



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

84 Villa Road, Suite 300  
Greenville, SC 29615

864/288-6353  
Fax: 864/288-6354  
www.kestrrelhorizons.com

September 18, 2014

## **Final Report to the Citizens of South Carolina**

from William A. Stephens, PE, Managing Principal,  
Kestrel Horizons, LLC as Trustee of the Pinewood Site Custodial Trust

Regarding: Urgent Matters Involving the Pinewood Site and the Pinewood Site Custodial Trust

### **Fellow Citizens of South Carolina:**

The conditions, issues, risks, and needs of the Pinewood Site and the Pinewood Site Custodial Trust discussed in this report are serious and immediate. Some are urgent. I have tried to organize and summarize the interrelated information so that it can be understood as well as possible by people not intimately familiar with the subject matter; however, there is no way to make some of the information simple.

Below is my attempt at a summary of the most important points: Please see *The Pinewood Story*, included as Attachment H for an orientation to the Pinewood Site and the Pinewood Site Custodial Trust. The discussions that follow assume you have at least scanned those and have a basic familiarity with the site history, setting, layout, and design as well as the Pinewood Site Custodial Trust fundamentals.

### **A Perspective on the Scale and Magnitude of the Pinewood Site:**

1. **Section I of the Pinewood Site hazardous waste landfill** contains approximately 1 million (1,000,000) cubic yards of hazardous waste.
  - For visualization, one cubic yard is a cube measuring 3' x 3' x 3'.
  - One cubic yard contains 202 gallons.
  - **Therefore, Section I contains approximately 200 million (200,000,000) gallons of hazardous waste.** (1,000,000 cubic yards x 202 gallons per cubic yard)
2. Let's imagine that each person in the entire United states between the ages of 18 and 65 held a gallon jug of **hazardous** waste and stood in a single file line three (3) feet

part. How many gallons would they be holding altogether and how long would the line be to fill Section I?

- The adult population of the United States 18 to 65 years old and older in 2012 was estimated by the US Census bureau at 197,041,000. Let's round up to 200,000,000. So that works out that one gallon jug of hazardous waste each would equal the volume of hazardous waste in Section I alone.
  - So if each person stands on a spot three (3) feet from the person in front of him or her, the line of 200,000,000 people, each with a jug of hazardous waste, would be 600,000,000 feet long
  - The circumference of the earth at the equator is approximately 24,900 miles.
  - There are 5280 feet in a mile, which means that the circumference of the earth at the equator is  $24,900 \times 5280 = 131,472,000$  feet.
  - **So the line would stretch  $600,000,000 / 131,472,000 = 4.56$  times around the earth at the equator.** Let's round that to  $4\frac{1}{2}$  times around the earth because some people are just pushy.
  - Now, the **entire Pinewood landfill** (Sections I, II, and III) contains 4 million (4,000,000) cubic yards of hazardous waste, so the line for the whole landfill would reach  $4 \times 4.67 = 18.68$  times around the earth. Getting dizzy just thinking about it.
3. A "typical" Superfund NPL site might have involved/involves maybe 50,000 cubic yards of wastes and soil contaminated enough to require remediation – but a substantial percentage (probably most) of the wastes and contaminated soils on those sites would be classified as "non-hazardous". So how long would that line be, if we count both hazardous and non-hazardous waste from a "typical" Superfund NPL site?
- $50,000 \times 202 = 10,100,000$  gallons
  - $10,100,000 \times 3$  feet per gallon = 30,300,000 feet
  - $30,300,000$  foot line / 131,472,000 feet around the earth = 0.23 times around the earth. Let's round to  $\frac{1}{4}$  of the way around the earth.
  - The distance from Rimini, South Carolina to Tel Aviv, Israel is 6250 miles, so **the line for a typical Superfund NPL site would stretch to the Holy Land, but most of the jugs would be filled with pretty weak stuff compared to the wastes in Section I of the Pinewood hazardous waste landfill.**
4. Now let's get a handle on how much of a contaminant would be required to raise pure water to a concentration that exceeds the drinking water standard. For an example, we will use a federal drinking water standard (Maximum Contaminant Level or MCL in regulatory terminology) of 5 parts per billion (ppb). That's the MCL for trichloroethylene (TCE), a common industrial solvent, and for tetrachloroethylene (PCE), another common industrial solvent also used for dry cleaning, which are hazardous waste constituents found in the landfill and solid waste management units at the Pinewood Site. **So let's say we have a body of water  $\frac{1}{2}$  mile by  $\frac{1}{2}$  mile that is an average of ten (10) feet**

**deep. How much TCE or PCE would be required to raise the concentration to the MCL (not considering any evaporation, degradation, adsorption, etc.)?**

- $\frac{1}{2}$  mile x  $\frac{1}{2}$  mile x 10 feet = 2640 feet x 2640 feet x 10 feet = 69,696,000 cubic feet
- One cubic foot equals 7.48 gallons, so 69,696,000 cubic feet is 69,696,000 cubic feet x 7.48 gallons per cubic foot = 521,326,080 gallons. Half a billion gallons. That's just over 2  $\frac{1}{2}$  times the volume of Section I of the landfill.
- So to calculate how much TCE or PCE would be required to raise the TCE or PCE concentration to the MCL, the required quantity would be 521,326,080 gallons x (5/1,000,000,000) = **26 gallons. So, not even a fifty five gallon drum.**
- Recall that Section I contains **200,000,000 gallons of hazardous waste** – a substantial portion of which was in liquid form contained in metal drums, and another substantial portion of which was reportedly bulk liquids disposed directly into the body of the waste.
- Fortunately, TCE and PCE are readily evaporated in surface water, so the actual quantity required to reach the MCL for those contaminants in that half billion gallon volume of pure water would be much higher. Possibly orders of magnitude higher, but that depends on the environment. But some contaminants do not readily evaporate, adsorb, or break down biologically. And some contaminants can affect aquatic life at concentrations lower than an MCL.

5. So what can be concluded from these quick calculations and comparisons?

- The Pinewood Site has the volume and potency of 20 or more “typical” Superfund NPL sites? That's hard to say for sure, because there really is no “typical” Superfund NPL site, but the ballpark comparison is probably fairly valid.
- Typical CERCLA NPL sites are child's play compared to the Pinewood Site. The Pinewood Site is in a class by itself.
- Give a person a gallon jug of hazardous waste in 1980 and it might be 2014 before he gets up to the front gate. Especially if his name starts with a “z”.

With a typical Superfund NPL site, a somewhat greater portion of funds would have been spent over the past ten years on achieving results and substantially less on addressing regulatory permit requirements typical of operating TSD facilities receiving, treating and disposing of large quantities of hazardous wastes. Probably 5% to 10% of the funds spent to date would have been shifted from permitting and compliance to results-oriented efforts. On the other hand, legal fees for various aspects of CERCLA sites are much higher than for the Pinewood Site, so the balance of resource allocation may be a wash in the end. Those are not conclusions supported by these calculations or comparisons but I can say, based on more than thirty years of heavy duty RCRA and CERCLA experience, they are in the ballpark.

## **B** Important Points Regarding Pathways by which Contaminants Could Affect the Headwaters of Lake Marion

1. The historical Conceptual Site Model which forms the basis for all scientific, engineering, operations, and monitoring at the Pinewood Site was and is fatally flawed. It assumes that the landfill cells containing 4 million cubic yards of hazardous waste - in drums and in bulk - will only leak out the bottom.
2. The use of the historical Conceptual Site Model and its recent update by a consultant to the Trust is of little or no significance for the modern hazardous waste landfill cells with double composite liner systems – Cells IIC through IIG and all of Section III. However, the significance and adverse consequences of the use of that model for the single-lined cells - all of Section I and Cells IIA and IIB – cannot be understated.
3. The significance of that assumption is that a low permeability layer of Opaline claystone at least ten feet thick will virtually prevent contamination from reaching Lake Marion. On the basis of that assumption scientists over 34 years have calculated that hundreds of years would pass before contamination could possibly reach the lake – and that the lake is effectively 1200 feet from the closest landfill cell containing hazardous waste.
4. A consultant to the Trust has recently validated that historical model again, after validating the model under contract to DHEC in 2002 – the year before the inception of the Trust. Kestrel Horizons absolutely does not agree with that consultant; however, the consultant and DHEC managers do agree, and they have affirmed their agreement at a meeting between the two.
5. Kestrel Horizons, as Trustee, has maintained since the inception of the Trust on December 24, 2003 that the single lined cells of the Pinewood Site hazardous waste landfills could leak out the sides, the seam where the sides of the liner meet the cover, and out the cover itself.
6. The single lined cells are the oldest, closest to the lake, and contain the worst hazardous waste. All totaled, these single-lined cells contain approximately 1/3 of the total 4 million cubic yards of hazardous waste disposed at the site and the hazardous waste was not treated to limit its mobility or toxicity before being landfilled.
7. The importance of understanding and accepting that all landfills – and especially the Pinewood Hazardous Waste Landfill – can leak out the sides and the top is that the time-of-travel for contamination then becomes months or years, and leaks like those are difficult to detect with standard groundwater monitoring wells.

