

Soil Standards Rule Changes (RR-15-23) – Second Draft (9/5/2024)
September 20, 2024, Rule Advisory Committee Meeting

Notes on formatting for the Rule Advisory Committee:

- Per request, this second draft shows the proposed rule changes in chapter format rather than board order format.
- Provisions that have revised, new, or repealed text within them are in **purple text**.
- Subsections that have rule changes are highlighted yellow at the subsection number (e.g., NR 720.12 **(2)**), or, if an entire section is changed, then the start of the section is highlighted yellow (e.g., **NR** 720.12).

Chapter NR 700

GENERAL REQUIREMENTS

NR 700.01	Purpose.	NR 700.08	Superfund site assessment.
NR 700.02	Applicability.	NR 700.10	Identification of responsible parties.
NR 700.03	Definitions.	NR 700.11	Submittals.
NR 700.05	Confidentiality of information.	NR 700.13	Sample preservation and analysis.
NR 700.07	Incorporation by reference.		

Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, February, 1997, No. 494.

NR 700.01 **Purpose.** (1) The purpose of this chapter is to provide definitions of terms used in chs. NR 700 to 754, to incorporate by reference specified regulations or materials, and to grant confidential status for records, reports and other information furnished to or obtained by the department for use in the administration of chs. NR 700 to 754.

(2) The purpose of chs. NR 700 to 754 is to establish consistent, uniform standards and procedures that allow for site-specific flexibility, pertaining to the identification, investigation and remediation of sites and facilities which are subject to regulation under chs. 289 and 292, Stats. The department intends that responsible parties and other interested persons should be able to efficiently move through the process set forth in chs. NR 700 to 754 with minimal department oversight, except where the department has specified that more in-depth oversight is needed such as under s. 292.15 or s. 292.65, Stats., or through an enforceable order or agreement. These rules are adopted pursuant to ch. 160, Stats., ss. 227.11 (2), 281.19 (1), 287.03 (1) (a), 289.05 (1), 289.06, 289.31 (7), 289.43 (8), 291.05 (6), Stats., and ch. 292, Stats.

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94; am. Register, February, 1996, No. 482, eff. 3-1-96; CR 12-023: am. (1), (2) Register October 2013 No. 694, eff. 11-1-13.

NR 700.02 **Applicability.** (1) This chapter and chs. NR 702, 704, and 708 to 754 apply to actions taken by the department under the authority of chs. 289 and 292, Stats.

(2) This chapter and chs. NR 706 to 754 apply to actions taken by responsible parties at sites, facilities or portions of a site or facility that are subject to regulation under chs. 289 and 292, Stats., regardless of whether there is direct involvement or oversight by the department.

Note: The department of agriculture, trade and consumer protection has the authority under s. 94.73, Stats., to issue corrective action orders to parties who are responsible for the discharge of an agricultural chemical, to require that the responsible parties take action that is necessary to restore the environment to the extent practicable and to minimize the harmful effects of the discharge to the air, lands or waters of this state. The department of agriculture, trade and consumer protection has confirmed their intention to require that this chapter and chs. NR 708 to 727 and 749 be applied to actions taken by responsible parties as directed by the department of agriculture, trade and consumer protection under s. 94.73, Stats. For actions directed by the department of agriculture, trade and consumer protection under s. 94.73, Stats., submittals under chs. NR 708 to 727 and 749 shall be sent to the department of agriculture, trade and consumer protection, and approvals required by these chapters shall be obtained from the department of agriculture, trade and consumer protection.

Note: Persons who are not responsible parties and who voluntarily take a response action at a site or facility that is subject to regulation under ch. 289, Stats., or s. 292.31 or 292.11, Stats., are not required to comply with the standards and procedures in chs. NR 700 to 754 unless the person is seeking the liability exemption under s. 292.15, Stats. However, the department may not consider case closure under ch. NR 726 for the site or facility until the applicable rules in chs. NR 700 to 754 have been complied with, and a person who did not originally fall within the definition of a responsible party may become a responsible party if the

actions taken by that person cause or worsen the discharge of a hazardous substance or if the person takes possession or control of the site or facility.

Note: Persons who wish to conduct response actions that will be consistent with the requirements of CERCLA and the National Contingency Plan (NCP) may request that the department enter into a contract with them pursuant to s. 292.31 or a negotiated agreement under s. 292.11 (7) (d), Stats. However, a CERCLA-quality response action will likely require compliance with additional requirements beyond those contained in chs. NR 700 to 754 in order to be consistent with CERCLA and the NCP.

(2m) This chapter and chs. NR 706 to 728, 750, and 754 apply to actions taken by persons who are seeking a liability exemption under s. 292.15, Stats.

(3m) The department may exercise enforcement discretion on a case-by-case basis and choose to regulate a site, facility or a portion of a site or facility under only one of a number of potentially applicable statutory authorities. However, where overlapping restrictions or requirements are applicable, the more restrictive shall control. The department shall, after receipt of a written request and appropriate ch. NR 749 fee from a responsible party, provide a letter that indicates which regulatory program or programs the department considers to be applicable to a site or facility.

Note: Sites or facilities or portions of a site or facility that are subject to regulation under ch. 292, Stats., may also be subject to regulation under other statutes, including the solid waste statutes in ch. 289, Stats., or the hazardous waste management act, ch. 291, Stats., and the administrative rules adopted pursuant to these statutes. In addition, federal laws such as CERCLA, RCRA, or TSCA may also apply to a site or facility or portions of a site or facility. One portion of a site or facility may be regulated under a different statutory authority than other portions of that site or facility.

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94; renum. (3) and (4) to be (5) and (6), cr. (3), Register, March, 1995, No. 471, eff. 4-1-95; cr. (4), Register, April, 1995, No. 472, eff. 5-1-95; am. (1), (3) (intro.), (a) and (b), (4), (5), cr. (2m), (3) (d), (4) (b), (5) (b), Register, February, 1996, No. 482, eff. 3-1-96; am. (2), Register, February, 1997, No. 494, eff. 3-1-97; correction in (3) (a) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2001, No. 541; correction in (3) (b) made under s. 13.93 (2m) (b) 7., Stats., Register September 2007 No. 621; CR 12-023: am. (1), (2), (2m), r. (3) to (5), renum. (6) to (3m) and am. Register October 2013 No. 694, eff. 11-1-13.

NR 700.03 **Definitions.** The following definitions apply to chs. NR 700 to 754:

(1e) "Agency with administrative authority" or "agency" has the meaning specified in s. 292.12 (1) (a), Stats.

Note: Section 292.12 (1) (a), Stats., reads: "Agency with administrative authority" means the department of agriculture, trade and consumer protection with respect to a site over which it has jurisdiction under s. 94.73 (2) or the department of natural resources with respect to a site over which it has jurisdiction under s. 292.11 (7).

(1m) "Approve" or "approval" means a written acceptance by the department of a plan, report or other document that has been submitted to the department for review.

(1s) "Attenuation factor" means the ratio of the indoor air concentration arising from vapor intrusion to the subsurface vapor concentration at a point or depth of interest in the vapor intrusion pathway.

Note: ~~Under ch. NR 720, the~~ The department allows the use of default attenuation factors from US EPA guidance, or the responsible party may collect enough information to develop a site-specific attenuation factor.

(2) "Background soil quality" means:

(a) Soil quality that is attributable to the parent material from which the soil was derived and the natural processes which produce soil, or from contamination attributable to atmospheric deposition including the following constituents; lead, polynuclear aromatic hydrocarbons, or polychlorinated biphenyls, but not attributable to hazardous substance discharges or the discharge of pollutants, as that phrase is defined in s. 283.01, Stats.

(b) Soil quality that is found at or within reasonable proximity to the site or facility, at a depth comparable to that of the area to be remediated, in the same soil layer and in an area unaffected by hazardous substances discharges or the discharge of pollutants.

(3) "Business days" means Monday through Friday excluding the holidays listed in s. 230.35 (4) (a), Stats.

(3m) "Case closure" has the meaning specified in s. 292.12 (1) (b), Stats.

Note: Under s. 292.12 (1) (b), Stats., "case closure" means "a determination by the agency with administrative authority, based on information available at the time of the review by the agency with administrative authority, that no further remedial action is necessary at a site."

(4) "CERCLA" means the federal comprehensive environmental response, compensation and liability act (CERCLA), 42 USC 9601 to 9675.

(4m) "CERCLIS" means the comprehensive environmental response, compensation and liability information system, as compiled by the U.S. EPA.

Note: The federal CERCLIS list is available from the U. S. EPA, by writing to: WI Freedom of Information Act Officer, U.S. EPA Region V, 77 W. Jackson Blvd, Chicago, IL 60604.

(5) "CFR" means the code of federal regulations.

(6) "Consultant" means a person or business under contract to perform a response action taken under, or subject to regulation under, chs. NR 702 to 754.

(6m) "Contaminated site boundary" or "contaminated site boundaries" means any area within which a hazardous substance has been discharged such that the air, land, or waters have been affected by a discharge or where environmental pollution exists.

Note: Both the source property and other properties affected by the discharge may be included within the "contaminated site boundary." Sub. (59m) defines "source property" as "the property on which the hazardous substance discharge which is under investigation or cleanup, originally occurred." Other properties may be affected by migration of the hazardous substance through soil or groundwater.

(7) "Contamination" or "contaminated" means:

(a) Where the air, land or waters of the state have been affected by the discharge of a hazardous substance; or

(b) Where environmental pollution exists.

(8) "Contingency plan" means a document setting out an organized, planned and coordinated course of action to be followed in the event of a hazardous substance discharge or imminent threat of a hazardous substance discharge.

(8m) "Commercial land use" means the utilization of a parcel of real estate for commercial purposes, including warehouses, office buildings, light manufacturing facilities, restaurants, retail businesses, entertainment venues, and hotels.

(9) "Day" means calendar day, except where the phrase "business day" is used.

(10) "Debris" means material resulting from the construction, demolition or razing of buildings, roads and other structures and materials that have been discarded at a site or facility.

(11) "Department" means the department of natural resources.

(11m) "Department database" means the publicly accessible database available on the internet as required by ss. 292.12, 292.31, and 292.57, Stats.

Note: The Remediation and Redevelopment Program maintains a database called the "Bureau for Remediation and Redevelopment Tracking System" or "BRRTS". The program also maintains an internet accessible version of this database, called "BRRTS on the Web", or "BOTW". "BOTW" includes information on properties where a hazardous substance discharge has or may have taken place. The program also maintains a web-based mapping system called "Remediation and Redevelopment Sites Map" or "RRSM", that allows users to view information from the BRRTS database using a geographic information system (GIS) application. Both these applications may be found at <http://dnr.wi.gov/topic/Brownfields/clean.html>.

(12) "Department-funded response action" means a response action undertaken by the department using the authority of s. 292.11, 292.31 or 292.41, Stats., which is funded in whole or in part by appropriations in s. 20.370 (2) or 20.866 (2), Stats.

(13) "Discharge" has the meaning specified in s. 292.01 (3), Stats.

Note: Under s. 292.01 (3), Stats., "discharge" means, but is not limited to, "spilling, leaking, pumping, pouring, emitting, emptying or dumping."

(14) "Dispose" or "disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid or hazardous waste into or on any land or water in a manner which may permit the waste to be emitted into the air, to be discharged into any waters of the state or otherwise to enter the environment.

(15) "Emergency" means a situation which requires an immediate response to address an imminent threat to public health, safety, or welfare or the environment.

(16) "Enforcement standard" has the meaning specified in s. NR 140.05 (7).

Note: Section NR 140.05 (7) defines "enforcement standard" to mean "a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.07, Stats., and s. NR 140.10 or s. 160.09, Stats., and s. NR 140.12."

(17) "Engineering control" has the meaning specified in s. 292.01 (3m), Stats.

Note: Under s. 292.01 (3m), Stats., "engineering control" means an "action designed and implemented to contain contamination or to minimize the spread of contamination, including a cap, soil cover, or in-place stabilization, but not including a sediment cover."

(18) "Environment" means any plant, animal, natural resource, surface water (including underlying sediments and wetlands), groundwater, drinking water supply, land surface and subsurface strata, and ambient air within the state of Wisconsin or under the jurisdiction of the state of Wisconsin.

(19) "Environmental pollution" has the meaning specified in s. 291.01 (4), Stats.

Note: Section 291.01 (4), Stats., defines "environmental pollution" to mean "the contamination or rendering unclean or impure the air, land or waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life."

(20) "Environmental standards" mean those cleanup standards, performance standards, standards of control and other substantive and procedural requirements, criteria or limitations promulgated as a regulation or rule under or pursuant to federal environmental or state environmental or facility citing laws that specifically address a hazardous substance, pollutant, remedial action, location or other circumstances found at a site or facility.

(21) "Facility" means "approved facility" as defined in s. 289.01 (3), Stats., "approved mining facility" as defined in s.

292.01 (1m), Stats., and “nonapproved facility” as defined in s. 289.01 (24), Stats.

Note: Under s. 289.01 (3), Stats., “approved facility” means “a solid or hazardous waste disposal facility with an approved plan of operation under s. 289.30 or a solid waste disposal facility initially licensed within 3 years prior to May 21, 1978, whose owner successfully applies, within 2 years after May 21, 1978, for a determination by the department that the facility’s design and plan of operation comply substantially with the requirements necessary for plan approval under s. 289.30.” Under s. 292.01 (1m), Stats., “approved mining facility” is defined by reference to the definition of approved mining facility in s. 289.01 (4), Stats., and also includes a mining waste site as defined in s. 295.41 (31), Stats. “Approved mining facility” as defined in s. 289.01 (4) means “an approved facility which is part of a mining site, as defined under s. 293.01 (12), used for the disposal of solid waste resulting from mining, as defined under s. 293.01 (9), or prospecting, as defined under s. 293.01 (18).” Chapter 293, Stats., applies to nonferrous metallic mining. “Mining waste site” as defined under s. 295.41 (31), Stats., means any land or appurtenances thereto used for the storage or disposal of ferrous mining waste. Subch. III of ch. 295, Stats., applies to ferrous metallic mining. “Nonapproved facility” as defined in s. 289.01 (24), Stats., means “a licensed solid or hazardous waste disposal facility which is not an approved facility.”

(22) “Free product” means a discharged hazardous substance or environmental pollution that is present in the environment as a floating or sinking non-aqueous phase liquid.

(23) “Groundwater” has the meaning specified in s. 160.01 (4), Stats.

Note: Section 160.01 (4), Stats., defines “groundwater” to mean “any waters of the state, as defined in s. 281.01 (18), Stats., occurring in a saturated subsurface geological formation of rock or soil.” See “waters of the state” definition in sub. (67).

(24) “Groundwater quality standards” mean site-specific standards developed pursuant to ch. NR 140 and groundwater quality standards adopted by the department in ch. NR 140, including enforcement standards, preventive action limits, indicator parameters and alternative concentration levels.

(25) “Hazardous substance” has the meaning specified in s. 299.01 (6), Stats.

Note: Section 299.01 (6), Stats., defines “hazardous substance” to mean “any substance or combination of substances including any waste of a solid, semisolid, liquid or gaseous form which may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or which may pose a substantial present or potential hazard to human health or the environment because of its quantity, concentration or physical, chemical or infectious characteristics. This term includes, but is not limited to, substances which are toxic, corrosive, flammable, irritants, strong sensitizers or explosives as determined by the department.”

(26) “Hazardous waste” has the meaning specified in s. 291.01 (7), Stats.

Note: Section 291.01 (7), Stats., defines “hazardous waste” to mean any “solid waste identified by the department as hazardous under s. 291.05” Federal laws and rules may have broader or different definitions than the state does. If so, federal hazardous waste laws must be complied with, in addition to state laws.

(27) “High groundwater level” means the higher of the elevation to which the soil is saturated and observed as a free water surface in an unlined hole, or the elevation to which the soil has been seasonally or periodically saturated as indicated by soil color patterns throughout the soil profile.

(28) “Immediate action” means a response action that is taken within a short period of time after the discharge of a hazardous substance occurs, or after the discovery of a hazardous substance discharge or environmental pollution, to halt the discharge, contain or remove discharged hazardous substances or remove contaminated environmental media, in order to restore the environment to the extent practicable and to minimize the harmful effects of the discharge to air, lands and waters of the state and to eliminate any imminent threat to public health, safety, or welfare that may exist. This term includes both emergency and non-emergency immediate actions.

Note: Examples of immediate actions may be found in s. NR 708.05 (4). If further action will be required after a non-emergency response action is taken, that

action would meet the definition of “interim action” in s. NR 700.03 (29). The principal distinction between a non-emergency, immediate action and an interim action is that a site investigation will generally be required in conjunction with an interim action, but not with a non-emergency immediate action. In addition, interim actions will be closed out using the criteria in ch. NR 726, not the “no further action” criteria in s. NR 708.09 which apply at the completion of an immediate action.

(28m) “Industrial land use” means the utilization of a parcel of real estate for manufacturing operations that use machinery and mechanical power to produce products or services, including electrical power, or for a service business that provides storage facilities, product distribution or maintenance or repair services for machinery.

Note: Examples of industrial land uses include manufacturing and assembly plants; warehouses; scrap salvage operations; foundries and forging plants; metal pressing, stamping and spinning plants; electroplating facilities; tanneries; chemical processing facilities; electrical generating plants and electrical substations; slaughter houses and meat processing plants; fertilizer and pesticide packaging plants; bottling plants; wholesale bulk fuel storage and distribution facilities; railroad yards; and businesses that sell and repair motor vehicles, recreational vehicles, transportation containers or construction machinery and equipment.

(29) “Interim action” means a response action taken to contain or stabilize a discharge of a hazardous substance, in order to minimize any threats to public health, safety, or welfare or the environment, while other response actions are being taken or planned for the site or facility.

Note: Examples of interim actions may be found in s. NR 708.11. “Interim action” does not include emergency or non-emergency immediate actions. An interim action is followed by subsequent response actions at the site or facility, unless the department determines in compliance with the requirements of ch. NR 726, that no further response action is necessary after a site investigation has been conducted.

(30) “Interim action options report” means a report which identifies and evaluates various interim action options with the goal of selecting an option which meets the environmental standards for the interim action being undertaken.

(30g) “Limit of detection” has the meaning specified in s. NR 149.03 (41).

Note: Section NR 149.03 (41) defines “limit of detection” or “LOD” to mean “the lowest concentration or amount of analyte that can be identified, measured, and reported with confidence that the concentration is not a false positive value.” For department purposes, the LOD approximates the method detection limit (MDL) and is determined by the method cited in s. NR 149.03 (46) (MDL). See sub. (33m) for MDL.

(30r) “Limit of quantitation” has the meaning specified in s. NR 149.03 (42).

Note: Section NR 149.03 (42) defines “limit of quantitation” or “LOQ” to mean “the lowest concentration or amount of an analyte for which quantitative results can be obtained.”

(31) “Long-term monitoring” means systematic evaluation of the selected remedial or interim action option through collection and inspection of soil data, groundwater data, surface water data, sediment data, and other relevant data.

(32) “Management of a hazardous substance” means the treatment, storage or disposal, including recycling, of a hazardous substance.

(33) “Media” means air, surface water, groundwater, sediments and land surface and subsurface strata, including soil.

(33m) “Method detection limit” or “MDL” has the meaning specified in s. NR 149.03 (46).

Note: Section NR 149.03 (46) defines the “method detection limit” to mean “the minimum concentration of an analyte that can be measured and reported with 99% confidence that the stated concentration is greater than zero, determined from analyses of a set of samples containing the analyte in a given matrix. The method detection limit is generated according to the protocol specified in 40 CFR 136, Appendix B.”

(34) “Migration pathway” means natural geologic features or cultural features, including but not limited to water mains, sewage laterals, drain tiles and road beds, which allow the

movement of a hazardous substance or environmental pollution in liquid, solid, dissolved or vapor phase.

(34m) "Minority business" means a business certified by the department of safety and professional services pursuant to s. 16.287 (2), Stats.

(35) "Municipal population" means the number of people residing in the municipality according to the most recent department of administration estimates.

(36) "Municipality" has the meaning specified in s. 292.01 (11), Stats.

Note: Section 292.01 (11), Stats., defines "municipality" to mean, "any city, town, village, county, county utility district, town sanitary district, public inland lake protection and rehabilitation district, or metropolitan sewage district."

(37) "National priorities list" means the list, compiled by the U.S. environmental protection agency (EPA) pursuant to section 105 (8) (b) of CERCLA, of hazardous substance releases in the United States that are priorities for investigation and remedial action.

(38) "National contingency plan" or "NCP" means 40 CFR part 300.

