

OHIO E.P.A.
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**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY**

ENTERED DIRECTOR'S JOURNAL

In the Matter Of:

Republic Services of Ohio II, LLC
dba Countywide Recycling and
Disposal Facility
110 S.E. 6th Street
Ft. Lauderdale, FL 33301

Director's Final Findings
and Orders

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

Respondent

By: *M. Paul Shapiro* Date: 11/07/07

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to Republic Services of Ohio II, LLC, dba Countywide Recycling and Disposal Facility ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code Sections 3734.13 and pursuant to Section V. Paragraph 9 of the March 28, 2007 Director's Final Findings and Orders.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent and its successors in interest liable under Ohio law. No change in ownership of Respondent or of the Facility (as hereinafter defined) shall in any way alter Respondent's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapters 3734 and the rules promulgated thereunder.

- A. The term "explosive gas extraction well" (EGEW) shall mean any well or any other engineered structure installed within the waste mass that is capable of transmitting or collecting landfill gas.
- B. The term "explosive gas extraction system" (EGES) shall mean Respondent's network of EGEWs connected in series to a blower unit that transmits landfill gas to a flare for thermal destruction.

IV. FINDINGS

The Director of Ohio EPA has determined the following findings:

General Findings.

1. Countywide Recycling and Disposal Facility ("Facility") is located at 3619 Gracemont Street SE, East Sparta, Stark Countywide, Ohio.
2. Respondent is the "owner" and "operator of the Facility as those terms are defined in Ohio Administrative Code ("OAC") Rule 3745-27-01(O)(7) and (O)(5), respectively, and is also the license holder for the Facility.
3. The Facility is a "sanitary landfill facility" as that term is defined under OAC Rule 3745-27-01(S)(4) and is authorized to accept "solid waste" as that term is defined under ORC Section 3734.01(E) and OAC Rule 3745-27-01(S)(24). On June 2, 2003 the Director issued to Respondent an expansion permit to install #02-14796.
4. Respondent is a "person" as that term is defined in ORC Section 3734.01(G) and in OAC Rule 3745-27-01(P)(3).
5. The Facility is a "municipal solid waste landfill" or "MSW landfill" as defined in 40 CFR 60.751. The Facility is an "air contaminant source" as defined in OAC Rules 3745-31-01(I) and 3745-15-01(C) and (W). The Facility is subject to the requirements of permit to install modification #15-01391 issued by the Director to Respondent on May 10, 2005, and a Title V operating permit issued by the Director to Respondent on August 30, 2004. Respondent is the permittee, under, and permit holder of, those permits.
6. Ohio EPA issued Director's Final Findings and Orders to Respondent on March 28, 2007 (March 2007 Orders). The March 2007 Orders required Respondent to complete certain actions to control a subsurface fire and offensive odors coming from the Facility. Pursuant to Section V. Paragraph 9 of the March 2007 Orders, the Director may select "a remedial action, or any combination of remedial actions" to extinguish the subsurface fire at the Facility. Pursuant to Section XVII. of the March 2007 Orders, Respondent waived "the right to appeal the issuance, terms and conditions, and service of the (March 2007) Orders, including but not limited to any rights" it may have to appeal "final actions issued by Ohio EPA pursuant to these (March 2007) Orders" selecting remedial actions.
7. On October 1, 2007, the Director of Ohio EPA selected an interim remedial action consisting of a fire break between Cells 8(A) and 8(B) at the Facility. The purpose of that remedial action was to cut off the potential spread of the fire at the Facility and thus limit the area of concern for purposes of subsequent remedial actions aimed at extinguishing the fire. The Orders being issued today contain the first in what will be a series of remedial actions aimed at extinguishing the fire at the

Facility. These Orders are specifically designed to reduce liquid in the EGEWs and the waste mass that is contributing to the rapid oxidation of the aluminum production waste and releasing significant amounts of heat.

Data Collection and Partial Analysis under the March 2007 Orders.

8. Since April 1, 2007, Respondent has been collecting data throughout the Facility pursuant to the March 2007 Orders. This data is designed to determine the rate and extent of the fire, monitor changes in the landfill conditions and assist in the selection of appropriate remedial actions to extinguish the fire at the Facility.
9. Data reveals that the Facility's explosive gas extraction wells contain excessive levels of liquid which is preventing the explosive gas extraction system from functioning at peak efficiency. This may be contributing to continued nuisance odors and the release of explosive gas constituents.

In addition, this data reveals that the level of liquid in the explosive gas extraction wells as well as head pressures within the leachate collection system indicates the overall liquid content of the waste mass remains high. This high liquid content within the waste has a direct effect on overall slope stability. Furthermore, the liquid continues to accelerate the exothermic breakdown of the aluminum production waste (dross, salt cake, and bag house dust) with liquid.

