



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

December 29, 2014

Brad White
Urban Renewables II, LLC
6397 Emerald Parway, Suite 200
Dublin, Ohio 43016

**Re: UR II Rittman Facility
Non-permit Related Exemptions
Approval
Residual Solid Waste Landfills
Wayne County
RSWL018763**

Subject: Urban Renewables II, LLC – Exemption Findings and Orders

Dear Brad White:

Transmitted herewith are the Final Findings and Orders of the Director concerning the matter indicated for Urban Renewables II, LLC.

If you have any questions, please contact Jeff Hurdley at (614) 644-3037.

Sincerely,

A handwritten signature in black ink that reads "Demetria Crumiell-Hagens". The signature is written in a cursive, flowing style.

Demetria Crumiell-Hagens, Administrative Professional II
Division of Materials & Waste Management

Enclosure

cc: Jeremy Carroll, DMWM, CO
Scott Hester, DMWM, CO
Brad Mitchell, DMWM, CO
Jeff Hurdley, Legal
Bruce McCoy, DMWM, CO
Natalie Oryshkewych, DMWM, NEDO

**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY**

In the Matter of:

Urban Renewables II, LLC
6397 Emerald Parkway, Suite 200
Dublin, Ohio 43016

Director's Final Findings
and Orders

Respondent

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to Urban Renewables II, LLC ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") Sections 3734.02(G), 3734.13(A), and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent and its successors in interest liable under Ohio law. Respondent shall maintain and preserve its existence and all material rights, privileges and franchises necessary in the normal conduct of business. Respondent shall notify Ohio EPA in writing within 60 days after any change in its name or places of business or chief executive office or member, or change in the type of business organization. No change in ownership of Respondent or of the Facility (as hereunder 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 3746 and the rules promulgated thereunder.

“VAP Property” shall mean all or part of the property located at 100 Industrial Avenue, Rittman, Wayne County, Ohio. And, at a minimum, must include all of the property which lies within the limits of waste placement identified in Permit to Install #02-5056, issued for the Rittman Paperboard Residual Waste Landfill.

IV. FINDINGS

The Director of Ohio EPA has determined the following findings:

1. Rittman Paperboard Class III Residual Waste Landfill (the “Facility”) is located at 100 Industrial Avenue, in Rittman, Wayne County, Ohio.
2. Respondent, Urban Renewables II, LLC (“Urban Renewables”), is the current “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. On September 12, 2013, the Wayne County Health Department approved the transfer of the Residual Solid Waste Landfill Facility license for the Facility from Rittman Paperboard, Carastar Mill Group, Inc. (OEPA CID#44595) to Urban Renewables, and on September 26, 2013 Ohio EPA gave final approval to the license transfer.
4. The Facility is a “residual waste landfill facility” as that term is defined under OAC Rule 3745-30-01(C) and is authorized to accept “residual waste” as that term is defined under OAC Rule 3745-30-01(B)(3). The landfill permit to install (“PTI”) #02-5056 was issued on June 4, 1997. The Facility consists of approximately 30 permitted acres of waste placement, of which, approximately 20 acres contain waste. The Facility is a part of a 330 acre property (the “Site”) consisting of the Facility, the former Rittman Paperboard plant, the Northern Lagoons, and the Salt Street Impoundments.
5. Urban Renewables has represented to Ohio EPA that it intends to redevelop the Site for commercial or industrial use. The residual solid waste landfill rules do not contemplate closure of the Facility in the context of redevelopment of the Facility.
6. Respondent is a “person” as that term is defined in ORC Section 3734.01(G) and OAC Rule 3745-27-01(P)(3).
7. On October 8, 2013 Urban Renewables submitted a report to Ohio EPA entitled “*Site Investigation Activities Completed for the Rittman Paperboard Site to Support Proposed Modifications*” (the Urban Renewables Investigation Report”). The data included a surface water and sediment characterization of the lagoons on the Site; characterization of

the physical and chemical composition of the paper waste/sludge waste and exempt waste placed in the Facility, including a hydraulic evaluation of the Facility; a comparison of the quality of the groundwater in the shallow saturated zone under the Facility to the quality of the leachate generated by the Facility; and, a surface water evaluation of the River Styx.

