

Summary: Draft Model Remedies for Sites with Petroleum Contaminated Soils

To help streamline and accelerate the pace of cleanups, the Washington State Department of Ecology (Ecology) is developing standardized cleanup methods called “model remedies.” If a site meets the eligibility criteria and individual provisions for a particular model remedy, that method can be selected and implemented. Once the requirements for use of a model remedy are met, it will not be necessary to conduct a Feasibility Study or Disproportionate Cost Analysis, or submit Ecology review fees.

Seven model remedies have been developed for sites that have only petroleum contaminated soil. They are discussed in this document. Ecology expects to develop model remedies for sites with limited groundwater impacts from petroleum as well as other types of contamination later in 2015.

Introduction: Determine If Using a Model Remedy Is Appropriate

Information must be gathered and analyzed prior to selecting and implementing a model remedy for a site. The following sections provide detailed information to assist in this effort. Sections 2 and 6 are critical for assessing if it is appropriate to use a model remedy:

1. What are the Model Toxics Control Act (MTCA) cleanup regulations and requirements;
2. What is the purpose of Model Remedies;
3. What eligibility criteria each project must meet;
4. How the model remedies comply with the requirements of MTCA;
5. What data were evaluated to justify the proposed model remedies;
6. What are the seven model remedies being proposed, and which provisions apply to each model remedy.

Section 1: Changes to MTCA Affect Model Remedy Development

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 has assembled information in this document to establish model remedies for sites with petroleum contaminated soil. Ecology expects to develop model remedies for other types of contamination in 2015.

MTCA regulations (WAC 173-340-390) specify that Ecology must identify the circumstances under which application of a model remedy meets the requirements for selection of cleanup actions established under WAC 173-340-360. If a site meets the requirements for use of a model remedy, it is not necessary to conduct a Feasibility Study (WAC 173-340-350(8)) or a Disproportionate Cost Analysis (WAC 173-340-360(3)).

A Feasibility Study evaluates and screens potential remedial technologies that may be appropriate for addressing contamination at a particular site. A Disproportionate Cost Analysis compares more costly remedial actions against the most practicable permanent remedy to determine whether the increased costs are warranted. If the cost to implement the more aggressive remedy is significantly higher than the incremental increase in benefits achieved, then selection of the more costly remedy is not required.

The 2013 legislative changes also provided Ecology the authority to waive the collection of fees when the agency provides a written opinion on cleanups that qualify for and appropriately use a model remedy. As a matter of policy, Ecology will not require a review fee if the selected remedy meets the specified criteria and implementation follows the provisions set forth in Appendix A of this document.

The 2013 legislative changes require that development of model remedies include the following elements:

- Requirements for characterizing a site,
- A description of how the model remedy meets the cleanup standards and remedy selection requirements,
- Monitoring requirements, and
- Public notice and the opportunity to comment on the proposed model remedy and the conditions under which it may be used.

Section 2: Purpose of Model Remedies

The purpose of model remedies is to streamline and accelerate the selection of cleanup actions that protect human health and the environment, with a preference for permanent solutions to the maximum extent practicable. This document provides information to establish model remedies for cleanup at sites with petroleum contaminated soil, including: a) the data Ecology evaluated, b) the eligibility criteria each project must meet, and c) a discussion of how the model remedies comply with the requirements of MTCA. The document also identifies the seven model remedies that are being proposed, along with the criteria that apply to each individual remedy. Appendix A identifies the provisions that must be evaluated and implemented for the selected model remedy.

Before considering a model remedy, the following steps in the remedial process must have already been completed:

1. A release to the environment has been confirmed,
2. Ecology has been notified of the release,
3. Emergency/Interim Actions have been implemented (if appropriate) and
4. An adequate site characterization has been completed.

Ecology previously developed guidance to address these steps in the cleanup process, so details for completing them are not included here. Since the model remedies in this document apply to sites with only soil contamination, sufficient data must be collected to confirm that the site has not impacted groundwater, surface water, sediments or indoor air. Therefore, it is strongly recommended that the applicable provisions found in Chapters 4 through 7 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites* be followed when conducting the site characterization. This guidance is available at:

<https://fortress.wa.gov/ecy/publications/SummaryPages/1009057.html>.

Model remedies are most appropriate for routine cleanup projects at lower risk sites, and are generally more applicable to independent cleanups. This includes those seeking a No Further Action (NFA) letter under the Voluntary Cleanup Program (VCP) or situations where the potentially liable person (PLP) is implementing the cleanup with no Ecology oversight. However, these model remedies can also apply to Ecology-supervised cleanups.

Section 3: Applicability Criteria for Model Remedies

The following criteria apply to all model remedies identified in this document.

Geographic Area – The model remedies in this document are applicable throughout the State of Washington.

