

Initial Observations and Thoughts of William A. Stephens, P.E. on the Haley and Aldrich report titled:

**REPORT ON
ANALYSIS OF POST-CLOSURE OPERATIONS AT THE
FORMER PINEWOOD COMMERCIAL HAZARDOUS
WASTE LANDFILL SITE
CAMP MACBOYKIN ROAD
PINEWOOD, SOUTH CAROLINA**

April 17, 2015

Signed by:

Dave Hagen
Program Manager

Mark Miesfeldt, P.G.
Hydrogeologist

I received the report this morning and was asked by a journalist for my initial observations and thoughts. Below are some of the most important:

1. The scope of any report by professional consultants, experts from the field of education, and any other form of subject matter expert depends on the information provided to the expert or team of experts. The authors preface their conclusions and recommendations as follows:

"The technical information required to conduct our analysis was provided to us by SCDHEC. A list of the technical reports, monitoring data, design drawings, and budget summaries that we reviewed and relied upon are provided at the end of this report."

The referenced list included at the end of the main body of the report lists only a single document prepared by Kestrel Horizons, LLC as Trustee:

The (incomplete) RCRA Part B Hazardous Waste Post-Closure Permit Application that Kestrel Horizons submitted June 7, 2013.

After more than a year of effort trying to address nearly a dozen specific remaining elements of the permit application needed to make the 17 volume permit application "true, accurate, and complete", Kestrel withdrew the June 7, 2013, declaring it "null and void". Instead, Kestrel submitted, on July 18, 2014, replacement sections and pages, with the advice and assistance of Trust legal counsel, to attempt to address those elements. Kestrel was asked to resign seven days later, after notifying SC DHEC management that Kestrel would be delivering a companion package to the July 18, 2014 permit application documents. That companion piece was Kestrel's resignation

package, dated July 25, 2014 – the same day we were asked to resign. That substantial package took two weeks to assemble and contains very important information directly pertinent to the scope of Haley and Aldrich's engagement.

Kestrel made the decision after determining that SC DHEC management had no intention of forthrightly addressing those elements in the permit, nor would SC DHEC management allow information related to those elements to be included in the Supplemental RCRA Part B Post Closure Permit Application. Among those elements (all absolutely required by state and federal regulations) are:

- the required full reporting of releases of hazardous wastes and hazardous waste constituents in any form including aqueous and gaseous;
- the adequacy and compliance with RCRA regulations of the groundwater, surface water, and gas monitoring system and program designed by AECOM;
- the foundational requirements for quantitative Human Health and Ecological Risk Assessment, including potential pathways and receptors for hazardous waste constituents;
- the requirements and standards for corrective action to address releases and potential releases of hazardous waste constituents from any source on site – including the closed landfill sections and cells, leachate storage and treatment units;
- the cost estimates for post-closure operations, maintenance, monitoring, and remediation for every unit and activities to be included in the permit;
- the adequacy of Pinewood Site Custodial Trust funds (nearly fully depleted) to fund 90 years of post-closure operations;
- the issues arising from inability of units proposed for full RCRA hazardous waste permitting (rather than more constraining permit-by-rule provisions) to meet South Carolina location standards for hazardous waste treatment or storage facilities; and
- several others mostly related to means to address changing conditions over time (e.g., leachate variability, characteristics, and segregation vs combination); operational flexibility; integration and consistency of RCRA, NPDES, and air permit requirements; and use electronic instrumentation and reporting rather than labor-intensive manual inspections and hard-copy paper reporting.

The most critical documents prepared and submitted to SC DHEC and/or other governmental agencies are dated July 18, 2014, July 25, 2014, September 18, 2014, and September 25, 2014.

Among the documents withheld from Haley and Aldrich was the professional opinion of Dr. Ronald Falta of Clemson University – one of the most eminent experts available regarding many of the topics Haley and Aldrich was asked to address. That work was entirely paid for by Kestrel Horizons' owners after SC DHEC management wrote to say, in essence, that if we thought the issues (listed above) were so important we should spend our own (personal) funds to address them. Of course, that's not the way a trustee role works – or should work. But most DHEC managers have never really understood that the Trustee of the Pinewood Site Custodial Trust is not their contractor, their agent, or their Huckleberry.

Now DHEC management has an Interim Administrator who, unlike a Trustee, actually *is* DHEC's contractor, agent, and Huckleberry – if DHEC so chooses and the Interim Administrator so consents. The Interim Administrator – especially an attorney – can do and say things that would land the Trustee in court, in prison, in a comedy club, or in the outhouse professionally and personally. “Bagdad Bob”, right hand man of Saddam Hussein, was an administrative spokesperson. And a hilarious one at that. I have to say the similarities between that circus and the one going on now are as disturbing as they are remarkable.

Also among the documents withheld from Haley and Aldrich were the leachate treatability studies – including advanced (Stage 2) treatment alternative testing and technical and economic feasibility analyses for leachate management alternatives - the same or similar options to those identified conceptually by Haley and Aldrich.