(38m) "Natural attenuation" means the reduction in the concentration and mass of a substance and its breakdown products in groundwater, due to naturally occurring physical, chemical, and biological processes without human intervention or enhancement. These processes include, but are not limited to, dispersion, diffusion, sorption and retardation, and degradation processes such as biodegradation, abiotic degradation and radioactive decay.

(39) "Naturally occurring background" means the quality of individual media in the vicinity of a discharge of a hazardous substance or environmental pollution that has not been affected by a hazardous substance discharge or environmental pollution.

(39m) "Non-residential setting" means a setting other than a residential setting, used for commercial or industrial purposes.

(40) "Operation and maintenance" means measures designed to monitor, operate and maintain the effectiveness of response actions.

(41) "Operator" has the meaning specified in s. 292.31 (8) (a) 1., Stats.

Note: Section 292.31 (8) (a) 1., Stats., defines "operator" to mean "any person who operates a site or facility or who permits the disposal of solid waste at a site or facility under his or her management or control for consideration, regardless of whether the site or facility remains in operation and regardless of whether the person operates or permits the disposal of solid waste at the time any environmental pollution occurs. This term includes a subsidiary or parent corporation."

(42) "Owner" has the meaning specified in s. 292.31 (8) (a) 2., Stats.

Note: Section 292.31 (8) (a) 2., Stats., defines "owner" to mean "any person who owns or who receives direct or indirect consideration from the operation of a site or facility regardless of whether the site or facility remains in operation and regardless of whether the person owns or receives consideration at the time any environmental pollution occurs. This term includes a subsidiary or parent corporation."

(42m) "Pathway" means the route a substance takes in traveling to a receptor or potential receptor or the specific portal of entry, such as lungs, skin or digestive tract, that the substance takes to potentially express its toxic effect, or both.

Note: The food chain pathway for cadmium, for example, refers to cadmium being taken up in plant tissue and the plant tissue being ingested by an organism.

(43) "Person" has the meaning specified in s. 292.01 (13), Stats.

Note: Section 292.01 (13), Stats., defines "person" to mean "an individual, owner, operator, corporation, limited liability company, partnership, association, municipality, interstate agency, state agency, or federal agency."

(43g) "Phase I environmental site assessment" means an assessment of a site to identify potential or known areas of environmental contamination. This assessment may include reviewing records, interviewing persons, and conducting physical inspections of the site.

(43r) "Phase II environmental site assessment" means an assessment of a site to physically confirm that contamination exists in potential or known areas of environmental contamination identified in the Phase I environmental assessment, but not to determine the nature, degree and extent of contamination. This assessment may include field sampling of media, laboratory analysis of samples and visual confirmation of environmental contamination at the site.

Note: The department recommends that at a minimum, the current ASTM standards be followed when conducting Phase I and Phase II environmental assessments. When a person is seeking liability protections under CERCLA the person should follow EPA's requirements. See EPA's web page at: www.epa.gov for more information.

(44) "Point of standards application" has the meaning specified in s. NR 140.05 (15).

Note: Section NR 140.05 (15) defines "point of standards application" to mean "the specific location, depth or distance from a facility, activity or practice at which the concentration of a substance in groundwater is measured for purposes of determining whether a preventive action limit or an enforcement standard has been attained or exceeded."

(44m) "Polycyclic aromatic hydrocarbons" or "PAHs" means a class of chemicals that occur naturally in coal, crude oil, and gasoline and are also produced from incomplete combustion of hydrocarbons.

(45) "Practicable" means capable of being implemented, taking into account:

(a) The technical feasibility of a remedial action option, considering its long-term effectiveness, short-term effectiveness, implementability and the time it will take until restoration is achieved; and

(b) The economic feasibility of a remedial action option, considering the cost of the remedial action option compared to its technical feasibility.

(45e) "Property" means a contiguous area of land the entire legal description of which is found in one deed.

(45m) "Property boundary" means the boundary of the property owned or leased by a common owner or lessor, regardless of whether public or private roads run through the property.

(46) "Preventive action limit" has the meaning specified in s. NR 140.05 (17).

Note: Section NR 140.05 (17) defines "preventive action limit" to mean "a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.15, Stats., and s. NR 140.10, 140.12 or 140.20."

(46g) "Reasonable maximum exposure" means the highest exposure reasonably expected to occur at a site or facility that is still within the range of possible exposures, and is represented by the 95th percentile of the exposure distribution.

(46m) "RCRA" means the resource conservation and recovery act, 42 USC 6901 to 6991i, as amended on November 8, 1984.

(47) "Receptor" means environmental resources, including but not limited to, plant and animal species and humans, sensitive environments and habitats, water supply wells, and buildings or locations that have the potential to be, or have actually been, exposed to contamination.

(47m) "Recreational land use" means the utilization of a parcel of real estate for non-commercial outdoor activities, including in urban and natural settings, and including community parks, playgrounds, sports fields, campgrounds,

beach and waterfront areas, recreational trails, wildlife areas, and local, state or national forests or parks.

(48) "Remedial action" or "remedy" means those response actions, other than immediate or interim actions, taken to control, minimize, restore, or eliminate the discharge of hazardous substances or environmental pollution so that the hazardous substances or environmental pollution do not present an actual or potential threat to public health, safety, or welfare or the environment. The term includes actions designed to prevent, minimize, stabilize, or eliminate the threat of discharged hazardous substances, and actions to restore the environment to the extent practicable and meet all applicable environmental standards. Examples include storage, disposal, containment, treatment, recycling, or reuse, and any monitoring required to assure that such actions protect public health, safety, and welfare and the environment.

(49) "Remedial action options report" means a report which identifies and evaluates various remedial action options with the goal of selecting an option in compliance with the requirements of s. NR 722.11.

(49g) "Residential setting" means any dwelling designed or used for human habitation, and includes educational, childcare, and elder care settings.

(49m) "Residential land use" means the utilization of a parcel of real estate for human habitation, including educational, childcare, and elder care uses and single or multi-family dwellings.

(49r) "Residual contamination" means that some contamination remains after a cleanup is completed and approved. Residual contamination includes all phases of remaining contamination including vapor, dissolved, adsorbed, and free-phase.

Note: The term "residual contamination" does not have the same meaning as the terms "residual phase", "residual concentration" or "residual contaminant level." The terms "residual phase" and "residual (phase) concentration" are used in some publications and are used when referring to the free-phase or separate non-aqueous phase liquid in soil or groundwater. The term "residual contaminant level" is used in ch. NR 720 to refer to soil standards developed under that chapter.

(50) "Response" or "response action" means any action taken to respond to a hazardous substance discharge or to environmental pollution, including emergency and non-emergency immediate actions, investigations, interim actions and remedial actions.

(51) "Responsible party" or "responsible parties" means any of the following:

(a) Any person who is required to conduct a response action under ch. 292, Stats.

(b) Persons liable to reimburse the department for the costs incurred by the department to take response action under chs. 289 and 292, Stats.

(c) Owners and operators of solid waste facilities that are subject to regulation under ch. NR 508.

(52) "Restore" or "restoration" means those actions necessary to return the environment to its original condition before the hazardous substance discharge or environmental pollution occurred. Such actions may include, but are not limited to, the replacement or removal of injured plant and animal life and treatment of contaminated soils.

Note: This definition was formerly found in s. NR 158.04 (5).

(52m) "Right-of-way" means the strip of land over which railroad tracks run, or within which a public street or highway has been constructed, regardless of whether the strip of land is owned by the railroad or the entity that maintains the public

street or highway; and corridors created by dedication, by the granting of an easement and by the acquisition of fee title.

(53) "Risk assessment" means a site-specific characterization of the current or potential threats that may be posed to public health, safety, or welfare or the environment by contamination migrating to or in groundwater or surface water, discharging to the air, leaching through or remaining in soil, bioaccumulating in the food chain, or other exposure pathways.

(54) "Sediment" means particles in surface waters or wetlands that are derived from the erosion of rock, minerals, soils and biological materials, as well as chemical precipitation from the water column. Sediment particles are transported by, suspended in or deposited by water.

(55) "Sensitive environment" means an area of exceptional environmental value, where a discharge could pose a greater threat than a discharge to other areas, including but not limited to: wetlands; habitat used by state or federally designated endangered or threatened species; national or state fish and wildlife refuges and fish and wildlife management areas; state and federal designated wild and scenic rivers, designated state riverways and state designated scenic urban waterways; riparian areas; rookeries; cold water communities as defined in s. NR 102.04 (3) (b), Lakes Superior and Michigan and the Mississippi river, environmentally sensitive areas and environmental corridors identified in area-wide water quality management plans, special area management plans, special wetland inventory studies, advanced delineation and identification studies and areas designated by the U.S. EPA under section 404 (c) 33 USC 1344 (c); calcareous fens; state forests, parks, trails and recreational areas; state and federal designated wilderness areas; designated or dedicated state natural areas established under ss. 23.27 to 23.29, Stats.; wild rice waters as listed in s. NR 19.09; and any other waters identified as outstanding or exceptional resource waters in ch. NR 102.

(55m) "Sensitive receptor" means a receptor that is affected by slight differences or changes in environmental conditions.

(56) "Site" means:

(a) Any waste site as defined in s. 292.01 (21), Stats.; or

(b) Any area where a hazardous substance has been discharged.

Note: Section 292.01 (21), Stats., defines "waste site" to mean "any site, other than an approved facility, an approved mining facility or a nonapproved facility, where waste is disposed of regardless of when disposal occurred or where a hazardous substance is discharged before May 21, 1978."

(57) "Site investigation" means an investigation undertaken in conformance with ch. NR 716.

(58) "Soil" means unsaturated organic material, derived from vegetation and unsaturated, loose, incoherent rock material, of any origin, that rests on bedrock other than foundry sand, debris and any industrial waste.

(58m) "Soil cleanup standard" means a residual contaminant level determined under ss. NR 720.10 or 720.12, and a soil performance standard determined under s. NR 720.08.

Note: Tables of soil residual contaminant levels can be found at: <https://dnr.wisconsin.gov/topic/Brownfields/soil.html>.

(59) "Solid waste" has the meaning specified in s. 289.01 (33), Stats.

(59m) "Source property" means the property on which the hazardous substance discharge which is under investigation or cleanup, originally occurred.

(60) "Submittal" means any document, report, plan, set of specifications, engineering design, or scientific evaluation of

site data that is prepared to satisfy the requirements of chs. NR 700 to 754.

(60m) "Sub-slab" means beneath the lowermost building foundation slab.

(61) "Surface water" has the meaning specified in s. NR 103.02 (3).

Note: "Surface water" means "all natural and artificial, named and unnamed lakes and all naturally flowing streams within the boundaries of the state, but not including cooling lakes, farm ponds and facilities constructed for the treatment of wastewaters."

(62) "Superfund" means the federal environmental cleanup fund and program created by CERCLA.

(62m) "Sustainable remedial action" means achieving protection of human health, safety, and the environment, while incorporating and balancing certain practices, processes, and technologies throughout all phases of the remedial action to deliberately generate a net positive impact on the environment, economy, and society.

(63) "Treatment" means any method, technique or process, including thermal destruction, which changes the physical, chemical or biological character or composition of a hazardous substance or environmental pollution so as to render the contamination less hazardous.

(64) "Treatability study" means the testing and documentation activities to evaluate the effectiveness of an interim or remedial action prior to full scale design and implementation. Treatability study includes, but is not limited to, bench scale studies and pilot scale studies.

Note: Treatability studies provide additional data for the detailed analysis of treatment alternatives and the engineering design of remedial alternatives under ch. NR 724.

(64g) "TSCA" means the toxic substance control act, 15 USC 2601 to 2692.

(64r) "Unconsolidated material" means soil, sediment or other granular material, such as fill, not including debris.

Note: Section NR 700.03 (58) defines "soil" as "unsaturated organic material, derived from vegetation and unsaturated, loose, incoherent rock material, of any origin, that rests on bedrock other than foundry sand, debris and any industrial waste." Section NR 700.03 (54) defines "sediment" as "particles in surface waters or wetlands that are derived from the erosion of rock, minerals, soils and biological materials, as well as chemical precipitation from the water column. Sediment particles are transported by, suspended in or deposited by water." Section NR 700.03 (10) defines "debris" as "material resulting from the construction, demolition or razing of buildings, roads and other structures and materials that have been discarded at a site or facility."

(65) "U.S. EPA" or "EPA" means the United States environmental protection agency.

(66) "Underground storage tank" or "UST" means any one or a combination of tanks, including connected pipes, that is used to contain an accumulation of hazardous substances, and the volume of which, including the volume of connected underground pipes, is 10 percent or more beneath the surface of the ground. The term does not include any of the following or pipes connected to any of the following:

(a) Septic tanks.

(b) Pipeline facilities, including gathering lines, regulated under:

1. The Natural Gas Pipeline Safety Act of 1968 (49 USC App. 1671, et seq.).

2. The Hazardous Liquid Pipeline Safety Act of 1979 (49 USC App. 2001, et seq.).

3. State laws comparable to the provisions of the law referred to in subd. 1. or 2. for intrastate pipeline facilities.

(c) Surface impoundments, pits, ponds or lagoons.

(d) Storm water or waste water collection systems.

(e) Flow-through process tanks.

(f) Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations.

(g) Storage tanks situated in an underground area, such as, but not limited to, a basement, cellar, mineworking, drift, shaft or tunnel, if the storage tank is situated upon or above the surface of the floor.

Note: This definition of "underground storage tank" is based on the definition found in s. ATCP 93.050 (122).

(66m) "Utility corridor" means any utility line that runs underground and any backfilled trench that was constructed to install a water main or lateral, a sewer main or lateral or other utility line.

(66p) "Vapor action level" means the concentration of vapors from volatile compounds is at or above the 1-in-100,000 (1×10^{-5}) excess lifetime cancer risk or is at or above a hazard index of 1 for non-carcinogens.

Note: Generic tables of risk based concentrations for air in residential and industrial land use scenarios can be found at: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm.

(66s) "Vapor mitigation system" means a system that prevents or reduces the migration of contaminant vapors into a building and does not have the primary purpose of remediating vapor contaminant sources.

(66w) "Vapor risk screening level" means the concentration of vapors in samples collected outside a building to estimate indoor vapor concentrations. The vapor risk screening level is equal to the vapor action level multiplied [divided] by an appropriate attenuation factor.

Note: The correct word is shown in brackets. The scientific process for determining a vapor risk screening level is to divide, not multiply, the vapor action level by an appropriate attenuation factor. This error will be corrected in future rulemaking.

Note: Vapor risk screening levels are applied to sub-slab, soil gas, and groundwater samples.

(66y) "Vapors" mean chemicals that are sufficiently volatile and toxic to pose an inhalation risk to human health via vapor intrusion from a soil or groundwater source.

(67) "Waters of the state" has the meaning specified in s. 281.01 (18), Stats.

Note: Section 281.01 (18), Stats., defines "waters of the state" to include "those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, and all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within the state or its jurisdiction."

(68) "Wetlands" has the meaning specified in s. 23.32, Stats.

Note: Section 23.32, Stats., defines "wetland" to mean "those areas where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation, and which have soils indicative of wet conditions."

(69) "Work plan" means a plan which outlines the intended scope of a response action, or any phase of a response action, including but not limited to intended methods, procedures and techniques to be used during the response action.

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94; cr. (42m), Register, March, 1995, No. 471, eff. 4-1-95; am. (49), Register, April, 1995, No. 472, eff. 5-1-95; am. (intro.), Register, October, 1995, No. 478, eff. 11-1-95; am. (intro.), (60), Register, February, 1996, No. 482, eff. 3-1-96; cr. (38m) and (45m), Register, October, 1996, No. 490, eff. 11-1-96; emerg. cr. (66m), eff. 5-18-00; cr. (66m), Register, January, 2001, No. 541, eff. 2-1-01; CR 01-129: cr. (28m), Register July 2002 No. 559, eff. 8-1-02; CR 12-023: am. (intro.), renum. (1) to (1m), cr. (1e), (1s), am. (2) (a), cr. (3m), (4m), am. (6), cr. (6m), (11m), am. (17), (27), cr. (30g), (30r), (33m), (34m), am. (36), cr. (39m), am. (43), cr. (43g), (43r), (45e), am. (45m), cr. (46m), am. (48), cr. (49g), (49r), renum. (51) to (intro.) and am., cr. (51) (a) to (c), (52m), (55m), (59m), am. (60), cr. (60m), (62m), (64g), (64r), (66p), (66s), (66w), (66y) Register October 2013 No. 694, eff. 11-1-13; CR

13-057: am. (21) Register July 2015 No. 715, eff. 8-1-15; correction in (17) made under s. 13.92 (4) (b) 7., Stats., Register February 2017 No. 734.

NR 700.05 Confidentiality of information. (1) Except as provided under sub. (2), any record, report or other information furnished to, or obtained by, the department in the administration of chs. NR 700 to 754 is a public record subject to the provisions of ss. 19.21, 19.31 to 19.39, Stats., and s. NR 2.195.

(2) If confidential status is sought for any record, report or other information furnished to or obtained by the department under chs. NR 700 to 754, the standards and procedures in s. NR 2.19 are applicable to all sites and facilities, and the standards and procedures in s. 289.09 (2), Stats., are applicable to the owners and operators of solid waste facilities.

Note: Under s. NR 2.19, the department may grant confidential status if: (1) the standards for granting confidential status found in s. 289.09 or 291.15, Stats., are met; (2) confidential treatment is in the public interest using the balancing test in *State ex rel. Youmanns v. Owens*, 28 Wis. 2d 672 (1965); or (3) a specific statutory or common law right to confidential treatment is applicable.

(3) Records, reports and other information for which the department has granted confidential status may be:

(a) Used by the department in compiling or publishing analyses or summaries relating to the general condition of the environment if the analyses or summaries do not identify a specific person or responsible party and the analyses or summaries do not reveal records or other information granted confidential status;

(b) Released by the department to the U.S. EPA or its authorized representative, if the U.S. EPA or its authorized representative agrees to protect the confidentiality of the records, reports or other information;

(c) Released for general distribution if the person who provided the information to the department expressly agrees to the release; and

(d) Released on a limited basis if the department is directed to take this action by a judge or administrative law judge under an order which protects the confidentiality of the record, report or other information.

Note: Sections 292.11 (8), 292.31 (1) (d) and (3) (e), and 292.41 (5), Stats., provide the department with authority to gain access to property for the purpose of conducting response actions, and access to records relating to abandoned containers, discharged hazardous substances and solid waste disposed of at a site or facility.

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94; am. (1), (2), Register, February, 1996, No. 482, eff. 3-1-96; CR 12-023: am. (1), (2) Register October 2013 No. 694, eff. 11-1-13.

NR 700.07 Incorporation by reference. The material listed in this section is incorporated by reference at the paragraph noted: "SW-846, Test Methods for Evaluating Solid Waste", by the U.S. Environmental Protection Agency, Office of Solid Waste, loose-leaf manual, "The Third Edition of SW 846, as amended by Final Updates I, II, IIA, IIB, III, IIIA, IIIB and IV", referenced in s. NR 716.13 (12).

Note: These materials are available for inspection in the offices of the department of natural resources, 101 S. Webster Street, Madison, Wisconsin, or may be accessed at the following web site: <http://www.epa.gov/epaoswer/hazwaste/test/main.htm> or may be purchased for personal use from:

National Technical Information Service
U.S. Department of Commerce
Springfield, VA 22161

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94; CR 12-023: am. Register October 2013 No. 694, eff. 11-1-13.

NR 700.08 Superfund site assessment. A site or facility may be evaluated by the department to determine eligibility for the federal superfund program, under CERCLA

and the NCP. The department also may conduct federal site assessment activities, in cooperation with the U.S. EPA. Assessment activities may include, but are not limited to:

- (1)** Identifying sites for addition to CERCLIS;
- (2)** Reviewing files by department staff in the form of preliminary assessments;
- (3)** Collecting data both on-and-off-site by conducting field sampling;
- (4)** Preparing or reviewing federally prepared hazard ranking system scores, using the federal hazard ranking system; and
- (5)** Nominating sites or facilities to the national priorities list.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 700.10 Identification of responsible parties. The department may attempt to identify potentially responsible parties during any phase of response action by any of the following methods:

- (1)** Interviewing local officials, neighboring residents, persons involved with the operations of the site or facility, and past and present site or facility owners or operators.
- (2)** Reviewing operational records of the site or facility.
- (3)** Reviewing department records.
- (4)** Determining current and past ownership of the site or facility.
- (5)** Collecting and analyzing samples.
- (6)** Other appropriate means.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 700.11 Submittals. (1) GENERAL. Unless otherwise directed by the department, responsible parties shall comply with the following:

(a) Responsible parties shall submit site progress reports that summarize the completed work and additional work planned to adequately complete the response action at the site or facility to the department at 6 month intervals until case closure is granted by the department. The first site progress report shall be submitted to the department no later than 6 months after the responsible party notifies the department of the discharge in accordance with s. NR 706.05. Progress reports shall be provided on a reporting form supplied by the department. The department may require progress reports be submitted at a different frequency than semi-annually.

