more than 25 years. Through water quality monitoring results from these sites, we have not see any adverse impacts to water quality associated with the beneficial used of coal ash. While beneficial use of FGD waste is a more recent development, we have not observed any problems for its use in over ten years under General Permit Number WMGR052 or more recently under General Permit Number WMGR111.

18. Comment:

This site still has not been adequately characterized for groundwater contamination, or for buried hazardous wastes from years of use as a legal and illegal dumping site after the mine works were abandoned. It should not be approved until the site has been fully and properly characterized, and all remaining buried hazardous wastes removed to appropriate disposal facilities. (20)

Response:

This 277 acre site was subject to an extensive characterization as part of the "Baseline Environmental Report" conducted over ten years ago. The 53-acre portion of the site that

is subject to this application does not contain dump sites, which are found on other parts of the larger site. The enhanced groundwater monitoring plan was approved by the Department and is designed to monitor the entire 277-acre site, including the area subject to this application.

19. Comment:

HCP's and DEP's witnesses in the pending *SUFFER* appeal have asserted that the lone downgradient groundwater monitoring well in the system (GW-10) was placed at a location in Area C of the mine to detect any off-site migration of contaminants from the placement of materials in the Mammoth Pit pursuant to the WMGR097R011 registration. There is no evidence to date that GW-10 will be adequate or able to detect contaminants migrating from the proposed placement area of this application in Area A of the site. (20)

Response:

The enhanced groundwater monitoring plan was approved by the Department and is designed to monitor the entire 277-acre site, including the area subject to this application.

20. Comment:

HCP's and DEP's witnesses in the pending *SUFFER* appeal have testified that another groundwater monitoring point, GW-9, was located directly in the Mammoth Pit where materials would be placed under the WMGR097R011 registration, to monitor another of the mine pools and enable early detection of any migration of contaminants from such placement. The only groundwater monitoring wells in the vicinity of the FGD/coal ash placement areas that could possibly be considered downgradient from the existing upgradient wells are dry and/or abandoned and are not returning any data. (20)

Response:

GW-10 is downgradient to all placement areas on this site and is adequate to detect any migration of contaminants before they exit the site.

HCP will be drilling a water supply well downgradient from the FGD/coal ash placement area that can be used check if any contamination detected in GW-10 is coming from the area subject to this application.

21. Comment:

HCP has proposed in its application to use the Synthetic Precipitation Leaching Procedure (SPLP) to determine whether the dry FGD and coal ash materials meet its proposed acceptance limits. The NRC discusses criticisms of single-point batch leaching procedures for prediction of coal combustion product stability in mine settings. The NRC concluded that alternative leaching procedures, which are being examined by scientists, should be developed in hopes of finding a test that more accurately represents the

potential for leaching hazardous substances from coal combustion products. DEP should require that leaching studies on coal combustion products utilize a more rigorous leachate testing procedure than SPLP or the toxicity characteristic leaching procedure (TCLP).(20, 22)

There is ongoing research by EPA's Office of Research and Development to identify trends in the composition and leaching behavior of coal combustion byproducts. EPA has concluded that there are significant variances in the leaching potential of the materials. More specifically, that "the rate of constituent release to the environment is affected by leaching conditions and that leaching evaluation under a single set of conditions may, to the degree that a single point leach test fails to consider actual management conditions, lead to inaccurate conclusions about the expected leaching in the field. (24)

Response:

The SPLP (EPA Method 1312) is a synthetic precipitation leaching procedure that simulates acid rain conditions that are typically found in Pennsylvania. If waste is kept out of the water table, the only water that will interact with the ash is rainwater. SPLP has proven to be an effective test for coal ash and protective of the environment in Pennsylvania.

Department scientists and chemists have considered the information on alternative leaching procedures, including multiple-point batch leaching procedures. The multiple-point batch leaching procedure being developed by EPA has several drawbacks: the process is not yet widely accepted, laboratories are not yet prepared to undertake this procedure, no interpretative framework has been provided by the researchers, and it would be prohibitively expensive. While the Department is open to adopting improved standard test methods, it will continue to require SPLP testing until another methodology has been developed and approved by EPA or the Department.

