



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
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Office of the
Secretary

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Secretary's Order No. 2008-A-0036

**Re: Joint Application of Delaware Solid Waste Authority and the City of
Wilmington for a Solid Waste Management Post-closure Permit for the
Pigeon Point Landfill, New Castle, New Castle County**

Date of Issuance: August 27, 2008

Effective Date: August 27, 2008

Under the authority granted the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") under 7 *Del. C. §6003*, the following findings, reasons and conclusions are entered as an Order of the Secretary. This Order considers the joint application submitted by the Delaware Solid Waste Authority ("DSWA") and the City of Wilmington, New Castle County ("City") for a post-closure solid waste management permit for the Pigeon Point Landfill ("PPL"), which is a closed sanitary landfill located on approximately 239 acres at 1101 Lambson Lane, New Castle, New Castle County.

On September 12, 2007, the Department held a public hearing on the application, and the Department's presiding Hearing Officer, Robert P. Haynes, issued a Hearing Officer's Report dated July 18, 2008 ("Report"), a copy of which is appended to this Order and incorporated herein. The Report recommends approval of the application and that the Division of Air and Waste Management, Solid and Hazardous Waste Management issue a solid waste management permit to regulate PPL's post-closure under the Department's *Delaware Regulations Governing the Regulation of Solid Waste*. The

Report indicates that a post-closure permit will allow the Department greater authority to regulate PPL than it currently holds because PPL's was closed as a landfill before the current Department regulations went into effect and the Regulations would not otherwise apply to PPL absent a post-closure permit. The post-closure permit application is the result of a negotiated agreement between the Department and the Applicants.

The Report considers the public comments, which object to DSWA's maintenance activity at PPL called the Cap Enhancement Project ("CEP"). The public claimed that CEP caused the improper disposal of solid or hazardous waste at PPL. The public comments also object to the CEP's use of stabilized sludge as the cover material, particularly from the current supplier, VFL Technology, Inc. ("VFL"). The Report finds that the CEP is a valid repair and maintenance activity based upon the need for DSWA to repair PPL from the effects of settling of the solid waste and erosion from rainfall. The Report finds that the CEP did not result in a re-opening of PPL to the disposal of solid waste, but the CEP added a considerable amount of cover material that increased the thickness of the cap and add to the grade of the slope.

I agree that the CEP is a repair and maintenance project that has and will continue improve the environment at PPL. The CEP has added 1.5 millions tons of cover material to increase the cap's thickness and reshape the cap to improve the cover's ability to keep surface water from seeping into the solid waste and forming leachate. DSWA also has planted numerous trees, and maintained PPL to provide an area of foliage and green space in an otherwise heavily industrialized area.

DSWA uses VFL's cover material for the CEP and this source of cover material was criticized by the public. The Department shares the public's concerns with VFL's compliance with the Department's laws and regulations, as the Department recently has issued VFL enforcement actions, including one since the Report was prepared. These

actions do not change the need to regulate PPL under a post-closure permit. Indeed, these enforcement actions reinforce the need for the post-closure permit in order to expand the Department's authority to regulate PPL.

The Department's experts carefully have considered the re-use of wastewater treatment sludge and ash for landfills' cover material. The Department's experts conclude that such re-use does not pose any undue risk to the environment and public health. Indeed, the beneficial re-use aspect of stabilized sludge is consistent with the Department's efforts to promote recycling of materials that otherwise would be disposed of as solid waste. Thus, the Department will continue to exercise its considerable authority over VFL's production and use of stabilized sludge to ensure that it is safe for the environment and public health.

I direct that a post-closure permit be issued and that it include such reasonable conditions appropriate to protect the environment and public health from the risk of harm from PPL. The permit will require increased water monitoring, testing, and reporting to the Department. The permit and its many conditions will allow the Department to more effectively regulate PPL as a closed landfill consistent with current management practices. This permit will be another tool in the Department's regulatory arsenal to regulate PPL, including the use of VFL's cover material in the CEP.