Affected Media – An adequate characterization of the site is necessary to confirm that the only media impacted by the contamination is soil. This includes groundwater, surface water, sediments and indoor air. These model remedies do not apply to sites with contaminated soil below the water table or sites with petroleum contamination detected above the practical quantitation limits in groundwater (see Table 7.3 in Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*). Given the importance of conducting an adequate site characterization, Ecology strongly recommends selecting a consultant who has significant experience performing this type of work, and is very familiar with the information in Chapter 6 ("Conducting an Effective Site Characterization") of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*.

Contaminant Types – The site investigation must document that petroleum hydrocarbons consisting of gasoline, middle distillates/oils or heavy fuels/oils and their constituents are the only contaminants present in soil (see Table 7.1 in *Guidance for the Remediation of Petroleum Contaminated Sites*). The testing requirements for petroleum releases are found in Table 830-1 of WAC 173-340-900. Additional testing information is available in Table 7.2 in *Guidance for Remediation of Petroleum Contaminated Sites*. If any contaminants other than those typically found in petroleum products, including but not limited to halogenated Volatile Organic Compounds (VOC's) and Polychlorinated Biphenyls (PCB's), are discovered above the practical quantitation limits during the site characterization, the site is not eligible to use any of the model remedies included in this document.

Emergency/Interim Actions – Emergency or interim actions are not required due to the lower risk nature of the site, or the necessary emergency/interim actions required by WAC 173-340-450 have already been implemented.

Terrestrial Ecological Evaluation – The site a) must meet the criteria in WAC 173-340-7491 and therefore qualify for an exemption for a terrestrial ecological evaluation, or b) is eligible to complete a simplified terrestrial ecological evaluation. There may be situations where a simplified terrestrial ecological evaluation results in adjusting the cleanup standards for certain compounds to meet the provisions in Table 749-2 of WAC 173-340-900.

Remedy Selection – Soil removal is the selected remedial action for the site.

Section 4: How Model Remedies Meet the Remedy Selection and the Compliance Monitoring Requirements of MTCA

All the model remedies in this document provide for removing the contaminant source as well as the impacted soil, so that:

- a) the remaining soil meets the cleanup levels established in accordance with MTCA, or
- b) structural impediments such as buildings, utility lines, or public roads prevent complete removal of the contaminated soil, and the remaining residual contamination will not impact other media including groundwater or indoor air quality.

In cases with structural impediments, contaminated soil must be removed to the greatest extent practicable. Additionally, institutional controls (typically environmental covenants) that meet the provisions in WAC 173-340-450 must be implemented to ensure the remedy remains protective.

It is recommended that soil cleanup standards and points of compliance be developed as early as possible in the cleanup process, but no later than immediately following completion of the site characterization. When developing the standards, use the provisions in WAC 173-340-740 (unrestricted land use soil cleanup standards) or WAC 173-340-745 (soil cleanup standards for industrial properties), and the applicable provisions in Chapters 8 and 9 of *Guidance for Remediation of Petroleum Contaminated Sites*.

The following discussion documents how the proposed model remedies meet the minimum requirements found in WAC 173-340-360.

A. Threshold Requirements

- (i) *Protect human health and the environment.* Model remedies must comply with the appropriate cleanups standards as well as all applicable state and federal laws. Cleanups complying with these two threshold requirements are presumed to be protective of human health and the environment.
- (ii) *Comply with cleanup standards contained in WAC 173-340-700 to 760.* All of the model remedies identified in this document apply to sites with only petroleum soil contamination. This requires that an adequate characterization is completed

to document that the site has not impacted groundwater, surface water, sediment or indoor air quality. In addition:

- a. the contaminated soil must be removed so that soil cleanup standards are met at the point of compliance, or
- b. if the presence of structural impediments such as buildings, utilities lines or public roads prevent complete removal of contaminated soil, then institutional controls must be put in-place to ensure the remedy remains protective over time.

All of the options found in WAC 173-340-704, 705 or 706 are available when considering which soil cleanup standards to use. Ecology guidance, in conjunction with rule requirements, forms the basis for evaluating and selecting the appropriate standards. Finally, the site characteristics must qualify the site for an exclusion from a terrestrial ecological evaluation, or meet the criteria for completing a simplified evaluation.

- (iii) *Comply with applicable state and federal laws.* Due to the lower risk nature of sites that will be eligible to use these model remedies, many other state or federal laws will not be applicable. For example, releases from the site cannot have impacted sediments and as a result the requirements contained in WAC 173-204 will not be applicable. While implementation of any of these model remedies is unlikely to trigger compliance with numerous other state and federal laws, there will be several that will apply (e.g., transporting and managing contaminated soil in accordance with the state's solid waste management rules). In such a case, an evaluation to determine compliance with this provision would be required.
- (iv) *Provisions for compliance monitoring.* Preparation of a health and safety plan is necessary before implementing any of the model remedies. Due to the simplified nature of these types of cleanups, it is anticipated the discussion will typically be less detailed and lengthy as other sites. Soil confirmation sampling will be necessary to a) document that applicable cleanup standards have been met, or b) to estimate the amount of contaminated soil that remains. Specific information about the frequency and type of confirmation testing needed after soil removal may be found in Appendix A.

