



Kestrel Horizons, LLC
As Trustee of the
Pinewood Site Custodial Trust

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July 25, 2014

Directors Catherine Templeton, Esq. and Elizabeth Dieck, Esq.
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Re: Current Status of Primary Pinewood Site Issues

Dear Director Templeton and Director Dieck:

This letter and our July 18, 2014 RCRA Permit Application respond to the South Carolina Department of Health and Environmental Control (DHEC's or Department's) letter authored by Mr. David Scaturo dated July 14, 2014 regarding releases of hazardous waste constituents and hazardous wastes from, above, and adjacent to single-lined hazardous waste landfill cells.

Kestrel Horizons, LLC (Kestrel), as Trustee of the Pinewood Site Custodial Trust (PSCT) – and as RCRA Part B and NPDES permit holder, also as Trustee, on behalf of the Trust – is surprised at several statements within the letter, particularly those regarding releases of hazardous waste constituents. Our responses are grouped by issue.

The letter states, in part [emphasis added]:

“Finally, in Attachment A, you mention that conceptual designs and cost estimates for preventive and corrective measures for releases of hazardous waste and constituents were completed at various times from 2004 through 2014 and provided to DHEC in reports and budget documents. "No requested funds to proceed with engineering, permitting, or construction have ever been approved by DHEC." **For the reasons listed above, allocation of funds for engineering, permitting or construction work would not be appropriate until a release or threat of release is identified and a remedy is selected.**” (Emphasis added.)

Please refer to our March 10, 2014 letters to each of you and the RCRA Part B Post Closure Permit Application documents submitted on Friday, July 16 for extensive documentation of current conditions and potential threats to the environment. Waiting for constituents of concern to be detected in water the sampling of water discharging uncontrolled to Lake Marion via French drain, shallow groundwater discharge, or storm water discharge before initiating a reasonable evaluation of risks and planning for potential corrective measures is not a sound approach from any perspective – legal, regulatory, technical, or economic.

Kestrel Horizons, as Trustee, has consistently advocated and proposed preventative measures, rather than wait for a substantial release of hazardous waste or hazardous waste

constituents to Lake Marion. As the staff and management of the Bureau of Land and Waste management know, evidence of releases has been consistently building since 2006. The approach the Department seems to insist on, however, is to wait until incontrovertible evidence of a release has occurred, and then try to figure out what to do and implement a corrective measure. That process would require the next eighteen to thirty-six months to investigate the nature and extent of the release, selecting and designing a set of suitable corrective measures, securing the necessary permits, and installing and making operational those remedies.

Meanwhile, the release of hazardous waste or hazardous waste constituents might continue unabated for months or years, producing extensive natural resource damage and requiring tens of millions of dollars in remediation – for which the taxpayers would foot the bill – and for which Potentially Responsible Parties would, no doubt, deny responsibility.

Not only is the Department's approach unwise, it directly contravenes the requirements of the federal Resource Conservation and Recovery Act of 1976 (RCRA), the federal Hazardous and Solid Waste Amendments to RCRA of 1984, relevant federal and South Carolina regulations promulgated pursuant to those statutes and the South Carolina equivalents, the 1994 RCRA Part B permit for the facility (which expired in 1999), the federal NPDES regulations, the NPDES permit for the facility (which expired in 2010), and the South Carolina Pollution Control Act. So regarding "optics" of spending Trust funds - the Department's vision is fatally flawed.

And also from David Scaturo's July 14, 2014 letter:

"I hope the items and issues discussed in this letter **make clear the Department's position regarding the environmental conditions at the Site**, and that we can move forward with the permitting and environmental monitoring activities."

The Department staff and managers have denied funding for Trust activities potentially at odds with Department positions and "strategies" - and denied funding to enable the Trustee to perform the most critical fiduciary and permit holder duties. The Department management has also temporarily denied payment of hard-earned fees for services specifically requested by Department managers. The Department management and staff have cited words of the Trustee and Trust consultants out of context to support illegitimate and untenable Department technical positions.

Continuing this dynamic will produce serious long-term liability for South Carolina taxpayers, and continuing the historical dynamic will only increase that liability, damage the ability of the State to recover costs from Potentially Responsible Parties, and pose an increasing risk to Lake Marion, which we have shown to be likely uncontrollable in real time.

