FORM #14

Ohio EPA RCRA AND VAP MOA Track: Phase II Property Assessment - Ground Water

This section is divided into subsections. General Information and Description of Geology/Hydrogeology; Determining Whether the Saturated Zone Is Ground Water; Determining Whether the Ground Water Zone Meets or Exceeds UPUS; Protecting Ground Water Zones That Meet UPUS (POGWMUPUS Demonstration), Classifying Ground Water Zones That Exceed UPUS, Determining Concentrations of COCs in Ground Water, and Identifying Source or Source Areas Impacting the Ground Water Beneath the Property; Modeling; and Ground Water Response Requirements. Complete all appropriate subsections.

First Subsection: General Information and Description of Geology/Hydrogeology.

This subsection must be completed for every property conducting a Phase II investigation.

Required Information or Component of a Phase II Property Assessment	Yes or No *(indicate which)*	Provide response below. Please reference the location [including document name, section and page number(s)] within the Phase II documentation where this information or evaluation is located and also answer any specific questions as indicated.
GENERAL INFORMATION		
1. Number of zones of saturation beneath the property.		Number of saturated zones being addressed: _____
2. Has the property received an Urban Setting Designation (USD) under OAC 3745-300-10 (C)? If yes, provide the approval date. Provide reference where CP has determined USD still meets requirements of 3745-300-10 (C).	Yes: ____ No: _____	Date: _____ Document: Section: Page Number:
3. Are Class V wells a source of contamination? *Note: Response requirements contained in the Safe Drinking Water Act*	Yes: ____ No: _____	Document: Section: Page Number:
4. **Evaluation of regional geologic/ hydrogeologic and physical characteristics [OAC 3745-300-07(E)(2)] .** NOTE: If information is not necessary for the Phase II Property Assessment, then rationale as to why the information is not necessary should be provided.		
4a. Are the lithology and depth to bedrock evaluated and described?	Yes: ____ No: _____	Document: Section: Page Number:
4b. Are the characteristics of major stratigraphic units and depositional environments evaluated and described?	Yes: ____ No: _____	Document: Section: Page Number:
4c. Are the regional aquifers, including those underlying the property evaluated and described?	Yes: ____ No: _____	Document: Section: Page Number:
4d. Are the ground water recharge and discharge areas and amount of recharges and discharges characterized and described? *(Example: this evaluation would be appropriate when the identified area is leaching to ground water and/or when the identified area is the ground water and when conducting modeling)*	Yes: ____ No: _____	Document: Section: Page Number:
4e. Has the potential orientation of the regional geomorphology been described (including topographical features that may influence the ground water flow system)	Yes: ____ No: _____	Document: Section: Page Number:

FORM #14

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Required Information or Component of a Phase II Property Assessment	Yes or No *(indicate which)*	Provide response below. Please reference the location [including document name, section and page number(s)] within the Phase II documentation where this information or evaluation is located and also answer any specific questions as indicated.
and included? *(Example: this evaluation would be appropriate when the identified area is leaching to ground water and when the identified area is the ground water)*		
4f. Are the structural geological features (e.g., joints, faults, or fractures) evaluated and described? *(Example: this evaluation is appropriate when the identified area is leaching to ground water, emanating off or on to the property or when the identified area is the ground water)*	Yes: ____ No: ____	Document: Section: Page Number:
4g. Are there legally enforceable restrictions on the use of ground water, including local rules or ordinances?	Yes: ____ No: ____	Document: Section: Page Number:
4h. Is the absence or presence of regional commingled chemicals of concern from multiple sources or source areas evaluated and described? (*Example: evaluation is appropriate when the identified area is the ground water or when CP is making a qualitative assumption that ground water meets potable use standards*.)	Yes: ____ No: ____	Document: Section: Page Number:
4i. Is the natural quality of ground water and surface water evaluated and described? *(Example: this evaluation is appropriate when the identified area is the ground water or surface water)*	Yes: ____ No: ____	Document: Section: Page Number:
4j. Is the regional availability of surface water and ground water and reasonable alternative sources of drinking water evaluated and described? *(Example: evaluation is appropriate when the identified area is a surface water or when the CP is evaluating soils as non-point sources of releases of hazardous substances or petroleum into the surface water)*	Yes: ____ No: ____	Document: Section: Page Number:
4k. Is the productivity of the saturated zones underlying the property evaluated and described? *(Example: evaluation is appropriate when determining if ground water exists on the property and when classifying ground water)*	Yes: ____ No: ____	Document: Section: Page Number:
4l. Have any well head protection areas or sole source aquifers been identified at or near the property? *(Example: this evaluation is appropriate when determining if ground water contamination on the property may impact a nearby sole source aquifer.)*	Yes: ____ No: ____	Document: Section: Page Number:
5. Evaluation of property-specific geologic/hydrogeologic characteristics [OAC 3745-300-07 (E)(2)]		

FORM #14

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This subsection must be completed for every property conducting a Phase II investigation.