8. Based on the October 8, 2013 submittal, Urban Renewables and its environmental consultant, Hull & Associates, Inc., have represented to Ohio EPA: that the materials encountered during the exploratory boring installation in the Facility were consistent with the materials documented by the 1997 PTI and other data sources; the stratigraphic sequence of materials encountered in the exploratory borings, from top to base, include: paper waste/sludge, cinders/fly ash (exempt material), sludge material (where present), and a low permeability clayey soil unit; the paper waste/sludge waste is generally non-toxic based on the results of multiple years of waste characterization and leachate quality data, and is a very low-permeability material with a high attenuation capacity; a thick, very low-permeability clayey soil unit, also having a high attenuation capacity, underlies the Facility and minimizes the potential vertical migration of potential constituents from the historical fill material to the regional aquifer; and that based on these combined circumstances, the fill presents an insignificant risk to the environment.
9. Pursuant to the Ohio Voluntary Action Program (“VAP”), ORC Chapter 3746, following review of a No Further Action letter (“NFA”) submitted to Ohio EPA by a “Certified Professional” as that term is defined in ORC Section 3746.01(F), and the Director’s determination that the site meets “applicable standards” as that term is defined in ORC Section 3746.01(C), the Director may issue a “covenant not to sue” (“CNS”) pursuant to ORC Section 3746.12 for the property.
10. Based upon the Urban Renewables Investigation Report, Urban Renewables has indicated to Ohio EPA that it intends to participate in the VAP with regard to any “Hazardous Substances”, as that term is defined in ORC Section 3746.01(I), associated with the Facility. The VAP rules were designed for reuse and redevelopment of contaminated property. Closure of the Facility in the VAP and under the work required by these Orders will provide the regulatory flexibility to both protect public health and the environment and redevelop and reuse the Facility.
11. Urban Renewables and Hull & Associates, Inc. have represented to Ohio EPA that no “waste-derived constituents,” as that phrase is used in OAC Rule 3745-30-08, from the Facility have entered the ground water. Further, they have represented that it is unlikely that any such waste-derived constituents from the Facility will enter the ground water because of the low permeability clayey soil unit that underlies the Facility and because Urban Renewables intends to cover the Facility to reduce the infiltration of surface water into the Facility. Nonetheless, Urban Renewables has represented to Ohio EPA that it is prepared to establish and maintain an account and subsequently transfer \$800,000.00 into that account to address any environmental issues associated with the Facility.

12. Notwithstanding the representations made by Urban Renewables as set forth in the Findings of Fact of these Orders, in a letter dated September 23, 2013, Ohio EPA informed Urban Renewables that the existing ground water monitoring system for the Facility, including all existing ground water monitoring wells, has been compromised and no longer yields samples that are representative of ground water quality. However, the work required by these Orders is designed to assess and address any potential adverse effect to public health or safety of the environment related to the Facility.
13. Pursuant to ORC Section 3734.02(G), the Director may, by order, "exempt any person generating, collecting, storing, treating, disposing of, or transporting solid wastes...under such circumstances that, in the determination of the director are unlikely to adversely affect the public health or safety of the environment from any requirement ... of this chapter."
14. Urban Renewables has requested an exemption from the closure, post-closure care and financial assurance requirements of ORC Chapter 3734 and OAC Chapters 3745-27 and 3745-30 in light of: the likelihood that no release of waste-derived constituents from the Facility will occur because of the low permeability clayey soil unit that underlies the Facility; because Urban Renewables intends to cover the Facility to reduce the infiltration of surface water into the Facility; and because Urban Renewables' intention to establish and maintain an account and subsequently transfer \$800,000.00 into that account to address any environmental issues associated with the Facility.
15. The Director finds that granting Respondent an exemption pursuant to ORC Section 3734.02(G) from the closure, post-closure care and financial assurance requirements of ORC Chapter 3734 and OAC Chapters 3745-27 and 3745-30, as described in Section V. of these Orders, is unlikely to adversely affect the public health or safety or the environment, provided Urban Renewables complies with these Orders and meets VAP applicable standards for Hazardous Substances at the Facility as documented in an NFA letter.