8. The “sidewall” leaks are usually narrow “plumes” (maybe 10 to 20 feet wide) that find underground paths, called preferential pathways. Think of these as “underground streams”. These “releases” of hazardous waste contaminants would flow on top of the Opaline claystone and might never be detected in the groundwater monitoring system beneath the Opaline claystone layer. Instead, these types of releases might flow directly to the lake and discharge to the lake much like the water we see flowing down the rocks alongside the highway when we go through the mountains.

---

### **C History of Trustee’s Proposals and DHEC Responses Regarding Shallow Releases from Landfill Sidewalls and Cover System**

1. Kestrel Horizons has proposed, since June 2004 that the monitoring system be expanded to monitor regularly for these sorts of potential releases of hazardous waste contaminants. Kestrel has also proposed, since May 2005, installation of a series of “French drains” to intercept any potential contamination before it could reach the lake as well as a system to pump contaminated liquid from those underground drains to the site’s storage tanks for treatment and off-site disposal.
2. DHEC has never approved of Kestrel’s proposed measures around the single-lined landfill cells, even though exactly the same methods were approved and endorsed by DHEC for interception of pre-landfill contamination from the 1970’s. That groundwater interception and monitoring system was permitted after a public hearing in 2007. Since being put into operation in 2006, that system has intercepted high levels of contamination in millions of gallons of groundwater that would otherwise have discharged underground to the lake undetected.
3. When I spoke at the public hearing in 2007, I was confident DHEC would approve a full system of interceptor trenches and drains, and I have a hard time accepting that DHEC top management has always rejected the possibility of hazardous waste releases other than out the bottom of the landfill.

## **D** Thoughts on Possible Explanations for DHEC Not Approving the Proposed Measures:

1. Here are some thoughts as to why DHEC top management has historically resisted considering a Conceptual Site Model which involves potential contaminant transport pathways other than Out-the-Bottom:
  - When the site was originally permitted, the story the original commercial waste company and DHEC managers agreed on was that the Opaline claystone protected Lake Marion because landfills leak out the bottom. That was plausible in 1980 because most landfills of any type were not lined with re-compacted soils and membrane (rubber/plastic) liners, so most landfills were dug into natural deposits of low permeability clayey soils. The same was true with the other major hazardous waste landfill in the Southeast, which is located near Emelle, Alabama.
  - The part of the landfill that rose above those natural low permeability clayey soils was not considered risky because, the reasoning went, water drops straight down – and so would leachate (mostly contaminated water that made it through the landfill cover) or liquid waste from bursting drums or tanker trucks placed in the landfill.
  - The problem is that a landfill is filled in layers, making a mucky layer cake in which leachate and liquid waste can flow horizontally and remain “perched” far above the bottom of the landfill. When this perched leachate and liquid waste makes its way to the sidewall of the landfill, it will “find” any imperfections and can leak directly out the side into the soils above the natural barrier layer.
  - If the waste is placed above the rim of the liner (which it was at the Pinewood Landfill) the leachate and liquid waste can leak out the place where the liner and cover come together. (Picture a bathtub overflowing).
  - If the cover is not so good, not only will it let rainwater in, but it can let leachate and liquid waste out. Because of the design of the cover system at Pinewood, that leakage would never be visible from the top; instead it would travel underground above the Opaline claystone undetected by normal monitoring methods. The Section I cover is “okay” by municipal solid waste landfill standards, but “not so good” by hazardous waste landfill standards – especially with a failing leachate collection system.
  - Now, the membrane liner of Section I of the Pinewood Landfill was made of Hypalon™ (a synthetic rubber sheet product) 30 thousandths of an inch thick – about the thickness of a rubber life raft you might buy at the store. The thin rubber

sheet was glued together with 1½ inch overlapped seams. That thin sheet was placed over a five foot layer of re-compacted low permeability clay soils (which were pretty darned good) – though early construction quality assurance was very weak, at best. The clay liner was sloped to low points.

- An underdrain system to collect leachate and liquid waste was installed on the surface of the Hypalon™ liner and a concrete manhole (just like the sanitary sewer manholes in your neighborhood) was placed at the low points in the liner and leachate collection system. A thin layer of soil was placed over the Hypalon™ to protect it. Drums of hazardous waste were placed over the underdrain system and around the manholes - for what crazy reason, I have no idea. No provision to maintain or clean out the leachate collection system was installed.
- Then drums of hazardous waste were placed in layers, with sludge, gunk, and soil used to cover the drums and other debris in layers. Tanker trucks of liquid waste and solvents were reportedly dumped directly into the landfill, as well. Then heavy machinery ran over the layers to compact them to make room for more waste. Pretty standard landfill practice at the time – except the hazardous waste part.
- To make matters much more serious and immediate, the leachate collection system within Section I is plugging up. Some of the sumps (manholes with pumps at the bottom of the landfill) are virtually plugged, so the pumping system can't keep up with the amount of water coming through the covers system and the liquid beginning to be released from drums. Imaging the faucet on in the tub with a thimble to use as a bailer. Or the bilge pump in a boat unable to keep up with the water coming in from rain or waves.
- Now, here's a couple of problems:
  - Solvents dissolve synthetic rubber and glue, so the best we can hope for is that gunk has filled those split seams and weakened areas of the synthetic rubber membrane. The Hypalon™ membrane liner was probably seriously deteriorated before Section I was ever closed. We have told DHEC that dozens of times in writing and in meetings. And
  - Chlorinated solvents, in particular, desiccate clay; that is, they break down the structure and interfere with the properties of the clay particles (which are like flat wafers) such that the clay which was once cohesive and nearly impermeable to water becomes cracked and very permeable to liquids of all types – especially at weak points. This creates the potential for point-source leaks much like the holes in a strainer or colander. The re-compacted clay layer is the last barrier to try to stop a sidewall or cover system release. After that, nothing substantial is in the way to stop the

leak or even detect it. (See Attachment I for photos of liner clay desiccated by heat. That desiccation is more extreme than chemical desiccation, but the photos illustrate the phenomenon.)

- Some landfills don't just leak liquid – some leak gas. In the case of the Pinewood Hazardous Waste Landfill, the gas would be virtually all hazardous waste contaminants – not just a mixture of mostly methane, carbon dioxide, nitrogen, oxygen, and some stinky organic sulfur compounds in a family called “mercaptans”. The hazardous waste contaminants from the Pinewood hazardous waste landfill include chlorinated organic chemicals (such as trichloroethylene, tetrachloroethylene, and methylene chloride) and non-chlorinated organic chemicals (such as benzene, toluene, and acetone). A completely different story than landfills that dispose of the trash we take out to the curb.
- The Pinewood Landfill has absolutely no routine monitoring system for such potential releases even though DHEC scientists first agreed with Kestrel Horizons in 2006 that such monitoring systems were necessary.
- The rub is that DHEC management, by agreeing to install such a monitoring system or the French drain interceptor system repeatedly proposed by Kestrel Horizons, would have to admit that these releases were always possible. That would bust the myth of 1,200 feet and hundreds of years for contaminants to reach Lake Marion. That would open up Pandora's box. That would mean CASE (Citizens Asking for a Safe Environment) and Senator Leventis were right all along about the risks posed by the single-lined cells.
- So what would be the implications of accepting Kestrel's version of the Conceptual Site Model?
  - First, it would mean that hazardous waste contaminants could release out the sidewalls and cover system in full strength, leachate, and gaseous form undetected and undeterred.
  - Second, it would mean that such releases or hazardous waste contamination may have already happened (possibly decades ago)( or may be happening now.
  - Third, it would mean that Lake Marion is, in effect only about 75 feet from the single-lined hazardous waste landfill cells and that the travel time for released hazardous waste contaminants could be months, years, or decades – not hundreds of years.
  - Fourth, it would mean DHEC management has been wrong for decades.

- Fifth, it would mean that, if DHEC had understood the actual Conceptual Site Model, the agency would have required the commercial waste companies to monitor the shallow groundwater and unsaturated zone above the Opaline claystone layer on a routine basis and to install another barrier system and a leachate extraction system for releases from the single liner system.
- Sixth, it would mean that the Post-Closure Operations and Maintenance estimates in the DHEC/Safety-Kleen Settlement Agreement would have included a lot more money to deal with all of this, and
- Seventh, it would mean that the public would have known about all of this for the past three decades.