22. Comment:

HCP's application suggests that placing FGD and coal ash to reclaim mine lands will eliminate surface water impairments and improve water quality through the Jeddo Tunnel and Little Nescopeck Creek, but does not suggest how that improvement may be quantified or monitored. (20)

Response:

Water quality monitoring at downgradient points will be used to quantify or monitor improvements.

23. Comment:

DEP advised at the August 31, 2010, informational meeting that the pending "Beneficial Use of Coal Ash" regulations (25 Pa. Code Chapter 290) will not apply to the activities contemplated under HCP's WMGR125 application. HCP has provided in its application an entire set of acceptance limits that are specifically identified as "Coal Ash Acceptance Limits (Stored/Ponded or New Production) Direct Placement," with a footnote stating "Ash may be directly placed or blended with Dry FGD material." If coal ash is to be beneficially used in a direct placement at the site, why would such activities fall outside of Chapter 290? (20)

Response:

Chapter 290 will not directly apply to beneficial use of coal ash that has been blended with other wastes, since a permit is required to authorize beneficial use of the blend. Section 290.2(b) of the pending regulations stipulates that the requirements in Chapter 290 be met and, if the general permit is issued, it will contain the appropriate Chapter 290 requirements. HCP has removed the use of unblended coal ash or FGD material from their application.

24. Comment:

HCP keeps proposing new and different combinations of waste materials and greater and greater aggregate quantities of those materials, but DEP still has not required additional bonding. The existing bond amount continues to be wholly inadequate and allegedly covers only groundwater monitoring for a ten-year post-project completion period that has no clear start or end date. Which of the myriad of projects approved for the site controls the length of time that groundwater monitoring will be required? DEP should require additional bonding. (20)

Response:

In permitting a new landfill or beneficial use of waste or coal ash, DEP does not require bonding to cover reclamation and remediation costs. If water quality would show signs of significant degradation, DEP can then require additional bonding to cover the project.

HCP's current bond covers the costs of equipment decontamination and ten years of monitoring after placement at the site has been completed. Bonding by HCP was originally required under General Permit Number WMGR085D001 and would also be required under General Permit Number WMGR097R011 due to the volume of waste and duration of placement. HCP also proposed water quality monitoring in their applications under General Permit Number WMGR096NE001 and for this project. Since water quality monitoring is tied to operations under the three existing general permits, as well as this proposal, the ten-year post placement period begins after the last waste is placed in all of these general permits rather than any one specific permit.

Based on review of groundwater monitoring results and other monitoring information, DEP may require an increase in bond amount to cover any necessary assessment and abatement activities.

25. Comment:

DEP should consider carefully whether the quantities that have been authorized for placement under General Permits WMGR111 and WMGR052 are sufficiently comparable to the quantities that HCP has proposed in this application to adequately justify HCP's purported reliance on acceptance limits and certain other conditions set forth in those permits. (20)

Response:

General Permit Numbers WMGR111 and WMGR052 are similar in wastes and size to allow DEP, if a general permit is developed based on HCP's application, to use conditions in those general permits as a starting point. However, conditions, parameters and acceptance limits may be added or modified as appropriate.

26. Comment:

HCP's acceptance limits in the application deviate from those in General Permits WMGR111 and WMGR052 in several respects. Given the variability of blending proportions that HCP proposes (between 0% and 70% coal ash), it would be irresponsible for DEP, and potentially harmful to human health and the environment, to allow HCP to accept coal ash for blending at acceptance limits up to 20 times higher than the acceptance limits proposed for coal ash or dry FGD materials alone. (20)

Response:

HCP has removed the option to place unblended FGD waste or coal ash alone from their proposal. In General Permit Numbers WMGR111 and WMGR052, the allowable levels are based on the waste blend and not individual, unblended components. In the event a general permit is developed based on HCP's application, the allowable levels will likely be also for the blended wastes.