The Department of Health and Environmental Control, as regulatory agency, and the Trustee, as permit applicant and Trustee of a Trust to be operated for the benefit of the citizens of South Carolina, will require assistance to resolve the impasses in opinion as to the performance of certain work at the Site articulated in our March 27, 2014 letter. The opinion of a "third party" consultant to DHEC may be useful to the Bureau of Land and Waste Management staff and may aid the Department in substantive discussions with the US EPA; however, the Trustee continues to be bound by its fiduciary duty to conduct activities it

believes, in its best professional judgment, are necessary regardless of the opinions of a third party consultant to DHEC.

We will be considering, over the next few days, whether other parties must be brought into this situation as a matter of our obligations to the citizens of the State of South Carolina as Trustee of the Pinewood Site Custodial Trust, as the permit holder on behalf of the Trust, and as licensed Professional Engineers and a licensed Professional Engineering firm in the State of South Carolina. This has been discussed numerous times recently in person and in writing.

Several attorneys have told us over the past ten years that, someday, Kestrel Horizons could find itself faced with the need to take the Department to court to compel Department of Health and Environmental Control managers to fulfil requirements of the Trust Agreement and/or to carry out the requirements of the regulatory role without exerting undue control of the Trustee – either as permit holder or as Trustee. We have repeatedly reminded virtually every DHEC manager and staff member over the past ten years that Kestrel Horizons is not a DHEC contractor to be managed, but rather the trustee of a separate, legally constituted entity that operates according to the Trust Agreement, fiduciary law, all applicable laws and regulations governing health, safety, and the environment, and the code of ethics and regulations governing the practice of Professional Engineering.

Unfortunately David Scaturo's July 14, 2014 letter in response to our March 27 correspondence accomplished very little in illuminating a path to resolution. Communications since that time have also not resulted in resolution of those issues or useful input from the staff of the Bureau of Land and Waste Management. The July 14, 2014 letter from David Scaturo confirms that observation with regard to one of the most critical of those issues.

Regarding the June 7, 2013 RCRA Permit Application

From David Scaturo's July 14, 2014 letter:

"Item 2 in your July 3 correspondence states that "Actions by DHEC to direct the Trustee to discontinue investigations of the known environmental hazards associated with Section I constrain the Trustee's ability to fulfill its obligations under the Pinewood Site Custodial Trust Agreement ("Trust Agreement")." The Department strongly disagrees with this statement for the following reasons:

"(1) Page E-1 of Section E, *Groundwater Monitoring*, of the RCRA Part B Application submitted by Kestrel on June 7, 2013 states: "There is no evidence that a release has occurred from the landfill. Groundwater monitoring has been ongoing since the site was first granted interim status in 1980. Since a release has not occurred from the regulated units, the Site is in Detection Monitoring and has been since the Part B permit was issued in 1994.""

Regarding the June 7, 2013 RCRA Permit Application, Kestrel as Trustee, was instructed in specific detail by the DHEC Bureau of Land and Waste Management (BLWM) staff as to what was to be incorporated into that application. Only preliminary results for key

investigations, including AECOM's additional soil gas monitoring, were available at that time. Therefore, a comprehensive evaluation to integrate the results of the soil gas monitoring with other previous investigations, such as AECOM's *2010 Pinewood Site Improvement Projects Volume 1 Projects 1 and 2* (PSIP112) which included an partial evaluation of Landfill Section I (including cover/pore water and soil gas monitoring) had not been completed.

The Bureau staff also instructed Kestrel to move content out of Section J (SWMUs) and place relevant information pertaining to non-landfill SWMUs into Section E (Groundwater Monitoring) and Bureau staff have insisted that no discussion of the extensive data regarding releases of hazardous waste or hazardous waste constituents from or outside the containment of Section I and II (both SWMUs) received from various consultants, including AECOM, be included in the permit application. They have taken the position that, instead, the entire body of releases and potential releases of hazardous waste or hazardous waste constituents from, above, adjacent to the single-lined cells of Sections I and II be handled "outside the Part B Permit". As a result, Section J of the 2013 application only included a single paragraph, largely referring the reader to the discussion of the non-landfill SWMUs included in Section E.

