

Comments on the ICF Comments on the Dr. G. Fred Lee Report,
“Review of the Potential Adverse Impacts of the Proposed Expansion
of the Allied Imperial Landfill”
Submitted to Imperial County Board of Supervisors Hearing on Permitting
of the Allied Imperial Landfill Proposed Expansion

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I have reviewed the Jim Wilder of ICF comments on my June 24, 2010 report entitled, “Review of the Potential Adverse Impacts of the Proposed Expansion of the Allied Imperial Landfill,” in which I discussed the significant threat that the proposed Allied Imperial Landfill represents to public health, groundwater resources, and the environment. My report and PowerPoint slides that summarize my report are available at:

Lee, G. F., “Review of the Potential Adverse Impacts of the Proposed Expansion of the Allied Imperial Landfill,” Report for McFarland FLA, for presentation to Imperial County Board of Supervisors at June 29, 2010 Board hearing on Allied Imperial Landfill expansion, G. Fred Lee & Associates, El Macero, CA, June 24 (2010).
http://www.gfredlee.com/Landfills/Allied_LF_exp_rpt.pdf

Lee, G. F., “Review of the Potential Adverse Impacts of the Proposed Expansion of the Allied Imperial Landfill,” PowerPoint slides for presentation to Imperial County Board of Supervisors at June 29, 2010 Board hearing on Allied Imperial Landfill expansion, G. Fred Lee & Associates, El Macero, CA, June 24 (2010).
http://www.gfredlee.com/Landfills/Allied_LF_exp_sli.pdf

Over the past four decades I have been involved in reviewing potential impacts of proposed landfills for water utilities, governmental agencies, industry/commercial interests, and members of the public and have examined more than 80 landfills. I have frequently found that landfill developers and those who prepare environmental impact statements for them (especially those which rely on landfill developers for their support), present inaccurate, unreliable, and in some instances distorted or misleading discussions of the potential impacts of landfills. In fact, of those such poor-quality EIRs I have reviewed that have been tested in the courts, all have been overturned. Problems with reliability of assessments made by consulting firms that earn an income from supporting the development of landfills are common and well-known; unreliable reports of such consulting firms are given little credibility by many governmental agencies reviewing landfill applications.

In the 1990s, on behalf of the American Society of Civil Engineers (ASCE), I presented two-day short courses on how to develop landfills that would be more reliably protective of public health and the environment, at several locations across the US. In the presentation I made in New York

City where I discussed the problems with landfill consultants reports, a member of the audience who was a member of the ASCE Ethics Committee suggested that I write up a discussion of the common problems with the quality and reliability of many landfill consultants' reports in evaluating/reporting on the potential impacts of landfills. A summary of the write-up we prepared was published as:

Lee, G. F., and Jones-Lee, A., "Practical Environmental Ethics: Is There an Obligation to Tell the Whole Truth?" Published in condensed form as "Environmental Ethics: The Whole Truth," Civil Engineering, Forum, 65:6 (1995).
<http://www.gfredlee.com/Landfills/ethics.htm>

As discussed therein, the basic problem is that consultants who provide full disclosure on the anticipated and predictable impacts of a proposed landfill know that their firms will be unlikely to obtain another contract with a landfill developer if they "tell the whole truth" ie, provide full disclosure of the potential impacts of a proposed landfill. The ICF comments on my report on the potential impacts of the proposed expansion of the Allied Imperial Landfill reflect this type of situation.

Discussion of Specific Comments

A critical review of the ICF comments on my report on the potential impacts of the proposed Allied Imperial Landfill expansion, relative to my report and the professional literature, shows that ICF has failed to reliably discuss the issues I have raised on the highly significant deficiencies in the Allied Imperial Landfill in protecting public health, groundwater resources and the environment. Examples of the unreliable information presented in the ICF comments are presented below.

ICF Issue 1: *"Issue 1: Dr. Lee's comments focus on the Initial Study and the Draft EIR. They do not account for additional analysis in the FEIR or post-FEIR CUP (P. 1)."*

I reviewed the FEIR and the draft CUP that was available at the time of preparation of my report. With respect to my providing detailed comments on the initial study, it must be recognized that it was that document that provided the technical basis for the summary comments that were made in the FEIS. My report specifically discussed aspects of the Imperial County draft CUP for developing this landfill. This ICF comment concludes with the statement, *"Those post-FEIR CUP conditions address potential impacts to agricultural operations on neighboring parcels."* I found, and commented in my report, that the discussion provided on the potential impacts of the proposed landfill expansion did not address the full range of anticipatable impacts of this landfill expansion on nearby agriculture.

