

## Chapter NR 724

## REMEDIAL AND INTERIM ACTION DESIGN, IMPLEMENTATION, OPERATION, MAINTENANCE AND MONITORING REQUIREMENTS

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**NR 724.01 Purpose.** The purpose of this chapter is to outline the requirements for the design, implementation, operation, maintenance and monitoring of remedial actions and specific types of interim actions. This chapter is adopted pursuant to ss. 144.431 (1) (a) and (b), 144.442, 144.76, 159.03 (1) (a) and 227.11 (2), Stats.

Note: This chapter does not apply to emergency or non-emergency immediate actions or to those types of interim actions that are not listed in s. NR 724.03 (1) (b).

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94.

**NR 724.02 Applicability. (1)** This chapter applies to all remedial actions and to those types of interim actions that are specified in s. NR 724.03 (1) (b) taken by the department under the authority of s. 144.442 or 144.76, Stats. In this chapter, where the term "responsible parties" appears, it should be read to include the department in situations where a department-funded response action is being taken.

Note: The following portions of 40 CFR part 280 have been included in the text of this chapter: portions of s. 280.34 (a) (3); and portions of s. 280.66 (a) and (b). Additional portions of s. 280.34 (a) (3) are included in chs. NR 705, 708 and 716. Additional portions of s. 280.66 (a) and (b) are included in ch. NR 708.

**(2)** This chapter applies to all remedial actions and specific types of interim actions taken by responsible parties, at sites, facilities or portions of a site or facility that are subject to regulation under s. 144.442 or 144.76, Stats., regardless of whether there is direct involvement or oversight by the department.

Note: Persons who wish to conduct response actions that will meet the requirements of CERCLA and the National Contingency Plan (NCP) may request that the department enter into a contract with them pursuant to s. 144.442, Stats. However, a CERCLA-quality response action will likely require compliance with additional requirements beyond those contained in chs. NR 700 to 726 in order to satisfy CERCLA and the NCP.

**(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 overlapping restrictions or requirements apply, the more restrictive control. The department shall, upon 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 s. 144.442 or 144.76, Stats., may also be subject to regulation under the solid waste statutes in ss. 144.43 to 144.47, Stats., or the hazardous waste management act, ss. 144.60 to 144.74, 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.

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**NR 724.03 General submittal requirements. (1) GENERAL.** Unless otherwise directed by the department, responsible parties shall submit the plans and reports that are required by this chapter to the department after all of the following:

(a) Selection of a remedial action.

(b) Selection of any of the following types of interim actions, as specified in s. NR 708.11 (4):

1. An on-site treatment system, including a groundwater extraction and treatment system.

2. An on-site engineering control or barrier, including an engineered landfill cover or groundwater barrier system.

3. Any other type of interim action option when the department determines, on a case-by-case basis, that a design report required under s. NR 724.07 is necessary prior to implementation.

**(2) LEVEL OF DETAIL. (a)** Nothing in this chapter shall be construed to require plans or reports that are more detailed or complex than is justified by the known scope of contamination or the complexity of the site or facility.

**(b)** The department may require additional information in the plans and report beyond what is specifically required under this chapter based on the complexity of the site or facility, or the degree and extent of the contamination.

**(3) SUBMITTALS.** Unless otherwise directed by the department, responsible parties shall submit the plans and reports required by this chapter in accordance with all of the following requirements:

(a) The plans, reports and specifications required by ss. NR 724.07, 724.09 and 724.11 shall be submitted simultaneously.

(b) Two copies of each plan or report shall be submitted to the department.

(c) The department may require by the issuance of an administrative order or consent order that these plans and reports be prepared in accordance with a site-specific schedule.

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(d) At sites or facilities where multiple remedial or interim actions are taken, all of the following requirements apply:

1. All submittals required by this chapter shall include a brief discussion of the interrelationship between the actions.

2. The design report required by s. NR 724.07 and the design plans and specifications required by s. NR 724.09 that are prepared for subsequent remedial or interim actions may include the design details for the subsequent action without repeating design work that was included in previous submittals to the department for other remedial or interim actions.

(e) Each submittal under this chapter shall include all of the following:

1. Cover letter. A cover letter, including:
  - a. The month, day and year of the submittal.
  - b. The department-issued identification number for the site or facility.
  - c. The purpose of the submittal and the desired department action or response.
  - d. A brief narrative summarizing the contents of the submittal.
  - e. The regulatory status of the site or facility.

2. General information. All reports or plans shall contain:

- a. Project title and purpose, including the department-issued identification number for the site or facility.
- b. Name, address and telephone number of the property owner, lessee, operator or any individual or company responsible for the discharge of hazardous substances or environmental pollution on the site or facility.
- c. Name, address, and telephone number or any consultants or contractors involved with the response action at the site or facility.
- d. Site name, address and location by, at a minimum, quarter-quarter section, township, range and county. The location of the site or facility shall be given in sufficient detail to allow department personnel to locate and inspect the site or facility.

e. A location map that meets the requirements of s. NR 716.15 (3) (h) 1.

f. Month, day and year of the submittal.

g. A summary of the nature and extent of contamination at the site or facility.

