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3745-300-01 **Definitions.**

[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 paragraph (B) of this rule titled "Incorporation by reference."]

(A) Except as otherwise provided in this chapter, the following definitions are applicable:

(1) "Acceptance limit" is the numerical range in which an analyte must be quantitated in a proficiency testing sample.

(2) "Active remediation" or "active remedy" is the remedial activities taken to reduce the mass, toxicity, mobility or concentration of a chemical of concern. Active remediation includes but is not limited to the removal of the hazardous substances or petroleum from the property or the design and installation of the following: air sparging; soil washing; pump and treat; steam stripping; soil vapor extraction; and enhancement of bioremediation. Active remediation may include short-term activities, such as soil removal and proper disposal, the construction of an engineering control, such as a cap or cover, or ground water gradient reversal. Alternately, active remediation may involve long-term activities such as ground water pump-and-treat systems.

(3) "Activity and use limitations" are one or more restrictions or obligations created under sections 5301.80 to 5301.92 of the Revised Code with respect to real property. Activity and use limitations eliminate or mitigate exposure to a release of hazardous substances or petroleum. Examples of activity and use limitations include but are not limited to land use limitations and ground water use restrictions. The term is known as institutional controls in rules 3745-300-07, 3745-300-08, 3745-300-09, 3745-300-10, 3745-300-11 and 3745-300-14 of the Administrative Code.

(4) "Actual costs" are the actual, substantiated direct, indirect and other costs associated with a specific voluntary action program activity.

(5) "Additional certification" is supplemental certification to perform analyses of specific analytes or parameter groups, using designated methods, for which the laboratory is not already certified pursuant to the laboratory's current certification under rule 3745-300-04 of the Administrative Code.

(6) "Affected media" are any environmental media present on or off property that contain concentrations of chemical(s) of concern.

(7) "Affected property" is a property, or portion thereof, for which a variance is being sought under rule 3745-300-12 of the Administrative Code.

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(8) "Affiliated" means under common ownership or control.

(9) "Agency" or "Ohio EPA" is the Ohio environmental protection agency.

(10) "Analyte" is a hazardous substance or petroleum, or a constituent of a hazardous substance or petroleum.

(11) "Applicable standards" are standards established in or pursuant to sections 3746.05, 3746.06, and 3746.07 of the Revised Code, or rule 3745-300-07, 3745-300-08, 3745-300-09, 3745-300-10, or 3745-300-11 of the Administrative Code, as applicable.

~~(12) "Applicant" is any individual who submits an application to become a certified professional.~~

~~(13)~~(12) "Audit findings" means written documentation provided by certified mail to a person who has performed a voluntary action, the current owner of a property that has been the subject of a voluntary action, or a certified professional or certified laboratory, as appropriate, which indicates the results of an audit conducted pursuant to rule 3745-300-14 of the Administrative Code.

~~(14)~~(13) "Background levels" are the conditions at a property and areas surrounding a property that are unaffected by any current or past activities involving treatment, storage, or disposal of hazardous substances or petroleum. Background levels include naturally occurring substances.

~~(15)~~(14) "Biocriteria manual" means collectively, unless specified otherwise, "Biological Criteria for the Protection of Aquatic Life: Volume II" and "Biological Criteria for the Protection of Aquatic Life: Volume III" as cited in paragraph (B)(2) of this rule.

~~(16)~~(15) "Capture zone" means all unsaturated and saturated subsurface areas that presently contribute or will contribute ground water to a well.

~~(17)~~(16) "Central tendency value" is a parameter value from a probability distribution of parameter values which is an estimation of the median of that distribution.

~~(18)~~(17) "Certificate" is the document issued by the director to an individual laboratory, certified under rule 3745-300-04 of the Administrative Code, that

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authorizes ~~it~~ the laboratory to perform analyses in support of a request for a no further action letter for the specified analytes or parameter groups, and using the methods listed on the document, or the document issued by the director which acknowledges that an individual is a certified professional for the purposes of this chapter and Chapter 3746. of the Revised Code.

~~(19)~~(18) "Certified" or "certification" is the authorization of a laboratory to perform analyses in support of a request for a no further action letter for the specific analytes or parameter groups and using the methods for which the director has determined the laboratory meets the requirements as set forth in rule 3745-300-04 of the Administrative Code, or the authorization of an individual to issue no further action letters under rule 3745-300-05 of the Administrative Code.

~~(20)~~(19) "Certified laboratory" is a laboratory, either a fixed-base laboratory or mobile laboratory as defined by this rule, and certified by the director pursuant to rule 3745-300-04 of the Administrative Code.

~~(21)~~(20) "Certified professional" is a person certified by the director pursuant to rule 3745-300-05 of the Administrative Code to issue no further action letters under section 3746.11 of the Revised Code.

~~(22)~~(21) "~~Chemical(s)~~Chemical of concern" are specific constituents of hazardous substances or petroleum which are on, underlying or emanating from a property, and are identified during a voluntary action.

~~(23)~~(22) "Chemical-specific intake" is the measure of exposure of a receptor to ~~chemical(s)~~the chemical of concern and is equivalent to the administered dose. Chemical specific intake is equal to the mass of a substance in contact with the exchange boundary of a receptor per unit body mass per unit time. For the purposes of this rule, chemical specific intake is expressed in units of milligrams per kilogram (mg/kg) per day.

~~(24)~~(23) "Chemical testing method" is a method used for the preparation and analysis of an environmental sample to quantify for hazardous substances or petroleum, or constituents of hazardous substances or petroleum.

~~(25)~~(24) "Class C release" means a release of petroleum occurring or identified from an underground storage tank system subject to sections 3737.87 to 3737.89 of the Revised Code for which the responsible person for the release is specifically determined by the fire marshal not to be a viable person capable of undertaking or completing the corrective actions required under those sections for the release. "Class C release" also includes any release

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designated as a "Class C release" in accordance with rules adopted under section 3737.88 of the Revised Code.

~~(26)~~(25) "Complete exposure pathway" is a current or reasonably anticipated exposure pathway determined to be complete after the identification of current and reasonably anticipated property use and receptor populations and as a result of a pathway completeness determination.

~~(27) "Compliance audit" is an inspection of a certified laboratory to evaluate compliance by the laboratory with its obligations as a certified laboratory under rule 3745-300-04 of Administrative Code and Chapter 3746. of the Revised Code which may include inspection of laboratory technology, operations, facilities, information and documents, and interviews with personnel.~~

~~(28)~~(26) "Conflict of interest" is any circumstances which would affect the laboratory's ability to objectively analyze samples in connection with a voluntary action, including circumstances similar to those set forth in paragraph (E)(3) of rule 3745-300-05 of the Administrative Code for certified professionals.

~~(29)~~(27) "Consolidated saturated zone" is a saturated zone in bedrock.