Note: Copies of site progress report forms may be obtained at: <http://dnr.wi.gov/topic/Brownfields/Pubs.html>.

(bm) Unless otherwise directed by the department, responsible parties shall submit a site investigation work plan meeting the requirements of s. NR 716.09 to the department within 60 days of receiving notification that a site investigation is required.

(cm) Responsible parties shall submit a site investigation report meeting the requirements of s. NR 716.15 to the department within 60 days after completion of the field investigation and receipt of the laboratory data.

(dm) Responsible parties shall submit a remedial action options report meeting the requirements of s. NR 722.13 to the department within 60 days after submittal of the site investigation report.

(em) The department shall provide written acknowledgement of receipt of the reports listed in par. (bm) to (dm) within 30 days.

(3) MORE EXTENSIVE REVIEW. The department may perform more extensive review where an application is submitted to the department by a person seeking a liability exemption under s. 292.15, Stats., or where a person is participating in the dry cleaner environmental response program under s. 292.65, Stats.

Note: Section 292.15, Stats., applies to persons who conduct remediation of contaminated property to obtain an exemption from liability.

(3g) NUMBER OF SUBMITTALS. One paper copy and one electronic copy of each plan or report shall be submitted to the department, unless otherwise directed by the department. The electronic copy shall be submitted on optical disk media and may not be submitted as electronic mail attachments unless specifically approved in advance by the department. Electronic copy files shall have a minimum resolution of 300 dots per inch, and may not be locked or password protected. The department may request that the electronic copy of sampling results be submitted in a format that can be managed in software. An electronic copy of certain types of voluminous attachments or appendices may be substituted for the paper copy, if specifically approved in advance by the department. All documents shall be digital format versions rather than scanned versions except documents that are only available as scanned versions. Deeds and legal descriptions may be scanned versions. All information submitted shall be legible.

Note: Guidance for GIS Registry submittals outlines how electronic copies should be submitted in the Adobe Portable Document Format (PDF) on optical disk media. This guidance can be accessed at <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

Note: The department strongly recommends the use of 2-sided copies for the paper copy of the report, and the use of accordion folders for larger reports instead of 3-ring binders, to help address file space issues.

Note: An example of a voluminous attachment is a laboratory quality assurance and control report.

Note: Examples of formats that can be managed in software are spreadsheets, plain text tabular files, hypertext markup language files (HTML) and extensible markup language files (XML).

Note: The department intends to implement an electronic document management system in the future that may require the submittal of all plans or reports in electronic format that can be managed in software.

(3r) TECHNICAL ASSISTANCE. When requesting technical assistance or liability clarification from the department, the request shall be submitted on a form supplied by the department.

Note: The Technical Assistance and Environmental Liability Clarification Request form may be accessed at <http://dnr.wi.gov/topic/Brownfields/Pubs.html>. Other forms are used for the following requests: off-site liability exemption or liability clarification requests, lender liability exemption requests, exemption to develop on a historic fill site, closure requests, or operation and maintenance requests. These forms may be accessed at <http://dnr.wi.gov/topic/Brownfields/Pubs.html>.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; am. (3) (b), Register, February, 1996, No. 482, eff. 3-1-96; emerg. am. (1) (b) and (2) (b), cr. (2) (e), eff. 5-18-00; am. (1) (b) and (2) (b), cr. (2) (e) and (f), Register, January, 2001, No. 541, eff. 2-1-01; correction in (2) (e) was made under s. 13.93 (2m) (b) 7., Stats., Register July 2002 No. 559; CR 12-023: r. and recr. (1) (title), (intro.), am. (1) (a), r. (1) (b) to (f), cr. (1) (bm) to (em), r. (2), am. (3) (title), renum. (3) (intro.) to (3), r. (3) (a) to (d), cr. (3g), (3r), r. (4) Register October 2013 No. 694, eff. 11-1-13.

NR 700.13 Sample preservation and analysis. (1) GENERAL REQUIREMENTS. All sampling, preservation, extraction, and analytical methods used for compliance with chs. NR 700 to 754 shall be according to the requirements in s. NR 716.13.

(1m) USE OF GASOLINE RANGE ORGANICS/DIESEL RANGE ORGANICS ANALYSIS. Soil or groundwater analyses for gasoline range organics or diesel range organics conducted for screening purposes shall be completed in accordance with the "Modified GRO, Method for Determining Gasoline Range Organics" and the "Modified DRO, Method for Determining Diesel Range Organics." For purposes of this section, the term "screening

purposes" means sampling conducted during site investigations, environmental assessments or other activities in compliance with chs. NR 700 to NR 754 for purposes of determining whether a discharge has occurred or to estimate the degree and extent of contamination.

Note: The "Modified GRO, Method for Determining Gasoline Range Organics" (WI-PUBL-SW-140) and "Modified Diesel Range Organics" (WI-PUBL-SW-141) are available online at the Wisconsin department of natural resources laboratory accreditation program website.

Note: The "Modified GRO, Method for Determining Gasoline Range Organics" (WI-PUBL-SW-141) and "Modified DRO, Method for Determining Diesel Range Organics" (WI-PUBL-SW-140) are available from the Department of Natural Resources, Emergency and Remedial Response Section, 101 S. Webster St., Madison, WI 53707.

History: Cr. Register, February, 1996, No. 482, eff. 3-1-96; correction in (1) made under s. 13.92 (4) (b) 7., Stats., Register February 2012 No. 674; CR 12-023: am. (1), cr. (1m), r. (2), (3) Register October 2013 No. 694, eff. 11-1-13; correction in (1m) made under s. 13.92 (4) (b) 7., Stats., Register November 2013 No. 695.

Chapter NR 720

SOIL CLEANUP STANDARDS

NR 720.01	Purpose.	NR 720.10	Procedures for determining <u>Determining</u> residual contaminant levels based on protection of groundwater.
NR 720.02	Applicability.	NR 720.12	Procedures for determining <u>Determining</u> residual contaminant levels based on protection of human health from direct contact with contaminated soil.
NR 720.03	Definitions.	NR 720.13	Other pathways of concern.
NR 720.05	General.		
NR 720.07	General requirements when establishing soil cleanup standards applicable to a site or facility.		
NR 720.08	Procedures for establishing <u>Establishing</u> soil performance standards.		

Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2001, No. 541.

NR 720.01 Purpose. The purpose of this chapter is to establish soil cleanup standards, for the remediation of soil contamination, which result in restoration of the environment to the extent practicable, minimize harmful effects to the air, lands and waters of the state and are protective of public health, safety, and welfare and the environment as required by ch. 292, Stats., and which are consistent with ch. 160, Stats., and ch. NR 140. This chapter is adopted pursuant to ss. 227.11 (2) and 289.06 (1) and (2), Stats., and ch. 292, Stats.

History: Cr. Register, March, 1995, No. 471, eff. 4-1-95; am., Register, February, 1996, No. 482, eff. 3-1-96; CR 12-023; am. Register October 2013 No. 694, eff. 11-1-13.

NR 720.02 Applicability. (1) This chapter applies to all remedial actions taken by responsible parties to address soil contamination after an investigation has been conducted at a site, facility or portion of a site or facility that is subject to regulation under ch. 292, Stats., regardless of whether there is direct involvement or oversight by the department. This chapter also applies to soil contamination at all of the following:

(a) Solid waste facilities, where remedial action is required by the department pursuant to ch. NR 508.

Note: Chapter NR 720 does not apply to landspreading regulated under ch. NR 518 or solid waste facilities where ongoing operations are occurring, unless remedial action is required pursuant to ch. NR 508.

(b) Hazardous waste facilities, where the owner or operator is required to close the facility pursuant to s. 291.29, Stats., or subchs. G and H of ch. NR 664, or to institute corrective action pursuant to s. 291.37, Stats., or s. NR 664.0100. However, if U.S. EPA requires that states employ soil cleanup standards for hazardous waste facilities that are more stringent than the standards in this chapter, the department is obligated under the state's hazardous waste management act, ch. 291, Stats., and its hazardous waste program RCRA authorization to apply the more stringent soil cleanup standards.

Note: Section NR 600.07 no longer exists.

(c) Wastewater lagoons, storage structures and treatment structures that are abandoned pursuant to s. NR 110.09, 213.07 or 214.08.

Note: Chapter NR 720 applies to abandonment of lagoons, storage structures and treatment structures for sewage treatment facilities projects; abandonment of lagoons, storage structures and treatment structures that receive wastewaters, associated sludges, by-product solids and any resulting leachates from industrial, commercial or agricultural sources, except as provided in s. NR 213.02 (2); and abandonment of land treatment systems for industrial liquid wastes, by-product solids and sludges, except as provided in s. NR 214.02 (3). Chapter NR 720 does not apply to activities regulated under s. 281.48, Stats., or permitted activities regulated under 40 CFR 503 or ch. NR 204, 206 or 214, including permitted land spreading of sludge or land disposal of wastewaters from municipal and domestic wastewater treatment works and permitted land treatment of industrial liquid wastes, by-product solids and sludges.

(d) Sites where remedial action is being taken by a person who is seeking the liability exemption under s. 292.15, Stats.

(e) Sites with PCB contamination.

Note: U.S. EPA has independent authority to regulate soil contamination from PCB's under the toxic substances control act. The department and EPA have entered into an MOA that specifies how responsibility for these types of sites will be determined. The MOA can be found at: <http://dnr.wi.gov/files/pdf/pubs/tr/tr786.pdf>.

(2) This chapter applies to interim actions taken by responsible parties or other persons under s. 292.15, Stats., when at the completion of both the site investigation and interim action taken to address contaminated soil, the responsible parties or persons taking action under s. 292.15, Stats., request that the site or facility be closed out in accordance with ch. NR 726, without taking a subsequent remedial action to address the contaminated soil.

(3) This chapter applies to remedial actions taken by the department where a department-funded response action is being taken under the authority of ch. 292, Stats.

(4) Concentrations of legally applied pesticides are exempt from the requirements of this chapter when all of the following conditions are met:

(a) The application of the pesticide was done in compliance with:

1. The pesticide label currently registered with the U.S. EPA;
2. Sections 94.67 to 94.71, Stats.; and
3. Rules adopted under ss. 94.67 to 94.71, Stats.

(b) For pesticides that are intended to be applied to the soil, pesticide concentrations exceeding soil cleanup standards are only found in the surface soil layer, where the pesticide is expected to perform its intended purpose, and only at concentrations that would be expected from pesticide application, in compliance with the pesticide label requirements.

Note: The depth of the surface layer of soil will vary depending on the type of pesticide applied and the appropriate intended use of that pesticide.

(5) The department may exercise enforcement discretion on a case-by-case basis and choose to regulate a site, facility or a portion of a site or facility under only one of a number of potentially applicable statutory authorities. However, where overlapping restrictions or requirements apply, the more restrictive control. The department shall, after receipt of a request from a responsible party, provide a letter that indicates which regulatory program or programs the department considers to be applicable.

Note: Sites, facilities or portions of a site or facility that are subject to regulation under ch. 292, Stats., may also be subject to regulation under other statutes, including solid waste statutes, ch. 289, Stats., or the hazardous waste management act, ch. 291, Stats., and the administrative rules adopted pursuant to those statutes. One portion of a site or facility may be regulated under a different

statutory authority than other portions of that site or facility. When necessary, the department will, to the best of its ability, facilitate coordination between the regulatory programs involved.

(6) The department may take any action within the context of regulatory programs established in statutes or rules outside this chapter, if those actions are necessary to protect public health, welfare, or safety or prevent a damaging effect on the environment for present and future uses, whether or not a soil cleanup standard has been adopted under this chapter.

(7) ~~Nothing in this chapter authorizes an impact on soil quality that would cause a violation of a groundwater quality standard contained in under ch. NR 140, an impact on soil quality or groundwater quality that would cause a violation of a surface water quality standard contained in under chs. NR 102 to 106 or, an impact on soil quality that would cause a violation of an air quality standard contained in under chs. NR 400 to 499, or an impact on indoor air that would result in an exceedance of a vapor action level under s. NR 700.03 (66p).~~

~~(8) This chapter may apply to floodplain soils and sediment at a site or facility that is subject to regulation under ch. 292, Stats., if the criteria under s. NR 720.14 (1) are met.~~

~~(9) This chapter may apply to materials other than soil, which may include saturated deposits, aquifer material, fill, unconsolidated materials, waste fill, and foundry sand, at a site or facility that is subject to regulation under ch. 292, Stats., if the criteria under s. NR 720.14 (2) or (3) are met.~~

History: Cr. Register, March, 1995, No. 471, eff. 4-1-95; cr. (1) (d), am. (2); Register, February, 1996, No. 482, eff. 3-1-96; emerg. am. (1) (intro.), cr. (1m), eff. 5-18-00; am. (1) (intro.), cr. (1m), Register, January, 2001, No. 541, eff. 2-1-01; corrections in (1) (b) made under s. 13.93 (2m) (b) 7., Stats., Register September 2007 No. 621; CR 12-023; am. (1) (intro.), (a), (b), cr. (1) (e), r. (1m), am. (3), Register October 2013 No. 694, eff. 11-1-13.

NR 720.03 **Definitions.** In this chapter:

(1) "Aquifer" means a saturated subsurface geological formation of rock or soil.

(1m) "Ceiling limit concentration" means a preset non-risk based concentration of an inorganic or semi-volatile chemical.

Note: This definition is consistent with the approach used in the U.S. EPA's Regional Screening Table which sets a ceiling limit concentration of 100,000 mg/kg or 10% by weight for a relatively non-toxic chemical in a soil sample. This definition is not the same as in other natural resources administrative rules. For example, the term ceiling limit in ch. NR 204 refers to the concentration of certain metals in domestic sludge that if exceeded would result in the sludge not being eligible for land application.

(2) "Contaminant of concern" means a hazardous substance that is present at a site or facility in such concentrations that the contaminant poses an actual or potential threat to human health, safety, or welfare or the environment based upon:

(a) The toxicological characteristics of the hazardous substance that influence its ability to adversely affect human health or the environment relative to the concentration of the hazardous substance at the site or facility;

(b) The chemical and physical characteristics of the hazardous substance which govern its tendency to persist in the environment and the chemical, physical and biological characteristics at the site or facility which govern the tendency for the hazardous substance to persist at the site or facility;

(c) The chemical and physical characteristics of the hazardous substance which govern its tendency to move into and through environmental media;

(d) The naturally occurring background concentrations of the hazardous substance;

(e) The thoroughness of the testing for the hazardous substance at the site or facility;

(f) The frequency that the hazardous substance has been detected at the site or facility; and

(g) Degradation by-products of the hazardous substance.

(3) "Cumulative excess cancer risk" means the upper bound on the estimated excess cancer risk associated with exposure to multiple hazardous substances or multiple exposure pathways.

(3m) "Dermal absorption" means systemic exposure via skin absorption. However, because dermal toxicity factors are not available, oral-to-dermal extrapolation is done by adjusting for gastrointestinal absorption in order to derive toxicity values in terms of a dermally-absorbed dose.

Note: Dermal toxicity values that are extrapolated from oral toxicity values may not take into account allergic contact responses or skin cancer.

(4) "Direct contact" means human exposure to substances in soil through one or more of the following pathways: inhalation of particulate matter, dermal absorption, incidental ingestion, or inhalation of vapors from the soil.

(5) "Hazard index" means the sum of 2 or more hazard quotients for multiple hazardous substances or multiple exposure pathways.

(6) "Hazard quotient" means the ratio of the exposure of a single hazardous substance over a specified time period to a reference dose, or reference concentration where appropriate, for that hazardous substance derived for a similar exposure period.

Note: Hazard quotients and hazard indices are measures of the potential for noncarcinogenic effects.

(7) "Incidental ingestion of soil" means ingestion of soil by humans as a result of normal hand-to-mouth behaviors.

(8) "Inhalation of particulate matter" means inhalation by humans of contaminants adsorbed to respirable soil particles less than 10 microns in diameter.

(9m) "Inhalation of vapors" means inhalation by humans of soil contaminants that volatilized into outdoor air.

(11) "Pathway" means the route a substance takes in traveling to a receptor or potential receptor or the specific portal of entry, such as lungs, skin or digestive tract, the substance takes to potentially express its toxic effect, or both.

Note: An example of the food chain pathway is when a substance is taken up from soil to plant tissue and the plant tissue is then ingested by a person.

(12m) "Performance standard" means a remedial action or, in some cases existing site conditions that prevent exposure to contaminants or will result in a decrease in contaminant concentrations, or both.

~~(12s) "Residual contaminant level" means a numerical value expressing the concentration of a contaminant in soil that is calculated in accordance with the requirements of this chapter.~~

(13) "Restricted access areas" means land immediately adjacent to highways or railroad right-of-ways, where the presence of structural controls, such as fencing, has eliminated pedestrian ingress by the public.

(14) "Risk" means the probability that a hazardous substance, when released to the environment, will cause carcinogenic effects in exposed humans or other biological receptors.

~~(15) "Soil cleanup standard" means either a residual contaminant level determined in accordance with ss. NR 720.10 or 720.12, or a soil performance standard determined in accordance with s. NR 720.08.~~

(16) "Soil saturation concentration" or "Csat" means the contaminant concentration in soil at which the absorptive limits of the soil particles, the solubility limits of the soil particles, the solubility limits of the soil pore-water, and saturation of soil

pore-air have been reached. At concentrations greater than Csat, the soil contaminant may be present in free phase for contaminants that are liquid at ambient soil temperatures and pure solid phases for compounds that are solid at ambient soil temperatures.

History: Cr. Register, March, 1995, No. 471, eff. 4-1-95; corrections in (12) (c) made under s. 13.93 (2m) (b) 7., Stats., Register September 2007 No. 621; CR 12-023: cr. (1m), (3m), am. (4), (8), r. (9), cr. (9m), r. (10), (12), cr. (12m), am. (14), cr. (15), (16) Register October 2013 No. 694, eff. 11-1-13.

NR 720.05 General. (1) REMEDIAL ACTION. Responsible parties shall select and implement a remedial action to address soil contamination when, after any of the following investigations has been completed, information collected during the investigation indicates that a remedial action to address soil contamination is necessary to achieve compliance with the requirements of this chapter:

(a) Site investigation report developed in accordance with ch. NR 716 at sites or facilities subject to regulation under s. 292.11 or 292.31, Stats.

(b) Solid waste site investigation report prepared in accordance with the requirements of ch. NR 508.

(c) Investigation done under a hazardous waste closure plan or a RCRA facility investigation report, developed in accordance with the requirements of subchs. G and H of ch. NR 664 or s. NR 664.0100.

(d) Investigation done under a wastewater facility, structure or system abandonment plan developed in accordance with the requirements of s. NR 110.09 (2) (r), 213.07 or 214.08.

Note: Remedial actions at some types of sites or facilities, such as the abandonment of wastewater lagoons, may only have to comply with ch. NR 720 and not other requirements in the NR 700 series, such as the minimum site investigation requirements in ch. NR 716. In this case, the department or responsible parties may choose to use the other chapters of the NR 700 rule series as guidance for complying with ch. NR 720.

(2) RESIDUAL CONTAMINANT LEVELS ~~OR~~ AND PERFORMANCE STANDARDS. Remedial actions conducted by responsible parties to address soil contamination shall be designed and implemented to restore the contaminated soil to levels concentrations that, at a minimum, meet the residual contaminant levels ~~or~~ and any applicable performance standards for the site or facility determined in accordance with this chapter.

(3) NO FURTHER ACTION. If all soil contaminant concentrations meet applicable residual contaminant levels ~~or~~ and any applicable performance standards after a remedial action is completed, the department may not require further remedial action for soils, unless the department determines that the residual remaining soil contamination:

(a) Presents a threat to public health, safety, or welfare or the environment at the site or facility;

(b) Will cause a violation of a groundwater quality standard contained in ch. NR 140;

(c) Will cause a violation of a surface water quality standard contained in chs. NR 102 to 106; or

(d) Will cause a violation of an air quality standard contained in chs. NR 400 to 499.

(e) Will cause an exceedance of a vapor action level under s. NR 700.03 (66p).

(4) SUBMITTALS. (a) Unless otherwise directed by the department, submittals under this chapter shall be included in the site investigation report or the draft remedial action options report required under s. NR 700.11 (1).

(b) Submittals to the department under this chapter shall include all of the following:

1. Complete background information and supporting documentation for the procedure to be used.

2. Documentation that the application of the procedure is valid for the site or facility under consideration.

3. Necessary data and documentation needed to fully evaluate the submittal.

4. Legible copies of source documents or pertinent portions of source documents.

Note: In order to facilitate department review of submittals, legible copies of entire source documents or the pertinent portions of source documents sufficient to evaluate the method or procedure used should be included with the submittal.