V. ORDERS

Respondent shall perform the following measures to maintain compliance with and prevent a violation of Chapter 3734 of the Revised Code and the rules promulgated thereunder:

1. Except as provided herein, Respondent is hereby exempted from the closure, post-closure care and financial assurance requirements of ORC Chapter 3734 and OAC Chapters 3745-27 and 3745-30 with respect to the Facility, provided that Respondent complies with the requirements of these Orders.
2. Not later than thirty days after the effective date of these Orders, Respondent shall develop an Investigation and Remediation Plan (the "Plan") to identify and address the potential for adverse effects from non-hazardous constituents from the Facility. Respondent shall develop and implement the Plan in accordance with the requirements of Appendix A, which is attached hereto and incorporated herein.

3. Respondent shall submit to Ohio EPA an Adverse Effects Compliance Report, which identifies the non-hazardous constituents from the Facility, details the investigation and remediation of the non-hazardous constituents from the Facility, and describes how the standards and requirements of Appendix A of these Orders were met. Respondent shall ensure that the Facility does not become a nuisance and that any release of waste-derived constituents from the Facility is abated and remediated, and addressed in accordance with the requirements of Appendix A.
4. No later than fourteen days after the effective date of these Orders, Respondent shall establish a trust fund (the "Urban Renewables Trust Fund") which meets the requirements of a "closure trust fund" established pursuant to OAC Rule 3745-27-15(F), 3745-27-16(F) and 3745-27-17. Respondent shall maintain the Urban Renewables Trust Fund until such time as Respondent implements an Operation and Maintenance Plan ("O&M Plan") as defined in OAC Rule 3745-300-01(A)(88) and obtains written agreement from the Trustee and the Director of Ohio EPA to terminate the Urban Renewables Trust Fund. The Urban Renewables Trust Fund shall initially be funded in the amount of \$800,000.00. No later than thirty days after the effective date of these Orders, Respondent shall immediately transfer \$800,000.00 into the Urban Renewables Trust Fund. Funds may be disbursed from the Urban Renewables Trust Fund as directed by the Director of Ohio EPA in his sole discretion and as follows:
 - a. Respondent may request reimbursement for the cost of work performed in accordance with the requirements of Paragraph 2, Section V, of these Orders up to \$500,000.00 except that no reimbursement shall be provided until the Director is satisfied that the ground water monitoring system for the Facility meets the requirements of Appendix A of these Orders. Respondent may open a VAP technical assistance account to determine the adequacy of the work performed pursuant to Paragraph 2, Section V, of these Orders in order to qualify work done for reimbursement; and
 - b. The Director may draw on the funds in the Urban Renewables Trust Fund to address circumstances or conditions arising from or related to the Facility, upon any noncompliance with these Orders by Respondent, upon the release of any waste-derived constituents from the Facility, or to the extent that the Facility becomes a nuisance.
5. To the extent that the Facility becomes a nuisance or there is a release of waste-derived constituents from the Facility that is not abated and remediated and addressed in accordance with the requirements of Appendix A of these Orders, the exemption from the closure, post closure care and financial assurance requirements of ORC Chapter 3734 and OAC Chapters 3745-27 and 3745-30 shall immediately expire and Respondent, and any and all successors in interest to the Site, shall be jointly and severally liable for such conditions, and shall address, abate and remediate the nuisance conditions and the release of waste-derived constituents from the Facility in accordance with: ORC Chapter 3734 and OAC Chapters 3745-27 and 3745-30; ORC Chapter 6111 and the rules promulgated thereunder; and any other applicable law.

6. Nothing herein shall be construed to release Respondent, any successors in interest to the Site, or any other person from the requirements of ORC Section 3734.02(H) and OAC Rule 3745-27-13 with respect to the Facility unless otherwise provided by the Director of Ohio EPA.

VI. TERMINATION

The exemption from the closure, post closure care and financial assurance requirements of ORC Chapter 3734 and OAC Chapters 3745-27 and 3745-30 provided herein shall immediately expire if:

1. Respondent has not obtained a CNS for the Facility before January 1, 2018;
2. Respondent or any successors in interest to the Site fail to maintain compliance with these Orders; or
3. The Facility becomes a nuisance; or
4. There is a release of waste-derived constituents from the Facility that is not addressed in accordance with the requirements of Section V of these Orders.