~~(30)~~(28) "Consumer price index" means the "Midwest Consumer Price Index for All Urban Consumers for the U.S. Average for All Items" - unadjusted, index base period 1982-84 = 100, annual average as of the close of the twelve-month period ending on the thirty-first day of December of that year, as published by the United States department of labor.

~~(31)~~(29) "Continuing education unit" is a unit of credit customarily used for professional development courses. One continuing education unit equals ten hours of actual instruction in an approved continuing education course.

~~(32)~~(30) "Course" is any educational activity with a clear purpose and objective which will maintain, improve, or expand the skills and knowledge relevant to the investigation, assessment or remediation of hazardous substances or petroleum.

~~(33)~~(31) "Covenant not to sue" is a release from civil liability that is issued by the director under section 3746.12 of the Revised Code.

~~(34)~~(32) "Cumulative risk" is the estimate of excess lifetime cancer risk attributable to the exposure of a receptor or receptor population to one or more chemicals

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of concern in one or more environmental media, or through one or more routes of exposure.

~~(35)~~(33) "Determination of sufficient evidence letter" is a notification from the director, pursuant to section 3746.02 of the Revised Code and this chapter, that a person or property that is the subject of an enforcement letter may or may not participate in the voluntary action program.

~~(36)~~(34) "Diligent inquiry" means conducting a thorough search of all reasonably available information, and making reasonable efforts to interview persons with knowledge regarding current and past uses of the property, waste disposal practices, and environmental compliance history.

~~(37) "Direct costs" are all costs directly tracked or accounted for which may be attributed to a specific voluntary action program activity.~~

~~(38)~~(35) "Director" is the director of the Ohio environmental protection agency, or the director's designee.

(36) "Discretionary audit pool" is any no further action letter submitted to the director with a request for a covenant not to sue in the preceding calendar year under section 3746.11 of the Revised Code that was either not included in or was not selected for audit from the random audit pool.

~~(39)~~(37) "Document" is any record, device, or item, regardless of physical form or characteristic, including but not limited to, electronic or hard copy records of reports, studies, data, correspondence, and all other information.

~~(40)~~(38) "Drinking water source protection area ~~for a public water system using ground water~~" is the surface and subsurface area surrounding a public water supply ~~well(s)~~well that will provide water to the ~~well(s)~~well within five years as delineated or endorsed by the agency under the wellhead protection program and the source water assessment and protection program.

~~(41)~~(39) "Drinking water source protection plan" means the strategies to be implemented by a public water system to prevent, detect, and respond to water quality contamination in a drinking water source protection area, as adopted by the owner of the public water system and endorsed by the agency as meeting the requirements of the wellhead protection program and the source water assessment and protection program.

~~(42)~~(40) "Enforcement letter" is a notification that the director intends to pursue enforcement under Chapter 3704., 3734., or 6111. of the Revised Code

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relating to a release or threatened release of hazardous substances or petroleum, in the form of an invitation to negotiate from the director which includes proposed director's final findings and orders.

~~(43)~~(41) "Engineered fill" is soil or aggregate materials derived from on-property or off-property locations which has been placed on the property to meet specific engineering requirements for the construction of buildings, utility lines, roadway sub-grade, or other structures. Engineered fill includes structural fill.

~~(44)~~(42) "Engineering control" is any structure, system, or barrier that effectively and reliably eliminates or mitigates human or important ecological resource exposure to hazardous substances or petroleum on, underlying or emanating from a property, which is protective of human health, safety and the environment.

~~(45)~~(43) "Environmental covenant" is~~, for the purposes of this chapter,~~ a servitude that imposes activity and use limitations on property that is the subject of a no further action letter submitted with a request for a covenant not to sue under section 3746.11 of the Revised Code. An environmental covenant meets the requirements established in section 5301.82 of the Revised Code.

~~(46)~~(44) "Environmental media" are soil, sediment, surface water, and ground water. Environmental media also include naturally occurring transitional zones between soil, sediment, surface water or ground water, such as bedrock, soil gas, and air.

~~(47)~~(45) "Exposure" is contact of a receptor with a ~~chemical(s)~~chemical of concern that is quantified as the amount of the ~~chemical(s)~~chemical of concern available for absorption at the exchange boundaries of the organism, such as the skin, lungs or gastrointestinal tract.

~~(48)~~(46) "Exposure factor" is a parameter that defines one term in an equation used to quantify the exposure of a receptor to a chemical of concern by means of one exposure pathway. Exposure factors may be represented by point values or by a distribution of values.

~~(49)~~(47) "Exposure factor point value" is a single numeric value selected from a distribution of numeric values of the exposure factor, selected on the basis of its representativeness of a central tendency or upper-bound value.

~~(50)~~(48) "Exposure pathway" is a mechanism by which a receptor is exposed to ~~chemical(s)~~chemical of concern.

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~~(51)~~(49) "Exposure point concentration" is the mass of a chemical of concern per unit quantity of medium which is available for intake by a receptor.

~~(52)~~(50) "Exposure route" is the manner in which a chemical or physical agent comes into contact with an organism (for example, ingestion, inhalation, or dermal contact of soil).

~~(53)~~(51) "Exposure unit" is a geographic area within which an exposed receptor may reasonably be assumed to move at random and where contact with environmental media is equally likely at all sub-areas.

~~(54)~~(52) "Fixed-base laboratory" is a laboratory at a permanent location that provides for the analysis of environmental media.

~~(55)~~(53) "Free product" is a separate liquid hydrocarbon phase that has a measurable thickness of greater than one one-hundredth of a foot.

~~(56)~~(54) "Gallons" means U.S. gallons.

~~(57)~~(55) "Generic direct-contact soil standard" is a generic numerical standard based on a single chemical exposure resulting from ingestion of soil, dermal contact with soil and inhalation of volatile and particulate emissions from soil.

~~(58)~~(56) "Generic numerical standard" is a concentration of a hazardous substance or petroleum that exists on a property that ensures protection of public health and safety and the environment for the reasonable exposures associated with a residential, commercial or industrial land use, construction or excavation activities, or potable ground water use. ~~For purposes of this chapter, generic~~ Generic numerical standards include generic direct-contact soil standards, generic unrestricted potable use standards, and surface water standards.

~~(59)~~(57) "Good moral character" is such character as will enable an individual to comply with the ethical responsibilities of a certified professional.

~~(60)~~(58) "Ground water" ~~is,~~ for purposes of conducting a voluntary action, is water underlying a property in a saturated zone that meets the following criteria:

(a) ~~Is capable~~ Capable of yielding, within eight hours after purging, a minimum of one and one-half gallons of water as determined in accordance with paragraph ~~(F)(6)~~(F)(2)(b) of rule 3745-300-07 of the

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Administrative Code.~~; and~~

(b) ~~Has an~~ The in situ hydraulic conductivity is greater than 5.0 X 10^{-6} centimeters per second as determined in accordance with standards of paragraph ~~(F)(6)~~(F)(2)(b) of rule 3745-300-07 of the Administrative Code.