The acceptable levels for coal ash certification under the Bureau of Mining and Reclamation's (BMR's) policies for beneficial use of coal ash and mine sites have been modified. Some of the differences between HCP's proposal and limits in General Permit Numbers WMGR111 and WMGR052 may be due to modifications made to the levels used in general permits may be due to a lag in changing acceptable in BMR's policies. The Department will use its current standards for general permitting based on fate and transport modeling in a general permit is issued based on this application.

27. Comment:

The conditions to General Permits WMGR111 and WMGR052 both set forth acceptance limits for free cyanide, both HCP has not proposed any acceptance limits for cyanide. (20)

Response:

Since the original applicant for General Permit Number WMGR111 included free cyanide in their application, DEP included an acceptance limit in that permit. No cyanide limit was included in General Permit Number WMGR052. However based on practical experience with FGD and coal ash the DEP has determined that cyanide is not a constituent of concern for FGD, coal ash or a mixture of the two.

28. Comment:

HCP's application appears to borrow its proposed acceptance limit of 0.05 mg/L from General Permit Number WMGR111. General Permit Number WMGR052, however, specifies an acceptance limit of 0.0125 mg/L. If this project is approved, the materials should be required to meet the lower threshold. If the Department disagrees, they should explain why the higher acceptance limit is appropriate. (20)

Response:

The current acceptance limit for thallium used in general permitting is 0.0125 mg/L.

29. Comment:

DEP should not approve HCP's application before HCP has demonstrated that FGD materials from the PSEG Mercer and the PSEG Hudson generating stations will produce similar analytical results to the materials from the Brayton Point, MA generating station (operated by Dominion) that were the subject of the study conducted by Dr. Barry Scheetz and Hawk Mountain Labs ("Scheetz Study"). HCP should be required to conduct a similar study on the PSEG Mercer and Hudson FGD materials once those scrubbers are operational. (20, 22)

Response:

The FGD waste used in the study is expected to be similar to the FGD waste that will be generated at the PSEG stations due to similarity in design of the equipment. Prior to accepting FGD waste from a new source, any permit issued by DEP would require HCP to submit chemical analysis of the waste from the new source for review by DEP. In addition, performance standards could eliminate the PSEG material if it behaves differently than the Brayton Point material.

30. Comment:

The Scheetz Study did not have any involvement or oversight by the Department, did not involve any field testing, and was not peer reviewed. (24)

Response:

In applying for a general permit for beneficial use of residual waste, the applicant needs to provide information to support the beneficial use. This information may include chemical data as well as data on the appropriate physical properties. DEP neither requires this information to be peer-reviewed nor be generated with DEP involvement or oversight.

In their application, HCP included a study PSEG Services Corporation had done on the chemical and physical properties of wastes and varying mixes that was done by Professor Barry Scheetz and Hawk Mountain Labs. Dr. Scheetz is a widely respected expert in materials science and has conducted studies with DEP involvement on mine reclamation. Whether Dr. Scheetz will decide to publish this study in a peer-reviewed is up to him.

The Scheetz Study included data on chemical leaching, the chemical form in the bulk mixtures and physical properties, such as Proctor density, permeability and compressive strength. This data supports that HCP's mixes will fall within likely limitations that would be included as permit conditions in the event a permit issued.

31. Comment:

HCP's application states that it will use FGD material and coal ash in combination or blended in various rations from FGD alone up to a ratio of 70% coal ash, a highly variable scenario. Studies suggest that leaching of potentially dangerous elements of FGD can be reduced when it is mixed with fly ash, but the amount of leaching that may be prevented is at least somewhat proportional to the amount of fly ash added. (20)

Response:

HCP has removed the option to place unblended FGD waste or coal ash alone from their proposal. Of the blends in the application, none exceeded any standards that would likely be used if a general permit is issued based on the HCP application.

32. Comment:

Studies have shown that variable conditions and sources for materials will lead to variable leachable concentrations for some constituent substances found in FGD and fly ash. (20)

Response:

The permit issued for this project requires ongoing testing of the blends to be used at the site. In addition, the blend is expected to undergo some cementitious reactions which will decrease leachability as the mixes cure.

