



Ohio Administrative Code Rule 3745-300-11 Remediation.

Effective: February 16, 2025

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-300-15 of the Administrative Code titled "Incorporation by reference - voluntary action program."]

(A) Applicability and identification of when remedial activities are required.

(1) Remedial activities shall be conducted to meet applicable standards when a phase II property assessment conducted in accordance with rule 3745-300-07 of the Administrative Code reveals that concentrations of chemicals of concern (COCs) in any environmental media fail to comply with any of the following:

(a) Applicable standards as determined from the generic numerical standards in accordance with rule 3745-300-08 of the Administrative Code.

(b) Applicable standards as determined from a property-specific risk assessment conducted in accordance with rule 3745-300-09 of the Administrative Code.

(c) Background levels as determined in accordance with rule 3745-300-07 of the Administrative Code, when background levels are the applicable standards.

(d) Any other applicable standard of this chapter.

(2) Each complete exposure pathway for environmental media determined in accordance with paragraph (F)(1) of rule 3745-300-07 of the Administrative Code shall comply with an applicable standard determined in accordance with this chapter. When a complete exposure pathway does not comply with an applicable standard, the volunteer shall implement a remedy in accordance with this rule. Implementation of a remedy under the voluntary action may be deferred or excluded, as



applicable, for any complete exposure pathway that is in compliance with paragraph (D) of this rule.

(3) An institutional control in the form of a use restriction, or activity and use limitation, as applicable, shall be established in accordance with this rule to apply applicable standards to a restricted land use, pursuant to paragraph (F)(5) of rule 3745-300-07 of the Administrative Code.

(4) An operation and maintenance plan shall be prepared and implemented in accordance with paragraph (F) of this rule for a property that relies on one or more of the following:

(a) Engineering controls that are necessary to maintain applicable standards following issuance of a no further action letter.

(b) Any on-going remedy employed at a property that does not yet meet applicable standards at the time that a no further action letter is issued. Such remedial activities shall achieve applicable standards within five years after the no further action letter issuance date, inclusive of verification, or such other time frame agreed to by the director in accordance with an operation and maintenance agreement. In the case of any complete exposure pathway to indoor air due to vapor exposure from environmental media, the indoor air applicable standards shall be met prior to occupancy of the building.

(c) The evaluation, response, and other activities that are implemented to comply with critical resource ground water response requirements in accordance with paragraph (E)(2) of rule 3745-300-10 of the Administrative Code.

(d) The evaluation, response, and other activities that are implemented to comply with off-property pathway deferral or exclusion response requirements in accordance with paragraph (D) of this rule.

(B) Compliance with other laws. Remedial activities conducted under this chapter and Chapter 3746. of the Revised Code shall be conducted in compliance with all applicable laws, regulations, rules, resolutions, and ordinances, including but not limited to the following:

(1) Chapter 3734. of the Revised Code.



(2) Chapter 6111. of the Revised Code.

(3) Chapter 3704. of the Revised Code;

(4) The Safe Drinking Water Act, including the requirements applicable to underground injection control wells.

(5) Rule 3745-9-03 of the Administrative Code, including the requirements for proper construction, sealing, repairing, and abandonment of monitoring wells.

(6) The laws and regulations administered by the occupational safety and health administration.

(C) Remedial activities. When remedial activities are required to be conducted at a property pursuant to paragraph (A) of this rule, one or more of the following remedial activities, if utilized to determine compliance with applicable standards, shall have been conducted and documented. To support a no further action letter for a property, the remedial activity shall be conducted and documented prior to issuance of the no further action letter.

(1) Remediation. Remediation shall be capable of attaining applicable standards within the following time frame:

(a) If remediation has not achieved applicable standards prior to issuance of the no further action letter for the property, an operation and maintenance plan prepared in accordance with this rule for continued implementation of the remediation shall be included with the no further action letter.

(b) If the remediation has not achieved applicable standards upon issuance of the no further action letter, the no further action letter shall demonstrate that the remediation is capable of attaining the applicable standards, inclusive of verification, within five years after the no further action letter issuance date or other time frame agreed upon by the director in an operation and maintenance agreement, in accordance with this rule. Until there is verification that the remediation meets applicable standards, the property shall remain protective of public health and safety and the environment through use of interim measures or other remedial activities.



(2) Institutional controls. Institutional controls (use restrictions or activity and use limitations, as applicable), shall meet the following criteria:

(a) Establish restrictions or limitations on use of the property that mitigate or eliminate risk or an exposure pathway to human receptors in order to achieve applicable standards.

(b) Be consistent with the criteria for representative exposure assumptions in accordance with paragraph (D)(3)(b) of rule 3745-300-09 of the Administrative Code, as applicable.

(c) Be effective at eliminating or mitigating exposures to human receptor populations sufficient to meet the risk goals described in rule 3745-300-08 or 3745-300-09 of the Administrative Code, as applicable.

(d) Be capable of being monitored, maintained and enforced by the owner or operator of the property during the period of time which the control is used to comply with applicable standards.

(e) Be transferrable with the property and valid in an instrument recorded with the county recorder in the same manner as a deed to the property during the time relied upon to comply with applicable standards.

(f) Be recorded with the county recorder in the same manner as a deed to the property, consistent with the requirements to record documents that are required for the voluntary action program.

(g) Be established through an environmental covenant pursuant to Chapter 5301. of the Revised Code in the case of activity and use limitations.

(h) Be overseen by a central management entity as follows:

(i) In the case of restricted residential land use at a property that relies on on-going implementation of remedial activities, the environmental covenant or environmental use limitations shall provide for a central management entity to oversee compliance with the activity and use limitations, engineering controls, and any other remedial activities that are relied upon for compliance with applicable standards.



(ii) In the case of commercial land use, a central management entity may be used to oversee the institutional controls.

