

Comment and Response Summary

Public Comments on Comm 46, NR 746 and NR 700 Series Amendments

Hearings Held: June 15, July 10 and July 12, 2000; and September 26, 2000

Organizations and Individuals Who Submitted Comments:

Central Wisconsin Engineers & Architects, Inc.
Citizens for a Better Environment
Environmental Compliance Consultants, Inc.
Sierra Club – John Muir Chapter (“Sierra Club”)
Liz Wessel
Wisconsin’s Environmental Decade
Wisconsin Environmental Health Association
Wisconsin Petroleum Council
Wisconsin Department of Transportation
Wisconsin Water Well Association

NOTE: Comments on provisions in Comm 46 are assumed to apply to the comparable provisions in NR 746, and vice versa, since the two chapters are identical except for their numbering. To make this summary more readable, we have only referred to Comm 46 when summarizing the comments and responses for provisions in Comm 46 and NR 746.

Comments and Responses:

1. **NR 700.11 (2)(b) and 716.15 (1)** Submittal of site investigation & remedial options reports

Comment submitted by: Wisconsin Petroleum Council

Comment: When a site is NOT eligible for closure under Comm 46.07, are site investigation (SI) and remedial action option (RAO) reports required to be submitted within 30 days of completion of site investigation work or within 30 days of completion of the SI report? Do the reporting requirements in NR 716.15 (1) correlate with PECFA reporting requirements in Comm 47?

Response: Sections NR 700.11 (2)(b) and NR 716.15 (1) will be amended to explicitly provide that responsible parties are required to submit site investigation reports within 30 days after completion of the SI report, except for sites that do not require public bidding under s. 101.143 (3)(cp)1, Wis. Stats. For these sites, where total site investigation and remediation costs are less than \$60,000, the site investigation data is required to be submitted with the site closure request. When a site investigation is conducted, the investigation requirements are the same regardless of which agency has administrative authority over the site and the site investigation must be completed in accordance with NR 716.

Sites that meet Comm 46 requirements are exempt from the requirements of NR 722, including submittal of remedial action option reports ("RAORs"). Petroleum contaminated sites that do not meet Comm 46 requirements are subject to NR 722. However, the rules have been revised in response to this comment to provide that RAORs are not required for petroleum-contaminated sites, unless an RAOR is requested by the agency with administrative authority over the site.

2. **NR 716.11 (5)(a).** Potential pathways for migration.

Comment submitted by: Wisconsin Environmental Health Association

Comment: Bedrock, especially fractured/creviced bedrock, should be added to the list of potential pathways for migration of contamination.

Response: The word "bedrock" will be added to the list of examples of potential pathways of migration in NR 716.11 (5)(a). Comm 46 recognizes that bedrock presents a possible migration pathway for contaminants. Any contamination in bedrock, regardless of the type of bedrock, must be evaluated and, if necessary, remedied, under Comm 46.

3. **NR 716, Appendix A.** Standard hydraulic conductivity testing.

Comment submitted by: Wisconsin Petroleum Council

Comment: By placing Appendix A in NR 716 (Appendix A was in Comm 46 in the previous rule version), hydraulic conductivity testing now applies across the board to all sites, not just low permeability sites. The rule should provide additional flexibility to waive the standard hydraulic conductivity tests where the situation warrants a waiver.

Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: Was Appendix A of NR 716 intended to apply to contaminated sites other than clay sites? The formula used for the transmissivity test appears to apply only to low permeability (clay) soils. Shouldn't this appendix be included in Comm 46? This would affect the wording in NR 716.07(12), NR 716.15(2)(g), Comm 46.05(2)(b).

Response: Determining the hydraulic conductivity of areas where contaminated groundwater is found is part of a complete site investigation. **Appendix A has been eliminated from NR 716** in order to address the concerns raised about the applicability of Appendix A to all sites. In addition, the following language changes have been made to the following rules:

NR 716.07 (12) ~~For sites with petroleum product contamination discharged from petroleum storage tanks, the~~ The need to gather data to determine the hydraulic conductivity of materials where contaminated groundwater is found ~~utilizing a method described in Appendix A, and, for sites with petroleum product contamination discharged from a petroleum storage tank,~~ to determine whether the site satisfies the risk screening criteria in S. NR 746.06 and the closure criteria in s. NR 746.07(4) or 746.08.

~~NR 716.11 (3)(c) For sites with petroleum product contamination discharged from petroleum storage tanks, provide~~ Provide sufficient information to determine the hydraulic conductivity of materials where contaminated groundwater is found ~~utilizing a method described in Appendix A, and, for sites with petroleum product contamination discharged from a petroleum storage tank,~~ to determine whether the site satisfies the risk screening criteria in S. NR 746.06 and the closure criteria in s. NR 746.07(4) or 746.08.

~~NR 716.15 (2)(g)9 For sites with petroleum product contamination discharged from petroleum storage tanks, the~~ The hydraulic conductivity of materials where contaminated groundwater is found ~~utilizing a method described in Appendix A, and, for sites with petroleum product contamination discharged from a petroleum storage tank,~~ interpretations of data necessary to determine whether the site satisfies all of the risk screening criteria in s. NR 746.06 and the closure criteria in s. NR 746.07(4) or 746.08.

Comm 46.05 (2)(b) *Standard Hydraulic conductivity tests.* During the site investigation, or during the gathering of additional information as directed by the agency with administrative authority under sub. (3), the responsible person shall determine the hydraulic conductivity of materials where contaminated groundwater is found at the site ~~utilizing a method described in Appendix A of ch. NR 716, or a method that has been approved under par. (c),~~ in conformance with the following requirements:

4. **NR 726.05 (2)(b) 1.f.** Rationale for wording change defining natural attenuation.

a. Comment submitted by: Wisconsin Petroleum Council

Comment: Why was the wording changed from “. . .The concentration or mass, or both” to “. . . The concentration and mass”?

Response: The wording change was made to make NR 726.05 (2)(b)1.f. consistent with the definition of natural attenuation in NR 700.03 (38m) which reads, “. . . the concentration and mass of a substance and its breakdown products in groundwater . . .”

b. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The rule allows responsible parties and property owners to do nothing under the guise of natural attenuation to remediate petroleum contamination. NR 726.05(2)(b)1.f. and NR 726.05(2)(b)2 both allow closure “without having to provide supporting documentation” that groundwater standards will be met within a reasonable period of time. Responsible parties should have further requirements to monitor and verify that natural attenuation is in fact occurring.

Response: Section Comm 46.07 and Comm 46.08, as renumbered, will be amended to clarify that closure requests must document that the risk screening criteria in Comm 46.06 and the closure criteria in Comm 46.07 and Comm 46.08, as renumbered, are met. If it is documented that the risk and closure criteria of Comm 46.06, Comm 46.07 and Comm 46.08, as renumbered, are satisfied, this will provide documentation that a site will meet groundwater standards within a reasonable period of time. For sites with a permeable subsurface, Comm 46.07 and Comm 46.08, as renumbered, provides that a

stable or receding plume must be demonstrated and declining contaminant levels must be found at the downgradient perimeter and along the centerline of the groundwater plume before closure can be granted. For low permeability sites, before closure can be considered under Comm 46.07 and Comm 46.08, as renumbered, it must be documented that there was no evidence of groundwater plume margin expansion during the site investigation and no evidence of a release of petroleum product at the site within the last 10 years. If these conditions can be demonstrated, it can be expected that groundwater contamination levels will decline and reach groundwater standards.

In addition, the following wording changes have been made to NR 726.05 (2)(b)1.f. and NR 726.05 (2)(b)2:

NR 726.05 (2) (b) 1.f. 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 for which groundwater use restrictions have been recorded, except that sites contaminated with petroleum products discharged from petroleum storage tanks that satisfy all of the risk screening criteria in s. NR 746.06 (2) and are eligible for closure under s. NR 746.07 (1) (b) or (2) (b) shall be considered to have satisfied the criterion in this subdivision paragraph without having to provide supporting documentation other than documentation required by ch. NR 746.

NR 726.05 (2) (b) 2. 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, except that sites contaminated with petroleum products discharged from petroleum storage tanks that satisfy all of the risk screening criteria in s. NR 746.06 (2) and are eligible for closure under s. NR 746.07 (1) (b) or (d) or (2) (b) or (d), shall be considered to have satisfied the criterion in this subdivision without having to provide supporting documentation other than documentation required by ch. NR 746.

5. **NR 726.05 (2)(b) 3.** Closure with a preventive action exceedance.

Comment submitted by: Wisconsin Petroleum Council

Comment: Proposed modification does not address closure with a PAL exemption where the tank owner leases the source property and is not the source property owner.

Response: The provisions for granting PAL exemptions in NR 140.28 are not affected by this rule. PAL exemptions are based on contaminant levels and are applicable regardless of property ownership.

6. **NR 726.05 (2)(b) 4.** Groundwater use restrictions and right-of-ways (ROW)

a. Comment submitted by: Wisconsin Petroleum Council, Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: Specify who is required/authorized to provide written notification of residual contamination in right-of-ways to the municipal clerk or state agency responsible for the right-of-way.

Response: The following language has been added to NR 726.05 (2)(b)4:

NR 726.05 (2)(b) 4. If there are ch. NR 140 enforcement standard exceedances on the property or properties, a groundwater use restriction which satisfies the requirements of sub. (8) (am) has been recorded at the county register of deeds office for each property, except that a groundwater use restriction is not required for a public street or highway right-of-way where there are ch. NR 140 enforcement standard exceedances in a stable or receding plume provided that the responsible person gives written notification of the presence of the residual soil and groundwater contamination from the responsible person's site or facility that remains within the right-of-way to the clerk of the town and county, or village or city where the right-of-way is located the municipal clerk, and to the municipal department or state agency that is responsible for maintaining the street or highway. ~~have been given written notification of the presence of residual soil and groundwater contamination within the right-of-way.~~

b. Comment submitted by: Wis. Dept. of Transportation

Comment: Suggest the following language be added to NR 726.05(2)(b)4. "For State or Federal highways, notification of residual contamination shall be sent to the following address: Bureau of Environment, Wis. Department of Transportation, 4802 Sheboygan Avenue, Rm. 451, P.O. Box 7965, Madison, WI 53707-7965."

Response: The following note has been added after NR 726.05 (2)(b)4:

Note: For state or federal highways, notification of residual contamination should be sent to the following address: Bureau of Environment, Wis. Department of Transportation, 4802 Sheboygan Avenue, Room 451, P.O. Box 7965, Madison, WI 53707-7965.

c. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The rule does not adequately notify property owners when soil and groundwater contamination exists in right-of-ways. ROWs are more likely to be disturbed by construction, exposing contamination. Notice of contamination is only given to the municipality that has maintenance responsibility but which may not "own" the ROW or be in a position to alert others to the potential hazards. It appears that under certain conditions, no additional remedial action other than natural attenuation will be required on some non-RP property where a groundwater use restriction is not recorded.

Comment submitted by: Wisconsin Water Well Association

Comment: The rule makes no provision for consent of the owner of a contaminated ROW. The rule only allows for notification of the municipality, who may not own the ROW. There are also issues of public lands that are ROWs and ROWs/roads that are abandoned. How will these be dealt with?

Response: It is rare that a street would be abandoned. Usually, a street would remain a street even if it is no longer a federal or state or county highway. If an owner of a right-of-way proposed to disturb the subsurface of the right-of-way, that owner would need to obtain approval from the entity responsible for maintenance of the right-of-way, and that entity would be expected to notify the owner that the residual contamination exists.

- d. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The rule should not allow notification without action by the responsible party for an expanding plume. The rule implies that the ROW offers some form of cap on residual contamination. Not all streets are paved and most ROWs are not paved. How can there be an impermeable cap to protect the public without pavement?

Response: The rule explicitly requires that data be collected to determine if a plume is expanding. An expanding groundwater plume is a risk factor in Comm 46.06(2)(a)1. and must be addressed before closure can be granted. These requirements apply to plumes beneath ROWs. The plume must be stable or receding and meet all other risk criteria before closure, regardless of whether the plume is in the right-of-way.