(5) LAND USE CLASSIFICATION. (a) Responsible parties shall identify the current land use and zoning for the site or facility by the time the remedial action is selected, unless otherwise directed by the department. Additionally, the responsible party shall select a land use classification under par. (d). The responsible party shall use the selected land use classification under (d) to determine the direct contact residual contaminant level under s. NR 720.12 to apply at the site or facility.

Note: A table of residual contaminant levels that are calculated using the EPA's standard default exposure assumptions for residential, commercial/industrial, and recreational exposure scenarios can be found online at <https://dnr.wisconsin.gov/topic/Brownfields/soil.html>.

Note: As a condition of approving an interim action, remedial action, or case closure under chs. NR 708, NR 722, NR 724, or NR 726, the department may impose a continuing obligation. The department may require a continuing obligation at a site or facility that contains residual contamination if residual contaminant levels are determined based on any land use classification other than residential, or if a soil performance standard is used, and the continuing obligation is imposed to ensure that conditions at the site or facility remain protective of public health, safety, welfare, and the environment. The department may impose continuing obligations upon approval of an interim action or remedial action or at case closure.

~~(b) Responsible parties shall classify the land use of a site or facility as industrial if all of the following criteria are met:~~

~~1. The site or facility is currently zoned for, or otherwise officially designated for, industrial use.~~

Note: Typically, a site or facility is officially designated for industrial use by the issuance of a conditional use or special exception permit that allows an industrial use of that site or facility in a non-industrial zoning district or by the designation of an area as industrial in a county development plan or a municipal master plan, among other means.

~~2. More stringent non-industrial residual contaminant levels for soil are not necessary to protect public health on or off the site or facility.~~

Note: Situations where a non-industrial classification would apply include site or facilities which could otherwise be classified as industrial, but where proximity to a non-industrial land use, such as residential housing located across the street, makes a non-industrial classification more appropriate.

(c) An industrial land use classification may be applied to restricted access areas unless more stringent residual contaminant levels are necessary to protect public health on or off the site.

Note: Under ch. NR 726, a continuing obligation will be imposed as part of the case closure letter if residual contaminant levels are based on industrial exposure or if a soil performance standard is used.

(d) Except as provided under par. (e) and (g), and unless a more stringent land use classification applies under the criteria in subd. 1. through 4., responsible parties shall determine residual contaminant levels using the following land use classifications:

1. The industrial land use classification if the site or facility is currently zoned or otherwise officially designated for industrial purposes, or currently has an industrial land use under s. NR 700.03 (8m).

2. The commercial land use classification if the site or facility is currently zoned or otherwise officially designated for commercial purposes, or currently has a commercial land use under s. NR 700.03 (28m).

3. As residential land use if the site or facility is currently zoned or otherwise officially designated for residential purposes, or currently has a residential land use under s. NR 700.03 (49m).

4. The recreational land use classification if the site or facility is currently zoned or otherwise officially designated for recreational purposes, or currently has a recreational land use under s. NR 700.03 (47m).

(e) Responsible parties shall use a land use classification that would result in the application of a more stringent residual contaminant level for soil if needed to protect human health on or near the site or facility.

Note: A residential land use classification may apply when a site or facility could otherwise be classified under the commercial or industrial land use classification, but the site or facility is adjacent to a property that includes residential land use, such as a property used for residential housing located across the street from the site or facility, and the residential land use classification is determined to be necessary to protect public health.

(g) If approved by the department under s. NR 720.12 (2), responsible parties for sites or facilities may utilize site-specific direct contact residual contaminant levels that are not based on a land use classification under par. (5) (d).

History: Cr. Register, March, 1995, No. 471, eff. 4-1-95; corrections in (1) (c) made under s. 13.93 (2m) (b) 7., Stats., Register September 2007 No. 621; CR 12-023: cr. (1) (title), am. (1) (b), (c), cr. (2) (title), am. (2), cr. (3) (title), am. (3) (intro.), cr. (4), (5) Register October 2013 No. 694, eff. 11-1-13.

NR 720.07 General requirements when establishing soil cleanup standards applicable to a site or facility. (1) GENERAL.

(a) Responsible parties shall use information from the sources listed in s. NR 720.05 (1) to determine the residual contaminant levels ~~or~~ and any performance standards for each exposure or migration pathway of concern for each soil contaminant of concern at a site or facility ~~in accordance with this chapter.~~ Responsible parties may utilize a combination of residual contaminant levels and performance standards at a site or facility.

(b) In addition to meeting the requirements ~~of~~ under par. (c), responsible parties shall establish the soil cleanup standard for each soil contaminant of concern at the site or facility as one or more of the following:

1. The residual contaminant level of each contaminant in soil ~~which that~~ that is the lowest concentration from among the following as applicable: the ceiling limit concentration, the soil saturation concentration if the contaminant is a volatile, a land use specific direct contact level, a groundwater quality protective level, a concentration calculated for a pathway of concern set forth ~~in~~ under s. NR 720.13 all of which are determined ~~in accordance with the requirements of~~ under this chapter.

Note: For a single contaminant, a numeric ~~land use specific~~ residual contaminant level ~~that is specific to a designated land use classification~~ is determined based on aggregate exposure through incidental ingestion of soil, inhalation of soil vapors and particulates, and dermal contact with soil. When more than one contaminant is present, the residual contaminant level is determined based on cumulative exposure and may have to be adjusted downward so that the cumulative risk does not exceed an excess cancer risk of 1-in-100,000 or a hazard index of 1 for non-carcinogens.

2. A performance standard determined ~~in accordance with~~ under s. NR 720.08 ~~that is established and maintained to ensure~~ that the residual soil contamination for each contaminant in soil

does not pose a threat to public health, safety, or welfare or the environment.

3. An environmental standard for soil established using a risk assessment approach under s. NR 722.11 if there are multiple contaminants or multiple pathways of exposure present at the site or facility, and it is determined that a more protective environmental standard for soil is needed to protect human health from the cumulative effects of exposure.

(c) In addition to meeting the requirements of par. (b), a soil cleanup standard developed under this chapter shall comply with all the following requirements:

1. Residual soil contamination at the site or facility may not adversely affect surface water.

2. Residual soil contamination at the site or facility may not adversely affect a sensitive environment.

3. Residual soil contamination at the site or facility may not concentrate through plant uptake and adversely affect the food chain.

4. Residual soil contamination at the site or facility may not result in vapor concentrations reaching a substance's lower explosive limit.

5. Residual soil contamination at the site or facility may not result in an exceedance of a vapor action level under s. NR 700.03 (66p).

~~(2) COMPLIANCE WITH SOIL CLEANUP STANDARDS. (a) Contaminant concentrations in soil samples shall be determined using a department approved and appropriate analytical method and reported on a dry weight basis. An appropriate analytical method shall have limits of detection or limits of quantitation, or both, at or below soil cleanup standards where possible. Responsible parties shall report the limit of detection and the limit of quantitation with sample results. The department may require that supporting documentation for the reported limit of detection and limit of quantitation be submitted~~

~~(b) Unless an alternative approach for determining standards exceedances is approved by the department, if a soil contaminant concentration in a sample exceeds the soil cleanup standard at or above the limit of quantitation for that soil contaminant, the soil cleanup standard shall be considered to have been exceeded.~~

~~Note: When evaluating the direct contact pathways, it may be possible to average measured soil sample concentrations to determine whether the calculated residual contaminant level has been exceeded or not. If averaging of soil concentrations is being considered, the department recommends seeking department approval of the proposed sampling plan and analysis methodology as soon as possible, but prior to submitting a case closure request in order to avoid delays and other potential problems.~~

~~Note: Averaging soil concentrations is not appropriate as the sole method for addressing sites with areas of significant soil contamination.~~

~~(c) If a soil cleanup standard for a soil contaminant is between the limit of detection and the limit of quantitation, the soil cleanup standard shall be considered to be exceeded if the soil contaminant concentration is reported at or above the limit of quantitation.~~

~~(d) The following applies when a soil cleanup standard for a soil contaminant is below the limit of detection:~~

~~1. If a soil contaminant is not detected in a sample, the soil cleanup standard shall not be considered to have been exceeded.~~

~~2. If a soil contaminant is reported above the limit of detection but below the limit of quantitation, the responsible party may accept the results and the soil cleanup standard shall be considered to have been exceeded, or the responsible party may choose to have the soil sample reanalyzed by the use of an appropriate analytical method. If the soil contaminant is~~

~~confirmed to be present between the limit of detection and the limit of quantitation, the soil cleanup standard shall be considered to have been exceeded. If the soil contaminant is not detected upon reanalysis of the soil sample, the soil cleanup standard shall not be considered to have been exceeded.~~

~~(3) BACKGROUND. If the background concentration for a substance in soil at a site or facility is higher than the residual contaminant level for that substance determined using the procedures in this section, the background concentration in soil may be used as the residual contaminant level for that substance. The background concentration for a substance in soil shall be determined using a department approved and appropriate method.~~

~~Note: Naturally occurring background concentrations of arsenic in soil, for example, may be higher than the calculated residual contaminant level for arsenic. In such instances, the naturally occurring background concentration could be used as the soil cleanup level.~~

~~History: Cr. Register, March, 1995, No. 471, eff. 4-1-95; CR 12-023; am. (title), (1) (a) to (c), cr. (1) (c) 4., am. (2) (b), (d) 2., cr. (3) Register October 2013 No. 694, eff. 11-1-13.~~

NR 720.08 ~~Procedures for establishing~~ **Establishing soil performance standards.** (1)

~~GENERAL. If When a responsible party selects this option a soil performance standard for implementation of a remedial action under s. NR 720.05, performance standards shall be established and maintained so that the residual contaminants in the soil do not pose a threat to public health, safety, or welfare or the environment.~~

~~Note: Guidance document RR-528 indicates that it may not be necessary to determine numeric residual contaminant levels for contaminants as long as all contaminant pathways for all contaminants of concern are addressed by the remedial action, the extent of contamination is fully defined, the remedy remains in place, is maintained as appropriate and remains effective. For example, if a cover is placed that addresses all pathways for the contaminated soil, then it isn't necessary to determine the numeric residual contaminant levels for as long as the cover adequately addresses the pathway and remains protective. It may be necessary to determine residual contaminant levels in the future if the remedy is changed or replaced.~~

~~Note: Continuing obligations for a soil performance standard may be imposed at the time of the interim action or remedial action approval or at case closure under s. 292.12 (2), Stats., and chs. NR 708, NR 722, NR 724, and NR 726.~~

(2) PROTECTION OF GROUNDWATER. Acceptable performance standard options to address the soil to groundwater pathway may include any of, or any combination of, the following:

(a) Placement of a permanent engineering control such as a cap or cover to limit infiltration and thereby minimizing the leaching of soil contaminants to groundwater that is constructed and maintained until the threat to groundwater no longer exists.

(b) Use of natural attenuation to contain and remediate the contaminants present.

(c) Operation of a system in compliance with ch. NR 724 until the residual contaminant level, or the lowest concentration that is practicable, is achieved.

Note: As explained in more detail in guidance document RR-528, if there is no threat to groundwater from soil contamination, a soil remedy is not necessary. The lack of groundwater contamination may not always be sufficient to establish there is not threat to the groundwater pathway. An analysis to determine whether sufficient time has passed for the soil contamination to have reached the locations where groundwater is being monitored may be necessary. The factors that may need to be considered include: the age of the contaminant release, type of contaminants, geologic setting, depth to groundwater, and the proximity of the monitoring wells to the source of contamination.

(3) PROTECTION FROM DIRECT CONTACT. Acceptable performance standard options to address the direct contact pathway may include either of, or a combination of, the following:

(a) Placement of a permanent engineering control such as a cap or cover that is constructed and maintained until the direct contact threat no longer exists.

(b) Operation of a system in compliance with ch. NR 724 until the residual contaminant level, or the lowest concentration that is practicable, is achieved.

History: CR 12-023; cr. Register October 2013 No. 694, eff. 11-1-13.

NR 720.10 ~~Procedures for determining~~ **Determining residual contaminant levels based on protection of groundwater.** (1) GENERAL. If When a responsible party selects this option determines residual contaminant levels for soil based on the protection of groundwater to implement a remedial action under s. NR 720.05, the residual contaminant levels for soil based on protection of groundwater shall be developed using the enforcement standards established in under ch. NR 140 or using procedures consistent with the methodology in under ss. 160.13 and 160.15, Stats., and the criteria in under s. NR 722.09 (2) (b) 2. when there is no enforcement standard to use as the target concentrations for contamination in groundwater. If the department of health has not developed a recommended enforcement standard and a federal maximum contaminant level exists, that value may be used for calculating a soil residual contaminant level for the protection of groundwater.

~~Note: In developing a residual contaminant level, any relevant information may be considered, including public welfare concerns for groundwater, such as taste and odor, and drinking water health advisory levels.~~

(2) METHODS. Responsible parties shall use one or more of the methods listed in this section based on scientifically valid procedures that are subject to department review and approval and site-specific geological, physical and chemical conditions to establish residual contaminant levels:

(a) A contaminant transport and fate model.

(b) Leaching tests appropriate for the site or facility in both application and extent.

(c) Any other appropriate method approved by the department for that specific site or facility, or other appropriate method suggested in department guidance.

Note: Guidance document RR-890 provides detailed instructions on one method the department considers scientifically valid for purposes of calculating site specific residual contaminant levels that are protective of groundwater quality. A table of residual contaminant levels that are calculated using the standard default exposure assumptions can be found at: <http://dnr.wi.gov/topic/Brownfields/professionals.html#tabx2>.

(3) PARAMETERS. Unless otherwise approved, when determining residual contaminant levels for soil to groundwater, responsible parties shall use all of the following soil parameter values:

(a) A dry soil bulk density of 1.5 gm/cm³.

(b) An air filled soil porosity of 0.13.

(c) A total soil porosity of 0.43.

(d) A water filled porosity of 0.30.

(e) A soil particle density of 2.65 gm/cm³.

(f) A soil organic carbon content of 0.002.

Note: These soil parameter values are the defaults used in Pub-RR-890, "Soil Residual Contaminant Level Determination Using the US EPA Regional Screening Level Web Calculator." This guidance may be found at <http://dnr.wi.gov/topic/Brownfields/Pubs.html>.

History: CR 12-023; cr. Register October 2013 No. 694, eff. 11-1-13.

NR 720.12 ~~Procedures for determining~~ **Determining residual contaminant levels based on protection of human health from direct contact with**

contaminated soil. (1) GENERAL. ~~If~~ When a responsible party ~~selects this option, determines~~ residual contaminant levels for soil based on protection of human health from direct contact, the residual contaminant levels shall be developed using the following criteria standards:

(a) For individual compounds using an excess cancer risk of 1×10^{-6} and a hazard quotient for non-carcinogens of one; ~~and~~.

(b) The cumulative excess cancer risk will not exceed 1×10^{-5} and the hazard index for non-carcinogens will not exceed one for the site or facility.

(c) Risks for carcinogens and hazard quotients for non-carcinogens are presumed to be additive within each category, unless there is specific information that demonstrates that an alternative approach is more appropriate.

(d) If toxicological values for both carcinogenic and non-carcinogenic end points exist for a substance, both toxicological values shall be evaluated and the method value that generates the lowest residual contaminant level shall be used for the site or facility.

(e) The land use classification of the site or facility.

(2) METHODS AND ~~PROCEDURES~~ CRITERIA. Responsible parties shall determine a residual contaminant level to protect public health from direct contact with soil contamination using scientifically valid ~~procedures~~ methods and toxicological values approved by the department and the default exposure assumptions identified ~~in~~ under sub. (3) or alternative exposure assumptions specifically approved by the department in writing.

Note: The department will generally consider toxicological values in the following order: U.S. EPA's Integrated Risk Information System (IRIS); U.S. EPA's Provisional Peer Reviewed Toxicity Values (PPRTV); Agency for Toxic Substances and Disease Registry (ATSDR); California EPA (Cal EPA); U.S. EPA's Health Effects Assessment Summary Tables (HEAST); and other pertinent toxicological information.

Note: Default residual contaminant levels for chemicals in soil may be found in the residual contaminant level spreadsheet, which may be found at <https://dnr.wisconsin.gov/topic/Brownfields/soil.html>.

Note: Responsible parties that are calculating residual contaminant levels according to the land use classifications under s. NR 720.05 (5) may utilize the default exposure assumptions available in the U.S. EPA Regional Screening Level calculator, which may be found at https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search.

(3) DEFAULT EXPOSURE ASSUMPTIONS. (a) *Non-carcinogens*. When the contaminant is not a carcinogen, the following default exposure assumptions shall be used:

1. When the land use of a site or facility is classified as ~~non-industrial, in accordance with residential under~~ s. NR 720.05 (5), all of the following shall apply:

a. Incidental ingestion of soil shall be assumed to occur at the rate of 200 mg of soil per day for a 15 kg child for 350 days each year.

b. Dermal absorption of soil shall be determined assuming a child's daily exposed skin surface area of ~~2,800~~ 2,373 cm² with a skin-soil adherence factor of 0.2 mg/cm² and a contaminant specific dermal absorption fraction.

c. Inhalation of outdoor soil vapors shall be assumed to occur for each volatile contaminant at a 24-hour daily exposure rate determined by the volatile's soil-to-air volatilization factor, and inhalation of particulate matter shall be determined assuming a particulate emission factor of ~~4.43~~ 1.56 $\times 10^9$ m³/kg.

d. An averaging period for exposure shall equal the default exposure duration of 6 years.

2. When the land use of a site or facility is classified as ~~commercial or industrial, in accordance with~~ under s. NR 720.05 (5), all of the following shall apply:

a. Incidental ingestion of soil shall be assumed to occur at the rate of 100 mg of soil per day for a ~~70~~ 80 kg adult worker for 250 days each year.

b. Dermal absorption of soil shall be determined assuming an adult outdoor worker's daily exposed skin surface of ~~3,300~~ 3,527 cm² with a skin-soil adherence factor of ~~0.2~~ 0.12 mg/cm² and a contaminant specific dermal absorption fraction.

c. Inhalation of outdoor soil vapors shall be assumed to occur for each volatile contaminant at an 8-hour daily exposure rate determined by the volatile contaminant's soil-to-air volatilization factor, and inhalation of particulate matter shall be determined assuming a particulate emission factor of ~~4.43~~ 1.56 $\times 10^9$ m³/kg.

d. An averaging period of exposure shall equal the default exposure duration of 25 years.

3. When the land use of a site or facility is classified as recreational under s. NR 720.05 (5), all of the following shall apply:

a. Incidental ingestion of soil shall be assumed to occur at the rate of 200 mg of soil per day for a 15 kg child and 100 mg/kg for a 80 kg adult for 175 days each year.

b. Dermal absorption of soil shall be determined assuming a child's daily exposed skin surface area of 2,373 cm² with a skin-soil adherence factor of 0.2 mg/cm², an adult's daily exposed skin surface area of 6,032 cm² with a skin-soil adherence factor of 0.07 mg/cm² and a contaminant specific dermal absorption fraction.

c. Inhalation of outdoor soil vapors shall be assumed to occur for each volatile contaminant at a 4-hour daily exposure rate determined by the volatile's soil-to-air volatilization factor, and inhalation of particulate matter shall be determined assuming a particulate emission factor of 1.56 ~~4.43~~ $\times 10^9$ m³/kg.

d. An averaging period for exposure shall equal the default exposure duration of 6 years for a child and 20 years for an adult.

(b) *Carcinogens*. When the contaminant is a carcinogen, the following default exposure assumptions shall be used:

1. When the land use of a site or facility is classified as ~~non-industrial, in accordance with residential under~~ s. NR 720.05 (5), all of the following shall apply:

a. Incidental ingestion of soil shall be assumed to occur at the rate of 200 mg of soil per day for 350 days each year for 6 years for a 15 kg child and the rate of 100 mg per day for 350 days each year for ~~24~~ 20 years for a ~~70~~ 80 kg adult.

b. Dermal absorption of soil shall be determined assuming a child's daily exposed skin surface area of ~~2,800~~ 2,373 cm² with a skin-soil adherence factor of 0.2 mg/cm², and an adult's daily exposed skin surface area of ~~5,700~~ 6,032 cm² with a skin-soil adherence factor of 0.07 mg/cm² and a contaminant specific dermal absorption fraction.

c. Inhalation of outdoor soil vapors shall be assumed to occur for each volatile contaminant at a 24-hour daily exposure rate determined by the volatile contaminant's soil-to-air volatilization factor, and inhalation of particulate matter shall be determined assuming a particulate emission factor of ~~4.43~~ 1.56 $\times 10^9$ m³/kg. For mutagenic contaminants, age segmented exposure durations shall be assumed when age adjusted cancer slope factors are available.

d. An averaging period of 30 years of exposure consisting of 6 child years and 24 adult years shall be assumed during a ~~70~~ year lifetime.