This definition only applies to voluntary actions conducted under Chapter 3746. of the Revised Code and this chapter.

~~(61)~~(59) "Hazard index" is a numerical value that describes the potential for an adverse non-cancer threshold effect to occur in an individual as a result of exposure of a receptor or receptor population to one or more chemicals of concern in one or more environmental media through one or more routes of exposure over a specific time exposure period. This numerical value is expressed as the unitless sum of the hazard quotient values for each chemical(s) of concern, each environmental medium and for each route of exposure.

~~(62)~~(60) "Hazardous substance" includes all of the following:

(a) Any substance identified or listed in rules adopted under division (B)(1)(c) of section 3750.02 of the Revised Code~~;~~.

(b) Any product registered as a pesticide under section 921.02 of the Revised Code when the product is used in a manner inconsistent with its required labeling~~;~~.

(c) Any product formerly registered as a pesticide under that section for which the registration was suspended or canceled under section 921.05 of the Revised Code~~; and~~.

(d) Any mixture of a substance described in paragraphs ~~(A)(62)(a)~~(A)(60)(a) to ~~(A)(62)(c)~~(A)(60)(c) of this rule with a radioactive material.

~~(63)~~(61) "Hazard quotient" is the value which quantifies non-carcinogenic risk for one chemical for one receptor population over a specified exposure period. The hazard quotient is equal to the ratio of a chemical-specific intake to the reference dose.

~~(64)~~(62) "Historical ~~sources~~records" means sources of information which assist in identifying current or past uses or occupants of a property, including but not

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limited to the following: aerial photographs, fire insurance maps, property tax files, recorded land title records, U.S. geological survey 7.5 minute topographic maps, local street directories, building department records, zoning or land use records that identify past uses or occupants of the property from its first commercial or industrial use through the present use, and records in the files of an owner or operator of the property.

~~(65)~~(63) "Identified area" is a location at a property where a release of hazardous substances or petroleum has or may have occurred.

~~(66)~~(64) "Imminent hazard" is any condition which poses a significant immediate risk of harm to public health, safety, or the environment, including, but not limited to, a threat of explosion, any discharge of hazardous substances or petroleum to surface water, any discharge of hazardous substances or petroleum to ground water that threatens to immediately impact drinking water supplies, releases of hazardous substances or petroleum into the air which could result in an exposure at or to a concentration of chemicals that is immediately dangerous to life or health, or any off-site migration or release of hazardous substances or petroleum which would threaten to immediately harm public health, safety, or the environment.

~~(67)~~(65) "Important ecological resource" is any specific ecological community, population or individual organism protected by federal, state or local laws and regulations, or ecological resources that provide important natural or economic resource functions and values. Important ecological resources include, but are not limited to: any surface water, as that term is used in Chapter 3745-1 of the Administrative Code; any wetland regulated under federal law and state of Ohio's water quality laws; any dedicated natural area or preserve; any federally-listed or state-listed threatened or endangered species and its associated habitat; any state of Ohio special interest or declining species and its associated habitat; any state or national park; any federally designated wilderness area; any national lakeshore recreational area; any national preserve; any national or state wildlife refuge; any federal, state, local or private land designated for the protection of natural ecosystems; any federally-designated or state-designated scenic or wild river; any federal or state land designated for wildlife or game management; and wildlife populations and their associated important nesting areas and food resources, taking into consideration land use and the quality and extent of habitat on and in the vicinity of the property.

~~(68)~~(66) "Incremental sampling" is a technique used to obtain a reproducible estimate of the exposure point concentration. An incremental sample is comprised of randomly collected sub-samples combined to form the sample.

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~~(69)~~(67) "Individual" is any person, but not a corporation, business trust, estate, trust, partnership, or association, as person is defined in section 1.59 of the Revised Code. Individual is also not this state, any political subdivision of this state, any other body of this state or of a political subdivision of this state, and the United States and any agency or instrumentality thereof.

~~(70)~~(68) "Indirect costs" are all costs other than direct costs which may be attributed to a fee source including, but not limited to, administrative overhead, training of personnel, reporting to the legislature, rule development, guidance development, program marketing, database management, and word processing. Indirect costs will be determined by multiplying direct costs by the indirect rate.

~~(71)~~(69) "Indirect rate" is the rate or percentage by which direct costs are multiplied to determine the indirect costs for a given fee or activity.

~~(72)~~(70) "Industrial fill" is non-soil material that is derived from industrial or manufacturing operations and that has been placed on a property for the purpose of disposal, grading or construction.

~~(73)~~(71) "Initial certification" is any first certification issued to a laboratory to perform analyses of specific analytes or parameter groups, using designated methods, under rule 3745-300-04 of the Administrative Code, or issued to an individual who is certified by the director to issue no further action letters under rule 3745-300-05 of the Administrative Code.

~~(74)~~(72) "Institutional control" is a restriction that is recorded in the same manner as a deed which limits access to or use of the property such that exposure to hazardous substances or petroleum are effectively and reliably eliminated or mitigated. Examples of institutional controls include land and water use restrictions.

~~(75)~~(73) "Interim measures" are remedial activities undertaken to protect public health and safety and the environment until the property complies with applicable standards through a permanent remedy.

~~(76)~~(74) "Investigatory auditing activities" means activities conducted prior to the issuance of audit findings, including, but not limited to document review and analysis, field screening or sampling activities, and laboratory analysis.

~~(77)~~(75) "Key property personnel" means a person or persons identified by the owner or operator of a property, and confirmed by the volunteer, as having

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reliable knowledge of the uses or physical characteristics of the property.

~~(78)~~(76) "Laboratory" is a fixed-base laboratory or mobile laboratory that provides for the analysis of environmental media.

(77) "Laboratory compliance audit" is an inspection of a certified laboratory to evaluate compliance by the laboratory with its obligations as a certified laboratory under rule 3745-300-04 of Administrative Code and Chapter 3746. of the Revised Code which may include inspection of laboratory technology, operations, facilities, information and documents, and interviews with personnel.