7. **Comm 46.01.** Reasonable period of time to meet groundwater standards.

- a. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The rule allows for an unreasonably long length of time for natural attenuation to "work". This violates the "reasonable period of time" requirement in the Wisconsin Groundwater Protection Law.

Comment submitted by: Wisconsin Environmental Health Association

Comment: Allowing groundwater contamination above enforcement standards to "naturally attenuate" rather than requiring proactive remedial action may be contrary to Chapter 160, Stats. We have not seen data regarding natural attenuation that was used by the agencies to conclude that enforcement standards will be achieved in a reasonable period of time. We are concerned about the highly subjective terms such as "within a reasonable period of time" and "cost effective alternative".

Comment submitted by: Wisconsin Environmental Health Association

Comment: The term "reasonable period of time" is highly subjective. Specific criteria should be established for a range of contamination levels that may be encountered, along with known or scientifically defensible expectations for natural attenuation of the contaminants at those levels.

Response: Ch. 160.21(3) requires that responses to groundwater exceedances “take into account . . . the uses of the aquifer, the degree of risk . . .” in determining the appropriate remedial action for a site. Comm 46 has been structured such that contaminated sites that present a low risk to human health or the environment (that is, sites that meet all the criteria of Comm 46.06, 46.07, and 46.08, as renumbered) frequently will meet groundwater standards by relying upon natural attenuation processes. The longer time frame for low permeability sites is considered to be reasonable because the risk to human health and the environment remains low throughout the period of time needed to reach standards.

The rule also establishes specific criteria for meeting the reasonable period of time criteria for permeable sites. Those criteria include meeting all the risk screening criteria in Comm 46.06(2) and demonstrating that all contaminants in the groundwater above enforcement standards are declining in concentration throughout the plume. The rule specifies that one of two statistical tests must be used to demonstrate declining trends and also specifies the methodology and data to be used in these statistical tests. Declining contaminant trends are primary evidence that natural attenuation processes are removing contaminants from the subsurface. Once declining trends are established, and all risk criteria are met, the contaminated site poses little additional risk to receptors. In addition, the time to meet groundwater standards will be fairly short.

b. Comment submitted by: Wisconsin Water Well Association

Comment: Amend Comm 46.01 Purpose: state that the purpose of the rules is to expedite the cleanup of petroleum contaminated sites in a cost-effective manner based upon limited financial resources.

The Wisconsin Water Well Association objects to policy at petroleum contaminated sites being driven by the desire to save money by reducing the level of environmental protection versus the state taking action to become a more prudent purchaser of services. It appears that some groups are trying to rewrite the state's groundwater law through the backdoor and develop contaminant specific standards independent of Chapter 160, Stats., and NR 140, Wis. Adm. Code. Be intellectually honest and admit that the state can only fund a portion of cleanup costs based upon the prioritization of risks.

Response: The agencies agree that the purpose of the rule is to expedite cleanups in a cost-effective manner. Comm 46 was developed in response to s. 101.143(2)(h), Wis. Stats., which states in part: “The department of commerce and the department of natural resources, jointly, shall promulgate rules designed to facilitate effective and cost-efficient administration of the program under this section. . .” and s. 101.143 (2e), Wis. Stats., which specifically provides: “RISK-BASED ANALYSIS. (a) The department of commerce and the department of natural resources shall attempt to agree on a method, which shall include individualized consideration of the routes for migration of petroleum product contamination at each site, for determining the risk to public health, safety and welfare and to the environment posed by discharges . . .” The rules are meant to comply with State statutes that specifically require cost-effective administration of the PECFA fund and consideration of risk in site remediation.

8. **Comm 46.03 (7) and (8).** Definition of fractured bedrock.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: All bedrock in Wisconsin is likely fractured. Recommend that the term "fractured" be dropped from the code or else that "fractured bedrock" be defined and determine which bedrock in Wisconsin is not fractured.

Response: Section 101.144.(1)(aq) 4, Wis. Stats., uses the term "fractured bedrock" and this portion of the statutes is quoted in Comm 46.03 (7). The following wording has been added to the note following Comm 46.03 (7):

"In the absence of evidence to the contrary, the agencies consider all bedrock in Wisconsin to be fractured."

9. **Comm 46.03 (9) and (10).** Definition of Site Classification.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Why differentiate between medium and low risk sites? The code only meaningfully differentiates between high risk sites and medium/low risk sites.

Response: Section 101.144 (3m), Wis. Stats., requires the agencies to establish standards for determining whether a site should be classified as medium risk or low risk. In Comm 46, low risk and medium risk sites are treated similarly for purposes of investigation, cleanup and closure. However, in the future, the agencies may choose to administer low and medium risk sites in a different manner, and separate definitions for low and medium priority sites will facilitate such a change.

10. **Comm 46.03 (11).** Definition of monitoring well.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: The State of Wisconsin should change the definition of "monitoring well" and "piezometer" to be consistent with other states in the country. All wells from which water samples are taken and water elevation is measured, regardless of depth, should be defined as "monitoring wells", and the term "piezometers" should be applied only to wells used for making water level measurements.

Response: The term "piezometer" is defined in NR 141 not in Comm 46. This is an issue beyond the scope of the proposed rule.

11. **Comm 46.03 (18); Comm 46.05 (4)(b); Comm 46.06 (2)(e).** Definition of “most recent release.”

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: **Comm 46.03 (18).** Add a note to the definition of “release” to define the term “most recent release”. Recommend the most recent release be defined to mean the date the tank system was abandoned, removed, or abandoned in place per Comm 10.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: **Comm 46.05 (4)(b).** Add a note as to what constitutes the “most recent release”. Clarify that free product does not constitute a new release each day it is present.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: **Comm 46.06 (2)(e).** Recommend rewording to make this risk criteria less confusing and more consistent: “If there are petroleum-product contaminants in soil or groundwater, the most recent release that caused or contributed to the contamination is not less than 10 years old.” OR “The most recent release of any petroleum-based contaminants has not occurred within the past ten years.”

Response: The following changes have been made to clarify the rules and Comm 46.06(2)(e) has been renumbered Comm 46.06(2)(f).

Comm 46.03 (17): “Release” means the original discharge to the environment from a petroleum storage tank.

Comm 46.05 (4)(b): (b) For sites where all groundwater contamination is contained within low permeability material, if no evidence is found of groundwater plume margin expansion during the site investigation, and no release the most recent release of a petroleum product to the environment on soil or groundwater at the site is more than has occurred within the last 10 years old, the assumption for agency decision making on remedial actions, closure and other related decisions shall be that the groundwater plume margin is not expanding.

Comm 46.06 (2)(f) No release of a If there are petroleum-product contaminants in to the soil or groundwater at the site, the most recent release that caused or contributed to the contamination is more than has occurred within the last 10 years old.

12. **Comm 46.03 (20).** Definition of remediation target.

Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin’s Environmental Decade and Liz Wessel

Comment: The discussion of remediation target should reference Chapters NR 140 and NR 720 as the default targets, not Comm 46.

Response: Chapter 160, Stats., and NR 140, Wis. Adm. Code, ultimately establish cleanup standards for all sites with contaminated groundwater. Remediation targets established

under Comm 46 are intended to bring about conditions at a site such that closure can be granted, even if standards are not yet met. After establishing a remediation target, active cleanup and/or on-going monitoring is implemented until it can be established that natural attenuation will bring the site into compliance with groundwater standards established in NR 140.

13. **Comm 46.03 (22).** Definition of "site".

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Add the following sentence to the note: "Therefore, the terms 'site' and 'source property' are not synonymous."

Response: The following changes have been made to the note that follows Comm 46.03 (21), as renumbered, to clarify the meaning of the term "site":

(21) "Site" means any area where a petroleum product has discharged.

Note: Because the term "discharge" has been interpreted by the Wisconsin Supreme Court to include the migration of hazardous substance contamination after it is released to the environment, the term "site" includes all areas to which petroleum-product contamination has migrated, including areas not on the source property. The term "site" and "source property" are not synonymous, a "site" can be larger or smaller than a "source property". The term "site" is synonymous with the term "occurrence" as that term is used by the department of commerce in Chapter Comm 47. The term "site" is used here in order to establish common terminology that will be used by both the department of commerce and the department of natural resources in the implementation of Comm 46.

14. **Comm 46.03 (24).** Definition of "soil".

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Eliminate from the definition of "soil" that it be unsaturated.

Response: The definition of "soil" is an existing definition found in NR 700.03 (58). Changing the definition of "soil" would require changes to NR 720 with regard to how residual contaminant levels are calculated and the applicability of soil cleanup standards. Such extensive changes to NR 720 are beyond the scope of this rule package.

15. **Comm 46.04 (1)(a) 3.** Contamination by one or more hazardous substances other than petroleum products.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Attach a note to define what "contaminated" means. Does a PAL exceedance but not an ES exceedance constitute "contaminated" by a hazardous substance?

Response: "Contaminated" is defined in NR 700.03 (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." Therefore, any media with a detected concentration of a hazardous substance is "contaminated." The mass and concentration of the substance will determine what response action is appropriate.

16. **Comm 46.05.** Site investigations.

Comment submitted by: Wisconsin Water Well Association and Wisconsin Environmental Health Association

Comment: Critical to the implementation and use of any risk assessment process is the adequacy of the site investigation. Both agencies need to commit resources to review and track the adequacy of the site investigation reports. There is a need to properly train owners, consultants and staff on site investigation procedures.

Response: Department of Commerce and Department of Natural Resources are committed to ensuring that complete and adequate site investigations are performed at petroleum contaminated sites. Both agencies track site investigation submittals and review site investigation reports for compliance with NR 716. Site investigation reports that do not meet NR 716 requirements are returned for additional work.

Comm 46.09 requires on-going staff training, at least annually, to ensure that the provisions of the NR 700 rule series and of Comm 46 are satisfied. In addition, both agencies will continue to provide outreach efforts to site owners and consultants by providing training on these rules. These outreach efforts include such events as "consultant days", providing training at professional meetings, development of guidance documents, fact sheets, newsletters, e-mails, and other written material and presentations.

17. **Comm 46.05 (2)(b) 3.** Standard hydraulic conductivity tests.

Comment submitted by: Wisconsin Petroleum Council and Environmental Compliance Consultants, Inc.

Comment: Delete Comm 46.05(2)(b)3. Additional costs associated with the new requirement for hydraulic conductivity testing should not be precluded from PECFA reimbursement. These costs should be reimbursable regardless of whether it's a new site investigation or a required supplemental site investigation.

Response: Hydraulic conductivity testing is not a new requirement. The evaluation currently required in NR 716.11 (5)(d) includes evaluation of a site's hydraulic conductivity. The intent of Comm 46.05 (2)(b) 3 was to make it clear that hydraulic conductivity is part of a standard site investigation and assessment of hydraulic conductivity does not justify, by itself, exceedances of PECFA's \$40,000 site investigation cap.

However, the agencies are in agreement that Comm 46.05 (2)(b) 3 should be deleted from the rule, since NR 716.07 (12) will now explicitly requires that hydraulic conductivity testing be part of a routine site investigation.

18. **Comm 46.05 (3).** Use of "utilize" and "data".

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Substitute the word "use" where the term "utilize" is found and correct the fourth sentence, ". . .the existing site data is insufficient . . ."

Response: The following changes have been made to the rule language:

Comm 46.05(3) SUPPLEMENTAL SITE INVESTIGATION INFORMATION. If the site investigation report was submitted prior to May 18, 2000, supplemental site information that is necessary to make the determinations required under sub. (1) may be required by the agency with administrative authority. The responsible person shall utilize use existing site data unless the agency with administrative authority for the site determines that the existing site data are insufficient to make the determinations required in sub. (1). Existing site data may include, but are not limited to, monitoring well development data, monitoring well purging and sampling data, rising and falling head test data, yield test data, pump test data, monitoring well and boring logs, grain size analysis, local and regional geology, subsurface description, depositional environment, expected and actual degree and extent of contamination, or a combination of the data. If a determination is made by the agency with administrative authority for the site that existing site data is are insufficient, the responsible person shall then gather the information necessary to make the determinations required under sub. (1), including determining the hydraulic conductivity of the materials where contaminated groundwater is found at the site in compliance with the requirements of sub. (2)(b).