10. The following explosive gas extraction wells have been impacted by liquid as reported in Respondent's vertical temperature profile data collected under the March 2007 Orders:

PW-A1R, B2, B2R, W1R, PW-14R2(M), PW-14R(3), PW-30R, PW-31R, PW-41R(2), W-42(R), PW-43R(M), PW-43R(2), PW-56R(2), PW-56R(3), PW-57R, PW-57R(2), PW-62R(2), PW-104, PW-105, PW-108, PW-115, PW-117, PW-118, PW-119, PW-120, PW-121R, PW-122R, PW-123, PW-124, PW-126, PW-132, PW-142, PW-147, PW-148, PW-149, PW-150, PW-151, PW-152, PW-153, PW-155, and PW-106R.

11. On October 23, 2007, Ohio EPA Northeast District Office received an alteration request from Respondent to install a 500,000 gallon on-site leachate storage tank.
12. As a result of data analysis, Ohio EPA and its experts have observed indicators of excessive hydraulic head pressure on the liner in certain areas of the Facility.
13. Respondent has indicated to Ohio EPA and its experts that the Facility's leachate collection system is connected to Respondent's explosive gas extraction system which is extracting explosive gas from the leachate collection system, thereby reducing gas pressure from within the leachate collection system.

14. Respondent's monthly explosive gas monitoring results submitted to Ohio EPA have shown exceedances of the designated explosive gas threshold limits in at least five (5) permanent monitoring probes located outside of the limits of waste placement.

Remedial Actions Designed to Control the Dross Reaction.

15. In light of data collected regarding the excessive levels of leachate in the explosive gas extraction wells and its affect on efforts to extinguish the fire at the Facility, Ohio EPA considered the following remedial alternatives:
 - A. No action.
 - B. Control the dross reaction by dewatering the Facility, including the Facility's explosive gas extraction wells and leachate collection system, evaluating the effectiveness of each system, and placing extracted liquid in a leachate storage vessel prior to appropriate disposal off-site.
 - C. Control the dross reaction by dewatering the Facility, including the Facility's explosive gas extraction wells and leachate collection system, evaluating the effectiveness of each system, and treating extracted liquid in a mobile leachate pretreatment system prior to appropriate disposal off-site.
 - D. Control the dross reaction by deploying additional cap material to reduce liquid in the landfill by preventing further surface water infiltration.
16. After considering the available alternatives to address the presence of excessive liquid in the explosive gas extraction wells, and the effect that liquid is having on efforts to extinguish the fire at the Facility, the Director has decided to select the remedial action of dewatering the Facility and placing the extracted liquid in a leachate storage vessel prior to appropriate off-site disposal.
17. In consideration of the no action alternative, the Director did not select this option because the data collected to date by Respondent pursuant to the March 2007 Orders indicates that this situation has not corrected itself and is unlikely to correct itself without more action specifically designed to redress the situation.
18. Ohio EPA has considered alternatives to the requirement to install an on-site leachate storage vessel. One such alternative is to utilize a mobile leachate pretreatment system. Ohio EPA finds that requiring a mobile on-site leachate pretreatment system is premature at this time. However, should excessive leachate storage and leachate disposal present an obstacle to appropriate leachate management, Ohio EPA will consider requiring leachate pretreatment as a potential remedial option in the future. Nothing in these Orders shall preclude Respondent from pursuing on-site leachate pretreatment as a leachate management option; however, at this time, requiring pretreatment is premature and not the most expedient or effective option.
19. Ohio EPA has considered alternatives to dewatering the Facility. One such alternative includes deployment of additional cap material to prevent additional

surface water infiltration. Ohio EPA finds that the affected explosive gas extraction wells are located in areas where a temporary flexible membrane liner is functioning to restrict infiltration of liquid and the Respondent has previously deployed an interim soil cover. Ohio EPA does not find that the excessive liquid levels in the explosive gas extraction wells to be the result of surface infiltration. However, the actions required by these Orders will provide further insight as to the source of the additional liquid in the explosive gas extraction wells and the ability of the leachate collection system to function properly.

20. Ohio EPA finds that dewatering the individual explosive gas extraction wells will be the most expedient method to allow the explosive gas extraction system to operate at peak efficiency, thereby controlling nuisance odors.
21. In light of the data indicating excessive head pressure on the liner in certain areas of the Facility, Ohio EPA is also requiring as an interim remedial action that Respondent measure and to ensure the effectiveness of the EGES and the leachate collection system within the entire area of waste placement in all constructed Facility Cells except for Cell 8(B). Ohio EPA finds that redundant liquid head measuring techniques will allow for more accurate indicators of leachate levels within the leachate collection system.
22. The work required by these Orders should provide further insight as to ability of the leachate collection system to function properly.