(3) Engineering controls. Engineering controls shall meet the following criteria:

(a) Be effective and reliable for the climatic conditions and activities at the property to which the control shall be applied.

(b) Be consistent with the criteria in paragraph (D)(3)(b)(iv)(b) of rule 3745-300-09 of the Administrative Code, as applicable.

(c) Be effective at eliminating or mitigating exposures to receptor populations sufficient to meet the risk goals of rule 3745-300-08 or 3745-300-09 of the Administrative Code, as applicable.

(d) Be reliable during the period of time the control is used to achieve or maintain applicable standards.

(e) Be capable of being monitored and maintained as required by an operation and maintenance plan developed and implemented in accordance with this rule.

(f) Be able to demonstrate that receptor exposure meets applicable standards.

(g) Be overseen by a central management entity as follows:

(i) In the case of restricted residential land use that relies on on-going implementation of remedial activities, the operation and maintenance plan and agreement shall provide for a central management entity to oversee compliance with engineering controls or other remedial activities that are relied upon for compliance with applicable standards.

(ii) In the case of commercial land use, a central management entity may be used to oversee the engineering controls.



(4) Critical resource ground water activities. The evaluation, response, and other activities required to protect off-property receptors when concentrations of COCs in critical resource ground water exceed unrestricted potable use standards shall be implemented in accordance with rule 3745-300-10 of the Administrative Code. The activities are provided in paragraphs (E)(3) and (E)(7) of rule 3745-300-10 of the Administrative Code.

(5) Off-property pathway deferral and exclusion. The evaluation, response, and other activities required to apply any pathway deferral or exclusion shall be implemented in accordance with paragraph (D) of this rule.

(6) Interim measures. Interim measures shall be in place for a property when applicable standards have not yet been achieved. At a minimum, interim measures shall mitigate the risks associated with complete exposure pathways to human receptor populations until the property complies with applicable standards through a permanent remedy. Institutional controls or engineering controls used as interim measures shall be consistent with the criteria in paragraphs (C)(2) and (C)(3) of this rule.

(7) Risk mitigation measures. Risk mitigation measures shall effectively eliminate or reduce the current or reasonably anticipated risk to persons who would be exposed to concentrations of COCs in environmental media that exceed applicable standards or the risk is uncharacterized.

(a) Risk mitigation measures shall be utilized to protect workers and other persons who would be exposed to COCs in excess of applicable standards as a result of construction activities.

(b) Risk mitigation measures are necessary when construction activities do any of the following:

(i) Breach the point of compliance for direct contact with soil for properties that rely on institutional controls to achieve the applicable standard.

(ii) Breach an engineering control, such as pavement or a soil cap, intended to eliminate direct-contact exposure to COCs in environmental media.

(iii) Result in direct contact with ground water which exceeds or has not been demonstrated to meet applicable standards for this exposure pathway.



(iv) Result in inhalation exposures in a trench from COCs present in environmental media that exceed or have not been demonstrated to meet applicable standards for the exposure pathway.

(c) If the risk mitigation measures are necessary for the property to meet applicable standards after issuance of the no further action letter for the property, the risk mitigation measures shall be implemented through a risk mitigation plan in accordance with paragraph (G) of this rule.

(8) Ground water use limitations. Restrictions on the extraction or use of ground water for any purpose, potable or otherwise, developed in accordance with paragraphs (E)(2)(a), (E)(3)(a)(i), (E)(3)(b)(i), and (E)(4)(a) of rule 3745-300-10 of the Administrative Code in order to achieve applicable standards for ground water, shall be applied to all ground water zones beneath the property, unless a property-specific investigation conducted in accordance with rule 3745-300-07 of the Administrative Code demonstrates the following:

(a) The ground water zone made subject to the use restriction has been demonstrated to have no interconnection to an unrestricted ground water zone.

(b) Selective use restrictions shall be implemented for each ground water zone, as necessary, to reliably restrict the use of each ground water zone, except the specific permissible uses that are demonstrated to ensure the following:

(i) The continued protection of all ground water zones that otherwise meet unrestricted potable use standards in accordance with paragraph (F)(4) of rule 3745-300-07 and paragraph (D) of rule 3745-300-10 of the Administrative Code.

(ii) Applicable standards are met for all complete exposure pathways for the resulting ground water use.

(D) Procedures to address complete exposure pathways to off-property receptors that cannot be remedied after a volunteer has applied diligent efforts. A volunteer may choose to either defer or exclude an off-property complete exposure pathway prior to issuance of a no further action letter in accordance with the following:



(1) Pathway deferral. When the volunteer has employed diligent efforts to access an off-property area known or suspected to have a complete exposure pathway but access has been denied and the volunteer has implemented reasonable remedial activities to control or mitigate the migration of COCs exceeding applicable standards from the property, an off-property pathway deferral shall be implemented by use of an operation and maintenance plan included in the no further action letter. The releases of hazardous substances or petroleum that are associated with the deferral of a complete exposure pathway remain subject to the covenant not to sue issued for the property as long as the pathway deferral obligations continue to be implemented in accordance with any applicable operation and maintenance plan and agreement and rule 3745-300-11 of the Administrative Code. Compliance with applicable standards associated with the pathway are deferred until access to the off-property area is attained, and the remedy is implemented and verified in accordance with this chapter. To justify the pathway deferral, the volunteer shall demonstrate that the following have been completed:

(a) Off-property receptors. Off-property areas where receptors are located and are different from the voluntary action property as follows:

(i) Identification of current or reasonably anticipated off-property receptors that may be exposed to COCs from the voluntary action property, in accordance with paragraph (E)(6) of rule 3745-300-07 of the Administrative Code and identification of the remedies in place to control or mitigate the migration of contaminants to those off-property receptors.

(ii) Identification of current or reasonably anticipated exposure pathways to the off-property receptors, in accordance with paragraph (F) of rule 3745-300-07 of the Administrative Code.