33. Comment:

Transportation of the materials subject to WMGR111 and WMGR052 must comply with the requirements of 25 Pa. Code Chapter 299. DEP should not grant HCP's application without similar explicit conditions to ensure, at a minimum, that none of the proposed materials escape into the air during transportation of such materials to the site. In particular, all trucks and train cars transporting coal ash should be expressly required to be covered appropriately and/or enclosed. (20)

Response:

The reference to the transportation requirements for residual waste in Chapter 299 is a standard condition used in general permits and would apply to transportation of residual waste, whether included in a general permit or not. The transportation of coal ash destined for beneficial use that has not been disposed or stored for one year or moreis exempt, by statute, from the requirements of Chapter 299.

34. Comment:

The application does not adequately address how concerns about local truck traffic and noise may impact the surrounding community. (20)

Response:

HCP did conduct a traffic study as part of its application under General Permit Number WMGR085D001. The truck traffic from the delivery of FGD waste and coal ash is not in addition to the projected estimated truck traffic to the site that was already evaluated in that study.

35. Comment:

The testimony given by all of the professionals at the public informational meeting states that, to their best evaluations, the end combined material will created by the mixtures of the fly ash and other incoming materials will create a stable material that will benefit the fill going into the old mine. The water monitoring that will be provided at the fill site will cover all elements of concern. It appears that as long as the permit is followed correctly, this permit would provide a much more acceptable placement than placement in a surface impoundment. (23)

Response:

Your comment is acknowledged.

36. Comment:

Under Section 287.1, beneficial use is defined as follows: "Use or reuse of residual waste for commercial, industrial or governmental purposes, if the use does not harm or threaten public health, safety, welfare or the environment." What is the commercial, industrial or governmental purpose behind importing 240,000 tons of FGD material annually and placing it in an unlined pit in Hazleton? HCP's application notes that it will use this mixture to reclaim abandoned mine lands. This is not a BAMR project, so it does not serve a governmental purpose. HCP does not propose to beneficially reuse the material in a commercial or industrial process. (24)

Response:

It is not necessary for a mine reclamation project to be a BAMR project for it to serve a "governmental purpose." In this case, elimination of dangerous highwalls serves DEP's purposes of protecting public safety. In addition to mine reclamation, HCP's application states that the reclaimed mine land could become "attractive developable property." As such, the project could also serve commercial and/or industrial purposes.

37. Comment:

Can the Department state with complete scientific certainly that putting such a large quantity of FGD material into an unlined pit will not threaten public health, safety, welfare or the environment? (24)

Response:

"Complete scientific certainty" is an absolute standard that can never be met by this or any other project. In issuing permits for beneficial use of waste or other types of permits, DEP includes limitations and safeguards designed to minimize threats to public health, safety, welfare or the environment from the permitted activity. Leachate limits, water quality monitoring and other safeguards would be included as conditions in the general permit.

38. Comment:

Neither WMGR052 nor WMGR111 authorizes HCP's use of the proposed mixture at the HCP site. It they did, HCP would have simply filed a registration notice with the Department. (24)

Response:

The form of the FGD waste is different in the two permits and this application. FGD waste in WMGR052 is largely calcium sulfite, in WMGR111 gypsum (calcium sulfate) and a mixture of the two in HCP's application.

39. Comment:

WMGR052 and WMGR111 that allow the use of FGD material at abandoned mine sites require that the use be done under a contractual agreement with the Department. When the work is done under a contractual agreement, the Department exercises significantly greater oversight. (24)

Response:

The requirements in general permits for beneficial use of waste materials in reclamation of mine sites are protective of the public's health and safety without a contractual agreement between DEP and the permittee.

40. Comment:

WMGR052 and WMGR111 place other limitations on the size and scope of the project. For example, under WMGR052, no more than 250,000 tons of material can be placed on any one project without written authorization from the Department and the duration of the project is limited to 365 days without written authorization from the Department. (24)

Response:

The limits mentioned in the comment are for use of the material as a construction material. There are not similar limits for use in mine reclamation.

