March 30, 2007

TO: SEPA Agency with Interest

PROPOSED REVISIONS TO THE MODEL TOXICS CONTROL ACT (MTCA) CLEANUP REGULATION (WAC 173-340)

The Department of Ecology is proposing revisions to the Model Toxics Control Act (MTCA) Cleanup Regulation (WAC 173-340) to clarify the policy and procedures for establishing cleanup levels for mixtures of polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans (dioxins/furans), polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs).

We have concluded that rule revisions are necessary to update the policies and procedures for establishing cleanup levels for mixtures of dioxins and furans, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). As background, the Environmental Protection Agency (EPA) has established a methodology for evaluating dioxin and furans using Toxicity Equivalency Factors (TEFs). The current MTCA Cleanup Regulation specifies that cleanup proponents may use the EPA methodology when establishing cleanup levels for mixtures of dioxin/furans. After publishing the rule amendments, we prepared guidance materials describing how the EPA methodology should be used to establish cleanup levels. A recent lawsuit challenged our application of the guidance. The lawsuit identified an ambiguity in the state's cleanup standards in terms of their application to mixtures of dioxins and furans and the use of the TEF methodology. Similar interpretation issues may exist for PAH and PCB mixtures. We have concluded that amending the rule to clarify key policy decisions is preferable to repeatedly resolving this issue on a site-specific basis.

As part of filing this draft regulation, Ecology prepared the enclosed SEPA checklist along with a determination of nonsignificance. Comments on the proposed rule and the SEPA checklist and determination of non significance must be received by May 25, 2007. Comments should be sent to:

Pete Kmet
Department of Ecology, Toxics Cleanup Program
PO Box 47600
Olympia, WA 98504-7600
Pkme461@ecy.wa.gov

Information on the proposed changes, including draft rule language, can be found at the Toxics Cleanup Program website at:
http://www.ecy.wa.gov/programs/tcp/regs/amendment_2006/amend.htm

Sincerely,

Dave Bradley
Section Manager, Toxics Cleanup Program

Enclosures:

1) SEPA Checklist
2) Determination of Nonsignificance

WAC 197-11-970 Determination of nonsignificance (DNS).

DETERMINATION OF NONSIGNIFICANCE

Description of proposal: Adoption of amendments to the Model Toxics Control Act (MTCA), Cleanup Regulation to clarify the policies and procedures for chemical mixtures.

Proponent: Washington State Department of Ecology

Location of proposal: The proposed rule applies statewide

Lead agency: Washington State Department of Ecology

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

☐ There is no comment period for this DNS.

☐ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

☐ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 51 days from the date below.

Responsible official
Dave Bradley

Position/title: **Information and Policy Section Manager, Toxics Cleanup Program, Department of Ecology**

Phone: **360-407-6907**

Address: P.O. Box 47600, Olympia, **WA 98504**

Date. 4/3/07 Signature _____

(OPTIONAL)

☐ You may appeal this determination to (name) _____
at (location) _____
no later than (date) _____
_____ by (method) .....

You should be prepared to make specific factual objections.
Contact _____to read or ask about the procedures for SEPA appeals.

X There is no agency appeal.

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Adoption of amendments to the Model Toxics Control Act (MTCA) Cleanup Regulation to clarify the policies and procedures for chemical mixtures.

2. Name of applicant: **Washington State Department of Ecology**

3. Address and phone number of applicant and contact person:

   Toxics Cleanup Program
   Department of Ecology
   300 Desmond Drive SE, Lacey
   P.O.Box 47600
   Olympia WA 98504-7600

4. Date checklist prepared: **January, 2007**

5. Agency requesting checklist: **Washington State Department of Ecology**

6. Proposed timing or schedule (including phasing, if applicable):

   Ecology expects to file the proposed rule revisions with the State Code Reviser in April 2007 and hold public hearings in May 2007. Ecology plans to adopt final rule revisions by June 30, 2007.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