Required Information or Component of a Phase II Property Assessment	Yes or No *(indicate which)*	Provide response below. Please reference the location [including document name, section and page number(s)] within the Phase II documentation where this information or evaluation is located and also answer any specific questions as indicated.
NOTE: If information is not provided, then the rationale as to why the information is not necessary must be provided. (See Question 5n.)		
5a. Provide the location of the evaluation of property-specific geologic/hydrogeologic characteristics.		Document: Section: Page Number:
5**b**. Does the evaluation of the property specific geology include a description of the continuous profile of the stratigraphic units beneath the property including thickness and lateral extent of each unit? *Providing cross section(s) will facilitate the review. Please attach to the end of this section.*	Yes: ____ No: ____	Location of Cross section (s): _____ Document: Section: Page Number:
5c. Does the evaluation include property-specific vertical and horizontal hydraulic conductivity determinations for each discrete zone?	Yes: ____ No: ____	Document: Section: Page Number:
5d. Does the Phase II documentation describe the soil characteristics including but not limited to; porosity, effective porosity, bulk density, moisture content, grain size analysis, and soil pH?	Yes: ____ No: ____	Mark all described in the Phase II: ❒ porosity ❒ effective porosity ❒ bulk density ❒ moisture content ❒ grain size analysis ❒ soil pH
5**e.** Is the contamination attenuation capacity and mechanism of attenuation of the soils/fill; such as ion exchange capacity, organic carbon content, mineral content, and soil sorptive capacity described?	Yes: ____ No: ____	Mark all that are described in the Phase II: ❒ ion exchange capacity ❒ organic carbon content ❒ mineral content ❒ soil sorptive capacity
5f. Is the effect of stratification of the saturated and unsaturated flow described?	Yes: ____ No: ____	Document: Section: Page Number:
5g. Is the effect of infiltration described?	Yes: ____ No: ____	Document: Section: Page Number:
5**h.** Is the effect of evapotranspiration described?	Yes: ____ No: ____	Document: Section: Page Number:
5i. Are any anthropogenic influences that may affect geology and hydrogeology of the property described?	Yes: ____ No: ____	Document: Section: Page Number:

FORM #14

First Subsection: General Information and Description of Geology/Hydrogeology.
This subsection must be completed for every property conducting a Phase II investigation.

Required Information or Component of a Phase II Property Assessment	Yes or No *(indicate which)*	Provide response below. Please reference the location [including document name, section and page number(s)] within the Phase II documentation where this information or evaluation is located and also answer any specific questions as indicated.
5j. Is the local occurrence, flow direction and gradient of surface water and/or ground water described?	Yes: ____ No: ____	Document: Section: Page Number:
5**k.** Is the structural geology of the property and the physical properties affecting the transport of COCs described?	Yes: ____ No: ____	Document: Section: Page Number:
5l. Are any other characteristics that may be useful for potential fate and transport analysis or remedial activities described in the Phase II documentation?	Yes: ____ No: ____	Document: Section: Page Number:
5m. Were the data quality objectives and procedures, [refer to OAC3745-300-07(C)] adhered to when sampling this identified area?	Yes: ____ No: ____	Document: Section: Page Number:
5n. In the box below, provide a brief summary of the justification if the site-specific information listed in 5a through 5m is not gathered to support the Phase II Property Assessment. (Attach extra pages as necessary)		

(Continued next page)

FORM #14

Second Subsection: Determining Whether the Water in a Saturated Zone Is Ground Water. This section must be completed for each saturated zone (as appropriate) that was identified beneath the property. Make multiple copies as necessary. *Note: If the volunteer can demonstrate that a ground water zone is protected from releases from sources or source areas on the property, then deeper saturated zones may not need to be evaluated as long as there are no sources below the zone in which protection is demonstrated. However, if off-property sources are suspected of contaminating the ground water above UPUS beneath the volunteer's property, the volunteer will need to prevent human exposure to the ground water.*