Apparently Haley and Aldrich was not provided the 3D computer model of the entire facility the Trust paid AECOM about \$300,000 to develop. From our perch, it appeared, in the end, AECOM didn't make full use of that model in their final work products in 2012 and 2013, either. That may explain why Haley and Aldrich and AECOM geologists envisioned the same fatally flawed and incomplete Conceptual Site Model.

The Conceptual Site Model is the essential representation of the site's natural and manmade features, their workings and interactions, and the physical, chemical, biological, energy principles and dynamics that explain and inform analyses and conclusions about the site. In other words, the Conceptual Site Model helps us determine the what's, where's, why's, when's, how's, and how much's so we can be managers rather than passengers.

Making decisions on the basis of a fatally flawed or seriously incomplete Conceptual Site Model is like performing surgery guided by medical imagery and tests on the patient in the other operating room. Sure it's all great fun, but just wait 'til the patient wakes up! Or doesn't.

I can (and will) identify many others, but you get the idea.

If I were one of the team of professionals at Haley and Aldrich, I would have wanted access to the large body of critical information SC DHEC withheld. If this were a litigation matter, I would say SC DHEC management just set up their testifying experts to be discredited, humiliated, and impeached. Possible even excused by the judge via application of Daubert principles, as Haley and Aldrich may have assigned different or additional personnel and approached the engagement differently if given all the pertinent information by SC DHEC.

Please note that the RCRA permit actually expired in 1994, so the Trust has operated under an expired permit for more than eleven years – its entire existence. The Post-Closure Permit is therefore, the one big opportunity to address all of the elements listed above for decades to come. So why would SC DHEC management insist on omitting and withholding so much critical information?

The NPDES permit expired in 2010, and SC DHEC staff, in 2013 and 2014, suggested that Kestrel Horizons, as Trustee and permit holder, might **attest and certify** (with full exposure to felony criminal prosecution as well as breach of fiduciary obligations and

regulations governing professional engineers in South Carolina) that the facility had **no potential to release pollutants to Lake Marion**. That suggestion from DHEC management despite having drawings and data showing releases of hazardous waste constituents to the cover system, as well as documented continuing unpermitted releases to storm water courses draining unconstrained into Lake Marion. That despite data showing concentrations of one hazardous waste constituents outside containment at 100 x the drinking water standard.

Again – clearly virtually none of this was communicated to Haley and Aldrich – or was mentioned only with SC DHEC’s customary dismissive approach to inconvenient facts and data regarding the Pinewood Site.

2. A curious apparent hole in Haley and Aldrich’s team effort is the lack of involvement of a professional engineer in the final report. Ironically we saw a similar hole in the work of AECOM in 2013. In both cases, geologists apparently developed the final analyses and wrote the reports. The big problem with that is geologists generally have no formal educational foundation to understand, evaluate, or design waste containment facilities. The “geology”, “hydrology”, and “hydrogeology” and chemistry of the inner workings of a landfill are very different from those of natural deposits of soil, sediment, and rock. While there are similarities and corollaries, the differences are more important – and absolutely require a sound understanding of engineering principles and man-made systems.

That’s why Kestrel Horizons insisted on hiring an inter-disciplinary team – scientists, engineers, and regulatory specialists – when Kestrel retained AECOM in late 2009 for extensive studies and design and various aspects of the landfill and monitoring program. What Kestrel faced in the spring of 2014 was an AECOM team in which the key engineers and regulatory experts were no longer participating or were only peripherally involved in the final work products. In Kestrel’s view, as Trustee and permit holder, that dynamic resulted in serious gaps and fundamentally incomplete work products.

Our efforts to address that situation were terminated by the direct intervention of DHEC management, who met with AECOM separately. After a two hour meeting SC DHEC management pronounced that Kestrel should certify AECOM’s final work products in the RCRA Post-Closure Permit Application as “true, accurate, and complete” – which would have constituted knowing, willful and gross negligence on the part of Kestrel.

All of this leads me to ask, “Does the withholding of a large body of critical information from Haley and Aldrich by DHEC management constitute knowing, willful, and gross [something] on the part of SC DHEC management?” After all, the purpose or engaging an expert firm like Haley and Aldrich was [ostensibly] to obtain an unbiased opinion by providing all pertinent facts and information to the experts and letting the chips fall where they may – wasn’t it? Or is this a case of the gaggle of attorney/managers at DHEC trying to steer the “litigation” to the most desired and comfortable outcome?

My overall prediction: This matter is clearly headed for the civil courts and possibly to criminal courts and/or a grand jury. Legislative hearings will produce thunder but little or no lightning.

The federal authorities will become involved. So will non-governmental individuals and groups. Politics as usual will not carry the day this time. DHEC management and the Interim Administrator will be challenged in ways they can't imagine at this point.

I'll stop there for now and dig a little deeper between now and May 26.

For more, come to the Citizens' Workshop on the Pinewood Site the evening of Tuesday, May 26, 2015 at the Quality Inn in Sumter. One night and one night only: The Full Monte. The naked truth about the Pinewood Site from a man who has nothing much to gain and nothing left to lose.