(b) Communication. Communication with owners of the off-property areas where the off-property receptors are located as follows:

(i) Communication to every owner of each receptor area property of each complete exposure pathway, the applicable COCs, and the potential risks with the COCs associated with the pathway deferral.



(ii) Explanation to every owner of each receptor area property regarding the activities that might be reasonably employed to investigate and remedy the pathway associated with the release from the voluntary action property.

(iii) Offer to pay all costs associated with or to complete the assessment, and, as applicable, remedial activities that are required to achieve applicable standards for the complete exposure pathway related to releases from the voluntary action property, including fair and reasonable compensation for repair of aesthetic impacts to the off-property receptor area that result from the activities.

(iv) Offer to pay for all sampling costs after the installation or implementation of a remedy to demonstrate the effectiveness of the remedy.

(v) Offer to pay or otherwise compensate for the cost of operation and maintenance of engineering controls, if any.

(vi) Document discussions or correspondence with the owners that indicate the owner's refusal to allow the volunteer the necessary access to complete assessment and, as applicable, to conduct a reasonable remedy to achieve compliance with applicable standards for the complete exposure pathway in accordance with this chapter.

(vii) Document, if applicable, any other reason that might prevent access to complete assessment and installation of a reasonable remedy, as necessary to comply with applicable standards for the complete exposure pathway.

(c) Notice to the owner of each receptor area property. The volunteer shall provide a written notice to each owner of a receptor area property, that at a minimum, includes the following:

(i) Explanation of the voluntary action program.

(ii) Description of the off-property pathways and potential risks associated with the COCs from the voluntary action property.



(iii) Location and description of the off-property area locations to which the notification applies.

(iv) Explanation regarding the activities that might be reasonably employed to investigate and remedy the pathway associated with the release from the voluntary action property.

(v) An offer to pay all costs associated with or to complete the assessment, and as applicable, remedial activities that are required to achieve applicable standards for the complete exposure pathway related to releases from the voluntary action property, including fair and reasonable compensation for repair of aesthetic impacts to the off-property receptor area that result from the activities.

(vi) An offer to pay for all sampling costs after the installation or implementation of a remedy to demonstrate the effectiveness of the remedy.

(vii) An offer to pay or otherwise compensate for the cost of operation and maintenance of engineering controls, if any.

(viii) A statement that the volunteer shall contact Ohio EPA within thirty days after the notice is sent to seek assistance to access the off-property area.

(d) Ohio EPA assistance. Within thirty days after the notice required in paragraph (D)(1)(c) of this rule is sent, the volunteer shall contact Ohio EPA to seek assistance with access to an off-property area, as follows:

(i) After the notice required in paragraph (D)(1)(c) of this rule is sent, contact Ohio EPA to seek assistance to allow the volunteer access to an off-property area to assess or install a reasonable remedy.

(ii) Upon request by Ohio EPA, provide to Ohio EPA, in a manner prescribed by Ohio EPA, the following:

(a) A summary of the diligent efforts and pathway deferral demonstration pursuant to paragraph (D)(1) of this rule.



(b) A description of the completed measures described in paragraphs (D)(1)(a) and (D)(1)(b) of this rule.

(c) Documentation of the notice provided to each owner of a receptor area property, as required in paragraph (D)(1)(c) of this rule.

(d) Documentation of the discussions or correspondence with the owners that indicate the owner's refusal to allow the volunteer the necessary access to complete assessment and, as applicable, to conduct a reasonable remedy to achieve compliance with applicable standards for the complete exposure pathway in accordance with this chapter, pursuant to paragraph (D)(1)(b)(vi) of this rule.

(e) Any other information the director deems necessary that may be relevant to assist with justification that pathway deferral is appropriate for the off-property receptor.

(iii) If Ohio EPA gains access to an off-property area on behalf of the volunteer, the volunteer shall continue to evaluate the current or reasonably anticipated exposure pathways to the off-property receptors in accordance with paragraph (F) of rule 3745-300-07 of the Administrative Code to determine compliance with applicable standards in accordance with paragraph (I) of rule 3745-300-07 of the Administrative Code.

(iv) A statement or statements of costs incurred by Ohio EPA shall be sent to the volunteer after Ohio EPA's assistance is complete. The volunteer shall pay the costs in full within sixty days after receipt of the statement, pursuant to paragraph (E) of rule 3745-300-03 of the Administrative Code.

(v) Reimburse Ohio EPA actual costs incurred to aid in communication with the owner of the receptor area property, as described in paragraph (D)(1)(d) of this rule.

(e) Timing. If Ohio EPA's assistance to seek access does not result in access to an off-property area, the timing for inclusion of pathway deferral in an operation and maintenance plan and issuance of a no further action letter shall occur as follows:

(i) If Ohio EPA's efforts to assist with access pursuant to paragraph (D)(1)(d) of this rule fail to



obtain access needed for the volunteer to complete a remedy of any off-property receptor area, include the pathway deferral in an operation and maintenance plan prepared in accordance with paragraphs (D)(1)(f) and (F) of this rule.

(ii) Issue the no further action letter with an operation and maintenance plan prepared pursuant to paragraphs (D)(1)(f) and (F) of this rule within one hundred eighty days after Ohio EPA's efforts to assist with access pursuant to paragraph (D)(1)(d) of this rule failed to obtain the needed access.

(iii) If more than one hundred eighty days have passed since the volunteer or Ohio EPA last contacted the owner of a receptor area property about access to an off-property area, at least thirty days prior to issuance of the no further action letter, the volunteer shall send a notice to such property owner that contains the following:

(a) Written invitation to the owner of the receptor area property to re-initiate discussions regarding the deferred pathway.

(b) The information required by paragraphs (D)(1)(c) to (D)(1)(c)(iv) of this rule.