	Required Information or Component of a Phase II Property Assessment	Yes or No (choose one)	Provide response below. Please reference the location [including document name, section and page number(s)] within the Phase II documentation where this information or evaluation is located and also answer any specific questions as indicated.
	6. Identify the saturated zone and depth for which this subsection applies		Saturated Zone:_____ Depth:_____
	7a. Is the water in the saturated zone ground water per the definition in OAC 3745-300-01(A)(122)?	Yes: ____ No: ____	If yes, go to question 9 (Question 8 optional) If no, go to 7b.
	7b. If the water in the saturated zone is not ground water per the rule definition, was this based on yield less than 1.5 gallons in 8 hours or a hydraulic conductivity (K) less than 5×10^{-6} cm /sec?		Not ground water based on: ❒ Yield less than 1.5 gallons in 8 hours:(answer 8a-8c) ❒ K less than 5×10^{-6} cm /sec:(answer 8d-8f)
	8. If the answerer to 7a is NO, and the demonstration was based on a yield, answer 8a through 8c. If the demonstration in question 6 was based on a hydraulic conductivity, answer questions 8d through 8f.		
YIELD	8a. Were spatial considerations evaluated in accordance with OAC 3745-300-07 (G)(8)(b)?	Yes: ____ No: ____	Document: Section: Page Number:
	8b. Are well construction details in accordance with OAC 3745-300-07 (F)(6)(c) contained in the Phase II documentation?	Yes: ____ No: ____	Document: Section: Page Number:
	8c. Was yield testing biased to expected times of maximum yield or was it demonstrated that the average yield over 12 month period would not exceed the cut off value (See TDC VA30010.98.003)		(Mark One) ❒ Conducted Time Highest Yield ❒ Demonstrated annual average would not exceed cut off value Document: Section: Page Number:
HYDRAULIC	8d. Have an adequate number of field tests been conducted in accordance with OAC 3475-300-07 (F)(6)(c)? Reference the location within the Phase II documentation of this information.	Yes: ____ No: ____	Number of Tests Document: Section: Page Number:
	8e. Have appropriate methods been used to evaluate the data in accordance with OAC 3745-300-07 (F)(6)(c) ?	Yes: ____ No: ____	Location of description of the methods used: Document: Section: Page Number: Appendix (or Location) of Raw Data: Document: Section:

C O N D U C T I V I T Y			Page Number:
	8f. Were the tests biased to areas of highest hydraulic conductivity (K) or were a sufficient number of tests conducted to provide an average representative of the zone beneath the property?		(Check one) ❒ Biased to Areas of High K: ❒ Average K Used: Number of Tests conducted: If Average K used, provide the location of Figure showing location of data points: Document: Section: Page Number:
Note: If the water in the zone is <u>not</u> ground water, then Section G is complete for <u>this</u> saturated zone. If the water in the saturated zone <u>is</u> ground water, complete the other sub-sections of Section G as appropriate.			

FORM #14

Third Subsection: Determining Whether the Ground Water in the Zone Meets or Exceeds UPUS. This subsection must be completed for each ground water zone. Make multiple copies as necessary.

9. Identify the ground water zone for which this section applies		Ground Water Zone:_____ Depth:_____
10. Does the ground water zone comply with or exceed unrestricted potable use standards as defined in OAC 3745-300-01(A)(135)?		____ Complies with Generic UPUS ____ Exceeds Generic UPUS ____ Property-Specific Risk Assessment will evaluate Risk-Derived UPUS (list COCs that will be evaluated):
11. Was the determination of whether the ground water zone complies with or exceeds unrestricted potable use standards made in accordance with OAC 3745-300-07 (F)(2)(b) or (F)(2)(a) ? If made in accordance with OAC 3745-300-07 (F)(2)(b), go to 12 then proceed to question 14. If made in accordance with OAC 3745-300-07 (F)(2)(a), proceed to 13. NOTE: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then, when appropriate, this question and questions 12 through 14 may need to be completed after calculation of the applicable standard. If it is necessary to complete this form during the risk assessment phase of this MOA track, a partially competed Form #14 must be submitted with the Phase II Property Assessment Report. A completed Form #14 must then be submitted with the Risk Assessment Report.		(Mark One) ❒ OAC 3745-300-07 (F)(2)(b): (assume meets UPUS) ❒ OAC 3745-300-07 (F)(2)(a): (2 sampling events within 2-90 days) ❒ Property-Specific Risk Assessment will evaluate Risk-Derived UPUS
12a. **Answer only if ground water was assumed to meet UPUS**. If the ground water was assumed to meet unrestricted potable use standards under OAC Rule 3745-300-07(F)(2)(b), is it reasonable (based on site conditions, types of chemicals of concern, and potential sources) to make that assumption? **Provide location of explanation.**	Yes: ____ No: ____	Document: Section: Page Number:
12b. **Answer only if ground water was assumed to meet UPUS**. Are the following responses to 13a through 13i provided as additional information even though ground water was assumed to meet UPUS?	Yes: ____ No: ____	
13a. Were samples taken immediately downgradient of the source area?	Yes: ____ No: ____	Document: Section: Page Number: Sampling Location Figure# :
13b. Were two samples collected and analyzed within 2 to 90 days of each other? (Note: In order to say that POGWMUPUS does not apply, two samples collected within 15 to 30 days of each other must exceed UPUS.)	Yes: ____ No: ____	Document: Section: Page Number:

Third Subsection: Determining Whether the Ground Water in the Zone Meets or Exceeds UPUS. This subsection must be completed for each ground water zone. Make multiple copies as necessary.

