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State of Ohio Environmental Protection Agency

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July 2, 2008

Mr. Geoff Jones  
VP Remediation  
Clean Harbors Environmental Services  
400 Arbor Lake Drive  
Columbia, SC 29223

Re: **Clean Harbors Recycling Services of Ohio, LLC**  
**Hebron Recycle Center**  
**U.S. EPA ID#: OHD980587364 / Ohio Permit #: 01-45-0518**  
**Review of Ground Water Data/RTC**

Dear Mr. Jones:

On March 3, 2008, Ohio EPA received the July to December 2007 Semiannual Corrective Action Progress Report and the 2007 Supplementary Annual Report from Safety-Kleen Systems, Inc. (Safety-Kleen) for the Hebron Recycle Center (Facility) in Licking County. Since March 3, 2008, Clean Harbors Recycling Services of Ohio, LLC (Clean Harbors) purchased the Facility from Safety-Kleen. As a result, I am sending you Ohio EPA's review of these reports. These reports were reviewed for compliance with Ohio's hazardous waste laws and rules as found in Chapter 3734 of the Ohio Revised Code (ORC) and Chapter 3745 of the Ohio Administrative Code (OAC) and the terms and conditions of the Facility's hazardous waste permit.

Review of the reports referenced above reveals that the permittee has now abated all of the violations cited in Ohio EPA's notice of violation (NOV) letter dated June 7, 2007, as listed below. (Please note that these same violations were also referenced in letters dated October 26, 2007, and December 3, 2007.)

Letter Citation #	Rule Citation
1.	OAC Rule 3745-50-58(A) and Permit Condition E.9(a)(vi)(b), Ground Water Sampling
2.	OAC Rule 3745-50-58(A) and Permit Condition E.9(a)(vii)(a), Ground Water Confirmation Sampling

**General Comments**

- Clean Harbors must use the lowest achievable practical quantitation limits (PQLs) to evaluate concentrations of chemicals of concern (COCs).**

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

The PQL of 150 ug/L for 1,4-dioxane (1,4-DX) is not low enough to enable an adequate evaluation of concentrations on and emanating from the site. To date, 1,4-DX detections less than 150 ug/L have been qualified "J" for estimated. However, the risk-based single-chemical generic cleanup level for ground water is 60.9 ug/L (Table A-3 of the 2008 Closure Plan Review Guidance for RCRA Facilities) and a site-specific cleanup goal may be even lower.

The lowest achievable PQLs should be used to evaluate the concentrations of COCs in ground water, even if they are lower than those listed in the appendix to OAC Rule 3745-54-98. Footnote 6 clarifies that the PQL values in the table in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

Lower 1,4-DX PQLs are achievable and have been used at other sites. Thus, a lower PQL must be used (at least lower than 60 ug/L) or Clean Harbors must provide evidence as to why a lower PQL cannot be achieved in this site-specific case.

- 2. Ohio EPA recommends that Clean Harbors collect additional water elevation and stream gauge measurement data on a regular basis. In addition, Clean Harbors should collect additional data to characterize the periodicity of high water events.**

When ground water elevation and water level data are only collected during high river stage events, it does not accurately reflect the overall evaluation of the site conceptual model for ground water flow and recovery system performance. During the December 15, 2007 sampling event, three of the stream gauges and one of the monitoring wells were inaccessible due to the high river stage and were not measured. The higher water elevations in and near the river during that single monitoring event had a significant effect on the depiction of ground water flow directions and the depicted capture zones of the recovery wells. However, such high river stage events are transient in nature. Thus, their effect on ground water flow direction and recovery system capture is limited.

In addition, collection of additional data would provide more information about water from the river, as Ohio EPA continues to disagree with the assertion in Section 2.3 of the Semiannual Corrective Action Progress Report (July to December 2007) that water from the river is extracted by the recovery wells. As Ohio EPA has previously discussed with Safety-Kleen, under typical ground water and river stage conditions, the hydraulic gradient between the recovery system wells and the river is toward the river. The only time the hydraulic gradient appears to be toward the recovery system is during high river stage events.

- 3. Ohio EPA recommends that the COC concentration trend charts presented in Appendix D of the Semiannual Corrective Action Progress Report for wells H-4S/H-4SR be separated for each well.**

Well H-4S was removed in March 2006 and replaced by well H-4SR. While H-4SR is located in a similar location as H-4S, it is a new well and does not provide a continuous basis for comparison to the historical data from H-4S as represented in Appendix D.

- 4. Ohio EPA recommends that Appendix E of the Semiannual Corrective Action Progress Report be revised to evaluate ground water sampling results from well H-4SR for statistically significant trends separately from former well H-4S.**

The trend analysis listed for well H-4S in Appendix E, Table 2, combines data from well H-4S, which was abandoned in March 2006, with the results from replacement well H-4SR. Since H-4S and H-4SR are not the same well, the data from both wells cannot be combined to conduct an intrawell statistical trend analysis.

5. **Ohio EPA recommends that subsequent statistical trend analyses presented in Appendix E of the Semiannual Corrective Action Progress Report be expanded to include all wells at the site which have had detections of COCs.**

Currently, only seven wells are being evaluated for statistically significant trends. However, at least 34 wells across the site regularly have detections of one or more COC within either the shallow, middle, or deep ground water zones. A more comprehensive evaluation of COC concentration trends across the site would facilitate a more complete and representative evaluation of site-wide corrective action effectiveness. Ohio EPA recommends a 0.05 alpha level be used for recognizing statistically significant trends.

6. **Ohio EPA recommends that Clean Harbors install additional monitoring wells in the shallow, middle, and deep ground water zones to evaluate the concentration, extent, and rate of migration of COCs in ground water.**

As indicated in the Draft Risk Assessment Work Plan Approval from Ohio EPA, Division of Hazardous Waste Management to Safety-Kleen dated February 14, 2008, monitoring wells are needed near/downgradient of monitoring well locations H-8S, H-23S, and H-24S. Based upon the results of ground water analyses from wells installed in the locations mentioned above, additional wells may be needed to determine the full extent of contamination. All wells installed in the middle or deep water bearing zones should be double-cased and installed using methods, which prevent cross-contamination from overlying water-bearing zones.

Should you have any questions, please feel free to call me at (614) 728-3887. You can find copies of the rules and other information on the division's web page at: <http://www.epa.state.oh.us/dhwm>.

Sincerely,



Melissa Musko  
Environmental Specialist  
Division of Hazardous Waste Management  
Central District Office

c: Stephen Lear, Clean Harbors Recycling Services of Ohio, LLC  
Kristina Durnell, DHWM/CO  
Randy Sheldon, DHWM/CDO  
Jason Reed, DDAGW/CDO  
CDO File

MM/nsm SK.GW July to Dec 2007

**NOTICE:**

Ohio EPA's failure to list specific deficiencies or violations in this letter does not relieve your company from having to comply with all applicable regulations.