(f) Operation and maintenance plan. The certified professional shall include an operation and maintenance plan in the no further action letter prepared for the voluntary action property that includes the following:

(i) The owner's name, the property address, and a description of the receptor area property or properties to which the pathway deferral applies.

(ii) A map that shows the receptor area property that is subject to the pathway deferral.

(iii) A description of the deferred pathway, including but not limited to, the associated receptors, media, and COCs.

(iv) Provision for annual notification to the owner of the receptor area property, as follows:

(a) The operation and maintenance plan shall include a provision that the volunteer or other person



responsible for compliance with applicable standards provide a written invitation to the owner of the off-property receptor property to re-initiate discussions about the deferred pathway and access to implement the remedy needed to achieve applicable standards.

(b) The notice shall include the information required by paragraphs (D)(1)(c)(i) to (D)(1)(c)(viii) of this rule.

(v) If the owner of the off-property receptor property chooses to re-initiate discussions about the deferred pathway in response to the annual notification sent in accordance with paragraph (D)(1)(f)(iv) of this rule, the volunteer may enact a post-covenant not to sue remedy change pursuant to paragraph (H) of this rule.

(2) Pathway exclusion. An off-property pathway exclusion from the release of liability in the covenant not to sue shall be requested prior to issuance of a no further action letter for the property if the volunteer has employed diligent efforts to remedy the pathway, and the volunteer has implemented reasonable remedial activities to control or mitigate the migration of COCs exceeding applicable standards from the property. The pathway exclusion request shall be submitted under affidavit by a certified professional on behalf of the volunteer. A certified professional shall not rely upon a pathway exclusion in a no further action letter unless the request was approved by the director. The director may approve or deny the volunteer's request to exclude the pathway.

(a) Prior to submittal of a pathway exclusion request, the following shall be evaluated and documented as completed, unless inapplicable:

(i) Off-property receptors. Off-property areas where receptors are located and are different from the voluntary action property:

(a) Identification of current or reasonably anticipated off-property receptors that may be exposed to COCs from the voluntary action property, in accordance with paragraph (E)(6) of rule 3745-300-07 of the Administrative Code and identification of the remedies in place to control or mitigate the migration of contaminants to those off-property receptors.

(b) Identification of current or reasonably anticipated exposure pathways to the off-property



receptors, in accordance with paragraph (F) of rule 3745-300-07 of the Administrative Code.

(ii) Communication. Communication with owners of the off-property areas where the off-property receptors are located:

(a) Communication to each owner of each receptor area property of each complete exposure pathway, and the potential risks with the COCs associated with the pathway exclusion.

(b) Explanation to the owner of each receptor area property regarding the activities that might be reasonably employed to investigate and remedy the pathway associated with the release from the voluntary action property.

(c) Offer to pay all costs associated with the assessment, and, as applicable, remediation of the pathway related to releases from the voluntary action property, including fair and reasonable compensation for the repair of aesthetic impacts to the off-property receptor area that result from the activities.

(d) Offer to pay for all sampling costs after the installation or implementation of a remedy to demonstrate the effectiveness of the remedy.

(e) Offer to pay or otherwise compensate for the cost of operation and maintenance of engineering controls, if any.

(f) Document discussions or correspondence with the owners that indicate the owner's refusal to allow the volunteer the necessary access to an off-property area to complete assessment and, as applicable, to conduct a reasonable remedy to achieve compliance with applicable standards for the complete exposure pathway in accordance with this chapter.

(g) Document, if applicable, any other reason that might prevent access to an off-property area to complete assessment and installation of a reasonable remedy, as necessary to comply with applicable standards for the complete exposure pathway.

(iii) Criteria for off-property sediment pathways. The provisions of paragraphs (D)(2)(a)(ii) and



(D)(2)(b) of this rule are not required for off-property sediment pathways. Rather, the volunteer may choose to evaluate the following, and include the demonstration of both in the request for pathway exclusion:

(a) Confirmation that on-property sources that migrate to the surface water body are in compliance with applicable standards, in accordance with paragraph (I) of rule 3745-300-07 of the Administrative Code.

(b) Explanation of why remedial activities pursuant to paragraph (C) of this rule at the off-property sediment area are not feasible, and how approval of the pathway exclusion request would result in the overall improvement of environmental conditions related to the voluntary action activities.

(b) Notice to property owner. If the volunteer applies diligent efforts and still cannot assess or implement a remedy to address off-property receptors, the volunteer shall provide a written notice to each owner of a receptor area property prior to submittal of the pathway exclusion request to Ohio EPA. At a minimum, the written notice shall include the following:

(i) Explanation of the voluntary action program.

(ii) Description of the off-property pathways and potential risks associated with the COCs from the voluntary action property.

(iii) Location and description of the off-property area locations to which the notification applies.

(iv) A statement that the volunteer shall submit the pathway exclusion request to Ohio EPA within thirty days after the written notice is sent in order to request the director to review and approve the pathway exclusion.

(v) An explanation that the pathway exclusion, if approved, excludes coverage of the pathway from any covenant not to sue that is issued pursuant to section 3746.12 of the Revised Code pertaining to the voluntary action.

(c) Pathway exclusion request. The pathway exclusion request provided by the certified professional



shall include the following:

(i) The owner's name, the address, and a description of the receptor property or properties to which the pathway exclusion request applies based upon a defined boundary that consists of one or more of the following:

(a) The area described by complete and adjacent parcels of real property shown on a plat or other recorded documents maintained by the county or political subdivision.

(b) The area described by the plat of a survey completed (signed and sealed) by a professional surveyor under Ohio law including any portion of the boundary that divides a parcel.

(ii) A map that shows the portion of the receptor property area that is subject to the request for pathway exclusion.

(iii) A description of the complete exposure pathway, including but not limited to, the associated receptors, media, and COCs.

(iv) A summary of the diligent efforts and completed measures described in paragraphs (D)(2)(a) to (D)(2)(b)(v) of this rule.