13c. Provide the location within the Phase II documentation of dates the samples were analyzed by the certified laboratory(ies).		Document: Section: Page Number:
13d. Provide name(s) of the certified laboratory(ies) used to analyze ground water.		Name(s):
13e. If the method described in paragraph (F)(2)(a) was utilized, was this based on ground water sampling or modeling?		❒ 95 percentile of ground water samples ❒ Modeled ground water samples
13f. In determining that ground water complies with unrestricted potable use standards, what standards were used? (NOTE: Phase II documentation should indicate whether the particular applicable standard was a generic standard or background. If appropriate, the Phase II documentation should also indicate if a property-specific value will be determined.)		(Mark all that apply) ❒ generic standards in OAC 3745-300-08(D) ❒ background (metals only) ❒ property-specific unrestricted potable use standards will be termined in accordance with OAC 3745-300-09(D)(3)
13g. Indicate whether the ground water was sampled in accordance with OAC 3745-300-07(F)(5)(d)(viii)(a) or in accordance with Ohio EPA's Technical Guidance Manual for Ground Water Monitoring (TGM) per OAC 3745-300-07(F)(5)(d)(viii)(b)? (Note: Phase II documentation should detail how rule requirements were met.)		(Mark all that apply) ❒ OAC 3745-300-07(F)(5)(d)(viii)(a) ❒ TGM per OAC 3745-300-07(F)(5)(d)(viii)(b) Document: Section: Page Number:
13h. Were any ground water samples analyzed for metals filtered? NOTE: If filtered, Phase II documentation should provide justification for the appropriateness of filtering the ground water samples	Yes: ____ No: ____	Document: Section: Page Number:
13i. Provide location of information regarding the number of wells and their location and relationship compared to the area(s) of concern.		Document: Section: Page Number: Location of MAP/Figure (s) that show well locations:
14. If the ground water zone complies with unrestricted potable use standards, go to the Fourth Subsection - Questions 15 to 17 (POGWMUPUS demonstration). If the ground water zone exceeds unrestricted potable use standards, go to the Fifth Subsection - Questions 18 to 47 (Ground Water Classification). NOTE: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then it may be appropriate to complete the fourth or fifth subsections after calculation of the applicable standard.		

Fourth Subsection: Protection of Ground Water Meeting Unrestricted Potable Use Standards (POGWMUPUS Demonstration). This subsection must be completed for the upper most ground water zone that meets UPUS. Ground Water zones beneath this zone will be considered protected from sources on the property unless waste disposal occurred below this zone. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

15. Identify the ground water zone and depth for which this section applies.		Ground Water Zone:_____ Depth:_____
16. Was an evaluation conducted to ensure that the migration of hazardous substances or petroleum from sources or source areas on the property will not result in unrestricted potable use standards being exceeded anywhere within the ground water zone under OAC 3745-300-10(D)?	Yes: ____ No: ____	Document: Section: Page Number:
16a. Was this demonstration made by a comparison to Ohio EPA generic leaching values in accordance with the Ohio EPA Derived Leach-Based Soil Technical Guidance Document (October, 1996)?	Yes: ____ No: ____	If yes, provide the location of the table that lists the generic leaching value(s) used: Document: Section: Page Number: Table # :
16b. Was this demonstration made by a comparison to risk derived leaching values derived in accordance with OAC 3745-300-09 (H)?	Yes: ____ No: ____	If yes, provide the location of the table that lists the COC's in which a property specific UPUS was developed and the leaching value calculated:. Document: Section: Page Number: Table #:
16c. Was a generic dilution factor used as provided in Ohio EPA's Derived Leach-Based Soil Technical Document?	Yes: ____ No: ____	Generic dilution Value: Provide section and page number which supports the use of the selected dilution factor. Section: Page #:
16d. Was a property-specific dilution factor or dilution attenuation factor determined?	Yes: ____ No: ____	Calculated Dilution Factor or Dilution Attenuation Factor: Provide document name, section and page number which supports the use of the calculated dilution factor. Document: Section: Page Number:
16e. Was this demonstration using the hydrogeologic characteristics of the property and the chemical characteristics of the COC's in accordance to OAC 3745-300-07(F)(5)(d)?	Yes: ____ No: ____	Document: Section: Page Number:
16f. Was a model used to demonstrate protection of ground water meeting unrestricted potable use standards, per OAC 3745-300-07(G)? If yes, provide the name of the model(s).	Yes: ____ No: ____	Document: Section: Page Number: Model Name(s):
17. If YES, answer the Sixth Subsection on Modeling - Questions 48 to 54.		