Comm 46.06(2) RISK CRITERIA FOR SCREENING SITES. ~~In making decisions under sub. (1),~~ The department of Commerce and DNR shall utilize use the following criteria, as provided in s. NR 746.07 and s. NR 746.08, ~~the following criteria~~ for identifying sites that are eligible for closure:

19. **Comm 46.05 (4).** Groundwater contaminant behavior.

Comment submitted by: Wisconsin Water Well Association

Comment: Given the importance to determining site risk, Commerce and DNR should develop a methodology for determining if the groundwater plume margin is expanding.

Response: The rules require that data be collected during the site investigation to determine whether the groundwater plume margin is expanding. Suggested methods to determine whether the plume margin is expanding can be found in DNR publication RR-614, "Interim Guidance on Natural Attenuation for Petroleum Releases," published in October 1999.

20. **Comm 46.06.** Risk screening criteria.

Comment submitted by: Wisconsin Environmental Health Association

Comment: This section does not enumerate the risk criteria based on scientific principle or research that will be used for making these decisions. Proven procedures or research results are necessary to assure that valid risk screening is being achieved.

Response: The risk screening criteria are intended to distinguish sites that may pose a significant risk to public health and the environment and direct more aggressive cleanup effort to those sites. Many of the criteria in Comm 46.06 have been used as screening tools for determining site remedies under Comm 47 since 1997. Risk screening criteria and risk-based decision making are used throughout the nation for environmental cleanups. A great deal of information on the validity of using risk-screening criteria is available from this national experience.

21. **Comm 46.06 (2)(b).** Table 1. Indicators of residual petroleum product in soil pores.

a. Comment submitted by: Wisconsin Environmental Health Association

Comment: There does not appear to be any scientific basis for the numbers used in Table 1. How were the numbers chosen? How long will a site take to naturally attenuate from these levels to a level below the enforcement standard?

Response: Enforcement standards apply to contaminated groundwater, not to soil contamination. Table 1 is a table of soil screening levels and does not apply to groundwater.

Table 1 is designed to identify higher risk sites based on soil contaminant levels. The numbers in Table 1 are based upon chemical partitioning theory. The calculations used to establish Table 1 numbers follow:

Calculation of Table 1 Values in Comm 46

There is a hypothetical maximum mass of contaminant that can be held in soil. Concentrations above the hypothetical maximum indicate the likely presence of trapped petroleum product. The method presented here calculates the maximum contaminant concentration expected just below free product. If the soil contaminant concentration equals or exceeds the theoretical maximum contaminant concentration, then it can be assumed that petroleum exists as trapped product within the pore spaces at the site.

1. Calculate the maximum contaminant concentrations (C_i) in soil for each contaminant of concern released from a petroleum tank system.

$$C_i = \frac{(K_{oc} f_{oc} \rho_b + \theta_w + H' \theta_a)(S_w)(MF_i)}{\rho_b}$$

Where:

Soil parameters:	Chemical-specific parameters:
ρ = dry bulk density = 1.5 g/cm ³	S_w = solubility in water (mg/l)
f_{oc} = fraction of organic carbon = 0.006	K_{oc} = organic carbon : water partitioning coefficient (ml/g)
θ_w = water-filled porosity = 0.2	H' = dimensionless Henry's law constant
θ_a = air-filled porosity = $n - \theta_w$	MF_i = mole fraction of compound i in non-weathered petroleum
n = total porosity = $\theta_w + \theta_a = .434$	

Default Chemical Characteristics of Fresh Petroleum Product

Substance	Pure Phase Water Solubility, S_w (mg/l)	Mole Fraction in Non-weathered Petroleum, (MF _i)	Organic Carbon:Water Partitioning Coefficient (K _{oc}) (ml/g)	Henry's Law Constant (H) (unitless)
Benzene	1750	0.0093	58.9	0.228
Ethylbenzene	169	0.0116	363	0.323
Toluene	526	0.0568	182	0.272
Xylene	178	0.0858	407	0.301
1,2,4-Trimethylbenzene	57	0.0653	3700	0.230
1,3,5-Trimethylbenzene	48	0.0457	820	0.320
1,2-DCA	8520	0.0003	17.4	0.040
Naphthalene	31	0.007*	2000	0.0198

*Naphthalene mole fraction is based on fresh diesel.

Note: If soil sample collection and handling does not preserve the soil gas, then the $H \theta_a$ term should be left out of the equation.

2. Example Calculation

An example calculation for benzene:

$$C_i = \frac{(K_{oc} f_{oc} \rho_b + \theta_w + H' \theta_a)(S_w)(MF_i)}{\rho_b}$$

$$C_{benzene} = \frac{[(58.9 \text{ ml/g})(.006)(1.5 \text{ g/cm}^3) + 0.2 + (0.228)(.234)](1750 \text{ mg/L})(0.0093)}{(1.5 \text{ g/cm}^3)} = 8.5 \text{ mg/Kg}$$

Table 1
Indicators of Residual Petroleum Product in Soil Pores

Substance	Soil Screening Levels (mg/Kg)
Benzene	8.5
1,2 – DCA	0.6
Ethylbenzene	4.6
Toluene	38
Xylene, Total	42
1,2,4 – Trimethylbenzene	83
1,3,5 – Trimethylbenzene	11
Naphthalene	2.7

Reference: Feenstra, S., MacKay, D.M., Cherry, J.A., "A Method for Assessing Residual NAPL Based on Organic Chemical Concentrations in Soil Samples", Ground Water Monitoring Review, Spring 1991, pp. 128-136.

b. Comment submitted by: Wisconsin Water Well Association

Comment: Contaminant values in Table 1 will leave a significant amount of residual contamination in the soil and groundwater. The Table 1 values will also be used as the "off-ramp" from which sites will be allowed to close. The levels pose concerns relating to the future development or sale of the property. Soil excavated in the future could be considered hazardous waste. This may have the unintended effect of creating future Brownfields.

Response: Table 1 is meant to identify higher risk sites based on soil contaminant concentrations. There are no groundwater concentration levels in Table 1. An adequate site investigation and documentation that a site meets the risk screening criteria and closure criteria in Comm 46 ensure that contamination is understood and soil and groundwater standards will be met. Understanding the remediation of contaminants through this process aids in planning for future site development. While no one can accurately predict the exact future use of a property, the processes set forth in Comm 46 work toward achieving standards while recognizing temporary limitations on a property's future use until standards are achieved. Deed restrictions and groundwater use restrictions are intended to notify current and future owners of use limitations that may exist at the site due to the contamination. Future excavation of contaminated soil must be managed in accordance with NR 718 or NR 518.

c. Comment submitted by: Wisconsin Water Well Association

Comment: Disagree with the Table 1 values for contaminant concentrations in groundwater within low permeability materials. Values are 300 times the enforcement standard in NR 140.

Response: This comment refers to the July 1999 version of Comm 46. Values for groundwater contaminant levels in low permeability materials have been eliminated from this version of the rule.

22. **Comm 46.06 (2)(c).** Table 2, Protection of Human Health from Direct Contact with Contaminated Soil

Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: Concentrations in Table 2 allow contamination to remain for unreasonably long periods of time, even generations, before reaching groundwater standards. Include an additional safety factor for the cancer-causing chemicals benzene and 1,2-DCA. A safety factor is needed for inhalation and ingestion risks, the potential of explosions, the variability in testing methods and the difficulty in calculating concentrations of contaminants.

Response: Table 2 is meant to identify higher risk sites based on direct contact with soil contamination. Table 2 does not establish groundwater concentrations. Enforcement standards apply only to groundwater. Table 2 is list of soil contaminant concentrations intended to protect human health from direct contact with contaminated soil. Numbers calculated for benzene and 1,2-DCA are based on nationally accepted procedures and do include consideration of inhalation and ingestion risks. The numbers in Table 2 will not result in an explosive atmosphere. In addition, the rule has an explicit provision for addressing explosion hazard, found in Comm 46.06(2)(g). Soils contaminated to the levels in Table 2 do not pose a hazard or risk to human health from direct contact. Soil testing methods are established by standard procedures approved by U.S. EPA. Determining the range of soil concentrations at a contaminated site will depend upon conducting a proper site investigation and using proper sampling procedures. All sites seeking closure under Comm 46 must comply with the requirements of NR 716.

23. **Comm 46.06 (2)(d).** Direct contact for compounds not in Table 2.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: How will people comply with sub. (d) when there are only two compounds listed for direct contact threat in Table 2? This may lead to more "dig & dump" remedies.

Response: Comm 46.06 (2)(d) should not lead to unneeded remedies because the agency with administrative authority must give approval for further analysis of anything other than the substances listed in Table 2 that is proposed as a "contaminant of concern" for the site. In addition, the proposed rule requires that the human health risk "be addressed" and allows broad latitude in choosing a remedy, if one is needed.

The following language has been added to the rule to clarify that there is no direct contact threat if the listed substances are present in concentrations below the table numbers:

Comm 46.06(2)(d): For substances not listed in Table 2 that are present within 4 feet of the ground surface and that have been approved by the agency with administrative authority for the site for further analysis as contaminants of concern as defined in s. NR 720.03 (2), any potential human health risk from direct contact has

been addressed.

Comm 46.06(2)(e): Except for the substances listed in Table 2, there is no human health risk from direct contact for a substance listed in Table 1 if the substance's concentration is below the Table 1 soil screening level.

24. **Comm 46.06 (2)(e).** Application of risk criteria to site specific circumstances.

Comment submitted by: Central Wisconsin Engineers & Architects

Comment: **Comm 46.06 (2)(e).** If the plume is stable or receding and all other risk requirements are satisfied, then the 10 year criterion seems irrelevant. If all other risk criteria have been met except for the 10 year requirement, would closure be denied?

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Add a variance to Comm 46 so that if some risk criteria is violated, a petroleum contaminated site can still close if that criteria is determined not to be significant. For example, if all site criteria are met, but the release is less than 10 years old or the site is within 1,000 feet of an upgradient municipal well and the consultant can show the contaminated site won't affect the well.

Response: If a stable or receding plume exists at a site and all other risk criteria have been met, except that petroleum product has been released in the last 10 years or the site is within 1,000 feet of an upgradient municipal well, then the site may be closed under the "flexible closure" provisions of NR 726.05, if the criteria of that section are met.

25. **Comm 46.07 (1).** Site closure and assumption of natural attenuation processes.

- a. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel, Wisconsin Environmental Health Association, and Wisconsin Water Well Association

Comment: There is nothing in the rule to evaluate the effectiveness of natural attenuation, especially in clay soils. The two agencies need to establish a method to audit the performance of these systems in order to determine if public health and the environment are adequately protected. See Chapter 4 (Approaches for Evaluation NA) and 5 (Protocols for Documenting NA) of the recent NAS report, "Natural Attenuation for Groundwater Remediation". WWWA recommends the agencies work through the Groundwater Coordinating Council to conduct long-term investigation of natural attenuation processes in low permeability materials.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Use the site data collected over the history of the PECFA program to determine what remedies (including natural attenuation) "work". Hire a graduate student or other resource to do this file search. Use this information to assess the effectiveness of remedies.

Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The rule needs a provision to avoid premature site closure decisions which will not be in the best interest of public health, the environment or property owners and potential buyers.

Response: The rule contains specific requirements for the evaluation of natural attenuation at petroleum contaminated sites. In low permeability material, the site investigation must establish that the groundwater contaminant plume is stable or receding and that no release has occurred on the site within the last 10 years (Comm 46.05 (4)(b) and Comm 46.06 (2)(f), as renumbered). There must also be "at least a 5-foot separation between the contamination in the low permeability material and any underlying or downgradient permeable material" (Comm 46.07 and 46.08, as renumbered). If these criteria are met, this means that natural attenuation processes are controlling contamination within the low permeability material.

