

NR 700 RULE
UPDATE



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October 16
2013

NR 700 REVISIONS WEBINAR

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NR 700 RULE
UPDATE



NR 708 - IMMEDIATE
AND
INTERIM ACTIONS

Dan Kolberg, P.E.
Local Governmental Specialist

October 16
2013

NR 708

NR 708.01 Purpose.
NR 708.02 Applicability.
NR 708.03 Definitions.
NR 708.05 Immediate actions.
NR 708.07 Additional response actions.
NR 708.09 No further response action.
NR 708.11 Interim actions.
NR 708.13 Free product removal.
NR 708.15 Interim action reports.

**NR 708.17 Local governmental unit (LGU)
or economic development corporation
(EDC) exemptions.**

NR 708 Update 4 

PURPOSE OF 708.17

**To Recognize the
LGU Exemption [s. 292.11(9)(e)]**

and the

**Differences in Handling Cases
Where it's Involved**

NR 708 Update 5 

LGU EXEMPTION [S. 292.11(9)(E)]

- For LGUs and EDCs
- Acquire contaminated property
- Exempt from:
 - Investigation
 - Remediation
 - Financial responsibility
- Some actions may be needed
- DNR may direct actions to be taken

NR 708 Update 6 

SUMMARY OF NR 708 CHANGES

■ **NR 708.01 Purpose.** This chapter establishes criteria for emergency and non-emergency immediate actions and interim actions to be taken by responsible parties, or interim actions taken by local governmental units or economic development corporations when directed by the department, to protect public health, safety and welfare and the environment; and establishes the documentation requirements associated with these response actions. This chapter is adopted pursuant to ss. 227.11 (2), 287.03 (1) (a), 289.06, 292.11, 292.15 and 292.31, and ch. 292, Stats.

■ **NR 708.02 Applicability.**
(2) Section NR 708.17 applies to response actions taken by a local governmental unit or economic development corporation when directed by the department under s. 292.11(9) (e) 4, Stats.



SUMMARY OF NR 708 CHANGES

■ **NR 708.03 Definitions.** The definitions in s. NR 700.03 apply to this chapter: in this chapter,
(1) "Economic development corporation" has the meaning described in s. 501(c) of the Internal Revenue Code, as defined in s. 71.22 (4), Wis. Stats., that is exempt from federal taxation under section 501 (a) of the Internal Revenue Code, or an entity wholly owned and operated by such a corporation, with respect to property acquired to further the economic development purposes that exempt the corporation from federal taxation.

(2) "Local governmental unit" has the meaning specified in s. 292.11(9)(e) 1, Stats.

Note: Section 292.11(9) (e) 1, defines "local governmental unit" to mean "a municipality, a redevelopment authority created under s. 66.1333, a public body designated by a municipality under s. 66.1337 (4), a community development authority or a housing authority."



SUMMARY OF NR 708 CHANGES

■ The rule language in NR 708.05 has been modified to allow DNR to approve management of more than 100 cubic yards of contaminated soil as an immediate action.

■ The note following NR 708.11(1)(a) has been modified to specify that a site investigation may not always be required following an interim action.



SUMMARY OF NR 708 CHANGES

- The examples of interim actions have been expanded to include installing or operating a vapor mitigation system.
- Rule language has been added to clarify that DNR may require the use of a vapor mitigation system or other engineering controls to address situations where vapor concentrations exceed the risk screening levels.

NR 708 Update

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SUMMARY OF THE NR 708 CHANGES

- The section addressing interim action reports has been expanded to specify that an operation and maintenance plan must be included when an engineering control is used.
- This would include cover systems, a groundwater barrier system or a vapor mitigation system.

NR 708 Update

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NR 708.17 LGU OR EDC EXEMPTIONS

(1) General

- (a) Dept. may direct actions
- (b) Actions may include
 - Soil removal
 - Investigations beneath demol. bldgs.
 - Replace infiltration barriers
 - Vapor mitigation barriers
- (c) LGU shall submit plans
- (d) Fees shall be paid

NR 708 Update

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NR 708.17 LGU OR EDC EXEMPTIONS

(2) Agency Authority if contamination remains

- (a) Require maintenance
- (b) Reduce threats if bldg. removed
- (c) Require protective conditions
- (d) Determine actions if impeds. removed
- (e) Additional response actions

(3) Dept. database and fees

- (a) Dept-directed actions on database
- (b) Fee for adding to database

NR 708 Update 13 

NR 708.17 LGU OR EDC EXEMPTIONS

(4) Documentation – requirements have been developed to be compatible with LGU exemption. Consideration was given to keeping costs low for exempt entities.

NR 708 Update 14 



QUESTIONS?