FORM #14

Fifth Subsection: Classification of Ground Water Zones That Exceed UPUS, Determining The Representative Concentrations of COCs in The Ground Water, And Determining The Source or Source Areas Impacting The Ground Water. This subsection needs to be completed for each ground water zone that exceeds UPUS. Make multiple copies as necessary. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

18. Identify the ground water zone and depth being classified:		Ground Water Zone:_____ Depth:_____
19. List of COCs in ground water and indicate whether they exceed a generic unrestricted potable use standard under OAC 3745-300-08(D) or background under OAC 3745-300-07(H)(3).		Document: Section: Page Number:
20. What is the ground water classification? Reference the location where information regarding the rationale, procedures and conclusions for making this determination can be found.		(Mark one) ❒ Class B ❒ Class A ❒ Critical Resource Document: Section: Page Number:
Answer questions 21 through 32 as applicable to demonstrate that a zone falls <u>below</u> Critical Resource or Class A ground water.		
21. Is the ground water zone being used by a Community Water Supply with a wellhead protection area endorsed by Ohio EPA or one submitted for endorsement in accordance with OAC 3745-300-10(B)(1)(a)?	Yes: ____ No: ____	Document: Section: Page Number:
22. Is the ground water zone part of a consolidated Sole Source Aquifer in accordance with OAC 3745-300-10(B)(1)(c)?	Yes: ____ No: ____	Document: Section: Page Number:
23. Was regional information used to determine that the ground water zone is not part of an unconsolidated aquifer capable of yielding 100 gpm in accordance with OAC 3745-300-10(B)(1)(b)? *(e.g., Ohio Department of Natural Resources Ground Water Resource Maps or other published documentation)?*	Yes: ____ No: ____	Document: Section: Page Number:
24. Are any wells within ½ mile of the property used for potable purposes? *[See TDC VA30010.015]*	Yes: ____ No: ____	Document: Section: Page Number:
25. Does the ground water have a natural total dissolved solids content over 3,000 mg/l in accordance with OAC 3745--300-10(B)(2)(b).?	Yes: ____ No: ____	Document: Section: Page Number:
26. Was the above classification based on yield in accordance with OAC 3745-300-07(F)(8)?	Yes: ____ No: ____	Document: Section:

FORM #14

Fifth Subsection: Classification of Ground Water Zones That Exceed UPUS, Determining The Representative Concentrations of COCs in The Ground Water, And Determining The Source or Source Areas Impacting The Ground Water. This subsection needs to be completed for each ground water zone that exceeds UPUS. Make multiple copies as necessary. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

If **YES**, continue with question 21 If **NO**, proceed to question 27		Page Number:
27. Were spatial considerations evaluated in accordance with OAC 3745-300-07(F)(7)(a)?	Yes: ____ No: ____	Document: Section: Page Number:
28. Were a sufficient number of yield tests performed across the property to allow for an average to be calculated?	Yes: ____ No: ____	Document: Section: Page Number:
29. Were the wells constructed in accordance with OAC 3745-300-07(F)(6)(c)(ii) or (F)(6)(c)(i) or (ii)?	Yes: ____ No: ____	(Mark One) ❒ OAC 3745-300-07 (F)(6)(c)(ii) ❒ OAC 3745-300-07 (F)(6)(c)(i) ❒ OAC 3745-300-07 (F)(6)(c)(ii)
29a. Location of Well construction details in the Phase II documentation:		Document: Section: Page Number:
29b. Location of Boring & Well Logs in the Phase II documentation:		Document: Section: Page Number:
30. Were multiple tests conducted throughout the year or was TGC #VA30007.09.013 used to establish that the yield does not exceed an annual average, OR was the yield based on a time of expected maximum yield in accordance with OAC 3745-300-07(F)(8)(a)(ii)?		(Mark One) ❒ Multiple tests throughout the year ❒ Used TGC #30007.09.013 ❒ Maximum time of Yield: If maximum, expected maximum yield:_____ Document: Section: Page Number:
31. If the yield was determined to be less than 3 gpm, was the yield of the zone of interest compared to another saturated zone?	Yes: ____ No: ____	Document: Section: Page Number:
32. For the purpose of comparing the yield of a saturated zone yielding less than 3 gpm to another saturated zone, in accordance with OAC 3745-300-10 (B)(2)(c)(ii) and 3745-300-07(F)(8) :		
32a Is the zone of comparison a source of drinking water within 1 mile of the property?	Yes: ____ No: ____	Document: Section: Page Number:
32b. Does the zone of comparison have a yield of at least 2 times the yield of the zone being classified?	Yes: ____ No: ____	Document: Section: Page Number:
32c. Is the zone of comparison present beneath the property?	Yes: ____ No: ____	Document: Section: Page Number:

Fifth Subsection: Classification of Ground Water Zones That Exceed UPUS, Determining The Representative Concentrations of COCs in The Ground Water, And Determining The Source or Source Areas Impacting The Ground Water. This subsection needs to be completed for each ground water zone that exceeds UPUS. Make multiple copies as necessary. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

