August 8, 2013

Karl Brooks
Regional Administrator, Region 7
Environmental Protection Agency
11201 Renner Blvd.
Lenexa, KS 66219

RE: West Lake Landfill Superfund Site

Dear Administrator Brooks:

Thank you for the response to community concerns and questions regarding the West Lake Landfill. A set of questions was submitted to the EPA on July 26, 2013 before receiving the EPA's response. Below are new questions as a result of the letter sent by EPA and questions that need more clarity.

The West Lake Landfill impacted communities continue to be concerned about the safety of citizens living in proximity to the landfill and depend on the EPA to address concerns as the lead regulatory agency. Questions and concerns have been organized by issue, similar to the response from the EPA. In the next response from the EPA, please ensure that each question is identified and receives a direct response.

**Smoldering Event**

1. How close can the subsurface smoldering event approach OU-1, Area 1 before the EPA interjects and emergency actions are taken?

2. Does the EPA have a "red line" for its involvement?

3. Is there a scenario in which the EPA becomes the lead agency as it relates to the subsurface smoldering event? If so, please explain.

**Groundwater Monitoring Inside and Outside the Landfill**

4. Has the EPA received any information regarding groundwater flow at the West Lake Landfill from the USGS?

5. Is there a timeline for USGS involvement? If so, will the EPA share the expected timeline?

6. Where exactly will the off-site groundwater samples be collected surrounding the West Lake Landfill Superfund Site?

7. The letter dated 7/26/2013 states "the EPA will have a better understanding of current groundwater conditions after the Agency...reviews the next two rounds of groundwater sampling." Considering groundwater sampling is conducted on a quarterly basis, and at the EPA meeting on 6/25/2013, administrator Karl Brooks stated that it could be as little

as 400 days** before the subsurface landfill fire hits the radioactive waste, why does the EPA propose to wait 6 months (180 days) before understanding groundwater conditions?

**This number was calculated by the administrator based on the assumption that the fire is 1,200 feet away from OU-1, using a maximum SSE progression of 3ft/day. However, the current movement of the fire is figured at around .5ft/day with a maximum of 2ft/day, putting the minimum time before the fire hits the radioactive wastes at 600 days.

8. How will the USGS data be made publicly available?

9. When will the USGS data be publicly available?

**National Remedy and Review Board Recommendations**

10. What studies/investigation did the National Remedy and Review Board recommend EPA Region 7 conduct to better understand the West Lake Landfill? Please include all recommendations from the NRRB.

11. Did EPA Region 7 provide the NRRB with concerns or reports from the general public?

12. Did Region 7 provide NRRB with Dr. Bob Criss' report submitted to the EPA on March 15, 2013?

13. What information has the NRRB received as it relates to the subsurface smoldering event?

14. Has the presence of the subsurface smoldering event triggered further recommendations from the NRRB as it relates to OU-1?

**Radium in Groundwater**

15. Can the EPA explain why levels of Radium-226 and Radium-228 are above the Maximum Contaminant Level (MCL) throughout the landfill, outside of Operable Unit 1? For example: The Responsiveness Summary from 2008 (page 3) states "only four wells exhibited a total radium concentration above the MCL of 5 picocuries per liter (pCi/L)" with the maximum reading being 6.33PiC/l. A map in the Groundwater Monitoring report dated December 14th displays 20 wells that show radium levels above 5pCi/l with PZ-l0l-SS reading 32.01pCi/l, which is outside of Area-l and Area-2 of Operable Unit 1.

16. With the increase in the concentration of Radium found the wells, how can the EPA continue to state that the levels of Radium being read are naturally occurring, as the EPA stated at the January 17 public meeting at the Machinists Union Hall?

17. If there is "little to no Ra-228" in the landfill waste at West Lake Landfill OU-1, where is the Radium 228 in the groundwater coming from?

18. How can the EPA assert that "recent groundwater results indicate that contamination is not migrating substantial distances from its original location where the radioactive waste was disposed" when wells outside of OU-1 and OU-2 consistently read radium levels higher than the MCL and no reports of off-site testing have yet been posted?

21. What testing protocol or investigation will be needed to ascertain the source of the radioactivity in the groundwater?

22. In the groundwater reports from tests in August 2012 and April 2013, the EPA posted data for both combined total radium 226 and 228 and combined dissolved radium 226 and 228. It is our understanding that total radium comes from unfiltered samples while dissolved radium is gathered from filtered samples, thus the total radium should be higher than the dissolved radium for its respective sampling location. How does the EPA account for the last two groundwater reports reading higher dissolved radium than total radium in 30% of the wells?