(v) Documentation of the notice provided to each owner of a receptor area property, as required in paragraph (D)(2)(b) of this rule.

(vi) Documentation of the discussions or correspondence with the owners, as applicable, that indicate the owner's refusal to allow the volunteer the necessary access to the off-property area to complete assessment and, as applicable, to conduct a reasonable remedy to achieve compliance with applicable standards for the complete exposure pathway in accordance with this chapter, pursuant to paragraph (D)(1)(b)(vi) of this rule.

(vii) All supporting information that demonstrates completion of the measures described in paragraphs (D)(2)(a) and (D)(2)(b) of this rule.



(d) Costs. The volunteer who enacts the pathway exclusion shall reimburse Ohio EPA for all costs incurred for the review of the pathway exclusion request, and in assistance with communication with the owner of the receptor property, as follows:

(i) Following Ohio EPA's assistance provided in support of the request for a pathway exclusion, Ohio EPA shall send to the volunteer a statement of costs.

(ii) Within sixty days after receipt of the statement of costs from Ohio EPA, the volunteer shall pay the cost in full, pursuant to paragraph (E) of rule 3745-300-03 of the Administrative Code.

(e) Request for additional information. After the director receives a complete request for review of a pathway exclusion, the director may request any additional information which may be relevant to the approval or denial of the pathway exclusion request. The information may be requested from the certified professional, the volunteer, local jurisdictions, or residents. Ohio EPA may attempt to contact owners of receptor properties to seek access to the off-property area.

(f) Criteria for approval or denial of the pathway exclusion request. The director may approve or deny a request for pathway exclusion, taking into consideration the following:

(i) The director shall first consider whether all applicable measures in paragraphs (D)(2)(a) and (D)(2)(b) of this rule were met.

(ii) The director may consider whether approval of the requested pathway exclusion would result in improved environmental conditions.

(g) Timing. The time frame of the director's approval or denial of a pathway exclusion request includes the following options:

(i) The director shall approve or deny a request for approval of a pathway exclusion within ninety days after receipt of a complete pathway exclusion request, as provided in paragraph (D)(2) of this rule.

(ii) If the director determines that an extension of time is necessary to properly consider the



pathway exclusion request, the director may extend the time to approve or deny the pathway exclusion request. If the director extends the time to consider the pathway exclusion request, Ohio EPA shall notify the volunteer and other interested persons of such extension.

(h) If the pathway exclusion request is approved by the director, the approved pathway exclusion may be applied to a no further action letter that is submitted to Ohio EPA with a request for a covenant not to sue.

(E) Verification that remedial activities are effective, and determination that applicable standards are met. Upon completion of remedial activities under this chapter, the volunteer shall verify that the remedial activities were implemented in accordance with this rule and resulted in compliance with applicable standards.

(1) When remedies are completed to achieve compliance with applicable standards in accordance with paragraph (I) of rule 3745-300-07 of the Administrative Code, the demonstration shall include the following, when applicable:

(a) Description of the implemented remedial activities that are a part of the voluntary action, and the applicable standards for each remedial activity.

(b) Summary tables of the data collected that verify compliance with applicable standards, based on the remedial activities performed.

(c) Documentation that each institutional control relied upon was developed in accordance with paragraph (C) of this rule and was implemented in accordance with rule 3745-300-13 of the Administrative Code.

(d) Documentation that each engineering control or remedy that requires operation or maintenance under this rule is made the subject of an operation and maintenance plan and agreement, as applicable, developed in accordance with paragraph (F) of this rule.

(e) Documentation that each risk mitigation measure under this rule is made the subject of a risk mitigation plan, as applicable, in accordance with paragraph (G) of this rule.



(f) Demonstration that each remedy implemented to comply with standards for a vapor intrusion to indoor air pathway is made the subject of an evaluation in accordance with paragraph (I)(3)(b) of rule 3745-300-07 of the Administrative Code. The evaluation shall verify that the concentrations of each COC do not exceed any applicable standard as required by rule 3745-300-07 of the Administrative Code.

(g) When a remedial activity is completed after the issuance of a no further action letter for property that relies on the remedial activity, an affidavit from a certified professional is required. The affidavit shall certify that applicable standards are met, based on the remedial activity verification.

(h) When a remedial activity that is not being maintained as an engineering control has been implemented through the subsurface injection or emplacement of a remedial substrate, injectate, or remedial media, to achieve compliance with applicable standards, provide documentation that sufficient post-remedial verification was conducted to demonstrate that the remedy is no longer active or no longer suppressing COC concentrations in environmental media, has achieved compliance with applicable standards, and is no longer necessary to maintain compliance with applicable standards.

(2) Termination of remedial activities. To document that a remedial activity is no longer necessary for compliance with applicable standards and may be terminated, the volunteer or other person responsible for remedy implementation shall demonstrate that the criteria in this rule have been met and, at a minimum, include the following in the demonstration:

(a) Description of the remedial activity that is no longer necessary to maintain compliance with applicable standards.

(b) Identification of the information relied upon to demonstrate the continued compliance with applicable standards without further implementation of the remedial activity.

(c) Information that supports the verification necessary to document the termination of the remedial activity in accordance with this rule and other criteria governing the remedial activity, such as the criteria provided in an operation and maintenance plan or agreement, environmental covenant, or risk mitigation plan.



(d) An affidavit from a certified professional, certifying that applicable standards are met without further implementation of the remedial activity.

(e) An affidavit from the volunteer or other person responsible for remedy implementation that attests to the completion of the remedy, demonstration of compliance with applicable standards, or understanding that the remedy may be terminated based on criteria in this rule and any other applicable criteria, as applicable.

(F) Operation and maintenance plan and agreement.