32d. Is the yield of the zone of comparison based on the lowest yielding wells within 1 mile of the property?	Yes: ____ No: ____	Document: Section: Page Number:
32e. If no wells exist within 1 mile of the property, does regional information (such as ODNR ground water resource maps) indicate that the zone is present beneath the property and that the zone has a yield of at least 2 times of the zone of interest?	Yes: ____ No: ____	Document: Section: Page Number:
REPRESENTATION OF CONCENTRATIONS OF COC'S IN THE GROUND WATER AT THE POINT OF COMPLIANCE OAC 3745-300-07 (F)(5)(d)		
33. Were ground water samples collected from each well for every quarter over a minimum of one year? **Note:** If the answer is **NO**, the Phase II report must describe how the temporal variations will not result in an exceedence of an applicable standard.	Yes: ____ No: ____	Document: Section: Page Number:
34. Were one or more samples collected biased towards the anticipated point of highest concentration in accordance with OAC 3745-300-07(F)(5)(d)(iii)?	Yes: ____ No: ____	Mark all that apply that were considered for determining anticipated points of highest concentration: ❒ Direction of Ground Water Flow ❒ Size of the Plume ❒ Field Screening Information ❒ Fate and Transport modeling
35. If sample locations could not be reliably biased towards the point of highest concentrations, were additional samples collected to determine the point of highest concentration in accordance with OAC Rule 3745-300-07 (f)(5)(d)(iv)?	Yes: ____ No: ____	Document: Section: Page Number:
36. Provide dates the samples were analyzed by the certified laboratory (ies).		Date(s):
37. Provide name(s) of the certified laboratory(ies).		Names:
38. Provide in the Phase II documentation the location of sampling procedures conducted in accordance with OAC 3745-300-13 (E)(4).	Yes: ____ No: ____	Document: Section: Page Number:
39. Was the ground water sampled in accordance with the recommended procedures of Ohio EPA's Technical Guidance Manual (TGM) for Ground Water Monitoring or were the procedures of OAC 3745-300-07(F)(5)(d)(viii)(a) followed?	Yes: ____ No: ____	(Mark all that apply) ❒ Ohio EPA's TGM ❒ Sampled in accordance to OAC Rule 3745-300-7(F)(5)(d)(viii)(a)

FORM #14

Fifth Subsection: Classification of Ground Water Zones That Exceed UPUS, Determining The Representative Concentrations of COCs in The Ground Water, And Determining The Source or Source Areas Impacting The Ground Water. This subsection needs to be completed for each ground water zone that exceeds UPUS. Make multiple copies as necessary. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

40. Were ground water samples filtered for metals? NOTE: If yes, provide justification in the Phase II documentation why filtering before analysis was done.	Yes: ____ No: ____	Document: Section: Page Number:
41. Were ground water samples analyzed in accordance to OAC 3745-300-07 (F)(5)(d)(v)?	Yes: ____ No: ____	Document: Section: Page Number:
SOURCE OR SOURCE AREAS WHICH IMPACT THE GROUND WATER FOR THE IDENTIFIED AREA (Note: Need to specify for each identified area).		
42. Are there sources or source areas located on the property that contributed or are contributing to ground water contamination?	Yes: ____ No: ____	Document: Section: Page Number:
43. Did an evaluation in accordance with OAC 3745-300-07(F)(9) indicate the presence of any off-property sources that have impacted ground water quality beneath the property subject to the voluntary action?	Yes: ____ No: ____	Document: Section: Page Number:
44a. In accordance with OAC 3745-300-10(E)(1)(b)(i), **is** the owner of the voluntary action property an owner or operator of any other property on which any source or source area is located that may be contributing to ground water pollution above UPUS beneath the voluntary action property?	Yes: ____ No: ____	Document: Section: Page Number:
44b. In accordance with OAC 3745-300-10(E)(1)(b)(ii), **was** the owner of the voluntary action property an owner or operator of any other property on which any source or source area was located during the owner's ownership of the property that may be contributing to ground water pollution above UPUS beneath the voluntary action property?	Yes: ____ No: ____	Document: Section: Page Number:
44c. In accordance with OAC 3745-300-10(E)(1)(b)(iii), did the volunteer, or owner if different from the volunteer, cause or contribute to the source or source areas or release of the off-property source?	Yes: ____ No: ____	Document: Section: Page Number:
44d. In accordance with OAC 3745-300-10(E)(1)(b)(iv), has the volunteer, or owner if different from the volunteer, entered into an agreement with any person with the purpose or effect of creating a less stringent ground water standard than would otherwise be applicable in this rule?	Yes: ____ No: ____	Document: Section: Page Number:
44e. In accordance with OAC 3745-300-10(E)(1)(b)(v), is the volunteer a parent, subsidiary, or other commonly owned entity of any party identified in paragraphs (E)(1)(b)(i) to (E)(1)(b)(iv) of this rule?	Yes: ____ No: ____	Document: Section: Page Number:
45. If **NO** to any of 44a through 44e, **and** off-property source(s) or source area(s) are contributing to ground water pollution beneath the voluntary action property, are the COCs the same, different or both?		❒ Same ❒ Different ❒ Both Provide a table which lists the off-property COCs and indicate whether they are the same or different from the COCs on the