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. APPLICABLE LAW

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.

These Orders and the rights and obligations of Ohio EPA and Respondent shall be governed by, and construed in accordance with, the laws of the State of Ohio without reference to principles of conflicts of laws.

IX. INDEMNIFICATION

Respondent agrees to indemnify, save, and hold harmless Ohio EPA from any and all claims or causes of action arising from, or related to, any acts or omission of Respondent or Ohio EPA, its officers, employees, agents, representatives, or assigns, arising from or related to the Facility or

the work required under these Orders. Ohio EPA agrees to provide notice to the Respondent within 30 days after receipt of any claim which may be the subject of indemnity as provided in this Section, and to cooperate with Respondent in the defense of any such claim or action against Ohio EPA. Ohio EPA shall not be considered a party to and shall not be held liable under any contract entered into by Respondent in carrying out the activities pursuant to these Orders.

X. ACCESS

Ohio EPA shall have access at all reasonable times, including during business hours, to the Facility and any other property to which access is required for the implementation of these Orders, to the extent access to the property is controlled by Respondent. Access under these Orders shall be for the purpose of conducting any activity related to these Orders including but not limited to the following:

- A. Performing or monitoring the work;
- B. Conducting sampling;
- C. Inspecting and copying records, operating logs, contracts and/or other documents related to the implementation of these Orders;
- D. Conducting investigations and tests related to the implementation of these Orders; and
- E. Verifying any data and/or other information submitted to Ohio EPA.

To the extent that the Facility or any other property to which access is required for the implementation of these Orders is owned or controlled by persons other than Respondent, Respondent shall use its best efforts to secure from such persons access for Respondent and Ohio EPA as necessary to effectuate these Orders. Copies of access agreements obtained by Respondent shall be provided to Ohio EPA upon request. If any access required to implement these Orders is not obtained within 30 days after the effective date of these Orders, or within 30 days after the date Ohio EPA notifies Respondent in writing that additional access beyond that previously secured is necessary, Respondent shall promptly notify Ohio EPA in writing of the steps Respondent has taken to attempt to obtain access. Ohio EPA may, as it deems appropriate, assist Respondent in obtaining access.

Notwithstanding any provisions of these Orders, the State of Ohio retains all of its access rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation.

XI. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modification shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA

except that the parties may amend Appendix A of these Orders in writing and by mutual agreement without issuance of a final action.

XII. NOTICE

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

Ohio Environmental Protection Agency
Northeast District Office
Attn: Natalie Oryshkewych and Rodney Beals
2110 East Aurora Road
Twinsburg, Ohio 44087

And

Ohio Environmental Protection Agency
Central Office
Division of Materials and Waste Management
Attn: Jeremy Carroll
PO Box 1049
Columbus, Ohio 43216-1049

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

XIII. SAMPLING AND DOCUMENT AVAILABILITY

As directed by Ohio EPA, Respondent shall notify Ohio EPA in advance of all sample collection activity. Upon request, Respondent shall allow split or duplicate samples to be taken by Ohio EPA or its designated contractor. Ohio EPA shall also have the right to take any additional samples it deems necessary. Upon request, Ohio EPA shall allow Respondent to take split or duplicate samples of any samples Ohio EPA takes as part of its oversight of the implementation of the work required by these Orders.

Ohio EPA may request copies of all documentation required by these Orders including, but not limited to, sampling, tests or other data, including raw data and original laboratory reports, generated by or on behalf of Respondent with respect to the Facility. Within 7 days after receipt of a request by Ohio EPA, Respondent shall provide Ohio EPA with a copy of the documentation requested by Ohio EPA. An electronic copy shall also be provided in a format approved by Ohio EPA. Respondent may submit to Ohio EPA any interpretive reports and written explanations concerning the raw data and original laboratory reports and raw data. Should Respondent subsequently discover an error in any report or raw data, Respondent shall promptly notify Ohio EPA of such discovery and provide the correct information.

Respondent shall retain all documentation generated as a result of these Orders for a period of 15 years following the effective date of these Orders.