In sum, as more fully described in the reasons and findings above and in the Report, I adopt and direct the following as a final order of the Department:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department provided adequate public notice of the proceeding and the public hearing, and held the public hearing in a manner required by the law and its regulations;

3. The Department considered all timely and relevant public comments in making its determination;

4. The record supports the issuance of a permit based upon the application, and such minor modifications and reasonable conditions that the Department official delegated to prepare the permit determines are necessary to protect the environment and public health;

5. The duly authorized Department official shall timely prepare and issue a permit consistent with this Order; and

6. The Department shall provide notice of this Order to the persons affected by this Order, as determined by the Department, including those who participated in the hearing process, and shall publish notice of its decision in a manner provided by the Department's regulations.

s/John A. Hughes
John A. Hughes
Secretary

HEARING OFFICER'S REPORT

TO: The Honorable John A. Hughes
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Senior Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Joint Application of Delaware Solid Waste Authority and the City of Wilmington
for a Solid Waste Management Post-closure Permit for the Pigeon Point Landfill,
New Castle, New Castle County

DATE: July 18, 2008

I. BACKGROUND AND PROCEDURAL HISTORY

This Report considers the administrative record, including the public comments in the public hearing record, and makes recommendations to the Secretary of the Department of Natural Resources and Environmental Control (“DNREC” or “Department”) concerning the April 26, 2006 joint application submitted by the Delaware Solid Waste Authority (“DSWA”) and the City of Wilmington (“City”) to the Department’s Division of Air and Waste Management, Solid and Hazardous Waste Management Branch (“SHWMB”). The application seeks a solid waste management permit for the post-closure of Pigeon Point Landfill (“PPL”) pursuant to the Department’s *Delaware Regulations Governing Solid Waste* (“DRGSW”).

PPL is located at 1101 Lambson Lane, New Castle, New Castle County on approximately 239 acres.¹ DSWA currently manages PPL as a closed landfill under an agreement with the City and New Castle County. Prior to 1968, portions of the land on which PPL is located was used as a dredge disposal site by the Delaware River and Bay Authority. (“DRBA”). In 1968, the City began operating PPL as a solid waste landfill for its municipal waste. In 1972, the City transferred the landfill operations to New Castle County. In 1974, the Department exercised

¹ DSWA designates PPL as ‘Northern Solid Waste Facility-1.’ PPL contains several parcels with separate owners. The City owns approximately 147 acres, DSWA owns approximately 70 acres, the State of Delaware’s Department of Transportation owns approximately 17 acres, and the Delaware River and Bay Authority owns approximately 5 acres. The State and DRBA parcels are to be transferred to DSWA under an existing agreement.

authority over PPL when it promulgated *Delaware Solid Waste Regulations* (“DSWR”), and issued New Castle County a permit to operate a municipal waste landfill.² On January 1, 1981, New Castle County transferred the landfill operations to DSWA, which operated PPL as a municipal waste landfill until October 21, 1985, when DSWA closed it after following the Department’s procedures in effect at the time, including preparing a October 1985 closure plan. The closure plan left PPL with a flattened top or cap, except at the perimeter where the sides were sloped. The closed landfill had a height of approximately 75 feet above sea level, a cap approximately two feet of cover material in thickness and a 1-2% slope. DSWA estimates that PPL holds approximately 6 million tons of solid waste.

Since PPL’s closure, DSWA has landscaped the site with trees and other vegetative cover as part of the long-term maintenance of a closed landfill. The 1985 closure plan requires DSWA to conduct ongoing maintenance and repairs. In 1999 DSWA retained the engineering firm of Camp, Dresser & McKee in order to address a repair and maintenance issue with the settling of the solid waste and erosion. The settling was due to the decomposition of the solid waste that created depressions, which then filled with water for a condition known as “ponding.” The settling caused a ten foot decrease of approximately in the cap’s height in some locations. Camp, Dresser & McKee’s engineering study proposed changing PPL’s cap of approximately two feet of cover material that had been largely flat cap to a much thicker layer of cover material and a 5% slope. DSWA began implementing this change after consulting with the Department and named the ensuing maintenance and repair project the “cap enhancement project” (“CEP”). The CEP was designed to improve PPL’s storm water management, to reduce the infiltration of

² The Department was formed in 1974. Other DSWA solid waste permits were SW-81/09, SW-82/18, SW-83/22 and SW-84/17.

rainwater and the associated formation of leachate,³ and to repair the effects of years of erosion, settling and ponding. The CEP is expected to add approximately 1.5 million tons of cover material to PPL's cap, and will increase PPL's height to approximately 92 vertical feet above sea level. The Department's Division of Soil and Water Conservation ("DSWC") approved a Sediment and Stormwater Plan for the CEP, and construction began in 2003 and is still continuing.