~~(79) "Mandatory audit pool" is the pool of those no further action letters submitted to the director in any of the ten preceding calendar years under section 3746.11 of the Revised Code and to which any of the following apply:~~

~~(a) The no further action letter was prepared by an individual who was certified under division (D) of section 3746.07 of the Revised Code, but not certified pursuant to rule 3745-300-05 of the Administrative Code;~~

~~(b) Laboratory analyses were performed in support of a no further action letter by a laboratory certified under division (E) of section 3746.07 of the Revised Code, but not certified under rule 3745-300-04 of the Administrative Code for the analyte(s), parameter group(s), and method(s) used in support of the no further action letter;~~

~~(c) The director has reason to believe that the no further action letter was submitted fraudulently;~~

~~(d) The no further action letter was prepared by a certified professional whose certification was subsequently revoked in accordance with rule 3745-300-05 of the Administrative Code;~~

~~(e) Laboratory analyses were performed in support of the no further action letter by a certified laboratory whose certification was subsequently revoked in accordance with rule 3745-300-04 of the Administrative Code;~~

~~(f) The no further action letter was the basis for a covenant not to sue which was subsequently revoked under this chapter and Chapter 3746. of the Revised Code; or~~

~~(g) A no further action letter for which the certified professional, volunteer or owner of the property has notified the director, in compliance with paragraph (E)(2)(f) of rule 3745-300-05 of the Administrative Code, that relevant facts, data or other information existed at the time the no~~

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~~further action letter was issued which indicates applicable standards were not met.~~

~~(80)~~(78) "Method" is the analytical procedure used to identify and calculate the concentration of an analyte or parameter group. ~~a laboratory procedure used to prepare samples and to quantitate analytes or parameter groups.~~

~~(81)~~(79) "Method detection limit study" is a procedure with a final spiking concentration not to exceed the laboratory's reporting limit. Further, the procedure is that used by a laboratory to determine its ability to reliably and accurately report to a specific concentration for an analyte or parameter group using the method for which it is applying for certification.

~~(82)~~(80) "Mobile laboratory" is a laboratory that is not fixed at a permanent location. Mobile laboratory data provide real-time analysis of environmental media at a location on or near a property.

~~(83)~~(81) "Native fill" is soil material derived from the property and transferred from one area of the property and placed in another area in such a manner that the original soil structure and physical properties may be altered from the initial pre-excavation conditions, but the chemical and physical properties remain consistent with other undisturbed native soils at the property.

~~(84)~~(82) "Natural attenuation" is the in situ biotic and abiotic processes through which passive remediation occurs. Natural attenuation processes can be non-destructive, including but not limited to the following physical processes: adsorption, absorption, advection, dispersion, diffusion, dilution from recharge, and volatilization. Natural attenuation processes can also be destructive, including but not limited to the following chemical processes: aerobic, hypoxic and anaerobic biodegradation, and chemical degradation, including abiotic oxidation processes, hydrolysis and other reactions.

~~(85)~~(83) "Ninety-five per cent upper confidence limit" is the upper limit of an interval within a frequency distribution curve in which the observed mean of a data set will occur ninety-five per cent of the time.

~~(86)~~(84) "No further action letter" is a document issued by a certified professional under affidavit upon determination by the person undertaking a voluntary action that either there is no information indicating there has been a release of hazardous substances or petroleum at or upon the property, or there has been a release of hazardous substances or petroleum at or upon the property and applicable standards were not exceeded or have been or will be achieved in accordance with Chapter 3746. of the Revised Code and rules adopted ~~under~~

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~~it~~thereunder.

~~(87)~~(85) "No further action letter submitted to the director" means those no further action letters submitted to the director for ~~which~~either of the following:

(a) A covenant not to sue has been requested from the director under division (D) of section 122.654, sections 3746.11 and 3746.12 of the Revised Code and paragraph (H)(1) of rule 3745-300-13 of the Administrative Code~~; or~~.

(b) A covenant not to sue has not been requested from the director, but Ohio EPA is obligated to review the no further action letter under division (C) of section 122.654 of the Revised Code.

~~(88)~~(86) "Operation and maintenance plan" is a written plan prepared in accordance with paragraph (E) of rule 3745-300-11 of the Administrative Code. An operation and maintenance plan describes the remedy or remedial activities planned to demonstrate that the property meets and will maintain compliance with applicable standards. As applicable, an operation and maintenance plan also describes the remedial activities planned so that the property will achieve compliance with applicable standards within five years or such other time frame as agreed upon by the director in an operation and maintenance agreement. The operation and maintenance plan must demonstrate that the property meets and will maintain applicable standards and the remedy continues to be protective of public health and safety and the environment.

~~(89)~~(87) "Other person responsible for operation and maintenance plan and agreement implementation" is the person responsible for implementation of the operation and maintenance plan and agreement through transfer of the operation and maintenance agreement, by assignment or in conjunction with acquisition of title to the property.

~~(90)~~(88) "Owner or operator" includes both of the following:

(a) Any person owning or holding a legal, equitable, or possessory interest in or having responsibility for the daily activities on a property~~; and~~.

(b) In the case of property title or control of which was conveyed due to bankruptcy, foreclosure, tax delinquency, abandonment, or similar means to this state or a political subdivision of this state, any person who owned, operated, or otherwise controlled activities occurring on the property before the conveyance.

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~~(91)~~(89) "Parameter group" is a group of analytes similar in chemical characteristics quantitated using a specific method and technology.

~~(92)~~(90) "Passive remediation" or "passive remedy" is the remedial activities relied upon as in situ natural methods and documented in peer-reviewed scientific literature, which reduce the mass, toxicity, mobility or concentration of a chemical of concern over distance and time through natural attenuation processes as defined in this rule.

~~(93)~~(91) "Peer-reviewed" is a document or study that meets the following criteria:

(a) The document or study has been published in a recognized scientific journal or publication~~;~~.

(b) The document or study is generally-accepted within the scientific community as being accurate and reliable~~; and~~.

(c) The results contained in the document or study have been independently reproduced or the methods described in the document or study have been proven to produce consistent results.

~~(94)~~(92) "Performance-based method" is a method designed to quantitate for an analyte or parameter group that is not listed in a method published or endorsed by U.S. EPA or Ohio EPA.

~~(95)~~(93) "Person" is defined in section 1.59 of the Revised Code and also includes this state, any political subdivision of this state, any other body of this state or of a political subdivision of this state, and the United States and any agency or instrumentality thereof.

~~(96)~~(94) "Petroleum" is oil or petroleum of any kind and in any form, including, without limitation, crude oil or any fraction thereof, petroleum, gasoline, kerosene, fuel oil, oil sludge, oil refuse, used oil, substances or additives utilized in the refining or blending of crude petroleum or petroleum stock, natural gas, natural gas liquids, liquefied natural gas, synthetic gas usable for fuel, and mixtures of natural gas and synthetic gas.

~~(97)~~(95) "Phase I property assessment" is all the activities required to evaluate a property in accordance with rule 3745-300-06 of the Administrative Code, Chapter 3746. of the Revised Code and the standards provided in division (B) of section 3746.07 of the Revised Code.

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~~(98)~~(96) "Phase II property assessment" is all the activities required to evaluate a property in accordance with rule 3745-300-07 of the Administrative Code, Chapter 3746. of the Revised Code and the standards provided in division (C) of section 3746.07 of the Revised Code.

~~(99)~~(97) "Point of compliance" is any location on or off the property to which applicable standards must be met and maintained.

