

groundwater



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January 29, 2008

Mr. Kenneth Humphrey
Environmental Director
Envirosafe Services of Ohio, Inc.
876 Otter Creek Road
Oregon, Ohio 43616-1200

**Subject: Notice of Violation of Permit Condition K.1(e)(iv) and Comments on
Alternate Source Demonstration at H-02D, H-04D, M-04D, M-10D, G-01A
and M-18D for April 2007 Sampling Event
OHD 045 243 706 / 03-48-0092
RCRA Hazardous Waste / Lucas County**

Dear Mr. Humphrey:

On November 29, 2007, Ohio EPA received from Envirosafe Services of Ohio, Inc. (ESOI) the document *Alternate Source Demonstration At H-02D, H-04D, M-04D, M-10D, G-01A and M-18D For April 2007 Sampling Event (October 2007 Data)*, dated November 29, 2007. The Division of Drinking and Ground Waters (DDAGW) has reviewed the document for compliance with ground water monitoring requirements of Ohio Administrative Code (OAC) Chapter 3745-54 and ESOI's Permit number 03-48-0092. Below are the DDAGW's findings from the review.

Violation

1. **Permit Condition K.1(e)(iv):** ESOI is in violation of Permit Condition K.1(e)(iv), which requires ESOI to submit a report detailing the results of ground water samples necessary to develop comparison standards for data from new well locations R-23 and R-24 for naturally occurring constituents in accordance with Permit Condition K.2(b)(ii)(c).

Bedrock monitoring wells R-23 and R-24 were installed during the last half of July 2006. In accordance with Permit Condition K.1(e)(ii), the collection of background data for naturally occurring constituents should have been completed by August 1, 2007 (collect background data within one year of the date of installation). Comparison standards for naturally occurring constituents, dissolved barium, chloride, fluoride and sodium, are needed to determine elevated constituents in accordance with the requirements of Permit Condition K.6(e) and OAC Rule 3745-54-98(F). OAC Rule 3745-54-98(H) requires the

owner or operator to submit a permit modification, within ninety days, to make any appropriate changes to the program when it is determined that the detection monitoring program no longer satisfies the requirement of this rule. Therefore, the permit modification request that provides the comparison standards to meet the requirements of Permit Condition K.6(e) and OAC Rule 3745-54-98(F) should have been submitted by November 1, 2007 (90 days from August 1, 2007). To date, Ohio EPA has not received the permit modification providing the comparison standards for naturally occurring constituents at monitoring wells R-23 and R-24.

To abate this violation, ESOI must submit a permit modification request detailing the development of the comparison standards for naturally occurring constituents at well locations R-23 and R-24 and adding the comparison standards to the permit application, Section E, Appendix E.7.

Comments

2. OAC Rule 3745-54-97(I)(5) requires any practical quantification limit (PQL) approved in the permit under paragraph (H) of this rule that is used in the statistical method to be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility. To meet the requirements of this rule, ESOI must submit within 90 days, in accordance with OAC Rule 3745-54-98(H), a permit modification revising the comparison standard for 1,4-dioxane in permit condition K.2(b) to provide a comparison standard specific to the method of analysis, 10 µg/l when analyzed using method 8270C and 50 µg/l when analyzed using method 8260B. The permit modification must also include monitoring well SW-03S in the affected well list, with 1,4-dioxane as the elevated constituent, unless ESOI submits a false positive demonstration in accordance with the requirements of OAC Rule 3745-54-98 (G)(6).

1,4-Dioxane is a non-naturally occurring constituent considered not to be present in background ground water. Therefore, the statistical comparison standard for 1,4-dioxane [50 µg/l, Permit Condition K.2(b)] is based on the lowest PQL for the analysis of 1,4-dioxane using analysis method 8260B. When analysis is conducted for constituents listed in the Appendix to OAC Rule 3745-54-98 (Appendix 98), 1,4-dioxane is also analyzed for using the analysis method 8270C. The PQL for the analysis of 1,4-dioxane using analysis method 8270C is 10 µg/l. 1,4-Dioxane was detected at a quantifiable level of 23 µg/l in monitoring well SW-03S, using analysis 8270C. Confirmation analysis detected it at 800

µg/l. ESOI must revise the permit to include an appropriate comparison standard for 1,4-dioxane when it is analyzed for using analysis method 8270C. ESOI must also put monitoring well SW-03S on the affected well list with 1,4-dioxane listed as an elevated constituent or submit a false positive demonstration in accordance with the requirements of OAC Rule 3745-54-98(G)(6).