(1) Content of operation and maintenance plan. When a remedy is required to have an operation and maintenance plan in accordance with this rule, the volunteer shall develop and implement an operation and maintenance plan that includes the following components as applicable, for each of the remedial activities subject to the operation and maintenance plan:

(a) A summary of the applicable standards for the property and the purpose of the remedial activities to achieve compliance with applicable standards.

(b) A plan to implement the remedial activities, including operation and maintenance and a description of tasks that shall be performed to implement the operation and maintenance of the remedial activities, including but not limited to, the following:

(i) Description of the tasks for standard operation of the remedial activities.

(ii) Description of the tasks and procedures to maintain the remedial activities, including but not limited to a plan for periodic preventive measures.

(iii) Description of prescribed treatment or operating conditions for the remedial activities, as applicable.

(iv) Schedules to implement remedial activities and for operation and maintenance tasks.



- (c) A plan to evaluate the effectiveness of each remedial activity shall be included in the operation and maintenance plan, that at a minimum, includes the following:
- (i) The purpose and objective of the activities planned to evaluate the effectiveness of the remedy.
 - (ii) Description of the activities that shall be performed to determine the effectiveness of the remedial activities in meeting or maintaining compliance with applicable standards.
 - (iii) Description of the activities that shall be performed to evaluate or confirm assumptions and predictions of a property-specific risk assessment conducted in accordance with rule 3745-300-09 of the Administrative Code, if a property-specific risk assessment was conducted.
 - (iv) Description of the activities that shall be conducted, to comply with the response requirements for critical resource ground water in accordance with paragraphs (E)(3) to (E)(5) of rule 3745-300-10 of the Administrative Code, as applicable.
 - (v) Summary of the procedures developed in accordance with paragraph (F) of rule 3745-300-07 of the Administrative Code, if data collection, field test, sampling, or data analysis activities are appropriate for the monitoring activities.
 - (vi) Description of the anticipated length and planned frequency of each monitoring activity that shall be performed to evaluate the effectiveness of the remedial activities.
 - (vii) Description of the monitoring and sampling activities that shall be conducted to determine the effectiveness of the remedial activities to meet or maintain compliance with applicable standards, as appropriate.
- (d) A description of the type of equipment required to operate and maintain the remedial activities, including the following:
- (i) Description of the monitoring and remedial equipment that was installed or shall be utilized, and the criteria for installation and the utilization.



- (ii) A schedule for the maintenance and replacement of monitoring and remedial equipment, as appropriate for each remedial activity.

- (e) A description of the reasonably anticipated adjustments and criteria establishing when the adjustments to be taken to re-establish the standard operation and maintenance of the remedial activities so that the remedial activities remain effective.

- (f) A plan to address potential problems with the remedial activities, if the remedial activities are disrupted.

- (g) A description of all records that shall be kept to document that the requirements of paragraphs (F)(1) and (F)(2) of this rule are met.

- (h) A plan for termination of the remedial activities, including but not limited to, the following:
 - (i) An identification and description of the data and information that shall be collected to support the criteria for termination of the remedial activities subject to the operation and maintenance plan to verify completion of the remedial activities in accordance with paragraph (E)(2) of this rule.

 - (ii) An identification and description of the criteria for termination, as appropriate, of the monitoring activity to verify completion of the remedial activity in accordance with paragraph (E)(2) of this rule.

- (i) A property map or maps that show the portion of the property subject to the remedial activities under the operation and maintenance plan. If any remedial activity, including any engineering control, applies to only a portion of the property, the operation and maintenance plan shall include a "survey plat," as defined in rule 3745-300-01 of the Administrative Code, that depicts the boundary of the portion of the property, and is subject to the remedial activity area location relative to the property boundary.

- (j) Identification of the central management entity roles and responsibilities, as applicable, in accordance with paragraph (C)(3) of this rule.



(k) Written cost estimate, in current dollars, that itemizes the annual projected cost to implement the operation and maintenance plan activities over a five-year period. At a minimum, the cost estimate shall account for the following:

(i) Costs of the reasonably anticipated repairs, replacements, monitoring, and remedy verification activities, as applicable.

(ii) Costs of recordkeeping and reporting.

(iii) Costs for a third party to conduct the operation and maintenance plan activities.

(iv) Costs to implement the operation and maintenance plan activities that are reasonably anticipated to occur over the next five years, starting from the first activity required by the operation and maintenance plan.

(2) Report evaluation of the effectiveness of remedial activities that are subject to an operation and maintenance plan and agreement. At least once annually following issuance of a covenant not to sue pursuant to Chapter 3746. of the Revised Code, or at such other interval as agreed upon in an operation and maintenance plan or agreement regarding the property, the volunteer or other person responsible for implementation of the operation and maintenance plan and agreement shall submit documentation to Ohio EPA. The documentation shall be provided under affidavit of a person in responsible charge or with knowledge of the implementation of the remedial activities, and at a minimum, include the following:

(a) The results from the evaluation activities performed in accordance with paragraph (F)(1)(c) of this rule.

(b) A description of the activities, conducted to address remedy problems encountered, if any, including emergencies.

(c) A demonstration of the performance of all remedial activities subject to the operation and maintenance plan.



(d) A demonstration of how compliance with applicable standards is met or maintained, including the measures used to maintain the remedy's protectiveness of public health and safety and the environment.

(e) A description of reports, documents, and maintenance records to be provided.

(f) A projection of the yearly cost estimate to operate and maintain remedial activities, and other updates to the current annual cost estimate in the operation and maintenance plan, based on the actual implementation costs during the prior year.

(3) When an operation and maintenance plan is required in accordance with this rule, the operation and maintenance plan shall be prepared and implemented, as appropriate to maintain applicable standards, prior to issuance of the no further action letter and be included with the no further action letter submittal. If an operation and maintenance plan is required for an engineering control or other remedy following the receipt of a covenant not to sue issued pursuant to Chapter 3746. of the Revised Code, the operation and maintenance plan may be included in a remedy revision notice prepared pursuant to paragraph (H) of this rule.