WAC 173-340-702(11) states that the Department of Ecology will review and, as appropriate, update the MTCA cleanup standards at least once every five years. Ecology plans to begin this five year review process after completion of this rule amendment.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Ecology is preparing several documents required by the Washington Administrative Procedures Act. These include: (1) Revised language for Chapter 173-340 WAC; (2) Small Business Economic Impact Analysis, for proposed Chapter 173-340 WAC rule revision; (3) Evaluation of Probable Benefits and Costs for Proposed Chapter 173-340 WAC rule revision and (4) Least Burdensome Analysis. These documents will be located at the following website: http://www.ecy.wa.gov/programs/tcp/regs/amendment_2006/amend.htm

Additional environmental information relevant to this proposal is contained in the Final Environmental Impact Statement which was prepared by the Department of Ecology to support decisions on rule amendments adopted in January 2001. The information is addressed in the description of proposed action alternatives; impacts to soil, ground water, surface water, air, human health, plants and animals and impacts on land and water use. Copies of the Environmental Impact Statement can be obtained by contacting the Toxics Cleanup Program at the Department of Ecology.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Not applicable

10. List any government approvals or permits that will be needed for your proposal, if known.

No government approvals or permits outside Ecology will be needed.

When adopting agency rules, Ecology must comply with the requirements for establishing a rule under Chapter 34.05 RCW (Washington's Administrative Procedures Act) and Chapter 19.85 RCW (Regulatory Fairness Act).

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposal is to amend the Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 WAC). This rulemaking will clarify the policies and procedures for establishing and determining compliance with cleanup levels and remediation levels for mixtures of polychlorinated dibenzo-p-dioxins and/or polychlorinated dibenzofurans (dioxin/furan mixtures), mixtures of carcinogenic polycyclic aromatic hydrocarbons (carcinogenic PAHs) and mixtures of polychlorinated biphenyls (PCBs). Specifically, the rule revisions:

- **Clarify that dioxin/furan mixtures, mixtures of carcinogenic PAHs and mixtures of PCBs will each be considered a single hazardous substance for calculating excess cancer risk and determining compliance with cleanup levels and remediation levels. This means a 1×10^{-6} cancer risk is applied to the mixture under Method B.**

- Incorporate the most recent Toxicity Equivalency Factors (TEFs) for dioxin/furan mixtures recommended by the World Health Organization.
- Incorporate the most recent Relative Potency Factors (RPF) for carcinogenic PAHs developed by the California Environmental Protection Agency as TEFs under MTCA; and
- Describe the procedures for using the TEF values when calculating cancer risk and/or evaluating compliance with cleanup levels and remediation levels.
- Revise the default gastrointestinal absorption fraction used to calculate soil cleanup levels for dioxin/furan mixtures.
- Require that evaluations of cross-media transfer (e.g. soil to ground water) consider the chemical and physical properties of each dioxin/furan congener or carcinogenic PAH compound.

In general cleanup actions themselves represent measures to mitigate the problems associated with past releases of hazardous substances. In other words, cleanup actions result in a net environmental benefit, irrespective of impacts caused by the cleanup action itself. The following is an overview of the potential environmental impacts resulting from the cleanup actions, not considering this overall environmental benefit.

The MTCA rules establish three methods (Methods A, B and C) for establishing cleanup levels. Method A is typically used to establish cleanup levels at relatively small sites that involve few contaminants.

Under Method A, Cleanup levels for carcinogens must be at least as stringent as the following:

- Method A Tables: Method A cleanup levels established in Tables 720-1, 740-1, and 745-1. These tables provide values for carcinogenic PAHs and PCBs but not for dioxins and furans.
- Applicable & Relevant & Appropriate Requirements (ARARs): Standards in applicable state and federal laws (such as the surface water quality standards in the National Toxics Rule).

No changes are proposed to Method A under these amendments. Thus, no changes to the scope of cleanups and associated environmental impacts are anticipated for cleanups of PCBs done under Method A. For cleanups of carcinogenic PAHs using Method A, the TEF for dibenz(a,h)anthracene is somewhat less stringent under the proposed rule amendment, which could result in a small reduction in the scope of cleanup at some sites. Overall, this change is anticipated to be minimal since petroleum and metals contamination typically drive cleanups at most sites with carcinogenic PAH contamination.