XIV. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges and causes of action, except as specifically waived in Section XV of these Orders. Notwithstanding any CNS that may be issued by Ohio EPA for the Facility, Ohio EPA expressly reserves all rights, privileges and causes of action against Respondent and any and all successors in interest to the Site in the event that the Facility becomes a nuisance or there is a release of waste-derived constituents from the Facility that is not addressed, abated and remediated to the satisfaction of the Director of Ohio EPA.

XV. WAIVER

Respondent consents to the issuance of these Orders and agrees to comply with these Orders. Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, including but not limited to any rights Respondent may have to appeal final actions issued by Ohio EPA pursuant to these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders in law or equity. Respondent specifically waives any and all rights it may have to seek administrative or judicial review of the establishment, maintenance, administration, operation, termination, or disbursement or non-disbursement of funds in the Urban Renewables Trust Fund, referenced in Paragraph 4, Section V, of these Orders.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such event, Respondent shall continue to comply with these Orders, notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

Respondent represents that it is not contemplating either the filing of a petition by it under any state or federal bankruptcy or insolvency laws or the liquidation of all or a major portion of its assets or property, and Respondent has no knowledge or any person contemplating the filing of any such petition against it. Respondent shall notify Ohio EPA within 10 days after the occurrence of any of the following: filing by Respondent of a petition seeking to take advantage of any laws relating to bankruptcy, insolvency, reorganization, winding up or composition or adjustment of debts; Respondent's consent to (or failure to contest in a timely manner to) any petition filed against it in an involuntary case under such bankruptcy or other laws; Respondent's application for (or failure to contest in a timely manner to) the appointment of, or the taking of possession by, a receiver, custodian, trustee liquidator, or the like of itself or of all or a substantial part of its assets; Respondent's making a general assignment for the benefit of creditors; or Respondent's taking any corporate action for the purpose of effecting any of the foregoing. The obligations of Respondent under these Orders shall not be altered, limited or affected by any proceeding, voluntary or involuntary, involving bankruptcy, reorganization, insolvency, receivership, liquidation, or arrangement by Respondent, or any affiliate thereof, or

by any defense which Respondent, or any affiliate thereof may have reason, or by any order, decree, or decision of any court or administrative body resulting from any such proceeding. Respondent hereby irrevocably waives, to the extent it may do so under applicable legal requirements, any protections against enforcement of these Orders to which they may be entitled under the Federal Bankruptcy Code or equivalent provisions of laws or regulations of any jurisdiction with respect to any proceedings, or any successor provisions of law of similar import, in the event of any such event with respect to Respondent. Specifically, in the event that the trustee (or similar official) in a bankruptcy event with respect to the Respondent or the debtor-in-possession takes any action (including the institution of any action, suit, or other proceeding for the purpose of enforcing the rights of the Respondent under these Orders, Respondent shall assert any defense, claim or counterclaim denying their obligations under these Orders. If a bankruptcy event with respect to Respondent shall occur, Respondent agrees, after the occurrence of such bankruptcy event, to reconfirm in writing, to the extent permitted by applicable legal requirements and at Ohio EPA's written request, their pre-petition waiver of any protection to which they may be entitled with respect to these Orders under the Federal Bankruptcy Code or equivalent provisions of the laws or regulations of any jurisdiction with respect to the proceedings and to give effect to such waiver. Respondent consents to the assumption and enforcement of each provision of these Orders by the debtor-in-possession or Respondent's trustee in bankruptcy, as the case may be.

XVI. EFFECTIVE DATE

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

XVII. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

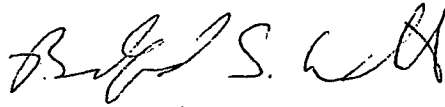
IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency



Craig W. Butler
Director

IT IS SO AGREED:



Urban Renewables II, LLC

Appendix A – Adverse Effects Assessment and Remediation of non-hazardous constituents, r3

Respondent shall comply with the requirements below for all waste-derived non-hazardous constituents from or associated with the Facility notwithstanding any language in ORC 3746 or OAC Chapter 3745-300 that would indicate that those requirements are not legally applicable to such non-hazardous constituents:

A. Assessment

1. The assessment shall include a review and analysis of all documentation associated with the most recent phase I assessment of the facility.
2. The assessment shall include data quality objectives consistent with OAC 3745-300-07(C).
3. The assessment shall include sampling procedures sufficient to ensure representative sampling consistent with OAC 3745-300-07(D), except that the use of a laboratory certified by the VAP for the analysis of non-hazardous constituents is not required.
4. The assessment shall include phase II data collection sufficient to properly characterize the non-hazardous constituents at the Facility and the receptor populations known or reasonably anticipated to be adversely affected by non-hazardous constituents at or from the Facility consistent with OAC 3745-300-07(E).
5. The assessment shall include a determination of adverse effects to environmental media, as defined by OAC 3745-300-01(A)(44), consistent with OAC 3745-300-07(F).
6. The assessment shall include a determination of the groundwater zones present and effects to groundwater consistent with OAC 3745-300-07(F). Groundwater zones identified as not having adverse effects must be protected from future adverse effects consistent with OAC 3745-300-07(F)(4) and OAC 3745-300-10(D). Groundwater zones identified as having adverse effects must be classified consistent with OAC 3745-300-07(F)(7) and OAC 3745-300-10(A) and (B).
7. The assessment shall include an analysis of constituents suspected or detected and a comparison of levels identified to adverse impact standards in section C below.
8. Modeling shall be done consistent with OAC 3745-300-07(G).

B. Adverse effects pathway evaluation shall include:

1. The groundwater potable use pathway
2. The groundwater to surface water pathway
3. The protection of groundwater zones with no current adverse effects pathway.
4. The surficial waste nuisance pathway for noxious fumes, eyesore and direct contact.
5. The soil to groundwater leaching pathway, as applicable, consistent with OAC 3745-300-07(F) and OAC 3745-300-10(E).
6. Migration of landfill gases pathway.

C. Adverse Effects Standards – the point of compliance for these standards shall be established consistent with OAC 3745-300-07(I).

1. For the groundwater potable use pathway, the standard at the VAP Property boundary is listed in the chart in section E below.
2. For the groundwater to surface water pathway, the standard shall be calculated based on a model demonstrating the migration of non-hazardous constituents will not cause an exceedance of any applicable water quality standards.
3. For the groundwater contaminated zone to uncontaminated zone pathway, the standard is listed in the chart in section E below.
4. For the surficial waste nuisance pathway for noxious fumes, eyesore and direct contact the standard will be considered met if:
 - a. No visual or olfactory evidence of waste is apparent and none of the constituents noted in E is present over the background standard in the top 2' of soil; or
 - b. No residual or other waste is present in the top 2' of fill and it is vegetated and graded to promote runoff.
5. For the leaching pathway, the standard shall be calculated based on a model demonstrating the leaching or migration of non-hazardous constituents will not cause an exceedance of the standards in section E within the applicable ground water zone.
6. To the extent that an Urban Setting Designation has been established which includes the VAP Property, the Urban Setting Designation may be relied upon for compliance with the off-property standards for the non-hazardous constituents listed in section E.

D. Remedial Measures

1. Remedial measures are necessary to address any pathways over standards.
2. Property use restrictions to be relied upon as a remedial measure, if any, must be implemented in accordance with ORC 5301.80 – 5301.92.
3. Remedial measures that require an operation period to achieve compliance with the adverse effects standards (e.g., pump and treat system) must be incorporated into an operation and maintenance plan consistent with OAC 3745-300-11(F).
4. Remedial measures that require maintenance to remain in compliance with the adverse effects standards (e.g., engineering controls like a cap) must be incorporated into an operation and maintenance plan consistent with OAC 3745-300-11(F).
5. Verification of completion – a demonstration that the adverse effects standards are met shall be included in the Adverse Effects Compliance report.

E. Groundwater Adverse Effects Standards

Constituent of Concern	Standard (mg/l)
Barium	2.0
Calcium	50.0
Chloride	250.0
Iron	0.30
Magnesium	20.0
Manganese	0.05
Nitrate-nitrite	10.0

Potassium	80.0
Sodium	20.0
Sulfate	250.0
Total Dissolved Solids	500.0
Hardness (CaCO ₃ equivalent)	180.0