B. Other Requirements

- (i) *Use permanent solutions to the maximum extent practicable.* The proposed model remedies require removal of contaminated soil to the greatest degree possible. Removal of the source material can eliminate the direct contact threat and significantly reduce the potential for contaminants to leach to groundwater or impact indoor air quality. Source removal also enhances the natural degradation process and can often be implemented quickly.

Soil removal is a very common remedial option used to successfully meet the selected cleanup standards and ensure sites are protective of human health and the environment. A review of information in Ecology's Integrated Site Information System (ISIS) database revealed that since January 1, 2012, more than 600 sites with only petroleum contamination in soil have received an NFA determination. A representative number of these letters were evaluated. In all but two cases, soil removal was used to address the contamination present. In the other two situations, initial sampling revealed soil impacts were below Method A levels.

A disproportionate cost analysis is required to determine if the selected remedy used permanent solutions to the maximum extent practicable. If the incremental increase in costs for an alternative remedy is disproportionate to the benefits achieved, then selection of the more costly remedy is not warranted. Model remedies are, by definition, exempt from the requirement to complete a site-specific analysis of the feasibility of alternative remedies. As a result, the following discussion provides a qualitative disproportionate cost analysis to document that the benefits of implementing any of the proposed model remedies meet the criteria of "permanent to the maximum extent practicable."

If the presence of a structural impediment precludes complete removal of all contaminated soil, then an environmental covenant must be used in conjunction with the remedy to reduce the overall risk and help ensure the site remains protective over the long-term. As provided under WAC 173-340-420, Ecology will perform periodic reviews of sites where environmental covenants are required.

Since soil removal is the remedial option of choice for cleanup of petroleum contaminated soil, implementation is typically straightforward and can be completed relatively quickly, thus minimizing short-term risks. The cost for implementing this type of remedy compared to others is very site specific and would need to be evaluated on a case-by-case basis. However, after evaluating numerous sites that successfully used this remedial option as a permanent long-term remedy, Ecology found that the cost of implementing other remedies in conjunction with soil removal is disproportionate relative to the incremental increase in benefits.

- (ii) *Provide for a reasonable restoration timeframe.* The proposed model remedies are based on soil being the only media impacted by the release. Implementation of a soil removal remedy will limit the timeframe needed to achieve compliance to the greatest degree practicable.

- (iii) *Consideration of public concerns.* Ecology will not make any final decisions on the appropriateness of any of the proposed model remedies until the public notice and participation requirements in WAC 173-340-600 have been completed and all public comments have been evaluated.

Section 5: Seven Proposed Model Remedies for Petroleum Contaminated Soil

This section discusses the scope of Ecology's seven proposed model remedies. Before any of these model remedies can be used, a cleanup action plan must be completed that identifies the specific work to be done. Appendix A contains information that must be considered when developing the cleanup action plan. The level of detail can be based on the site's complexity and the specific model remedy selected. Upon completion of the removal action, confirmation samples must be taken to determine compliance with the selected soil cleanup standards.

If the removal action is not sufficient to fully comply with the applicable soil cleanup standards due to the presence of a structural impediment, the source property owner must record an environmental covenant with the Register of Deeds in the County in which the site located. The environmental covenant must meet all applicable requirements in WAC 173-340-440. A copy of the executed restriction must be included as part of the final remedial action report. The recommended sampling frequency and locations are outlined in Appendix A. Within 90 days from completion of the remedial action, a final remedial action report documenting the results of all work must be submitted to Ecology.

Model Remedy 1. This model remedy is for situations where complete removal of the contaminated soil will take place and Method A Soil Cleanup Levels for Unrestricted Property Use has been selected to set the cleanup levels. In addition to the source property, this option can also include off-property soil impacts. Following excavation, confirmation testing must be performed to document that the applicable Method A cleanup levels found in Table 740-1 of WAC 173-340-900 have been met at the point of compliance, such that no environmental covenants are necessary.

Model Remedy 2. This is similar to Model Remedy 1, in that soil will be completely removed. The major differences are:

- a) The site meets the definition of an industrial property as specified in WAC 173-340-745 and therefore can use the Method A cleanup levels for industrial properties contained in Table 745-1 of WAC 173-340-900, and
- b) Use of Table 745-1 is limited to the source property. Any off-property impacts would need to meet the cleanup levels specified in Table 740-1.

