



State of Ohio Environmental Protection Agency

STREET ADDRESS

Lazarus Government Center
122 South Front St.
Columbus, OH 43215

TELE: (614)644-3020 FAX: (614)644-2323

OHIO E.P.A.

MAILING ADDRESS:

Lazarus Government Center
P. O. Box 1049
Columbus, OH 43216-1049

SEP 17 2002

ENTERED DIRECTOR'S JOURNAL

SEP 17 2002

Mr. Allen Rogers
SWACO
6220 Young Road
Grove City, Ohio 43123

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By Zoran Clement 9/17/02

RE: Franklin County; Franklin County Landfill, OAC 3745-27-10(D)(7)(c)

Dear Mr. Rogers:

During March 2002, a ground water sampling event was conducted at the Franklin County Landfill. This report also served as notification to the Director of Environmental Protection (Director) of statistically significant increases at multiple monitoring wells. Those wells were resampled and the results submitted on August 15, 2002.

Ohio Administrative Code (OAC) 3745-27-10(D)(7)(c) requires facilities who have identified statistically significant increases in ground water monitoring parameters to receive approval from the Director in order to remain in detection monitoring. If a facility does not receive approval within 180 days of ground water sampling, the facility is required to initiate their assessment monitoring program.

In response to this regulation, SWACO has submitted to Ohio EPA, a report presenting false positive ground water demonstrations for the following wells with statistically significant increases: MW-Ga sodium, MW-Gb ammonia, MW-1D ammonia, and MW-4b, MW-7, MW-8 and MW-11m for potassium. Representatives from the Division of Drinking and Ground Waters (DDAGW) and the Division of Solid and Infectious Waste Management (DSIWM) have reviewed the aforementioned documents to determine the facility's compliance with OAC 3745-27-10. The submitted data confirms that the statistically significant increases were not a result of a release from the landfill. As such this demonstration is hereby approved and SWACO may continue the detection monitoring program in accordance with OAC Rule 3745-27-10(D)(7)(c) at the Franklin County Landfill for the next ground water sampling event.

The attached interoffice communication (IOC) dated, August 29, 2002, discusses the findings of Central District Office DDAGW's review. As stated in DDAGW's IOC, Ohio EPA does not concur with using the two week interval sampling for potassium in order to increase the background database. This short of an interval could lead to a data bias resulting from samples not being independent. Background data should also be added in groups of four.

Bob Taft, Governor
Maureen O'Connor, Lieutenant Governor
Christopher Jones, Director

Mr. Allen Rogers
SWACO
Page - 2 -

In addition, trip blank data sheets for the original data still need to be provided. This should be submitted prior to the next sampling event.

You are hereby notified that this action of the Director of Environmental Protection is final and may be appealed to the Environmental Review Appeals Commission pursuant to Ohio Revised Code Section 3745.04. The appeal must be in writing and set forth the action complained of and the ground upon which the appeal is based. It must be filed with the Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director within three (3) days of filing with the Commission.

An appeal may be filed with the Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, OH 43215

If you should have any questions or comments on the above, feel free to contact Laura Parkinson in the Central District Office at (614) 728-3889.

Sincerely,



R. Bruce Coleman, Chief, Central District Office
for Christopher Jones, Director
Ohio Protection Agency

pc: Roy Stanley, SWACO w/attachment
Jeff Grose, Franklin County Health Dept. w/attachment
Linnea Saukko, CDO/DDAGW w/o attachment
Duane Snyder, CDO/DSIWM

Attachment

RBC/LP/jl GW10D7csept01.wpd

Ohio EPA

Central District Office

3232 Alum Creek Drive * Columbus, Ohio 43207-3417 * 614-728-3778

INTEROFFICE COMMUNICATION

TO: Laura Parkinson, DSIWM-CDO

FROM: Cal James through Linnea Saukko, DDAGW-CDO

DATE: August 29, 2002

SUBJECT: Confirmation Resampling for March 2002 Sampling Event Statistical Analysis and Ground Water Quality Data, Franklin County Sanitary Landfill (Franklin County)

