

12/16/11

Jon Taylor, PE CEM  
Division of Environmental Protection  
Bureau of Waste Management  
901 South Stewart Street, Suite 4001  
Carson City, NV 89701-5249

Dear Mr. Taylor:

I am Paul Bendell. I live in Humboldt County, Nevada. Regarding the Draft Application and Permit to Construct and Operate a Class 1 Landfill, Permit #SW495REV00, and the intent of NDEP to issue that permit to Nevada Land and Resource Company, L.L.C., and/or Jungo Land and Investments, INC., or whatever other entity NDEP would designate as the responsible party:

Many of my fellow citizens and I have brought forth numerous observations to NDEP pointing out that the proposed site cannot support the proposed project as designed without creating real and substantial danger to the health and welfare of the residents of Humboldt County Nevada, and to the underlying aquifer and surface waters of the State of Nevada. Briefly, such observations include:

1. The technology used by NDEP and Golder Associates to develop information and data within the "Application Permit Package" is flawed.
2. The plastic landfill liner system would ultimately fail, allowing contamination of the groundwater underlying the proposed site.
3. The aquifer in question is important and would eventually become contaminated if the proposed project is permitted as currently planned.
4. The native soils at the proposed site location are inadequate for landfill construction, daily cover, etc., and are essentially limited, providing inadequate natural protection of the underlying groundwater.
5. The soils at the proposed site location are limited to very limited, and, in some cases, severely limited in use potential for landfill purposes, and, as such, include elemental deficiencies in composition and physical characteristics necessary to support the millions of tons of weight that the proposed waste project would impose above the aquifer.
6. The soils are inadequate for use in landfill construction activities such as building perimeter berms and trenches that would be used to control storm water run-on and run-off at and around the proposed site.
7. The Ground Water Monitoring Plan is grossly inadequate for providing long-term protection against off-site migration of leachate plumes into the underlying aquifer.
8. The existence of multiple issues within the Permit Application Package is very important to all involved and will not be overlooked; including the use of inadequate, unreliable and/or misleading information by Golder Associates and the NDEP.

A collective attempt to force a hazardous project into a sensitive location that is legally restricted due to its proximity of less than 100 feet above an active aquifer, combined with other compounding factors such as those numbered above and other issues and details identified below is not acceptable.

NDEP has received statements of local residents who have attested that the location of the proposed site is prone to flood and extreme wind events. These periodic flood and wind events in conjunction with the previously mentioned deficient physical characteristics naturally incorporated into the proposed site make it inherently inadequate in preventing degradation to the waters of the state of Nevada. The essential elements themselves foredoom the proposed project at this location.

Furthermore, I believe that if NDEP issues this permit as drafted, it exhibits negligent disregard for the known destructive potential of a 50 or 100-year storm event. The application/permit materials severely underestimate the actual, true potential of sheet-flow, prolonged flooding and the subsequent harmful effects on the proposed site under such conditions within a one hundred year time span.

NDEP must not dismiss the real potential of storm water run-on and run-off containment failure and resultant off-site contamination of surrounding lands and waters of the State of Nevada both above and below ground. The present course that NDEP has taken of accepting a design and operation plan that makes no provision beyond a 25 year/24 hour storm event for a 100-year project is highly questionable and unacceptable.

I will now add to this list of general observations the direct reference to all comments, questions and details conveyed as set forth by my fellow citizens and residents of Humboldt County, Nevada, recommending against the issuance of a permit to construct and operate a class 1 landfill at the proposed site. These references are to include correspondence received by the NDEP as comments at the December 1, 2011 hearing in Winnemucca, Nevada and those subsequently received through the close of the public comment period.

In addition, I will also include direct reference to comments of my fellow citizens and residents of Humboldt County, Nevada, received by the NDEP during its public hearing and comment period for the Air Quality Permit, which occurred in 2009. Specifically those comments, which in its response dated March 5, 2010, NDEP more or less dismissed as "to be handled under the solid waste permit". See items 54 through 59 of NDEP response to comments dated March 5, 2010. See pdf file "bapc response", attached to this email. Those comments and questions are relevant now and I formally recall them to your attention for response at this time as reflective of my views.

In addition to the above referenced comments and questions, I will include in my statement direct reference to the 54 page document titled "**Review of Potential Public Health and Groundwater Quality Impacts of the Proposed Jungo Landfill**", dated December 9, 2011. This review was written and prepared by **G. Fred Lee, PhD, PE, BCEE, F.ASCE and Anne Jones-Lee, PhD, of G. Fred Lee and Associates** (The Review). This reference is to include all source materials and references cited throughout that document in its entirety, which received approval of the Humboldt county Board of Commissioners for release on its behalf to NDEP on December 14, 2011. The Review substantiates and re-enforces the previously referenced comments and concerns of citizens opposing the proposed site location, as well as many other significant issues with respect to the public health and environmental safety. See pdf file "Jungo-GFred Lee", attached to this email.

The G. Fred Lee and Associates Review of the proposed operation specifically points out a remarkable number of serious issues concerning site location, feasibility and an unacceptable potential for illegal offsite contamination. Moreover, the report describes certain critical

information contained in the permit/application package as “unreliable,” “inadequate,” “highly misleading,” “significantly misleading with respect to what is known...,” “misleading at best,” and so on.