Method B is the universal method for establishing cleanup levels and can be used at any site. Under Method B, cleanup levels for carcinogens must be at least as stringent as the following:

- Applicable & relevant & Appropriate Requirement (ARARs): Standards in applicable state and federal laws.
- Individual Hazardous Substances: The cancer risk for individual substances cannot exceed one in one million (1×10^{-6}). The non-cancer risk for individual substances cannot exceed a hazard quotient of one (1).
- Total Site Risk: The total site risk for carcinogens cannot exceed one-in-one hundred thousand (1×10^{-5}). Non-cancer total site risk cannot exceed a hazard index one (1). The MTCA rules require that the cleanup

levels established for individual substances be adjusted downward if the total risk posed by the entire mixture exceeds either of these limits. Total site risk includes consideration of multiple hazardous substances and multiple pathways of exposure.

At some sites using Method B these proposed rule amendments could result in somewhat larger areas of soil contaminated by dioxin/furan mixtures and needing remediation than would be required under the current rule. This would primarily be a small number of pulp and paper mill sites with soils contaminated by air emissions of dioxin/furan mixtures.

For soil cleanups of carcinogenic PAHs, these proposed rule amendments could result in somewhat larger areas of soil needing remediation for sites being cleaned up under Method B than would be required under the current rule. However, the TEF for dibenz(a,h)anthracene is somewhat less stringent under the proposed rule amendment, which could result in a small reduction in the scope of cleanup at some sites. Overall, the affect of this amendment is anticipated to be minimal primarily because other contaminants such as petroleum and metals typically drive Method B soil cleanups at most sites with carcinogenic PAH contamination.

For PCBs these amendments are not anticipated to result in significant changes to Method B PCB cleanups primarily because these cleanups are typically driven by ARARs, which treat PCB mixtures as a single hazardous substance and because the voluntary use of TEFs is not expected to result in significantly different cleanup levels.

In addition, no significant changes to the scope of ground water cleanups are anticipated as a result of these rule amendments since these cleanups are typically driven by either the drinking water standard for these mixtures or other contaminants that occur along with these mixtures, such as pentachlorophenol or petroleum.

Lastly, no significant changes to the scope of surface water and sediment cleanups are anticipated as a result of these rule amendments since these cleanups are typically driven by surface water standards, environmental toxicity issues, or background concentrations.

Method C is a conditional method that is only allowed to be used in certain limited situations. It is typically used to establish soil cleanup levels for industrial land uses. Under Method C, cleanup levels for carcinogens must be at least as stringent as the following:

- Applicable & Relevant & Appropriate Requirements (ARARs): Standards in applicable state and federal laws.
- Individual Hazardous Substances: The cancer risk for individual substances cannot exceed one in one hundred thousand (1×10^{-5}). The non-cancer risk for individual substances cannot exceed a hazard quotient of one (1).
- Total Site Risk: The total site risk for carcinogens cannot exceed one-in-one hundred thousand (1 x 10-5). Non-cancer total site risk cannot exceed a hazard index of one (1). The MTCA rules require that the cleanup levels established for individual substances be adjusted downward if the total risk posed by the entire mixture exceeds either of these limits. Total site risk includes consideration of multiple hazardous substances and multiple pathways of exposure.

Because the level of risk used under Method C is the same for single and multiple hazardous substances, for sites using Method C, no significant changes to the scope of cleanup and associated environmental impacts of these chemical mixtures are anticipated as a result of this aspect of these rule amendments. For cleanups of carcinogenic PAHs, the TEF for dibenz(a,h)anthracene is somewhat less stringent under the proposed rule amendment, which could result in a small reduction in the scope of cleanup at some sites. Overall, this change is anticipated to be minimal since petroleum or metals contamination typically drive cleanups at most sites with carcinogenic PAH contamination. For dioxin/furan mixtures, the change in the default gastrointestinal absorption fraction will result in somewhat less stringent Method C soil cleanup levels, potentially reducing the area needing remediation on some industrial properties. No significant change is anticipated for PCB Method C cleanup levels.

