

## Frequently Asked Questions (FAQ's) Regarding Model Remedy Implementation

### Implementation Memorandum No. 20

*Date:* March 8, 2017

*To:* Interested Persons

*From:* Jeff Johnston, Section Manager  
Information & Policy Section  
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*Contact:* Policy & Technical Support Unit, Headquarters

*Attachments:* None

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## Table of Contents

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**1.0 Purpose and Applicability ..... 3**

**2.0 Background ..... 3**

**3.0 General Questions Related to Model Remedies ..... 4**

**4.0 Questions Specific to Process and Implementation..... 7**

**5.0 Questions When Other Compounds Are Present .....11**

**6.0 References.....14**

## Acronyms and Abbreviations

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Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
FS	Feasibility Study
MTCA	Model Toxics Control Act
NFA	no further action
PCBs	polychlorinated biphenyls
PCE	tetrachloroethylene (also called perchloroethylene)
PQL	practical quantitation limits
RCW	Revised Code of Washington
RI	Remedial Investigation
TCP	Toxics Cleanup Program
TPH	total petroleum hydrocarbons
VCP	Voluntary Cleanup Program
WAC	Washington Administrative Code

## 1.0 Purpose and Applicability

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In 2015 and 2016, the Washington State Department of Ecology (Ecology) produced two guidance documents that established new model remedies for sites impacted by petroleum: [\*Model Remedies for Sites with Petroleum Contaminated Soils\*](#) (Ecology 2015b) and [\*Model Remedies for Sites with Petroleum Impacts to Groundwater\*](#) (Ecology 2016c).

Since then, Ecology has received a number of implementation questions on both documents from Ecology staff and external parties. This frequently asked questions (FAQ) implementation memo provides additional direction and clarification for using model remedies at sites contaminated with petroleum. It is intended to supplement the two model remedy guidance documents, but also contains updated information that will soon be reflected in the guidance.

This document applies to any petroleum cleanup site eligible to use a model remedy for cleanup, including both Ecology-supervised sites and independent cleanup actions.

## 2.0 Background

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In 2013, the Washington Legislature made significant changes to the Model Toxics Control Act (MTCA). One of the provisions gave additional direction to Ecology regarding the establishment of model remedies. In response to the 2013 legislative amendments, Ecology prepared two guidance documents. The first was completed in September 2015: *Model Remedies for Sites with Petroleum Contaminated Soils* (referred in this memo as “Soil Model Remedies Guidance”). In August 2016, Ecology released *Model Remedies for Sites with Petroleum Impacts to Groundwater* (referred in this memo as “Groundwater Model Remedies Guidance”). Together, the two guidance documents provide 19 new model remedy options for addressing petroleum contamination.

### **3.0 General Questions Related to Model Remedies**

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#### **Question No. 1:**

What is a model remedy?

#### **Answer:**

Model remedies are cleanup actions that Ecology has determined will be protective of human health and the environment for certain types of contamination and media.

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#### **Question No. 2:**

How was the model remedy process created?

#### **Answer:**

In 1995, Ecology formed the MTCA Policy Advisory Committee (PAC) at the Legislature's request to study and re-evaluate how the Model Toxics Control Act was working. During the 2001 MTCA rulemaking process, the committee recommended establishing model remedies. Ecology responded by developing the necessary rule language criteria to support implementation of this concept.

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#### **Question No. 3:**

What are the goals and benefits of model remedies?

#### **Answer:**

The goal of model remedies is to streamline and accelerate the selection of cleanup actions. If a site meets the requirements to use a model remedy, it is not necessary to conduct a Feasibility Study or a Disproportionate Cost Analysis. In addition, Ecology has the option to waive fees for the time spent reviewing no further action (NFA) requests at cleanups that qualify for and appropriately use a model remedy.

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**Question No. 4:**

Who can help me determine if my site qualifies for using a model remedy?

**Answer:**

You can contact Ecology's Model Remedies Coordinator at the Toxics Cleanup Program or your Cleanup Project Manager. See Question No. 22 for contact details.

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**Question No. 5:**

If sampling is conducted at a historic petroleum site and no exceedances of the MTCA cleanup levels are found, does the site qualify as a model remedy?

**Answer:**

No. To qualify, an established or approved model remedy must be used for the cleanup. If the only cleanup action consists of removing the tank, then the site would not qualify.

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**Question No. 6:**

If I incorrectly identify the appropriate model remedy in my NFA request, will Ecology still process my application?

**Answer:**

It depends on whether a different model remedy could be used, and if so, whether any additional requirements would apply.

For example, if Groundwater Model Remedy No. 1 was identified in the NFA request, but Model Remedy No. 5 was applicable and should have been chosen, Ecology would likely identify the appropriate model remedy in the NFA opinion letter.

However, if Groundwater Model Remedy No. 1 was identified when Model Remedy No. 2 was actually the applicable remedy, Ecology would typically issue an "NFA likely" letter and indicate that an Environmental Covenant would be necessary to address the remaining soil contamination.