The CEP uses cover material produced by VFL Technology Corporation ("VFL") at the City's wastewater treatment plant. The cover material is stabilized sludge, which is made by combining wastewater treatment bio-solids or sludge⁴ with the ash from fossil fuels burned in the generation of electricity. The recycling of stabilized sludge and its reuse as cover material on DSWA's landfills was approved by Department's Division of Water Resources ("DWR") permit DM 0009/95B, Authorization to Conduct a Distribution and Marketing Program for the Utilization of Sludge or Sludge Products ("D&M permit"). The re-use of ash to make stabilized sludge was approved by DAWM's Beneficial Use Determination ("BUD") # 7.⁵ The ash acts as a reactive agent to neutralize pathogens in the wastewater treatment sludge.

In 2005, the Department investigated VFL to determine if the stabilized sludge was in compliance with the Department's D&M permit and BUD # 7. On December 21, 2005, the Department negotiated an agreement with DSWA, City and VFL a "Pigeon Point Landfill Interim Agreement." ("Interim Agreement"). Under the terms of the Interim Agreement, DSWA and the City were required to file with the Department an application for a post-closure permit no later than May 1, 2006. The Interim Agreement also limits the CEP to only 250,000 tons

³ DRGSW defines leachate as "liquid that has passed through, contacted, or emerged from solid waste and contains dissolved, suspended or miscible materials, chemicals, and microbial waste products removed from the solid waste."

⁴ The sludge is the biomass sediment in a waste water treatment plant's settling tanks.

⁵ DAWM administers the beneficial use determination program under its authority over recycling. The Department encourages recycling of materials that otherwise would be disposed of as solid waste.

annually of VFL's cover material. In addition, the Department issued an administrative enforcement action against VFL for not properly complying with the D&M permit and BUD # 7 and will continue to exercise its enforcement authority when appropriate to obtain compliance.

The Department published public notice of the post-closure permit application and received a timely meritorious request for a public hearing. A duly noticed public hearing was held September 12, 2007 at the Rose Hill Community Center, 19 Lambson Lane, New Castle, New Castle County. Several persons attended the public hearing and provided written and oral comments. At the request of members of the public, the public comment period was kept open for an additional thirty days. This hearing officer requested additional technical assistance from SHWMB, which was provided in a December 24, 2007 memorandum attached hereto as Appendix A.

This Report considers the permit application, relevant information in the Department's files, and the public comments, and applies the applicable laws and regulations in order to make a recommendation to the Secretary on whether to issue a permit or any permit conditions.

II. SUMMARY OF THE PUBLIC HEARING RECORD

The public hearing record contains a 151 page verbatim transcript of the public hearing and the documents introduced as exhibits at the public hearing. SHWMB's Robert Hartman introduced into the hearing record⁶ the application and related correspondence, the public notices, and the written public comments the Department received. The Applicants made a presentation from DSWA's engineer, Robin Roddy, P.E., and City's Commissioner of the Department of Public Works, Kash Srinivasan, P.E.

⁶ The Department does not have an obligation to develop the public hearing record and remains neutral on the merits of a pending permit application until after the public hearing, but the Department nevertheless develops a basic public hearing record for the public's benefit.

The public comments were made by three members of the public.⁷ Alan Muller, Executive Director of an environmental group known as Green Delaware, asked questions and made comments to support his position that PPL was an active landfill and that no more VFL stabilized sludge should be added to PPL. He considered that the placement of the City's wastewater treatment sludge under the CEP was really a way for the City to dispose of its sludge. He considered the use of the two waste products used to make the stabilized sludge as improper and that they were possibly hazardous waste products. Elder Louis McDuffy presented comments that supported DSWA's role in PPL, but he strongly criticized the use of cover material from VFL or any VFL involvement. Michael Fiorentino, Executive Director of the Mid-Atlantic Environmental Law Center ("MAELC"), stated his support for the post-closure permit, but also questioned and commented about the reuse of coal ash, which he contended was the disposal of industrial waste. He also raised an issue with the post-closure activities because he claimed that the October 1985 closure plan was sufficient to close PPL without the CEP. He also requested that the Department direct that a geomembrane cap be used because it would be waterproof and prevent rainwater from infiltrating the solid waste and becoming leachate. He questioned whether the addition of 1.5 million tons under the CEP and the 250,000 tons annually under the Interim Agreement were too much and would harm the environment.