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**NR 724.05 Department response.** (1) **PRIOR DEPARTMENT REVIEW NOT REQUIRED.** Unless the department directs otherwise, responsible parties shall submit all of the plans and reports required under this chapter and shall proceed to the next step in the design, implementation or operation of a remedial action or interim action under this chapter without department acknowledgement, prior review or approval.

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(2) **DEPARTMENT APPROVAL REQUIRED.** (a) When the department directs responsible parties in writing that department approval of a plan or report is necessary prior to proceeding to the next step in the design, implementation or operation of a remedial action or interim action under this chapter, the department shall provide a written acknowledgement of receipt of any report or plan submitted pursuant to this chapter within 30 days. The department acknowledgement shall include an estimated date for completion of department review.

(b) In cases where department approval is required for the reports or plans submitted under this chapter, the department may request additional information, require revisions, approve, conditionally approve or disapprove of the plans or reports. The department shall provide to the responsible parties, in writing, the reasons for any disapproval and the department may establish a deadline for providing revisions.

Note: Persons who prepare the plans and reports required by this chapter should be aware that other department programs may also require the submittal, review and approval of plans and reports.

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**NR 724.07 Design report.** Responsible parties shall submit to the department a design report for all remedial actions and those interim actions specified in s. NR 724.03 (1), containing all of the following information:

(1) The information required in s. NR 724.03 (3) (e).

(2) A brief description of the site or facility.

(3) A complete and detailed description of the remedial or interim action being designed.

(4) All engineering criteria, concepts, assumptions and calculations used in preparing the design, including adequate justification for their use.

(5) Any treatability study information, pilot test results, aquifer pumping test results or other test results utilized in the design shall be presented, unless this data was previously submitted to the department.

Note: Treatability studies should be conducted as early in the response process as possible.

(6) A listing of all local, state and federal permits, licenses and approvals required to construct and implement the remedial or interim action.

(7) A brief description of the public health and environmental laws and standards applicable to the contamination and the interim or remedial action being implemented, including the physical location where the environmental standards shall be complied with for each media of concern.

(8) A preliminary discussion of the types of, frequency of and schedule for monitoring of the remedial or interim action. This discussion shall address any water, soil, soil gas, air or other monitoring required for each component of the remedial or interim action.

(9) A preliminary discussion of planned operation and maintenance provisions.

Note: An operation and maintenance plan prepared in accordance with s. NR 724.11 will satisfy the requirements of s. NR 724.07 (6), (7), (8) and (9), if submitted with the design report. In this case, the operation and

maintenance plan should provide a complete, rather than a preliminary discussion of the topics described in s. NR 724.07 (6), (7), (8) and (9).

(10) A proposed schedule for implementation of the remedial or interim action, which identifies timing for initiation and completion of all tasks. The proposed dates for completion of the remedial or interim action and major milestones shall be specified. The schedule shall include deadlines for all reports, plans and submittals required by the department.

(11) Discussion of any other relevant technical factors.

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**NR 724.09 Design plans and specifications.** Responsible parties shall submit to the department design plans and specifications for each remedial action, and any of the interim actions specified in s. NR 724.03 (1), in accordance with all of the following requirements:

(1) Shall be prepared in accordance with the concepts presented in the design report required by s. NR 724.07.

(2) Provide a general correlation between drawings and technical specifications.

(3) Include technical specifications and requirements necessary for all the components of the remedial or interim action.

(4) Include detailed drawings of the proposed design, including general component arrangements, equipment layout, process flow diagram, piping and instrumentation diagrams, cross sections, sampling locations and instrumentation locations.

(5) Show sufficient detail for construction, according to customary industrial and professional standards.

(6) Unless otherwise directed by the department, legible visual aids, including maps, plan sheets, drawings, isometrics, cross-sections and aerial photographs shall be included with the design plans and specifications and prepared according to all of the following requirements:

(a) Be no larger than 24 inches x 36 inches and no smaller than 8½ inches x 11 inches.

(b) Be of appropriate scale to show all required details in sufficient clarity.

(c) Be numbered, titled, have a legend of all symbols used, contain horizontal and vertical scales, where applicable, and specify drafting or origination dates and current drawing revision or issue status.

(d) Use uniform scales.

(e) Contain a north arrow, where appropriate.

(f) Use USGS datum as a basis for all elevations.

(g) Show dimensions for location and placement of features or units and elevations that are based on permanent, retrievable surveying control monuments or stations.