2. When the land use of a site or facility is classified as commercial or industrial, ~~in accordance with~~ under s. NR 720.05 (5), all of the following shall apply:

a. Incidental ingestion of soil shall be assumed to occur at the rate of 100 mg of soil per day for 250 days each year for a ~~70~~ 80 kg adult worker.

b. Dermal absorption of soil shall be determined assuming an adult outdoor worker's daily exposed skin surface of ~~3,300~~ 3,527 cm² with a skin-soil adherence factor of ~~0.2~~ 0.12 mg/cm² and a contaminant specific dermal absorption fraction.

c. Inhalation of outdoor soil vapors shall be assumed to occur for each volatile contaminant at an 8-hour daily exposure rate determined by the volatile contaminant's soil-to-air volatilization factor, and inhalation of particulate matter shall be determined assuming a particulate emission factor of ~~1.43~~ 1.56 x10⁹ m³/kg.

d. An averaging period of 25 years of exposure shall be assumed during a ~~70-year~~ 70-year lifetime.

Note: EPA's regional screening level user's guide provides a table containing contaminant specific dermal absorption factors and soil to air volatilization factors. The document can be found at: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/usersguide.htm.

Note: Department approval of alternative exposure assumptions for a site or facility may be based on consultation with the department of health services. If EPA makes changes to the default exposure assumptions, the department ~~would generally use~~ recommends that the responsible party use the revised values.

Note: Guidance document RR-890 provides detailed instructions on one method the department considers scientifically valid for purposes of calculating site specific residual contaminant levels that are protective of the direct contact pathway. A table of residual contaminant levels that are calculated using the standard default exposure assumptions can be found at: <http://dnr.wi.gov/topic/Brownfields/professionals.html#tabx2>.

3. When the land use of a site or facility is classified as recreational under s. NR 720.05 (5), all of the following shall apply:

a. Incidental ingestion of soil shall be assumed to occur at the rate of 200 mg of soil per day for 175 days each year for 6 years for a 15 kg child and the rate of 100 mg per day for 175 days each year for 20 years for a 80 kg adult.

b. Dermal absorption of soil shall be determined assuming a child's daily exposed skin surface area of 2,373 cm² with a skin-soil adherence factor of 0.2 mg/cm², and an adult's daily exposed skin-surface area of 6,032 cm² with a skin-soil adherence factor of 0.07 mg/cm² and a contaminant specific dermal absorption fraction.

c. Inhalation of outdoor soil vapors shall be assumed to occur for each volatile contaminant at a 4-hour daily exposure rate determined by the volatile contaminant's soil-to-air volatilization factor, and inhalation of particulate matter shall be determined assuming a particulate emission factor of 1.56 x10⁹ m³/kg. For mutagenic contaminants, age segmented exposure durations shall be assumed when age adjusted cancer slope factors are available.

d. An averaging period of 30 years of exposure consisting of 6 child years and 24 adult years shall be assumed during a 70-year lifetime.

(4) SOIL PARAMETER VALUES. Unless otherwise approved, when determining ~~site specific~~ residual contaminant levels, all the following soil parameter values shall be used:

(a) For direct contact:

1. A dry soil bulk density of 1.5 gm/cm³.
2. An air filled soil porosity of 0.28.
3. A total soil porosity of 0.43.
4. A water filled porosity of 0.15.

5. A soil particle density of 2.65 gm/cm³.

6. A soil organic carbon content of 0.006.

~~(b) For soil to groundwater:~~

~~1. A dry soil bulk density of 1.5 gm/cm³.~~

~~2. An air filled soil porosity of 0.13.~~

~~3. A total soil porosity of 0.43.~~

~~4. A water filled porosity of 0.30.~~

~~5. A soil particle density of 2.65 gm/cm³.~~

~~6. A soil organic carbon content of 0.002.~~

Note: These soil parameter values are the defaults used in Pub-RR-890, "Soil Residual Contaminant Level Determination Using the US EPA Regional Screening Level Web Calculator." This guidance may be found at <http://dnr.wi.gov/topic/Brownfields/Pubs.html>.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 720.13 Other pathways of concern. Responsible parties shall consider human food chain, surface water quality, and terrestrial ~~eco-system~~ ecosystem pathways of exposure, when those pathways of exposure are of concern at a site or facility.

Note: In some cases, the potential for contaminant migration or exposure to contamination through other pathways may be of concern at a site or facility. These situations could include contaminated soil in close proximity to a surface water where the potential for runoff from the site or facility to cause an impact on surface water quality exists or contaminated soil where potential for bioaccumulation and uptake through the food chain resulting in adverse impacts to human health or terrestrial ecosystems exists. This section requires responsible parties to establish appropriate residual contaminant levels protective of these pathways when necessary.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 720.14 Criteria for application of direct contact residual contaminant levels to media other than soil.

(1) FLOODPLAIN SOILS AND SEDIMENT; DIRECT CONTACT. Direct contact residual contaminant levels under s. NR 720.12 shall be applied to floodplain soils and sediment if the site or facility is subject to regulation under ch. 292 and any of the following criteria apply:

(a) The contaminated floodplain soils or contaminated sediment present a human health risk from direct contact.

(b) The department approves the application of this chapter to floodplain soils or sediment at a site or facility.

(2) MATERIALS OTHER THAN SOIL; GROUNDWATER. The department may require a responsible party to apply the residual contaminant levels determined for protection of groundwater under s. NR 720.10 to materials other than soil, which may include saturated deposits, aquifer material, fill, unconsolidated materials, waste fill, and foundry sand if the site or facility is subject to regulation under ch. 292 and any or all of following criteria apply:

(a) The materials are interspersed with soil and the dominant material in the area of dispersal is soil.

(b) There is potential for contaminants in the materials to pose a risk to groundwater.

(3) MATERIALS OTHER THAN SOIL; DIRECT CONTACT. The department may require a responsible party to apply the residual contaminant levels determined for protection from direct contact with contaminated soil under s. NR 720.12 to materials other than soil, which may include saturated deposits, aquifer material, fill, unconsolidated materials, waste fill, and foundry sand, if the site or facility is subject to regulation under ch. 292 and all the following criteria apply:

(a) The materials are interspersed with soil and the dominant material in the area of dispersal is soil.

(b) The human health risk from direct contact with the materials is not significantly different from the human health risk from direct contact with soil.

NR 720.15 Compliance with soil cleanup standards.

(1) METHODS AND ANALYSIS. Contaminant concentrations in soil samples shall be determined using an appropriate analytical method at a department-certified laboratory and reported on a dry weight basis. An appropriate analytical method shall have limits of detection or limits of quantitation, or both, at or below soil cleanup standards where possible. Responsible parties shall report the limit of detection and the limit of quantitation with sample results. The department may require submission of supporting documentation for the reported limit of detection and limit of quantitation.

(a) If a soil contaminant concentration in a sample exceeds the soil residual contaminant level at or above the limit of quantitation for that soil contaminant, the soil cleanup standard shall be considered to have been exceeded, unless an alternative approach for determining standards exceedances is approved by the department.

(b) If a soil residual contaminant level for a soil contaminant is between the limit of detection and the limit of quantitation, the soil cleanup standard shall be considered to be exceeded if the soil contaminant concentration is reported at or above the limit of quantitation.

(c) The following applies when a soil residual contaminant level for a soil contaminant is below the limit of detection:

1. If a soil contaminant is not detected in a sample, the soil cleanup standard shall not be considered to have been exceeded.

2. If a soil contaminant is reported above the limit of detection but below the limit of quantitation, the responsible party may accept the results and the soil cleanup standard shall be considered to have been exceeded, or the responsible party may choose to have the soil sample reanalyzed by the use of an appropriate analytical method. If the soil contaminant is confirmed to be present between the limit of detection and the limit of quantitation, the soil cleanup standard shall be considered to have been exceeded. If the soil contaminant is not detected upon reanalysis of the soil sample, the soil cleanup standard shall not be considered to have been exceeded.

(d) When determining residual contaminant levels, responsible parties shall assume the point of application is at all locations and all depths. The depth to which soil is remediated at a site or facility may be determined based on site-specific information, but at a minimum shall be a zero to four feet interval when there is direct contact with soil contamination.

(2) ALTERNATE APPROACHES FOR COMPLYING WITH SOIL CLEANUP STANDARDS.

(a) Cumulative risk for PAHs. In lieu of compliance with residual contaminant levels for individual contaminants, a cumulative cancer risk evaluation may be used to determine compliance with soil cleanup standards for carcinogenic PAHs. Cumulative risk will be determined using the cumulative excess cancer risk and hazard index targets specified under s. NR 720.12 (1) (b). Cumulative risk shall be based on the same exposure assumptions used for calculating the individual residual contaminant levels. A cumulative risk value that exceeds the cumulative risk target specified under s. NR 720.12 (1) (b) is considered a soil cleanup standard exceedance.

Note: The department has developed guidance on cumulative evaluation that is available in [placeholder for document title and number]. A tool for calculating

cumulative risk is available in the department's residual contaminant level spreadsheet available at: <https://dnr.wisconsin.gov/topic/Brownfields/soil.html>.

(b) Averaging. Subject to written department approval, averaging of soil contaminant data may be conducted when evaluating the direct contact pathway as a means to comply with soil cleanup standards.

Note: The department provides guidance on soil averaging in the soil guidance document RR-991, which is available on the department's website at <https://dnr.wisconsin.gov/topic/Brownfields/soil.html>. The department recommends that a responsible party requests department approval of the proposed sampling plan and methodology for averaging soil concentrations as soon as possible, and prior to submitting a case closure request, in order to avoid delays and ensure the proposed actions comply with applicable cleanup standards. Averaging soil concentrations is not appropriate as the sole method for addressing sites with areas of significant soil contamination.

(c) Background. If the background concentration for a substance in soil at a site or facility is higher than the residual contaminant level for that substance determined using the procedures in this section, the background concentration in soil may be used as the residual contaminant level for that substance. The background concentration for a substance in soil shall be determined using a department-approved and appropriate method. If a responsible party chooses to calculate a background threshold value for a contaminant, written department approval is required.

Note: The department has developed statewide background threshold values for some common naturally occurring metals. These values are available in the department's residual contaminant levels spreadsheet, which is available on the department's website at: <https://dnr.wisconsin.gov/topic/Brownfields/soil.html>. When the statewide background threshold value is greater than the calculated residual contaminant level, the background value may be used as the applicable soil cleanup standard for that contaminant.

Chapter NR 722

STANDARDS FOR SELECTING REMEDIAL ACTIONS

NR 722.01	Purpose.	NR 722.11	Risk assessments.
NR 722.02	Applicability.	NR 722.13	Remedial action options report.
NR 722.03	Definitions.	NR 722.15	Department response.
NR 722.05	General.	NR 722.17	Department database requirements for remedial actions approved with a continuing obligation.
NR 722.07	Identification and evaluation of remedial action options.		
NR 722.09	Selection of a remedial action.		

Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, February, 1997, No. 494.

NR 722.01 Purpose. The purpose of this chapter is to establish minimum standards for identifying and evaluating remedial action options and selecting remedial actions. This chapter is adopted pursuant to ss. 227.11 (2), 287.03 (1) (a), 287.05, and 289.06 (1) and (2), Stats., and ch. 292, Stats.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; am. Register, February, 1996, No. 482, eff. 3-1-96; CR 12-023: am. Register October 2013 No. 694, eff. 11-1-13.

NR 722.02 Applicability. (1) This chapter applies to all remedial actions taken by the department under the authority of ch. 292, Stats. This chapter does not apply to immediate actions or interim actions, unless specifically noted in ch. NR 708. In this chapter, where the term “responsible parties” appears, it shall be read to include the department, where a department-funded remedial action is being taken.

(2) Unless otherwise specified elsewhere in chs. NR 700 to NR 754, this chapter applies to all remedial actions taken by responsible parties at sites, facilities or portions of a site or facility that are subject to regulation under ch. 292, Stats., regardless of whether there is direct involvement or oversight by the department, except for those sites or facilities being addressed under the dry cleaner response program.

Note: Sites being addressed under the dry cleaner response program are exempt because the comparison of remedies is accomplished through the remedial action bidding process, which requires 3 to 6 alternative bids to be compared before a remedy is selected.

(2m) This chapter applies to all remedial actions taken by persons seeking the liability exemption under s. 292.15, Stats. In this chapter, where the term “responsible party” appears, it shall be read to include the “voluntary party” where an action is being undertaken to comply with s. 292.15, Stats.

(3) In addition to being applicable to sites or facilities that are subject to regulation under ch. 292, Stats., ch. NR 722 applies to the evaluation of proposed remedial action options for solid waste facilities where remedial action is required by the department pursuant to ch. NR 508.

Note: Persons who wish to conduct response actions that will be consistent with the requirements of CERCLA and the National Contingency Plan (NCP) may request that the department enter into a contract with them pursuant to s. 292.31 or a negotiated agreement under s. 292.11 (7) (d), Stats. However, a CERCLA-quality response action will likely require compliance with additional requirements beyond those contained in chs. NR 700 to 754 in order to be consistent with CERCLA and the NCP.

(4) The department may exercise enforcement discretion on a case-by-case basis and choose to regulate a site, facility or a portion of a site or facility under only one of a number of potentially applicable statutory authorities. However, where overlapping restrictions or requirements apply, the more restrictive requirements shall control. The department shall, after receipt of a written request and appropriate ch. NR 749 fee from a responsible party, provide a letter that indicates which

regulatory program or programs the department considers to be applicable to a site or facility.

Note: Sites, facilities or portions of a site or facility that are subject to regulation under ch. 292, Stats., may also be subject to regulation under other statutes, including the solid waste statutes in ch. 289, Stats., or the hazardous waste management act, ch. 291, Stats., and the administrative rules adopted pursuant to those statutes. In addition, federal authorities such as CERCLA, RCRA, or TSCA may also apply to a site or facility or portions of a site or facility. One portion of a site or facility may be regulated under a different statutory authority than other portions of that site or facility.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; cr. (2m), Register, February, 1996, No. 482, eff. 3-1-96; emerg. am. (1) to (3), cr. (3m), eff. 5-18-00; am. (1) to (3), cr. (3m), Register, January, 2001, No. 541, eff. 2-1-01; correction in (3) made under s. 13.93 (2m) (b) 7., Stats., Register, January, 2001, No. 541; CR 12-023: am. (1), (2), (2m), (3), r. (3m), am. (4) Register October 2013 No. 694, eff. 11-1-13.

NR 722.03 Definitions. The definitions in s. NR 700.03 apply to this chapter.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; CR 12-023: renum. (intro.) to 722.03, r. (1), (2) Register October 2013 No. 694, eff. 11-1-13.

NR 722.05 General. (1) Responsible parties shall select an appropriate remedial action or combination of remedial actions for implementation under this chapter, unless the department makes the selection under sub. (2).

(2) The department shall select the remedial action for the following types of sites or facilities:

(a) State-lead national priority list sites.

(b) Sites or facilities being addressed under a contract with the department under s. 292.31, Stats.

(c) Department-funded response actions. For those sites or facilities where the department is responsible for selecting the appropriate remedy, significant consideration shall be given to options that provide for long-term sustainability.

(d) Sites or facilities being addressed under an administrative order issued under s. 292.11 (7) (c), Stats.

(3) The department shall document the remedial action selected for those sites or facilities listed in sub. (2) following the requirements of s. NR 722.07, at a minimum, and conduct the applicable public participation and notification activities as required in ch. NR 714.

(4) To select a remedy or combination of remedies, responsible parties shall identify, evaluate and document an appropriate range of remedial action options to address each contaminated medium in accordance with the requirements of this chapter, when one of the following happens:

(a) A site investigation report is completed in accordance with ch. NR 716.

(b) An evaluation of remedial action options is required in accordance with ch. NR 508.

(5) The identification, evaluation and documentation of an appropriate set of remedial action options, to address each medium and migration or exposure pathway shall be based on

the complexity of the site or facility and the legal requirements applicable to the response action and the site or facility.

Note: Each remedial action option identified may be used to address more than one contaminated medium or migration or exposure pathway if that remedial action option would be protective of public health, safety and welfare and the environment for each media and migration or exposure pathway that it is proposed to address.

(6) The evaluation and documentation of an appropriate set of remedial action options shall be conducted by a qualified person or persons pursuant to s. NR 712.07 and shall be signed and sealed by the qualified person or persons in accordance with s. NR 712.09.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; CR 12-023: am. (2) (b), (c), (4) Register October 2013 No. 694, eff. 11-1-13.

NR 722.07 Identification and evaluation of remedial action options. (1) GENERAL. Unless otherwise directed by the department, responsible parties shall identify and evaluate an appropriate range of remedial action options in accordance with the requirements of this section.

(2) IDENTIFICATION OF LIKELY REMEDIAL ACTION OPTIONS. An initial screening of remedial technologies shall be conducted to identify remedial action options for further evaluation which are reasonably likely to be feasible for a site or facility, based on the hazardous substances present, media contaminated and site characteristics, and to comply with the requirements of s. NR 722.09.

(3) EVALUATION OF REMEDIAL ACTION OPTIONS. (a) Except as provided in par. (b), responsible parties shall use all of the criteria in sub. (4) to further evaluate appropriate remedial action options that have been identified for further evaluation under sub. (2), for each contaminated medium or migration or exposure pathway. This evaluation process shall be used to determine which remedial action option constitutes the most appropriate technology or combination of technologies to restore the environment, to the extent practicable, within a reasonable period of time and to minimize the harmful effects of the contamination to the air, land, or waters of the state, to address the exposure pathways of concern, and effectively and efficiently address the source of the contamination.

Note: The purpose of the technical and economic feasibility evaluation is to evaluate a range of remedial action options suitable for a particular site or facility to determine the practicability of implementing those options. If a particular option is not suitable for a particular site or facility, such as in situ air sparging in dense clay soils, it should not be evaluated. Emphasis should be placed on remedial action options suitable for a particular site or facility. Any remedy selected should attempt to limit secondary impacts including air and water discharges, destruction of ecosystems, and excessive use of energy.

Note: For cases involving a discharge and migration of organic contaminants that do not readily degrade in soil or groundwater, an active remedial action that will reduce the contaminant mass and concentration will typically be necessary. Natural attenuation, covers, and barriers do not actively reduce contaminant mass and concentrations. Chlorinated compounds are the most common contaminants that fall under this provision. Some organic contaminants, such as PCBs and PAHs may not readily migrate, depending on site characteristics.

(am) Responsible parties shall document their evaluation of a remedial option or combination of options which would use recycling or treatment technologies that destroy or detoxify contaminants, rather than transfer the contaminants to other media.

(b) A detailed evaluation based on the criteria in sub. (4) is not required in those cases where a remedial action option identified during the initial screening results in the reuse, recycling, destruction, detoxification, treatment, or any combination thereof of the hazardous substances present at the site and this proposed option meets all of the following requirements:

1m. Is proven to be effective in remediating the types of hazardous substances present at the site, based on experience gained at other sites with similar site characteristics and conditions;

2m. Can be implemented in a manner that will not pose a significant risk of harm to human health, safety, or welfare or the environment; and

3. Is likely to result in the reduction or control, or both, of the hazardous substances present at the site to a degree and in a manner that is in compliance with the requirements of s. NR 722.09 (2) to (4).

Note: Section NR 722.07 (3) (b) is intended to provide a streamlined evaluation process for certain remedial actions that are presumed to meet the evaluation and selection criteria in ss. NR 722.07 and 722.09.

(4) EVALUATION CRITERIA. Except as provided in s. NR 722.07 (3) (b), the remedial action options identified by the initial screening shall be evaluated based on the following requirements and in compliance with the requirements of s. NR 722.09.

(a) *Technical feasibility.* The technical feasibility of each appropriate remedial action option that effectively and efficiently addresses the sources of contamination shall be evaluated using the following criteria:

1. 'Long-term effectiveness.' The long-term effectiveness of appropriate remedial action options, taking into account all of the following:

a. The degree to which the toxicity, mobility and volume of the contamination is expected to be reduced.

b. The degree to which a remedial action option, if implemented, will protect public health, safety, and welfare and the environment over time.

2. 'Short-term effectiveness.' The short-term effectiveness of appropriate remedial action options, taking into account any adverse impacts on public health, safety, or welfare or the environment that may be posed during the construction and implementation period until case closure under ch. NR 726.