Within permeable material (saturated subsurface conditions with a hydraulic conductivity greater than 1×10^{-5} cm/sec), the groundwater contaminant plume must be shown to be stable or receding during the site investigation (Comm 46.05(4)(a)) and sufficient groundwater monitoring must be performed to establish that contaminant concentrations are decreasing at the downgradient perimeter and along the centerline of the contaminant plume (Comm 46.07 and 46.08, as renumbered). The rule establishes specific data requirements and statistical methodology that must be followed to establish these declining trends. All of these requirements are intended to provide documentation of the effectiveness of natural attenuation processes.

The agencies agree that a significant volume of site-specific data has been collected regarding the effectiveness of natural attenuation. The experience that the two agencies have gained through the application of the PECFA and spill laws and the flexible closure provisions of NR 726 has been used in developing this rule. As further data becomes available, the agencies will continue to evaluate the role and use of natural attenuation in controlling contamination and in remediating sites to achieve groundwater standards.

- b. Comment submitted by: Wisconsin Water Well Association and Wisconsin Environmental Health Association

Comment: The rule establishes de facto aquifer classification and a tiered approach to protecting groundwater by the agency's willingness to write off groundwater contamination present in clay or low permeability soils. What are the benefits to and economies associated with writing off certain sources of groundwater? Water well drillers in southeastern WI construct private potable wells in sand seams that typically occur in the clay or low permeability formations in that area of the state. There are several construction and well/pump installation techniques that can provide property owners with a consistent water supply.

Response: The rule does not "write off groundwater contamination in clay or low permeable soils". The goal for all cleanups in the State of Wisconsin is to meet NR 140 groundwater standards within a reasonable period of time. Comm 46 is intended to reach this goal by identifying the appropriate remedial action for petroleum contaminated sites while effectively and efficiently administering funds for cleanup. The

methods by which natural attenuation are evaluated are delineated in the response to Question 24 a. above.

Water supply wells that are established in low permeability materials draw water from permeable "sand" seams interbedded in the clay unit. Comm 46 specifically requires that contaminants in low permeability material must be separated from downgradient or underlying permeable material by at least 5 feet. This provision is specifically intended to address clay soils with "sand seams" that may be used for development of water supply wells. Contamination in permeable material must be monitored until it is established that contaminant levels are decreasing at the downgradient perimeter and along the centerline of the contaminant plume.

c. Comment submitted by: Wisconsin Water Well Association

Comment: Closure letters have, in the past, indicated that contaminated sites have been cleaned up. Under the proposed rules, closure letters will have less meaning for public health concerns and future buyers. Additional investigation and cleanup may be needed after closure.

Response: Contaminated sites closed under Comm 46 will have been cleaned up to a level protective of public health and the environment. If necessary, closure conditions may require that a deed restriction or groundwater use restriction be recorded to require maintenance and repair of caps and other engineering controls or to prevent future owners from constructing inadequate wells. Deed notices may be required to notify current and future owners of the presence of contamination. If a condition is found to exist in the future that poses a threat to public health, welfare or the environment, the site can be reopened under NR 726.09.

26. **Comm 46.07 (1)(a) 1.** Site closure criteria.

Comment submitted by: Wisconsin Petroleum Council

Comment: It is not clear what is meant by "satisfied" in the site closure criteria in a number of sections: Comm 46.07(1)(a)1.; (c)1. and (d)1.; Comm 46.07(2)(a)2., (b)2., (c)2., and (d)2. Concerned that "satisfied" is intended to mean actively remediated. Recommend the following clarification: "All of the risk screening criteria in s. Comm 46.06(2) have been satisfied, or further evaluated to the satisfaction of the agency with administrative authority for the site."

Response: The following language change has been made to clarify the provision's meaning in several subdivisions in the renumbered Comm 46.07 and Comm 46.08, as renumbered:

"The site meets all of the risk screening criteria in s. NR 746.06 (2) ~~have been satisfied.~~

27. **Comm 46.07 (1)(a) 2.** and **Comm 46.07 (2)(c) 3.** Recording of deed restrictions or deed notices and a GIS system.

- a. Comments submitted by: Wisconsin Petroleum Council and Environmental Compliance Consultants, Inc.

Comment: The rules should specifically include a description of the type of deed instrument and/or restrictions that are required and the site situations that warrant the use of a particular kind of instrument to achieve closure.

Comment: **Comm 46.07 (2)(c) 3.** Clarify the circumstances when a deed restriction/deed notice is required. The note at the end of Comm 46.07(2) is not enough.

Response: The issues related to the use of deed notices and deed restrictions are critical to the proper administration of Comm 46 because many contaminated petroleum sites closing under this rule will require a deed instrument. To ensure consistency, the agencies will develop proposed rule language to address these issues. However, because the proposed rule language would institute new procedures and broadly affects many property owners in the State, additional public input is necessary before promulgating a rule. Therefore, the agencies will develop proposed rule language and seek authorization at the Natural Resources Board meeting in December 2000 to conduct additional public hearings on a proposal to codify the situations where deed instruments are required.

- b. Comment by: Wisconsin Petroleum Council.

Comment: The rules do not incorporate the GIS registry to replace the groundwater use restriction as a means of tracking residual groundwater contamination. The previous rule version referenced the GIS registry. Why has the registry been abandoned in this rule version?

Comment submitted by: Wisconsin Water Well Association

Comment: WWSA supports the development of a GIS registry for all contaminated sites, whether the sites are under remediation or closed. Development of a GIS registry should be done as soon as possible, but the information should be up-to-date, properly maintained, and readily available to all users (even those without computers).

Response: The GIS registry has not been abandoned. The DNR has proposed the GIS registry in a separate rule package. Hearings on those proposed rules were held August 15, 16, 21 and 23, 2000. When the proposed changes to NR 726 incorporating the GIS registry become final, those requirements will apply to Comm 46 closures. At this time, deed notices for soil contamination need to be recorded for sites with residual soil contamination as will deed restrictions for institutional controls. The initial GIS registry only addresses groundwater use restrictions. The GIS registry may be expanded in the future to track soil contamination as well. Recorded deed restrictions and deed notices are intended to require maintenance and repair of caps and other engineering controls and to notify current and future owners of contamination.

- c. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The previous version of Comm 46 included an electronic system to track remediation progress and site closure restrictions. We request that in developing the electronic system, consideration be given to how property owners will be notified:

- that their property is impacted with residual contamination
- what precautions and restrictions apply to the property and its users, and
- the significance of listing the property electronically.

In addition, notification of buyers, education of banks, lenders real estate and other affected professions on the purpose of the electronic tracking system and maintenance and error correction of the system and public accessibility need to be addressed.

Response: The DNR is proposing a rule clarification to NR 714 (to be considered at the October 2000 Natural Resource Board meeting) that will require the responsible person to mail a letter to all landowners whose property has been contaminated, informing them of the presence of contamination. The proposed rule language can be found attached to this memo. In addition, the DNR is developing a public participation rule package that will address the other issues in this comment; it is anticipated that hearing authorization from the Natural Resources Board for the public participation rule package will be sought in mid-2001.

28. **Comm 46.07 (1)(b).** Site closure where groundwater contamination is within low permeability material.

Comment submitted by: Wisconsin Environmental Health Association

Comment: This paragraph is very difficult to understand and should be rewritten. The phrase "technically feasible and cost effective" is very subjective. The subjective nature of this phrase will create inconsistencies within the program and create unacceptable risks to protection of the environment and the health of Wisconsin's citizens.

Response: This comment relates to the October, 1999 version of Comm 46. Comm 46.07 and Comm 46.08, as renumbered, have been rewritten in the present version of the rule and the term "technically feasible and cost effective" does not appear in this section of the rule.

29. **Comm 46.07 (1)(b) 3.a.** Separation distance for groundwater in low permeability material and permeable material.

Comment submitted by: Wisconsin Water Well Association

Comment: This provision appears to require a minimum 5 foot separation distance between contaminated low permeability material and any permeable material. How will this provision be implemented in cases where there are sand seams? What is the interrelationship between low permeability soils and materials?

Response: Comm 46.05(2)4 requires that hydraulic conductivity be determined on materials where contaminated groundwater is found. A complete site investigation must define the nature, degree, and extent of groundwater contamination. Sand seams would constitute permeable material. There would have to be a 5 foot separation distance between any underlying or downgradient permeable material, including sand seams.

"Soil" is located above the water table while "material" is located below the water table. The definition of soil, found in NR 700.03 (58), is: "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.

Comm 46.03(8) states: "Low permeability material" means subsurface material above bedrock, as defined in s. NR 141.05 (5), that is at or below the water table and has a hydraulic conductivity less than or equal to 1×10^{-5} centimeters per second as determined by a method specified in s. NR 746.05.

30. **Comm 46.07 (1)(b) 3.b.iii and Comm 46.07 (2)(b) 4.b.iii.** Requirements of tests listed in par. (c)2 where enforcement standards are exceeded in permeable material.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Par. (c)2 does not refer to the tests that need to be complied with. What does Comm 46.07(1)(b)3.b.iii and 46.07(2)(b)4.b.iii. refer to?

Response: The cross-references in the proposed rule were incorrect. The correct references should have referred to Comm 46.07 (1)(d)3 and Comm 46.07 (2)(d)4 in the version of the rule that was taken to public hearing. The correct reference has been included in the final version of the rule.

31. **Comm 46.07 (1)(c).** Closure where groundwater contamination exceeds a PAL but is less than an ES.

Comment by: Wisconsin Petroleum Council

Comment: Sections Comm 46.07(1)(a), (b), and (d) all contain reference to completion of a site investigation that complies with the requirements of NR 716, but section (c) does not. Amend (c) to include this reference.

Response: Comm 46.07(1)(c) has been revised and renumbered as follows:

Comm 46.07 (3) *Groundwater contamination exceeding preventive action limits, but below enforcement standards, within permeable material.* A site that has Sites that have groundwater contamination that attains or exceeds preventative action limits, but does not attain or exceed enforcement standards, within permeable material, shall be closed at the completion of a site investigation that complies with the requirements of ch. NR 716, if the site closure request documents that all of site-complies-with the following requirements have been complied with:

32. **Comm 46.07 (1)(d) 3.b. and Comm 46.07 (2)(d) 4.b.** Mann-Whitney U Statistical Test.

Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Revise wording by beginning sentence: "For sampling data not free of seasonal variation,"

Response: The rule language has been revised and renumbered:

Comm 46.07 (4)(c) 2. and Comm 46.08 (4)(d) 2. For sampling data not free of seasonal variation, an appropriate number and frequency of sampling rounds has been conducted consistent with the requirements of Appendix A, and the sample results establish, through the use of the Mann-Whitney U statistical test that is set forth in Appendix A, that the concentrations of contaminants with confirmed exceedances of enforcement standards are decreasing at the downgradient perimeter and along the centerline of the contaminant plume.

33. **Comm 46.07 (3)**. Closure under Ch. NR 726.

Comment submitted by: Wisconsin Environmental Health Association

Comment: Why do the rules allow for an alternate closure under NR 726 if the requirements of Comm 46 can not be met? This seems to be "shopping" for closure options.

Response: Closure under NR 726 is not less stringent than closure under Comm 46. If the conditions of Comm 46 are not met, NR 726 allows for site closure if all the requirements of NR 726 are met.

34. **Comm 46.07 (5)(a) 1**. Remediation funding.

Comment by: Wisconsin Petroleum Council

Comment: Amend rule to reference "sub. (1) or (2)" not just "sub (2)". As currently drafted, the provision restricting the agency from requiring additional remedial action, other than natural attenuation, Comm 46.07(5)(b) would not apply to sites seeking closure after site investigation under (1).

Response: The rule language has been revised in response to this comment. Cross-references to both Comm 46.07 (Site Closure Decisions at the Completion of a Site Investigation) and Comm 46.08 (Site Closure Decisions After Remedial Action to Address One or More of the Risk Screening Criteria) are included in the new section Comm 46.09, (Remediation and Remediation Funding for Conditionally Closed Sites) which was previously numbered Comm 46.07(5).