Introduction

The Ohio EPA received on June 14, 2002 the statistical results and analytical data from the March 2002 semiannual ground water sampling event at the Franklin County Sanitary Landfill (FCSL) facility. Seven wells contained constituents with ground water concentrations that were statistically elevated (Table 1). These wells were resampled on June 19, June 20 or July 17, 2002 and results received by Ohio EPA on August 15, 2002. The FCSL facility used DLZ Laboratories for ground water sample analyses from 1992 to February 2001. The March 2001 through the present ground water samples have been analyzed at a different primary laboratory, Zande Environmental Services. In addition, split samples taken in June and July 2002 were analyzed at Severn Trent Services and American Analytical Laboratories for comparison purposes. The FCSL facility states that the statistical triggers determined for the March 2002 semiannual sampling event are artifacts of changing from DLZ Laboratories to Zande Environmental Services. The FCSL facility must successfully demonstrate the initial results are false positives following OAC 3745-27-10 (D)(7)(c)(June 1, 1994) or go into assessment on or about September 28, 2002.

Comments and Recommendations

The initial results for sodium in MW-6a and ammonia in MW-6b and MW-1D for the March 2002 sampling event were determined to be statistically elevated (Table 1). These wells were resampled for sodium or ammonia and the background database updated. Based on resample results, MW-6a, MW-6b and MW-1D have no statistically significant constituents. The original statistically significant results are thought to be false positives most likely caused by switching from DLZ Laboratories to Zande Environmental Services in March 2001. Split sampling results from Severn Trent Services and American Analytical Laboratories confirm inter-laboratory variability sufficient to cause a false statistical trigger for ammonia and/or sodium in MW-6a, MW-6b and MW-1D.

Potassium concentrations remain statistically elevated after resampling wells MW-4b, MW-7, MW-8 and MW-11m (Table 1). The maximum potassium concentration measured in any of these wells for the March 2002 sampling event or resampling event is 4.18 mg/L. Additionally, split sample results from Severn Trent Services and American Analytical Laboratories are consistently less than results from the primary laboratory, Zande Environmental Services. Therefore, DDAGW concurs that the potassium results, as determined by Zande Environmental Services for the March 2002 sampling and resampling events, produce false positives when compared to the original background database.

The FCSL facility proposes to sample wells twice each month for potassium to increase as soon as possible the background database for statistical purposes. The purpose of this proposal is to decrease the false-positive rate at the site. DDAGW does not concur with using this short a sampling interval to increase background as it may lead to a data bias resulting from samples not being independent. While there is no minimum sampling time interval in rule, DDAGW has been reluctant to concur with proposals recommending a period shorter than one month between sampling events. DDAGW does recommend that Ohio EPA work closely with the FCSL facility to identify potassium and other false positives due to switching laboratories until a sufficient number of background samples are collected at the site. DDAGW further recommends that new background data be added in groups of four by combining with the existing background data set and performing a trend analysis or other appropriate statistical test to insure that a gradual release is not being masked by the updating process.

Conclusions

Through resampling, split sampling and comparisons to historical data, the statistically significant results for the March 2002 sampling event have been demonstrated to most likely be false positives (Table 1). The false positive results for sodium, ammonia and potassium were most likely caused by switching from DLZ Laboratories to Zande Environmental Services in March 2001. Therefore, DDAGW recommends the FCSL facility remain in detection monitoring based on the March 2002 sampling event and resampling event results.

DDAGW does not concur with the FCSL facility's proposal to increase background for potassium by sampling wells twice each month. DDAGW does recommend that Ohio EPA work closely with the FCSL facility to identify false positives due to switching laboratories until a sufficient number of background samples are collected for each constituent at the site.

Water-Bearing Zone	Well Location	Statistically Significant Constituent for Initial Sample CC=control charts PI=prediction intervals	Zande Lab Initial Sample mg/L	Zande Lab Resample mg/L	American Analytical Lab Resample Split mg/L	STS / Atel Labs Resample Split mg/L
Zone B1	MW-6a	Sodium / CC	19.1	18.5	15.9	14.4
Zone C2	MW-4b	Potassium / PI	1.89	1.34	1.17	<1.0
	MW-6b	Ammonia / PI	0.55	0.39	0.42	0.34
Zone D	MW-1D	Ammonia / CC	0.65	0.56	0.53	0.54
	MW-7	Potassium / CC	2.78	2.40	2.29	1.80
	MW-8	Potassium / CC	3.51	3.09	1.99	1.60
	MW-11m	Potassium / PI	4.18	3.89	3.28	2.80

Table 1. Summary of statistically significant results for the March 2002 sampling event and resampling; STS = Severn Trent Services; Atel = Aqua Tech Environmental Laboratories.