~~(100)~~(98) "Practically reviewable" means information provided in a manner and in a form that, upon examination, yields information relevant to the property. Records that cannot feasibly be retrieved by reference to the location of the property, the geographic area in which the property is located, or the name of the owner or operator of the property are not practically reviewable.

~~(101) "Priority audit pool" is the pool of those no further action letters submitted to the director in the preceding calendar year under section 3746.11 of the Revised Code and to which either of the following applies:~~

~~(a) The no-further action letter pertains to a voluntary action for which a risk assessment was conducted under division (B)(2) of section 3746.04 of the Revised Code and the rules adopted thereunder; or~~

~~(b) The no-further action letter pertains to a voluntary action that included, as a remedial activity, either an engineering control(s) as described in this chapter and Chapter 3746. of the Revised Code or institutional controls which restrict access to or use of the property pursuant to this chapter and Chapter 3746. of the Revised Code.~~

~~(102)~~(99) "Professional development hour unit" is a unit hour for tracking continuing education, as required by paragraph (C) of rule 3745-300-05 of the Administrative Code.

~~(103)~~(100) "Professional services" is any conduct in connection with a voluntary action or in rendering a voluntary action opinion.

~~(104)~~(101) "Proficiency" is a demonstration of competence in projects similar in type and scope to voluntary actions.

~~(105)~~(102) "Proficiency testing provider" is any entity that is accredited to provide proficiency testing samples and evaluate proficiency testing results by a proficiency testing oversight body/proficiency testing provider accreditor designated by the national environmental laboratory accreditation conference institute.

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~~(106)~~(103) "Proficiency testing result" is the result derived by the laboratory from the analysis of a proficiency testing sample.

~~(107)~~(104) "Proficiency testing sample" is a material or matrix spiked with a known concentration of one or more specific analytes representative of the analyte or parameter group, and method for which the laboratory is applying for initial and additional laboratory certification. The proficiency testing sample is used to evaluate a laboratory's ability to identify and quantitate an analyte or parameter group using a specific method or technology.

~~(108)~~(105) "Property," except for the purposes of sections 3746.02, 3746.26, and 3746.27 of the Revised Code, is any parcel of real property, or portion thereof, and any improvements thereto, the limits of which have been described in writing by the owner of record or a legally appointed representative of the owner and that is or has been the subject of a voluntary action under this chapter and Chapter 3746. of the Revised Code.

~~(109)~~(106) "Property-specific risk assessment" is an analysis conducted in accordance with the requirements of rule 3745-300-09 of the Administrative Code. This process includes the following steps:

(a) Selection of chemicals of concern~~;~~.

(b) Exposure assessment~~;~~.

(c) Toxicity assessment~~; and~~.

(d) Risk characterization, including uncertainty.

~~(110)~~(107) "Publicly available" means the source of the information allows access to the information by anyone upon request.

~~(111)~~(108) "Quality assurance program plan" is a written document detailing the data collection, storage, analysis, and quality assurance/quality control procedures used by a laboratory to assure that all data generated are scientifically valid, defensible, and of known precision and accuracy.

~~(112)~~(109) "Radioactive material" is a substance that spontaneously emits ionizing radiation.

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~~(113)~~(110) "Random audit pool" is the pool of all of the no further action letters submitted to the director with a request for a covenant not to sue in the preceding calendar year under section 3746.11 of the Revised Code. Properties with a remedy or a risk assessment that have been issued and submitted after completion of the process and procedures, as defined by the Agency, to comply with the "2007 Memorandum of Agreement," between the Agency and U.S. Environmental Protection agency, Region 5, are excluded from the random audit pool. ~~that were:~~

~~(a) Not included in the mandatory audit pool or the priority audit pool; or~~

~~(b) Included in the priority audit pool but were not selected for audit from the priority audit pool.~~

~~(114)~~(111) "Reasonably available" is a situation under which information is:

(a) Publicly available or known of and available to the volunteer or owner/operator of the property~~;~~.

(b) Provided or made available by the source within ninety days of receiving a written request~~; and~~.

(c) Practically reviewable.

~~(115)~~(112) "Receptor" or "receptor population" means humans or important ecological resources that are reasonably anticipated to come in contact with chemicals of concern, based on the distribution of the chemicals of concern on the property and the activity patterns of those humans or important ecological resources on or off the property.

~~(116)~~(113) "Recognized educational institution" is an institution which is accredited by an appropriate regional board or association of institutions of higher education.

~~(117)~~(114) "Reference concentration" is an estimate of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

~~(118)~~(115) "Reference dose" is a value representative of a daily exposure level for the human population, including sensitive subpopulations, that is not likely to cause an adverse non-cancer health effect during a specified period of time

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(for example, an acute, short-term, subchronic or chronic exposure period).

~~(119)~~(116) "Release" is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, migrating, dumping, or disposing of any hazardous substance or petroleum into the environment, including, without limitation, the abandonment or discarding of barrels, containers, or any other closed receptacle containing any hazardous substance, petroleum, or pollutant or contaminant. "Release" does not include any of the following:

(a) Any release that results solely in the exposure of individuals to hazardous substances or petroleum in the workplace with respect to which those individuals may assert a claim against their employer and that is regulated under the Occupational Health and Safety Act and regulations adopted under that act, or under Chapter 4167. of the Revised Code and rules adopted ~~under it;~~thereunder.

(b) Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine~~;~~.

(c) Any release of a source, byproduct, or special nuclear material from a nuclear incident, as "source material," "byproduct material," "special nuclear material," and "nuclear incident" are defined in the Atomic Energy Act if the release is subject to financial protection requirements under section 170 of that act unless any such material is mixed with a hazardous substance or petroleum~~;~~.

(d) Any federally permitted release as defined in section 101(10) of the Comprehensive Environmental Response, Compensation, and Liability Act~~; or~~.

(e) The normal application of a fertilizer material that is intended to improve the quality or quantity of plant growth.

~~(120)~~(117) "Relevant professional experience" is experience obtained through conducting or supervising voluntary actions or projects similar in type and scope to voluntary actions. Such experience must indicate that the applicant is competent to conduct voluntary actions or render voluntary action opinions. Relevant professional experience does not include experience involving non-scientific or non-technical activities associated with assessment or remediation projects such as contract management, budget control, or other similar management activities.

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~~(121)~~(118) "Remedy" or "remedial activities" are actions that are taken at a property to treat, remove, transport for treatment or disposal, dispose of, contain, or control hazardous substances or petroleum, which are protective of public health and safety and the environment, and which are consistent with a permanent remedy, including, without limitation, excavation, treatment, off-property disposal, the use of engineering or institutional controls or measures, the issuance and implementation of a consolidated standards permit under section 3746.15 of the Revised Code, and the entering into and implementation of an operation and maintenance agreement pursuant to section 3746.12 of the Revised Code.