Consultant Evaluations

AECOM's additional soil gas report was finalized and subsequently submitted on June 13, 2013 just days after the June 7 Part B deadline and did not include AECOM's potential conclusions and recommendations, as directed by BLWM staff. AECOM's draft PSIP112, dated February 2011, has yet to be finalized. Like many preliminary draft reports by consultants, AECOM's preliminary draft PSIP112 had not been through final senior consultant review and quality assurance. As a result, the PSIP112 report contained some incomplete and erroneous conclusions and the recommendations associated with those conclusions. An example of this includes their following conclusion:

"However, due to the extremely low concentrations of VOCs detected in the French drains (as discussed in Section 2.7, below) and in surface water (as discussed in Section 2.8, below) as compared to the high VOC concentrations observed in perched water on the landfill cover, it appears unlikely that the VOCs in this perched cover water are a source of VOCs in either the French drains or surface waters at the site. This conclusion is further supported by the tight nature of cover soils and the apparent low volume of the perched water on Section I."

It seems clear to us that the process AECOM is describing here is **dilution** of the affected cover/pore water from that which has accumulated in the Section I French drain from likely unaffected groundwater upgradient. We don't consider dilution to be an acceptable means of ruling out a potentially serious environmental threat from the affected cover system of Section I and II.

Under instruction and pressure from DHEC staff to complete a permit application in time for an arbitrarily-selected deadline imposed by DHEC (for a permit nearly 15 years expired), AECOM hastily provided a set of very basic recommendations for enhancing the water table monitoring program around the single-lined cells in their June 6, 2013 *Technical Memorandum regarding Detection Monitoring Program Point of Compliance Well Network and Sampling Schedule Recommendations* (DMP-POC Recs) without a thorough analysis of the newly-obtained and critical information. Note that, this report was submitted the day before the June 7, 2013 RCRA Application was submitted. This preliminary recommendation was in response to an emphasis by Department staff on a very limited water table monitoring

well approach under the basic premise of, *"If you are going to do something stupid, then do it cheap"*. Therefore, the portions of the June 7, 2013 application which rely on those preliminary conclusions and recommendations are also null and void.

AECOM has informed Kestrel Horizons that the preliminary conclusions incorporated in the preliminary draft June 2013 report require substantial revision because some conclusions are in error or inappropriate, as they were developed for the purposes of discussion and without benefit of the integration of proper engineering and regulatory perspectives. Kestrel agrees with this and we believe that installing nine shallow monitoring wells along the entire length of the single lined cells which extend nearly 8,500 linear feet (over 1.5 miles) as a way to evaluate conditions above the Opaline Claystone to be inadequate. We informed the Department staff of this a year ago and have repeated that since.

Department staff continues to resist Kestrel's requests to proceed with work necessary to arrive at complete and valid conclusions based on interdisciplinary analysis. The Department clearly favors the draft conclusions and preliminary recommendations and continues to this day to cite them selectively to reinforce Department strategies and positions.

In short, further analysis of relatively recent investigations and historical data with consideration for the results from the additional soil gas monitoring included in AECOM's Soil Gas Monitoring Technical Memorandum dated June 10, 2013 make some of the conclusions and recommendations of AECOM's prior work including their draft PSIP112, their October 2011, *2010 Pinewood Site Improvement Projects Volume 3, Project 3, Element 2* (PSIP332), and DMP-POC Recs documents null and void.

Further, citations of excerpts from reports by Trust consultants such as the one included in the July 14, 2014 letter from David Scaturo of the Golder Critical Elements Analysis Report are not useful to the management and decision making process when they are plucked from their full context. We suggest that DHEC Bureau staff read the letter Golder subsequently wrote providing additional comment on their report and look at the assumptions, qualifiers, and caveats Golder provided. We have included the full text of Golder's letter and highlighted important excerpts to illuminate what we believe to be the important facts of the current situation.

The following sets forth some of the Department's technical positions to which the Trustee takes issue:

Preface - Regarding the purposes of the Pinewood Site Custodial Trust:

The purposes of the Pinewood Site Custodial Trust, as stated in Section 3 of the Trust Agreement (effective date December 24, 2003) include the following phrases:

- “. . . maintaining the Pinewood Facility in an environmentally protective manner and in accordance with applicable law.”
- “. . . for the benefit and protection of the people of the State of South Carolina.”

The Trust Agreement requires the Trustee to do the following (among other things):

- “. . . perform such measures as are necessary to comply with the Permit [the Hazardous Waste TSD Facility Permit, dated March 21, 1994]. . . “
- “...to employ and compensate engineers, environmental consultants, project managers, ... attorneys, ... and other assistants and advisors deemed by the Trustee needful for the proper administration of the Trust, and the achieving of its purposes...”

