



State of Ohio Environmental Protection Agency

Northeast District Office

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

April 9, 2007

RE: **MT. EATON LANDFILL
GROUND WATER
NOTICE OF VIOLATION**

Mr. Steve Viny
Norton Environmental Company
6200 Rockside Woods Blvd., Suite 105
Independence, Ohio 44131

Mr. Freeman Mullet
Mount Eaton Reclamation, Inc.
P. O. Box 256
Mount Eaton, OH 44659

Twilight Mining, Inc.
P. O. Box 403
Berlin, OH 44610

Dear Gentlemen:

The Ohio Environmental Protection Agency (Ohio EPA) has completed a review of the Second Semiannual Ground Water Sampling Results and the Semiannual Assessment Activities Report, concerning ground water monitoring activities at the Mt. Eaton Landfill located in Wayne County, Ohio. The document is dated February 26, 2007, was received by Ohio EPA on February 28, 2007, and was prepared by Eagon and Associates, Inc. Mt. Eaton Landfill is subject to operations under the revised 2003 Municipal Solid Waste Rules and is conducting assessment monitoring. The facility no longer accepts waste, and all the wells in the ground water monitoring system are in the assessment monitoring program. The subject document was reviewed for compliance with Ohio Administrative Code (OAC) Rule 3745-27-10(B), (C), and (E).

Ground water samples were analyzed for Appendix I parameters 1-78. One parameter was above its maximum contaminant level (MCL). Monitoring well MW-8D contained bis (2-ethylhexyl) phthalate (DEHP) at 7 ug/L; MCL is 6 ug/L.

Ohio EPA has identified the following violation of Ohio Administrative Code (OAC) Chapter 3745-27-10:

1. **OAC Rule 3745-27-10(C)(10)(a)**: Mt. Eaton Landfill is in violation of this rule, which requires the laboratory data sheets be submitted not later than seventy-five days after sampling the well. The sampling event report did not include the first page of analytical results for monitoring well MW-15R. The missing page should contain the analytical results for alkalinity, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane, field-measured pH, field-measured specific conductance, field-measured temperature, field-measured turbidity, mercury, chloride, sulfate,

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ammonia, nitrate plus nitrite, bis (2-ethylhexyl) phthalate, and di-butyl-phthalate, based on similar pages for other monitoring wells elsewhere in the same report. The owner/operator should send the missing results to Ohio EPA and place a copy in the operating record in accordance with OAC Rule 3745-27-09.

Ohio EPA has identified the following issues that need more information in order to determine compliance:

1. **OAC Rules 3745-27-10(C)(1)(a), (C)(10)(b) and (E)(1):** Compliance with these rules cannot be determined without additional information from the owner/operator that clarifies the source of bis (2-ethylhexyl) phthalate (DEHP) and di-n-butyl-phthalate. These rules require consistent sampling and analysis procedures that ensure monitoring results that provide an accurate representation of the ground water quality; including quality assurance and quality control data (QA/QC) to ensure the integrity of the sampling results and an accompanying narrative discussing these results. Also, these rules require the implementation of a Ground Water Quality Assessment Plan (GWQAP), capable of determining the concentration of waste-derived constituents in the ground water. Provisions to meet these rule requirements are included in Section 7.3.5 of Mt. Eaton Landfill's GWQAP. According to Section 7.3.5, the results may be reviewed by the laboratory when they differ from historical results. It appears the owner/operator should have implemented Section 7.3.5 and discussed the results in the Case Narrative, because these compounds were detected in all monitoring well samples, surface water samples, duplicate samples and the equipment blank at a concentration equal to the method detection limit with one exception (where DEHP was above the MCL at MW-8D). Instead, the Case Narrative is without any discussion of the DEHP and di-n-butyl-phthalate results, except for stating, "*no problems were encountered during analysis of this work order.*"

The owner/operator and the laboratory should determine if these compounds are present in the ground water beneath the site or resulted from sampling or analytical error. The owner/operator could have addressed this issue in the sampling event report by analyzing the trip blank for these compounds to show whether the contamination is from the laboratory's containers; reporting the QA/QC results at a lower concentration to show whether the contamination is from a laboratory error, such as a laboratory contaminate; and discussing these results in the sampling event report.

2. **OAC Rules 3745-27-10(C)(1)(a), (C)(2)(c)(i), (C)(2)(c)(ii) and (E)(4)(d):** Compliance with these rules cannot be determined, until it is clear whether well MW-21D can be sampled, using a more conventional 'minimum/no purge' sampling method. The sampling procedure designed and used for monitoring

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well MW-21D is inconsistent with the various literature regarding ground water sampling, including Ohio EPA's Technical Guidance Manual for Hydrogeologic Investigations and Ground Water Monitoring (TGM; Revision 1, dated February 2006, Chapter 10, p. 32-33). Well MW-21D was sampled, using a dedicated bailer and without purging the well, during the Second 2006 Semiannual Sampling Event. This method is 'a no purge or passive sampling technique,' according to the Ground Water Quality Assessment Monitoring Plan (GWQAMP; p. 7-5). The American Society for Testing and Materials (ASTM D4448-01) and Powell and Puls (no date) recommend using bladder and low-flow submersible pumps for minimum/no purge sampling, whereas bailers, inertial lift samplers and peristaltic pumps should not be used. The minimum/no purge sampling method involves removing the least possible volume of water prior to sample collection. The purge volume is generally limited to the volume of the sampling system, i.e., pump and discharge tubing. A sample is collected immediately after this volume is withdrawn from the well. It may be necessary to discontinue the sampling once allowable drawdown is reached, if available water is insufficient to meet the sample volume requirements. Sample collection should proceed when the well has recharged sufficiently to meet the remaining sampling requirements.

