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LETTER AND COMMENTS FROM ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
REGARDING LANDFILLS 6 AND 7 OPERATIONS AND MAINTENANCE PLAN REVISION 5  
FORT SHERIDAN IL  
10/21/2009  
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 • (217) 782-2829  
James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 • (312) 814-6026

PAT QUINN, GOVERNOR

DOUGLAS P. SCOTT, DIRECTOR

(217) 557-8155  
(FAX) 782-3258

October 21, 2009

Bill Brawner  
Headquarters, Department of the Army  
Base Realignment and Closure Division (DAIM-BD)  
2530 Crystal Drive  
Arlington, VA 22202

Re: October 9, 2009 Letter Regarding the  
Fort Sheridan Landfills 6 and 7 Operations  
And Maintenance Plan, Revision 5.0

0970555001/Lake  
Fort Sheridan (BRAC)  
Superfund/Technical

Dear Mr. Brawner:

The Illinois Environmental Protection Agency (Illinois EPA or Agency) is in receipt of the Army's October 9, 2009 letter regarding the Fort Sheridan Landfills 6 and 7 Operations and Maintenance Plan, Revision 5.0. It was received on October 13, 2009. The submittal presents changes made "to bring the plan up-to-date with current procedures, sample frequencies, and maintenance activities that have been adopted since the Plan was last revised." The cover letter also requests "Illinois EPA's concurrence for the modification of the sampling frequency of the gas monitoring probes." Illinois EPA has reviewed the revised Operations and Maintenance Plan (O & M Plan) and compared it the most recent revision of the document in the Agency's possession (Revision 3.0). The Agency also considered the Army's request for a modification to the sampling frequency of the gas monitoring probes. Comments generated during our review are provided below.

There were a significant number of revisions made to the O & M Plan as compared to the previous version, some of which need revision or clarification. The items requiring revision or clarification are discussed, along with the Agency's determination on the sampling frequency of the gas probes, below.

- 1) **Section 2.1** – The required HAZWOPER training in the next to last paragraph has been changed from a 40-hour training level to a 24-hour training level. Please justify the need for this change.
- 2) **Section 2.1** – In the last paragraph, there is no longer any mention of where locks have been placed on doors or elsewhere within the maintenance building. That would seem to be important safety information.
- 3) **Section 3.2.3.1** – The bullet item under landfill cap inspection for "Edge of Liner (N & S) down east slope" has been omitted and the bullet is missing from the last item "Toe of slope at the beach".

- 4) **Section 3.3.2** – Regarding the required controlled burns, there is no schedule provided, as is stated will be appended to the plan. During discussions at the BCT meeting in March 2009, the need for a burn was discussed and it was noted that a minimum of three months was required to obtain the proper permits. A burn in the fall of 2009 was discussed and then dismissed due to scheduling issues, but the Agency believed one would be scheduled and conducted in 2010. According to the meeting minutes, there “was a sudden burst of growth of ragweed and it’s KEMRON’s recommendation to the Army that it should all be cut this spring at both landfills and get it ready for a burn the following year.” The following year would be 2010. Has the paperwork to obtain the required permits been submitted or has the Army’s horticulture expert advised against such a burn at this time? Please advise on the status of a burn and update the O & M Plan accordingly.
- 5) **Table 3-1** – A footnote should be added to the table indicating that certain maintenance actions (e.g. erosion repair) may be required more often than listed depending on the results of routine inspections or after significant rainfall events.
- 6) **Section 4.2, last paragraph** – The reference to Lake Michigan water level has been removed. The requirement to keep the leachate level in the LIT at least one foot below Lake Michigan water level is essential to ensuring leachate cannot be released into the surface waters of Lake Michigan. The omitted wording should be put back in the plan.
- 7) **Section 5.3.3** – The last bulleted item has been changed to an annual frequency. The Agency does not recall concurring with a request for such a change. The testing for NMOCs should be revised to semi-annually (see Agency correspondence dated 26Mar2007), unless more recent permission for such a change has been granted. (In this case, please provide the Agency with the date of such correspondence.)
- 8) **Tables 5-1** – Many of the frequencies listed in this table have been extended. As these may be safety-related, please explain why a reduced frequency of inspections is acceptable.
- 9) **Section 5.4 and 5.4.3** – As mentioned above, the NMOC gas monitoring at the flare should be on a semi-annual basis, rather than annually, as listed in these locations.
- 10) **Tables 6-1** – In this table, the gas monitoring probes located beyond the perimeter storm drainage swale are first identified as “Compliance Gas Monitoring Probes.” They were not identified this way in previous versions of this document. The Agency views all of the installed gas probes as compliance sampling points, not just those farthest away from the landfills. The gas probe network was designed to ensure that if landfill gas was escaping from beneath the cap, it could be detected and the system modified to correct the situation. If the inner circle of probes were not installed, a significant number of additional outer wells would be required.
- 11) **Section 6.4.1** – In the last paragraph, the number of landfill gas parameters listed for analysis have been reduced by omitting BTU content and hydrogen sulfide (H<sub>2</sub>S). Please explain the

reasoning for this reduction.