Regarding the Department’s comment on the definition of “groundwater”:

The Trustee has pointed out that hazardous waste constituents above maximum contaminate levels - some at concentrations ten to 100 times that level - exist in pore water above the landfill cover in Section I. The Department dismisses this finding by stating that interstitial pore water from rainfall events is not groundwater. While the Department’s interpretation may be accurate in the context of the RCRA requirements for regulated hazardous waste landfill units, the Trustee is concerned that the dismissal of pore water essentially as irrelevant to groundwater quality assurance and RCRA corrective action for releases, potential releases, and threats from potential releases of hazardous waste constituents from SWMU’s and Areas of Concern is inappropriate. Here are a few points relevant to the Trustee’s line of thinking:

“Groundwater” or “ground water” defined:

1. C.W. Fetter describes and defines “ground water” in Applied Hydrogeology, Fourth Edition, Prentice Hall, 2000, considered the “Bible” of hydrogeology, as the following:

“Excess soil moisture is pulled downward by gravity, a process known as gravity drainage. At some depth, the pores of the soil or rock are saturated with water. The top of the zone of saturation is called the water table. Water stored in the zone of saturation is known as ground water. It then moves as ground-water flow through the rock and soil layers of the earth until it discharges as a spring, or as seepage into a pond, lake, stream, river, or ocean.”

2. Fetter continues:

“If the unsaturated zone is uniformly permeable, most of the infiltrated water percolates vertically. Should layers of soil with a lower vertical hydraulic conductivity occur beneath the surface, then infiltrated water may move horizontally in the unsaturated zone. This interflow may be substantial in some drainage basins and contribute significantly to total streamflow. Thin permeable soil overlying fractured bedrock of low permeability would provide a geologic condition contributing to significant interflow.”

3. Fetter makes it clear that the “pore water”, or whatever you call it, will move through the subsurface and discharge in the same manner as “groundwater”. The pore water becomes groundwater by displacement with rainfall infiltration, so why split hairs and not just consider it groundwater and manage it accordingly?

4. The American Heritage Science Dictionary (copyright 2005) defines groundwater as “Water that collects or flows beneath the Earth's surface, filling the porous spaces in soil, sediment, and rocks. Groundwater originates from rain and from melting snow and ice and is the source of water for aquifers, springs, and wells.”

We see no inconsistencies with the interpretation of the “pore water” as groundwater, it just happens to be on a local/micro-scale, compared to a macro/regional geologic scale. Clearly, we have water stored in a zone of saturation, otherwise it wouldn't pool in the cover wells or even soil gas wells for that matter. We're not sure what definition DHEC is referring to.

Regarding gas generated in landfills:

The Trustee is concerned about the presence of hazardous waste constituents in the cover soils of portions of the Pinewood Site. The Department attempts to dismiss this concern by stating that virtually all landfills generate gases and that VOC's in soil gas are not at concentrations that are impacting the vegetative cover of the landfill.

The statement in AECOM's February 2011 preliminary draft PSIP112 report does indeed include the following statement: "The presence of VOC mass in the cover soils is not unique to the Pinewood Site. Virtually all landfills generate gases, whether through biodegradation or volatilization." and, "Based on the field testing results, the physical properties of the clay soil layer did not appear to be impacted by the vapors diffusing through the PVC geo-membrane. Furthermore, the VOCs in soil gas are not at concentrations that are impacting the vegetative cover of the landfill."

This is one of AECOM's preliminary conclusions that is critically flawed. We talked about that with Bureau of Land and Waste Management staff. First, it is obvious to professionals familiar with landfills that the author is referencing landfills in which municipal solid waste is disposed - because a very large portion of landfills contain relatively inert materials that are not putrescible or biodegradable, and don't generate significant quantities of any sort of gas. The “vegetative cover” reference is a classic archaic reference to vegetative stress as a crude indicator of a potential release of municipal solid waste leachate, mine tailings releases, and spills and gross releases of unknown chemicals. Laboratory instruments are used for that sort of thing now. Second, gas from municipal solid waste landfills includes the following range of constituents:

From a report by the ATSDR/CDC on municipal solid waste landfills:

“Landfill gas is composed of a mixture of hundreds of different gases. By volume, landfill gas typically contains 45% to 60% methane and 40% to 60% carbon dioxide. Landfill gas also includes small amounts of nitrogen, oxygen, ammonia, sulfides, hydrogen, carbon monoxide, and non-methane organic compounds (NMOCs) such as trichloroethylene, benzene, and vinyl chloride.