---

## **Facts and Events Citizens of South Carolina Should Know About:**

1. DHEC technical staff members Kestrel Horizons worked with from 2006 through 2013 were actively involved in pursuing an accurate and complete understanding of the natural and manmade workings of the Pinewood site. They participated actively and productively in technical discussions with Kestrel and the Trust's consultants and contractors. With due diligence and considerable technical, regulatory, and management judgment, they authorized funding for Kestrel Horizons, as Trustee, to retain consultants to investigate and assess the conditions of and potential releases from the single-lined cells. Those consultants to the Trust completed the following work for the Trust since 2006:
  - A preventative contaminant interception design capable of real-time detection and control of sidewall and cover releases; and
  - A Critical Elements Analysis report by a well-respected global environmental consultant assessing potential release scenarios and design and operational vulnerabilities, and criteria for corrective and preventative action; and
  - Conceptual contingency plans for sidewall and cover releases; and
  - A highly detailed three dimensional computer model of the entire Pinewood facility, integrating the scientific and engineering work of dozens of consultants over 35 years – all recovered from more than 1000 boxes of records and three thousand drawings left behind in piles by Safety-Kleen in 2003; and

- Two separate evaluations each of the Section I cover system and storm water management system; and
  - Investigations that included extensive sampling and testing of seepage above the Opaline claystone into the channel that runs alongside Section I to Pond A and directly to Lake Marion uncontrolled, storm water from the perimeter ditches around the landfill sections, water in an existing French drain system around one end of Section I, pore water in the Section I cover system, and gas within the soils above and adjacent to Section I and Section II single-lined cells.
2. Those investigations demonstrate that, not only is Kestrel's Conceptual Site Model correct, but that hazardous waste contaminants in substantial quantities and concentrations exist outside of landfill containment within the cover system of single-lined cells and around the perimeter of single-lined cells at the level of the liner/cover system interface. (See Attachment D for example figures depicting gas concentrations from AECOM's studies in 2012 and 2013. These are examples of the figures DHEC has directed Kestrel to delete from the RCRA Part B Post-Closure Hazardous Waste facility Permit Application.)
  3. State and federal regulations require the permit holder (in this case Kestrel Horizons, as Trustee) to immediately report any such findings and data to DHEC – and we did in every case all along the way.
  4. An applicant for a RCRA Part B Post-Closure Permit (in this case, Kestrel Horizons, as Trustee) must, by state and federal regulations - under penalty of fines and imprisonment - include all such relevant data and reports in the permit application – and we did on July 18, 2014.
  5. Including with the RCRA Part B Post-Closure Permit Application the information required - addressing all of the above - was submitted contrary to the desires of DHEC management.
  6. One week later, on July 25, 2014 Director Templeton asked for Kestrel's resignation from our role as Trustee, telling the media Kestrel had “taken” 10 million dollars from the Pinewood Site Custodial Trust funds to cover “overhead and administration” and that Kestrel had sent unsubstantiated invoices to DHEC for questionable services.
  7. On August 22, 2014 DHEC managers met with the Trust consultants who maintained the Conceptual Site Model with which Kestrel does not agree after that consultant refused to meet with DHEC and Kestrel to discuss the matter. The two of them agreed to maintain and support the validity of the historical Out-the-Bottom Only model. And that the manager for the local office of the consulting firm noted in her email informing Kestrel of the impending meeting that they were going to discuss other work with DHEC. And the

consultant notified Kestrel that it would perform no additional services under the Trust-Consultant agreement.

8. And finally on September 2, 2014, DHEC issued a “Notice of Deficiency” – in effect a regulatory order – requiring that Kestrel retract the July 18, 2014 RCRA Part B Post-Closure Permit Application supplement which included the relevant information on releases of hazardous waste constituents, potential risks to the environment, and all information on Post-Closure cost estimates which would show the Pinewood site Custodial trust to be insolvent in 2015 or 2016. The “Notice of Deficiency” required instead that Kestrel include only eleven items specifically requested by DHEC which were also included in the July 18, 2014 Permit application package.
9. Further, DHEC’s September 2, 2014 “Notice of Deficiency” required that I, William A. Stephens, PE, as Trustee of the Pinewood Site Custodial Trust, sign and certify as “true, accurate, and complete” the entire RCRA Part B Post-Closure Permit application package (about eighteen ring binders) omitting all of the required information which was included in our July 18, 2014 supplement they ordered omitted. This despite written and verbal communications from me and from the Trust’s attorney that Kestrel Horizons would not be a part of illegal and unethical proceedings – and promises to DHEC we would resign and bring these to public light should they not relent.

---

## **F** What Happened Next:

Kestrel Horizons did, indeed resign its role as Trustee of the Pinewood Site Custodial Trust. We had our resignation package ready July 22 – the day a SLED agent strangely showed up at the gates of the Pinewood facility babbling something about wanting to talk to someone about “*improprieties in the use of funds*”.

When I reached her by telephone two weeks ago, she said that the Village of Pinewood officials wanted to know about contributions to the village beautification fund and how much we had given the previous officials. I told her “*We are not Laidlaw or Safety-Kleen. They went bankrupt and left this site in 2003. We are Trustee for the Pinewood Site Custodial Trust - a public trust. We don’t make contributions to anyone.*”

The agent acted as though she had no notion of what she was actually investigating. She then asked, “*Well how much have you given them?*” I said “*Nothing. We are a public trust.*” And she said the jury was coming back in the courtroom with a verdict on a murder trial and she would have to call me back. She did, indeed, call me back the next day and left a message she had called and that she would be out of the office for a week or more.

Keep in mind that any contributions to the Village of Pinewood would have to have been at least fourteen years ago, when Safety-Kleen was still in business. Now why would SLED be suddenly

investigating - two working days after we surprised and displeased DHEC management by submitting all of the required information in a permit application – some sort of “improprieties” from a decade and a half ago? So, one week an investigation of contributions a beatification fund of the 1990’s to a murder trial the next. Sorry, I’m not buying that.

Marshall Taylor, DHEC General Counsel (whom I have known for more than 15 years and respect immensely) arrived at our Greenville office at about 3:40 PM on Friday, July 25, 2014 to talk about a course of action. Within a few minutes after Mr. Taylor related that Director Templeton had decided to request Kestrel’s resignation, we were interrupted by calls from reporters asking about Director Templeton’s announcement to the media earlier that afternoon that DHEC had requested Kestrel’s resignation. Clearly Mr. Taylor was caught by surprise.

I asked Mr. Taylor whether SLED would be showing up to take me to prison, and he was clearly shaken by that question and by my relating the story of the SLED visit to the site three days before. Mr. Taylor knows that I have had some health challenges, and that I have helped defend clients from fines and imprisonment for such nefarious felonies as distributing a product containing a toxic substance (lead) without a proper Material Safety Data Sheet.

Our three-volume July 25, 2014 resignation package is included as Attachment G. Our resignation letter follows:



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: Resignation of Kestrel Horizons, LLC from Position of Trustee of the Pinewood Site Custodial Trust

Dear Director Templeton and Director Dieck:

Effective today, we are providing notice of our resignation from the position of Trustee of the Pinewood Site Custodial Trust. After months of concentrated effort trying to work with Department managers and staff to fully and finally address what we believe to be serious environmental, technical, legal, regulatory, financial, and economic issues, we have reached an impasse.

We will not provide detail here, but rather refer to the RCRA Post-Closure Part B Permit application amendments submitted to the Department on July 18, 2014 by Kestrel Horizons, as Trustee, and the three volume set of documents submitted to you today.

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. . .”

We have concluded that Kestrel's orientation towards addressing potential threats to health and the environment rather than waiting for substantial threats to develop, and prevention of adverse environmental effects rather than develop “just-in-time” cures, are incompatible with the Department's preferred approaches.

---

Directors Catherine Templeton, Esq. and Elizabeth Dieck,  
Esq. July 25, 2014  
Page 2 of 2

Kestrel has always been committed to full public disclosure of all aspects of the Trust operations and of Pinewood Site conditions and challenges. *The Pinewood Story*, which is updated and posted on the Pinewood Site web page each January, is one example of this commitment. All correspondence with the Department over the past 10 years and seven months since the inception of the Trust on December 24, 2003 conveys that transparency and clear articulation of issues, concerns, legal and regulatory frameworks, alternatives, economics and financials, risks and risk management strategies, required decisions, and proposed plans.

Kestrel Horizons, LLC will, of course comply with the terms of the Trust Agreement and will plan to meet with Department managers regarding arrangements for a transition.

Sincerely,



William A. Stephens, P.E. Managing Principal

---

**KESTREL HORIZONS,  
LLC**

84 Villa Road, Suite 300 • Greenville, SC 29615 • Phone: 864.288.6353 • Fax:  
864.288.6354

706 Orleans Road • Charleston, SC 29407 • Phone: 843.769.4449 • Fax: 843.573.8721 www.kestrrelhorizons.com

---

What I can and will do at this time is to shine a bright light on this situation, preserve for the record what the Citizens of South Carolina need, and be available to help people understand. Many have said that at this point I know more about Pinewood than anyone. I don't really know if that's a good thing or not. It can be useful to those who want the truth. It also makes me a target.