Following excavation of the contaminated soil, confirmation testing must be performed to document that the applicable Method A cleanup levels have been met. Use of the industrial Method A levels requires that an environmental covenant must be filed to help ensure the remedy remains protective and that the zoning designation does not change. Attachment 1

of this document contains Ecology's model language for preparing an environmental covenant. The document should be tailored to the site specific situation.

Model Remedy 3. This model remedy applies to situations where Method A levels are selected but the soil removal action is not sufficient to fully comply with the specified concentrations at all locations on the source property or within the right-of-way of a public road due to the presence of one or more structural impediments (e.g., buildings, utility lines, or roadways). Information must be provided to document that:

- a) the soil removal action was implemented to the greatest degree practicable;
- b) the site characterization confirms that no other pathway has or can reasonably be expected to be impacted; and
- c) an environmental covenant is filed (or an institutional control is utilized for certain public right-of-ways) to ensure the remedy remains protective (see Attachment 1).

Model Remedy 4. This model remedy is for situations where Method B has been selected to establish the cleanup levels and removal of the contaminated soil is sufficient to meet the calculated Method B levels. The Method B soil cleanup levels must address direct contact, soil to groundwater, terrestrial ecological receptors, vapor intrusion and be determined using the provisions contained in WAC 173-340-740(3). The following link is to Ecology's Cleanup Level and Risk Calculations (CLARC) web page and provides the Method B direct contact levels for unrestricted use:

<https://fortress.wa.gov/ecy/clarc/FocusSheets/Soil%20Methods%20B%20and%20A%20unrestricted.pdf>.

After contaminated soil is excavated, confirmation testing must be performed to document that the Method B cleanup levels have been met at the point of compliance, such that no environmental covenants would be necessary.

Model Remedy 5. This model remedy is similar to model remedy 4. The major difference is that the soil removal action is not sufficient to fully comply with the calculated Method B levels at all locations on the property, or within the right-of-way of a public road due to the presence of one or more structural impediments (e.g. buildings, utility lines or roadways). The following link directs to Ecology's Cleanup Level and Risk Calculations (CLARC) web page, which provides Method B direct contact levels for unrestricted use:

<https://fortress.wa.gov/ecy/clarc/FocusSheets/Soil%20Methods%20B%20and%20A%20unrestricted.pdf>.

Documentation must be provided that the soil removal action was implemented to the greatest degree practicable and an environmental covenant has been filed (or an institutional control has been used for certain public right-of-ways) to ensure the remedy remains protective (see Attachment 1).

Model Remedy 6. This model remedy is for those situations where:

- a) the site meets the definition of an industrial property per WAC 173-340-745,
- b) soil impacts are limited to the source property,
- c) Method C has been selected to establish the cleanup levels,
- d) removal of the contaminated soil is sufficient to meet the calculated Method C levels, and
- e) following soil removal, TPH concentrations do not exceed 10,000 mg/kg.

The Method C soil cleanup levels must address direct contact, soil to groundwater, terrestrial ecological receptors, vapor intrusion and be determined using the provisions contained in WAC 173-340-745(5)(b). The following link directs to Ecology's Cleanup Level and Risk Calculation (CLARC) web page, which provides Method C direct contact levels:

<https://fortress.wa.gov/ecy/clarc/FocusSheets/Soil%20Methods%20C%20and%20A%20industrial.pdf>.

Following excavation of the contaminated soil, confirmation testing must be performed to document that the Method C levels have been met at the point of compliance such that the only environmental covenant necessary is to limit the property to industrial land use (see Attachment 1).

Model Remedy 7. This model remedy is similar to Model Remedy 6. The major difference is that the soil removal action is not sufficient to fully comply with the Method C levels at all locations on the property, due to the presence of one or more structural impediments (e.g. buildings, utility lines or roadways). The following link directs to Ecology's Cleanup Level and Risk Calculation (CLARC) web page, which provides Method C direct contact levels:

<https://fortress.wa.gov/ecy/clarc/FocusSheets/Soil%20Methods%20C%20and%20A%20industrial.pdf>.

Documentation must be provided to show that the soil removal action was implemented to the greatest degree practicable and unless a structural impediment is present, TPH concentrations do not exceed 10,000 mg/kg. An environmental covenant must be filed to ensure the remedy remains protective and the property remains industrial (see Attachment 1).

APPENDIX A: MODEL REMEDY PROVISIONS

Applicants whose sites meet the criteria in Section V may select and implement that particular model remedy. Implementation must address all of the applicable provisions contained in Appendix A, including preparation and submittal of the final remedial action report to Ecology.

Select a Remediation Contractor/Consultant

To help ensure that all applicable regulatory requirements are met, owners and operators typically hire an environmental consultant to act as their representative during the entire cleanup process. Based on the results of a site characterization, an environmental consultant can determine whether any of the model remedies identified would apply, then prepare the necessary plans and specifications to implement the selected remedy. The consultant is also available to help solicit and evaluate bids from interested parties so that a qualified and experienced contractor can be selected to conduct the work.