Table 2-1 lists “typical” landfill gases, their percent by volume, and their characteristics.”

Table 2-1: Typical Landfill Gas Components		
Component	Percent by Volume	Characteristics
methane	45–60	Methane is a naturally occurring gas. It is colorless and odorless. Landfills are the single largest source of U.S. man-made methane emissions.
carbon dioxide	40–60	Carbon dioxide is naturally found at small concentrations in the atmosphere (0.03%). It is colorless, odorless, and slightly acidic.
nitrogen	2–5	Nitrogen comprises approximately 79% of the atmosphere. It is odorless, tasteless, and colorless.
oxygen	0.1–1	Oxygen comprises approximately 21% of the atmosphere. It is odorless, tasteless, and colorless.
ammonia	0.1–1	Ammonia is a colorless gas with a pungent odor.
NMOCs (non-methane organic compounds)	0.01–0.6	NMOCs are organic compounds (i.e., compounds that contain carbon). (Methane is an organic compound but is not considered an NMOC.) NMOCs may occur naturally or be formed by synthetic chemical processes. NMOCs most commonly found in landfills include acrylonitrile, benzene, 1,1-dichloroethane, 1,2- cis dichloroethylene, dichloromethane, carbonyl sulfide, ethyl- benzene, hexane, methyl ethyl ketone, tetrachloroethylene, toluene, trichloroethylene, vinyl chloride, and xylenes.
sulfides	0–1	Sulfides (e.g., hydrogen sulfide, dimethyl sulfide, mercaptans) are naturally occurring gases that give the landfill gas mixture its rotten-egg smell. Sulfides can cause unpleasant odors even at very low concentrations.
hydrogen	0–0.2	Hydrogen is an odorless, colorless gas.
carbon monoxide	0–0.2	Carbon monoxide is an odorless, colorless gas.

Source: Tchobanoglous, Theisen, and Vigil 1993; EPA 1995

Of these constituents in gas generated in **municipal solid waste (RCRA Subtitle D) landfills**, only NMOC's(0.1 to 0.6%) are potentially hazardous waste constituents.

By contrast, the gasses measured in AECOM's gas investigation around and in the cover system of the single-lined hazardous waste landfill cells include primarily hazardous waste constituents. Further, the Trustee believes the presence of these gasses is substantial

enough to be considered a release of hazardous waste constituents from a **RCRA Subtitle C landfill/solid waste management unit**. The vast difference in composition of gasses, concentrations, and regulatory framework between Subtitle D non-hazardous waste landfills and Subtitle C hazardous waste landfills make the comparison completely invalid and misleading. Presenting this comparison as valid indicates a lack of familiarity with the subject matter on the part of the writer.

Further, with regard to AECOM's preliminary conclusions: field tests and observations cannot conclusively determine whether clay components of landfill containment features have been degraded by gas, nor can observations of PVC membranes at spot locations in the field determine the integrity of a membrane system.

And finally, here is the full text of AECOM's recommend "Decision Rule" regarding gas monitoring:

(c) *Soil Gas Investigation*

Recommendation – Install 14 reusable soil gas points around the Section I cover adjacent to soil gas hot spots identified on the cover. Each sampling point will be sampled at three discrete depths, 2 ft, 5 ft, and 8 ft bgs.

Objective – Determine if soil gas from hot spots on the cover of the landfill is migrating beyond the landfill. Soil gas points are to be installed at differing depths to help profile the results and determine if soil gas is from the cover or from the side wall of the landfill.

Hypothesis – The source of VOC constituents in Manholes 4 and 5 is soil gas resulting from diffusion through the Section I landfill cover.

Decision Rule – If the hypothesis is confirmed the sampling frequency of Manholes 4 and 5 can be reduced to annual and made part of the long-term monitoring activities. If the hypothesis is not confirmed continue quarterly sampling of Manholes 4 and 5 until the source is confirmed.

Decision Rule – If the investigation indicates that the soil gas is at depths of 5 ft or 8 ft additional investigation to confirm the source of the soil gas should be considered.