35. **Comm 46.07 (5)(b)**. No additional remedial action.

Comment by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel.

Comment: It appears that under certain circumstances, no additional remedial action other than natural attenuation will be required on some non-RP properties that are contaminated by the migration of pollution where a groundwater restriction is not recorded. This is not consistent with provisions of the Wisconsin Groundwater Protection Law that protects innocent neighbors.

Comment submitted by: Wisconsin Environmental Health Association

Comment: This paragraph allows site closure without additional remedial action even though it doesn't meet the natural attenuation requirements, as determined by the agency with administrative authority, apparently with no justification required. This "loophole" could allow the closeout of sites where additional remedial action should be implemented.

Response: A site that closes under Comm 46.07 or 46.08, as renumbered, does meet natural attenuation requirements and groundwater standards will be met. Additional remedial action may not be required unless an actual or potential risk to public health, safety or welfare or the environment exists.

The rule language that was formerly found in Comm 46.07 (5) has been reorganized and renumbered as Comm 46.09. The agencies believe that Comm 46.09 complies with Wisconsin's Groundwater Law, chapter 160, Wis. Stats. The language states:

Comm 46.09 Remediation and remediation funding for conditionally closed sites. (1) Additional remedial action, other than natural attenuation, may not be required at ~~such sites~~ that are eligible for closure under s. Comm 46.07 or Comm 46.08, unless the agency with administrative authority for the site determines that an actual or potential risk to public health, safety or welfare or the environment exists.

36. **Comm 46.07 (5)(c).** Termination of funding.

a. Comment by: Wisconsin Petroleum Council

Comment: Object to terminating funding for sites eligible for closure but can not be closed due to a party, other than the tank owner, who is unwilling to execute a deed restriction.

Response: Under both the existing emergency rule Comm 46 and the proposed permanent rule Comm 46, PECFA funding is terminated at the first point that a site is eligible for closure. If the only condition that remains to be satisfied before a site can be closed is the recording of a deed restriction or deed notice, no additional remediation other than natural attenuation will be required by the agencies. The Department of Commerce has determined that once "conditional closure" is granted, further remediation costs will not be PECFA eligible. Only post-closure costs that are eligible under Comm 47 will be reimbursed after "conditional closure" is granted.

b. Comment by: Wisconsin Petroleum Council

Comment: Suggest that a provision be added to the rules to allow for reinstatement of funding eligibility in the event additional remediation costs are necessary to address liability claims brought against tank owners or if there is a change in site circumstances that present a threat to public health, safety or welfare or the environment.

Response: A site can be reopened under NR 726.09 by the agency with administrative authority over the site, and additional remedial action may be required under Comm 46.07 (5) (which has been revised and renumbered Comm 46.09), if a threat to public health, safety, welfare or the environment is discovered. If the site has PECFA eligibility, these costs may be eligible for reimbursement.

- c. Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: Add a note to Comm 46.07(5)(c) clarifying eligible post-closure costs. This clarification should include costs related to developing necessary institutional controls. It is counter-productive to exclude these costs from reimbursement. Cost controls could be put on these items.

Response: Eligible post-closure costs are defined in Comm 47. The requested change is beyond the scope of Comm 46.

37. Comm 46.07 (5)(d). Sites that are "conditionally closed."

- a. Comment by: Wisconsin Petroleum Council

Comment: Expand this paragraph to require the agency with administrative authority to issue a no-further-action-required letter to the responsible party when the site is classified as "conditionally closed".

Response: Both agencies issue "conditional closure letters" when a site is determined to meet the closure criteria in Comm 46. No change to the rule is necessary.

- b. Comment by: Wisconsin Petroleum Council

Comment: Is it correct that sites that are classified as "conditionally closed" are eligible to submit reimbursement of incurred costs under Comm 47? Do Comm 47 rules need to be modified to clarify that tank owners qualify for closure payments in the case of "conditionally closed" sites?

Response: "Conditionally closed" sites are treated as "closed" sites for purposes of submitting a claim under the progress payment provisions of Comm 47.35 (2)(a)2.

38. Comm 46.07 (6). Tracking of Remediation Progress.

- a. Comment by: Wisconsin Petroleum Council

Comment: Is the cost of preparing the annual report PECFA eligible? Do Comm 47 rules need to be amended to identify the costs of preparing the annual report as PECFA eligible?

Response: When this annual reporting requirement is implemented, information will be provided on the eligibility and reimbursement provisions.

- b. Comment submitted by: Environmental Compliance Consultants, Inc.

Comment: This provision is not consistent with s. 101.143 (2)(h) 1, Stats., which requires "quarterly summaries of costs incurred with respect to a discharge for which a claim is intended to be submitted under sub. (3) but for which a final claim has not been submitted." Even the data requirements of this provision are not required in the annual report.

Response: The requirement for the quarterly reporting of costs will be satisfied through quarterly lender reporting. Procedures for review of lending reports and remediation progress will be the subject of future rulemaking.

39. **Comm 46.08 (4).** Changes in classification.

Comment by: Wisconsin Petroleum Council.

Comment: Provision should be made to ensure the responsible party knows the site has been reclassified. Recommend the following language be added to the end of sub (4): "The agency making the determination shall also provide written notice to inform the responsible party that the site has been reclassified and shall state the reasons why the initial classification was determined to be incorrect."

Response: The agencies currently send copies of the reclassification letter to the responsible person. The rule language has been renumbered and revised to reflect the agencies' current practice:

Comm 46.11 (4) CHANGES IN CLASSIFICATION. If a site is has been classified as high-risk, or medium or low risk, and the agency receiving the site investigation report or closure report determines that the classification is incorrect and the site, as reclassified, falls under the other agency's administrative authority, the agency making the determination shall transfer the site file and all related data to the other agency within 14 days after making the determination that the site was incorrectly classified. The agency making the determination shall provide written notice to inform the responsible person that the site has been reclassified, which can be done by sending to the responsible person a copy of the reclassification letter that is addressed to the other agency. The written notice shall state the reasons for the reclassification.

40. **Comm 46.09 (3).** Interagency staff training needs.

Comment by: Wisconsin Petroleum Council.

Comment: Revise this provision to include minimum requirements for receiving and addressing training recommendations from interested parties outside the agencies. Add rule language to require the agencies to solicit training recommendations by February 1 of each year and that these recommendations be submitted by March 1 of each year so outside parties can have input before the agencies prioritize their training needs. Add language to require the agencies to respond to an outside party as to why they agree/disagree with the submitted recommendation prior to May 1 of each year.

Response: The agencies set training priorities based upon issues that arise each year, changing technologies, rule revisions, etc. Interested parties are encouraged to contact each agency and make suggestions as to training needs they perceive and/or inform the agencies of training that is available for staff. The agencies will develop procedures as provided for in the renumbered Comm 46.12 (3) regarding staff training. Additional rule language mandating outside training recommendations is not necessary.

Other comments:

41. Public input to closure decisions.

- a. Comments submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel, and Wisconsin Water Well Association

Comment: The rule does not provide the public and affected property owners with a meaningful role in determining an adequate, acceptable level of clean up. The April 2000 Green sheet to the NRB states (p. 3), "an affected party would have to use a civil suit to obtain additional remedial action, if they desire that outcome."

Comment: The rule must include notification of the affected neighbor as soon as possible after the site investigation indicates actual or potential contamination of the neighbor's property. The neighbor needs to be informed early enough to be involved in decision points of: setting and commenting on the remediation target, the remedial options and the remedial action.

Response: In response to the comment that neighboring property owners should be notified as soon as possible after contamination on the neighbor's property is found, the Department will seek authorization at the Natural Resources Board meeting in October 2000 to take the rule language to public hearing. The proposed rule language can be found in attachment #1 to this memo.

The other issues raised in the first comment in this section will be addressed in a separate "public participation" rule package, which is anticipated to be developed for presentation to the Natural Resources Board in mid-2001.

- b. Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel, and Wisconsin Water Well Association

Comment: Other education and outreach aspects that are needed include: notification of prospective buyers, education of banking, lending, real estate and other affected professions on the purpose of the new rule. Please refer to the NRC report's discussion on "Protocols for Natural Attenuation" which deals with: community concerns, scientific and technical issues and implementation issues.

Response: Outreach and education efforts will be undertaken after the rule is permanent. These outreach and education efforts will include such events as "consultant days", providing training at professional meetings, development of guidance documents, fact sheets, newsletters, e-mails, and other written materials and presentations.

42. Biennial budget provision setting percentage of sites to be classified as medium and low risk.

Comment by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel

Comment: The rule codifies the unfortunate 1999-2001 Biennial Budget provision classifying sites by risk and forcing a set percentage of sites to be classified as medium

and low risk and transferred from DNR to COMM. Political pressure and insufficient funding are driving pressures, not public health and environmental protection.

Response: This comment raises statutory issues that are beyond agency rule-making authority.

43. Controversy over the use of natural attenuation.

Comment submitted by: Sierra Club, Citizens for a Better Environment, Wisconsin's Environmental Decade and Liz Wessel, and Wisconsin Water Well Association

Comment: Recommend both agencies read the recent National Academy of Sciences report, "Natural Attenuation for Groundwater Remediation" (<http://www.nap.edu/catalog/9792.html>). This includes the following paragraph (p.2):

"The principal findings of this report are that natural attenuation is an established remedy for only a few types of contaminants, that rigorous protocols are needed to ensure that natural attenuation potential is analyzed properly, and that natural attenuation should be accepted as a formal remedy for contamination only when the processes are documented to be working and sustainable. Further, where communities are affected by contamination, community members must be provided with documentation of these processes and an opportunity to participate in decision making."

Response: The agencies recognize that natural attenuation is not an appropriate remedy for every type of contaminant. U.S. EPA and DNR have developed protocols to help owners and consultants analyze natural attenuation properly. Comm 46 establishes specific criteria that must be met before natural attenuation is accepted as a remedy for a petroleum contaminated site.

44. NR 749 Table 1 fee schedule.

Comment by: Wisconsin Petroleum Council.

Comment: Clarify NR 749 Table 1 Fee Schedule so closure under Comm 46.07(1) would constitute one \$750 fee when the applicant makes one combined submittal, rather than two \$750 fees – one for Site Investigation and one for Case Close-out Request.

Response: If the site is under DNR's administrative authority and the applicant makes one submittal that includes the site investigation and request for case closure, only one \$750 fee submittal is required under the existing rule.

45. Timeliness of case closure reviews.

Comment by: Wisconsin Petroleum Council.

Comment: Recommend inserting the following language: "Within 120 days after receipt of a request for department review of a case closure, the department shall review the closure request and associated documents and notify the applicant in writing of the decision by the department to either grant or deny closure. Fee payment pursuant to NR 749 for case close-out actions will be due from the applicant upon receipt of a decision from the

department. If the department does not provide the applicant with a written decision to grant or deny the case closure within 120 days of receipt of the closure request, no fee payment will be required pursuant to NR 749. Written notice of a decision to deny the case closure will include an explanation of the reason for the decision."

Response: The agencies review requests for case closure as quickly as possible, given staffing levels and workload requirements. All decisions to deny case closure are accompanied by an explanation of the decision and a description of the additional information that the responsible person must provide to gain closure.

FISCAL ESTIMATE
DOA-2048 (R10/92)

ORIGINAL
 CORRECTED

UPDATED
 SUPPLEMENTAL

LRB or Bill No./Adm. Rule No.