We now have nearly 100 boxes of files to transfer from the trust's records to DHEC's designee. We are inventorying the paper files and will keep copies of all electronic files to be placed in an archive not controlled by DHEC or their designee, but rather by an entity responsible to the citizens of South Carolina.

---

### **G And One Final Contribution to "The Cause":**

On May 16, 2014 David Scaturo of DHEC wrote a letter to Kestrel. In it he stated:

**The Department will not at this time approve any supplemental investigation of soil, groundwater, and/or surface water. Any unapproved supplemental work would be performed at Kestrel's own expense.** The Department prefers to wait until results from the work recommended by AECOM in their June 6, 2013 Technical Memorandum are submitted and evaluated. 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.

Now, the work proposed by AECOM included nine shallow monitoring wells over a perimeter of single lined cells of approximately 7,000 feet. That's about one well every 1150 feet. Given that a plume from a sidewall leak might be expected to be as wide as maybe 15 feet by the time it got to the well, there would be about a 1 in 75 chance of one of those wells detecting a leak.

Further, Kestrel has supplied DHEC with authoritative literature from 1991 through 2013 that highlighted the unreliability of monitoring wells detecting such releases and the ineffectiveness of detecting releases that flow in thin layers on top of a formation such as the Opaline claystone layer. One of the AECOM consultants even quipped, "*If you're going to do something stupid, do it cheap.*" Now we are about to install those wells at DHEC's instruction,

because DHEC and the consultant agree we should. I think it might turn out to be a bust, but DHEC has ordered the work.

So, on the subject of Mr. Scaturo's email, we put our money where our mouths are. Kestrel Horizons (in effect my wife, Gail, and I) retained Dr. Ronald Falta, PhD to provide a third party opinion about the Conceptual Site Model, the needs for contaminant control, and the needs for environmental monitoring. Dr. Falta's concise report is included as Attachment C. Dr. Falta's *curriculum vitae* is also included, as is his invoice and a copy of our payment for his services. Dr. Falta is a world renowned expert in groundwater modeling, environmental monitoring, and environmental remediation. Dr. Falta is a professor at Clemson University who also serves as an expert in litigation and in environmental projects. Mr. Falta's \$7,700 fee for expert services came out of our retirement savings, and we both believe the money was well spent for a good cause.

You can read the brief report for yourself. The upshot is that DHEC and everyone else should take a longer look at what we have included as attachments and references to this final report.

We joked at Kestrel after we received Mr. Scaturo's email that we could take up a collection and maybe have a car wash and bake sale to raise money to take DHEC up on their suggestion that, if we thought this stuff was so important, we spend our own money to pursue it. We never had a car wash or bake sale, but if you know anyone who might want to contribute to replenish our retirement savings, please let us know.

Preparing, copying and distributing all of the information for today's packages will have cost more than \$10,000, as well. So - Director Templeton and DHEC managers - we did just what you suggested we do. We put our money where our mouths are. Right now, yours are full of toes.

---

## **H** Why is Kestrel Horizons Reporting Directly to South Carolina Citizens?

The recent developments (explained in detail in this Final Report, including its many attachments) require Kestrel Horizons to communicate directly with the citizens of South Carolina in order to fulfil our duties and responsibilities of Trustee of the Pinewood Site Custodial Trust, as fiduciary and as environmental permit holder.

Kestrel Horizons is taking these steps at this time due to adverse actions of the South Carolina Department of Health and Environmental Control, which acts both as primary government regulatory agency and Beneficiary of the Pinewood Site Custodial Trust. Further, Kestrel's own ethical standards and the regulations and Code of Professional Conduct governing Kestrel's Professional Engineers and Kestrel as a Professional Engineering Firm

require us to move beyond the limitations of communication with DHEC management and staff only.

---

### **Regarding Kestrel Horizons:**

Kestrel Horizons' final day as Trustee of the Pinewood Site Custodial Trust will be October 31, 2014. After sixteen years and six months of service to industry and ten years and ten months service to the citizens of South Carolina as Trustee of the Pinewood Site Custodial Trust, Kestrel Horizons will close its doors on that day. Kestrel's extraordinarily capable and committed professionals have begun to move on to the next step in their careers.

My wife, Gail, and I have decided that, in the face of foolish and self-serving comments by DHEC Director Catherine Templeton, we are not willing to see the reputation of Kestrel Horizons and its many dedicated professionals sacrificed to serve personal or political ambitions. Director Templeton's derogatory remarks and innuendo about Kestrel Horizons and about me would have been highly insulting to me if her motives and methods had not been so transparently desperate.

We are also not willing to sit and watch aspiring government officials or politicians use the good name of Kestrel Horizons - and the impeccable reputation we worked so hard to build - as stepping stones. We have decided we would rather end our commitments with honor than to try to restore what has been lost.

After October 31, we will try to ignore all the machinations of DHEC management. We will continue to work toward the public recognition of the important and urgent needs of the Pinewood Site and to bring to bear the wealth of information and knowledge Kestrel Horizons has amassed.

I want to thank DHEC General Counsel Marshall Taylor as well as the Trust's attorney, Phil Conner, and the manager of all things Pinewood for the past several years, Bryan Williams, PE, of Kestrel Horizons, for working through a good share of the night of July 25, 2014. They were all three professional and considerate.

Nothing Director Templeton or any government official or politician ever says will diminish the pride I take in Kestrel Horizons, its team members over the past 16½ years, or the important work we have done for the Pinewood Site Custodial Trust and for our many industrial clients and for more than 100 attorneys.

And, despite having provided annual audits by an independent CPA firm of the CPA firm that does all of the Pinewood Site Custodial Trust accounting, I insisted, in the "divorce decree" on a closeout audit by a CPA of DHEC's choosing, spanning the entire period of the Trust – 6:30

PM on Christmas Eve, 2003 through 11:59 PM October 31, 2014. The financial files will be turned over on October 31, 2014 directly to the CPA audit firm who will be required sign a Chain of Custody form. The Trust's CPA firm will retain one copy for at least five years.

---

## **J** My Promise:

If the independent CPA firm concludes that Kestrel "took" money we did not earn from the Trust, I will eat my hat under the flagpole at the Statehouse.

And if anyone again impugns my reputation or the reputation of Kestrel Horizons or its team members, they will eat all of my hats. Whole. In one sitting.

Ask yourself, if you were in my position would you trust that the powers that be will do the right thing and act fairly and squarely?

---

## **K** Scope of this Final Report

The attachments and references included in this Final Report are organized as attachments. Some are voluminous and will be posted on our web site (kestrelhorizons.com). Kestrel has reproduced, at its own cost, eight full copies of all documents and distributed them today to the addressees listed at the end of this letter.

Each of the eight recipients will receive a large box of files; thereby insuring these records will be preserved by several parties other than DHEC - and employed in the management of the site and in the public involvement process. Copies of certain documents made for distribution and viewing by non-governmental entities and the general public have been redacted to remove or obscure information which may be security sensitive.

The titles of the attachments and referenced documents, listed as follows, speak for themselves.

- A. Informing Citizens of South Carolina of Urgent and Critical Matters Involving the Pinewood Site and the Pinewood Site Custodial Trust
- B. Figures Depicting the Critical Differences between Conceptual Site Models
  - the Historical Commercial Waste Company/DHEC/AECOM Conceptual Site Model (releases out the bottom of the landfill only)

- the Conceptual Site Model Illustrated by Kestrel Horizons and Supported by other Consultants to the Trust and by Authoritative Technical Literature (releases from the entire containment envelope – bottom, sides, and top)
- C. Expert Opinion of Dr. Ronald Falta, PhD with regard to the Conceptual Site Model and immediate needs for environmental controls and environmental monitoring
- D. Figures Which convey recent Environmental Monitoring Results and Qualitative Analysis of Potential Risks and Associated Preventative and Corrective Measures
- E. Kestrel's September 18, 2014 Correspondence with DHEC Managers
  - DHEC Director Catherine Templeton
  - Bureau of Land and Waste Director David Scaturo
- F. The July 18, 2014 RCRA Part B Hazardous Waste Facility Post-Closure Permit Application Supplement
- G. Kestrel's July 25, 2014 Resignation Package, including
 

The resignation package includes critical Trust documents developed over ten years and addresses the following subjects and more:

  - Myths, Truths, and Issues regarding the Pinewood Site and the Pinewood Site Custodial Trust
  - The Conceptual Site Model – DHEC and commercial waste companies vs The Truth
  - Current environmental conditions and risks
  - Immediate and long-term needs – prevention and cure
  - The harsh realities of projected costs and Trust funding
  - Complicated and absolute regulatory and legal requirements
  - Ethical and fiduciary matters
  - The Trustee's role as originally agreed vs the Trustee's actual role as required by DHEC
  - Fiduciary, legal, and ethical responsibilities of the Trustee
    - Duties, responsibilities, and authority specified in Trust Agreement
    - Fundamental statutory fiduciary duties, responsibilities
    - Legal and regulatory requirements of Trustee as permit holder
    - Legal and ethical responsibilities of Kestrel's professional engineers and Kestrel Horizons as a licensed professional engineering firm
    - Inferred responsibility to attempt to mitigate potential risks and costs and to conform to the applicable requirements of the National Contingency Plan in order to position the State of South Carolina as requisite actions for successful pursuit of Potentially Responsibilities in CERCLA litigation
- H. The Pinewood Story – January 2014 version

- I. Selected Historical Photos from Pinewood
- J. Irreconcilable Kestrel Horizons Differences between SC DHEC and Kestrel Horizons

---

## **L Kestrel's Recommendations to the Citizens of South Carolina**

Kestrel Horizons recommends the citizens of South Carolina consider compelling government officials to undertake the actions described as follows. For people or entities who want to play an active role in getting the right things done at the Pinewood site, start by reading the attachments to this report. If you call me, I will ask you three random questions about this report and its attachments. If you can answer them correctly, I will talk to you. If you can't, I will ask that you go back and do your homework and call back again when you are ready. I am not interested in interviews with reporters who want a quote to put in the newspaper or a clip for television. I will, however, be happy to engage in substantive discussions.

1. Immediately remove the responsibility of managing decisions regarding Pinewood Site Custodial Trust operations and finances from the South Carolina Department of Health and Environmental Control and place that responsibility in the hands of a steering committee or task group consisting of representatives of Santee Cooper, the South Carolina Department of Natural Resources, Sumter County, the South Carolina Legislative Audit Council, and the South Carolina Governor. Add two citizen members and two representatives from South Carolina's manufacturing community – all of whom are conversant with the subject matter to be dealt with. Allow the committee or task group to choose a Chairperson and provide funding for the group to operate as a true management group – not an honorary advisory committee. This is not a political matter, so avoid partisan selections and political cronyism at all costs.
2. Select an Interim Administrator (the temporary replacement for Kestrel Horizons) who understands the subject matter and who has proven experience and capabilities in managing consultants, contractors, economic decisions, finances, legal and regulatory matters, risks, liability exposures, and conflict. With all due respect to my many friends and colleagues who are attorneys, if any attorneys are considered, they should have had at least three years as Managing Partner of a law firm, or President or CEO of an industrial corporation. Gray Geddie of the Ogletree Law Firm is the only attorney in South Carolina I know personally who could serve effectively in this role. There may be others, but precious few. No accountants, doctors, retail or wholesale commercial enterprise managers, real

estate brokers, politicians, former DHEC employees, or not-for-profit entity managers.

3. DHEC's Environmental Division undergo a thorough housecleaning. *"Get the right people on the bus, the wrong people off the bus, and the right people in the right seats. Who first, then What."* - to quote Jim Collins from his book, Good to Great. Do it soon. There is no time to waste.
4. The Interim Administrator and steering committee or task group involve the experts from our universities. Clemson and the University of South Carolina have a lot of talent that should be brought to bear. The State Legislature and Governor should make sure funding is provided. \$1 million would be a good start.
5. Since a large portion of the waste at Pinewood came from the federal government agencies and other states, the US Congress and President should enact legislation to provide ample funding by US taxpayers to do what must be done to fully contain and manage the hazardous waste until the CERCLA action can yield results. That may be several years and may require tens of millions of dollars. The US taxpayers fund the Department of Energy and Department of Defense waste sites and contaminated sites to the tune of tens of billions of dollars each year. Tens of millions for one of the nation's largest hazardous waste sites that contain very large quantities of hazardous wastes from US government agencies and contractors should not be a difficult decision – particularly considering the broad and serious potential implications of inadequate containment or not-in-time response to releases of hazardous wastes or hazardous waste constituents.
6. This is the most urgent and important one: Governor Nikki Haley and the Legislature – having been duly informed by virtue of receiving this report – make definitive commitments – management and financial – to take preventative action at the Pinewood Site to mitigate potential risks and minimize the possibility hazardous waste or hazardous waste constituents could be released to Lake Marion undetected and uncontrolled. This will require the Legislature and the Governor to authorize access to the \$22 million in the Permitted sites Fund which is earmarked for response actions at the Pinewood Site.

Done right, this is enough to place a barrier and extraction system around the single-lined cells, install and operate an effective environmental monitoring system for all potential pathways of releases, and operate the site long enough to get to the point a CERCLA action to involve Potentially Responsible Parties begins to ripen.

7. There is no time to waste on pursuing the CERCLA action. And don't let the state government go cheap on the CERCLA action. DHEC has scanned all the waste

manifests, authorization request forms, and customer records left behind by Safety-Kleen and archived the moldy paper records. However, the huge collection of documents was not scanned using optical character recognition and extensive, tedious examination and documentation are required to be successful in this type of mega-scale CERCLA action.

Outsourcing the litigation preparation to Malaysia or Egypt or India could cost the taxpayers of South Carolina hundreds of millions of dollars in the end because it could saddle the State with the vast majority of the financial responsibility for the Pinewood Site for the next century. Kestrel's staff has looked at every page of those records (at least the ones we could get "unstuck" from each other). This is a challenge that makes the work I directed two decades ago at the AquaTech/Groce Labs site in Duncan, South Carolina seem like warmup calisthenics.

The entire CERCLA effort needs to be managed by someone other than the current DHEC management. Managing and pursuing this effort will likely require an out-of-state law firm, as every major law firm in the state capable of leading that work would likely not accept the role due to the likelihood of ethical and business conflicts. The best firms for this will likely be in places like Washington, D.C., Chicago, New York, Massachusetts, or California. Atlanta, Charlotte, Raleigh, and Richmond might yield some possibilities, but the potential for conflicts may get higher the closer to the Pinewood Site the firms are. This will be very expensive and will take several years, but it is the only way South Carolina taxpayers will not be saddled with the costs for the Pinewood site.

---

## **M** **A Few Words About Costs and Funds**

I have not addressed in this report exactly why the funds provided as a result of the settlement between DHEC and Safety-Kleen didn't last 102 years, as advertised by DHEC in 2003. The Pinewood Story, which is included as Attachment H tells some of the story – the cost part. The rest of the story is much fuzzier – and I don't mean warm and fuzzier.

The plain truth is that the "estimates" prepared by Safety-Kleen and accepted by DHEC managers who managed the settlement negotiations were preposterously low, beginning in 2007 and running through 2105. For example, the "estimates" included only  $\frac{1}{4}$  of one person (500 hours per year) to perform virtually all operations and maintenance tasks. At the time, Safety-Kleen had 12 people doing the same tasks.

We have been able to operate the site since March 2004 with three people doing those tasks – thanks to the amazing skill and dedication of the managers and staff of Sumter Transport

Company. But  $\frac{1}{4}$  of one person? It never passed the red face test, and the faces of the managers of Safety-Kleen got red when we confronted them with this and other questionable entries in the ‘estimates’ in the summer of 2003 several months before the Trust was formed. The 500 hours per week was made to look like a decimal error (being reduced from 5,000 in 2006 to 500 in 2007 and beyond. Other costs, such as maintenance materials, spare parts, and equipment were simply entered as \$0. The answer Safety-Kleen gave to our questions was, (paraphrased) *“It will be highly automated by then, and the second fund – the \$35 million New Environmental impairment Trust fund - is there to cover any shortfalls.”*

When we discussed the glaring deficiencies and errors in the estimates with DHEC managers involved in the settlement negotiations at the time, the answer was that the numbers were set, except for any credits Safety-Kleen might get for work done during the bankruptcy. Kestrel provided the basis for DHEC to deny approximately \$1.35 million in Safety-Kleen offset claims (all claims) and to secure another \$1.3 million for excess leachate management. I know that one very capable DHEC manager had reviewed the Safety-Kleen estimates and told the DHEC managers involved in the settlement negotiations that the Safety-Kleen estimates were *“low by a factor of ten”*. His memorandum should be in the Pinewood files at DHEC.

Hey, it was a bankruptcy and the DHEC folks did pretty well. The mistake was not telling the public it was the best that could be done under bankruptcy conditions. That’s why DHEC people get down under their desks whenever the subject of funding comes up.

And perpetuating that deception only complicates things. For example, last year DHEC instructed Kestrel to cease work on advanced treatment of leachate – to “save money”. Kestrel tried to explain that advanced treatment might be necessary to reduce off-site disposal costs, but DHEC wanted to save the \$250,000 to \$450,000 needed to do treatability testing, engineering design, and installation of a chemical oxidation process.