Substantial gas concentrations were, in fact discovered at those depths; AECOM's preliminary draft recommendation would indicate that further investigation to confirm the source would be required – as proposed by the Trustee in at least two meetings with DHEC staff.

Regarding the statement, "The Department has consistently stated that any potential threats posed by the Site should be investigated by the Trustee...":

The Trust record of interaction with the Department shows this to be absolutely correct with regard to any operational spills over 16 ounces of leachate since the inception of the Trust on December 24, 2003 and selectively accurate with regard to releases or potential releases of hazardous waste constituents from, above, and around single-lined landfill cells.

Regarding statements by Department managers and staff to the effect that “...no releases have occurred...” and “...no releases have occurred in excess of regulatory standards...”:

The Trustee is at a loss to understand these statements or the regulatory standards being referenced by the Department. We find no such standards in the permits for the site or in correspondence from the Department. The facts are that hazardous waste constituents above MCLs have been found in the pore water above the Section I landfill cover, hazardous waste constituents have been found in the French drain system adjacent to Section I. further, shallow groundwater downgradient of Section I (possibly the most vulnerable location for the migration of contaminants due to the proximity of Pond A) has not been monitored since the inception of the Trust.

Monitoring of seepage from interflow discharging into the channel adjacent to the north end of Section I, above the Opaline claystone was monitored in 2005. The results showed the presence of several chlorinated and non-chlorinated hazardous waste constituents at levels below the MCL's. The seeps into the channel adjacent to Section I, , have not been monitored since 2005. The channel is actually part of Pond A, which, in turn, discharges uncontrolled into Lake Marion. However, that single round of sampling was the basis for the Department decision that the water table aquifer should become part of the Detection Monitoring program for all permitted landfill sections.

Consultants to the Trust recommended water table monitoring wells around the perimeter of single-lined landfill cells at spacing ranging from 75 feet (Golder) to 200 feet (GEL). The Trustee expressed concern that, based on authoritative literature, releases from landfill sidewalls might only spread to a width of ten to twenty feet by the time they reach perimeter monitoring wells, so that, even at nominal spacing of 100 feet, releases might have only a one in five to one in ten chance of being detected. The Trustee judges that level of uncertainty for the landfill cells containing the highest strength hazardous waste, the oldest and least sound liner, cover, and crudest leachate collection systems, is imprudent and insufficient to protect Lake Marion.

By contrast cells IIC through IIG and all of section III have double composite liner systems, providing close to a 100% chance of primary liner leaks being detected. These double-lined landfill cells contain treated waste and lower strength wastes, so the disparity in relative environmental protection is very substantial.

The potential for releases above the Opaline claystone layer from single-lined cells and the hit-or-miss effectiveness of perimeter wells to detect interflow (aka “preferential pathway”) releases and releases water table led Kestrel to continually advocate methods in addition to monitoring wells. Since May 2004, Kestrel has advocated and proposed various approaches to the use geophysical (ground-penetrating remote sensing and down-hole electronic) methods, detailed definition of the Opaline claystone layer around the perimeter of the single-lined cells, and use of sand blanket interceptor drains along the channel to monitor and potentially collect and remove groundwater from interflow or the water table below that.

Regarding comparisons to “regulatory levels”, the Trustee has no record a site-specific Human Health and Environmental Risk Assessment (HHERA) has been completed, so site-specific risk-based standards do not exist. The trustee has also not located any citations in

permit documents for regulatory levels applicable to these releases or potential releases, so we are not sure we understand what regulatory levels the department is citing.

Regarding prevention versus cure:

Statements such as “[A]llocation of funds for engineering, permitting or construction work would not be appropriate until a release or threat of release is identified and a remedy is selected.” express the reactive rather than a preventative mindset of Department managers and staff. The Trustee believes that a preventative approach is necessary given the nature of the Pinewood Site and the potentially serious consequences of releases from the landfill cells.

The entire premise of the design and operation of Subtitle C landfills is prevention - not cure. And if the package submitted to Directors Dieck and Templeton on March 10, 2014 did not finally and compellingly convey serious threats, we have at a loss to understand what evidence would actually be needed. This summarizes, more than any one statement by the Department, the very serious continuing deficits at the Pinewood Site regarding early detection and prevention of the releases of hazardous wastes and hazardous waste constituents, and assurance of the integrity of the site's containment and infrastructure components.