See the Cost-Benefit Analysis of these rule amendments for further discussion of the impacts on cleanup at various types of sites and under the various methods for establishing cleanup levels under MTCA.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The proposed rule applies statewide.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other . . . . .

The proposed rule applies statewide; therefore, it will affect cleanup sites in all types of terrain.

b. What is the steepest slope on the site (approximate percent slope)?

The proposed rule applies statewide; therefore, it will affect cleanup sites in all types of slopes.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The rule revision is applicable to all types of soils contaminated with these chemical mixtures. These are typically developed sites with urban soils that have been disturbed by previous development.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The proposed rule applies statewide; therefore there may be unstable soils at cleanup sites.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

The amount of filling or grading will be largely dependent on site-specific conditions addressed in site-specific cleanup action plans and applicable permits such as grading permits. Backfill material for

areas where contaminated soil has been removed typically comes from re-grading the site, nearby construction sites or commercially available sources.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

To the extent these rule amendments could result in the disturbance of larger areas of soil than would otherwise occur, there is the potential for increased erosion during site remediation. This depends on the characteristics of the site that is being cleaned up and the type of cleanup method being employed. Often these are the same areas that would be disturbed by site redevelopment. However, remediation of these sites often results in less long-term soil erosion as redevelopment and restoration of remediated sites typically includes new buildings, parking lots and re-landscaped areas that minimize exposed soil.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

This rule revision should not result in additional impervious surfaces. Typically, impervious surfaces are only used as part of a cleanup action if the surfaces are already in place or are planned as part of the redevelopment of the property.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Potential soil erosion during remediation can be reduced or eliminated by limiting the area of soil exposed at one time during remediation, limiting runoff from the area being remediated, and using best management erosion control practices. If the site is not scheduled for redevelopment, site cleanup will include restoration of the site. With these mitigations, no significant adverse impacts from erosion or other impacts to the earth are expected as a result of this proposal.

2. **Air**

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

To the extent these rule amendments could result in the disturbance of larger areas of soil contaminated with dioxin/furan mixtures than would otherwise occur, there is the potential for increased dust and construction vehicle emissions during site remediation. This depends on the characteristics of the site that is being cleaned up and the type of cleanup method being employed. Some industrial properties with soil dioxin/furan contamination being addressed under Method C could have somewhat smaller areas needing cleanup as a result of this amendment and thus have a reduction in dust and vehicle emissions during site remediation.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Not applicable

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Excavation and grading activities on specific cleanup sites will be carried out in a manner that minimizes emissions of dust and vehicle emissions. Engineering controls that are typically used include wetting of disturbed areas and installing temporary crushed rock or hard surfaced access roads to control dust.

In addition, site-specific health and safety and air monitoring plans specifying air monitoring requirements are typically prepared at sites where dust or other emissions are a potential concern. These plans specify monitoring requirements and locations, and establish action levels providing for protection of site workers and nearby residents from dust and other potential air contaminants.

With these mitigations, no significant adverse impacts to air are expected as a result of this proposal.

TO BE COMPLETED BY APPLICANT

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3. **Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Based on current data from Ecology's contaminated site database, it is estimated that approximately 30 percent of the contaminated sites in Washington State have affected surface water. The surface waters most affected by contaminated sites are those in urbanized areas where a majority of contaminated sites are located. These include fresh water surface waters, and marine waters located near contaminated sites. It is expected that this pattern would hold for sites that are the subject of the chemical mixtures affected by this rule amendment.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Some cleanup sites involve remediation of sediment and many cleanup projects/sites are adjacent to surface waters.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

These rule amendments are not anticipated to result in an increase in the areas of sediment or wetlands needing remediation and thus would change the area of surface water or wetlands affected. This is because the sediment cleanups would be based on factors other than the changes that are the subject of these rule amendments, such as ecological considerations or background concentrations.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

In general, remediation of sites with these chemical mixtures would not require surface water withdrawals or diversions. However, this will be largely dependent on site-specific conditions addressed in cleanup action plans. For example, river water might need to be temporarily diverted around a construction area.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The proposed rule amendments apply statewide, and many cleanup sites are located within 100-year floodplains. Therefore, the proposed rule amendments will likely affect cleanup sites located within 100-year floodplains.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