OAC Rule 3745-54-98(H) requires the owner or operator to submit a permit modification, within ninety (90) days, to make any appropriate changes to the program when it is determined that the detection monitoring program no longer satisfies the requirement of this rule. To meet the requirements of this rule, ESOI must submit the permit modifications discussed above within 90 days.

3. Ohio EPA concurs with the false positive demonstration for dissolved barium at monitoring wells G-01DA and M-18D with the following clarification:

Statistically significant increases in barium concentrations were identified during the April 2007 sampling at monitoring wells G-01DA and M-18D. July 2007 confirmation sampling split samples confirmed the increases at one lab. Since the two separate independent laboratory results had greater than 30% relative percent differences, the single result above the limit is considered confirmation of the increase [Permit Condition K.6(c)]. ESOI's false positive demonstration is based on the fact that analysis results from sampling conducted during the September/October/November 2007 sampling event were below the comparison standard at each well. See the table below:

Well	Comparison Standard	Barium Concentrations µg/l					
		April/May 2007	July 2007		September/October 2007	November 2007	
G-01DA	116	154	140	103	105	<20	<20
M-18D	76.3	79.6	81	57.3	74.3	-	-

Ohio EPA concurs with the demonstration based on the subsequent sampling event results only because the July 2007 split samples did not both confirm the increase and the subsequent sampling supports evaluating the July split sample results as non-confirmation of the statistical increase.

4. Ohio EPA concurs with ESOI's false positive demonstrations for non-hazardous constituents sodium, chloride and fluoride at monitoring wells H-02D, H-04D, M-04D and M-10D, based on no Appendix 98 hazardous constituents being detected.

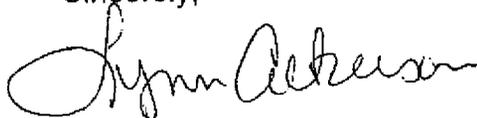
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5. Ohio EPA's record of required actions, actions taken as a result of the April 2007 sampling event, and record of on-going background determinations are listed in Table 1 (enclosed).

Please respond to this letter by submitting the required permit modification request and any other written comments no later than **February 29, 2008**.

If you have any questions, please contact me at (419)373-4113.

Sincerely,



Lynn Ackerson
Environmental Specialist II
Division of Hazardous Waste Management

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Enclosure

pc: Oregon Document Depository
Cindy Lohrbach, DHWM, NWDO
~~DHWM, NWDO File~~ ~~ESOI Ground Water File~~
ec: Lynn Ackerson, DHWM, NWDO
Mike Beal, DDAGW, NWDO
Gary Deutschman, DHWM, NWDO
Michael Terpinski, DHWM, NWDO
Chris Maslo, DHWM, NWDO
Jeremy Carroll, DHWM, CO
Sue Richards, ESOI

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.

Table 1. April 2007 Confirmed Exceedances and Nested and Adjacent Wells Appendix 98(Sept.2007) Sample Results