Obtain Necessary Permits and Approvals

Model remedies are not exempt from local, state or federal laws and therefore implementation must comply with all applicable procedural and substantive requirements, including the need to obtain any necessary permits. Since all of the model remedies identified in this document rely on excavation and off-site management, several laws and permits may be applicable. See Chapter 11 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites* for a general discussion of permits. The following information is intended to supplement that guidance.

The requirements below are provided as examples only. Some may not apply to the specific cleanup action being implemented, while additional requirements to those below may apply. Therefore, anyone considering using one of the model remedies outlined in this document should consult Ecology and other government entities (e.g., city or county authorities) to ensure compliance with all required permits, notifications, and other requirements.

- **State Environmental Policy Act (SEPA)**

SEPA (Revised Code of Washington 43.21C, WAC 197-11 and the SEPA procedures found in WAC 173-802) are intended to ensure that state and local government officials consider environmental values when making decisions. The SEPA process is triggered whenever a local or state permit is required to conduct the cleanup. It begins by completing a SEPA Environmental Checklist and submitting it to the "lead agency" (usually the county or city where the site is located). The lead agency will use the checklist to decide whether the cleanup action is likely to cause a significant adverse impact to the environment. The SEPA Environmental Checklist form may be found in

WAC 197-11-960. Information on how to use the checklist may be found in WAC 197-11-315 and 330.

- **Grade and Fill Permit**

Most local governments require a grade and fill permit for excavations above a specified number of cubic yards. Contact the city or county development permitting department for additional information.

- **Demolition Permit**

If the cleanup requires the demolition of a building or other structure, a permit will likely be needed from the local government. Contact the city or county development permitting department for additional information.

- **Electrical Permit**

If the cleanup involves changes to electrical systems, then an electrical permit will often be necessary. Many smaller jurisdictions rely on the Washington State Department of Labor and Industry for electrical permitting and inspections. Contact the city or county development permitting department for additional information.

- **Construction Stormwater General Permit (CSWGP)**

Construction site operators are required to obtain a Construction Stormwater General Permit if a) they are engaged in clearing, grading, and excavating activities that disturb one or more acres and b) stormwater will or may be discharged to surface waters of the state. Construction activity that Ecology has determined to be a significant contributor of pollutants to waters of the State and construction activity that has a reasonable expectation to cause a violation of any water quality standard also requires a CSWGP. General Permits typically apply only to situations where runoff does not come in contact with contaminated soil or groundwater. Further information on the CSWGP can be found on Ecology's website:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/>.

Contaminated sites may not be eligible for a General Permit if the stormwater and/or dewatering discharge from the construction site have the potential to violate water quality standards. In these situations, Ecology's Water Quality Program should be contacted for direction on the applicable permit submittal requirements and permitting options. Permitting options include Individual Permits and/or site specific companion orders to a General Permit.

- **Air Emissions**

Excavation of petroleum contaminated soils may trigger regulatory requirements related to volatile emissions, diesel equipment emissions and dust. Although using local construction equipment and dust controls (such as wetting or covering exposed soils during construction) should limit diesel emissions and airborne particulates, the local authority should be contacted to determine if any additional requirements apply.

- **Noise Ordinance Requirements**

Construction activities must be carried out in a manner consistent with the local and state environmental noise standards (WAC 173-60). Contact the city or county development permitting department for additional information.

- **Minimum Standards for Construction and Maintenance of Wells**

Groundwater monitoring wells that will be installed or removed as part of excavation activities must be constructed or decommissioned in accordance with the requirements of WAC 173-160.

- **Access Agreements**

If soil contamination extends to neighboring properties, an access agreement is required before initiating any soil excavation work on property owned by others. These access agreements should be negotiated and obtained as early in the cleanup process as possible. In order to use the model remedies in this guidance that address off-property contamination, the site characterization must address the full extent of contamination from the release without regard to property boundaries.

Complete Pre-Soil Removal Activities

Before initiating soil removal activities, several important actions must be completed. These include:

Utility Locating

Excavation locations should be marked with white paint and notification must be provided to underground utility service providers by calling 811 or 800-424-5555. Notification to the utility locate service must be made not less than two business days and not more than ten business days before the scheduled date of excavation. Failure to provide notification can result in significant penalties. Owners and operators may also want to contract a private utility locating service to mark areas within their facilities that will not be addressed by the one-call service.

UST Removal

If the model remedy is being applied at a site where contamination is the result of a regulated underground storage tank (UST), it is strongly recommended that the UST be removed as part of remedy implementation. Notify applicable local authorities and Ecology UST officials prior to UST removal and conduct UST decommissioning according to the requirements of WAC 173-360. UST decommissioning requires the person conducting the work to be certified under WAC 173-360.