Now, the site has accumulated a large quantity of leachate treatment residuals with low levels of pesticides and very high concentrations of salts. Because the pesticide concentrations are slightly above Land Disposal Restrictions, the residuals cannot be stabilized and disposed at another hazardous waste landfill – much as the one in Emelle, Alabama. Instead, they must be incinerated at a hazardous waste incinerator, and the very high concentrations of inorganic salts cause big maintenance problems with the incinerator, so the net difference in cost for disposal of these residuals accumulated is now greater than what would have been the cost to design and install the relatively simple chemical oxidation process. That’s hundreds of thousands of potential cost savings lost because current DHEC managers understand only cost cutting – and not economics or return on investment.

## **N** Six Final Points

1. Kestrel Horizons is absolutely committed to finishing strong and faithfully fulfilling our fiduciary responsibilities as Trustee of the Pinewood Site Custodial Trust. That includes doing all we can in the short time available to insure the Trust continues as smoothly as possible and the Interim Administrator and new Trustee receives all the information we have in an orderly structure.

That does not included signing and certifying as “true, accurate and complete” a permit application or any other documents we believe to be false, inaccurate, or incomplete. Or illegal or unethical. If DHEC managers or anyone else insists we do that, I believe we will let a judge hear the facts and let him or her decide. The Rule of Law is what sets our nation and our state apart from people who behead innocents.

2. We have managed the Pinewood Site and the funds of the Pinewood Site Custodial Trust and the New Environmental Impairment Trust in a way that would make all of our families proud and confident. I am confident no one could have done better and few could even come close. Nothing that happens after we end our ten years and ten months as Trustee will ever change my mind about that.
3. Kestrel Horizons actually saved more money than we received as compensation during the ten years and ten months we served as Trustee. In 2003 - before we were ever Trustee - we had helped DHEC secure from Safety-Kleen a net \$2.65 million. From 2004 through 2006 we saved about that same amount (another \$2.6 million) by an innovative approach that integrated contaminated soil removal, groundwater remediation, storm water clarification, and reduction of landfill closure earthwork costs.

The savings we achieved from 2004 through 2006 were in addition to \$150,000 in contributed services for dealing with the ragged and expired environmental permits left behind as a result of the bankruptcy.

We stopped keeping track of savings in 2007, but I can assure you those would exceed \$5 million. At the same time, our rates for services were in the middle of the range of professional rates of consultants to the Trust – yet our responsibilities and liability exposures were an order of magnitude higher than any of theirs. During that period, the minimum reduction for Trustee services from our standard rates was 7%. In the first half of 2014, the discount was 20%.

4. The single biggest cost for Trustee services was regulatory permitting and compliance, as permit holder. We never would have accepted the role if we had known that would be a central part of our responsibilities – and DHEC knew that then and has been reminded of that frequently since. Many times we felt like we were doing DHEC’s job as well as ours.

That's when it was really expensive. Accounting, auditing, Trustee travel and office expenses (truck mileage, copies, prints, supplies, health and safety equipment, etc.), and a fair amount of insurance and legal fees - were included in "Trustee Services Compensation."

If you look at Kestrel's proposal from 2003, you will note that we planned to leave after seven years – at the end of 2010. We stayed because our work was clearly not close to finished – and, regrettably, it still isn't and won't be when we leave. The most important work will be accomplished in the next two to three years.

The State of South Carolina cannot indemnify individuals or entities; as a result the liability exposure for the Trustee is so severe (e.g., state and federal government fines and imprisonment for permit or regulatory violations, citizen suits, PRP suits), I'm not sure who the State will get to take the role.

So if anyone tells you Kestrel Horizons was "exorbitantly expensive", as one State Senator was quoted as saying, please set them straight. If anyone suggests that people think I drive a Ferrari, as Director Templeton said at the opening of our March 10, 2014 meeting, please tell them I drive a 2006 Ford pickup with 137,000 miles on it and I will keep it 'til the wheels fall off.

5. Should you meet anyone who says they used to work for Kestrel, you are meeting a real professional and a person with a servant's heart. The same is true for the team members of Sumter Transport Company. I will miss all of them a lot.

6. **We saved the The Most Important Point for last:**

The sky is not falling and the Pinewood Site is not about to break loose from its moorings and float down to the ocean. Hazardous waste constituents being found on site outside landfill containment does not necessarily mean a plume of contamination has moved or is moving beyond the facility boundary or into Lake Marion.

Hazardous waste constituents were detected in 1998 in a storm water study report we found recently on the internet – a report we never found in site records. Hazardous waste constituents found in seeps, French drains, storm water, pore water in landfill cover and adjacent soils, and gas in soils above and adjacent to the landfill liners all point to the need for the actions described as follows.

These monitoring results point to clear trends that warrant risk-based decisions and careful attention to conformance with the National Contingency Plan standards required for successful pursuit of Potentially Responsible Parties under the Comprehensive Environmental Response, Compensation, and Liability act (CERCLA) , also known as "The Superfund Law".

No landfilled waste needs to be removed and taken off-site to make the Pinewood Site safe. In fact, digging in the single-lined cells (because they have drummed waste of all different chemical compositions) would be dangerous. Characterizing chunks of the stew and getting another commercial waste facility to accept it would be challenging to say the least. Most would need to be incinerated and the costs would be sky high.

The fact is that, with the types of measures proposed by Kestrel Horizons, Dr. Ronald Falta, and several consultants to the Trust over the past ten years, the Pinewood Site can be made safe for the next century.

And it will not be “exorbitantly expensive”. Here’s are the basics needed:

- Shallow vertical barriers such as liquid-tight sheet pile walls to block the shallow release pathways. These will only have to be 20 to 45 feet deep. Sheet piles along the coast of South Carolina are in the same depth range or greater.
- Simple French drains like the ones already used and proven on the site,
- A new and expanded cover system for single-lined cells – especially all of Section I. The new cover system needs to extend beyond the vertical barriers and can be placed over the top of the existing cover.
- Enhancement of the existing leachate extraction system – especially in the single-lined cells. The existing ones are plugging or plugged and were never designed to be maintained. This is tricky, but there are some good methods to accomplish this economically and safely
- Pumping systems in place to extract - in real time - hazardous waste constituents between the original liner/cover containment and the new landfill barrier/cover containment system. These pumping systems will require some tanks be dedicated to receive this liquid, as it might be highly contaminated or marginally contaminated.
- Treatment capacity and capabilities to stay ahead of changes in leachate. This may require treatment of leachate from different landfill cells using some different processes. We built the new leachate treatment system with plenty of space for expansion and addition of treatment equipment – both basic and advanced. The building was built to RCRA hazardous waste containment building standards and has a thick membrane underneath. Almost everything is stainless steel. That’s why it was so expensive.

The main thing is to stay ahead of the changes in leachate composition. That takes treatment testing and some pilot scale work. This is essential for cost management. You have to “skate to where the puck is going to be.” Don’t confuse cost cutting with sound management of economics. Any fool can walk in and say, *“Stop doing that. It costs money.”*

- An active gas collection and treatment system (if treatment is actually needed). No passive systems; they don’t work.
- Major storm water management improvements to insure separation from potential contaminants. These will involve piping, membranes, concrete flumes, and some special structures. Some changes in roadways will be needed, but they’re easy.
- And a robust, reliable environmental monitoring system and environmental data mining tools making use of the body of knowledge available – including especially the experts who teach and do research at Clemson and the University of South Carolina.

Thank you for the opportunity to serve.

William A. Stephens, PE, Managing Principal  
Kestrel Horizons, LLC as Trustee of the Pinewood Site Custodial Trust



**Attachment A**  
***Informing Citizens of South Carolina of Urgent and Critical Matters  
Involving the Pinewood Site and the Pinewood Site Custodial Trust***

**Foundation:**

As Trustee of the Pinewood Site Custodial Trust, Kestrel Horizons, LLC (Kestrel) has relied for 10 years and nine months (since the inception of the Trust) on the South Carolina Department of Health and Environmental Control (SC DHEC or DHEC), which is both Beneficiary of the Trust and primary government regulatory agency administering state and federal environmental regulations, to inform the citizens of South Carolina of facts and issues involving the Pinewood Site and the Trust.

As Trustee, Kestrel also holds all permits required by laws and regulations, and is subject to all permitting, enforcement actions, and civil and criminal penalties imposed by state and federal laws and regulations of all types. Some federal statutes – particularly the Resource Conservation and Recovery Act (RCRA) and the Clean Air Act (CAA) – impose very large fines (up to \$25,000 per day per violation) as well as imprisonment for violations. Knowing, willful, and continuing violations are prosecuted by the US Justice Department and frequently result in multi-year prison terms and/or federally-enforced probation.