ICF Issue 2: *"Issue 2: Dr. Lee's comments inappropriately cite data from the IS regarding the location of homes near the landfill (P. 3)."* The discussion in my report of the number of homes near the landfill, was, as indicated, based on information provided to me by Robert McFarland, an adjacent property owner. Robert McFarland's comments on this issue are presented in his presentation to the Imperial County Board of Supervisors.

ICF Issue 3: *"Issue 3: Dr. Lee asserts that the DEIR is deficient in addressing the project's effect on the value of nearby crops. (P. 4)."* The information I provided in my report was based on information provided by Robert McFarland whose land near the existing landfill is used for

farming. He indicated to me that the value of crops grown near the existing Allied Imperial landfill was less than that it would be if the crops had been grown away from a landfill. I personally know of situations where this issue is a real problem in other areas. He is providing additional comments on this issue in his presentation to the Imperial County Board of Supervisors..

ICF Issue 4: *“Issue 4: Dr. Lee inappropriately cites ICAPCD’s 1-mile screening distance to conclude the proposed landfill expansion will cause odor impacts and human health impacts related to windblown emissions. (P. 4).”* I presented a discussion of the ICAPCD one-mile screening distance as a typical distance that MSW landfills release odors that are adverse to humans through smell and adverse to their public health by causing disease. As I discussed in my review paper:

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). Updated June (2010).

<http://www.gfredlee.com/Landfills/SubtitleDFlawedTechnPap.pdf>

cited in my report, odor transmission from municipal landfills is commonly found over that distance.

ICF Issues 5, 6, and 7:

“Issue 5: Dr. Lee asserts that the odor analyses were deficient and unreliable. (P.5).”

“Issue 6: Dr. Lee states that toxic air pollutant emissions were not properly addressed (P.5).”

“Issue 7: Dr. Lee states there is inadequate buffer distance between the landfill and existing/future homes, and implies the proposed project would allow ‘trespass of odors and hazardous/deleterious chemicals onto adjacent and nearby property’. (p. 4 and 5).

As discussed in my report, air quality regulatory agencies frequently fail to ensure protection of the public’s interests and health from airborne releases, including odors, from landfills and other sources of obnoxious/hazardous odors. I provided references to studies by medical professionals in my “Flawed Technology” review cited above, and know, based on my own public health academic background and 50 years of professional experience, that there is inadequate regulatory control of odors released from landfills. As discussed in my report, only a very small number of the many thousands of chemicals present in landfill releases are monitored. Unmeasured and unregulated hazardous and otherwise deleterious chemicals could be expected to be released in the landfill gas releases from the proposed Allied Imperial Landfill expansion that would be a threat to the health and well-being of people well-beyond the 500-ft area that ICF claims would be the limit of detectable odors from the proposed landfill expansion.

ICF Issue 8: *“Issue 8: Dr. Lee asserts that the liner system proposed for the landfill expansion will fail, resulting in eventual groundwater contamination. (P.10).”* I provided detailed discussion, with citations to the technical literature, that supports the conclusion that a single composite liner in a MSW landfill of the type that is proposed to be constructed at the Allied Imperial Landfill expansion will eventually fail to prevent leachate-pollution of groundwater. It is well-documented that the California waste management agencies, such as the regional water boards, have approved landfills of a design like the proposed Allied Imperial Landfill expansion that will not prevent groundwater pollution. While this situation is well-known, the state and

regional water boards have thus far failed to correct this highly significant problem with landfill development in the state. Additional information on this issue is presented in:

Lee, G. F. and Jones-Lee, A., "Groundwater Quality Protection Issues," Report of G. Fred Lee & Associates, El Macero, CA, February 2007; Presented in part at CA/NV AWWA Fall Conference, Sacramento, CA, October (2007).
<http://www.gfredlee.com/Groundwater/GWProtectionIssues.pdf>

Lee, G. F., and Jones-Lee, A., "Groundwater Quality Protection Issues," Presented in part at CA/NV AWWA Fall Conference, Sacramento, CA, PowerPoint Slides, G. Fred Lee & Associates, El Macero, CA, October (2007).

ICF Issue 9: *"Issue 9: Table 2 of Dr. Lee's letter implies the DEIR and FEIR failed to analyze the full range of environmental impacts required under CEQA (P. 7)."* As I documented in my report, the draft and final EIRs failed to properly discuss the full range of impacts of the proposed landfill expansion. Despite the "belief" expressed in the ICF comment, the fact remains that the discussion of impacts provided was superficial compared to that necessary for a proper "full disclosure" discussion of the potential impacts.