The owner/operator should show whether the pumping method, standard for minimum/no purge sampling, can be used to sample well MW-21D, in order to determine compliance with these rules. The GWQAMP should include the equipment, procedures and techniques for evacuating the well and removing the ground water samples from the well. These procedures should be designed to ensure monitoring results that provide an accurate representation of ground water quality, according to these rules. The GWQAMP will need to be revised to include this information.

3. **OAC Rules 3745-27-10(B)(3)(e) and (C)(1)**: Compliance with these rules cannot be determined at this time without additional information from the owner/operator, regarding the elevated turbidity at the uppermost aquifer (UAS) background well, MW-24R. The well was bailed dry and sampled approximately 22 hours later with turbidity measuring 459 Nephelometric Turbidity Units (NTU). Turbidity is usually significantly lower (less than 100 NTU) at this well (Table 1). Relatively high or erratic turbidity measurements may indicate inadequate well construction, development or improper sampling procedures, such as purging at an excessive rate that exceeds the well yield (Puls and Powell, 1992; and Paul et. al., 1988).

The well should be maintained to perform to design specifications throughout the life of the monitoring program, while sampling procedures should be consistent and designed to provide an accurate representation of ground water quality, according to these rules. The well may need to be redeveloped, and/or sampling methods need to be changed, in order for the well to yield less turbid ground

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water samples that are representative of the actual ground water quality at the background location. Furthermore, the owner/operator is reminded to comply with OAC Rule 3745-27-10(C)(7)(g) prior to adding to the background data set of MW-24R.

Table 1: The UAS background well, MW-24R, was installed in August 2003. Historically, the well has yielded ground water samples with low turbidity. A sample exhibiting high turbidity may indicate that the results of the other ground water constituents, particularly the metals and volatile organic compounds (VOC), may be unrepresentative of ground water quality. Total depth measurements from the top of the well casing suggest a 2.5 inch thick accumulation of sediment settled to the bottom of this well.

Date Sampled	Turbidity (NTU)	Total Well Depth (feet)
Sept. 2, 2003	35.1	49.87
Sept. 17, 2003	10	-
Oct. 7, 2003	161	-
Feb. 3, 2004	20	-
Feb. 12, 2004	15	-
March 27, 2004	3.7	-
June 27, 2004	5.4	-
Aug. 12, 2004	10	-
Sept. 1, 2004 (see footnote1)	711	-
Dec. 14, 2004	120	-
June 13, 2005	36.4	-
Dec. 13, 2005	72.3	-
June 6, 2006	13.7	-
Dec. 16, 2006	459	49.66

- In the past, MW-21D was bailed dry, using volumetric sampling methods, but the well recovered too slowly for adequate sampling. The ground water consultant and Ohio EPA discussed this problem in e-mails dated June 7 and 8, 2006. It is Ohio EPA's understanding from these correspondences that the consultant would try sampling MW-21D, using a pump and conventional minimum/no purge sampling methods, during the Second 2006 Semiannual Sampling Event. The

¹ The September 1, 2004, measurement of 711 NTUs is addressed in a separate letter.

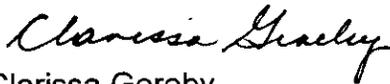
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owner/operator was informed in a letter, dated September 28, 2006, of this information, while being referred to the TGM for additional information about this sampling method, prior to the Second 2006 Semiannual Sampling Event.

Please submit a response within thirty (30) days of the receipt of this correspondence. If you have any questions regarding this review please contact me at (330) 963-1224. Please submit all correspondence to my attention at the Ohio EPA Northeast District Office, 2110 East Aurora Road, Twinsburg, Ohio 44087.

Nothing in this letter shall be construed to authorize any waiver from the requirements of any applicable state or federal laws or regulations. This letter shall not be interpreted to release the Entity from responsibility under Chapters 3704, 3714, 3734, or 6111 of the Ohio Revised Code or under the Federal Clean Water or Comprehensive Environmental Response, Compensation, and Liability Acts for remedying conditions resulting from any release of contaminants to the environment.

Sincerely,



Clarissa Gereby
Environmental Specialist
Division of Solid & Infectious Waste Management

CG:cl

cc: John Cayton, AGO
Nicholas Bryan, AGO
Ken Eng, Wayne County Health Department
Judy Bowman, DSIWM, NEDO
John Logsdon, Mt. Eaton Landfill
Bruce McCoy, DSIWM, CO
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