(4) Operation and maintenance agreement. When requesting a covenant not to sue from the director pursuant to this chapter and Chapter 3746. of the Revised Code for a property subject to a remedial activity that requires an operation and maintenance plan pursuant to this rule, the volunteer shall enter into an operation and maintenance agreement with the director.

(a) At a minimum, the operation and maintenance agreement shall include the following:

(i) An operation and maintenance plan for the property developed in accordance with paragraphs (F)(1) and (F)(2) of this rule and approved by Ohio EPA.

(ii) A provision that the volunteer agrees to implement the operation and maintenance plan.

(iii) A provision that requires periodic reporting to Ohio EPA of monitoring results and evaluation of the effectiveness of the remedial activities subject to the operation and maintenance plan, in accordance with paragraph (F)(2) of this rule, to the extent the operation and maintenance plan does



not provide for such periodic reporting.

(iv) A provision that requires notification to Ohio EPA within a specified time of all adjustments made to the operation and maintenance activities as specified in the operation and maintenance plan, and of implementation of the contingency plan activities, if any, specified in the operation and maintenance plan.

(v) A provision that requires that proposed modifications to a remedial activity, or the operation and maintenance plan, other than adjustments to operation and maintenance plan activities developed in accordance with paragraphs (F)(1)(e) to (F)(1)(f) of this rule and prescribed by the operation and maintenance plan, shall be submitted to Ohio EPA for review and approval prior to implementation of the proposed modification. The provision shall be written in a manner consistent with paragraph (H) of this rule, including but not limited to updates to sampling, data evaluation, demonstration, and verification activities based on the modifications.

(vi) A provision that requires that prior notification, within a specified reasonable time frame, be provided to the prospective buyers or transferees of the property of the remedy subject to the operation and maintenance plan and agreement.

(vii) A provision that requires notice to Ohio EPA within a specified reasonable time frame of each transfer of the property subject to the operation and maintenance plan and agreement.

(viii) A provision that requires notice to Ohio EPA within a specified reasonable time frame of the transfer of the operation and maintenance plan and agreement, and of the terms and conditions of the transfer.

(ix) A provision that requires the establishment and description of financial assurances that the remedy subject to the operation and maintenance plan and agreement shall remain operational and functional. The financial assurance mechanism or instrument established pursuant to this rule shall be based on a current cost estimate over the next five years of implementation of the operation and maintenance plan, starting from the first activity required by the operation and maintenance plan, and shall be subject to updates based on adjustments made to the cost estimate prepared and submitted with the operation and maintenance plan in accordance with paragraph (F)(1)(k) of this



rule. Unless otherwise approved by Ohio EPA, the financial assurance established and described for purposes of this rule shall apply the following:

(a) Equal or exceed the projected yearly updates to the cost estimate to operate and maintain the remedial activities prepared in accordance with paragraph (F)(2)(f) of this rule.

(b) Designate the director as beneficiary to the financial assurance established under this rule.

(c) Prepare and establish financial assurance based on the criteria for selection, wording, use, duration, approval, establishment, and termination of mechanisms or instruments provided in rules 3745-27-16 to 3745-27-18 or 3745-66-40 to 3745-66-48 of the Administrative Code.

[Comment: Financial assurance for purposes of this rule applies the financial assurance criteria given by Ohio EPA rules for solid waste and hazardous waste facility post-closure care activities.]

(x) A provision for inspection of the property by the director or the director's authorized representatives to determine compliance with the operation and maintenance plan and agreement.

(xi) Other provisions necessary to protect public health and safety and the environment or to demonstrate effectiveness of the remedial activities subject to the operation and maintenance plan or agreement.

(xii) Approval of the termination of the remedial activities subject to the operation and maintenance plan and agreement may be requested with proper documentation and demonstration, including verification that the remedial activity is no longer needed to comply with applicable standards in accordance with paragraph (E) of this rule.

(b) The operation and maintenance agreement may specify a reasonable time frame within which the property shall attain applicable standards through the remedial activities specified in the operation and maintenance plan or agreement.

(c) Operation and maintenance agreements may be transferred by the volunteer to another person by assignment or in conjunction with the acquisition of title to the property that is the subject of the



agreement. The volunteer may choose to but is not required to transfer any operation and maintenance agreement to another person (e.g., the subsequent property buyer). The term "other person responsible for operation and maintenance plan and agreement implementation" is defined in rule 3745-300-01 of the Administrative Code for this purpose.

(G) Risk mitigation plans. When risk mitigation measures are to be employed after issuance of a no further action letter, a risk mitigation plan shall be developed and implemented as follows:

(1) At a minimum, include the following components:

(a) A description of the purpose of the risk mitigation plan.

(b) A summary of the potential health risks associated with the COCs at the property.

(c) A description of the specific precautions against exposure to be taken at the property.

(d) Directions on how to handle environmental media at the property that may contain COCs.

(e) Provisions regarding when to implement the risk mitigation plan at the property.

(f) Provisions regarding where to implement the risk mitigation plan at the property. If the entire property is not subject to the risk mitigation plan, a plat of survey completed (signed and sealed) by a professional surveyor under Ohio law that shows the portions of the property subject to the risk mitigation plan shall be attached to and referenced in the risk mitigation plan.

(g) A property map or maps that show the property subject to the risk mitigation plan, including the survey plat, if required by paragraph (G)(1)(f) of this rule.

(h) Provisions to give notice of the risk mitigation plan activities to contractors, subcontractors, and other persons working in areas where risk mitigation measures are necessary.

(i) A summary explanation of the precautions that each contractor shall require of and communicate to the contractor's employees and subcontractors.



(j) For property where a covenant not to sue is requested, provisions to annually notify the director as to whether or not implementation of the risk mitigation plan occurred, and if implemented, notification of the events that required implementation of the risk mitigation plan, the exposures to hazardous substances or petroleum that may have occurred, and the risk mitigation measures undertaken in accordance with the risk mitigation plan. The annual notification documentation shall be provided under affidavit of a person in responsible charge or with knowledge of the implementation of the risk mitigation plan.