In response to some issues raised, I requested the technical assistance from experts within SHWMB, who provided a memorandum attached hereto as Appendix A.

III. DISCUSSION AND REASONS

This discussion will address certain issues raised by the public comments and the permit application, but I have considered all the public comments even if not specifically mentioned in this Report. The issues raised to be addressed in greater detail are: 1) whether the CEP caused

⁷ The presentation of public comments does not grant a member of the public any status as "party" as that term is used in an adjudicatory style proceedings in Delaware and most other jurisdictions.

PPL to be an active landfill under the Department's regulations; 2) whether the CEP should be allowed to continue and under what terms and conditions; and 3) whether PPL should be made subject to more stringent requirements under the DRGSW, including adding a liner and/or a geomembrane cover.

The first issue I will address is whether the CEP's use of VFL's stabilized sludge product caused solid waste to be placed in PPL for disposal. If solid waste was placed in PPL for final disposal, then PPL could be considered as improperly resuming active operations as an open landfill. Based upon my review of the record and the Department's regulations, I find that the CEP did not result in PPL becoming an active landfill. Instead, I find that PPL was closed to solid waste on October 21, 1985 and has not received any solid waste since its closure. The Department is not aware of any solid waste that has been disposed at PPL since this closure.

This finding is based upon the uncontested fact that there has not been any more solid waste disposed at PPL, as defined by Department regulation. The DRGSW expressly excludes from any solid waste regulation any material regulated by a DWR issued permit, such as VFL's product approved by the D&M permit. *7 DE. Admin. Code §2.2.3*. The stabilized sludge falls under this exemption since it is being used in accordance with the D&M permit issued by the DWR.⁸ Thus, the use of the stabilized sludge pursuant to the D&M permit results in the CEP not using any solid waste.

This difference may seem like a technicality, but the Department's D&M permit is issued to extend the Department's regulation over the use of stabilized sludge and that regulation provides the Department with sufficient control to ensure that the environment and public health are adequately protected. While it is true that wastewater treatment sludge by itself and ash by itself would be considered solid waste under the Department's regulations, their combination and

⁸ It could be argued that a violation of the D&M permit could result in solid waste being added, but the placement of cover material under a DWR permit provides DSWA some degree of regulatory protection for VFL's conduct.

re-use in a beneficial manner, as authorized by the D&M permit and BUD#7, removes VFL's stabilized sludge from the Department's definition of solid waste. Any challenge to the use of the VFL stabilized sludge in the CEP is not appropriate in this permit proceeding because it would require the Department to change its regulations. Based upon this record, I see no reason to recommend revising the regulation. Nevertheless, until such a change in its regulations, the Department is obligated to follow its own regulations and to allow the continued use of the VFL stabilized sludge at PPL.

I agree with the public comments that DSWA's CEP and its use of up to 1.5 million tons of VFL's cover material is a significant change to PPL. This change, however, I find is warranted by prudent management of the PPL landfill as a closed landfill. I find no support for any allegations of improper conduct or purpose in the CEP or the use of VFL's product as cover material. Instead, I find that the CEP is based upon sound engineering in response to deteriorating conditions at PPL that required major repair and maintenance. The CEP was designed to improve the landfill's closure and not to re-open it to solid waste. The CEP's improvements are consistent with making needed repairs and maintenance, albeit repairs and maintenance that will change PPL's shape and add to the existing cap's thickness. These are unquestionably good changes that will improve the closed landfill's ability to prevent rainwater infiltration and repair the settling and ponding that had been a problem.

The central concern in the public's criticism of the CEP is the cover material used, namely, VFL's stabilized sludge. I find that the Department's regulation of this material is sufficient to ensure that the public and the environment are protected from any undue risk of harm from the material's use as landfill cover. The re-use of wastewater treatment sludge and ash is consistent with the Department's policy to encourage recycling. The Department's

support for recycling, however, would not override the Department's fundamental duty to protect the environment and public health from any undue risk of harm.