V. ORDERS

Pursuant to Section V., Paragraph 9. of the March 28, 2007 Director's Final Findings and Orders, the Director of Ohio EPA hereby requires Respondent take the following actions to dewater the Facility, and measure and ensure the effectiveness of the EGES and the leachate collection system within the entire waste placement area, in all currently constructed Facility Cells other than Cell 8(B):

Explosive Gas Extraction System

1. Not later than 5 days after the effective date of these Orders, and continuing monthly thereafter, Respondent shall identify and provide a list to Ohio EPA of all individual EGEWs that, as of the effective date of these Orders, exhibit greater than 1 foot of liquid within the EGEWs.
2. Not later than 30 days after the effective date of these Orders, Respondent shall install dewatering pumps within all EGEWs identified in Order No. 1. above. At a minimum, Respondent shall operate the dewatering pumps in accordance with the criteria identified in Orders No. 3 and 5. In addition, each month Respondent shall obtain a sample of the liquid contained within each EGEW identified in Order No. 1 above and shall monthly analyze the chemical composition of the liquid in each such EGEW for the following parameters:

- A. Hexylene Glycol, Ethylene Glycol Monobutyl Ether, Diethylene Glycol Monobutyl Ether, Dipropylene Glycol Monomethyl Ether, Propylene Glycol (1,2-Propanediol) using EPA Method 8015;
- B. Anionic Surfactants as Methyl Blue Active Substances (MBAS) using EPA Method 5540; and
- C. All analytes identified in OAC Rule 3745-27-10 Appendix I, aluminum, fluoride, and any additional VOCs detected by EPA Method 8260.

Respondent shall provide Ohio EPA 3 days advance notice of any anticipated sampling, as well as allow Ohio EPA personnel to be present during the sampling to obtain split samples. Respondent shall provide the analytical results required by this Order to Ohio EPA within 35 days after the sampling event.

3. Not later than 30 days after the effective date of these Orders, Respondent shall fit each EGEW in the EGES with a gas flow meter. Respondent shall obtain a baseline measure of flow for each EGEW. If an EGEW has any liquid in the perforated interval, the EGEW must be dewatered so that there is no standing liquid in the EGEW before a baseline measure of flow is obtained. Respondent shall also obtain a vertical temperature profile of each EGEW, consistent with the methodologies used in Section V., Order No. 4.A.7. of the March Orders, during the baseline data collection activities. Baseline measures of flow and vertical temperature profiles shall be provided to Ohio EPA within 35 days after the sampling event.
4. For any EGEWs identified in Order No. 1, after obtaining a baseline measure of flow and vertical temperature profile readings, Respondent shall continue to conduct monthly vertical temperature profile analysis and report the data to Ohio EPA within 35 days after the sampling event.
5. Beginning 31 days after the effective date of these Orders, Respondent shall measure explosive gas flow monthly for each EGEW within the EGES. Upon discovery of a decrease in EGEW flow by 25%, Respondent shall, within 3 days after discovery, evaluate the EGEW to ensure it is free of liquid or obstructions. Respondent shall take appropriate corrective actions to repair any obstructions following written approval by Ohio EPA. If liquid is present in the EGEW, Respondent shall begin dewatering the impacted EGEW within 24 hours after the discovery of the presence of liquid. All liquid pumped from EGEWs must be pumped into an on-site leachate storage vessel. Respondent shall continue to comply with this Order by measuring flow and pumping liquid from EGEWs until the March 2007 Orders are terminated.
6. Upon the effective date of these Orders, Respondent shall conduct an evaluation of the EGES, including an investigation of the integrity of the EGEWs, efficiency of the EGES, and evaluation as to the need for additional EGEWs to be installed within or added to the EGES.