One irony is that the Department requires the Trustee to manage, in a rigorous and very expensive regulatory process, the operational release of as little as 16 ounces of leachate when tens of thousands or hundreds of thousands of gallons pore water contaminated at concentrations approaching leachate concentrations exist in the Section I landfill cover system – outside any containment.

And a few of the most troubling statements by the Department:

From David Scaturo's July 14, 2014 letter, attempting to attribute assurances of no releases of hazardous waste or hazardous waste constituents to Kestrel Horizons:

“Page E-1 of Section E, *Groundwater Monitoring*, of the RCRA Part B Application submitted by Kestrel on June 7, 2013 states: "There is no evidence that a release has occurred from the landfill. Groundwater monitoring has been ongoing since the site was first granted interim status in 1980. Since a release has not occurred from the regulated units, the Site is in Detection Monitoring and has been since the Part B permit was issued in 1994."

This sort of summary statement of conclusion with regard to the RCRA Detection Monitoring Program for the Pinewood Landfill associated specifically with Part 264 regulations has been made repeatedly by Bureau of Land and Waste Management staff and managers. Kestrel staff members working on the 2013 version did not modify the Bureau's refrain, pending changes to be made after the receipt and review of the AECOM report. Further this statement was made in respect to the available information from available sampling locations and monitoring locations were not, and remain not, available in the areas where the greatest potential threat exists.

The Bureau's consistent conclusion is certainly asserted by the Department in Bureau Chief Daphne Neel's June 25, 2014 letter. Chief Neel's letter states:

"At this time, there is no evidence of a release into the groundwater monitoring network."

And David Scaturo's July 14, 2014 letter chastises Kestrel Horizons for not including an affirmation of the Bureau's refrain, as follows:

"(2) The attachment fails to include the fact that no hazardous waste or hazardous constituents in the French drain discharge into Pond A, have been detected above a regulatory limit."

First, the Department's assertion that "[T]here is no evidence of a release into the groundwater monitoring network..." is highly misleading because the water table aquifer adjacent to the single-lined landfill cells has never been monitored, except as associated with historic releases from several non-landfill solid waste management units more than a decade ago. Second, the Trustee views fully accurate statements to be an issue of the most critical importance. Accuracy is absolutely essential to the purposes of the Trust as spelled out in the Trust Agreement and to the preparation and certification of RCRA Post Closure and NPDES permit applications that are true, accurate, and complete. The Trustee views recent information as clearly providing evidence of a release of hazardous waste constituents to the environment, including groundwater.

Kestrel and DHEC have discussed the concerns with the hazards posed by Section I in numerous meetings. We reiterate that reports presented to the Trust from gas monitoring show a widespread distribution of contaminants on and around the cover of Section I. Samples of water in the soils above the cover of Section I (outside of containment) show some constituents exceeding EPA National Primary Drinking Water Regulation standards. This and other data are summarized in Attachment A. Kestrel believes that the information submitted by Kestrel Horizons as Trustee supports that there are real threats from Section I landfill that require immediate attention to preserve remaining Trust funds and protect the environment.

While Kestrel anticipates soon proceeding with contracting for installing the limited number of new shallow groundwater monitoring wells as part of the Detection Monitoring Program improvements for the Site, we do not agree with DHEC that these wells are an adequate first approach to responding to the information the Trust has regarding the issue. The Trust's environmental consultants also do not agree with this approach; however, DHEC has to date refused to fund the efforts needed to address this.

Attachment A is a short statement of what Kestrel Horizons sees as myths and truths regarding the Pinewood Site. Here are the main points:

1. **Myth Number 1: *The protection of Lake Marion is primarily insured by the existence of a thick layer of Opaline claystone*** (the material mined for manufacturing on absorbents before the landfill operations began.)
2. **Myth Number 2: *If the landfill were to leak hazardous waste or hazardous waste contaminants, the leak would occur out the bottom, near the low point of each cell.***
3. **Myth Number 3: *The liner, cover, and leachate collection systems of the single-lined cells (all five cells in Section I and Cells A and B in Section II) were built to withstand the chemical and physical punishment of the wastes disposed.***
4. **Myth Number 4: *The closest distance from Section I to Lake Marion is nearly a quarter mile, releases would take centuries to reach the lake, releases would certainly be detected by the deep monitoring well network, and remediation would be readily accomplished in the unlikely event of a substantial release.***
5. **Myth Number 5: *Potential shallow releases can be monitored and intercepted before any adverse effects on Lake Marion could occur.***
6. **Myth Number 6: *The Trustee reviewed and approved the Settlement Agreement estimates and careful management of the proceeds from the settlement will insure the funds last the requisite 102 years.***