3. 'Implementability.' The implementability of appropriate remedial action options, taking into account all of the following:

a. The technical feasibility of constructing and implementing the remedial action option at the site or facility given the type of contaminants and hydrogeologic conditions present.

b. The availability of materials, equipment, technologies, and services needed to conduct the remedial action option taking into account the location and environmental impact of the selected materials and equipment.

c. The potential difficulties and constraints associated with on-site construction or off-site disposal and treatment.

Note: For example, evaluate the use of heavy equipment and cost of fuel to transport wastewater and leachate from a site compared to on-site treatment.

d. The difficulties associated with monitoring the effectiveness of the remedial action option.

e. The administrative feasibility of the remedial action option, including activities and time needed to obtain any necessary licenses, permits or approvals.

f. The presence of any federal or state, threatened or endangered species.

g. The technical feasibility of recycling, treatment, engineering controls or disposal.

h. The technical feasibility of naturally occurring biodegradation at the site or facility, if responsible parties evaluate this option.

i. The redevelopment potential of the site once the remedy has been implemented.

j. Reduction of greenhouse gases consistent with federal or state climate action policies.

4. 'Restoration time frame.' The expected time frame needed to achieve the necessary restoration, taking into account all of the following qualitative criteria:

- a. Proximity of contamination to receptors.
- b. Presence of sensitive receptors.
- c. Presence of threatened or endangered species or habitats, as defined by state and federal law.
- d. Current and potential use of the aquifer, including proximity to private and public water supplies and surface water bodies.
- e. Magnitude, mobility and toxicity of the contamination.
- f. Geologic and hydrogeologic conditions.
- g. Effectiveness, reliability, and enforceability of continuing obligations.
- h. Naturally occurring biodegradation processes at the site or facility which are expected to reduce the total mass of contamination in an effective and timely manner and which have been demonstrated to be occurring at the site or facility, to the satisfaction of the department in the site investigation report.
- i. The degradation potential of the compounds.

Note: The biogeochemical environment and the contaminant of concern are critical factors in determining degradation potential. Not all compounds readily degrade in soil or groundwater, while others, such as certain petroleum compounds have a greater degradation potential.

Note: The purpose of s. NR 722.07 (4) (a) 4. is to provide criteria to determine how quickly environmental laws and standards must be achieved, due to the site-specific hazards that the contamination poses. It is not intended to authorize risk assessments, nor is it the intent of this provision to establish a generic time period that would be applied at all sites or facilities.

(b) *Economic feasibility.* The economic feasibility of each appropriate remedial action option that effectively and efficiently addresses the source of the contamination shall be evaluated, using the following criteria:

- 1m. Capital costs, including both direct and indirect costs;
- 2m. Initial costs, including design and testing costs;
3. Annual operation and maintenance costs;
4. Total present worth of the costs for all national priority list sites or facilities; sites or facilities where the department has entered into a contract pursuant to s. 292.31 (1) (b), Stats.; and sites or facilities where state environmental fund monies are being expended; and
5. Costs associated with potential future liability.

(5) ADDITIONAL REQUIREMENTS. (a) *Engineering controls.* If engineering controls are considered, responsible parties shall, at a minimum, evaluate an on-site engineering control to address all hazardous substances, contaminated media and migration or exposure pathways.

Note: Engineering controls include on-site or off-site containment methods, such as covers, soil covers, engineered structures, liners, gas collection systems, armoring of sediments, erosion controls, vapor mitigation systems, and groundwater slurry walls. Restricting access to a site or facility, such as constructing a fence, is not an engineering control.

(b) *Continuing Obligations.* Responsible parties shall consider the appropriateness of using continuing obligations to ensure that adequate protection of public health, safety, and welfare and the environment is maintained over time.

(c) *Additional requirements.* Responsible parties shall comply with additional site-specific remedial action evaluation or documentation requirements that may be specified by the department due to the complexity of the site or facility, the

persistence of certain compounds, or the severity of the potential or actual public health or environmental impacts.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; CR 12-023: am. (3) (a), cr. (3) (am), am. (b) (intro.), r. (3) (b) 1., 2., renum. (3) (b) 2. a. to c. to (3) (b) 1m, 2., 3. and am. (3) (b) 3., am. (4) (a) (intro.), 3. a., b., cr. (4) (a) 3. i., j., am. (4) (a) 4. d., g., cr. (4) (a) 4. i., am. (4) (b) (intro.), r. (4) (b) 1., renum. (4) (b) 1. a. to e. to (4) (b) 1m., 2m., 3., 4., 5. and am. (4) (b) 4., r. (4) (b) 2., am. (5) (b), (c) Register October 2013 No. 694, eff. 11-1-13.

NR 722.09 **Selection of a remedial action. (1) GENERAL.** An option from the range of technically feasible options shall be selected based on the results of the evaluation conducted pursuant to s. NR 722.07, in compliance with this section. If an option's cost, including all the costs listed in s. NR 722.07 (4) (b), is excessive with respect to what is being technically achieved by the option relative to other available options, responsible parties may choose not to select it.

(2) ENVIRONMENTAL LAWS AND STANDARDS. Responsible parties shall select a remedial action or combination of remedial actions that achieve restoration of the environment to the extent practicable, minimize the harmful effects from the contamination on the air, lands and waters of the state and comply with all applicable state and federal public health and environmental laws and environmental standards. Environmental laws and standards include:

(a) *Soils.* Contaminated soil shall be restored in compliance with the requirements of ch. NR 720.

Note: Chapter NR 720 provides requirements and criteria for residual contaminant levels ~~or~~ and performance standards. If residual contaminant levels are used instead of performance standards they must be determined as required ~~in accordance with the requirements set forth in ch. NR 720 under this chapter.~~ A performance standard maintains a condition that is protective of human health, safety and welfare and the environment. Use of a performance standard will involve ~~land-use restrictions~~ continuing obligations, maintenance agreements, long-term monitoring or a combination of these.

(b) *Groundwater.* Contaminated groundwater shall be restored in accordance with all of the following requirements:

1. For substances that are listed in ch. NR 140, the groundwater restoration goal is the preventive action limit. The preventive action limits shall be achieved to the extent technically and economically feasible, pursuant to ss. NR 140.24 and 140.26, unless a PAL exemption is granted pursuant to s. NR 140.28.

2. For substances which do not have an established standard in ch. NR 140, the department may take or require the responsible parties to conduct any necessary actions, such as developing site-specific environmental standards in cooperation with the department of health services, to protect public health, safety, or welfare or to prevent a significant damaging effect on groundwater or surface water quality for present or future consumptive or non-consumptive uses.

(c) *Surface water and wetlands.* 1. Discharges to surface waters or wetlands may not result in a surface water quality standard contained in chs. NR 102 to 106 being exceeded and may not exceed effluent limitations established by the department based on "best available control technology currently available" or, where appropriate, "best available control technology economically achievable," in accordance with ch. NR 220.

2. For substances that do not have established criteria in ss. NR 102.14 and 105.05 to 105.09, discharges to surface waters or wetlands may not exceed site-specific water quality criteria established by the department pursuant to the general standards of ss. NR 102.04 (1) (d) and 103.03 (2) (d).

Note: The water quality standards contained in chs. NR 102 to 106 are comprised of water quality criteria for the prevention of adverse tastes and odors in fish and drinking water (s. NR 102.14), acute and chronic toxicity to aquatic life

(ss. NR 105.05 and 105.06, respectively), adverse effects to wild and domestic animals (s. NR 105.07), human threshold and cancer effects (ss. NR 105.08 and 105.09, respectively) and designated uses of the surface waters based on their classification and water quality standards and criteria for wetlands. Chapter NR 220 provides that for those point sources identified in s. NR 220.21 (1), the department shall establish effluent limitations that are achievable by the application of the "best practicable control technology currently available" or, where appropriate, the "best available control technology economically achievable", as required in s. NR 220.21 (2).

3. At sites or facilities in, or in close proximity to, surface water bodies or wetlands, active remedial actions shall be taken to prevent or minimize, to the extent practicable, potential and actual hazardous substance discharges and environmental pollution that may attain or exceed surface water or wetland criteria established in accordance with chs. NR 102 to 106.

(d) *Discharges to the air.* All emissions to the air shall comply with applicable requirements in ch. 285, Stats., chs. NR 400 to 499, and any other applicable federal or state environmental laws. In addition, for those sites or facilities where a discharge of volatile hazardous substances has occurred, the vapor intrusion pathway shall be evaluated to determine the likelihood of those substances entering the breathing space of a structure. Air contaminated from vapor intrusion shall be restored in accordance with the following requirements:

1. At sites or facilities where vapors have migrated from the source of contamination, active remedial actions shall be taken to limit or prevent, to the extent practicable, potential and actual hazardous substance discharges and environmental pollution that may attain or exceed vapor action levels.

2. The department may take or require the responsible parties to conduct any necessary actions, such as developing site-specific environmental standards in cooperation with the department of health services, to protect public health, safety, or welfare or to prevent a significant damaging effect on indoor air quality for present or future use.

(e) *Hazardous and solid waste.* 1. Any waste, debris or waste stream generated by the remedial action shall be managed in compliance with all applicable state and federal laws and regulations. Contaminated debris, at a minimum, shall be addressed to minimize the harmful effects to protect health, safety, and welfare and the environment.

2. Management of materials contaminated with polychlorinated biphenyls (PCBs) shall comply with the requirements of ch. NR 157 and TSCA, if applicable.

(2m) SUSTAINABLE REMEDIAL ACTION. Once the remedial action has been selected, the responsible party shall evaluate all of the following criteria, as appropriate for the selected remedial action:

(a) Total energy use and the potential to use renewable energy.

(b) The generation of air pollutants, including particulate matter and greenhouse gas emissions.

(c) Water use and the impacts to water resources.

(d) The future land use and enhancement of ecosystems, including minimizing unnecessary soil and habitat disturbance and destruction.

(e) Reducing, reusing, and recycling materials and wastes, including investigative or sampling wastes.

(f) Optimizing sustainable management practices during long-term care and stewardship.

Note: Tradeoffs will exist when evaluating these criteria and responsible parties need to balance both the benefits and risks to human health and the environment when selecting and implementing the best overall approach.

Additional information can be obtained from U.S. EPA at: <http://www.clu-in.org/greenremediation/>.

(3) ADDITIONAL STANDARDS OF PERFORMANCE. Each remedial action or combinations of actions shall protect public health, safety and welfare and the environment from all contaminated media, routes of exposure and contamination at the site or facility. Responsible parties shall presume that a remedial action option or combination of options is protective if it meets the criteria in sub. (2), unless the responsible party or the department determines that compliance with applicable public health and environmental laws, including environmental standards, is not protective of public health, safety, or welfare or the environment due to multiple pathways of exposure or synergistic effects of contamination. At sites or facilities where there may be synergistic effects of contamination, multiple pathways of exposure or both that pose an unacceptable threat to public health, safety or welfare or the environment, responsible parties shall attain more stringent, facility or site-specific numeric standards to ensure that public health, safety and welfare and the environment are protected. In such a situation, the department may require that the responsible parties develop a site-specific numeric or performance standard, or both, that is protective of public health, safety and welfare and the environment for the specific media, migration or exposure pathways and contamination.

(4) LANDFILL DISPOSAL OF UNTREATED CONTAMINATED UNCONSOLIDATED MATERIAL. Responsible parties may only select landfill disposal for untreated contaminated unconsolidated material if such disposal is in compliance with chs. NR 500 to 538, the landfill's approved plan of operation and both of the following requirements:

(a) *Use of untreated contaminated unconsolidated material.*

1. Except as provided in subd. 2., untreated contaminated unconsolidated material may only be accepted by the landfill operator for use as daily cover in accordance with s. NR 514.04 (6), if the volume of untreated contaminated unconsolidated material that is proposed to be used as daily cover does not exceed the landfill's net daily cover needs nor 12.5% of the annual volume of waste received by the landfill, or for use in the construction of soil structures within the fill area when approved for that specific use by the department, unless otherwise specifically provided in the landfill's individual license and approved plan of operation.

2. Untreated contaminated unconsolidated material that is not usable as daily cover or for soil structures and for which there is no technically and economically feasible treatment alternative may be disposed of in a landfill only with prior written approval from the department, unless otherwise specifically provided in the landfill's individual license and approved plan of operation.

(b) *Volume limitations.* 1. Except as provided in subd. 2. or 3., the volume of untreated contaminated unconsolidated material from a single site or facility that is proposed for landfill disposal may not exceed 250 cubic yards as measured *in situ*.

2. Except as provided in subd. 3., volumes of untreated contaminated unconsolidated material that exceed 250 cubic yards may be disposed of in a licensed landfill with a department-approved composite liner, or a liner that is equivalent to a composite liner in terms of environmental protection as determined by the department.

3. Volumes of untreated contaminated unconsolidated material that exceed 2000 cubic yards may be disposed of in a landfill only if prior written approval is obtained from the

department after the department has reviewed a remedial action options report.

Note: Material contaminated with polychlorinated biphenyls (PCBs) must be managed in accordance with the requirements of chs. NR 700 to 754. EPA has independent authority to regulate material contaminated with PCBs under TSCA. The department and EPA have entered into a memorandum of understanding that specifies how responsibility for government oversight at sites with PCB contamination will be determined. The memorandum of agreement can be found at: <http://dnr.wi.gov/files/pdf/pubs/tr/tr786.pdf>.

(5) CONTINUING OBLIGATIONS. All legal and administrative mechanisms that establish property-specific responsibilities shall be selected consistent with the provisions of ch. 292, Stats., ch. NR 726, and this chapter, and are protective of public health, safety, and welfare and the environment.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; CR 01-129: am. (2) (a), Register July 2002 No. 559, eff. 8-1-02; correction in (4) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register February 2010 No. 650; CR 12-023: am. (2) (b) 1., 2., renum. (2) (d) to (2) (d) (intro.) and am., cr. (2) (d) 1., 2., am. (2) (e) 2., cr. (2m), am. (4) (a) 1, (b) 3., r. and recr. (5) Register October 2013 No. 694, eff. 11-1-13.

NR 722.11 **Risk assessments.** ~~(1) The responsible party~~ Responsible parties may request, and the department may consider granting, approval to prepare and submit a risk assessment for the purpose of developing environmental standards only if the responsible parties demonstrate to the satisfaction of the department that compliance with the applicable environmental standards listed under s. NR 722.09 (2) will not be protective of public health, safety and welfare and the environment because of the presence of multiple contaminants or multiple pathways of exposure.

~~(a) Compliance with the applicable environmental standards listed in s. NR 722.09 (2) will not be protective of public health, safety and welfare and the environment; or~~

~~(b) Attaining compliance with the applicable residual contaminant levels in ch. NR 720 is not practicable.~~

(1m) The risk assessment shall evaluate the multiple hazardous substances and exposure pathways present at the site or facility and shall be based on current and potential future land use, if known. Default exposure parameters shall be utilized based on the land use classifications under s. NR 720.05 (5). Default exposure parameters as described in s. NR 720.12 (3) shall not be modified unless the responsible parties obtain prior department approval in writing. A conceptual site model may be used to identify when an individual or group of individuals may be exposed to hazardous substances through more than one exposure pathway. All applicable exposure pathways shall be evaluated in the risk assessment.

Note: Although drinking water receptors may not be present and therefore not included in the risk assessment, groundwater quality standards under ch. NR 140 must be met.

~~(2) If the department authorizes the use of a risk assessment to develop environmental standards, the responsible parties shall utilize standard exposure assumptions approved by the department. The department may approve, modify or disapprove of the risk assessment prepared by the responsible parties and shall provide a written explanation of the department's action to the responsible parties.~~

(2) If the department authorizes the use of a risk assessment to develop environmental standards, responsible parties shall utilize standard exposure assumptions approved in advance and in writing by the department, and shall comply with the following criteria:

(a) The default values for these exposure parameters specified under s. NR 720.03 shall not be changed when

calculating cleanup levels except when necessary to establish a more stringent cleanup level to protect human health.

(b) Other exposure parameters identified under s. NR 720.12 may be modified only when an alternate reasonable maximum exposure scenario is used, and only when there is adequate data to demonstrate that use of a modified exposure parameter would protect human health, safety, welfare, and the environment based on the conditions present at the site or facility. For calculation of environmental standards, the exposure parameters that may be modified include only those that define the exposure frequency and exposure time. The default values for these exposure parameters may be modified only where there is adequate data to demonstrate that use of a modified exposure parameter would be more appropriate for the conditions present at the site or facility.

(c) The responsible party may make modifications that incorporate site-specific characteristics including the soil, hydrologic or hydrogeologic conditions at the site, such as contaminant leaching and transport variables.

(d) The responsible party shall not rely on the use of site access restrictions, including fencing, to control hazardous substance exposures at the site or facility when selecting exposure assumptions and parameters.

(2m) The department may approve, modify or disapprove of the risk assessment prepared by the responsible parties and shall provide a written explanation of the department's decision to the responsible parties. The department may consult with the department of health services in determining whether to approve, modify or disapprove of the risk assessment.

(3) When the department enters into a contract pursuant to under s. 292.31, Stats., the department shall determine whether or not a risk assessment ~~should~~ shall be prepared and by whom.

(4) When the department enters into a negotiated agreement under s. 292.11 (7), Stats., the department shall determine whether or not a risk assessment shall be prepared and by whom.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; CR 12-023: am. (3) Register October 2013 No. 694, eff. 11-1-13.

NR 722.13 **Remedial action options report.** **(1) GENERAL.** Based on the evaluation and selection of remedial action options required in ss. NR 722.07 and 722.09, responsible parties shall document the evaluation and selection in a remedial action options report in compliance with the requirements of this section. Responsible parties shall submit the remedial action options report to the department within 60 days after submitting the site investigation report, unless otherwise specified by the department.

(2) CONTENTS OF REPORT. The remedial action options report shall include the following:

(a) *Cover letter.* 1. The department's identification number for the site or facility.

2. The purpose of the submittal and the desired department action or response.

3. Month, day and year of the submittal.

(b) *Executive summary.* A brief narrative summarizing the contents of the report.

(c) *Background information.* 1. Project title, name of the site or facility, its location, the mailing address and telephone number of the responsible parties, and the name, address and telephone number of the person who prepared the report.

2. The regulatory status of the site or facility.

3. A summary of the nature and extent of contamination at the site or facility, based on the data gathered during the site investigation.

4. A summary of the geologic and hydrogeologic characteristics at the site or facility, based on data gathered during the site investigation.

Note: If a site investigation report required under ch. NR 716 and a remedial action options report required under this chapter are prepared as a single submittal, the site investigation information does not need to be restated in the remedial action options portion of the combined submittal.

(d) *Remedial action options.* A brief description of each remedial action option that has been evaluated under s. NR 722.07, including all of the following information:

1. A physical and operational description of each remedial action option.

2. The degree to which each evaluated remedial action option is expected to comply with the environmental laws and standards under s. NR 722.09 (2).

3. The physical location at the site or facility where the environmental standards applicable to the site or facility and the remedial action option are to be complied with.

4. Any local, state or federal licenses, permits or approvals that are required for each remedial action option.

5. A comparison of the expected performance of each remedial action option in relation to the technical and economic feasibility criteria in s. NR 722.07 (4).

6. A statement on whether or not treatment was considered and why a treatment option or combination of treatment options were rejected, if rejected.

(e) *Selected remedial action.* Responsible parties shall document the selected remedial action in compliance with this section, except where the department is selecting the remedial action option under s. NR 722.05 (2). The remedial action options report shall identify the selected remedial action and shall include:

1. A brief summary of the rationale for choosing the remedial action, based on the evaluation required under s. NR 722.07.

2. A proposed schedule for implementing the selected remedial action option.

3. An estimate of the approximate total cost of implementing the selected remedial action option, including the costs listed in s. NR 722.07 (4) (b).

4. An estimate of the time frame needed for the selected remedial action option to comply with the applicable federal or state environmental laws and standards, whichever are more stringent.

5. A description of how the performance of the selected remedial action option will be measured.

6. A description of how treatment residuals generated in connection with the selected remedial action option will be managed on-site and, if applicable, off-site.

7. A description of how the criteria in s. NR 722.09 (2m) regarding sustainable remedial action were addressed.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; am. (1), Register, January, 2001, No. 541, eff. 2-1-01; CR 12-023: am. (1), (2) (e) 1., 3., cr. (2) (e) 7. Register October 2013 No. 694, eff. 11-1-13.

NR 722.15 Department response. (1) GENERAL. The department may respond to the submission of a remedial action options report required by this chapter using one of the following methods:

(a) The department may, in writing, direct responsible parties to submit all of the reports required under this chapter and to proceed to implement the selected remedial action without department approval, review or acknowledgement.

(b) The department may, in writing, direct responsible parties that review and approval of a remedial action options report is necessary prior to proceeding to implement the selected remedial action pursuant to ch. NR 724. The department shall provide written acknowledgement of receipt of each report submitted pursuant to this chapter within 30 days. Department acknowledgement shall include an estimated date for completion of department review.