ICF Issue 10: *"Issue 10: Dr. Lee disagrees with the results of ILI's LandGEM model to forecast refuse degradation rates and landfill gas generation rates (P. 8)."* As discussed in my report and in the Flawed Technology review referenced in my report, the LandGEM model is unreliable for predicting landfill gas generation. Among other issues, it fails to properly account for the rate of entrance of moisture into the landfill after the final cover has been placed. It also does not consider the impact of the fact that large amounts of the garbage that would be deposited in the proposed landfill expansion will be in plastic bags that are only crushed, thereby hide the wastes from water till the bags decompose at some time in the future, likely many decades to hundreds of years. These issues continue to be ignored by state regulatory agencies and the US EPA.

I have commented below on the deficiencies in the CalRecycle recently adopted regulations. They do not properly address this issue.

ICF Issue 11: *"Issue 11: Dr. Lee recommends that post-closure monitoring for landfill gas and groundwater monitoring should continue for much longer than 30 years, and the post-closure Financial Assurance bond required by CalRecycle should be increased accordingly (P. 9)."* ICF commented that CalRecycle recently revised its regulation regarding post-closure monitoring and financial assurance and stated,

"The new regulation took effect on July 1, 2010. The following key features of the new regulation address Dr. Lee's concerns:

- *The required post-closure monitoring period is now defined to be the forecast future date when the residual waste in the landfill no longer poses a threat to the environment based on landfill gas and leachate generation. The operator must periodically submit landfill gas and leachate generation forecasts to predict when that future 'no longer a threat' date will occur."*

As discussed in my Flawed Technology report referenced above, failure to detect leachate or landfill gas generation is not a reliable indication that a landfill is no longer a threat, especially given the nature of landfill monitoring being allowed; it is certainly inappropriate for

determining when the postclosure period, as defined by its no longer being a threat, is over. Landfill operators know that if they properly install a landfill cover on a landfill, water infiltration into the landfill can be deterred for some time to temporarily halt production of gas and leachate. However, over time the integrity of the landfill cover will deteriorate and water will again enter the landfill and will result in generation of leachate and landfill gas. If the cover was adequately designed, installed, and initially maintained, deterioration to the point of leachate or gas migration may be expected to be delayed beyond the period when the landfill owner would be providing postclosure monitoring and maintenance. Thus, pollution of the environment by landfill gas and leachate would be expected. The postclosure period must extend for as long as the wastes in the landfill, when contacted by water, could generate landfill gas and leachate.

- *“The operator is required to post Financial Assurance bonds for a minimum of 30 years, with additional Financial Assurance required annually based on the observed site-specific conditions of each individual landfill.”*

While superficial consideration of that approach gives the appearance of affording protection by providing postclosure funding for as long as the wastes in the Allied Imperial Landfill expansion would be a threat, that approach is grossly inadequate in practice. The wastes in the proposed landfill would be a threat for many hundreds, to thousands, or more years, well-beyond any reasonable expectation of the existence, much less financial capability, of Allied. Were true long-term protection of public health and environmental quality from landfill impacts to be demanded, Allied and other private waste management companies would ultimately have to spend more funds for postclosure care than they had gained during the active life of the landfill, with the result that they would go out of business, go bankrupt. At that point, it would be Imperial County that would have to pay for postclosure care and remediation of the polluted groundwater, and would be subject to litigation by citizens who will have been damaged by the permitting of the Allied Imperial landfill expansion.

- *“Financial Assurance is now required to cover representative hypothetical corrective action measures that might be required if releases are discovered by the future post-closure monitoring.”*

That statement is clearly hollow, and indeed misleading, as applied to this proposed landfill expansion. If Allied is out of business in decades, or at some time in the future, while the wastes in the proposed landfill expansion would still be a threat, it would not be able to provide the funds that will unquestionably be needed to perform a Superfund-like cleanup of the groundwater pollution that will occur as the liner system for this landfill fails.

Overall, ICF has continued to provide unreliable, inaccurate, and distorted information on the potential impacts of the proposed Allied Imperial Landfill expansion. That proposed landfill expansion will be a significant threat to the public health, groundwater resources, and the interests and well-being of those who own and/or use land in the sphere of influence of the proposed landfill expansion. Of particular concern is a lack of adequate landfill-owner-owned buffer land between where the wastes are proposed to be deposited and adjacent private property to dissipate odors and hazardous chemicals that will trespass onto nearby private property. The permitting of this landfill expansion will be significantly adverse not only to those in the immediate sphere of influence of the landfill, which will at times extend for several miles from

the landfill property, but also to the interests of Imperial County who will eventually have to assume the responsibility for providing financial support for postclosure care of this landfill expansion and the inevitable remediation of the area, for as long as the wastes in the landfill will be a threat.

Questions on the reliability of these comments can be directed to Dr. G. Fred Lee at gfredlee@aol.com.