Construction activities at cleanup sites have the potential to affect surface water quality from contaminated storm water runoff. In some cases construction water may be contaminated with petroleum products released from construction equipment. To the extent these rule amendments could result in an incremental increase in the amount of soil needing remediation there could be a small increase in such discharges.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Because these chemical mixtures are relatively immobile, ground water contamination is typically less of an issue than soil contamination at sites contaminated with these chemical mixtures. The most likely sites where ground water contamination may be an issue are at wood treatment sites where these contaminants are mixed with oils and other chemicals like pentachlorophenol that facilitate their transport to groundwater. Remediation of contaminated ground water at these types of sites typically consists of free product removal and containment of contaminated ground water. Some sites may require the removal and treatment or containment of contaminated ground water. The extent of ground water remediation is not expected to change under these proposed rule amendments as the ground water standards for these chemical mixtures are usually driven by applicable drinking water or surface water standards.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Not applicable

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Construction activities at cleanup sites have the potential to temporarily alter runoff flow, either through diversion of runoff around the active remediation area or changing of grades after site remediation. To the extent these rule amendments could result in an incremental increase in the amount of soil needing remediation there could be a small increase in such impacts at contaminated sites undergoing remediation.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Site remediation reduces the potential for contaminants to enter ground water and surface water. Construction activities at cleanup sites have the potential to affect surface water quality due to erosion during construction and release of contaminants in the storm water runoff. In some cases construction water may be contaminated with petroleum products released from construction equipment.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

If a surface water diversion is necessary, the short-term impacts of such a diversion, such as erosion, can be mitigated by measures such as the use of best management practices for erosion control, berms, pumps and

other methods necessary to divert and drain surface water away from the work area and to minimize sediment entering surface waters.

Although sites may be found within flood plains, these rule amendments would not require additional mitigation measures than those which would already be required as part of a cleanup action.

Should surface runoff concerns be an issue at a site, construction plans can be prepared providing for diversion of runoff around areas subject to remediation and use of best management practices to limit erosion and release of contaminants off areas during remediation. In extreme cases, construction water can be collected and treated prior to being discharged from the cleanup site.

Potential impacts on ground water are considered during the remedy selection process. Where removal of ground water for remediation is of concern, the treated ground water can be infiltrated back into the site, if necessary.

With these mitigation measures no significant adverse impacts to surface, ground, and runoff water are anticipated as a result of these rule amendments.

4. **Plants**

As this is a statewide regulation, all or some of the plants listed below may be affected by site remediation.

a. Check or circle types of vegetation found on the site:

X_____ deciduous tree: alder, maple, aspen, other
X_____ evergreen tree: fir, cedar, pine, other
X_____ shrubs
X_____ grass
X_____ pasture
X_____ crop or grain
X_____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
X_____ water plants: water lily, eelgrass, milfoil, other
X_____ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Most sites contaminated by chemical mixtures that are the subject of these rule amendments are in industrial or commercial areas, which typically have limited existing vegetation. To the extent these rule amendments could result in an incremental increase in the amount of soil needing remediation in these areas and nearby developed and undeveloped areas, some additional vegetation could be impacted by site remediation.

c. List threatened or endangered species known to be on or near the site.

This is a statewide regulation, thus depending on the site conditions including location, some threatened or endangered species may be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Potential impacts and mitigation measures are considered on a site-specific basis during the remedy selection process in site cleanup. Where there is a potential for adverse environmental impacts on plants during cleanup actions, potential mitigation measures include: selecting a remedy with less impact on vegetation; the relocation of support facilities (such as site access roads and staging areas) to less critical or previously disturbed areas; and, replacement of damaged vegetation and topsoil after site cleanup is completed. With these mitigation measures no significant adverse impacts to plants are anticipated as a result of these rule amendments.

5. **Animals**

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

As this is a statewide regulation, it is possible that some, or all of the animals could present at sites undergoing remediation.