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NR 700 RULE
UPDATE



NR 722
STANDARDS FOR SELECTING
REMEDIAL ACTIONS

Jane Lemcke
Standards & Streamlining Team Leader
&
Tom Coogan, WISRR Team Leader

October 16
2013

PURPOSE

- establish minimum standards for identifying and evaluating remedial action options and selecting remedial actions

NR 722

17



APPLICABILITY

- Exemption for DERF sites added, as comparison of RA options accomplished through bidding process
- Exemption for PECFA sites removed, due to repeal of NR 746

NR 722

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GENERAL CHANGES

- Definitions removed, see NR 700.03
- For DNR-funded actions, consideration given to options providing long-term sustainability
- For evaluation of RA options: added criteria
 - Address the pathways of concern
 - Effectively and efficiently address the source of contamination

NR 722 19 

SOURCE CONTROL

- 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.

NR 722 20 

SOURCE CONTROL

- 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 (current) criteria:

NR 722 21 

RA OPTION EVALUATION

- Removed language regarding 250 cubic yard limit on landfill disposal of contaminated soil
- **Added to a Note :** Any remedy selected should attempt to limit secondary impacts including air and water discharges, destruction of ecosystems, and excessive use of energy.

NR 722 22 

EVALUATION CRITERIA

- **Added evaluation criteria:**
 - The redevelopment potential of the site once the remedy has been implemented.
 - Reduction of greenhouse gases consistent with federal or state climate action policies.
 - 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.

NR 722 23 

SELECTION OF A RA - VAPOR

- ... 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:

NR 722 24 

VAPOR CRITERIA

- 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.

NR 722

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VAPOR CRITERIA (CONT.)

- 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 and welfare or to prevent a significant damaging effect on indoor air quality for present or future use.

NR 722

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SUSTAINABLE REMEDIAL ACTIONS

- **SUSTAINABLE REMEDIAL ACTION.** Upon selection of the RA, RP to address the following criteria:
 - (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.

NR 722.09 (2m)

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SUSTAINABLE REMEDIAL ACTIONS

- (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, and

NR 722.09 (2m)

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SUSTAINABLE REMEDIAL ACTIONS

- (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/>.

NR 722.09 (2m)

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NR 716

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WISCONSIN INITIATIVE FOR SUSTAINABLE
REMEDiation & REDEVELOPMENT (WISRR)

- DNR Remediation & Redevelopment Team
- Promote Environmentally & Socioeconomically responsible practices

NR 722 Update 31 

WISCONSIN INITIATIVE FOR SUSTAINABLE
REMEDiation & REDEVELOPMENT (WISRR)

■ The WISRR Team

Central Office <ul style="list-style-type: none">• Tom Coogan (Team Leader)• Tim Cooke• Chris Zenchenko• Mark Giesfeldt (Sponsor)	Regional PMs <ul style="list-style-type: none">• Jennifer Borski, NER• Mark Drews, SER• Erin Endsley, NOR• Gina Keenan, WCR• Larry Lester, SCR
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NR 722 Update 32 

RESOURCES

Wisconsin Initiative for Sustainable Remediation and Redevelopment

Green & Sustainable Remediation Manual

A Practical Guide to Green and Sustainable Remediation in the State of Wisconsin



Pub. BS-811 January 2012

NR 722 Update 33 

INSIDE THE MANUAL

- GSR Overview
- Integrating GSR into all Phases of the Project Life Cycle
- Sustainability Baseline Development
- Remedial Process Optimization
- Alternative Energy
- Sustainability Options Evaluation
- Appendix A – Example Qualitative Checklist and Carbon Footprint Calculations
- Appendix B – Life Cycle Cost Analysis

NR 722 Update 34

QUICK REFERENCE GUIDES

QUICK REFERENCE GUIDE: Remedial Process Optimization Techniques NR 722-301

The goal of this guide is to assist in the selection of remedial process optimization techniques for use in the Remedial Process Optimization (RPO) phase of the Remedial Investigation/Feasibility Study (RI/FS) process. This guide provides a list of techniques and a checklist to help in the selection of techniques.

Objectives: Identify and evaluate remedial process optimization techniques. **Scope:** This guide is intended for use in the RPO phase of the RI/FS process.

Key Elements:

- Review design alternatives to identify optimization opportunities.
- Review current design to identify optimization opportunities.
- Review design alternatives to identify optimization opportunities.
- Review current design to identify optimization opportunities.