Conduct Remediation Activities

Soil Excavation Approach and Methods

All of the model remedies set forth in this document require that contaminated soil be removed to the greatest degree possible. As a result, excavation activities must extend laterally and vertically until soil concentrations are below the established cleanup levels or the presence of structural impediments precludes complete removal of the contaminated soil. The soil conditions, depth of excavation and the proximity to buildings are all situations that may require shoring systems or other safety precautions. Shoring systems must be designed by a professional engineer and excavation slopes must comply with Washington State construction safety standards for excavation, trenching, and shoring (WAC 296-155, Part N).

Field Screening and Confirmation Soil Sampling

Field-screening (headspace organic vapor screening, water sheen screening, and visual observation) should be used as excavation proceeds to help determine the extent of soil removal. Field-screening techniques are discussed in Chapter 5 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*. Once it appears that the appropriate limits are reached or further excavation is not practicable, collect confirmation soil samples from the excavation sidewalls and base, and submit the samples for laboratory analysis. If a UST has been removed from the site, specific samples must be collected to comply with WAC 173-360 which may be required in addition to those specified below.

Confirmation samples should be collected from locations where field screening/visual observations indicate contamination may be present, or at locations where a professional geologist or engineer has determined is the most appropriate based on site specific factors. Follow the sampling criteria contained in Ecology's *Guidance on Sampling and Data Analysis Methods*. Confirmation soil samples must be submitted to an Ecology-certified chemical analytical laboratory and analyzed for those constituents that are most likely to be present based on site characterization data (see Table 7.2 in *Guidance for Remediation of Petroleum Contaminated Sites* for the appropriate chemicals of concern to submit for analysis).

Sampling and Analysis of Excavated Soil

Excavated soil must be sampled and analyzed in order to properly classify the material. Sampling should be performed at the frequency specified in Table 5-3 of the *Guidance for Site*

Checks and Site Assessments for Underground Storage Tanks. Soil contaminated by releases from federally regulated UST's is exempt from many of the dangerous waste regulations under WAC 173-303-071(3)(t). However, the Toxicity Characteristic Leaching Procedure (TCLP) values set forth in WAC 173-303-090(8) for waste codes D004 to D017 (which includes lead) must be met. In addition, petroleum contaminated soil from other releases (e.g., non-federally regulated UST's and spills) are not exempt. It is the responsibility of the waste generator to determine if the dangerous waste rules apply and if so, to manage the material properly. The remainder of this discussion focuses on those situations where the soil is not defined as a dangerous waste.

Discrete grab samples should be collected as the soil is being placed into the storage area or into trucks for transportation off-site. Collect soil samples from locations that are representative of the soil and where field-screening indicates contamination may be present. Samples that will be analyzed for VOC's must be collected using EPA Method 5035. Submit soil samples for chemical analysis and test for gasoline, diesel, and oil-range petroleum hydrocarbon-related compounds listed in the WAC 173-340-900, Table 830-1. Additional testing information is also available in Table 7.2 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*.

Soil Segregation and Storage

Contaminated material that will be temporarily stored on-site must be managed such that releases to the environment (e.g. groundwater, surface water and air) are minimized. The contaminated soil must also be secured and covered as appropriate when not actively in use. Section 11.3.2 of the *Guidance for Remediation of Petroleum Contaminated Sites* provides specific information on options for appropriately storing petroleum contaminated soil. In some cases it may be advantageous to separate excavated soil based on visual observations or preliminary testing, since additional management options will often be available for soils with more limited impacts.

Management of Contaminated Soil

Excavated contaminated soil must be managed in accordance with state and local requirements. Table 12.2 of *Guidelines for the Remediation of Petroleum Contaminated Sites* provides a number of options, depending on the level of petroleum impacts. Anyone transporting contaminated material must be properly trained, licensed, and in compliance with applicable DOT regulations. Owners and operators must obtain the necessary approvals prior to transportation and maintain records of how the material was ultimately managed. This can include weight tickets provided by the disposal facility, manifests, or completed dangerous waste manifests as applicable to document disposal. The appropriate documentation must be submitted to Ecology as part of the remedial action report.

Compliance with MTCA Cleanup Levels and Site Restoration

If laboratory analytical results indicate all confirmation samples are less than the soil cleanup levels established for the site, or if removal of additional contaminated soil is no longer practical due to the presence of structural impediments, the excavation can be backfilled and site restoration activities completed. Backfill must be placed and compacted in a manner consistent with the planned use of the site and in accordance with all applicable local building, zoning, and grading requirements to prevent settling.

Prepare and Submit a Remedial Action Report to Ecology

The results of all site characterization activities, as well as a description of the cleanup work completed, shall be compiled and submitted to Ecology in a remedial action report. This report must provide adequate information to document that the selected model remedy meets the applicable cleanup standards, or the presence of structural impediments precluded complete removal of the contaminated soil.