41. Comment:

The General Permit Application previously approved for the HCP site states that the material is proposed for use as "construction material." The use of the FGD material and coal ash does not qualify as "construction material" under § 287.1.

The mixture of coal ash and FGD material also does not qualify as structural fill as defined in § 287.1. The definition only extends to coal ash and not a mixture of coal ash and FGD material. In addition, the definition specifically excludes the use of "solid waste to fill open pits from coal … mining," and FGD material is a solid waste. (24)

Response:

The specific beneficial uses approved in general permits for other areas of the site do not control what beneficial uses can be approved under this HCP application.

DEP can agree that the use proposed by HCP is neither as a construction material nor as structural fill. This application proposes use in mine reclamation, not as a construction material or as structural fill. The Department can authorize use of residual waste mixed with coal ash to fill open pits from coal mining under § 287.611(e)(3).

42. Comment:

The groundwater in the area is known to be contaminated with acid mine drainage. Since the hydration process is part of the application for the general permit and would be authorized by the general permit, the Department should request sampling to identify the levels of contaminants in the proposed water source. Since there is no information regarding the levels of contaminants present in the water source, there is no way for the Department to know whether that water would require treatment after its extraction and before use in the hydration process. (24)

Response:

Since the water source well has not been installed at this time, it is not possible for HCP to provide this data. However, there is data from the upgradient and downgradient groundwater monitoring points which provide adequate information. The high alkalinity in the FGD waste will be more than sufficient to neutralize the acidity found in the groundwater at this site during hydration.

43. Comment:

The Department recently adopted new regulations governing total dissolved solids (TDS). Those regulations noted that mine pool waters are still waters of the Commonwealth and are regulated under the Clean Streams Law. The application notes that there is a small surface water discharge at the southern border of the site. Accordingly, the application should provide information on the TDS in the acid mine drainage waters and the levels of TDS that would be expected to be generated by mixing that acid mine drainage water with the FGD, prior to any surface water release or potential release into the underlying mine pool. (24)

Response:

The amount of mine pool water that will be used to hydrate the FGD waste is insufficient on its own to generate leachate. In addition, since the hydrated FGD waste/coal ash mixture is expected to undergo some cementitious reactions, leachable TDS data from a fresh mixture is unlikely to predict what will happen in the field. TDS is a parameter already part of the groundwater monitoring at the site and should be part of HCP's quarterly monitoring of the small surface water discharge.

44. Comment:

Under Section 287.127 a harms/benefits analysis is required because the project involves the disposal of residual waste. (24)

Response:

The application is for beneficial use of residual waste, not for disposal. As such, a harms/benefit analysis is not required.

45. Comment:

How does the Department propose to inspect and monitor the activities that would be permitted under the proposed general permit? On March 24, 2010, a Solid Waste Supervisor in the Northeast Regional Office sent a memorandum to the Solid Waste Program Manager raising a number of regulatory issues concerning the HCP site and prior general permits issued for that site. The same concerns would similarly apply to the inspection and enforcement of the proposed general permit. The Department should have to issue a formal response to this memorandum prior to taking any action on HCP's latest application. (24)

Response:

The Department has many "tools" it can use to inspect and monitor activities conducted under general permits. Routine and complaint-driven site visits can be made. Chemical data for new sources of wastes can be reviewed. Annual reports containing chemical data, sources and quantities of waste beneficially used and water quality monitoring data can be examined.

It is up to the Solid Waste Program Manager to assign the responsibility to monitor and inspect this site to a Solid Waste Supervisor and his or her team. Regardless whether the author of the memorandum or another Solid Waste Supervisor is assigned, we expect they will carry out their duties to the best of their ability in a professional manner.