7. Not later than 30 days after the effective date of these Orders, Respondent shall submit a report to Ohio EPA detailing the findings in Order No. 6 above. If it is determined that there is a need for new EGEWs, Respondent shall, within 15 days after installation of the new EGEWs, comply with the substantive requirements of Orders No. 3 and 5 above. Respondent's report required by this Order shall be written and signed by a Professional Engineer registered in the State of Ohio.
8. Not later than 30 days after the effective date of these Orders, Respondent shall install soil gas survey monitoring probes, beginning at the haul road at the toe of the South Slope at approximately E: 43,500, and place one every 100 feet to E: 42,500, for a total of 11 probes. The probes shall be placed along the South Slope, and parallel to the soil buttress on the South Slope not more than 10 feet outside the limits of waste placement and the geosynthetic anchor trench, North of the gravel ditch, unless otherwise authorized in writing by Ohio EPA's DSIWM Enforcement Coordinator. The soil gas survey monitoring probes shall extend 30 feet vertically, and shall be screened no more than two feet below the surface and throughout the extent of the probe. Ohio EPA concurs with the use of direct push technology to determine the optimum placement of permanent monitoring points.
9. Beginning 31 days after the effective date of these Orders, and continuing monthly thereafter until the March 2007 Orders are terminated, Respondent shall sample the soil gas survey monitoring probes required by Order No. 8 above for methane, hydrogen, carbon monoxide, and carbon dioxide, as well as the chemicals identified in Order No. 4.A. 8 of the March 2007 Orders, and report the resultant data to Ohio EPA within 35 days after the sampling event.
10. Not later than 60 days after the effective date of these Orders, Respondent shall submit a report to Ohio EPA detailing the causes of any explosive gas migration outside of the limits of waste placement. This report shall be submitted as an Addendum to Respondent's ECES and shall include the results of findings associated with the requirements of Order No. 9 above, as well as an explanation of the results identified in Finding No. 14. Respondent's report required by this Order shall be written and signed by a Professional Engineer registered in the State of Ohio.

Leachate Collection System

11. Upon the effective date of these Orders, Respondent shall utilize redundant confirmation methodologies to measure the depth of liquid within the Facility's leachate collection system at various points. If either method indicates a liquid level greater than one foot, Respondent shall pump the liquid out of the landfill until no more than one foot of liquid head remains on the liner. If any method is believed to be providing a faulty reading, Respondent shall, not later than 3 days after the faulty reading, provide Ohio EPA a written explanation of the error and any actions to be

taken to prevent another faulty reading. This explanation must be in writing written and signed by a Professional Engineer registered in the State of Ohio.

12. Upon the effective date of these Orders, Respondent shall conduct a focused leachate collection system investigation that evaluates the effect of slope movement, temperature, pressures, and other relevant effects on all leachate collection system components, including pipes and drainage media. This investigation shall focus particular attention to the failed South Slope and impacted area, leachate collection pipe 3A, as well as the cells that have experienced high temperatures and contain a tire chip drainage layer.
13. Not later than 30 days after the effective date of these Orders, Respondent shall submit a report as an addendum to Respondent's ECES to Ohio EPA detailing the findings of the leachate collection system investigation described in Order No. 12 above. If any component of the leachate collection system cannot be investigated, or is determined to be damaged or compromised, Respondent must provide Ohio EPA with a written explanation detailing why a component cannot be investigated, the cause of the damage, and any corrective action Respondent intends to initiate. This addendum shall be completed and sealed by a Professional Engineer registered in the State of Ohio.
14. Not later than 30 days after the effective date of these Orders, Respondent shall submit to Ohio EPA the necessary authorizations to install or construct permanent on-site leachate storage vessels that no more than double the current on-site storage capacity. Upon approval from Ohio EPA, Respondent shall commence construction or placement of these storage vessels. Respondent's leachate storage system must include a secondary safety containment system, including a concrete slab capable of containing a 10% volume release. Respondent shall cease its current use of mobile storage units upon completion of the construction or installation of the permanent on-site leachate storage vessels.
15. Unless otherwise specified, Respondent shall provide Ohio EPA at least 7 days notice prior to any field or sampling activity under taken as required pursuant to these Orders.

VI. TERMINATION

Respondent's obligations under these Orders shall terminate upon written notice of the Director of Ohio EPA.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to, Respondent's Facility.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent or the Facility.

Where any portion of the work required by these Orders requires a permit or approval, Respondent shall timely submit applications and take all other actions necessary to obtain such permits or approvals. Except as expressly provided herein, these Orders are not, and shall not be construed to be, a permit, exemption or variance issued pursuant to any statute or rule.

IX. NOTICE

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency
Central Office
Division of Solid and Infectious Waste Management
Attn: DSIWM Enforcement Coordinator
PO Box 1049
Columbus, Ohio 43216-1049

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

X. RESERVATION OF RIGHTS

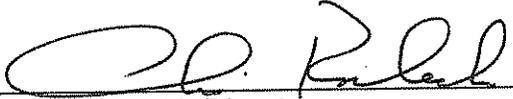
Nothing contained herein shall be construed to prevent Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal or equitable action as deemed appropriate and necessary, including seeking penalties against Respondent for noncompliance with these Orders. Nothing contained herein shall be construed to prevent Ohio EPA from exercising its lawful authority to require Respondent to perform additional activities pursuant to the March 2007 Orders, ORC Chapters 3734, 3704, or any other applicable law in the future.

XI. EFFECTIVE DATE

The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

IT IS SO ORDERED:

Ohio Environmental Protection Agency



Chris Korleski, Director