For those sites using the Voluntary Cleanup Program (VCP) process, the remedial action report submittal should follow the format and requirements set out in Chapter 5 of Ecology's *Guidelines for Property Cleanup under the Voluntary Cleanup Program*. The cover letter needs to indicate that an Ecology-approved model remedy is being used so it is clear that a Feasibility Study, Disproportionate Cost Analysis, and the review fees do not apply.

Based on the selected model remedy, it may be necessary to use environmental covenants or (for certain public rights-of-way) other institutional controls to help ensure the remedy remains protective of human health and the environment over the long-term. If an environmental covenant is used, it must be filed with the Register of Deeds in the County where the site is located. The environmental covenant must meet all applicable requirements in WAC 173-340-440 and a copy of the executed restriction must be included as part of the final remedial action report (see Attachment 1). Documentation on the impediments encountered and an estimate of the amount of contaminated soil remaining must also be provided in the final remedial action report.

Pursue a No Further Action (NFA) Determination

While it is not required to submit a no further action request for sites under independent cleanup, the fees for such reviews are waived when a model remedy is selected as the remedial option. Therefore, Ecology encourages persons to pursue an NFA determination after work is completed, so that a final determination of the adequacy of the cleanup can be provided. The procedures for submitting a no further action request are found in Section 5.3 of Ecology's *Guidelines for Property Cleanup under the Voluntary Cleanup Program*. For sites where Ecology oversight is being provided under either an Agreed Order or Consent Decree, the method for documenting the cleanup actions must follow the specific requirements contained in those documents.

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Attachment 1
Model Environmental Covenant Language

DRAFT

[Text highlighted by yellow are instructions/comments and options]

Questions about specific provisions should be directed to the Ecology Site Manager assigned to the site. If no Site Manager has been assigned, contact Ecology's Toxics Cleanup Program at (360) 407-7170 for advice.

After Recording Return

Original Signed Covenant to:¹

[Ecology Site Manager]

Toxics Cleanup Program

Department of Ecology

[Ecology Office address]

NOTE: This Covenant should not be recorded without Ecology's approval and signature.

Grantors must have a title search conducted within the last 6 months to identify all recorded interests in the Property including title holders, holders of other interests (such as easements, right of ways, water & mineral rights), and encumbrances (such as lien and mortgage holders). The results of this search, typically called a title report or plat certificate, must be included with any request asking Ecology to sign a Covenant. A update to the title search should be provided to Ecology along with the request to sign the final covenant.

Environmental Covenant (5/7/14 version)

Grantor: [Insert name of the land owner or other grantor]²

Grantee: State of Washington, Department of Ecology

Brief Legal Description: [Insert brief legal description]

Tax Parcel Nos.: [Insert tax parcel numbers]

Cross Reference:

- If superseding or amending an existing Covenant, insert one of the following:
"Original Covenant # ____ (superseding)" OR "Original Covenant # ____ (amending)"
- Insert a reference to any subordination agreements, if separately recorded
- Insert a list of other related documents such as consent decree, order, or NFA opinion
- Otherwise, delete

¹ Some counties keep the original covenant, others don't. If the signed original is available, it must be sent to Ecology. If the signed original is not available, send a legible copy to Ecology.

² The Grantor of a covenant typically is the fee simple land owner of the property. The Grantor may also include holders of other property interests such as a holder of an easement, right of way, mineral right, lien, or mortgage.

RECITALS ³

a. This document is an environmental (restrictive) covenant (hereafter “Covenant”) executed pursuant to the Model Toxics Control Act (“MTCA”), chapter 70.105D RCW and Uniform Environmental Covenants Act (“UECA”), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as **[Insert Ecology site name and facility ID]**. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter “Property”). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail. ⁴

c. The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions.

Specifically, the following principle contaminants remain on the Property: ⁵

Medium	Principle Contaminants Present
Soil	
Groundwater	
Surface Water/Sediment	

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through the Washington State Department of Ecology. **[Optional--This includes the following documents: (list key documents such as RI/FS, Cleanup Action Plan, Voluntary Cleanup Report(s), As-built report)].**

e. This Covenant grants the Washington State Department of Ecology, as holder of this Covenant, certain rights specified in this Covenant. The right of the Washington State Department of Ecology as a

³ This section is primarily used to describe this document and its purpose. It should not be used for substantive binding provisions.

⁴ Note that an environmental covenant applies to a specific Property, not the site (which may comprise several properties or “parcels”). A precise legal description of the Property (or Property interest such as an easement) is essential to know where the covenant applies. If there is any uncertainty, the Grantor must have the Property (or Property interest) surveyed and a legal description prepared by a licensed surveyor. If the contaminated area includes multiple parcels, each parcel must have the covenant recorded on the title. If contamination remains on only part of a larger Property, the restrictions may apply to just the smaller area, but the covenant must still be recorded on the title for all parcels encompassing the contaminated area.