(2) DEPARTMENT REVIEW. In cases where the department is reviewing a remedial action options report under this chapter prior to the implementation of the selected remedial action, the department:

(a) May exercise discretion on a case-by-case basis and request additional information, require revisions, approve, conditionally approve or disapprove of the report.

(b) Shall provide a written explanation of the reasons for any disapproval to the responsible parties.

(c) May establish a schedule for the responsible parties to provide additional information and revisions to the department.

(d) May approve the remedial action options report only after ensuring that implementation of the selected remedial action will adequately protect human health, safety, and the environment. In making this determination, the department shall consider the following factors as appropriate:

1. The physical and chemical characteristics of each contaminant including its toxicity, persistence, and potential for migration.

2. The hydrogeologic characteristics of the site or facility and the surrounding area.

3. The proximity, quality, and current and future uses of nearby surface water and groundwater.

4. The potential effects of residual contamination on nearby surface water and groundwater.

5. All other relevant assessments prepared and submitted in compliance with the requirements of s. NR 722.11.

6. All other relevant information contained in the remedial options report.

(e) May, as a condition of approving the remedial action, do any of the following:

1. Require operation and maintenance of an engineering control on the site.

2. Require an investigation of the extent of residual contamination and the performance of any necessary remedial action if a building or other structural impediment is removed that had prevented a complete investigation or remedial action at the site.

3. Require that the department be notified prior to a change in land use, if the proposed land use change would be such that any of the exposure assumptions on which a continuing obligation are based would no longer be protective of human health, safety, or welfare or the environment.

4. Require vapor control technologies be used for any new construction on the site, or require interim actions to limit or prevent vapor intrusion be installed, operated and maintained.

5. Require site-specific actions or continuing obligations to adequately protect human health, safety, or welfare or the environment.

6. Require the submittal of the information necessary for listing the site on the department database.

Note: In accordance with ch. NR 749, the appropriate review must accompany any request for the department to review a specific document.

(3) NOTICE TO PROCEED. Unless otherwise directed, at sites or facilities where the department approves or conditionally approves of a remedial action report, the responsible parties shall initiate the design and construction of the selected remedial action within 90 days after department approval or conditional approval.

History: Cr. Register, April, 1995, No. 472, eff. 5-1-95; CR 12-023: am. (2) (d) 1. to 5., cr. (2) (e), renum. (3) (intro.) to (3) and am., r. (3) (a), (b) Register October 2013 No. 694, eff. 11-1-13.

NR 722.17 Department database requirements for remedial actions approved with a continuing obligation. **(1)** For sites or facilities where the department has approved a remedial action that includes a continuing obligation which meets any of the criteria in ss. NR 722.15 (2) (e) and 725.05 (2), the department may require that the site or facility, including all properties and rights-of-way within the contaminated site boundaries, be included on the department database.

(2) The site or facility remedial action plan approval letter shall be associated with the site or facility record in the department database, for those sites required to be included on the department database.

(3) The fees required by ch. NR 749 shall be submitted to the department.

Note: Under s. 292.12 (3) (b), Stats., the department has authority to charge a fee for placement on a department database.

(4) Documentation requirements shall meet s. NR 726.11, to the extent practicable.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

Chapter NR 726

CASE CLOSURE

NR 726.01	Purpose.	NR 726.09	Closure documentation requirements.
NR 726.02	Applicability.	NR 726.11	Department database documentation requirements.
NR 726.03	Definitions.	NR 726.13	Authority and approvals for case closure.
NR 726.05	General requirements for case closure.	NR 726.15	Closure letters and continuing obligations.
NR 726.07	Department database requirements.		

Note: Chapter NR 726 as it existed on April 30, 1995 was repealed and a new chapter NR 726 was created effective May 1, 1995. Chapter NR 726 was repealed and recreated, Register October 2013 No. 694, eff. 11-1-13.

NR 726.01 Purpose. The purpose of this chapter is to specify the minimum requirements and conditions that shall be met before the department may determine that a case related to a discharge of hazardous substances or environmental pollution at a specific site or facility may be closed. This chapter is adopted pursuant to ss. 227.11 (2), 287.03, and 289.06, Stats., and ch. 292, Stats.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 726.02 Applicability. (1) This chapter applies to the closure of all cases where a response action, other than an immediate action, is taken at a site, facility or portion of a site or facility that is subject to regulation under ch. 292, Stats., regardless of whether there is direct involvement or oversight by the department, except that this chapter does not apply where the department determines under ch. NR 708 that no further action is necessary.

(2) In addition to being applicable to sites or facilities specified in sub. (1), this chapter applies to the proposed closure of all of the following:

(a) Solid waste facilities where remedial action is required by the department pursuant to ch. NR 508.

(b) Sites or facilities where remedial action has been taken by a person who is seeking a liability exemption under s. 292.15, Stats.

(3) The department may exercise enforcement discretion on a case-by-case basis and choose to regulate a site, facility or a portion of a site or facility under only one of a number of potentially applicable statutory authorities. However, where there are overlapping restrictions or requirements, the more restrictive requirements shall control. The department shall, after receipt of a request and the appropriate fee under ch. NR 749 from the responsible parties, provide a letter that indicates which regulatory program or programs the department considers to be applicable to a site or facility.

Note: Sites, facilities or portions of a site or facility that are subject to regulation under ch. 292, Stats., may also be subject to regulation under other statutes, including the solid waste statutes in ch. 289, Stats., or the hazardous waste management act, ch. 291, Stats., and the administrative rules adopted pursuant to those statutes. One portion of a site or facility may be regulated under a different statutory authority than other portions of that site or facility.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 726.03 Definitions. The definitions in s. NR 700.03 apply to this chapter.

Note: "Agency with administrative authority" or "agency" is used in several sections of ch. NR 726 to distinguish between the actions for which the department is responsible, in contrast to those actions where the Department of Agriculture, Trade and Consumer Protection (DATCP) has authority to review and approve closure requests, ensure that comment periods prior to closure approvals are followed, and to review information on the department database regarding compliance with conditions of closure.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 726.05 General requirements for case closure.

(1) COMPLIANCE. The responsible party or other person requesting closure shall ensure compliance with all applicable federal, state, and local public health and environmental laws, including chs. NR 140, 141, and 700 to 754, as applicable, prior to requesting case closure.

(2) NOTIFICATION. Where written notification is required under ch. NR 725, the notification requirements shall be satisfied prior to submitting a request for case closure to the agency. When a site-specific condition of closure is required for a site or facility under s. NR 726.13 (1) (c), notification shall be in accordance with the requirements of s. NR 725.07.

(3) FEES. (a) For sites or facilities where the department has administrative authority to oversee the remediation of the site, the case closure fee and, if entry on the department database is required under s. NR 726.07, the fee or fees listed in ch. NR 749 for adding a site to the department database, shall be submitted to the department with each case closure request.

Note: Under s. 292.12 (3) (b), Stats., the department has authority to charge a fee for placement on a department database.

(b) [For sites or facilities contaminated with petroleum products discharged from a petroleum storage tank for which the department of safety and professional services has administrative authority under s. 101.144, Stats., and] Sites or facilities for which department of agriculture, trade and consumer protection has administrative authority under s. 94.73, Stats., that are required by s. NR 726.07 to be entered onto the department database, the fee or fees listed in ch. NR 749 for adding a site to the department database shall be submitted to the department before a case closure request is submitted to the appropriate agency. For these sites or facilities, a case closure request may not be considered complete until proof of payment of the required fees has been entered onto the department's bureau for remediation and redevelopment tracking system, which is available on the department's internet site.

Note: The department's bureau for remediation and redevelopment tracking system can be found on the internet at <http://dnr.wi.gov/topic/Brownfields/rtrsm.html>.

Note: The language in brackets no longer applies as a result of the repeal of s. 101.144, Stats., by 2013 Wis. Act 20. This provision is subject to future rulemaking.

(4) RESPONSE ACTION GOALS. For sites or facilities considering closure under this chapter, the closure request shall document that the remaining level of contamination is not likely to:

(a) Pose a threat to public health, safety, or welfare or the environment.

(b) Cause a violation of ch. NR 140 groundwater quality enforcement standards at any applicable point of standards application, except where the department has granted an

exemption under s. NR 140.28 for a specific hazardous substance or the criteria under s. NR 726.05 (6) are met.

(c) Cause a violation of surface water quality standards in chs. NR 102 to 106.

(d) Cause a violation of air quality standards contained in chs. NR 400 to 499.

(e) Cause a vapor action level in indoor air to be attained or exceeded.

Note: Vapor action level is defined in s. NR 700.03 (66p) as "the concentration of vapors from volatile compounds is at or above the 1-in-100,000 (1×10^{-5}) excess lifetime cancer risk or is at or above a hazard index of 1 for non-carcinogens."

(5) COMPLETENESS. A case closure request shall be complete and meet the documentation requirements of ss. NR 726.09 and 726.11 if applicable.

Note: Incomplete closure requests may be denied. The review fee may be applied to review of the site investigation for grossly incomplete closure requests, on a case-by-case basis. A closure review fee would be required when a complete closure request is then submitted.

(6) CRITERIA FOR CLOSURE FOR SITES OR FACILITIES WITH GROUNDWATER CONTAMINATION. For sites or facilities with groundwater contamination that attains or exceeds ch. NR 140 enforcement standards at the time that case closure is requested, including sites or facilities contaminated with petroleum products discharged from a petroleum storage tank that are eligible for closure under ch. NR 726, the responsible party or other person requesting closure shall submit a case closure request to the agency for the site that documents that all of the following criteria are satisfied, if applicable:

(a) Adequate source control measures have been taken which include all of the following:

1. Whether regulated or registered under ch. ATP 93 or not, all existing underground storage tanks have been removed, permanently closed or upgraded to prevent new discharges of hazardous substances to the groundwater that would violate ch. NR 140. The same requirement applies to all new and replacement underground storage tanks not regulated under ch. ATP 93.

Note: The intent of this requirement is to ensure that source control measures are taken which prevent new or continuing releases, regardless of whether or not the tank is regulated under ch. ATP 93.

2. All new and replacement underground storage tanks regulated under ch. ATP 93 have been constructed and are being monitored in accordance with ch. ATP 93.

3. All other existing tanks, pipes, barrels or other containers which may discharge a hazardous substance have been removed, contained or controlled to prevent, to the maximum extent practicable, new discharges of hazardous substances to the groundwater that would violate ch. NR 140.

4. Where applicable, immediate and interim actions have been taken in accordance with ch. NR 708 to protect public health, safety, or welfare or the environment.

5. Free product has been removed in accordance with the criteria in s. NR 708.13.

6. The concentration and mass of a substance and its breakdown products in groundwater have been reduced due to naturally occurring physical, chemical and biological processes as necessary to adequately protect public health and the environment, and prevent groundwater contamination from migrating beyond the boundaries of the property or properties which are required to be entered onto the department database.

(b) Natural attenuation will bring the groundwater into compliance with ch. NR 140 groundwater quality standards within a reasonable period of time, considering the criteria in s. NR 722.07.

(c) The groundwater plume margin is stable or receding, and after case closure, groundwater contamination attaining or exceeding ch. NR 140 preventive action limits will not migrate beyond the boundaries of any property that falls into either one of the following categories:

1. Properties for which a preventive action limit exemption has been granted.

2. Properties that have been identified as having existing groundwater contamination that attains or exceeds ch. NR 140 enforcement standards and that will be included on the department database.

(d) There is no existing or anticipated threat to public health, safety, or welfare or the environment.

(e) Except for ch. NR 140, all applicable public health and environmental laws, including chs. NR 141 and 700 to 754, have been complied with.

(7) GENERAL CLOSURE CRITERIA. The following shall be required for case closure at all sites or facilities:

(a) All monitoring wells and boreholes installed during any response action taken for the site or facility shall be abandoned and documented as abandoned in accordance with s. NR 141.25, except for specific wells that the agency approves of retaining until sampling is no longer required.

(b) For sites or facilities where waste or contaminated media was generated during the response action and was stored or treated on-site, all the waste or contaminated media shall be handled and disposed of in accordance with applicable state and federal laws before a case closure request is submitted or approved.

(c) Groundwater samples used to determine compliance with ch. NR 140 shall be taken from monitoring wells constructed in accordance with ch. NR 141. The agency may approve an alternative monitoring program designed to show whether groundwater quality standards have been met.

(8) CRITERIA FOR CLOSURE FOR SITES OR FACILITIES WITH VAPOR CONTAMINATION. A site or facility is not eligible for closure until the following criteria have been met:

(a) The vapor exposure pathway has been investigated in accordance with s. NR 716.11 (5) (g); and

(b) Where vapors were present above the vapor risk screening level:

1. A remedial action has been conducted and reduced the mass and concentration of volatile compounds to the extent practicable; and

Note: Vapor mitigation systems are not considered remedial actions, as they do not reduce the mass or concentrations of the contaminants. Vapor mitigation systems are used to interrupt the vapor migration pathway.

2. The vapor exposure pathway has been interrupted or mitigated.

(9) OTHER. Any other condition for case closure that is necessary to protect public health, safety, or welfare or the environment may be required.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13; corrections in (6) (a) 1., 2. made under s. 13.92 (4) (b) 7., Stats., Register October 2013 No. 694.

NR 726.07 Department database requirements. (1)

All sites or facilities meeting any of the criteria in s. NR 725.05 (2) or 726.13 (1) (c), upon approval of the closure request under ch. NR 726, shall be entered onto the department database. All properties within or partially within the contaminated site or facility boundaries, including all public street and highway rights-of-way and railroad rights-of-way, shall be included.

(2) The site or facility closure approval letter, and the information required under s. NR 726.11 shall be associated with the site or facility record in the department database.

Note: A continuing obligation can be imposed within a general liability clarification letter for a local governmental unit directed to take an action under s. NR 708.17, in a remedial action plan approval under s. NR 722.15, or in a closure approval under ch. NR 726.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 726.09 Closure documentation requirements.

(1) CASE CLOSURE REQUEST FORM. A request for case closure shall be submitted on a form supplied by the agency and shall be accompanied by documentation that the criteria in s. NR 726.05 (1) to (8) are satisfied. One paper copy and one electronic copy of the complete closure request shall be submitted to the department, unless otherwise directed by the department. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Note: Copies of the WDNR case closure request form (form 4400-202) and the associated impacted property notification information form (4400-246) for sites or facilities over which the department has administrative authority may be accessed at:

<http://dnr.wi.gov/files/PDF/forms/4400/4400-202.pdf>,

or may be obtained from any regional office of the department, or by writing to the Department of Natural Resources, Bureau for Remediation and Redevelopment, P.O. Box 7921, Madison, Wisconsin 53707.

Note: Electronic copies should be submitted in the Adobe portable document format (PDF) on optical disk media. Guidance on electronic submittals can be accessed at <http://dnr.wi.gov/files/PDF/pubs/tr/RR690.pdf>.

(2) GENERAL REQUIREMENTS. In order to demonstrate that applicable federal, state and local public health and environmental laws have been complied with, and to provide information on the location and nature of any residual contamination at the site or facility, the person who is requesting case closure shall submit all of the following information, that is applicable, as attachments to the case closure request, in the format that is specified in this subsection, and in the order that is specified in the form.

(a) Documentation showing that site investigation requirements in ch. NR 716 have been met or, where applicable, documentation which meets the requirements in ch. NR 508, the groundwater assessment requirements in s. NR 140.24 (1) (b), or both.

(b) A description of the interim and remedial actions taken at the site or facility. For sites or facilities where residual soil contamination exceeds ch. NR 720 soil standards at the time that case closure is requested, include a demonstration that the remedial action taken, and any interim action that was taken that constituted the final response action for soil contamination, satisfies the requirements of chs. NR 720 and 722, where applicable.

(c) Maps and cross sections shall be to scale, and use a graphic scale. The north arrow shall be pointing to the top of the map.

(d) For sites or facilities where soil excavation or active soil remediation occurred:

1. A table of soil analytical results with collection dates identified. Soil analytical data tables shall clearly indicate depth of sample, soil type and whether the sample represents pre-remedial or post-remedial conditions. At sites or facilities where soil excavation occurred, the soil analytical data tables shall indicate whether the soil data point represents soil that was removed or soil that remains in place.

2. A map that shows the locations of all soil samples collected.

Note: Where a soil performance standard cover is the only action taken, that is not considered active soil remediation. This requirement applies to all sites where soil excavation or active soil remediation occurred, not just those to be included on the department database under s. NR 726.07.

(e) Where the agency has required groundwater quality sampling to be conducted, results from a minimum of 8 successive quarterly rounds of sampling to demonstrate compliance with either the applicable requirements of ch. NR 140 or the requirements of s. NR 726.05 (6), unless otherwise directed or approved by the agency.

Note: Under ch. NR 722, alternate sampling schedules may be proposed, based on site geology, contaminants of concern, remedial action applied and redevelopment plans. The department expects that more monitoring may be necessary at complex sites, or where statistical analysis will be used for data evaluation. Conversely, less post-remediation monitoring may be appropriate for certain sites with significant source removal, readily degradable compounds or other well-established site conditions.

(f) For sites or facilities with sediment contamination, or soil vapor contamination, sampling data demonstrating that the remedial action selected in accordance with ch. NR 722 has restored the environment to the extent practicable and minimized the harmful effects of the hazardous substances on the air, lands, and waters of the state.

(g) Submit to the department documentation that all other closure conditions have been satisfied, within 120 days after the department provides a conditional closure response.

Note: This requirement is meant to cover well abandonment and any other minor condition identified in a conditional closure letter. It does not apply to the continuing obligations specified in the final closure letter. Ch. NR 141 requires the documentation of well abandonment on a form supplied by the department. The well abandonment form, 3300-005, can be accessed at <http://dnr.wi.gov/topic/DrinkingWater/documents/forms/3300005.pdf>.

(h) Where attempts to locate monitoring wells for abandonment are unsuccessful, submit documentation of the efforts made, to the department.

(i) Any other information that the department specifically requests.

(3) NOTIFICATIONS. Responsible parties or other persons requesting closure shall submit a copy of all the notifications required under ch. NR 725 or under s. NR 726.13 (1) (c) with written proof of the date on which the letters were received.

Note: These notifications will be in the case file, but will no longer be included as part of the PDF on the department database. A list of addresses of all affected properties and a cover letter detailing the continuing obligations per property will be included as part of the PDF on the department database.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 726.11 Department database documentation requirements.

(1) GENERAL REQUIREMENTS. Responsible parties or other persons requesting closure for any site or facility meeting the criteria in s. NR 725.05 (2) or as required under s. NR 726.13 (1) (c), shall submit the applicable information in the case closure request. The information shall be in the order specified in the closure request form.

(a) For sites or facilities meeting the criteria of s. NR 726.07 (1), the information required in subs. (2) to (7) shall be submitted, as applicable.

(b) Information shall be submitted in accordance with s. NR 700.11 (3g), unless otherwise directed by the department. Providing illegible information may result in a submittal being considered incomplete until corrected unless otherwise directed by the department.

Note: Under s. NR 700.11 (3g), "one paper copy and one electronic copy of each plan or report shall be submitted to the department, unless otherwise directed by the department. The electronic copy shall be submitted on optical disk media and may not be submitted as electronic mail attachments unless specifically approved in advance by the department. Electronic copy files shall have a minimum resolution of 300 dots per inch, and may not be locked or password protected. The department may request that the electronic copy of sampling

results be submitted in a format that can be managed in software. An electronic copy of certain types of voluminous attachments or appendices may be substituted for the paper copy, if specifically approved in advance by the department. All documents shall be digital format versions rather than scanned versions except documents that are only available as scanned versions. Deeds and legal descriptions may be scanned versions. All information submitted shall be legible."

(2) MAINTENANCE PLANS. Responsible parties or other persons requesting closure shall submit a copy of a maintenance plan for any condition listed in s. NR 725.05 (2) (d) to (L) or 726.13 (1) (c), as applicable, or as otherwise required by the department. The maintenance plan shall include the following information:

(a) A location map which shows the location and extent of the structure or feature to be maintained, in relation to other structures or features on the site. The map shall also include the extent and type of residual contamination, and include property boundaries.

(b) A brief description of the type, depth and location of residual contamination.

(c) A description of the maintenance actions required for maximizing effectiveness of the engineered control, feature, or other action for which maintenance is required.

(d) An inspection log, to be maintained on site, or at a location specified in the maintenance plan or approval letter.

(e) A contact name, address, and phone number of the individual or facility who will be conducting the maintenance.

Note: The closure approval letter will specify whether the inspection log is to be submitted to the department and the frequency of submittal, or simply maintained on site or at the location identified in the maintenance plan. The inspection log is reviewed by the department during audits conducted of sites with continuing obligations.