In conclusion, I find and recommend that PPL be considered a closed landfill based upon its October 2005 closure. The use of stabilized sludge from VFL as cover material for the CEP, as authorized by the D&M permit and BUD #7, did not result in PPL receiving any solid waste or becoming an active landfill. Instead, the CEP is an approved repair and maintenance that will improve PPL as a closed landfill. The CEP is consistent with DSWA's post-closure maintenance, repair and monitoring duties and responsibilities under the October 1985 closure plan. If a post-closure permit is issued, then PPL will be subject to regulation under DRGSW, which will provide the Department with even greater authority to regulate PPL on an ongoing basis.

The second issue to be discussed in greater detail is whether the Department should stop the CEP or at least to change it, particularly with the use of cover material from VFL. First, in light of my recommendation in the first issue, if accepted by the Secretary, then the Department may not have the legal authority to stop DSWA from conducting an otherwise lawful activity. The CEP is lawful and appropriate activity to maintain the PPL landfill in a closed condition. Nevertheless, the issuance of a post-closure permit should allow the Department to exercise greater authority over PPL than the Department currently may exercise since the current landfill is not subject to DRGSW. The post-closure permit will also allow the Department to include the Interim Agreement's terms. Thus, a post-closure permit is consistent with the public comments that seek the Department to exercise greater regulatory authority over PPL.

As with the first issue, the real issue with the CEP is whether there is an unacceptable risk to the environment and public health from the use of VFL's cover material in the CEP. The same issue applies to any use as cover material that includes the combination of wastewater treatment sludge and ash. The public's concern was that these materials may contain

unacceptable levels of hazardous substances, such as mercury and arsenic that is found in coal ash. The Department's experts reviewed this issue and conclude that stabilized sludge is appropriate for use in DSWA's landfills as cover material. I find the scientific support for the re-use of materials in this manner is sound and that it does not pose an unacceptable risk to the environment or public health. The use of sludge mixed with ash from burning fossil fuels has been recognized as an acceptable re-use of these materials when the mixing is done properly. To the extent the stabilized sludge may contain unacceptable levels of hazardous substances, as may be determined in the future, then the Department may take appropriate action at that time. Until then, the Department will continue to monitoring the material under its current level of regulation and enforcement when appropriate.

The public's claim that ash should be treated as a hazardous waste is not supported because the levels of heavy metals and other hazardous contaminants are below the levels that would classify the ash as a hazardous waste. The Department has some concerns with whether VFL violated its regulatory approvals, but that concern is for the enforcement of the existing approvals and not a reason to deny the post-closure permit or modify it to exclude VFL's product. Nevertheless, at this time the Department has no information sufficient to warrant any change to the CEP or to ban use of VFL's product as cover material.

I do not recommend any changes to the CEP other than the changes required by the Interim Agreement, which has placed some valuable restrictions on the CEP. As noted in the above discussion of the legal status issue, the CEP is not a way to improperly dispose of solid waste or any waste. Instead, the Department has studied the re-use of coal ash and wastewater treatment plant sludge and found that it may be re-used with sufficient safeguards, as provided in the D&M permit and BUD #7 approvals. This re-use is allowed in other jurisdictions and

recognized as an acceptable and indeed environmental way to re-use coal ash and wastewater treatment sludge.

I find no support for any improper motivation in the VFL product being used as the cover material for the CEP. Any inquiry into motives, whether ulterior or overt, is irrelevant if the purpose is lawful, and consistent with the Department's public health and environmental protection purposes. If the Department considered the use of the VFL cover material to be unsafe or harmful to the environment, then the Department would end the use of the VFL product for the CEP. Thus, I find that the CEP was commenced to improve the ability of PPL to control storm water, rainwater infiltration, and erosion, and the use of VFL's product promotes recycling and the production re-use of two materials that otherwise would have been thrown away.

Furthermore, VFL's D&M permit for re-use of wastewater treatment sludge and its BUD # 7 approval to re-use ash are not directly subject to review in this permit proceeding. Nevertheless, the Secretary has the authority to condition the post-closure permit to prevent the use of VFL products if there was environmental or public health support for such a condition. I have found none other than the speculation that the material may be harmful. If in the future information becomes known that may change the Department's opinion, then the Department could re-open the permit or otherwise take appropriate regulatory action to end the use of VFL's cover material. I note that the record contains public comments from the local residents that praised DSWA's management of PPL. I agree that DSWA should be allowed discretion to continue to manage PPL subject to the terms and conditions of a post-closure permit and the Department's on-going regulation. The CEP should be allowed to be completed, except as limited by the Interim Agreement and the post-closure permit, if issued. In sum, I recommend that no permit condition be imposed to ban VFL products at this time, although that remedy may be appropriate based upon any further Department investigation or enforcement action.