Fifth Subsection: Classification of Ground Water Zones That Exceed UPUS, Determining The Representative Concentrations of COCs in The Ground Water, And Determining The Source or Source Areas Impacting The Ground Water. This subsection needs to be completed for each ground water zone that exceeds UPUS. Make multiple copies as necessary. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

		voluntary action property: Document: Section: Page Number: Table:
46. Is there, has there been, or will there ever be ground water migrating off the property (from source(s) or source area(s) on the property) with concentrations of COCs exceeding unrestricted potable use standards? If yes, provide details in Phase II documentation.	Yes: ____ No: _____	Document: Section: Page Number:

Sixth Subsection: Use of Models. This subsection needs to be completed for each model used to either demonstrate that the ground water is protected, or determine the standards are met at the compliance point, or demonstrate that a receptor is protected of the applicable standard. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

47. Identify the ground water zone(s) for which a model is used:		Ground Water Zone(s):_____ Depth(s):_____
48. What is the purpose of the use of modeling for this property?		☐ Demonstrating POGWMUPUS ☐ Meeting UPUS at a specific point of compliance ☐ Other_____
49. What is the name and version of the model(s) used?		Model Name:_____ Version:_____
50. Is the model(s) consistent with OAC 3745-300-07(G)? NOTE: It should be summarized in the section that the model was peered reviewed, field-validated, used consistent with conditions throughout the modeled area, used consistent with documentation and calibrated to conditions throughout the modeled area. **The section should provide the necessary input parameters and their values and information regarding when property specific information was utilized and when default values were used.**	Yes: ____ No: ____	☐ Peer-reviewed, see: (G)(4)(a) ☐ model verified: (G)(2)(a)(i) ☐ Field Validated: (G)(2)(b) ☐ Consistent with property conditions: (G)(4)(b)(i) ☐ Used consistent with model documentation: (G)(2) ☐ Calibrated to site conditions: (G)(4) (*Note: It may be acceptable not to be calibrated to property conditions if it can be demonstrated that it is much more conservative that the site hydrogeology*.) Location of Input parameters: Document: Section: Page Number:
51. Is a description provided as to how the model(s) was calibrated and field validated in accordance with OAC 3745-300-07(G)(4)?	Yes: ____ No: ____	Document: Section: Page Number:
52. Was a degradation rate used? If yes, is property-specific information provided to support the use of the degradation rate?	Yes: ____ No: ____ Yes: ____ No: ____	Document: Section: Page Number:
53. Is the presence of an engineering control used to adjust input parameters? Note: The use of engineering controls should not be used during the Phase II. The use of engineering controls should be evaluated during the remedial activities stage of the project.	Yes: ____ No: ____	Document: Section: Page Number:

Seventh Subsection: Response Requirements for Ground Water Zones That Exceed UPUS. This subsection needs to be completed for each ground water zone that exceeds UPUS. Make multiple copies as necessary. (Note: If a risk-derived unrestricted potable use standard will be calculated as part of a property-specific risk assessment, then this subsection may be completed after calculation of the applicable standard.)

54. Identify the ground water zone and depth that has a response requirement (i.e., COCs are above UPUS): NOTE: For all ground water zones with COCs above UPUS, remedial activities are required to address on property potable use of ground water.		Ground Water Zone: Depth:

55. Are on property non-potable pathways or pathways to on property ecological receptors complete. If YES, a property-specific risk assessment is required to determine applicable standards or the need for remedial activities, or remedial activities are needed to achieve compliance with applicable standards.	Yes: _____ No: _____	Document: Section: Page Number:
56. Identify the appropriate ground water response category for the ground water zone:		❑ Critical resource without USD ❑ Critical resource with USD ❑ Class A without USD ❑ Class A with USD ❑ Class B
57. Identify the appropriate source location and, if applicable, whether COCs from off property are the same or different as those from on property: If sources or source areas are both on and off property, a table (or appropriate text) summarizing the location of the source or source area for each COC and whether the COC is the same or different must be included in the Phase II report. Provide the location in the Phase II documentation where the table (or appropriate text) can be found.		❑ All sources or source areas are on property ❑ All sources or source areas are off property ❑ Sources or source areas are both on and off property and the COCs from on property sources or sources areas are the same as those from off property ❑ Sources or source areas are both on and off property and the COCs from on property sources or sources areas are different than those from off property Document: Section: Page Number:
58.a Does ground water emanating beyond the property boundary exceed UPUS?	Yes: ____ No: _____	Document: Section: Page Number:
58.b Will ground water emanating beyond the property boundary exceed UPUS in the future?	Yes: ____ No: _____	Document: Section: Page Number:
59. If YES to 58a or 58b and COCs are from sources or source areas on the property, are off property non-potable pathways to human receptors or pathways to important ecological receptors complete? If YES, a property-specific risk assessment is required to determine applicable standards or the need for remedial activities, or remedial activities are needed to achieve compliance with applicable standards.	Yes: ____ No: _____	**If YES, Check the one that applies:** ❑ Non-potable pathways to human receptors ❑ Important ecological receptors ❑ Both Document: Section: Page Number:
60a. If sources are located off property and the COCs from off property are the same as those COCs from on property, and the ground water zone is either critical resource without a USD or Class A without a USD, will leaching of COCs from sources or source areas on property result in UPUS being exceeded in ground water emanating beyond the property boundary? If YES, remedial activities are required.	Yes: _____ No:_____ Does not apply: ____	Document: Section: Page Number:
60b. If sources are located off property and the COCs from off property are the same as those COCs from on property, and the ground water zone is critical resource with a USD, will leaching of COCs from sources or source areas on property result in UPUS being exceeded in ground water emanating beyond ½ mile from the property boundary? If YES, remedial activities are required.	Yes: _____ No:_____ Does not apply: ____	Document: Section: Page Number:

61a. If the ground water zone is Class A without a USD or critical resource without a USD, does ground water emanating or ground water that has emanated beyond the property boundary meet UPUS? If YES and COCs are from sources or source areas on the property, remedial activities are required for critical resource ground water zones without a USD. Remedial activities are required for Class A without a USD, if the ground water is impacting wells used for potable purposes (see questions 65 and 66).	Yes: _____ No:_____ Does not apply: ____	Document: Section: Page Number:
61b. If YES to 61a, will ground water emanating beyond the property boundary continue to meet UPUS in the future?	Yes: _____ No:_____ Does not apply: ____	Document: Section: Page Number:
62. If NO to 61a or 61b, are COCs are from sources or source areas on the property? If YES, go to question 63. If NO, go to question 64a.	Yes: _____ No:_____	Document: Section: Page Number:
63. If the ground water emanates to a surface water body immediately adjoining the property, does ground water meet standards established for the receiving surface water at the point of discharge? If NO, remedial activities or a property-specific risk assessment are required. If "does not apply", remedial activities are required.	Yes: _____ No:_____ Does not apply:____	Document: Section: Page Number:
64a. If the ground water zone is critical resource with a USD, does ground water emanating or does ground water that has emanated beyond ½ mile from the property boundary meet UPUS? If NO and COCs are from sources or source areas on the property, remedial activities are required.	Yes: _____ No:_____ Does not apply: ____	Document: Section: Page Number:
64b. If YES to 64a, will ground water emanating beyond ½ mile from the property boundary continue to meet UPUS in the future? If NO and COCs are from sources or source areas on the property, remedial activities are required.	Yes: _____ No:_____ Does not apply: ____	Document: Section: Page Number:
65. If NO to either 61a, 61b, 64a or 64b, and COCs are from sources or source areas on the property: ❑ has any visual evidence of ground water use by current property owners or users been identified in areas where ground water has or is reaonably anticipated to have concentrations of COCs in excess of UPUS, or ❑ have ODNR water well log information been reviewed to determine whether ground water wells have been	Yes: _____ No:_____ Does not apply:____	**If YES, Check all that apply:** ❑ Visual evidence ❑ ODNR water well log information ❑ Other means (explain):

installed in areas where ground water has or is reaonably anticipated to have concentrations of COCs in excess of UPUS, or ❑ have wells been identified by any other means? Note: If ground water zone is critical resource, the first two items, at a minimum, are required by rule. However, the identification of potable use wells by unspecified means is needed for both critical resource and Class A ground water zones.		Document: Section: Page Number:
66. If YES to 65, are the off-property wells used for potable purposes? If YES, remedial activities are required.	Yes: _____ No:_____	Document: Section: Page Number:
67. Were models used to demonstrate that an applicable standard is met at the compliance point? If YES, complete the sixth subsection of this form for each model used.	Yes: _____ No:_____	Document: Section: Page Number:
68. For ground water zones that are critical resource with and without a USD and Class A without a USD, what standards are applied at the points of compliance?		(Mark all that apply) ❑ generic standards in OAC 3745-300-08(D) ❑ property-specific unrestricted potable use standards determined under OAC 3745-300-09(D)(3) ❑ background (metals only) ❑ surface water standards ❑ Other (specify): ❑ property-specific risk assessment is required to determine risk-based non-potable use or other applicable standards Document: Section: Page Number:
69. Are remedial activities required to meet ground water response requirements? If "unknown at this time", a property specific risk assessment is required to determine applicable standards to meet ground water response requirements.	Yes: _____ No:_____ unknown at this time: _____	Document: Section: Page Number:
70. Is a property-specific risk assessment required to determine applicable standards to meet ground water response requirements?	Yes: _____ No:_____	Document: Section: Page Number:
END OF FORM #14		