Closing

David Scaturo's July 14, 2014 letter includes the following paragraph:

"In previous correspondence and meetings, the Department has encouraged Kestrel to conduct the necessary monitoring as soon as possible to determine if there is a release or threat of release for which such corrective measures are necessary. We stated: "If, at that time, conditions at the Site warrant additional work, or if data gaps from this initial work are identified, the Department will revise the conceptual site model with Kestrel, and decide on a path forward for additional investigation." A logical, technically sound approach continues to be the reasonable path forward for this investigation. If the Trustee's investigation yields a concern, we will work diligently with the Trustee to take the necessary response action including, but not limited to, corrective measures previously suggested by the Trustee if they represent the best remedial alternative.

This is as good a paragraph as any to use in closing. Here are some summary statements on this matter by Kestrel Horizons, LLC, as Trustee of the Pinewood Site Custodial Trust and as conscripted RCRA Part B and NPDES permit holder:

1. We view the statement, "[t]he Department has encouraged Kestrel to conduct the necessary monitoring as soon as possible to determine if there is a release or threat of release for which such corrective measures are necessary" as absolutely false and misleading in that proposals to do necessary monitoring have been denied or postponed by the Department over nearly a decade.
2. The statement, "If, at that time, conditions at the Site warrant additional work, or if data gaps from this initial work are identified, the Department will revise the conceptual site model with Kestrel, and decide on a path forward for additional investigation." is typical of the Department's approach since 2006, when hazardous waste constituents were first found adjacent to single lined cells of Section I. The attached timeline, which was included in the RCRA Part B Post Closure Permit Application documents submitted on Friday, July 18, tells the story. It seems to Kestrel that the Department's language of July 14, 2014 , "the path forward for additional investigation..." is telling in itself.

The fact is the Trustee has already revised and articulated the conceptual site model. The revised model was articulated in detail in narratives and attachments to our March 10, 2014 letter to Director Dieck. Repeated articulations of the revised conceptual site model date back to May 2004, shortly after the inception of the Trust.

3. The sentence, "A logical, technically sound approach continues to be the reasonable path forward for this investigation." indicates to the Trustee that the Department may not yet recognize the realities of data indicating the real potential that releases are now occurring.
4. And the final sentence, "If the Trustee's investigation yields a concern, we will work diligently with the Trustee to take the necessary response action including, but not limited to, corrective measures previously suggested by the Trustee if they represent the best remedial alternative." conveys that the Department does not share the Trustee's serious concerns based on available information or the Trustee's sense of urgency.
5. The Department continues to dismiss or postpone approval and implementation of the Trustee's proposed action plans. We continue to be concerned about our ability to effectively carry out the Trustee's role as an independent fiduciary of a Trust with the following primary responsibilities, as specified in the Trust Agreement:
 - "... maintaining the Pinewood Facility in an environmentally protective manner and in accordance with applicable law."

- “ . . . for the benefit and protection of the people of the State of South Carolina.”

These are the words of the Trust Agreement as written by the Department legal staff in 2003.

Conclusion

If the Pinewood Site Custodial Trust is to survive as a legitimate and effective vehicle to carry out its stated purposes, the Department must not place the Trustee in a position of being coopted or constrained by Department managers or staff for taking positions which are not aligned with their own thoughts or conclusions.

I reiterate the Trustee of the Pinewood Site Custodial Trust is neither a DHEC contractor nor extension of DHEC staff. By the terms of the Trust Agreement written by DHEC attorneys, the Trustee has full authority to represent the Trust before DHEC and other governmental entities and to take actions as necessary to carry out the purposes of the Trust. We clearly need more collaborative problem solving, effective negotiation of differences, and a dispute resolution vehicle so that the Department and the Trustee can operate productively and with constructive tension rather than falling into posturing and transactional dynamics that waste money and create unnecessary friction.

Further discussion of this and related topics are included in other contemporary correspondence and documents.

Best regards,

William A. Stephens, P.E.

Managing Principal

Kestrel Horizons, LLC as Trustee of the Pinewood Site Custodial Trust

cc: Phillip Conner, Esq., Nexsen Pruitt

Marshall Taylor, Esq. SC DHEC