46. Comment:

The presentation at the public informational meeting did not provide a summary of the physical and chemical tests performed and if the results would be relevant for mixtures of FGD, fly ash and other materials previously approved. (25)

Response:

This information for dry FGD waste, coal ash and their mixtures is found in HCP's application. While there is also information in the application on mixtures containing dredged material, this information is not considered relevant to this application, since use of dredged material is not part of the application and placement of dredged material as regulated fill has not been approved for the part of the site subject to HCP's proposal.

47. Comment:

While HCP's consultant did state that the material would be placed in two-foot lifts, it was not clear if the material would be compacted under optimum moisture conditions. It is also not clear on how this stated "impermeable" material could be feasibly placed in

these two-foot maximum lifts and compacted in a strip pit that has very dangerous high walls. (25)

Response:

The application is silent on whether the materials will be placed under optimal moisture. The use of maximum two-foot lifts is a common requirement of the mining program uses when reclaiming strip pits.

48. Comment:

There was no mention on how infiltration will be minimized in contact with this stabilized material. (25)

Response:

The relatively low permeability will reduce infiltration.

49. Comment:

The response to the commentator's March 2010 Right-to-Know request did not address the following:

a. There was no information on analytical data in the files at the Northeast Regional Office used to calculate the "background" lead concentration of 943 ppm at the site.

b. There was no final Enhanced Groundwater Monitoring Plan at the regional office. There was an earlier copy marked as "draft" or "for discussion purposes only."

c. There was no report on the US EPA response to the cleanup of the capacitors containing PCBs at the site. (25)

Response:

a. The determination of site background for lead was for a different area of the site than covered by this proposal and is not considered relevant to this application.

b. The "draft" Enhanced Groundwater Monitoring Plan contained in HCP's application was the final version agreed to settle the appeal of General Permit Number WMGR085D001. Since HCP was directed by the Environmental Hearing Board to not make modifications to the plan, HCP did not remove the "draft" watermarks. A copy of the plan is available at the regional office in their copy of HCP's application.

c. The capacitors containing PCBs were found at a different area of the site than covered by this proposal and are not considered relevant to this application. (25)

50. Comment:

There have been allegations that clean materials consisting of boulders and other natural materials from former mining have been delivered to off-site areas. This appears contradictory that the FGD waste/coal ash is needed to mitigate this "high hazard" as stated, and logically seems the natural material should have been utilized to be placed in the pits to help reduce this hazard. (25)

Response:

HCP did not create the abandoned mine pits on the site and has no obligation to use on-site materials to reclaim them. In fact, HCP is under no obligation to reclaim them at all.

51. Comment:

Both New York and New Jersey have abandoned mines, yet these wastes have not been used to remediate the physical high wall hazard in those states. Beneficial use of these wastes seems questionable if these states do not consider these materials for their own use. (25)

Response:

The Department does not have the statutory authority to require that a waste must be used for the same purpose in the state where the waste is generated before an application for beneficial use can be acted upon.

Table of Commentators

Commentator ID #	Name	Location
1	Robert T. Marchetti	Sugarloaf
2	Dr. Janine Pusti	Hazleton
3	Laurie Tevlin-Klemow	Hazleton
4	John Falvello	Hazleton
5	Valeria Mohry	Sugarloaf
6	George Bereznak	Freeland
7	Eric Curran	Conyngham
8	Georgia M. Rusnock	Hazleton
9	Richard Castrina	Sugarloaf
10	Grace Cuozzo	Hazleton
11	Elaan Yefchak	West Hazleton
12	Robert Klemow	Hazleton
13	Morgan Evans	Newville
14	John Pisak	Sugarloaf
15	Joan Mizenko	Hazle Township
16	Marguerite Woefel	Conygham
17	Dee Deakos	Hazleton
18	Representative Todd A. Eachus	116th District
19	Congressman Paul E. Kanjorski	Wilkes-Barre
20	Adam H. Cutler on behalf of S.U.F.F.E.R.	Philadelphia
21	Carolyn Martienssen	West Hazleton
22	Drew Magill	Sugarloaf
23	Dale M. Crouse	Harmony Township
24	M. Joel Bolstein	Warrington
25	John S. Mellow	Archbold