(h) For solid or hazardous waste disposal facilities or other land-based features being constructed at the site or facility as part of the response action, the visuals shall:

1. Contain a survey grid based on monuments established in the field which is referenced to state plane coordinates.

2. Show survey grid location and reference major plan sheets on all cross sections.

Note: Examples of land-based features include earth moving, covers, waste or soil piles, soil treatment piles, liners, landfills and regrading.

(i) Include a reduced plan-view map on all sheets with cross-sections indicating the location of the cross-section.

(j) Include descriptions, specifications and performance criteria necessary for procurement, construction and start up of all features and units, including key components and all instrumentation. Performance curves or criteria published by equipment suppliers or manufacturers may be utilized if they provide sufficient information.

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**NR 724.11 Operation and maintenance plan.** (1) GENERAL. Unless otherwise directed by the department, responsible parties shall conduct all necessary operation and maintenance activities according to all of the requirements of this section:

(a) Submit to the department an operation and maintenance plan in accordance with this section where on-site maintenance activities are necessary to implement, monitor or ensure the effectiveness of a remedial or interim action.

(b) Conduct operation and maintenance activities at a site or facility in compliance with all applicable state or federal public health and environmental laws, whichever is more stringent, until all applicable environmental laws, are complied with as required in chs. NR 700 to 726.

(c) Unless otherwise directed by the department, perform operation and maintenance of any final covers, liners, physical hydraulic containment systems, leachate collection systems and gas collection, extraction and management systems at sites or facilities for which they are responsible for, for at least 30 years.

Note: The operation and maintenance requirements of par. (c) do not apply to any of the following:

1. Off-site disposal of material at facilities or sites in compliance with state and federal laws.

2. Sites or facilities where no landfill engineering features or systems are or will be provided, and no other contaminants have been or will be disposed of.

(2) PLAN CONTENTS. The operation and maintenance plan shall outline all operation, monitoring and maintenance activities, from design through case closure under ch. NR 726, including all of the following information:

(a) The information required pursuant to s. NR 724.03 (3) (e).

(b) A description of normal operation and maintenance, including a schedule showing the frequency of each operation and maintenance task.

(c) A contingency plan for any anticipated or potential operation and maintenance problems, including a description of techniques or activities to be conducted by the responsible parties to resolve operation and maintenance problems.

(d) A description of routine monitoring and analysis, including:

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1. Long-term monitoring required under s. NR 724.15;
2. Laboratory or field tests, test methods and sampling methods; and
3. A schedule of monitoring frequency and dates.

(e) A descriptions of any site-specific or facility-specific record-keeping and reporting requirements to document operation and maintenance activities, including:

1. Mechanisms for reporting system failures, discharges of hazardous substances or environmental pollution and other emergencies; and
2. Reports to be submitted to the department, including the results of system and environmental monitoring and the results of the monitoring well inspections meeting the requirements of s. NR 716.15 (7).

(3) **PROGRESS REPORTS.** Unless otherwise directed by the department, progress reports shall be submitted quarterly and shall be sequentially numbered, starting with the first report after the remediation system start up. Progress reports shall include all of the following:

(a) A brief discussion of the progress of the remediation system, including:

1. As applicable to the site or facility, total contaminant extraction and destruction to date in pounds of contaminant removed;
2. A discussion of any system operational problems, periods of shutdown, equipment malfunctions, and any other potential problems;
3. An overall evaluation of the effectiveness of the system; and
4. Recommendations for future activities, if appropriate.

(b) A site map that indicates the location of pertinent equipment and sampling points at the site or facility.

(c) Sufficient tables, graphs and figures to efficiently and concisely summarize and portray relevant data and pertinent field measurements.

(d) Laboratory reports and chain-of-custody for any laboratory data, unless otherwise directed by the department.

(e) Any other pertinent information or data.

(4) **REVISIONS.** The appropriate section of the operation and maintenance plan shall be revised, sent to the department by the responsible parties, and shall include all of the following:

1. Include the information required pursuant to s. NR 724.03 (3) (e).
2. Be numbered with a revision number.
3. Document any changes in the time of anticipated case closure and any conditions the department may place on case closure under ch. NR 726.

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4. Document any changes in the design, operation, maintenance or monitoring of the interim or remedial action.

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**NR 724.13 Documentation of construction and completion.** (1) Responsible parties shall submit to the department a construction documentation or as-built report within 60 days after the date that construction of a remedial action or any interim action specified in s. NR 724.03 (1) is completed or determined to be essentially complete by the department.

(2) The report shall document that the completed final remedial or interim action meets or exceeds all design criteria and the plans and specifications developed in accordance with all of the requirement of this chapter.

(3) Unless otherwise directed by the department, the construction documentation report shall include all of the following information:

(a) The information required pursuant to s. NR 724.03 (3) (e).

(b) As-built maps, plan sheets, drawings, isometric drawings and cross-sections.