(3) PHOTOGRAPHS. For sites or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernable. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.

(4) DEED AND PARCEL INFORMATION. Responsible parties or other persons requesting closure shall submit all of the following items, for each property within or partially within the contaminated site boundaries other than public street or highway rights-of-way or railroad rights-of-way:

(a) A copy of the most recent deed which includes the legal description of each property, except that, in situations where a buyer has purchased property under a land contract and has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted.

Note: Copies of deeds, or other documents with legal descriptions, are not required to be submitted for contaminated public street or highway rights-of-way or railroad rights-of-way. Information on residual groundwater or soil contamination that has migrated onto a right-of-way will be found in the documents that are submitted as part of the case closure request for the source property. It is only in the situation where the source of the contamination is in the right-of-way, that a right-of-way will be listed on the department database as a separate property. In those situations, the maps that are required to be submitted, as an attachment to the case closure request for the site, will show where contaminated groundwater or soil samples were collected and will provide points of reference for locating residual contamination in the right-of-way.

(b) A copy of the certified survey map or the relevant portion of the recorded plat map for those properties where the legal description in the most recent deed or land contract refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county

land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.

(c) A statement signed by the responsible party or other person requesting closure affirming that he or she believes that legal descriptions for all of the properties within or partially within the contaminated site's or facility's boundaries where inclusion on a department database is required under s. NR 726.07, at the time that case closure is requested, other than public street or highway rights-of-way or railroad rights-of-way, have been submitted to the agency as part of a department database attachment to the case closure request.

(d) A list of addresses of all properties affected by residual contamination or a continuing obligation.

Note: There is a section in the closure request form on which this information is to be entered.

(e) The parcel identification number for each property.

(f) Geographic position data for each property in compliance with the requirements of s. NR 716.15 (5) (d), unless the agency has directed that the responsible party or other person requesting closure does not need to provide geographic position data for a specific site.

Note: Geographic position data for properties can be found by using the department database that is available on the internet at <http://dnr.wi.gov/topic/Brownfields/rasm.html>.

(5) MAPS AND CROSS SECTIONS. All the following information shall be included in a department database attachment to the case closure request:

(a) A site location map that outlines all properties within the contaminated site boundaries on a United States Geological Survey topographical map or plat map in sufficient detail to permit the parcels to be located easily. This map shall identify the location of all municipal and potable wells within 1200 feet of the site. If there is only one parcel, this map may be combined with the map required in par. (b).

(b) A detailed site map of all contaminated properties within the contaminated site boundaries, showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells, and potable wells. This map shall also show the location of all contaminated public street and highway rights-of-way and railroad rights-of-way in relation to the source property and in relation to the boundaries of contamination exceeding applicable standards.

(c) For sites or facilities where soil contamination exceeds residual contaminant levels as determined under ch. NR 720 at the time that case closure is requested:

1. A map that shows the location where all soil samples were collected and identifies, with a single contour, the horizontal extent of each area of contiguous residual soil contamination that exceeds residual contaminant levels, as determined under ch. NR 720, within the contaminated site boundaries.

2. A geologic cross section showing the vertical extent of residual soil contamination that exceeds residual contaminant levels as determined under ch. NR 720, if one was required as a part of the site investigation report. If there is groundwater contamination on the site that attains or exceeds any ch. NR 140 enforcement standard in addition to residual soil contamination, one geologic cross section may be submitted to show the vertical extent of both soil and groundwater contamination.

(d) For sites or facilities where groundwater attains or exceeds any ch. NR 140 enforcement standard at the time that case closure is requested:

1. A geologic cross section, if one was required under ch. NR 716, that includes the vertical extent of residual contamination in soil and groundwater, the location and extent of the source of the contamination, isoconcentrations for all groundwater contamination attaining or exceeding ch. NR 140 preventive action limits that remains when case closure is requested, water table and piezometric elevations, location and elevation of geologic units, bedrock and confining units, if any.

2. An isoconcentration map of the contaminated properties within the contaminated site boundaries, if such a map was required under ch. NR 716. An isoconcentration map shall show the areal extent of groundwater contamination attaining or exceeding ch. NR 140 preventive action limits and the areal extent of groundwater contamination attaining or exceeding ch. NR 140 enforcement standards, with the groundwater flow direction indicated, using the most recent data, with sample collection dates identified. If an isoconcentration map was not required under ch. NR 716, submit a map showing the horizontal extent of contamination exceeding applicable standards based on the most recent data; or where standards have not been promulgated, the horizontal extent of contamination remaining after the remedial action.

3. A groundwater flow map, representative of groundwater movement at the site. If groundwater flow direction varies by more than 20 degrees over the history of water level measurements at the site, 2 groundwater flow maps showing the maximum variation in groundwater flow direction shall be submitted.

(e) For sites or facilities where samples were collected other than soil or groundwater, include a map showing the sampling locations and results, with type of sample and collection date identified.

(6) DATA SUMMARY TABLES. For information submitted for sites or facilities where inclusion on a department database is required under s. NR 726.07, shading and cross-hatching may not be used on data summary tables unless prior approval is obtained from the department. All the following information shall be included in a department database attachment to the case closure request:

(a) *Soil.* For sites or facilities where soil contamination exceeds residual contaminant levels as determined under ch. NR 720 at the time that case closure is requested include a table of the analytical results showing results for the most recent samples, for all contaminants found in pre-remedial sampling, with sample collection dates identified.

(b) *Groundwater.* For sites or facilities where groundwater attains or exceeds any ch. NR 140 enforcement standard at the time that case closure is requested, include:

1. A separate table of only the 8 most recent analytical results from all monitoring wells, and any potable wells for which samples have been collected, with sample collection dates identified.

2. A table including, at a minimum, the previous 8 water level elevation measurements from all monitoring wells, with the date measurements were made. If free product is present at the site, it shall be noted in the table.

3. A completed groundwater monitoring well information form.

Note: The Groundwater Monitoring Well Information Form is required in s. NR 716.15. It can be obtained at http://dnr.wi.gov/topic/Groundwater/documents/forms/4400_89.pdf.

(c) *Other.* For sites or facilities where samples other than soil or groundwater were collected, include a table specifying the sample type, sample number or location, sample results, and collection date.

(7) DOCUMENTATION FOR MONITORING WELLS. For sites or facilities where a monitoring well has not been abandoned in accordance with the requirements of ch. NR 141 at the time of case closure, the following information shall be included in a department database attachment to the case closure request.

(a) A site location map with the surveyed locations identified on the map for those groundwater monitoring wells that have not yet been abandoned;

(b) The well construction report for each monitoring well that needs to be abandoned; and

(c) The deed with legal description for each property on which a monitoring well is located.

Note: This would include wells that have not been located for abandonment, wells that the property owner has requested to keep and not abandon at this time, and those wells required by the agency under s. NR 726.05 (7) (a) for continued monitoring after closure. Proper abandonment is required once the wells are no longer used. The well construction report, form 4400-113A can be obtained at http://dnr.wi.gov/topic/Groundwater/documents/forms/4400_113_1_2.pdf.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.

NR 726.13 Authority and approvals for case closure. (1) CLOSURE APPROVAL. (a) The agency may grant case closure under this section, if all the following conditions are met:

1. The fees required by ch. NR 749 have been paid to the department.

2. It has been documented, in the case closure request that is submitted to the agency in compliance with the requirements of s. NR 726.09, that all applicable public health and environmental laws, including chs. NR 700 to 754, have been complied with, or where ch. NR 140 enforcement standards are the only standards that are attained or exceeded, that the criteria in s. NR 726.05 (6) are satisfied.

3. A complete case closure request is submitted to the agency in accordance with ch. NR 726.

(b) The agency may not close a case under this chapter if, at any time in the future, the remaining level of contamination is likely to do any of the following:

1. Pose a threat to public health, safety, or welfare or the environment.

2. Cause a violation of a ch. NR 140 groundwater quality enforcement standard at any applicable point of standards application, except where the department has granted an exemption under s. NR 140.28 for a specific hazardous substance or the criteria under s. NR 726.05 (6) are met.

3. Cause a violation of surface water quality standards in chs. NR 102 to 106.

4. Cause a violation of air quality standards contained in chs. NR 400 to 499.

5. Cause a vapor action level in indoor air to be attained or exceeded.

Note: Vapor action level is defined in s. NR 700.03 (66p) as "the concentration of vapors from volatile compounds is at or above the 1-in-100,000 (1x10⁻⁵) excess lifetime cancer risk or is at or above a hazard index of 1 for non-carcinogens."

(c) The agency may require any other condition for case closure that is necessary to protect public health, safety, or welfare or the environment. The agency may require a site-specific condition of closure, and notification of any parties

affected by that condition, including situations where contamination remains in media other than soil, groundwater, or vapors, or exposure or migration pathways are not otherwise addressed, that make a continuing obligation necessary to adequately protect human health, safety, or welfare or the environment.

(d) The agency may not conduct a final closure review until all the following criteria are met:

1. Documentation has been received that all required notifications under ch. NR 725 have been provided.

2. At least 30 days has elapsed since the date of receipt of the notification required under s. NR 725.05 or 726.13 (1) (c), unless all of the affected property owners waive their right to comment within 30 days on the proposed case closure and copies of the waivers are submitted to the agency.

(e) The agency may extend the 30 day period upon request by any party receiving a notification.

Note: In this chapter, the "agency" refers to the "agency with administrative authority," which is either DNR or DATCP. "Agency" is specified in subsection (1) for actions involving granting closure approval, with or without conditions, and for ensuring comment time periods between notification and closure approval. Subsections (2) and (3) describe DNR responsibilities.

(2) DEPARTMENT REVIEW RESPONSES. (a) Within 60 days after receipt of a complete request for case closure under s. NR 726.09, the department shall either determine whether the case qualifies for closure in accordance with par. (b) or acknowledge in writing the request for case closure has been received, and provide an estimated date by which the department intends to determine whether the case can be closed.

(b) Following receipt of a request for case closure under this section, the department shall review the information provided under s. NR 726.09 to determine whether the applicable public health and environmental laws, including chs. NR 700 to 754 where applicable, have been complied with and whether any further threat to public health, safety, or welfare or the environment exists at the site or facility. Based on this review, the department shall approve the case closure, or conclude that additional response actions, such as additional remedial action or long-term monitoring, are needed at the site or facility, or conclude that there is not sufficient information to allow the department to determine whether the applicable public health and environmental laws have been complied with.

(c) If the department approves the request for case closure, the department shall mail written notice of the closure approval to the responsible parties, other interested persons who have requested closure of the case, and any person who has requested that information under s. NR 714.05 (5).

(d) If the department determines that the applicable public health and environmental laws have not been complied with, the department shall notify the responsible parties, other interested persons who have requested closure of the case, and any person who has requested that information under s. NR 714.05 (5). The notification shall indicate what conditions must be met in order for the case to receive further consideration by the department for closure.

Note: In cases where minimal information or changes are needed, this notification is most often provided by phone or email.

(e) If the department determines that there is not sufficient information to allow the department to determine whether the applicable public health and environmental laws have been complied with, the department shall mail written notice to the responsible parties, other interested persons who have requested closure of the case, and any person who has requested that information under s. NR 714.05 (5). The notice shall indicate

what additional information the department needs in order to determine whether the case can be closed.

(f) The department shall also mail written notice of the department's response to a request for case closure to the owners of any property required to receive notification under s. NR 725.05 or 726.13 (1) (c), in addition to those parties identified under par. (c), and (d) of this subsection.

(g) Closure letters shall be associated with the site or facility record in the department database.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13; correction in (1) (b) 2. made under s. 13.92 (4) (b) 7., Stats., Register November 2013 No. 695.

NR 726.15 Closure letters and continuing obligations. (1) For sites or facilities meeting the criteria of s. NR 725.05 (2) or 726.13 (1) (c), the closure letter shall include the following:

(a) A statement that the site will be included in the department database, and that if the property owner intends to construct or reconstruct a well, prior department approval is required, in accordance with s. NR 812.09 (4) (w).

(b) A requirement that the property owner shall inform any purchaser of the property about the continuing obligations identified in the closure letter that apply to the property. The closure letter may also require the property owner to notify affected occupants of the need for specific continuing obligations.

(c) For conditions of closure that restrict site conditions, occupancy or property use from what is conditioned or identified in the final closure letter, a requirement that the property owner at the time that the condition changes shall notify the agency of the change in site condition, occupancy or land use, so that the agency can determine if further actions are necessary to maintain protection of public health, safety, or welfare or the environment.

(d) For conditions of closure that require maintenance, a requirement that the property owner operate and maintain the applicable system, cover or containment system in accordance with the operation and maintenance plan developed under ch. NR 724. The closure letter shall also include conditions regarding inspections, documentation, availability, and submittal of an inspection log, at a frequency determined by the agency.

(2) For specific continuing obligations, the closure letters shall contain the following:

(a) *Residual groundwater contamination.* If there is residual groundwater contamination at the time of case closure, the final closure letter shall include a description of the extent of groundwater contamination.

(b) *Residual soil contamination.* If there is residual soil contamination at the time of case closure, the final closure letter shall include a description of the extent of soil contamination, and shall state that any soil that is excavated in the future from an area that had residual soil contamination at the time of case closure shall be sampled, analyzed, handled, and disposed of as a solid waste in compliance with applicable state and federal laws.

(c) *Monitoring well abandonment.* 1. Where there is a monitoring well that has not been abandoned as required under ch. NR 141 at the time of case closure, the closure letter shall include a description of which wells still need to be abandoned, the surveyed location, and state that the property owner at the

time the well is located shall properly abandon the well in accordance with the requirements of ch. NR 141.

2. Where either a request for retaining a monitoring well for continued monitoring has been approved, or continued monitoring is required by an agency with administrative authority, the closure letter shall also require the property owner to verify the integrity of the well at least annually until use of the well is discontinued and the well is properly abandoned. The closure letter shall require that an inspection log be maintained on-site, unless otherwise directed by the agency, and require that the responsible party or property owner make the inspection log available for review by agency staff upon request.

3. Where responsibility for continued monitoring of a well is being transferred to another responsible party, the closure letter shall also require that the responsible party or property owner not abandon the specified well at that time.

Note: Typically, when responsibility for a monitoring well is shifted to another responsible party, that party also becomes responsible for well abandonment in the future.

(d) *Building, cover or containment structure for protection of groundwater.* For sites or facilities where there is residual soil contamination beneath a building or a cover, such as concrete or asphalt pavement, a soil cover, or composite cover, or within an engineered containment structure, that exceeds residual contaminant levels based on protection of groundwater as determined under ch. NR 720, which would pose a threat to groundwater if the building, cover, or containment structure were removed, the closure letter shall include a description of the residual contamination and the location of the building, cover or containment structure, and shall require the property owner to take any steps necessary to ensure that the building, cover, or containment structure will function as intended, to protect the groundwater, as required by the applicable performance standard. The closure letter shall also require the property owner to maintain and repair or shall require the property owner to notify the agency prior to replacing the building, cover, or containment structure with a structure of similar permeability or with a cover that is protective of the new use until such time as further investigation demonstrates that the concentration of contaminants no longer exceeds residual contaminant levels that protect the groundwater, as determined under ch. NR 720.

(e) *Building, soil cover, cover or containment structure for prevention of direct contact with soils.* For sites or facilities where a building, or an engineering control, such as a soil cover, cover, or engineered containment structure is required to be maintained in order to prevent direct contact with contaminated soil within 4 feet of the ground surface that exceeds residual contaminant levels as determined under ch. NR 720, the closure letter shall include conditions which require the property owner to ensure that the building, soil cover, or cover such as concrete or asphalt pavement, or a composite cover, or engineered containment structure will be repaired and maintained until it is no longer needed. The closure letter shall include a description of the residual contamination and the location of the building, soil cover, cover, or engineered containment structure, and shall restrict the use of the land where the building, soil cover, cover, or engineered containment structure is located to ensure that the building, soil cover, or cover, will function as intended, to prevent direct contact, as required by the applicable performance standard. The closure letter shall also require the property owner to maintain and repair or shall require the

property owner to notify the agency prior to replacing the building, soil cover, cover, or engineered containment structure with a structure of similar permeability or with a cover that is protective of the new use until such time as further investigation demonstrates that the concentration of contaminants no longer exceeds residual contaminant levels that protect human health from direct contact, as determined under ch. NR 720.

(f) *Structural impediment.* For sites or facilities where a building or other structural impediment at a site or facility has prevented the completion of an investigation to determine the degree and extent of residual contamination, or the completion of a remedial action, the closure letter shall include a description of the general location of the residual contamination and shall require the property owner to notify the agency and then conduct an investigation of the degree and extent of contamination at such time that the removal of structural impediments makes the formerly inaccessible contamination accessible.

(g) *Commercial/Industrial residual contaminant levels soil cleanup standards.* For sites or facilities where commercial or industrial residual contaminant levels soil cleanup standards under ch. NR 720 have been applied for closure, the closure letter shall include a condition that restricts the use of that property to a commercial or industrial land use until non-industrial residential soil cleanup standards are achieved in the future through natural attenuation or additional remediation.

(h) *Vapor mitigation system for sites where sub-slab levels attain or exceed the vapor risk screening level.* The agency may require installation and operation of a vapor mitigation system for sites or facilities where sub-slab levels attain or exceed the vapor risk screening level. The closure letter shall include conditions which require the property owner to maintain the system until it is no longer needed. The closure letter may include conditions which require maintenance of certain structural features of existing buildings. The closure letter shall include conditions which require the immediate repair and replacement of system components that fail.

(i) *Vapor mitigation system where compounds of concern are in use.* The agency may require installation and operation of a vapor mitigation system for sites or facilities where the site is using the compounds of concern in their daily operations, in accordance with par. (h). The agency may require restrictions on the use or occupancy of the property to ensure that closure will be protective. The closure letter shall require notification of the agency and evaluation of the vapor intrusion pathway prior to changing use to a residential setting. The closure letter shall include a description of the type and location of the residual contamination.

Note: This would include sites or facilities where closure was based on worker exposure conditions, which then change to a different use, with different exposure assumptions.

(j) *Vapor mitigation system for sites where vapor intrusion is of concern due to hydrogeologic conditions.* The agency may require installation and operation of a vapor mitigation system and any other systems necessary for the proper operation of the vapor mitigation system, for sites or facilities which present a vapor risk, based on site-specific hydrogeologic circumstances. The closure letter shall identify the specific hydrogeologic conditions and a description of any other system necessary for the proper operation of the vapor mitigation system.

Note: This may include sites where contaminated groundwater enters the structure, or sites where the moisture content of soils below the slab is high or sub-slab samples are difficult to obtain, but where other conditions indicate the potential for vapor intrusion.

(k) *Site-specific exposure conditions.* The agency may restrict the use or occupancy of the property for sites or facilities based on specific exposure assumptions for vapor intrusion, to ensure that closure will be protective. The closure letter shall include the specific exposure assumptions on which the closure decision was based.

Note: This may include non-residential settings; sites or facilities where certain commercial or industrial exposures were applied at the time of closure, which later change to a residential setting, such as single or multiple family residences, or educational, child, or senior care facilities, where a residential exposure would apply.

(L) *Potential for future exposure to vapors.* For sites or facilities where residual soil or groundwater contamination from volatile compounds exists, but where no building is present, the agency may require protective measures to eliminate or control vapor intrusion into a future building. The closure letter may include conditions requiring that the agency be notified prior to any building construction, and a requirement that appropriate vapor control technologies be used in the construction of any building, unless an assessment is conducted which shows that the residual contaminant levels are protective of the new use.

Note: The potential for vapor migration into a future building is dependant on the type of building and the planned use of the building. Building control technologies may include but are not limited to passive barriers, passive venting, sub-slab depressurization, sub-membrane depressurization, sub-slab pressurization, building pressurization, and indoor air treatment.

(m) *Site-specific conditions.* For sites or facilities where closure is requested, and where the agency determines that there are site-specific circumstances that warrant site-specific closure conditions, the closure letter shall specify the exposure assumptions, use or occupancy restrictions, and necessary maintenance and notification of the agency if conditions change such that the exposure assumptions used no longer apply to the site, facility or property. Site-specific circumstances may include but are not limited to situations where contamination remains in media other than soil, groundwater, or vapors; or exposure and migration pathways not otherwise addressed make a continuing obligation necessary to adequately protect human health, safety, or welfare or the environment. If there is contamination remaining in media other than soil, groundwater, or vapor, the final closure letter shall also state that any sediments or other solids excavated in the future from an area that had residual contamination at the time of closure shall be sampled, analyzed, handled, and disposed of in compliance with applicable state and federal laws.

History: CR 12-023: cr. Register October 2013 No. 694, eff. 11-1-13.