The final issue to be addressed was the imposition of more stringent standards than required by the regulations that were in effect when PPL was closed. I find that this issue is a collateral challenge to the Department's existing regulations, which established as a matter of policy that older landfills would not have to be upgraded to conform to the new standards imposed by the DRGSW. Subsequent to the October 1985 closure, the Department issued new solid waste regulations in the DRGSW. The post-closure permit will allow the Department to exercise greater authority over PPL, but PPL does not have to meet the more stringent standards for an active landfill as set forth in the DRGSW, such as placing a geomembrane liner under the solid waste. The post-closure permit will enable the Department to exercise far greater regulatory oversight of PPL than the Department may now exercise and this is one significant benefit to the Interim Agreement.

DRGSW do not apply to the landfills already in existence because of the severe economic and environmental risks associated with retrofitting Delaware's closed landfills. For example, the public comments pointed out that DRGSW requires that landfills have a geomembrane liner, but to install that now would require the existing six million tons of solid waste to be removed. The Department would and could require such action if there was an unacceptable risk to the environment or public health, but the Department's experts indicate that no such risk exists from PPL's closed status with no geomembrane liner. PPL is like other Delaware landfills closed or in operation before the effective date of DRGSW that also do not use geomembrane liners. Similarly there is no need for a geomembrane cover. The Department requires monitoring of PPL to ensure it is not causing pollution and this monitoring will alert the Department to any problem so that the appropriate regulatory action may be taken at that time. The Department's regulations recognize the extreme difficulty in retrofitting a landfill to meet the current standards.

Thus, until the monitoring shows any problems, DSWA may continue to manage PPL without the upgrading to comply with the more stringent requirements in the DRGSW.

I recommend the issuance of the post-closure permit based upon the record that shows that it will improve the Department's ability to regulate PPL and hence the environment and public health. Under the post-closure permit, PPL will be regulated as a closed landfill under the DRGSW. The application is somewhat unusual in that the Department required the application to be submitted, but this requirement was negotiated as an important part of the Interim Agreement. The Department wanted to increase its regulatory authority over PPL, which it could not otherwise do under PPL's status as a grandfathered closed landfill only subject to DSWR. I agree with this purpose and recommend that a post-closure permit be issued to allow the Department to include permit conditions that reflect more modern landfill management practices.⁹

The technical response document sets forth the areas where the permit's conditions will apply the current best landfill management practices to the management of PPL as a closed landfill. I agree that the permit conditions to be included in a post-closure permit will result in improved regulation of PPL that will benefit the environment and public health during the term of the permit and beyond. DSWA has managed PPL as a closed landfill and undertaken considerable expense in the CEP and other measures that has improved PPL, and the benefits of DSWA's management was recognized in the public comments.

I recommend approval of DAWM's issuance of a post-closure permit under DRGSW, subject to the reasonable terms and conditions recommended by SHWMB as discussed in its

⁹ The Department exercises ongoing regulatory authority over PPL now through its review of PPL's monitoring data. The Department's has the ability to enforce any unauthorized environmental pollution or public health risk that may occur at PPL.

technical response document and technical documents in its files that set forth best management practices for post-closure maintenance, repair and monitoring of closed landfills such as PPL.

IV. RECOMMENDED FINDINGS AND CONCLUSIONS

Based on the record developed, I find and conclude that the record supports approval of the post-closure solid waste management permit for PPL. I recommend the Secretary adopt the following findings and conclusions:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations;
3. The Department held a public hearing in a manner required by the law and regulations;
4. The Department considered all timely and relevant public comments in making its determination;
5. The Department shall issue Applicants a post-closure permit for PPL, subject to the reasonable general and specific permit conditions recommended by SHWMB, as outlined in the technical response document;
6. The Department shall issue a permit to Applicants within the time period provided by Department regulations; and
7. The Department shall serve either by mail or email a copy of this Order on each person who participated in the public hearing, as reflected on the hearing's sign-in sheet.

s/Robert P. Haynes

Robert P. Haynes, Esquire
Senior Hearing Officer

MEMORANDUM

TO: Robert Haynes, Hearing Officer

THRU: Nancy Marker, Environmental Program Manager II, SHWMB
Bryan Ashby, Environmental Program Manager I, SHWMB

FROM: Robert Hartman, Environmental Scientist, SHWMB

DATE: December 21, 2007

SUBJECT: Pigeon Point Landfill Post-Closure Permit Application

REFERENCE: Hearing Officer's Memorandum Dated 10/23/07

Here is our response to the questions you posed in your Memorandum of October 23, 2007.

