



ARKANSAS  
Department of Environmental Quality

July 7, 2016

Attn: Mr. Floyd Cotter, P.E., Project Manager  
SCS Engineers  
7311 West 130<sup>th</sup> Street, Suite 100  
Overland Park, Kansas 66213

**RE: NABORS Class 1 Landfill**  
**Review of Groundwater Monitoring Reports for 2015 and Fourth Quarter 2014 and**  
**Assessment of Corrective Measures**  
**AFIN: 03-00051 Permit No: 0249-S1-R2**  
**Document ID: 69902 Cross References: 69154, 68591, 68235, 67823, 67821,**  
**67153, 67822**

Dear Mr. Cotter:

The Arkansas Department of Environmental Quality – Office of Land Resources (ADEQ) Regulated Waste Programs has performed a technical review of the following documents for the Nabors Landfill: Groundwater Monitoring Reports for 2015 and Fourth Quarter 2014 and the Assessment of Corrective Measures. These documents were provided to ADEQ by SCS Engineers through work associated with Contract Number 4600033394. After review, ADEQ has the following observations to be incorporated into future groundwater reports for the facility:

1. Please provide the historical groundwater database as pages in future reports. Also, please put the data in a format that requires an appropriate number of pages. One of these reports provides the database, but it is spread over more than 1700 pages, while 50 pages is more in line with groundwater monitoring reports from other facilities with a similar amount of data.
2. Section 3.2.2 states that the data evaluation consisted of the establishment of 95% Lower Confidence Limits (LCL). This section also states that the evaluation utilized the last 11 to 12 sampling events. However, looking at the "Confidence Interval" printouts in Appendix E of the more recent reports, it appears that the number of sampling events for most parameters at most wells was four (4) sampling events.

Please follow Sections 7.4.1 and 22.1.1 of the Unified Guidance concerning power and the false positive rate using confidence intervals. Section 7.4.1 is titled *False Positives and Statistical Power in Assessment* and Section 22.1.1 is titled *Pre-specifying Power in Compliance/Assessment*. If a small number of data points are used in the confidence interval, the facility should be using a lower value than 95% for the confidence level. Please use the appropriate confidence level in future groundwater monitoring reports.

If you have any questions or concerns, please feel free to contact me at (501) 682-0606 or email me at [sadler@adeq.state.ar.us](mailto:sadler@adeq.state.ar.us).

Sincerely,

A handwritten signature in blue ink that reads "Bill Sadler". The signature is fluid and cursive, with the first name "Bill" and last name "Sadler" clearly distinguishable.

Bill Sadler, P.G.  
Geology Supervisor  
Regulated Waste Programs  
Office of Land Resources

cc: Dan McCullough, P.G., SCS Engineers  
Dillion Baird, P.E., SCS Engineers



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**REGULATED WASTE PROGRAMS, OFFICE OF LAND RESOURCES ROUTING SLIP**

DATE: July 7, 2016

Subject: NABORS Class 1 Landfill;  
Review of Groundwater Monitoring Reports for 2015 and Fourth Quarter 2014  
and Assessment of Corrective Measures

From: Bill Sadler

<u>Route in turn to:</u>	<u>Action Needed</u>	<u>Date Received</u>	<u>Date Reviewed</u>	<u>Initials</u>
ACusher	<input checked="" type="checkbox"/> Concurrence <input type="checkbox"/> Review	<u>7/7</u>	<u>7/7</u>	<u>AC</u>
JRich	<input checked="" type="checkbox"/> Concurrence <input type="checkbox"/> Review	<u>7-7-16</u>	<u>7-7-16</u>	<u>JR</u>
THynum	<input checked="" type="checkbox"/> Concurrence <input type="checkbox"/> Review	<u>7/7/16</u>	<u>7/7/16</u>	<u>TH</u>
	<input type="checkbox"/> Concurrence <input type="checkbox"/> Review	_____	_____	_____
	<input type="checkbox"/> Concurrence <input type="checkbox"/> Review	_____	_____	_____

**\*Note:** Marking the Concurrence box indicates the individual agrees with the applicable text as it relates to their individual discipline and Work Section (e.g., Engineer; Risk Assessor; Geology; Compliance; Policy/Management), as applicable. Marking the Review box indicates the individual has read the document.

**Return to Bill Sadler for distribution**

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**COMMENTS:**