~~(122)~~(119) "Renewal certification" is the renewal of a laboratory's current certification under rule 3745-300-04 of the Administrative Code or a certified professional's certification under rule 3745-300-05 of the Administrative Code.

~~(123) "Revised Code" is the Ohio Revised Code, a codification of all of the Ohio statutes of a general and permanent nature.~~

~~(124)~~(120) "Risk mitigation measures" are the health and safety precautions and other such remedial activities that mitigate or eliminate human exposure to the chemicals of concern at the property. Risk mitigation measures provide protection to persons working in construction or excavation in environmental media from exposure of chemicals of concern at concentrations above target risk goals, as defined in rule 3745-300-08 or 3745-300-09 of the Administrative Code. Risk mitigation measures also protect persons working in construction or excavation in environmental media from exposure to chemicals of concern where the risk is uncharacterized. Risk mitigation measures reduce potential risks to receptor populations performing excavation or construction activities that may breach the point of compliance for properties having institutional controls that limit land use or that may breach an engineering control, such as a soil cap or other structure.

~~(125) "Saturated zone" is a part or layer of the earth's crust, excluding the capillary zone, in which all voids are filled with water.~~

~~(126)~~(121) "Sediment" is unconsolidated inorganic and organic material that has precipitated and deposited below surface waters. Sediment includes the following:

(a) Materials below the water surface under bankfull conditions in streams, lakes and ditches~~;~~.

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(b) Materials below normal pool elevation for reservoirs~~;~~.

(c) Materials within the federal and state jurisdictional boundaries of wetlands~~;~~.

(d) Materials below maximum capacity for ponds and lagoons~~; and~~.

(e) Materials found below the ordinary high water mark of lake Erie, as defined by "International Great Lakes Datum".

(122) "Soil" is an accumulation of granular or cohesive particles which may be consolidated, but not cemented, which is partly to completely derived from the weathering of rock materials, and which may or may not contain organic constituents of natural or man-made origin.

~~(127)~~(123) "Sole source aquifer" is an aquifer designated as a sole source aquifer under section 1424(e) of the Safe Drinking Water Act.

~~(128) "Source" is either:~~

~~(a) An event which releases hazardous substances or petroleum into environmental media; or~~

~~(b) A vessel or impoundment which contains hazardous substances or petroleum and from which a release of hazardous substances or petroleum has occurred or is occurring.~~

~~(129)~~(124) "Source area" is any abandoned or discarded barrels, containers or any other closed receptacle in environmental media, or any affected media originally impacted by a release from which contamination is acting, has acted or has the potential to act as a point of origin for the migration of the release throughout the environment.~~affected media containing chemical(s) of concern that is acting, has acted, or has the potential to act as a source of chemical(s) of concern to environmental media.~~

~~(130)~~(125) "Split sample" is a material or medium that consists of two or more individual samples collected at the same time and location and that are analyzed independently; with each sample analyzed at a different laboratory.

~~(131)~~(126) "Standard operating procedures" are a laboratory's written procedures to prepare samples and perform measurements of analytes or parameter groups.

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~~(132)~~(127) "Suspension period" is the period of time, listed on the final findings and orders issued by the director to a certified laboratory, in which the certified laboratory is suspended for an analyte or parameter group and corresponding method.

~~(133)~~(128) "System audit" is an inspection of a laboratory to evaluate its qualifications for certification under rule 3745-300-04 of the Administrative Code and Chapter 3746. of the Revised Code, which may include inspection of laboratory technology, operations, facilities, information and documents, and interviews with personnel.

~~(134)~~(129) "Technology" is the laboratory instrumentation used to quantify an analyte or parameter group. Examples include but are not limited to: gas chromatography, gas chromatography / mass spectrometry, and inductively coupled plasma.

~~(135)~~(130) "Tier I audit" is a review and analysis of documents pertaining to a no further action letter held or produced by a certified professional, a volunteer, the current owner of the property, or a certified laboratory, as appropriate, and a site walkover of the property, in order to determine compliance with applicable standards, this chapter or Chapter 3746. of the Revised Code.

~~(136)~~(131) "Tier II audit" is a physical inspection and investigation of a property upon which a voluntary action was conducted in order to determine compliance with applicable standards, this chapter or Chapter 3746. of the Revised Code, including sampling and analysis of soils, surface water, air, sediments, or groundwater.

~~(137)~~(132) "Unconsolidated saturated zone" is any saturated zone that is not in bedrock, including, but not limited to, saturated zones in soil, gravel, sand, silt, clay or fill materials.

~~(138)~~(133) "Unrestricted potable use standard" means ground water standards based on the assumption that ground water will be used as a source of water for drinking, cooking, showering, and bathing. Unrestricted potable use standards include generic unrestricted potable use standards based on maximum contaminant levels or other established regulatory criteria in accordance with rule 3745-300-08 of the Administrative Code, generic risk-derived unrestricted potable use standards developed in accordance with rule 3745-300-08 of the Administrative Code, or property-specific risk-derived unrestricted potable use standards developed in accordance with rule 3745-300-09 of the Administrative Code.

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~~(139)~~(134) "Upper-bound value" is a parameter value from a distribution of such values which is contained within the highest decile (ten per cent) of that distribution.

(135) "Urban setting designation" is an area where the potable use pathway is determined to be incomplete in accordance with paragraph (C) of rule 3745-300-10 of the Administrative Code. An urban setting designation does not eliminate the volunteer's responsibility to address non-potable pathways or to protect ground water meeting unrestricted potable use standards.

~~(140)~~(136) "U.S. EPA sediment toxicity test" means "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates". ~~as cited in paragraph (B)(2) of this rule.~~

~~(141)~~(137) "Voluntary action" is a series of measures that may be undertaken to identify and address contamination and potential sources of contamination of properties by hazardous substances or petroleum and to establish that the property complies with applicable standards. "Voluntary action" may include, without limitation: a phase I property assessment; a phase II property assessment; a sampling plan; a remedial plan; remedial activities; or such other actions the volunteer considers to be necessary or appropriate to address the contamination, followed by the issuance of a no further action letter indicating that the property complies with applicable standards. To demonstrate that applicable standards have been met, the person undertaking such measures must establish either that there is no information indicating that there has been a release of hazardous substances or petroleum at or upon the property or that there has been a release of hazardous substances or petroleum at or upon the property and that applicable standards were not exceeded or have been or will be achieved in accordance with Chapter 3746. of the Revised Code and this chapter.

~~(142)~~(138) "Voluntary action opinion" is any of the following:

(a) A no further action letter issued in accordance with this chapter and Chapter 3746. of the Revised Code~~;~~.

(b) A written notice pursuant to division (B) of section 3746.11 of the Revised Code that the certified professional is not able to issue a no further action letter for a property because the property does not comply with applicable standards~~;~~.

(c) An application for a variance pursuant to rule 3745-300-12 of the

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Administrative Code and section 3746.09 of the Revised Code~~;~~.

