

Comments on the US Army Corps of Engineers Los Angeles District
Review of the Gregory Canyon Landfill Application
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Introduction

On September 24, 2015 the US Army Corps of Engineers Los Angeles District (Corps) released a Public Notice that it was undertaking a review of the Gregory Canyon Landfill Permit Application. That announcement stated,

“the Corps withdrew the [previous] DA [Department of Army] permit application on April 28, 2014 ... due to a lack essential information needed from the applicant to continue with the permit application evaluation process. The applicant has since provided the essential information and a new DA permit application. The proposed project has not changed. However, the Corps is reissuing a public notice given the time elapsed since the Corps withdrew the original application.”

The announcement indicated that it would accept public comments on that permit application until October 24, 2015; following are our comments.

In the late 1990s while serving as a consultant to the Metropolitan Water District of Southern California I examined some of the key issues concerning the potential impacts of the proposed Gregory Canyon Landfill on water quality in area domestic water supply. Since my initial review we have developed several reports on potential impacts of the proposed Gregory Canyon Landfill, including:

Lee, G. F. and Jones-Lee, A, “Comments on the Draft Environmental Impact Report for the Proposed Gregory Canyon Landfill Prepared by San Diego County Department of Environmental Health dated January 1999,” Report of G. Fred Lee & Associates, El Macero, CA, April 25 (1999). [440 kb]
www.gfredlee.com/Landfills/Gregory_Canyon_DEIR1999.pdf

Lee, G. F. and Jones-Lee, A, “Comments on the Revised Draft Environmental Impact Report for the Proposed Gregory Canyon Landfill Prepared by San Diego County Department of Environmental Health dated December 1999,” Report of G. Fred Lee & Associates, El Macero, CA, February (2000). [211 kb]
http://www.gfredlee.com/Landfills/LF063_gregory_canyon2.pdf

Lee, G. F., “Comments for the October 14, 2004 SDWA Board Meeting Concerning Proposed Gregory Canyon Landfill,” Comments submitted to San Diego County, CA Water Authority Board by G. Fred Lee & Associates, El Macero, CA, October 12 (2004). [216 kb]
http://www.gfredlee.com/Landfills/Gregory_Canyon_SWDA_2004.pdf

Lee, G. F., and Jones-Lee, A., “Comments on the Deficiencies in the Development of the Gregory Canyon Landfill,” Submitted to J. Henderson, San Diego County Dept. Environmental Health, San Diego, CA, by G. Fred Lee & Associates, El Macero, CA, February 16 (2011).
<http://www.gfredlee.com/Landfills/GregoryCanyonLF-Comments.pdf>

Those comments are incorporated into these comments by reference, since as stated in the Public Notice, the design has not changed since previously proposed. The information on our qualifications to comment on these matters provided in our October 2004 comments has been updated on our website, www.gfredlee.com, in the “About G. Fred Lee & Associates” section [<http://www.gfredlee.com/gflinfo.html>]. As discussed in our previous comments and noted below, the proposed Gregory Canyon Landfill poses a major, long-term threat to groundwater quality. The municipal solid wastes (MSW) that would be accepted for disposal in the landfill will generate leachate (garbage juice) that will eventually leave the landfill liner system and pollute the groundwater of the area with hazardous and otherwise deleterious chemicals that are a threat to the use of groundwater for a domestic water supply.

This assessment is based on my more than 40 years of research and investigation of about 90 landfills located in various areas of the US, Canada, and other countries. We have published numerous professional papers and reports on our studies and the professional literature developed by others; many of those papers and reports are available on our website www.gfredlee.com in the Landfill Impacts section at http://www.gfredlee.com/Landfill_Impacts.html).

Our key summary report that was referenced in our original comments that describes many of the key issues concerning providing protection of public health and environmental quality from adverse impacts of MSW landfilling, which we refer to as our “Flawed Technology” report and referenced in our comments, is:

Lee, G. F. and Jones-Lee, A., “Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste,” Report of G. Fred Lee & Associates, El Macero, CA, December (2004). Last updated January (2015). <http://www.gfredlee.com/Landfills/SubtitleDFlawedTechnPap.pdf> has been updated from that presented in our original comments.

This report is a compilation of the technical literature, as well as our findings, on near-term and long-term properties of currently permitted landfills under US EPA and state of California regulations governing the siting, design, operation, closure, and postclosure care of municipal solid waste landfills. As discussed therein, federal and state landfill development regulations are fundamentally flawed for developing landfills that will protect public health, groundwater quality, and the environment for as long as the wastes deposited in the landfill will be threat to generate leachate that can pollute groundwater when the landfill liner system fails to prevent leachate penetration and movement into the underlying groundwater. While these issues are well-understood by professional’s who critically examine the properties of the landfill containment and monitoring systems of the landfills permitted in accord with current regulations, few regulators are willing to address them in a meaningful way. This results from the fact that federal and state regulatory agencies are unwilling to increase the cost MSW landfilling to the public to the extent necessary to provide long-term protection because of the political

repercussions. These issues are discussed in the invited paper:

Jones-Lee, A., and Lee, G. F., "Landfill Post-Closure and Post-Post-Closure Care Funding - Overview of Issues," *Waste Advantage Magazine* 5(12):24-26 December (2014).

http://www.gfredlee.com/Landfills/Funding_Issues_WasteAdvantage.pdf

as well in other papers reports posted on our website www.gfredlee.com at the URL locations cited above.