The previous examples assume that there are no technical problems with the NFA request. If significant shortcomings exist, they would be addressed as described in FAQ No. 11 (below). If none of the model remedies apply because one or more of the eligibility criteria are not met (e.g. petroleum contaminated groundwater is co-mingled with chlorinated compounds) then Ecology's response letter would indicate that a model remedy would not be appropriate.

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**Question No. 7:**

A number of policy changes have occurred since the Soil Model Remedies Guidance was completed. Are there any plans to revise this document to make it consistent with current practice?

**Answer:**

Yes. Ecology intends to update the document by mid-2017 to make it consistent with both the Groundwater Model Remedies Guidance and the changes identified in this FAQ memo.

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**Question No. 8:**

Does Ecology intend to provide updates on how many sites successfully used a model remedy to obtain an NFA determination? Will Ecology provide site-specific examples?

**Answer:**

Yes. Ecology will periodically post information about the progress to establish and use model remedies on our Model Remedies website at:

<http://www.ecy.wa.gov/programs/tcp/policies/model-remedies/index.html>

The webpage will include Cleanup Site Identification (CSID) numbers for sites that received an NFA using model remedies, so you'll be able to access and evaluate all posted documents for the site.

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## 4.0 Questions Specific to Process and Implementation

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### **Question No. 9:**

Ecology recently finalized several checklists to help improve the quality and consistency of remedial investigations, feasibility studies, and cleanup action plans. How do these documents apply to sites that use model remedies for cleanup?

### **Answer:**

- **Use the Remedial Investigation (RI) checklist.** This checklist should be used for all sites, including when planning to implement a model remedy. It is essential to prepare a complete and accurate RI to determine whether the site is eligible to use a model remedy.
  - **Do not use the Feasibility Study (FS) checklist.** If your site meets the eligibility criteria and appropriately uses a model remedy, you are not required to conduct a feasibility study or a disproportionate cost analysis, and do not need to complete the feasibility study checklist.
  - **Recommend using Cleanup Action Plan (CAP) checklist.** Cleanup sites under the independent process do not need a CAP checklist. However, after completing the cleanup, sites using a model remedy need to provide adequate documentation that the selected model remedy met the established provisions. Since much of the information identified in the CAP checklist would apply to a model remedy cleanup, Ecology recommends using the checklist when completing the remedial action report.
  - **Find the checklists at:** <http://www.ecy.wa.gov/programs/tcp/policies/checklists.html>.
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### **Question No. 10:**

I am currently in the Voluntary Cleanup Program (VCP) and would like to seek Ecology's opinion on the adequacy of my Remedial Investigation. I intend to use a model remedy for the cleanup, so does the review fee waiver apply?

### **Answer:**

No. If you request agency feedback before submitting the NFA application, you must pay the appropriate fee.

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**Question No. 11:**

How detailed a response will Ecology provide if my NFA request submittal is incomplete?

**Answer:**

If only minor issues exist, Ecology will identify any remaining information necessary to obtain an NFA letter. If the report has significant shortcomings, (e.g. the investigation hasn't adequately characterized the distribution on hazardous substances at the site) Ecology will typically identify only the major concerns. For example, a review letter would not typically specify the number and locations of additional wells still needed to complete an investigation.

As discussed in FAQ No. 9, Ecology developed the [Remedial Investigation Report Checklist](#) to help ensure full site investigations are completed. The RI checklist should be used at all sites, regardless of whether they are cleaned up independently or under Ecology supervision.

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**Question No. 12:**

How do property-specific NFA requests differ from site-specific NFA requests?

**Answer:**

Chapter 2 of Ecology's [Guidelines for Property Cleanups under the Voluntary Cleanup Program](#) (Ecology 2015a) discusses this distinction. In general, a *site* is defined as any area where a hazardous substance is located. A *property* must consist of at least one whole tax parcel but may include multiple, contiguous tax parcels affected by the site. The VCP guidance provides examples where a property-specific NFA may be possible.

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**Question No. 13:**

When implementing a model remedy cleanup, we encountered a structural impediment that would not allow us to fully remove the contaminated soil. What type of documentation do we need to demonstrate that soil removal was implemented to the greatest degree practicable?

**Answer:**

For situations where the contamination is adjacent to a building or other structure, obtain a technical assessment from a geotechnical or structural engineer that describe the ramifications of removing that additional soil contamination.

For situations where one or more sub-surface impediments are present, contact either a) the local government, b) the utility with jurisdiction, or c) the company responsible for the underground piping. Seek their feedback on whether any restrictions or limitations would apply to soil removal activities.

If constraints are identified for these situations, request written documentation from the authorized representative(s) to support the conclusion that further soil removal is not practicable. In addition, an Environmental Covenant must be filed to document that contaminated soil remains on the property.

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**Question No. 14:**

Can I request a Model Remedy NFA opinion if my site has received a petroleum brownfields grant?