(k) The criteria for termination of the risk mitigation plan, as appropriate.

(2) For a covenant not to sue issued pursuant to Chapter 3746. of the Revised Code, the risk mitigation plan is developed as a separate plan for implementation as a condition of a covenant not to sue.

(H) Post covenant not to sue remedy changes, as follows:

(1) A volunteer, including persons responsible for compliance with applicable standards, may revise an existing remedy or remedies relied upon to meet applicable standards. In order to ensure a covenant not to sue issued pursuant to Chapter 3746. of the Revised Code remains effective, the volunteer shall do the following:

(a) Continue to comply with all existing institutional controls, engineering controls, operation and maintenance plan activities, risk mitigation measures, and other remedies required for compliance, until the existing remedies are replaced or terminated under this chapter.

(b) Collect any data necessary to scope and support the remedy revision in accordance with rule 3745-300-07 of the Administrative Code.

(c) Implement the remedy revision in accordance with this chapter, and as follows:

(i) For remedial activities that do not conflict with an existing requirement in an operation and maintenance plan or agreement, institutional control, or risk mitigation plan, remedial activities may



be conducted at any time without Ohio EPA approval by the volunteer or persons responsible for compliance with applicable standards. If Ohio EPA approval is desired, the remedy shall be implemented prior to any request for approval. Paragraphs (H)(2) and (H)(3) of this rule describe the process to obtain Ohio EPA approval.

(ii) For remedial activities that conflict with an existing requirement in an operation and maintenance plan or agreement, institutional control, or risk mitigation plan, Ohio EPA's approval of the modification is required before the remedial activities are implemented. Paragraphs (H)(2) and (H)(3) of this rule describe the process to obtain Ohio EPA approval. Ohio EPA review of the remedy revision request requires at least ninety days to complete.

(d) Take any steps necessary to ensure that the property complies with all applicable standards prior to, during, and after the remedy revision.

(e) Ensure remedial activities are implemented in accordance with this rule.

(2) Remedy revision documentation. If paragraph (H)(1)(c)(i) of this rule applies, the volunteer may choose to demonstrate to Ohio EPA that additional remedial activities comply with applicable standards and submit the remedy revision documents after the remedy was implemented. If paragraph (H)(1)(c)(ii) of this rule applies, the volunteer shall provide the remedy revision documents to seek Ohio EPA approval to ensure that proposed remedial activities comply with applicable standards. The remedy revision documents shall be in the format prescribed by Ohio EPA and include the following:

(a) A description of the remedial activities necessary to achieve or maintain compliance with applicable standards.

(b) A statement in an affidavit from the certified professional that the property complies with applicable standards through implementation of one or more of the remedial activities in accordance with this rule and paragraph (I) of rule 3745-300-07 of the Administrative Code.

(c) Both a description and a reference list of the data, information, records, and documents relied upon by the certified professional to determine and verify that the property complies with applicable



standards.

(d) A description of any remedial activity that the certified professional concluded is no longer relied upon for compliance with applicable standards, with supporting documentation for termination of the remedial activity in accordance with paragraph (E) of this rule.

(e) If compliance with applicable standards requires a new or revised institutional control, each such institutional control shall be developed as an activity and use limitation in accordance with paragraphs (C) and (E) of this rule, and be consistent with rule 3745-300-13 of the Administrative Code, as applicable.

(f) If compliance with applicable standards relies on an engineering control, a new or revised operation and maintenance plan and agreement, as applicable, shall be developed with regard to the engineering control in accordance with paragraph (F) of this rule.

(g) If compliance with applicable standards relies on a risk mitigation measure, a new or revised risk mitigation plan, as applicable, shall be developed in accordance with paragraph (G) of this rule.

(h) A request for remedy revision approval in accordance with paragraph (H)(3) of this rule.

(3) Request to Ohio EPA for remedy revision approval. Ohio EPA review of the remedy revision request requires at least ninety days to complete. A volunteer who submits a remedy revision notice and requests a remedy approval letter shall do the following:

(a) Include copies of all relevant data, information, records, and documents referenced in paragraph (H)(2)(c) of this rule.

(b) Respond to questions or requests from Ohio EPA sufficient for the director to issue a remedy approval letter and any new or modified engineering control, operation and maintenance plan or agreement, institutional control, or risk mitigation plan.

(c) Reimburse Ohio EPA for actual costs incurred to review the remedy revision notice and prepare and process the remedy approval letter, and new or modified operation and maintenance plan or



agreement, institutional control, or risk mitigation plan, or other remedial activities or documentation, as applicable. The applicant shall establish a direct billing schedule for receipt of such costs charged pursuant to paragraph (E) of rule 3745-300-03 of the Administrative Code. A statement of costs shall be sent to the applicant after the request is approved, denied, or withdrawn. The applicant shall pay the costs, in full, within sixty days after receipt of the statement of costs.

(4) A remedy revision that includes the modification or establishment of institutional controls shall apply the criteria of paragraph (F)(5) of rule 3745-300-07 of the Administrative Code for development of activity and use limitations. The institutional control shall be developed in accordance with paragraphs (C) and (E) of this rule, and shall be consistent with rule 3745-300-13 of the Administrative Code, as applicable.

(5) A remedy revision that requires the establishment or modification of an operation and maintenance agreement shall have the agreement established or modified in accordance with paragraph (F)(4) of this rule. The remedy revision shall provide financial assurance in accordance with paragraph (F)(4)(a) of this rule, based on the cost estimate calculated to implement the remedy revision.

(6) A remedy revision that involves a land use change that cannot be supported by data gathered for the original no further action letter requires issuance of a new no further action letter in support of the land use change.