(c) A synopsis of the remedial or interim action and a certification that the design and construction was carried out in accordance with the plans and specifications.

(d) An explanation of any minor changes to the plans and why these were necessary for the project.

(e) Results of all pilot and field tests or studies and site monitoring conducted during construction.

(f) A brief description of the public health and environmental laws applicable to the contamination and the interim or remedial action selected, including the physical location where the environmental laws shall be complied with for each media of concern;

(g) The information required in ch. NR 516 for documenting the construction at the site or facility of any final covers, liners, leachate collection systems and gas collection, extraction and management systems at sites or facilities they are responsible for.

Note: Please see the note in s. NR 724.11 for further information on the types of solid and hazardous waste systems covered by s. NR 724.13 (3) (g).

(h) A revised operations and maintenance plan in accordance with s. NR 724.11 (4), unless the cover letter indicates that there are no revisions to the operations and maintenance plan.

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**NR 724.15 Long-term monitoring.** (1) **GENERAL.** (a) Responsible parties shall conduct all necessary and appropriate long-term monitoring at a site or facility in accordance with all of the requirements of this section and any other applicable public health and environmental laws.

(b) Unless otherwise directed by the department, the responsible parties shall submit a long-term monitoring plan to the department that specifies:

1. The parameters to be monitored;

2. The sampling and analytical methods to be used, consistent with the sampling and analysis requirements in s. NR 716.15;

3. The interval at which monitoring is to be performed; and

4. The public health and environmental laws, including standards, to be complied with.

(2) **RESULTS.** (a) Unless otherwise directed by the department, monitoring results shall be submitted by the responsible parties to the department within 60 days of each sampling event, except as provided in par. (b).

(b) Monitoring results from private and public wells shall be submitted to the department in accordance with s. NR 716.13 (9).

Note: Section 144.76 (2) (a), Stats., requires that the department be notified immediately of any hazardous substance discharge. The immediate notification requirements of s. NR 158.05 shall be followed by the responsible parties, unless the discharge is from an underground storage tank (UST). Where a UST discharge is discovered, responsible parties shall immediately follow the notification requirements in s. NR 705.05.

(c) A written report shall be submitted by the responsible parties to the department, including all of the following information:

1. The information required pursuant to s. NR 724.03 (3) (e).

2. Results from the sampling event, on forms provided by the department or in an alternate format approved in advance by the department.

Note: The department recommends that groundwater monitoring results be submitted to the department in an electronic (i.e., computer disk) format. However, hard copy (i.e., paper) forms may be used for the submission of groundwater monitoring results. Hard copy forms may be obtained from any district office of the department, or by writing the Department of Natural Resources, Bureau of Solid and Hazardous Waste Management, P.O. Box 7921, Madison, WI 53707.

3. Monitoring results in tabular and graph form, including the current monitoring results and all previous results, so as to provide a concise summary of the monitoring program.

4. Laboratory analytical reports and sample chain-of-custody forms, unless otherwise directed by the department.

5. Identification of the specific environmental laws, including standards, which have been attained or exceeded, and the physical location of the attainments or exceedances noted on a site or facility map.

6. A preliminary analysis of the cause and significance of any new attainments or exceedances or increases in concentrations of previously reported attainments or exceedances, including the factors specified in s. NR 140.24 (1) (c)1. through 9. for groundwater.

(3) **DEPARTMENT REVIEW.** (a) *Plan.* The long-term monitoring plan required in s. NR 724.15 (1) (a) shall be reviewed by the department in accordance with the procedures specified in s. NR 724.05.

(b) *Monitoring results.* 1. The department shall review the results of long-term monitoring every 5 years if requested to do so by the responsible parties, to evaluate the effectiveness of the remedial action in achieving the environmental and public health laws.

2. The department may review long-term monitoring results at other times at its discretion.

3. The department may require additional remedial action, pursuant to s. 144.76, Stats., or a contract under s. 144.442, Stats., based on the evaluation of monitoring results.

History: Cr. Register, April, 1994, No. 460, eff. 5-1-94.

**NR 724.17 Application of new soil or groundwater quality standards.** (1) If after a remedial action is selected the groundwater quality standards in ch. NR 140 are modified by the department to be more stringent, or if new soil or groundwater quality standards are promulgated, the department shall require responsible parties to comply with the new or modified soil or groundwater quality standards if the department determines that, for a specific site or facility, compliance with the more stringent standards is necessary to ensure that the interim action or remedial action will be protective of public health, safety and welfare and the environment.

(2) If after a remedial action is selected, the groundwater quality standards in ch. NR 140 are modified by the department to be less stringent, the department shall approve of case closeout if requested by a responsible party once the new, less stringent standards are attained, if the department determines that the new, less stringent standards will be protective of public health, safety and welfare and the environment at the specific site or facility that is the subject of the case closeout request.

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