Landfills whether operating or closed, pose potential environmental and public health risks which include but are not limited to possible ground/surface water impacts, odors, gas, leachate, dust, noise and vectors. Additionally, if someone wishes to construct a structure on a closed landfill, there is also the possibility of impacts from subsidence, explosive gas, and exposing buried solid waste. Landfill operators typically employ best management practices and engineering controls to minimize these risks, and such practices and controls are typically required by a permit issued pursuant to the Delaware Regulations Governing Solid Waste.

Since closing the Pigeon Point Landfill in 1985, the Delaware Solid Waste Authority (DSWA) has voluntarily implemented (without a solid waste facility permit) generally accepted landfill risk control practices to mitigate risks there. These risk controls have included maintenance of the landfill cap, stormwater controls, collection of leachate, collection and flaring of landfill gas, as well as groundwater and surface water monitoring. Additionally, as the result of the Pigeon Point Landfill Interim Agreement of December 21, 2005, the DSWA implemented measures to better control access and manage ongoing maintenance work at the landfill.

By issuing a post-closure care permit to the City of Wilmington and the DSWA jointly, the Department will be able to hold both entities accountable for proper care of the closed landfill. Such a permit will require that the voluntary measures undertaken by the DSWA since 1985 remain in place until the Department determines that the landfill no longer poses any risks. A post-closure permit issued pursuant to the Delaware Regulations Governing Solid Waste will provide the Department the means to implement necessary changes to environmental monitoring at the site and to specify reporting procedures, including emergency reporting procedures and assessment of corrective measures in the event of contaminant release. Such a permit will allow the Department to undertake enforcement action in the event of violations. The Department will

be able to enhance the permit should risk conditions change. Additionally, a post-closure care permit will allow the Department to ensure the protection of public health and the environment during any future reuse of the landfill by the City of Wilmington.

We recommend that the Secretary's Order recognize that the closure of the facility in 1985 meets the definition of an environmental response project for the purposes of 7 Del. C. Chapter 79, Subchapter II, Uniform Environmental Covenants Act, and that the Order stipulate and require the establishment of an Environmental Covenant for the Pigeon Point Landfill. The Order should stipulate that, prior to the end of the post-closure care period required by the Delaware Regulations Governing Solid Waste, and prior to any transfer of ownership of the landfill property to a third party from the City of Wilmington or the DSWA, the permittees shall establish, pursuant to 7 Del. C. Chapter 79, an Environmental Covenant for the lands occupied by the closed pigeon point landfill.

The Order should require that the post-closure care permit implement the post-closure care requirements of the Delaware Regulations Governing Solid Waste and include specific permit conditions that will require the permittees to:

1. Control odors, dust and litter during activities at the closed landfill, particularly during the cap enhancement work.
2. Provide an environmental monitoring report to the Department annually.
3. Provide an annual operations report summarizing all activity and maintenance at the closed landfill over the previous year.
4. Provide a topographical survey showing the final grades and contours of the closed landfill within 60 days after the completion of the cap enhancement project.
5. Provide performance-based evaluations of each landfill control system prior to any reduction or termination of the 30-year post-closure care permit. Performance-based evaluations shall include data review, a discussion of the proposed change and the anticipated impacts, as well as a plan to evaluate the impacts resulting from the proposed change or termination. Landfill Control systems include those systems that manage leachate and landfill gas; that protect and monitor groundwater, stormwater, and landfill stability; and that provide for cap protection and maintenance.

NCM: RH: dtd
DSWA\Pigeon Point Transfer Station\Internal Memos\RH07033b

cc: Katie Bennett, Environmental Scientist, SHWMB
Susan Baker, Paralegal, SHWMB
Frank Gavas, Hydrologist, SHWMB