Comm 46

Amendment No. if Applicable

Subject: Risk Screening and Closure Criteria for Petroleum Product Contaminated Sites, and Agency Roles and Responsibilities

Fiscal Effect

State: No State Fiscal Effect

Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation

Increase Existing Appropriation
 Decrease Existing Appropriation
 Create New Appropriation
 Increase Existing Revenues
 Decrease Existing Revenues

Increases Costs - May be possible to Absorb Within Agency's Budget Yes No

Decrease Costs

Local: No local government costs

1. Increase Costs
 Permissive Mandatory

2. Decrease Costs
 Permissive Mandatory

3. Increase Revenues
 Permissive Mandatory

4. Decrease Revenue
 Permissive Mandatory

5. Types of Local Governmental Units Affected:

Towns Villages Cities

Counties Others _____

School Districts WTCS Districts

Fund Sources Affected

GPR FED PRO PRS SEG SEG-S

Affected Ch. 20 Appropriations

Assumptions Used in Arriving at Fiscal Estimate

The Department is promulgating the rule to codify provisions in the working relationship between the Departments of Natural Resources and Commerce in the administration of the PECFA program. In addition, the rule creates risk criteria to be used in selecting responses to contaminated sites. The rule also allows sites to close after a site investigation if risk screening and closure criteria are satisfied. Comm 46 is consistent with the flexible closure requirements of NR 726 that allows the closure of sites where groundwater contamination exceeds enforcement standards, provided natural attenuation will meet groundwater standards.

Long-Range Fiscal Implications

At this point in time, the long term fiscal impact of the changes can not be determined. A workload study will follow that will be completed by the two agencies after implementation of the rule for assessment of impact.

Agency/Prepared by: (Name & Phone No.)

William J. Morrissey 266-7605

Authorized Signature/Telephone No.



Date

10/12/00

FISCAL ESTIMATE WORKSHEET
 Detailed Estimate of Annual Fiscal Effect
 DOA-2047(R02/97)

ORIGINAL
 CORRECTED
 UPDATED
 SUPPLEMENTAL

LRB or Bill No./Adm. Rule No.
 Comm 46

Amendment No.

Subject Risk Screening and Closure Criteria for Petroleum Product Contaminated Sites, and Agency Roles and Responsibilities

I. One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):

II. Annualized Costs:	Annualized Fiscal impact on State funds from:	
	Increased Costs	Decreased Costs
A. State Costs By Category		
State Operations - Salaries and Fringes	\$	\$ -
(FTE Position Changes)	(0 FTE)	(- 0 FTE)
State Operations - Other Costs		-
Local Assistance		-
Aids to Individuals or Organizations		-
TOTAL State Costs By Category	\$ 0	\$ - 0
B. State Costs By Source of Funds		
GPR	\$	\$ -
FED		-
PRO/PRS	0	- 0
SEG/SEG-S	0	- 0
III. State Revenues- Complete this only when proposal will increase or decrease state revenues (e.g., tax increase, decrease in license fee, etc.)		
GPR Taxes	\$	\$ -
GPR Earned		-
FED		-
PRO/PRS	0	- 0
SEG/SEG-S	0	- 0
TOTAL State Revenues	\$ 0	\$ - 0

NET ANNUALIZED FISCAL IMPACT

	<u>STATE</u>	<u>LOCAL</u>
NET CHANGE IN COSTS	\$ 0	\$ 0
NET CHANGE IN REVENUES	\$ 0	\$ 0

Agency/Prepared by: (Name & Phone No.)

Bill Morrissey, 266-7605

Authorized Signature/Telephone No.



Date

10/12/02

SENATOR JUDITH B. ROBSON
CO-CHAIR

PO BOX 7882
MADISON, WI 53707-7882
(608) 266-2253



REPRESENTATIVE GLENN GROTHMAN
CO-CHAIR

PO BOX 8952
MADISON, WI 53708-8952
(608) 264-8486

JOINT COMMITTEE FOR REVIEW OF ADMINISTRATIVE RULES

September 24, 1999

Ms. Brenda Blanchard
Secretary, Department of Commerce
P.O. Box 7970
Madison, WI 53707-7970

Mr. George Meyer
Secretary, Department of Natural Resources
P.O. Box 7921
Madison, WI 53707-7921

Dear Secretary Blanchard and Secretary Meyer:

We are writing to inform you that the Joint Committee for the Review of Administrative Rules (JCRAR) held a public hearing on September 22, 1999. At that meeting, JCRAR received public testimony regarding **Comm 46**, relating to the Petroleum Environmental Cleanup Fund (PECFA).

The Joint Committee for the Review of Administrative Rules met in Executive Session on September 22, 1999 and adopted the following motion:

1. The Joint Committee for the Review of Administrative Rules finds that:

a. In January and February of 1999 the Departments of Commerce and Natural Resources published an emergency rule creating ch. Comm 46, relating to the petroleum environmental cleanup fund interagency responsibilities.

b. Following the expiration of the emergency rule creating ch. Comm 46, the Departments of Commerce and Natural Resources intend to continue to administer and implement the petroleum environmental cleanup fund program according to

the policies and interpretations contained in ch.
Comm 46.

c. The policies and interpretations contained in ch.
Comm 46 meet the definition of a rule as given in s.
227.01(13), Stats.

2. The Joint Committee for the Review of Administrative
Rules, pursuant to s. 227.26 (2) (b), Stats., directs the
Departments of Commerce and Natural Resources to
promulgate as an emergency rule, no later than October 22,
1999, the policies and interpretations under which they
intend to administer and implement the petroleum
environmental cleanup fund program.

Ayes: (8) Senators Grobschmidt, Welch, and
Darling*; Representatives Grothman,
Seratti, Gunderson, Kreuser, and Black


Noes: (0)

Absent: (2) Senators Robson and Shibilski. *Roll
held open, voted by phone

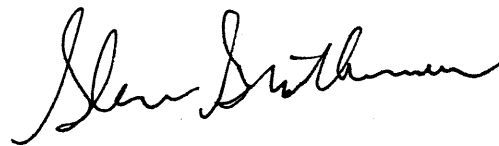
Motion Carried:

8 Ayes, 0 Noes, 2 Absent.

Sincerely,



Judith B. Robson
State Senator
15th Senate District



Glenn Grothman
State Representative
59th Assembly District

JBR:da

**BEFORE THE
DEPARTMENT OF COMMERCE
AND THE DEPARTMENT OF NATURAL RESOURCES**

**NOTICE OF THE JOINT CREATION OF
EMERGENCY RULE Comm 46 and NR 746**

COMMERCE Chapter Comm 46
NATURAL RESOURCES Chapter NR 746

NOTICE IS HEREBY GIVEN that, pursuant to ss. 227.11 (2)(a), 227.24 and 227.26 (2)(b), Stats., interpreting ss. 101.143, 101.144, 292.11 and 292.31 and ch. 160, Stats., the Department of Commerce and the Department of Natural Resources are jointly creating an emergency rule, ch. Comm 46 and NR 746, Wis. Adm. Code, entitled "Petroleum Environmental Cleanup Fund Interagency Responsibilities," relating to sites contaminated with petroleum products from petroleum storage tanks. This emergency rule takes effect upon publication in the official state newspaper as provided in s. 227.24, Stats.

**ORDER OF THE STATE OF WISCONSIN
DEPARTMENT OF COMMERCE**

**CREATING EMERGENCY RULES RELATING TO THE PETROLEUM
ENVIRONMENTAL CLEANUP FUND INTERAGENCY RESPONSIBILITIES**

On September 22, 1999, the Joint Committee for Review of Administrative Rules adopted a motion pursuant to s. 227.26 (2) (b), Stats., that directs the Departments of Commerce and Natural Resources to promulgate as an emergency rule, no later than October 22, 1999, the policies and interpretations under which they intend to administer and implement the shared elements of the petroleum environmental cleanup fund program.

In administering the fund, the Departments had previously relied upon a Memorandum of Understanding for classifying contaminated sites and addressing other statements of policy that affect the two Departments. The rule that is being promulgated details the policies and interpretations under which the agencies intend to administer and guide the remedial decision making for sites with petroleum product contamination from petroleum product storage tank systems.

The rule defines "high priority site," "medium priority site," and "low priority site," and provides that the Department of Natural Resources has authority for high priority sites and that the Department of Commerce has authority for low and medium priority sites. The rule requires transfer of authority for sites with petroleum contamination in the groundwater below the enforcement standard in ch. NR 140 from the Department of Natural Resources to the Department of Commerce. The rule also establishes procedures for transferring sites from one agency to the other when information relevant to the site classification becomes available.

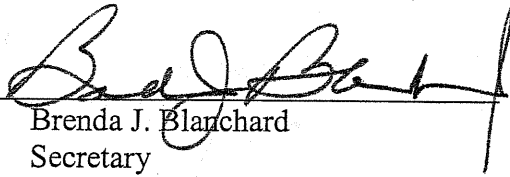
The Chapter also provides that the two agencies will work cooperatively on:

1. Joint decision-making for the selection of remedial bids and the setting of remediation targets for sites that are competitively bid or bundled with another site or sites.
2. Determining when sites may close directly after completing an environmental investigation.
3. Determining when remediation by natural attenuation may be approved as the final remedial strategy for a contaminated site.
4. Tracking the achievement of remediation progress and success.
5. Joint agency reporting of program activities.

Pursuant to s. 227.24, Stats., this rule is adopted as an emergency rule to take effect upon publication in the official state newspaper.

Dated at Madison, Wisconsin 10/13, 1999

STATE OF WISCONSIN
DEPARTMENT OF COMMERCE

By 
Brenda J. Blanchard
Secretary

SECTION 1. Comm 46 is created to read:

CHAPTER Comm 46
PETROLEUM ENVIRONMENTAL CLEANUP FUND INTERAGENCY
RESPONSIBILITIES

Comm 46.01 Purpose. The purpose of this rule is to identify the roles, processes and procedures that guide the departments of commerce and natural resources in the administration of their respective responsibilities for high, medium and low priority petroleum-contaminated sites under ss. 101.143, 101.144, 292.11 and 292.31, and ch. 160, Stats. This rule codifies portions of a memorandum of understanding that has been signed by the two agencies, as required by s. 101.144 (3m), Stats.

Comm 46.02 Applicability. This chapter only applies to sites where petroleum products have discharged from petroleum storage tanks.

Comm 46.03 Definitions. In this chapter:

- (1) "Commerce" means the department of commerce.
- (2) "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."

- (3) "DNR" means the department of natural resources.
- (4) "Enforcement standard" means 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.
- (5) "Groundwater" has the meaning specified in s. 160.01 (4), Stats.

Note: Section 160.01 (4), Stats., defines "groundwater" to mean "any water of the state, as defined in s. 281.01 (18), occurring in a saturated subsurface geological formation of rock or soil. Section 281.01 (18), Stats., defines "waters of the state" to include "those portions of Lake Michigan and Lake Superior within the boundaries of this state, 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 this state or its jurisdiction."

- (6) "High priority site" means a site that is contaminated with a petroleum product and meets one or more of the following criteria:

(a) One or more hazardous substances other than petroleum products from a petroleum storage tank are present at the site.

(b) Contamination from the site discharges to a sensitive environment as defined in s. NR 700.03 (55).

Note: Section NR 700.03 (55) defines “sensitive environment” to mean “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.”

(c) Groundwater contamination that is equal to or greater than an enforcement standard has been confirmed at the site.

(7) “Low permeability material” means subsurface material above bedrock, as defined in s. NR 141.05 (5), that is saturated with groundwater and has a hydraulic conductivity less than or equal to 1×10^{-5} centimeters per second as determined by a method specified in s. Comm 46.05.

Note: Section NR 141.05 (5) defines “bedrock” to mean “the solid rock underlying any loose surficial material such as soil, alluvium or glacial drift. Bedrock includes but is not limited to limestone, dolomite, sandstone, shale and igneous and metamorphic rock.”

(8) “Low priority site” means a site that is contaminated with a petroleum product and meets both of the following criteria:

(a) There is no confirmed petroleum product in groundwater equal to or greater than a preventive action limit, and

(b) There is no evidence of a hazardous substance on the site other than petroleum products that were discharged from a petroleum storage tank.

(9) “Medium priority site” means a site that is contaminated with a petroleum product and meets both of the following criteria:

(a) There is no evidence of a hazardous substance on the site other than petroleum products that were discharged from a petroleum storage tank; and

(b) There is no confirmed petroleum product in groundwater equal to or greater than an enforcement standard.