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

This is a statewide regulation, thus depending on the site location, some threatened or endangered species may be on or near sites undergoing remediation.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY

c. Is the site part of a migration route? If so, explain.

This is a statewide regulation and thus sites undergoing remediation could potentially be in an area that is part of a migration route.

d. Proposed measures to preserve or enhance wildlife, if any:

Most sites contaminated by chemical mixtures that are the subject of these rule amendments are in industrial or commercial areas, which typically do not have significant animal populations. To the extent these rule amendments could result in an incremental increase in the amount of area needing remediation, there could be a small increase in the opportunity for animals to be temporarily impacted during site remediation. Depending on site-specific conditions, mitigation measures could include: temporary or permanent relocation of species; relocation of remediation support activities (such as access roads and staging areas) to less critical or previously disturbed habitats; and restoration of habitat one cleanup has been completed. For aquatic environments no additional areas are anticipated to be disturbed as a result of these rule amendments. However, if there would be impacts, restoration of the river or stream bottom substrate can be done at the completion of remediation. With these mitigation measures no significant adverse impacts to animals are anticipated as a result of these rule amendments.

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

To the extent these rule revisions could result in an incremental increase in the area of soil needing remediation, there could be a small increase in the amount of equipment fuel usage.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Not applicable

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

To the extent energy usage is an issue at a site, this could be considered during the remedy selection process. Mitigation measures could include use of fuel efficient equipment and remediation methods that minimize energy impacts. With these mitigations, no significant adverse impacts to energy are anticipated as a result of these rule amendments.

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The protection of human health and the environment is one of the primary goals of MTCA. To the extent these rule amendments result in reducing impacts to human health and the environment , these rule revisions should reduce environmental health impacts caused by exposure to these chemical mixtures.

Construction and operation of cleanup measures often involve extensive physical disturbance of hazardous substances in soils. This increases the potential for site remediation workers and nearby persons to be temporarily exposed to these chemical mixtures during cleanup.

To the extent these rule amendments result in an increase in the transport of contaminated soil to off-site treatment and disposal facilities there could be an increase in the potential for transportation-related injuries. However, the estimated number of trucks involved with the transport of hazardous wastes represent a small percentage of the overall truck traffic in the state (approximately 1 in 300 to 1 in 400). Consequently, implementation of the proposed amendments is not expected to result in a significant increase in transportation-related injuries.

1) Describe special emergency services that might be required.

Not applicable

2) Proposed measures to reduce or control environmental health hazards, if any:

Environmental health hazards can be considered on a site-specific basis during the remedy selection process. Worker exposure and adverse health effects resulting from cleanup activities can, to a large degree, be mitigated by occupational health and safety practices and the implementation of site-specific health and safety plans. Potential adverse impacts among off-site populations can be mitigated through the use of practices that minimize the potential for dust generation and, in extreme cases, by temporarily relocating residents and workers. With these mitigations, no significant adverse impacts to environmental health are anticipated as a result of these rule amendments.

b. **Noise**

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Not applicable

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction-related noise in cleanup areas will be generated through traffic, excavation activities and heavy equipment engine noise. Some heavy equipment is equipped with safety alarms (beepers) that are activated when the equipment is operating in reverse. Such safety alarms are for safety purposes. To the extent these rule revisions could result in somewhat larger areas of soil remediation, there could be a small incremental increase in these noises.

3. Proposed measures to reduce or control noise impacts, if any:

Construction noise can be reduced by providing mufflers on engines, using quieter equipment or construction practices, turning off equipment when not in use and scheduling work during times when this noise is less intrusive. To reduce construction generated vibration at nearby residents and businesses, truck routes and speed limits can be established. With these mitigations, no significant adverse noise impacts are anticipated as a result of these rule amendments.

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties?

Most sites contaminated by chemical mixtures that are the subject of these rule amendments are in industrial or commercial areas, some of which are located in shoreline areas. Since the proposal is statewide, it is possible that other uses may also be present.

b. Has the site been used for agriculture? If so, describe.