Well	April 2007 New Confirmed Exceedance	Appendix 98 Sampling to be conducted Sept. 2007		Actions Taken
		Appendix 98 Sampling Constituents Confirmed Above Background	Appendix 98 constituents detected, confirmed & background needs determined	
F-02D	1,1-Dichloroethane	1,1Dichlorethane		Submitted permit modification, dated November 9, 2007, to add well to affected well list 1,1-Dichloroethane to elevated constituent list.
SW-03D	Tetrahydrofuran	Tetrahydrofuran 1,4-Dioxane		Submitted permit modification, dated November 9, 2007, to add well to affected well list and tetrahydrofuran to elevated constituent list.
G-01DA	Chloride Sodium Dissolved Barium	Nickel	Nickel	Determine background for Appendix 98 constituents, due November 29, 2008 [Permit Condition K.6(e)(iii) and K.2(b)(ii) and OAC Rule 3745-54-99(G)]. Demonstration submitted November 29, 2007.
M-18D	Dissolved Barium	None		Demonstration submitted November 29, 2007.
H-02D	Sodium	None		No elevated levels of hazardous constituents detected, no further action required.
H-04D	Chloride	None		No elevated levels of hazardous constituents detected, no further action required.
M-04D	Chloride	None		No elevated levels of hazardous constituents detected, no further action required.
M-10D	Sodium	Fluoride		No elevated levels of hazardous constituents detected, no further action required.
R-09	Nested with F-02D	Total phenols		Permit modification to add constituents to elevated constituent list or submit a false positive demonstration, due 90 days from date of Final Report for October 2007 sampling event.
F-03D	Adjacent to F-02D	None		No elevated levels of hazardous constituents detected, no further action required.
SW-01D	Adjacent to F-02D	None		No elevated levels of hazardous constituents detected, no further action required.
H-02D	Adjacent to SW-03D	None		No elevated levels of hazardous constituents detected, no further action required.
SW-03S	Nested with SW-03D	1,4-Dioxane		Permit modification to add constituents to elevated constituent list or submit a false positive demonstration, due 90 days from date of Final Report for October 2007 sampling event.
G-01SA	Nested With G-01DA	None		No elevated levels of hazardous constituents detected, no further action required.
G-08	Adjacent to G-01DA	None		No elevated levels of hazardous constituents detected, no further action required.
G-09	Adjacent to G-01DA	None		No elevated levels of hazardous constituents detected, no further action required.
R-02	Nested With G-01DA	None		No elevated levels of hazardous constituents detected, no further action required.

Table 1. April 2007 Confirmed Exceedances and Nested and Adjacent Wells Appendix 98(Sept.2007) Sample Results

Well	April 2007 New Confirmed Exceedance	Appendix 98 Sampling to be conducted Sept. 2007		Actions Taken
		Appendix 98 Sampling Constituents Confirmed Above Background	Appendix 98 constituents detected, confirmed & background needs determined	
M-18S	Nested with M-18D	Copper Zinc	Copper Zinc	Determine background for Appendix 98 constituents, due November 29, 2008 [Permit Condition K.6(e)(iii) and K.2(b)(ii) and OAC Rule 3745-54-99(G)].
M-17D	Adjacent to M-18D	Zinc	Zinc	Determine background for Appendix 98 constituents, due November 29, 2008 [Permit Condition K.6(e)(iii) and K.2(b)(ii) and OAC Rule 3745-54-99(G)].
M-19D	Adjacent to M-18D	None		No elevated levels of hazardous constituents detected, no further action required.

Background determinations being conducted:

- R-23 and R-24 collect new well background data by August 1, 2007; permit modification to add elevated constituents or comparison standards to the permit is due November 1, 2007. (Permit condition says to submit limits in the next semi-annual report after collecting data. However, the limits must also be submitted as a permit modification to add the limits to the permit application).
- R-24 permit modification to add comparison standard for zinc or add R-24 to the affected well list with zinc as an elevated constituent, due May 29, 2008.
- G-01DA, M-18S, and M-17D permit modification to add elevated constituents or comparison standards to the permit, due November 29, 2008.

Recommended Permit Modification to delete chloride, sodium, and fluoride as indicator monitoring parameters has no due date.

To-date background has been determined for Appendix 98 total metals at the following wells:

June 30, 2006 – F-02D, F-02S, MR-01SA, MR-02D, MR-02S, MR-03D, MR04S, SW-01S, SW-02S, and SW-03D; and
September 28, 2007 – G-06, H-04D, I-05SA, M-2D, M-20S, MR-4D, and SW-2S.