RCRA is the primary federal law that governs activities of the Pinewood Site. It is the law of the land governing hazardous waste management, which is in a class all its own. South Carolina has adopted the RCRA and CAA regulations verbatim, and is funded by the federal government to administer the federal permitting and enforcement programs in South Carolina.

With the very large decreases in DHEC's funding from South Carolina taxpayers over the past two years, DHEC's environmental permitting and enforcement programs now rely on federal funding for more than two thirds of all operating costs. Therefore, the federal government has the controlling voice in the application and enforcement of federal laws and regulations. Federal laws and regulations, federal enforcement, and federal judgment ultimately trump state laws, regulations, enforcement, and judgment – no matter what the state does or doesn't do. The US EPA can come "over the top" of SC DHEC any time it sees fit.

The point is, no matter what DHEC decides about what to omit or ignore – or what to permit under what conditions – no one regulated by federal and state regulations experiences double jeopardy. And in the case of a conflict, the feds almost always rule.

**Urgent and Critical Matters**

1. DHEC issued a directive on September 2, 2014 (See Attachment E) to Kestrel which has the effect of requiring Kestrel Horizons, as Trustee, to withdraw crucial, legally-

required information included in our July 18, 2014 RCRA Part B Post-Closure Permit application and to re-sign and recertify a previous permit application, dated June 7, 2013, with minimal additions and corrections.

2. The RCRA Part B Post-Closure Permit is required by federal and state regulations (which are virtually identical) for hazardous waste treatment, storage, and disposal facilities where hazardous waste or hazardous waste constituents cannot be completely removed to stringent risk-based standards. In the State of South Carolina a RCRA Part B Post-Closure Permit is administered by DHEC.

3. Among the information DHEC is requiring Kestrel - by DHEC's regulatory (police) power - to omit are the following:

a. Consultant reports containing a large body of sampling and analytical data that demonstrate the presence of very substantial newly-discovered hazardous waste constituent releases over very large areas outside of hazardous waste containment – both above and beside the landfill's single-lined cells – required by regulation to be included; and

b. References to potential hazardous waste or hazardous waste constituent release pathways to the environment (especially Lake Marion) from landfill cells other than out the bottom of the landfill cells (*i.e.*, sidewall releases, cover/liner interface releases, cover system releases, gas releases, etc.) – required by regulation to be included; and

c. Preliminary outlines and report structures for supplemental RCRA facility investigations and corrective measures studies required by regulation for newly-discovered releases of hazardous wastes or hazardous waste constituents; and

d. References to potential risks to Lake Marion posed by shallow migration pathways for releases of hazardous wastes or hazardous waste constituents from single-lined landfill cells and the newly-discovered releases; and

e. Cost estimates required by regulation for all Post-Closure activities, including operations, maintenance, environmental monitoring, hazardous waste storage, hazardous waste treatment, hazardous and non-hazardous waste disposal, environmental remediation (aka "corrective action"), permitting, regulatory compliance, and several other activities.

f. DHEC provided language which referenced a provision of the 2003 Settlement Agreement among DHEC, Safety-Kleen, SC DNR, Santee Cooper, Senator Leventis, and Citizens Asking for a Safe Environment (CASE) stating that the funds provided by the Settlement Agreement fully satisfied the requirements for proof of financial responsibility for the RCRA Part B permit in existence at that time (which was a permit that expired in 1992 and was amended in 1994 by a

Consent Decree between DHEC and Laidlaw.) While the Trust is still required in 2014 to comply with that long-expired permit, the RCRA Part B Post-Closure permit will be a new permit, with a new permit application to be used as the basis for a new permitting process.

g. Further, the funds supplied pursuant to the Settlement Agreement are nearly depleted, and the future funding is limited to an annuity of approximately \$1 million per year and approximately \$5 million in a contingency fund, known as the New Environmental Impairment Trust Fund.

h. With the 2015 Base Operations, Maintenance, and Monitoring budget estimated to be in excess of \$3.5 million not including Trustee services, legal services, accounting and auditing services, or any environmental remediation, so current funding could be expected to last no longer than the end of 2016. That means current funding cannot possibly suffice to meet the estimated needs of the to-be permitted hazardous waste management activities over the next decades; therefore the applicant (the Trust) cannot demonstrate the capability to insure financial responsibility for the to-be permitted activities.

i. While the Permitted Sites Fund, which was built by a per-ton tax on all hazardous wastes disposed in South Carolina, reportedly contains approximately \$22 million earmarked for the Pinewood Site by South Carolina law, the Trustee of the Pinewood Site Custodial Trust has no legal rights to access those funds; only the South Carolina Legislature can grant access to those funds. Therefore, the Trustee cannot cite those funds to prove financial responsibility.

4. Complying with DHEC's directive would require Kestrel Horizons, as Trustee, to commit a set of felonies under federal and state law, as well as a willful and gross breach of fiduciary responsibilities under state law and under the Trust Agreement. Further, complying with DHEC's directive would require Kestrel and Kestrel's Professional Engineers to violate state licensing regulations as well as the Code of professional Conduct of Professional Engineers which is codified virtually verbatim in South Carolina law.

5. On July 18, 2014 Kestrel submitted a RCRA Part B Post-Closure Permit Application supplement which included all of the information DHEC is now requiring Kestrel to withdraw. This permit application supplement directly contravened DHEC's instructions and "regulatory analysis" – including a letter dated July 14, 2014, which we deemed illegitimate.

6. Seven days later, on July 25, DHEC Director Catherine Templeton requested Kestrel's resignation. Kestrel had already prepared a resignation package and had it ready to submit on July 22. We knew contravening DHEC's requirements would likely end the relationship – regardless of the facts and overriding legal requirements and ethical standards.

7. Kestrel's July 25, 2014 resignation package includes three large binders of information Kestrel is now making available to the parties to the Settlement Agreement and selected governmental agency representatives. We are also making available the July 18, 2014 RCRA Part B Permit Application Supplement containing all of the information DHEC has ordered to be omitted. We have prepared redacted copies of some documents to address federal security regulations and requirements.

8. A handful of elements of major conflict between Kestrel, as Trustee with fiduciary and permit holder roles and responsibilities, and DHEC, as regulatory agency and Beneficiary of the Trust, are now irreconcilable. We suspect any legitimate trustee will encounter the same conflicts unless DHEC management changes its approach. The irreconcilable conflicts are summarized in Attachment D to this letter.

## **Attachment J**

### ***Irreconcilable Differences between SC DHEC and Kestrel Horizons***

- A handful of elements of major conflict between Kestrel, as Trustee with fiduciary and permit holder roles and responsibilities, and DHEC, as regulatory agency and Beneficiary of the Trust, are now irreconcilable. We suspect any legitimate trustee will encounter the same conflicts unless DHEC management changes its approach. The irreconcilable conflicts are summarized as follows:

**a. *Understanding of the Terms of the Trust Agreement:***

- i. 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.”

- ii. DHEC apparently views the first part of the following sentence (“... for the sole benefit of DHEC...” ) as primary, whereas Kestrel views the second portion “.....and for the public purpose...” as primary when the two purposes are in conflict: “[The purpose of this Trust is to function for the sole benefit of DHEC, and for the public purpose of maintaining the Pinewood Facility in an environmentally protective manner and in accordance with applicable law.]” Ideally the two stated purposes would not ever be in conflict, but they most certainly are in irreconcilable conflict.
- iii. Kestrel serves as Trustee of a legal entity separate from DHEC, and the Trust Agreement which governs conduct of Trust activities specifies that Kestrel has the following powers:

#### **POWERS OF THE TRUSTEE**

5.01 **Express Powers of Trustee.** In addition to the powers conferred by law or elsewhere in this Trust Agreement, the Trustee shall have, solely as a fiduciary, full and ample rights, powers and authority without obtaining court approval to do any and all things which the Trustee shall reasonably deem necessary or advisable to administer and carry out the purpose of the Trust, including the following rights and powers, but subject to any limitations set forth in this Trust Agreement:

(a) To purchase, lease, sell, convey, exchange, invest and reinvest in any property;

(b) To compromise, adjust, arbitrate, sue on or defend, abandon, or otherwise deal with and settle claims in favor of or against the Trust as the Trustee deems best;

(c) To employ and compensate engineers, environmental consultants, project managers, agents, accountants, investment advisers, attorneys, brokers, realtors, tax specialists, and other assistants and advisors deemed by the Trustee needful for the proper administration of the Trust, and the achieving of its purposes and to do so;

(d) To hold cash awaiting investment or distribution for a reasonable time and without liability for the payment of interest thereon; and

(e) To obtain property, casualty and liability insurance for the Trust.