In general, agricultural uses are not impacted by these chemical mixtures. One exception would be pesticide mixing areas, which could have dioxin/furans present as a contaminant in the pesticides historically used.

c. Describe any structures on the site.

The proposed rule applies statewide, and some cleanup sites may have commercial, industrial, residential and other structures present on them.

d. Will any structures be demolished? If so, what?

Whether structures are demolished depends on site-specific considerations addressed in the cleanup action plan. Within the site that is the source of the contamination, it may be necessary to demolish a structure to access underlying soil contamination. Often these same structures are being demolished for site redevelopment purposes. Cleanup of off-property areas typically does not require demolish of structures, since such cleanup is usually limited to the yard around the structure.

e. What is the current zoning classification of the site?

The rule amendments have statewide applicability, and therefore will affect sites in all zoning classifications. The rule amendments will not change how land use is considered in setting cleanup levels.

f. What is the current comprehensive plan designation of the site?

Not applicable

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Not applicable

i. Approximately how many people would reside or work in the completed project?

Not applicable

j. Approximately how many people would the completed project displace?

Only rarely will a cleanup action require temporary dislocation. The rule revision is having an effect only at the margins (low levels of contamination at the edge of sites). Cleanup of such low levels of contamination is unlikely to result in dislocation.

k. Proposed measures to avoid or reduce displacement impacts, if any:

If cleanup of yards around businesses and housing units is necessary, impacts to these areas would be temporary (during site cleanup). If necessary, occupants of these areas can be temporarily relocated while cleanup is underway. Once cleanup is complete, cleanup plans typically require restoration of the yard after completion of the cleanup. As a result, no significant adverse displacement impacts are anticipated as a result of these rule amendments.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Site cleanup often results in blighted, underutilized property being positioned for redevelopment. Any such redevelopment would occur independent of the cleanup process and have to comply with land uses and plans.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Sites cleanups, by themselves do not create housing units; however site redevelopment after cleanup may create new housing units.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Most sites contaminated by chemical mixtures that are the subject of these rule amendments are in industrial or commercial areas where housing units are unlikely to be encountered. Where nearby housing units are impacted by contamination, cleanup actions typically address cleanup of yards around these units, and do not eliminate these units.

c. Proposed measures to reduce or control housing impacts, if any:

If cleanup of yards around housing units is necessary, impacts to these units would be temporary (during site cleanup). If necessary, occupants of the housing can be temporarily relocated while cleanup is underway. Once cleanup is complete, cleanup plans typically require restoration of the yard after completion of the cleanup. As a result, no significant adverse impacts to housing are anticipated as a result of these rule amendments.

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Not applicable

b. What views in the immediate vicinity would be altered or obstructed?

These proposed rule revisions are not anticipated to alter or obstruct views. Cleanup actions must meet legally applicable requirements (e.g., local ordinances) and address the concerns of the public. Cleanup actions should not reduce views. If anything, they might increase views if vegetation or structures are removed to gain access to contaminated soil.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Sites are typically restored or redeveloped after cleanup, resulting in the same or improved aesthetics. As a result, no significant adverse impacts to aesthetics are anticipated as a result of these rule amendments.

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

When cleanup construction activities occur at night due to construction delays and timing constraints, portable construction lighting may be necessary.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Not applicable

c. What existing off-site sources of light or glare may affect your proposal?

Not applicable

d. Proposed measures to reduce or control light and glare impacts, if any:

Temporary light and glare impacts caused by portable construction lighting would be directed away from homes and roads as much as possible and focused on work areas. The lights would be shielded and turned off when not necessary. As a result, no significant adverse impacts from light or glare are anticipated as a result of these rule amendments.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Not applicable

b. Would the proposed project displace any existing recreational uses? If so, describe.

To the extent these rule amendments could result in the disturbance of larger areas of soil than would otherwise occur, there is the potential for more impacts to recreational resources than would otherwise occur. However, most sites contaminated by chemical mixtures that are the subject of these rule amendments are in industrial or commercial areas where recreational uses are unlikely to be encountered. Where such uses are present, the impacts of site cleanup are limited to when site cleanup is occurring. Sites are typically restored after cleanup is complete and often provide improved recreational access and opportunities after cleanup.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Site cleanup actions may temporarily limit or preclude certain site use or activities during cleanup. These impacts can be minimized by phasing cleanup or scheduling cleanup actions around ongoing activities. As a result, no significant adverse impacts to these resources are anticipated as a result of these rule amendments.