(10) "Monitoring well" means a groundwater monitoring well designed, installed, constructed and developed in accordance with the requirements of ch. NR 141, for the purpose of monitoring groundwater or obtaining geologic or groundwater related data. The term "monitoring well" includes piezometers and water table observation wells.

(11) "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.

(12) "Permeable material" means a subsurface material that is saturated with groundwater and that is not a low permeability material.

(13) "Petroleum product" has the meaning specified in s. 101.143 (1)(f), Stats.

Note: Section 101.143 (1)(f), Stats., defines "petroleum product" to mean "gasoline, gasoline alcohol fuel blends, kerosene, fuel oil, burner oil, diesel fuel or used motor oil." The term "petroleum product" includes substances that are, or once were, constituents of a petroleum product.

(14) "Petroleum storage tank" has the meaning specified in s. 101.144(1)(bm), Stats.

Note: Section 101.144 (1)(bm), Stats., defines "petroleum storage tank" to mean "a storage tank that is used to store petroleum products together with any on-site integral piping or dispensing system." The term "petroleum storage tank" does not include a pipeline facility.

(15) "Preventive action limit" means a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.15, Stats., and s. NR 140.10 or 140.12.

(16) "Property boundary" has the meaning specified in s. 160.01(6m), Stats.

Note: Section 160.01(6m), Stats., defines "property boundary" to mean "the boundary of the total contiguous parcel of land owned by a common owner, regardless of whether public or private roads run through the parcel."

(17) "Remedial action" means a response action taken to control, minimize or eliminate the discharge of petroleum products so that they do not present an actual or potential threat to public health, safety or welfare or the environment. The term "remedial action" includes actions taken to restore the environment to the extent practicable and to meet applicable environmental standards, and includes natural attenuation. Examples include containment, treatment, excavation, disposal, recycling or reuse, and any monitoring required to assure that such actions protect public health, safety and welfare and the environment.

(18) "Remediation target" means the contaminant concentration in groundwater or soil, or both, that must be achieved before a site can be granted, or is eligible for, closure under ch. NR 726.

(19) "Responsible person" has the meaning specified in s. 101.144(1)(d), Stats.

Note: Section 101.144(1)(d), Stats., defines "responsible person" to mean "a person who owns or operates a petroleum storage tank, a person who causes a discharge from a petroleum storage tank or a person on whose property a petroleum storage tank is located."

(20) "Site" means any area where a petroleum product has discharged.

(21) "Site closure" or "site closed" means a determination made pursuant to ch. NR 726 that applicable groundwater quality standards in ch. NR 140 have been met or will be met by relying on natural attenuation and that applicable soil cleanup standards in ch. NR 720 have been met or will be met by relying on a remedial action performance standard.

(22) "Source control" means actions taken to remove or treat soil or groundwater contamination, or both, actions taken to minimize the leaching of soil contamination to groundwater, and actions taken to prevent the migration of groundwater contamination. The term "source control" includes tank removal, the removal of free product and contaminant hot spot removal or treatment.

Note: The term "source control" does not include groundwater monitoring, soil sampling, recycling or reuse of contaminants, reliance on natural attenuation to address residual contamination, or changes to a facility's design, operation, construction or waste handling or disposal practices.

Comm 46.04 Site authority. (1) GENERAL. The assignment of administrative authority for high, medium and low priority petroleum contaminated sites shall be determined according to the following:

- (a) DNR shall have administrative authority for high priority sites.
- (b) Commerce shall have administrative authority for low and medium priority sites.

(2) ADMINISTRATIVE AUTHORITY. The administrative authority of Commerce and DNR for a site includes enforcement under ss. 101.02, 101.144 (2) or (3), or s. 292.11 (7), Stats., setting remediation targets, remediation supervision and direction, and decision making regarding granting or denying closure and deciding whether or not further remedial action is required.

(3) JOINT DECISION-MAKING. Commerce and DNR shall implement a system of joint decision-making for the setting of remediation targets for sites that are competitively bid or bundled with another site or sites pursuant to s. Comm 47.337 (4)(a)3. and 4., and the selection of remedial bids.

(4) CLOSURE DECISIONS FOR SITES WITH GROUNDWATER CONTAMINATION. At any time following completion of the site investigation, the following steps shall be taken for a site with confirmed groundwater contaminant levels equal to or greater than an enforcement standard:

(a) Where a closure request has been submitted by, or on behalf of, a responsible person with the appropriate fee, the DNR shall review the request, make a determination on closure, and if closure is granted, forward a copy of the closure determination to Commerce.

(b) Where a closure request has not been submitted, if Commerce or DNR identifies a site that either agency believes has met its remediation target, DNR may take action to solicit a closure request from the responsible person.

(5) DISPUTE RESOLUTION. Any disputes between Commerce and DNR under sub. (3) or (4) shall be subject to the following dispute resolution process:

(a) Project managers shall discuss their differences, and the basis for them, in an attempt to resolve the dispute.

(b) If the dispute is not resolved by the project managers, the decision shall be referred to the project managers' supervisors.

(c) If the dispute is not resolved by the project managers' supervisors, the decision shall be referred to the appropriate division administrators.

(d) If the dispute still remains unresolved at the division administrator level, the department secretaries shall be the final decision-makers.

Comm 46.05 Site investigation. (1) GENERAL. In conducting an investigation of petroleum contaminated sites, the responsible person or a consultant retained by the responsible person shall meet applicable ch. NR 716 requirements and minimize costs while providing sufficient data necessary for risk assessment screening and decision-making under this section and ss. Comm 46.06, 46.07, 47.337 and 47.339, and chs. NR 720, 722 and 726.

(2) GROUNDWATER PLUME EXPANSION DETERMINATION. Commerce and DNR shall develop an agreed upon methodology for determining if there is evidence of a groundwater-contaminant plume margin expansion and the actions to take if the data provided in the site investigation report are not adequate to make this determination. This methodology shall be utilized in the site investigation process.

(3) LOW PERMEABILITY DETERMINATION. (a) *General.* If groundwater is contaminated with petroleum products, the responsible person or a consultant retained by the responsible person shall determine, as part of the site investigation, if the contaminant plume is completely contained within low permeability materials and does not extend into deposits of laterally extensive permeable material, into a water line or sewer line trench or other utility corridor, into a fracture in clay, or into another feature that acts or is anticipated to act as a migration pathway for groundwater contamination.

(b) *Evaluation of existing site data.* Existing site data shall be used to make the determinations required under par. (a), if existing site data are sufficient to make these determinations. Existing site data may include, but are not limited to, monitoring well development data, monitoring well purging and sampling data, rising and falling head test data, yield test data, pump test data, monitoring well and boring logs, grain size analysis, local and regional geology, subsurface description, depositional environment, expected and actual degree and extent of contamination, or a combination of this data. If the responsible person's consultant finds groundwater contamination in low permeability materials, the responsible person or the consultant shall submit to the agency that has administrative authority for the site, for approval, the results of the evaluation of existing site data that is required by this paragraph, or an explanation of why the existing site data are not sufficient to make the determinations required in par. (a).

(c) *Standard hydraulic conductivity tests.* If the agency with administrative authority for the site determines that the existing site data are insufficient to make the determinations required under par. (a), the responsible person, or a consultant retained by the responsible person, shall then determine the hydraulic conductivity of the saturated materials at the site utilizing a method described in Appendix A, or a method that has been approved under par. (d), in conformance with the following requirements:

1. Hydraulic conductivity shall be determined for at least one monitoring well within the contaminant plume unless subd. 2 is applicable.

2. Notwithstanding the requirements in subd. 1, the agency with administrative authority for the site may determine that hydraulic conductivity test results for one or more monitoring wells outside of the plume are representative of the hydraulic conductivity of the saturated materials within the plume, based upon a comparison of the monitoring well logs for monitoring wells installed inside and outside of the plume, and that it is not necessary to conduct a hydraulic conductivity test for a monitoring well within the plume.

(d) *Alternative methods for determining hydraulic conductivity.* The agency with administrative authority for the site may approve an alternative method for determining the

hydraulic conductivity of the saturated materials at a site if the method meets the objectives of this section. The responsible person, or a consultant retained by the responsible person, shall obtain approval from the agency before using an alternative method. If the agency grants approval for use of the alternative method, the responsible person or the consultant shall submit site data and test results, to the agency with administrative authority for the site, documenting that the objectives of this section have been met.

(4) SUPPLEMENTAL SITE INVESTIGATION INFORMATION. If the site investigation report for the site was submitted prior to the effective date of this rule, supplemental site information, evaluating existing site data to make the determinations required under par. (a), may be required by Commerce or DNR to be included as part of a submittal for approval of a remedial action, setting remediation targets or approving or denying closure. If the agency with administrative authority for the site determines that the existing site data are insufficient to make the determinations required in sub. (3)(a), the responsible person or a consultant retained by the responsible person, shall then determine the hydraulic conductivity of the saturated materials at the site in compliance with the requirements of sub. (3)(c).

Comm 46.06 Risk assessment screening. (1) GENERAL. The risk criteria in sub. (2) for screening sites shall be used to measure the environmental, public health, safety and welfare risks associated with the discharge of petroleum products to determine whether a remedial action shall be required, which could include, but is not limited to, adequate source control and measures to address environmental factors listed in s. Comm 47.337 (3), to set remediation targets, and to determine whether the site may be closed as provided in s. Comm 46.07.

(2) RISK CRITERIA FOR SCREENING SITES. In making decisions under sub. (1), Commerce and DNR shall utilize, as provided in s. Comm 46.07, the following risk criteria for screening sites:

(a) None of the environmental factors as listed in s. Comm 47.337 (3) are present at the site at the time of the completion of the site investigation;

(b) There is no contaminant concentration in any groundwater that has migrated outside of the property boundary, of the property where the source of the contamination is or was located, that is equal to or greater than enforcement standards, except in a public road or street right of way;

(c) No soil contamination exists within 4 feet of the ground surface that exceeds the direct contact soil concentrations listed in Table 1;

(d) No groundwater contamination, in a water sample collected from a monitoring well in low permeability material, which has been identified using the methods specified in s. Comm 46.05, exceeds the groundwater concentrations listed in Table 1;

(e) 1. There is a vertical separation distance of 5 feet or more between any contaminants contained within low permeability material and any permeable material on the site, or the soil and groundwater contaminant concentrations are decreasing with depth within the low permeability material, and

2. No concentration of any contaminant in the groundwater contained within permeable material is equal to or greater than an enforcement standard;

(f) There is no impact to a water line or sewer line trench or other utility corridor along which vapors, free product or contaminated water may flow, or an interbedded permeable soil layer, and there is no impact or evidence of imminent impact to a basement;

(g) There is no enforcement standard exceedance in any groundwater within 1000 feet of a public well; and

(h) There is no enforcement standard exceedance in any groundwater within 100 feet of a private well.

Table 1

Substance	Direct-Contact Soil Contaminant Concentrations (Top 4 ft)	Basis	Contaminant Concentration in Groundwater within Low-Permeability Materials	Basis
	(mg/kg)		($\mu\text{g/l}$)	
Benzene	1.10	Cancer risk	1,500.	Cleanup time
1,2-DCA	0.54	Cancer risk	1,500.	Cleanup time
Ethylbenzene	400.	Soil Saturation Limit	7,100.	Soil Saturation Limit
Toluene	670.	Soil Saturation Limit	20,000.	Soil Saturation Limit
Xylene	470.	Soil Saturation Limit	7,800.	Soil Saturation Limit

Comm 46.07 Site closure and approval and tracking of remedial actions. (1)
SITE CLOSURE DECISIONS. Commerce and DNR shall make site closure decisions based upon the following requirements:

(a) Sites where contaminant concentrations are below the enforcement standards at every point on site at which groundwater is monitored, and where all of the risk criteria in s. Comm 46.06 (2) are satisfied, shall be closed without reimbursement from Commerce for additional remedial actions except for post closure costs that are otherwise eligible for reimbursement under ch. Comm 47.