Technique	Benefits	Considerations
1. Process optimization	• Reduces energy consumption	• Requires detailed process knowledge
2. Heat recovery	• Reduces energy consumption	• Requires detailed process knowledge
3. Process control optimization	• Reduces energy consumption	• Requires detailed process knowledge
4. Process integration	• Reduces energy consumption	• Requires detailed process knowledge
5. Process intensification	• Reduces energy consumption	• Requires detailed process knowledge
6. Process redesign	• Reduces energy consumption	• Requires detailed process knowledge
7. Process optimization	• Reduces energy consumption	• Requires detailed process knowledge
8. Process optimization	• Reduces energy consumption	• Requires detailed process knowledge
9. Process optimization	• Reduces energy consumption	• Requires detailed process knowledge
10. Process optimization	• Reduces energy consumption	• Requires detailed process knowledge

QUICK REFERENCE GUIDE: Green Site Investigation Techniques NR 722-302

The goal of this guide is to assist in the selection of green site investigation techniques for use in the Remedial Investigation/Feasibility Study (RI/FS) process. This guide provides a list of techniques and a checklist to help in the selection of techniques.

Objectives: Identify and evaluate green site investigation techniques. **Scope:** This guide is intended for use in the RI/FS process.

Key Elements:

- Review design alternatives to identify optimization opportunities.
- Review current design to identify optimization opportunities.
- Review design alternatives to identify optimization opportunities.
- Review current design to identify optimization opportunities.

Technique	Benefits	Considerations
1. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
2. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
3. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
4. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
5. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
6. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
7. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
8. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
9. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge
10. Green site investigation	• Reduces energy consumption	• Requires detailed process knowledge

NR 722 Update 35

SITE SPECIFIC ANALYSES



Wisconsin Initiative for Sustainable Remediation and Redevelopment - WISRR - January 2012

Site Specific Sustainability Analyses







NR 722 Update 36

FUTURE

- **Additional External training**
 - Green and Sustainable Remediation Manual
 - Quick Reference Guides

- **Informational Content**
 - Example Green and Sustainable Practices (NR 722.09 (2m) A-F)
 - Showcase Sites with Green and Sustainable Activities

NR 722 Update 37 

FOR MORE INFORMATION

- **WISRR Homepage**
 - dnr.wi.gov/topic/brownfields/rrprogram.html

- **EPA Webpage**
 - EPA: www.clu-in.org/greenremediation

- **Questions**
 - Tom Coogan, 608/267-7560 or Thomas.Coogan@wi.gov

NR 722 Update 38 

RAOR TIMELINES

- **Submit report within 60 days of submitting the SIR. (unless otherwise specified)**

- **For the selected RA, describe how the sustainable RA criteria were addressed.**

- **Proceed with RA within 90 days of approval or conditional approval. (current)**

NR 722 39 

DNR RESPONSE TO RAOR

- 1. Require O&M of an engineering control
- 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, welfare or the environment.

NR 722.15 (2) (e) 40 

DNR RESPONSE TO RAOR (CONT.)

- 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, welfare or the environment.
- 6. Require the submittal of the information necessary for listing the site on the department database.

NR 722.15 41 

DATABASE REQUIREMENTS

- If a RA is approved that includes a Continuing Obligation:
 - The site can be included on the database (BRRS/GIS Registry)
 - Approval letter will be posted to the database
 - Pay GIS fees
 - Follow documentation requirements (for GIS PDF) of NR 726.11 to the extent practicable

NR 722.17 42 



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NR 716 43

NR 700 RULE
UPDATE



**NR 724 – REMEDIAL AND INTERIM
ACTION DESIGN,
IMPLEMENTATION, OPERATION,
MAINTENANCE AND
MONITORING REQUIREMENTS**

Mark Gordon
Bureau for Remediation and Redevelopment

October 16
2013

SUMMARY OF NR 724 CHANGES

- The Applicability and O&M sections were expanded to cover vapor mitigation systems.
- The language specifying that RP's were responsible for operating and maintaining engineered systems for at least 30 years was replaced with a provision requiring that O&M continue until no longer required by DNR.
- A provision was added to indicate that O&M may need to continue through post-closure.

NR 724 Update 45



SUMMARY OF NR 724 CHANGES

- The language on O&M progress reports has been removed and replaced with a requirement to provide the appropriate information on a DNR reporting form.
- The form is posted for external review. The comments will be evaluated and the necessary changes made.
- An announcement in our electronic newsletter will identify how to access the form.

NR 724 Update 46 

SUMMARY OF NR 724 CHANGES

- RP's must provide monitoring results within 10 business days of receiving the data, unless otherwise approved by DNR. This is consistent with the new reporting requirements in NR 716.
- NR 724.19 has been modified slightly to include any applicable environmental standards and not just soil or groundwater.

NR 724 Update 47 


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NR 700 REVISIONS

- Next Webinar: Tuesday, October 22, 2013
- 1:00 – 3:00 pm
- Chapters: 746, 749, 750
- Presenters: Mark Gordon & Michael Prager
- Presentations available at <http://dnr.wi.gov/topic/brownfields/training.html>
- Questions after today can be emailed to DNRRRCComments@wisconsin.gov

Next Webinar

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