13. **Historic and cultural preservation**

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

The proposed rule applies statewide; therefore, some cleanup sites may be located in areas of historic and cultural significance. Historic or archeological artifacts could be encountered or disturbed during site excavation activities.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

The proposed rule applies statewide, and some cleanup sites may be located in or close to landmarks and areas of historic and cultural significance.

c. Proposed measures to reduce or control impacts, if any:

To the extent these rule amendments could result in the disturbance of larger areas of soil than would otherwise occur, there is the potential for more impacts to historical or cultural resources than would otherwise occur. However, most sites contaminated by chemical mixtures that are the subject of these rule amendments are in areas already impacted by urban development so that such resources are unlikely to be encountered. Where historic, archaeological, scientific or cultural resources are known to exist, impacts to these resources can be minimized by selecting a remedy that minimizes disturbance of these resources or developing a plan addressing preservation of these resources during site remediation. As a result, no significant adverse impacts to these resources are anticipated as a result of these rule amendments.

14. **Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The proposed rule amendments apply statewide, and some cleanup sites may be served by public streets and highways. Site access from these streets and highways would be determined on a site-specific basis.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The proposed rule amendments apply statewide, and some cleanup sites may be served by, or located close to public transit routes.

c. How many parking spaces would the completed project have? How many would the project eliminate?

No parking spaces would be added or removed as a result of these rule amendments. Site redevelopment after remediation could result in more or less parking spaces depending on the development characteristics.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Depending on the site-specific characteristics, there may be a need for flaggers and other traffic control measures on adjoining streets and temporary access roads within a site during site remediation. Temporary access roads are typically removed at the completion of remediation unless needed as part of the site redevelopment after cleanup.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Some sites addressed in these rule amendments may use water or rail transportation modes to transport contaminated soils to a disposal or treatment facility.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

To the extent these rule amendments result in the offsite removal of more contaminated soil than would otherwise occur, additional vehicles trips could be generated. Site redevelopment after remediation could result in more or less vehicle trips depending on pre-development site conditions and post cleanup re-development conditions.

g. Proposed measures to reduce or control transportation impacts, if any:

Various measures may be implemented to mitigate these impacts. Vehicles entering or leaving the site can be scheduled to arrive and depart during non-peak traffic hours. Impacts can also be mitigated by scheduling truck movements during non peak hours, thus avoiding impacts on traffic volume and reducing the chances of accidents. Emergency response plans prepared prior to remediation insure that spills or other emergencies, if they occur, can be handled in an efficient and safe manner to minimize traffic impacts.

With the above mitigations, no significant adverse impacts to transportation systems are anticipated as a result of these proposed rule amendments.

15. **Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No increased need for public services is anticipated as a result of this proposal.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable.

16. **Utilities**

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

The proposed rule applies statewide, and some cleanup sites may be served by, or located close to, some or all utility services listed above.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The proposed rule applies statewide, and some cleanup sites may require some or all utility services listed above during the cleanup. Following the cleanup, the site may be available for redevelopment and require utility services as part of that proposal.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:

Date Submitted:

TO BE COMPLETED BY APPLICANT

EVALUATION FOR
AGENCY USE ONLY

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

   Proposed measures to avoid or reduce such increases are:

   Please see answers in Section B

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

   Please see answers in Section B.

3. How would the proposal be likely to deplete energy or natural resources?

   Proposed measures to protect or conserve energy and natural resources are:

   Please see answers in Section B.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   Proposed measures to protect such resources or to avoid or reduce impacts are:

   Please see answers in Section B

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

   Proposed measures to avoid or reduce shoreline and land use impacts are:

   Please see answers in Section B.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   Proposed measures to reduce or respond to such demand(s) are:

   Please see answers in Section B.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

No conflicts, resulting from implementation of the proposal, have been identified.