**Long Term Risks**

23. The EPA said in its response: "The EPA is overseeing work by the potentially responsible parties which includes the evaluation of risk associated with multiple disasters such as fire, tornado, and earthquake." Is the EPA or PRPs working on a new Risk Assessment for West Lake Landfill? If so, when will it be published? If not, does the EPA intend to provide a new Risk Assessment that includes landfill fire risks?

24. Is the EPA or PRPs taking into consideration the possibility of concurrent disasters taking place in its risk assessment?

**Leached Barium Sulfate**

28. In the EPA response on Leached Barium Sulfate, too many assumptions are made and more clarity is needed. The EPA's justification that Cotter Corporation found the materials valuable and therefore "it is likely that very little of this material was left on-site" is an inadequate assumption about what was actually dumped at the West Lake Landfill as it relates to public health. Also, Atomic Energy Commission documents appear to contradict the basis of what was mixed with the 8,700 tons of Leached Barium Sulfate. It's MCE's understanding the material eventually shipped to Colorado sat outside, unprotected from the elements for years. Has the EPA considered the possibility that the soils from Latty Avenue contain highly soluble radioisotopes based on the exposure of the material at Latty to heavy rains over the course of several years?

29. The EPA's understanding of what was dumped at the West Lake Landfill is inaccurate as recently as 2008 based on the Atomic Energy Commission's 1974 investigation of Latty Avenue, which has been shared with EPA Region 7. Does the EPA plan to continue basing its understanding of what was dumped at West Lake Landfill on what appear to be inaccurate NRC reports?

30. Has the EPA analyzed the West Lake Landfill as recommended by Dr. Criss in point 8 of his report submitted March 15, 2013? If so, where in the volumes of reports on West Lake Landfill can this information be found? EPA's guidance here is most appreciated.

> "Additional study of the site is needed. The character of the radioactive materials and processing wastes originally dumped at West Lake Landfill needs to be determined. Relevant, old chemical and radiological analyses of these materials probably exist, and physical samples may still exist. In lieu of these being found, radioactively-contaminated material from the landfill needs to be excavated and collected, processed by standard mineral separation techniques, and then analyzed and examined to determine the chemical, physical and radiological character of the separates of concern. Accurate determination of elemental ratios including Ra/Ba, Ra/U, Ba/U, Th/U, Ba/SO4, etc. by ICP-MS and other modern techniques would clearly help. Groundwater analyses need to include major elements, physical parameters such as electrical conductivity, and stable isotope data so that radionuclides can be definitively traced to their sources by well-understood methods (e.g., Criss, 1999; Hasenmueller and Criss, 2013). It is not acceptable that so little is known about this radwaste after more than 30 years of "study". Regular monitoring of the levels and radionuclide contents of groundwater also need to be undertaken. Several dozen new monitoring sites must be developed to establish conditions at least 1000 feet away from the landfill boundaries, particularly north and northwest of Area 2, to establish the scale of groundwater contamination and migration."

31. Was inductively coupled plasma mass spectrometry (ICP-MS) used to analyze soil samples in OU-1?

**Perimeter Fence**

32. Why was the fence along OU-1 Area 1 moved closer to the St. Charles Rock Road?

33. When was the new fence constructed?

34. By whose order?

**Community Interviews**

35. Can EPA provide evidence on its website to support that community interviews were conducted between 1994 and 2013?

36. How have the community interviews guided the EPA's response to community concerns? This question was not answered in the EPA's last response.

37. EPA Superfund decision making is supposed to be guided in part by what local communities want. How does EPA qualify and/or quantify community concerns or preferred remedial action when creating a Record of Decision, or in this case, an amended ROD?

**Public Record**
38. Will the EPA provide digital records on its website of all documents in the "administrative record" and "public record" concerning West Lake Landfill?

39. Does the EPA have different delineations for "administrative record" and "public record?"

**Other Superfund Sites**
40. How many Superfund Sites in Region 7 involve radiological contamination?

41. Has EPA Region 7 executed a ROD at a radioactive Superfund Site? If so, which ones and when?

**Schedule**
42. Does the EPA have a schedule moving forward that it can provide regarding the decision making process?

Please send a response to Ed Smith at the Missouri Coalition for the Environment and Dawn Chapman who lives near the West Lake Landfill.

Thank you for your consideration.

Sincerely,

West Lake Landfill Impacted Communities & the Missouri Coalition for the Environment

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Dawn Chapman – Ex. 6 - Personal Privacy