The Review report provides much needed illumination on the involvement of NDEP and its overall approach to the proposed project as suspect on several levels including its accumulation and use, or in this case, misuse of scientific data critically important to providing long-term protection of the health and welfare of Nevadans, and the waters of the state of Nevada.

For example, In The Review on pages 9 and 10, citing information and scientific calculations on pages 9 and 10, Dr. Lee states:

“ Page 10 of the Report of Design states in the Ground Water Velocity section:”

*“Rising head slug tests were conducted in each well on February 2, 2007 to determine the hydraulic conductivity of the middle sand and silty sand. With these data, hydraulic conductivities were calculated for each well. To determine a hydraulic conductivity for the site, the geometric mean of the four individual well conductivities was calculated. As such, the hydraulic conductivity at the site is estimated to be  $1.2 \times 10^{-4}$  cm/s. The slug test data is presented in Appendix D.*

*Using the calculated gradient (i), the hydraulic conductivity (K), and the estimated effective porosity of the water-bearing zone ( $n_e$ ), the approximate groundwater seepage velocity can be calculated using Darcy's Law ( $v = Ki/n_e$ ). An effective porosity value of 0.15 for the sandy zones is assumed, based on information from Cohen (1963). Groundwater seepage velocity beneath the site is estimated to be  $2.4 \times 10^{-7}$  cm/s (0.25 feet per year [ft/yr]).”*

Dr. Lee goes on to state:

“The information on the groundwater horizontal velocity shows that the geology of the area does not provide for protection of offsite groundwater from pollution by leachate-polluted groundwater that will occur under the landfill as the landfill liner systems fail. The information provided is misleading because the hydraulic conductivity was reported as the geometric mean. It is not the mean velocity that defines how fast offsite groundwater stands to be polluted by landfill leachate; it is the fastest velocity that will define the incipient, or first, pollution of offsite groundwater once the groundwater under the landfill is polluted by leachate. The farmer who has a well near the landfill wants to know the earliest estimated time at which his well could be polluted.”

Subsequently, on pages 10 and 11 of The Review, Dr. Lee cites **Lopes, T. J., “Hydrologic Evaluation of the Jungo Area, Southern Desert Valley, Nevada” Open-File Report 2010–1009 U.S. Department of the Interior U.S. Geological Survey (2010)**

<http://pubs.usgs.gov/of/2010/1009/pdf/ofr20101009.pdf>.

The abstract of that USGS (Lopes) report states:

*“On September 22, 2009, the Interior Appropriation (S.A. 2494) was amended to require the U.S. Geological Survey to evaluate the proposed Jungo landfill site for:*

- (1) potential water-quality impacts on nearby surface-water resources, including Rye Patch Reservoir and the Humboldt River;*
- (2) potential impacts on municipal water resources of Winnemucca, Nevada;*
- (3) locations and altitudes of aquifers; \*

*(4) how long it will take waste seepage from the site to contaminate local aquifers; and*

*(5) the direction and distance that contaminated groundwater would travel at 95 and 190 years. This evaluation was based on review of existing data and information.*

*Estimates indicate that contaminants would travel about 0.02 mile and a maximum of 2.5 miles in 95 years and about 0.04 mile and a maximum of 5.0 miles in 190 years. The closest supply wells that could be impacted by contaminants are 5 to 6 miles downgradient and are used for industry, irrigation, and stock watering.”*

That USGS (Lopez) report states on page 7:

*“Slug tests done on four monitoring wells at the proposed Jungo landfill site had K values that ranged from 0.26 to 0.45 ft/d and averaged 0.34 ft/d (Golder Associates, Inc., 2008, appendix D). Near the proposed Jungo landfill site, the maximum hydraulic conductivity is 50 ft/d (Berger, 1995).”*

Dr. Lee continues:

*“That statement illustrates the substantial difference between the “average” and the “maximum” hydraulic conductivity at this site; the maximum rate of movement is nearly 150 times faster than the average.”*

In light of these new insights, in combination with numerous other deficiencies and discrepancies pointed out by G. Fred Lee and Associates along with all, I would say that “inadequate”, “unreliable” and “misleading” are rather mild terms, and far more polite than I would use in describing these serious issues with the Application/Permit Package and NDEP process. What do you make of these numerous problems, Mr. Taylor? Why did NDEP not include the Lopes USGS Open Report in the application materials? Please answer these important questions. Are intelligent people to believe that NDEP personnel could be so incompetent, so negligent, that they could work over a project for years, yet accidentally overlook important scientific calculations so vitally important to properly understanding the potential for groundwater contamination at a legally restricted site? If so, the engineers working on and overseeing the Jungo project are incompetent to do the job. Barring such incompetence, Mr. Taylor, there seems to be only one other possible conclusion. In my view, the operations between NDEP, Recology, and Golder seem very close to obfuscation and subterfuge, if not outright fraud.

In conclusion: NDEP should re-evaluate the proposed project and recognize that the proposed site is essentially not suitable to support the proposed project in any way that could be properly and fully protective of the public health and welfare of the citizens of Humboldt County and the waters of the state of Nevada. It is the obligation of The Nevada Department of Environmental Protection to protect the public health and environment, not collaborate with out of state garbage companies to set it up for ruination. Clearly, the NDEP must re-examine its position and deny the permit.

Sincerely,

Paul Bendell  
Winnemucca, Nv.

List of attachments:

1. “BSW Comments” (contains body of this email)

2. "Jungo-GFred Lee"
3. "bapc comments"