(d) A request for an urban setting designation, pursuant to paragraph (C) of rule 3745-300-10 of the Administrative Code~~; or~~.

(e) A summary report prepared pursuant to division (C) of section 3746.11 of the Revised Code.

~~(143)~~(139) "Voluntary action program" means the program created under Chapter 3746. of the Revised Code to provide a way to voluntarily investigate and clean up possible environmental contamination.

~~(144)~~(140) "Volunteer" is a person conducting a voluntary action and any authorized representative of the person conducting the voluntary action. Volunteer does not include a responsible person, as defined by section 3737.87 of the Revised Code, for a Class C release on the property that is the subject of a voluntary action.

(B) Incorporation by reference. This chapter includes references to certain matter or material. The text of the incorporated materials is not included in the ~~regulations~~rules contained in this chapter. The materials are hereby made a part of the regulations in this chapter. For materials subject to change, only the specific version specified in ~~the regulation~~ this rule is ~~are~~ incorporated. ~~Material is incorporated as it exists on the effective date of this rule unless a different edition or version date is specified in this rule.~~ Any amendment or revision to a referenced document is not incorporated unless and until this rule has been amended to specify the new dates.

(1) Availability. The materials incorporated by reference are available as follows:

(a) "~~American Society for Testing Materials~~ASTM International" ~~(ASTM).~~ ASTM International documents are generally available at Ohio public libraries and the state library of Ohio. Information and copies may be obtained by writing to: "ASTM International, 100 Bar Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania 19426-2959." These documents are available for purchase at http://www.astm.org.

(b) Code of Federal Regulations references. These regulations can generally be found in most Ohio public libraries and at the state library of Ohio, electronically at ~~http://www.gpo.gov/fdsys~~http://www.ecfr.gov, or can be purchased from: "U.S. Government Printing, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20-402-9328."

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(c) Federal Register. The Federal Register is available for inspection and copying at most Ohio public libraries and the state library of Ohio, and electronically at http://www.gpo.gov/fdsys. Information and copies may be obtained by writing to: "Superintendent of Documents, Attn: New Orders, PO Box 371954, Pittsburgh, PA 15250-7954."

(d) Government literature. The availability of these documents is provided with the reference to each document contained in paragraph (B)(2) of this rule.

(e) Ohio EPA technical documents. These documents are generally available in most Ohio public libraries and the state library of Ohio. Information and copies may be obtained by writing to: "Voluntary Action Program, Lazarus Government Center, PO Box 1049, Columbus, OH 43216-1049."

(f) Private publications. These publications are generally available at Ohio public libraries and the state library of Ohio. Information and copies may be obtained by writing to: "Voluntary Action Program, Lazarus Government Center, PO Box 1049, Columbus, OH 43216-1049."

(g) USC and USCA. These laws can generally be found in Ohio public libraries and the state library of Ohio, and electronically at http://www.gpo.gov/fdsys. Information and copies can may be obtained by writing to: "U.S. Government Bookstore, 732 N. Capitol Street NW, Washington, DC 20401."

(h) U.S. EPA technical documents. These documents are generally available in Ohio public libraries and the state library of Ohio. Documents listed in paragraph (B)(2) of this rule without an address can be ordered by writing to "Voluntary Action Program, Lazarus Government Center, PO Box 1049, Columbus, OH 43216-1049."

(2) Incorporated materials.

(a) "American Industrial Hygiene Association, Asbestos Analysts Registry, 2700 Prosperity Ave., Suite 250, Fairfax, VA 22031". http://www.aiha.org

(b) Appropriate "Federal Statutes," the statutes listed in this rule are those versions of the laws amended through July 1, ~~2011~~2013, including the following:

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(i) Atomic Energy Act, 68 Stat. 919 ~~(1954)~~, 42 U.S.C. 2011 et seq.

(ii) Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601 et seq.

(iii) Federal Water Pollution Control Act, 86 Stat. 886 ~~(1972)~~, 33 U.S.C. 1251 et seq.

(iv) Occupational Health and Safety Act, 84 Stat. 1590 ~~(1970)~~, 29 U.S.C. 651 et seq.

(v) Resource Conservation and Recovery Act, 90 Stat. 2806 ~~(1976)~~, 42 U.S.C. 6921 et seq.

(vi) Safe Drinking Water Act, 42 U.S.C. 300f, et seq.

(vii) Toxic Substances Control Act, 15 U.S.C. 2601 et seq.

(c) "ASTM ~~Standard E 1527 (ASTM E1527) STM E1527-05~~E1527-13. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process ASTM International / ~~November 1, 2005~~2013."

(d) "CHEMFATE Chemical Search, Syracuse Research Corporation, 7502 Round Pond Road, North Syracuse, NY 13212-2510." ~~http://srcinc.com/what-we-do/databaseforms.aspx?id=381.~~ http://www.srcinc.com/what-we-do/environmental/scientific-databases.html.

(e) "Comprehensive Environmental Response, Compensation, and Liability Information System" list. http://www.epa.gov/enviro/html/cerclis/cerclis_query.html

(f) "Consumer Price Indexes. United States Department of Labor. Bureau of Labor Statistics, Division of Consumer Prices and Price Indexes, Suite 3130, 2 Massachusetts Avenue, NE, Washington, DC 20212-0001." http://www.bls.gov/cpi/.

(g) Corrective action program. http://www.epa.gov/epawaste/hazard/correctiveaction/index.htm

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(h) Gerlach, R. W., and J. M. Nocerino. 2003. "Guidance for Obtaining Representative Analytical Laboratory Subsamples from Particulate Laboratory Samples." U.S. EPA, Washington, DC, EPA/600/R-03/027. http://www.epa.gov/osp/hstl/tsc/Gerlach2003.pdf.

(i) "Hazardous Substances Data Bank. National Library of Medicine's Toxicology Data Network, 8600 Rockville Pike, Bethesda, MD 20894." http://toxnet.nlm.nih.gov/.

(j) "Integrated Risk Information System. Toxicology data file on the National Library of Medicine's Toxicology Data Network." http://toxnet.nlm.nih.gov.

(k) MacDonald, D.D., Ingersoll, C.G. and Berger, T.A. 2000. "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. Arch. Environ. Contam. Toxicol. 39, 20-3."

(l) Mason, B. 1992. "Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies." U.S. EPA, Washington, DC, EPA/600/R-92/128. http://www.epa.gov/OUST/cat/mason.pdf.

(m) Method detection limit study. 40 CFR Part 136, Appendix B (effective June 30, 1986).

(n) The national environmental laboratory accreditation conference institute standards. http://www.nelac-institute.org/.

(o) "National Institute of Standards Technology. National Voluntary Laboratory Accreditation Program for Asbestos Fiber Analysis, 100 Bureau Drive, M/S 2140, Gaithersburg, MD 20899-2140." ~~http://www.nist.gov/pml/nvlap/~~ http://ts.nist.gov/Standards/scopes/plmtm.htm.