(b) Sites where contaminant concentrations within permeable material outside of the property boundary, of the property where the source of the contamination is or was located, are below enforcement standards and where contaminant concentrations within low permeability material outside of the property boundary, of the property where the source of the contamination is or was located, are below the groundwater concentrations listed in Table 1, but where contaminant concentrations above enforcement standards exist within the property boundary, of the property where the source of the contamination is or was located, shall be offered closure with institutional controls that satisfy the requirements of ch. NR 726, if all of the risk criteria in s. Comm 46.06 (2), except ss. Comm 46.06 (2)(b) or 746.06 (2)(e)2., are satisfied. If the owners of all properties on the site with enforcement standard exceedances sign and record a groundwater use restriction, as required under s. NR 726.05 (2)(b)4., the site shall be closed. If the owner of any property on the site with an enforcement standard exceedance does not sign and record a groundwater use restriction, additional remedial action, other than the utilization of natural attenuation, may not be required for areas where all contaminant concentrations that are equal to or greater than enforcement standards are found in low permeability material, except in situations where a risk or potential risk exists to public health, safety or welfare or the environment from the residual groundwater contamination in the low permeability material, and where a technically feasible and cost effective response is available. Funding under s. 101.143, Stats., shall be terminated by Commerce for sites that are offered closure under this paragraph, except for post closure costs that are otherwise eligible for reimbursement under ch. Comm 47.

Note: DNR is currently developing a geographic information system (GIS) registry as a means for tracking residual groundwater contamination which could replace the groundwater use restriction requirement in ch. NR 726. However, until the GIS registry is operable and ch. NR 726 is amended to allow registration on a GIS registry as a substitute for recording a groundwater use restriction, groundwater use restrictions will continue to be used as the method for notifying future property owners and other interested persons of the existence of the residual groundwater contamination.

(c) After an investigation that satisfies the requirements of ch. NR 716, the agency with administrative authority for the site may approve of site closure under ch. NR 726 for sites that do not meet all of the risk criteria in s. Comm 46.06(2) if the requirements of ch. NR 726 are satisfied, or may determine that additional remedial action other than reliance on natural attenuation is not required even though all of the requirements for closure in ch. NR 726 have not been satisfied, without reimbursement from Commerce for additional remedial actions except for post closure costs that are otherwise eligible for reimbursement under ch. Comm 47.

(d) If the agency with administrative authority for a site determines that pars. (a), (b) and (c) do not apply to the site, the responsible person shall be required to conduct a remedial action, and shall be entitled to reimbursement under ch. Comm 47 for all eligible costs of the remedial action.

Note: In compliance with s. 160.21(2)(a), Stats., s. NR 140.22(2)(b) establishes the point of standards application to determine whether an enforcement standard has been

attained or exceeded, for facilities, practices or activities that do not have an established design management zone, as "any point of present groundwater use and any point beyond the boundary of the property on which the facility, practice or activity is located and s. NR 140.22 (2)(c) establishes a point of standards application for "discharges, releases, sites or facilities" regulated under s. 292.11 or 292.31, Stats. (among other statutes) as "every point at which groundwater is monitored." The environmental factors in s. Comm 47.337 (3) and the other risk criteria in s. Comm 46.06 (2) require an evaluation of groundwater contaminant concentrations at all of these points of standards application.

(2) CLOSURE BASED ON REMEDIATION TARGETS. When the remediation targets developed under s. Comm 46.04 (3) are achieved, the site shall be closed utilizing an institutional control that satisfies the requirements of ch. NR 726, if required, without reimbursement from Commerce for additional remedial actions except for post closure costs that are otherwise eligible for reimbursement under ch. Comm 47.

(3) DETERMINATION OF COMPLIANCE WITH ENFORCEMENT STANDARDS OR REMEDIATION TARGETS. When determining whether contaminant concentrations at a site are above or below either an enforcement standard or a remediation target, recognition shall be made of the impact of error of measurement, repeatability of test results and statistical significance. Commerce and DNR shall develop, by June 30, 1999, a process for taking these considerations into account and then revise or adopt administrative rules as appropriate.

(4) TRACKING OF REMEDIATION PROGRESS. (a) Commerce and DNR shall establish a system for electronically tracking remediation progress and shall use the tracking system to determine if remediation funding under s. 101.143, Stats., should end or if a site closure request should be submitted.

(b) Commerce and DNR shall jointly require and enforce the use of the electronic reporting system by claimants for reimbursement under s. 101.143, Stats.

Comm 46.08 Transfer of sites. (1) GENERAL. Except as provided in sub. (2) or (3), DNR shall determine whether Commerce or DNR has administrative authority for a site. Until that determination is made, DNR has administrative authority for the site. DNR shall make this determination within 60 days after receipt by DNR of the site investigation report, unless any of the following apply:

(a) DNR has requested additional information from a responsible person or a consultant retained by the responsible person after reviewing the site investigation report and the requested information has not been submitted to DNR.

(b) The site is the subject of an enforcement action under s. 292.11, Stats., initiated by DNR.

(c) Other circumstances over which DNR has no control have prevented DNR from making a site classification determination.

(2) CONSULTANT DETERMINATION. Consultants performing site investigations may determine, as part of a joint agency site classification pilot, whether a site is high, medium or low priority and submit the investigation report directly to the agency they determine to have administrative authority under s. Comm 46.04 (1).

(3) CHANGES IN CLASSIFICATION. If a site is classified as high, medium or low priority, and DNR or Commerce determines that the classification is incorrect, the agency making the determination that a site has been incorrectly classified shall transfer the site file and all related data to the other agency within 14 days after making the determination, if the other agency has administrative authority for the reclassified site.

(4) LIST OF SITES IN REMEDIATION. Commerce and DNR shall develop and maintain a reconciled list of sites in remediation including data on remediation targets, risk criteria for screening sites, expected closure costs and other relevant data.

Appendix A

STANDARD METHODS FOR DETERMINING HYDRAULIC CONDUCTIVITY

(1) TRANSMISSIVITY TEST. (a) To conduct a transmissivity test, a volume of water is removed from a monitoring well and the water level recovery in the well is measured after a specified time has elapsed. The resultant data may be used to determine the hydraulic conductivity of the area surrounding the monitoring well.

(b) For transmissivity tests, groundwater may not be removed from the well 12 hours prior to beginning the test.

(c) Transmissivity tests shall be conducted in a monitoring well as follows:

1. If using a pump, set the pump intake in the lower half of the screen and allow sufficient time for the water level in the well to equilibrate.

2. Measure and record the initial depth to water and well depth. Subtract the difference to determine the saturated interval of the well, in feet.

3. Pump or bail 2 gallons of groundwater from the well within 2 to 3 minutes.

4. Record the start time and finish time to remove 2 gallons from the well.

5. Measure and record the water level in the well immediately after 2 gallons is removed from the well.

6. After the applicable time listed in Table A has elapsed, measure and record the water level in the well.

7. Calculate hydraulic conductivity utilizing Formula A.

TABLE A

Saturated Interval of Well (feet)	Time (minutes)
5	190
6	160
7	140
8	120
9	105
10	95

FORMULA A

Step 1: Calculate $T = q / 4 \pi s t$

Where: T = coefficient of transmissivity, in gallons per day per foot (gpd/ft)

q = volume of groundwater removed (2 gallons)

s = measured residual drawdown, in feet (water level at time in Table A minus initial depth to water in par. (c) 2., above)

t = time, in days, from Table A. (convert minutes to days by dividing by 1440)

Step 2: Convert T in gpd/ft to T in ft^2/sec by dividing by 646272.

Step 3: Calculate $K = T/b$

Where: K = hydraulic conductivity, in ft/sec

b = saturated interval of well, in feet, as measured in par. (c) 2., above.

Step 4: Convert K in ft/sec to K in cm/sec by multiplying by 30.48.

(2) RISING AND FALLING HEAD TEST. (a) To conduct a rising head test, a volume of groundwater is instantaneously removed from a well and the rate of water level recovery in the well is measured. To conduct a falling head test, a solid object is instantaneously inserted into a well and the rate at which groundwater flows out of the well is measured. The results of both tests may be used to determine the hydraulic conductivity of the area surrounding the well. Both tests shall be conducted in accordance with procedures specified by ASTM in guidance number D 4044-96 and D 5912-96, or their successor, and the relevant criteria in pars. (b) and (c) or (d).

Note: ASTM guidance number D 5912-96 is based on the Bouwer and Rice method. Rising head test is also referred to as bail-down test, slug-out test and slug extraction test. Falling head test is also referred to as slug-in test and slug injection test. The criteria listed

under pars. (a) to (c) are intended for determining the hydraulic conductivity of low permeability materials. They may not be applicable to saturated materials having a hydraulic conductivity greater than 1×10^{-5} cm/sec.

(b) For both the rising and falling head tests, groundwater may not be removed from the well 12 hours prior to the test, the well shall have at least five feet of water within the well screen or well casing, or both, prior to each test, and the borehole diameter of the well shall be at least six inches.

(c) Hydraulic conductivity shall be determined only by rising head tests in wells where the water table intersects the well screen and shall be conducted in accordance with all of the following criteria:

1. Assume the filter pack's specific yield is 0.20 to 0.25, unless measured by the manufacturer.
2. Remove a minimum of 0.75 gallons and a maximum of 1.5 gallons during the test.
3. Each test shall continue for 150 minutes or more unless the test results clearly demonstrate that the hydraulic conductivity of the well is greater than 1×10^{-5} centimeters per second.
4. Determine if the hydraulic conductivity of the well is less than or equal to 1×10^{-5} centimeters per second based upon the test results.

(d) Both rising head and falling head tests may be conducted in piezometers and shall be conducted in accordance with all of the following criteria:

1. Remove a minimum of 0.75 gallons for the rising head test and add a slug with a volume equivalent to 0.75 gallons or more for the falling head test.
2. The volume of groundwater water removed from the well shall be less than the total volume of water within the well casing above the top of the well screen.
3. The sum of the filter pack length and the filter pack seal shall be used as the length of well screen when calculating hydraulic conductivity.
4. The drawdown in the well shall not exceed the top of the filter pack seal.
5. The length of well screen shall be at least four feet.
6. Each test shall continue for 45 minutes or more per well unless the test results clearly demonstrate that the hydraulic conductivity of the well is greater than 1×10^{-5} centimeters per second.
7. Determine if the hydraulic conductivity of the well is less than or equal to 1×10^{-5} centimeters per second based upon the test results.

(End)

FISCAL ESTIMATE
DOA-2048 (R10/92)

ORIGINAL
 CORRECTED

UPDATED
 SUPPLEMENTAL

LRB or Bill No./Adm. Rule No.

Comm 46

Amendment No. if Applicable

Subject: Petroleum Environmental Cleanup Fund Interagency Responsibilities

Fiscal Effect

State: No State Fiscal Effect

Check columns below only if bill makes a direct appropriation
or affects a sum sufficient appropriation

Increase Existing Appropriation
 Decrease Existing Appropriation
 Create New Appropriation
 Increase Existing Revenues
 Decrease Existing Revenues

Increases Costs - May be possible to Absorb
Within Agency's Budget Yes No

Decrease Costs

Local: No local government costs

1. Increase Costs
 Permissive Mandatory

2. Decrease Costs
 Permissive Mandatory

3. Increase Revenues
 Permissive Mandatory

4. Decrease Revenue
 Permissive Mandatory

5. Types of Local Governmental Units Affected:

Towns Villages Cities

Counties Others _____

School Districts WTCS Districts

Fund Sources Affected

GPR FED PRO PRS SEG SEG-S

Affected Ch. 20 Appropriations

Assumptions Used in Arriving at Fiscal Estimate

The Department is promulgating the rule to codify provisions in the working relationship between the Departments of Natural Resources and Commerce in the administration of the PECFA program. At this point in time, the longer term fiscal impact of these changes cannot be determined. A workload study will follow that will be completed by the two agencies after implementation and assessment of impact.

Long-Range Fiscal Implications

None known.

Agency/Prepared by: (Name & Phone No.)

Bill Morrissey 266-7605

Authorized Signature/Telephone No.

Bill Morrissey

Date

10/13/99