5.02 Sale or Disposal of Property of the Trust Estate. The Trustee, subject to all requirements and conditions of the Settlement Agreement and this Trust Agreement, may allow such portion of the Trust Estate which may have value for salvage or recycling to be sold, removed or disposed of. The Trustee may also, subject to the requirements and conditions of the Settlement Agreement and this Trust Agreement, and with the prior written consent of DHEC, sell or lease some or all of the real estate held as part of the Trust Estate. All proceeds from any such sale or lease will be disbursed to the Trust.

5.03 Authority to Represent Trust Before Agencies. The Trustee shall represent this Trust with regard to any matter concerning this Trust or its purpose before any federal, state or local agency or authority which has authority or attempts to exercise authority over any matter which concerns this Trust.

- iv. The Trustee is protected from personal liability if the Trustee complies with the following provision of the Trust Agreement:

7.01 Limitation of Liability. For purposes of this Trust Agreement, the Trustee shall be considered a "fiduciary" as that term is defined in Section 107(n)(5) of CERCLA, 42 U.S.C. § 9607(n)(5). In no event shall the Trustee, or any of its owners, officers, directors or employees, be (a) individually or personally liable pursuant to this Trust Agreement except to the extent that damages, claims or losses arise out of the gross negligence or willful misconduct or willful omissions of any such persons in relation to the duties of the Trustee hereunder or (b) individually or personally liable for the acts or omissions of any prior Trustee or successor Trustee. The limitation of liability provided by this Section 7.01 shall not apply to the extent the Trustee or its owners, officers, directors or employees are not acting solely in a fiduciary capacity, such as if such persons are engaged in activities not in accordance with this Trust Agreement or outside the Scope of Fiduciary Duties described in Attachment 1A and any modifications thereto.

- v. The Trustee is not required to risk its own funds or incur financial liability or take any action which may conflict with the rule of law or the terms of the Settlement Agreement:

7.03 Limitation on Financial Liability. No provision of this Trust shall require the Trustee to expend or risk its own individual funds or otherwise incur any personal financial liability in the performance of any of its duties as Trustee hereunder, or in the exercise of any of its rights or powers, **nor to take any action pursuant to this Trust, which in the reasonable judgment of the Trustee may conflict with any rule of law or with the terms of the Settlement Agreement.**

***b. The Relationship between the Trustee as Fiduciary, and DHEC as Beneficiary***

- i. The Trustee of a Trust has the responsibilities and authorities described in the Trust Agreement. The same is true for the Beneficiary of a Trust. DHEC and Safety-Kleen prepared the Trust Agreement. DHEC was established as the Beneficiary of the Trust; Kestrel Horizons, LLC was established as the Trustee.
- ii. Kestrel reviewed the semi-final draft of the Trust Agreement and requested several clarifications, additions, and wording changes. The DHEC and Safety-Kleen agreed on some of those and rejected or modified others.
- iii. The final Trust Agreement provided ample powers to the Trustee, except that the funding provided by post-closure operations was grossly inadequate, making necessary a detailed budgeting and approval process for supplemental funding from the New Environmental Impairment Trust – a \$35 million contingency fund for which DHEC was and is both Trustee and Beneficiary.
- iv. The Trustee of the Pinewood Site Custodial Trust was assured by the terms of the Trust Agreement that access to the funds of the New Environmental Impairment Trust would not be unreasonably denied by the trustee of that “contingency fund”. That placed Kestrel, as Trustee of the Pinewood Site Custodial Trust, and DHEC, as Trustee of the “contingency fund” in constructive tension – which was a good concept. Balance of power.
- v. The problem arose when DHEC managers and Kestrel ran headlong into the fact that neither the Pinewood Site Custodial Trust nor the New Environmental Impairment Trust would provide anywhere close to the funds needed to operate the site and protect the environment in Post-Closure. The site infrastructure was in terrible shape at the end of the three year bankruptcy period. In addition, the facility was never built to last longer than the required minimum 30 year post-closure care period – which is up in 2015 for Section I and in 2022 for Section II. Read The Pinewood Story for the details. One contractor said, in 2004, *“If this place were a horse, you’d have to shoot it. If it*

*were a car, you'd want to shoot it."* Another said, *"Looks like we have our work cut out for us – trying to make chicken salad out of chicken [manure]."*

- vi. This complicated fiduciary relationship worked pretty well until last year, when the reality began to sink in that DHEC management would have to fess up to the Legislature and the Governor that the funds were nearly dried up. In fairness to Director Templeton, she was absolutely "set up" by her predecessors. As she quipped to the legislature, her staff got down under their desks when she told them she was going to the Legislature and the Governor to deliver the brutal facts.
- vii. Director Templeton told me in her opening remarks at her first site tour of the Pinewood Site on December 4, 2013, that she and I would be going "arm-in-arm" to the Legislature. She told me in front of her staff that I was not to worry about having adequate funds to do what needed to be done. That December 4 meeting followed a September 28 meeting in her office with her staff, where Bryan Williams, Phil Conner, and I laid out the full range of issues regarding existing conditions, risks, needs, regulatory and legal requirements, and financials.
- viii. Director Templeton's attitude and approach last fall gave me great confidence, as I was contemplating our resignation at the end of last year due to those concerns. I was especially impressed with her blunt question to her staff during the site tour on December 4 while we were standing at the corner of Landfill Section I looking over the channel that leads to Lake Marion: *"How long have we known about this?"* She didn't look too pleased when the whole bunch did the Bobble Head Bullet Ballet and the only sound was gurgling. The correct answer, of course, was *"A looong time"*.
- ix. Sometime between that meeting and early January, everything changed. Director Templeton went solo and apparently did not choose to use the packages we gave her to communicate important points. The result was a likely appropriation of \$2 million for 2014 – which was nowhere near enough.
- x. Meetings after January were devoid of the collaborative dynamic we had employed to work through very difficult issues and problems – and to save millions of dollars in the process.

***c. The Relationship between the Trustee as Permit Holder and DHEC as Regulatory Agency***

- i. The relationship between DHEC as regulatory agency and Kestrel Horizons, as permit holder by virtue of being Trustee, was one we never contemplated during the pre-Trust transition and run-up. We thought (assumed) DHEC

would hold the permits and we would be responsible to assign permit compliance responsibilities to Trust consultants and contractors.

- ii. The Trust Agreement includes a provision that the Trustee cannot “*contract with itself*” for services (whatever that means), and no money was included in any estimates for Trustee services nor tasks in any Trustee scopes, so we were shocked when DHEC and Safety-Kleen presented us with the permits to sign as Trustee at the Trust closing. The refrain to my question about funding for those activities was familiar: “*The Trustee of the Pinewood Site Custodial Trust has access to the New Environmental Impairment Trust to cover any shortfalls in funding of the Pinewood Site Custodial Trust.*”
- iii. I have said many times to DHEC managers, if I had known that Kestrel was going to be required to hold, as Trustee, the elaborate, expired permits for the Pinewood Site, we would have walked away long before we got to the closing. I believe the DHEC managers knew that and I’m certain the Safety-Kleen people knew that. In fact, Kestrel, as Trustee, now holds an onerous RCRA operating permit for one of the nation’s largest commercial hazardous waste treatment, storage, and disposal facilities - that either expired in 1992 or 1994, depending on who you are talking to. A 2004 RCRA Part B Operating Permit modification or “reissue” essentially accomplished the purpose of approving final landfill and waste treatment and storage building closure plans and cleaning up some completely irrelevant remnants from 1989 RCRA Part B Operating Permit and 1994 Consent Decree documents. The site’s NPDES permit was expired when we became Trustee in 2003, was renewed once, and has now been expired since 2010.

***d. The Trustee is Not a DHEC Contractor, an Agent of DHEC, or an Extension of DHEC Staff in any Respect Whatsoever***

- i. The biggest conflicts between the Trustee and DHEC have had their roots in the tangled mess of Trustee/Beneficiary/Regulatory Agency/Permit Holder roles, responsibilities, and authorities. Those conflicts had been sorted out in 2004 and we had relatively little problem keeping those roles partitioned until early 2013.
- ii. At the foundation of the conflicts between DHEC and Kestrel this past year has been the fact that DHEC management choose to interact with Kestrel, depending on the circumstance, as if Kestrel is a contractor to DHEC, an agent of DHEC, and extension of DHEC staff, and/or a passive entity that should obey regulatory agency orders – no matter what they may be. Kestrel is none of those, so we reached an impasse.
- iii. No single event characterizes this conflict better than the September 2, 2014 “Notice of Deficiency” DHEC issued to Kestrel, requiring to omit legally-

required documents, and sign, certify and submit, as “true, accurate, and complete” an application we believe to be none of those. That DHEC directive for that action by Kestrel was issued under penalty of law. A Notice of Deficiency is a prelude to a government enforcement action, which employs the police powers of the State to compel compliance. How’s that for being between a rock and a hard place?