(p) "National Priorities List." http://www.epa.gov/superfund/sites/index.htm

(q) Ohio department of natural resources. Water well log search. Ground water mapping and technical services. http://www.dnr.state.oh.us/water/maptechs/wellogs/app/.

(r) Ohio EPA. "Biological Criteria for the Protection of Aquatic Life: Volume II: Users Manual for Biological Field Assessment of Ohio Surface

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Waters. Division of Surface Water." Published in October 1987 and as amended through August 2008. http://www.epa.ohio.gov/dsw/bioassess/BioCriteriaProtAqLife.aspx.

(s) Ohio EPA. "Biological Criteria for the Protection of Aquatic Life: Volume III: Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities. Division of Surface Water. " Published in October 1989 and as amended through August 2008. http://www.epa.ohio.gov/dsw/bioassess/BioCriteriaProtAqLife.aspx.

(t) Ohio EPA. "Ecological Risk Assessment Guidance Document. Division of Emergency and Remedial Response." Published in February 2003 and as amended through April 2008. http://www.epa.ohio.gov/portals/30/rules/RR-031.pdf.

(u) Ohio EPA. "Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices. Division of Surface Water." Published in 2006 and amended in 2009. http://www.epa.ohio.gov/portals/35/documents/Filed-manual_1-9-09_revision.pdf.

(v) Ohio EPA. "Sediment Sampling Guide and Methodologies, 2nd edition. Division of Surface Water." Published in November 2001. http://www.epa.ohio.gov/portals/35/guidance/sedman2001.pdf.

(w) Ohio EPA. "Support Document for the Development of Generic Numerical Standards and Risk Assessment Procedures. Division of ~~Emergency and Remedial Response~~Environmental Response and Revitalization." ~~Published in February 2002 and as amended through November 2008. http://www.epa.ohio.gov/portals/30/vap/docs/fvapspportDoc.pdf.~~ http://epa.ohio.gov/Portals/30/vap/docs/rules/Risk%20Support%20Document.pdf.

(x) Ohio EPA. "Technical Guidance Manual For Hydrogeologic Investigations and Ground Water Monitoring." Published in February 1995 and as amended through October 2009. http://www.epa.ohio.gov/ddagw/tgmweb.aspx.

(y) Ohio EPA. "Sample Collection and Evaluation of Vapor Intrusion to Indoor Air." Published in May 2010.

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http://epa.ohio.gov/portals/30/rules/Vapor%20Intrusion%20to%20Indoor%20Air.pdf.

~~(y)~~(z) "The Physical Properties Database, Syracuse Research Corporation, 7502 Round Pond Road, North Syracuse, NY 13212-2510." ~~http://www.srcinc.com/what-we-do/product.aspx?id=133~~ http://www.srcinc.com/what-we-do/environmental/scientific-databases.html.

~~(z)~~(aa) Source water assessment and protection program. http://www.epa.ohio.gov/ddagw/swap.aspx.

~~(aa)~~(bb) State emergency response commission. www.epa.ohio.gov/dapc/serc~~/index~~.aspx.

~~(bb)~~(cc) Underground injection control program. http://www.epa.gov/safewater/uic/

~~(cc)~~(dd) U.S. department of energy. 2006. "The Risk Assessment Information System. Office of Environmental Management, Oak Ridge National Laboratory." Oak Ridge, TN. ~~http://risk.lsd.ornl.gov/~~http://rais.ornl.gov.

~~(dd)~~(ee) U.S. EPA. 1989. "Risk Assessment guidance for Superfund, Volume I: Human Health Evaluation manual (Part A). Office of Remedial Response." EPA/540/1-89/002. https//rais.ornl.gov/documents/HHEMA.pdf.

~~(ee)~~(ff) U.S. EPA. 1989. "Risk Assessment guidance for Superfund, Volume II: Environmental Evaluation Manual. Office of Remedial Response." EPA/540/1-89/001. http/Rais.ornl.gov/documents/RASUPEV.pdf.

~~(ff)~~(gg) U.S. EPA. 1991. "Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. Office of Remedial Response. Office of Solid Waste and Emergency Response Directive." 9285.6-03. http://Rais.ornl.gov/documents/OSWERdirective9285.6-03.pdf.

~~(gg)~~(hh) U.S EPA. 2009~~1992~~. "Statistical Analysis of Ground Water Monitoring Data at RCRA Facilities. Unified Guidance. EPA/R-09-007. Office of Resource Conservation and Recovery Program Implementation and Information Division. U.S. Environmental Protection Agency. http://www.epa.gov/osw/hazard/correctiveaction/resources/guidance/sitechar/gwstats/unified-guid.pdf. ~~Addendum to the Interim Final~~

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~~(hh)~~(ii) U.S. EPA. 1992. "Supplemental Guidance to Risk Assessment Guidance for Superfund: Calculating the Concentration Term. Office of Solid Waste and Emergency Response." Washington, DC. OSWER Directive 9285.7-081.

~~(ii)~~(jj) U.S. EPA. 1994. "Statistical Methods for Evaluating the Attainment of Cleanup Standards. Volume 3: Reference-Based Standards for Soil and Solid Media. Office of Policy, Planning and Evaluation." Washington DC. EPA 230-R-94-004. http://www.epa.gov/tio/download/stats/vol3-refbased.pdf.

~~(jj)~~(kk) U.S. EPA. 1997. "Exposure Factors Handbook. Office of Research and Development, National Center for Environmental Assessment." Washington, DC. EPA/600/P-95/002F. http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12464.

~~(kk)~~(ll) U.S. EPA. 2000. "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates, Second Edition. Office of Science and Technology, Office of Water." Washington, DC. EPA 600R-99/064. http://water.epa.gov/polwaste/sediments/cs/upload/freshmanual.pdf.

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~~(oo)~~(pp) U.S. EPA. 2003. "Region 5 Ecological Screening Levels (ESLs). RCRA Corrective Action." ~~http://www.epa.gov/Region5/rcraca/edql.htm.~~

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~~(qq)~~(rr) U.S. EPA. 2006. "Guidance on Systematic Planning Using the Data Quality Objectives Process. Office of Environmental Information." Washington, DC. EPA/240/B-06/001. http://www.epa.gov/quality/qs-docs/g4-final.pdf.

(ss) "Voluntary Action Program Memorandum of Agreement Between the United States Environmental Protection Agency and the Ohio Environmental Protection Agency." http://epa.ohio.gov/portals/30/vap/docs/OH_MOA.pdf.

~~(rr)~~(tt) ~~Wellhead protection program. . http://cfpub.epa.gov/safewater/sourcewater/~~Drinking water source protection. http://epa.ohio.gov/ddagw/swap.aspx.