**Answer:**

Yes, as long as all applicable criteria specified in the Soil or Groundwater Model Remedies Guidance have been met.

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**Question No. 15:**

Is site development work considered a cleanup action and therefore eligible to use a model remedy?

**Answer:**

Yes, if the applicable eligibility criteria and the specific technical details in the Soil or Groundwater Model Remedies Guidance have been met. At that point, the NFA request could indicate that a model remedy was used to complete the cleanup.

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**Question No. 16:**

What model remedy options apply to sites with petroleum contaminated soil below the water table?

**Answer:**

The majority of sites with contaminated soil below the water table have groundwater impacts. In this situation, several of the groundwater model remedy options would likely apply, as long as the eligibility criteria in Chapter 3 in the [Model Remedies for Sites with Petroleum Impacts to Groundwater](#) (Ecology 2016c) are met. If no groundwater samples contain hazardous constituents above the practical quantitation limits (PQL's), and the investigation was thorough and comprehensive, then the Soil Model Remedies Guidance could apply.

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**Question No. 17:**

For sites that used a model remedy for cleanup, can I rely on the statistical evaluation procedures set forth in [WAC 173-340-740\(7\)\(e\)](#) if the direct comparison approach does not apply?

**Answer:**

Generally, yes. The only exception would be for situations where compliance with the generic TPH cleanup level of 1500 mg/kg is being used. See Chapter 5 in [Model Remedies for Sites with Petroleum Contaminated Soils](#) (Ecology 2015b) for more details on the approach used to develop the 1500 mg/kg level and why only the direct comparison method is allowable at this time.

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## 5.0 Questions When Other Compounds Are Present

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### **Question No. 18:**

Can I use model remedies for sites with waste oil releases?

### **Answer:**

Yes, if the waste oil consists of one or more of the products listed in Table 7.1 of Ecology's [Guidance for Remediation of Petroleum Contaminated Sites](#) (Ecology 2016). This includes engine lubricating oil, hydraulic fluid (etc.) as long as the waste oil does not contain non-petroleum products such as PCBs or chlorinated solvents.

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### **Question No. 19:**

Can I use model remedies for sites with non-petroleum metal impacts?

### **Answer:**

Yes. The groundwater model remedy guidance indicates a site can use the model remedy process:

- a) If the hazardous constituent meets the definition of natural background, or
- b) When metal concentrations exceed the PQLs, but the remaining concentrations do not exceed the applicable cleanup standards at the time cleanup is completed.

The Soil Model Remedies Guidance will be revised in mid-2017 to include this same provision.

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### **Question No. 20:**

My site has petroleum contaminated soil that also has impacts from a non-petroleum source. The contaminants do not co-mingle. Can I use a soil model remedy for just the petroleum source?

### **Answer:**

Currently, the Soil Model Remedies Guidance does not allow exceedances of the PQLs for any non-petroleum contaminants. However, Ecology believes this criteria is overly conservative and

intends to modify the guidance to allow using model remedies when contaminants do not co-mingle. This option can be used after the Soil Model Remedies Guidance has been updated in mid-2017.

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**Question No. 21:**

I have completed the Remedial Investigation. In addition to various petroleum constituents, low levels of PCE are also present in the groundwater beneath the property being investigated. The Environmental Site Assessment (ESA) Phase 1 report did not identify any known sources of PCE and the results of the RI strongly suggest that an off-site source is responsible. Am I eligible to use a model remedy to address the petroleum contamination?

**Answer:**

Currently, the Groundwater Model Remedies Guidance does not allow any contaminants to be present above the PQLs, except for petroleum, metals, or substances that meet the definition of natural background. However, Ecology believes this criteria is overly conservative and intends to modify this guidance. Once it has been updated, the following options will be available for use.

- *Scenario 1:* A contaminant other than petroleum is present on the property being investigated, but does not exceed the Method A groundwater cleanup levels. If the non-petroleum compound is from an off-site source, the petroleum contamination can be cleaned up using one of the groundwater model remedies. Upon successful completion of the remedial action, the site would be eligible to obtain a no further action (NFA) determination.
  - *Scenario 2:* Contaminants other than petroleum are present on the property being investigated and exceed the Method A groundwater cleanup levels. If the non-petroleum compounds do not co-mingle with the petroleum impacted groundwater, the site would be eligible to use a model remedy to address the petroleum contamination. Upon successful completion of the remedial action, the petroleum release would be eligible to obtain an NFA determination. This NFA would not apply to the non-petroleum groundwater exceedances and the property would continue to be identified as contaminated.
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**Question No. 22:**

Who can I contact if I have more questions?

**Answer:**

Contact your Cleanup Project Manager or Ecology's Model Remedies Coordinator:

Mark Gordon  
Toxics Cleanup Program  
Washington State Department of Ecology  
300 Desmond Dr SE  
Lacey, WA 98503  
[mark.gordon@ecy.wa.gov](mailto:mark.gordon@ecy.wa.gov)  
360-407-6357

## 6.0 References

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