- 12) **Section 6.5** – The fourth paragraph in this section is new. In it, the gas monitoring probes are categorized into two different classes: Those on the inner perimeter are labeled as “tell-tale probes”, which is new terminology for this document. Those on the outer perimeter are labeled as “compliance probes”, first used earlier in this document. The Agency did not agree to this new terminology. As noted previously, Illinois EPA views all of the installed gas probes as compliance sampling points. In addition, it also states that, “Monitoring frequencies of gas probes in exceedances will differ depending on whether the monitoring probe is a tell-tale or compliance gas monitoring probe as discussed in the following sections (refer to Table 6-1 and Figures 3-5).” Illinois EPA cannot agree to handle the gas probes differently depending on where they were located. There should be only one procedure for all of the monitoring probes.
- 13) **Section 6.5** – In the second bullet, the re-monitoring frequency has been changed from monthly to quarterly. The Agency cannot agree to this change. The proper re-monitoring frequency is monthly, as stated in the previous version of this document.
- 14) **Section 6.5** – In the fourth bullet, the process outlined for monitoring the nearest outer perimeter probes in addition to the inner probe with the exceedance is acceptable, save the monitoring frequencies. The initial sentence should read “the probe shall be monitored on a monthly basis until such time as said probe shows three consecutive readings without an exceedance.” The last two sentences of this paragraph should be deleted, as the Agency cannot agree to this change in procedure.
- 15) **Section 6.6** – The first paragraph on page 36 mentions gas probe MP-07-17 as if it had been discussed previously as having been one of the probes that have historically had exceedances. In the previous version it was. However, in this version of the document, it has not been mentioned. This will need to be rectified.
- 16) **Section 6.6** – According to Revision 3.0 of this document, “a new monitoring probe, designated MP 7-5A, will be installed within 100 feet of MP 7-5, away from the edge of the landfill. This new probe will be used to determine if landfill gas migration in the vicinity of MP 7-5 is traveling towards the proposed 100 foot set back of the buffer zone.” The Agency cannot find where this probe was ever sampled or even installed. Please explain why it has not been installed as stated in Revision 3.0.
- 17) **Section 6.6** – The last sentence mentions the possible need for additional probes near the buffer zone. If the outer ring of gas probes (the “compliance probes” as specified in this revision) were to yield a methane exceedance, more would be required than merely installing more probes. The gas system would require adjustment and/or modification at a minimum.
- 18) **Section 8.1 and throughout** – The landfill caps should be listed as RCRA-equivalent caps rather than RCRA caps.

- 19) **Section 8.2** – See previous comments regarding sampling frequencies.
- 20) **Section 8.4.1** – It states in the second paragraph that the flow rate of leachate is calculated once a month on the Weekly Flare Data Log Form. First, wasn't the system built to monitor, record, and total that data automatically? Second, is that the proper form to be recording leachate flow, the form used for gas flare data?
- 21) **Appendix C** – The example field forms for monitoring probe readings and gas extraction wells and lateral valve readings previously found in this appendix have been removed. These should be added back.
- 22) **Appendices** – In the previous version, there was an appendix containing the Standard Operating Procedure for Oxygen Levels at the Flare. Has this information been included elsewhere in this revision? If not, the Agency believes it should be added back unless that information is no longer applicable.

If you have any questions regarding anything in this correspondence or would like further explanation, you may contact me at 217/557-8155 or via electronic mail at [Brian.Conrath@illinois.gov](mailto:Brian.Conrath@illinois.gov).

Respectfully,

*Brian A. Conrath*

Brian A. Conrath  
Remedial Project Manager  
Federal Facilities Unit  
Federal Site Remediation Section  
Bureau of Land

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cc: Bill O'Donnell, Army BRAC  
Howard Hickey, US Navy - EFA Midwest  
David Moore, US Army Reserve

Owen Thompson, USEPA (SR-6J)  
Kurt Thomsen, Fort Sheridan EC