On receipt of the Corps Public Notice announcement of the review of the Gregory Canyon permit, I contacted Shanti Santulli who was identified as the Corps' staff "project manager" for this review to get information on the changes in the landfill design reflected in the revised permit. I was informed that information on the proposed design of the Gregory Canyon Landfill being investigated in the COE permit review is available in the draft EIS available on the Corps website, (<http://www.spl.usace.army.mil/Missions/Regulatory/ProjectsPrograms.aspx>). Our comments on the ability of the proposed Gregory Canyon Landfill to protect public health, groundwater resources, and environmental quality for as long as the wastes in the landfill are a threat are based on the information in draft EIS developed by the landfill applicant.

Discussion of Specific Issues

The Draft EIR Volume 1 page 3-8 identifies states with regard to the nature of the preferred design alternative for the landfill:

<p>E. Liner and Leachate Collection System.</p> <p>A liner and leachate collection system shall be installed and monitored as required by the Regional Water Quality Control Board.</p> <p>F. Landfill Gas System.</p> <p>The Project shall include a network of vertical extraction wells, lateral transmission pipes to a gas recovery facility, and perimeter gas monitoring probes. With this system, the landfill gas will be extracted from the landfill and combusted in an enclosed flare.</p> <p>G. Water Quality.</p> <p>The Project shall comply with all requirements of the Regional Water Quality Control Board to ensure protection of surface and underground water quality.</p>

The developer of the proposed Gregory Canyon Landfill, Sovereign Management Group, has developed a website [<http://www.gregorycanyonlandfill.com/>] that it purports to provide information on the Gregory Canyon Landfill that is being reviewed by the US Army Corps of Engineers (Los Angeles District), including a cross-section of the "Proposed Landfill Liner at Proposed Floor Liner." The referenced diagram shows that the proposed liner contains several additional liner layers in a double-composite liner. The proposed liner includes a GCL layer that are known to be unreliable. While the liner proposed is more protective than a minimum design Subtitle D liner, as discussed in our "Flawed Technology" review the wastes in the proposed landfill will likely be a threat to generate leachate for hundreds of years; the proposed liner components have limited periods of time during which they can be expected to be effective in collecting all the leachate that can be generated in this landfill over the time that the landfilled wastes will be a threat. Of particular concern is the use of GCL layer in the liner system, which is well-known to experience problems with long term ability to prevent leachate from passing through it.

Information provided on the Sovereign Management Group Gregory Canyon website is misleading at best. For example, contrary to banner claims made, the proposed landfill is not “state of the art” for providing public health and environmental quality protection from buried wastes for as long as the wastes represent a threat.

While the California Regional Water Quality Control Boards (RWQCBs) approves the development of MSW landfill with liner/leachate collection systems such as those proposed for the proposed Gregory Canyon Landfill, a critical review shows that such systems will not protect water quality from pollution by landfill-derived leachate for as long as the wastes in the landfill will be a threat. These issues are discussed in our “Flawed Technology” review.

Beginning on page 3-57 is the description of the water quality monitoring systems proposed for the landfill. That section reveals that the site of the proposed landfill has high groundwater that requires the inclusion of a subdrain system. Such systems can be expected to become plugged over the hundreds of years that the wastes in the proposed landfill will be a threat; as they become plugged, they will allow groundwater to enter the landfilled wastes where they will facilitate the generation of leachate and provide an avenue for groundwater pollution.

Page 3-66 describes the proposed groundwater monitoring system. That section states that the groundwater monitoring would be in accord with the RWQCB requirements. Again, it is well-known that the RWQCBs, including the San Diego Board, approve groundwater monitoring systems for detecting the failure of the landfill liner to collect all leachate due to inadequate spacing of the monitoring wells. These issues are discussed in our “Flawed Technology” review.

Page 3-94 discusses the proposed plan for closure and post-closure financial assurance. CalRecycle has issued “Financial Assurance-Postclosure Maintenance: Step-Down Criteria Proactive Monitoring”

[<http://www.calrecycle.ca.gov/LEA/Regs/Implement/Postclosure/Monitoring.htm>]

which states,

“Financial Assurance Requirements

State regulations (Title 27 California Code of Regulations [27 CCR] section 22211) require the operator of each solid waste landfill that accepted waste on or after January 1, 1988, to demonstrate financial responsibility (financial assurance) for postclosure maintenance until released from postclosure maintenance. Postclosure maintenance financial assurance is required for the entire postclosure maintenance period; that is, until the owner/operator demonstrates that the waste no longer poses a threat to public health and safety and the environment.”

For the proposed Gregory Canyon Landfill, the period over which financial assurance must be provided can readily extend for many decades to hundreds of years. There is need to evaluate the expected financial assurance that the Sovereign Management Group developer of the Gregory Canyon Landfill offers. There are few private landfill companies that can realistically claim to provide financial assurance for the many decades to hundreds of years after landfill closure that the buried wastes will remain a threat.

Additional, detailed comments on the proposed Gregory Canyon landfill are provided in our

previous comments referenced above. Those comments, and this discussion, highlight some of key issues that should be address in evaluating the short-term and long-term protection of public health and environmental quality afforded by the proposed landfill.

Overall Finding

Overall the proposed Gregory Canyon Landfill should not be permitted owing to near-term and long-term threats that the landfill represents to public health, water quality, and the environment. The draft EIR is significantly deficient in acknowledging and addressing important public health and environmental quality impacts of the proposed landfill that should be brought to the attention of decision-makers and the public in consideration of permitting the proposed landfill.

Questions or comments on these comments can be directed to Dr. G. Fred Lee at gfredlee33@gmail.com.