⁵ List the contaminants for the associated media. If more than a few are present, list the top three to five for each medium.

holder is not an ownership interest under MTCA, Chapter 70.105D RCW or the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”) 42 USC Chapter 103.

f. [Optional—Include the following statement if this Covenant is superseding another environmental covenant.] This Covenant supersedes and replaces the existing Environmental (Restrictive) Covenant, which is recorded with [] County as [# of original covenant].

COVENANT

[Name of Land Owner or other Grantor], as Grantor⁶ and [fee simple, easement or other] owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, (hereafter “Ecology”) the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

- a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.
- b. **Protection of Human Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.
- c. **Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.
- d. **Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.
- e. **Amendment to the Covenant.** Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant.⁷ Before approving any proposal, Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal. If Ecology approves the proposal, the Covenant will be amended to reflect the change.

⁶ If there is more than one Grantor, use the term “Grantors” here and throughout this document.

⁷ Examples of inconsistent uses are: using the Property for a use not allowed under the covenant (for example, mixed residential and commercial use on a property that is restricted to industrial uses); OR, drilling a water supply well when use of the groundwater for water supply is prohibited by the covenant.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

[See Appendix 1 for example restrictions.]

Select from the restrictions in Appendix 1 as appropriate, based on site-specific circumstances. Most sites will have only some of these restrictions. Options are provided to illustrate the range of potential restrictions. In some cases, the options are mutually exclusive (pick one or the other, but not both). In other cases several options may need to be combined to cover the range of conditions at the site. This is not intended to be an all-inclusive list. In circumstances where none of the categories or suggested options fit the site conditions, adjust the language as appropriate to fit the situation.

- a. Land use.
- b. Containment of soil/waste materials.
- c. Stormwater facilities.
- d. Vapor/gas controls.
- e. Groundwater use.
- f. Sediments.
- g. Monitoring
- h. Other.

Section 3. Access.

- a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.
- b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.
- c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. **Conveyance of Any Interest.** The Grantor, when conveying any interest [in any part of the Property] OR [within the area of the Property described/illustrated in Exhibit B/C], including but not limited to title, easement, leases, and security or other interests, must:

- i. Notify Ecology at least thirty (30) days in advance of the conveyance.⁸
- ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE [COUNTY] COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

- iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

- b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation to Ecology.
- c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology of the event

⁸ Ecology may waive this notice provision for some units at a Property where the anticipated use is a multi-tenant/owner building where some owners or tenants are unlikely to be exposed to residual contamination. For example: upper story apartments or condominiums, or commercial tenants in a strip mall, with limited rights to use the grounds under and around the building (such as for parking).

If Ecology agrees to such a waiver, the circumstances of the waiver will be detailed in paragraph 4.a.i. In addition to the specific circumstances, this provision must include the following statement: “Waiver of this advance notice to Ecology for these transactions does not constitute waiver of this notice for the entire Property nor a waiver of the requirement in Section 4.a.ii. to include this notice in any document conveying interest in the Property.”

law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 20__.

[NAME OF GRANTOR]

[SIGNATURE]

[TITLE]

Dated: _____

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

[SECTION MANAGER SIGNATURE - if VCP or Order.]

[PROGRAM MANAGER SIGNATURE - if Consent Decree.]

|

[TITLE]

Dated: _____

[Unless waived under Section 5b above, add the following provision where a covenant is being amended or superseded.]

The undersigned acknowledge Environmental (Restrictive) Covenant [# of the original covenant] filed in [] County is hereby terminated and replaced with the above Environmental Covenant.

[NAME OF GRANTOR OF ORIGINAL COVENANT]

[SIGNATURE]

[TITLE]

Dated: _____

GRANTOR INDIVIDUAL ACKNOWLEDGMENT

STATE OF _____

COUNTY OF _____

On this _ day of _____, 20__, I certify that _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

Notary Public in and for the State of
Washington, residing at _____.
My appointment expires_____.

GRANTOR CORPORATE ACKNOWLEDGMENT

STATE OF _____

COUNTY OF _____

On this _ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of _____ the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

Notary Public in and for the State of
Washington, residing at _____.
My appointment expires_____.

Exhibit A

LEGAL DESCRIPTION

(Required)

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Exhibit B

PROPERTY MAP

(Required)

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Exhibit C

MAP ILLUSTRATING LOCATION OF RESTRICTIONS

While a map illustrating the location of the restrictions is required, the grantor has the option of creating a separate map or including this information in Exhibit B.

More than one map may be necessary to illustrate the area subject to restrictions. For example, the area encompassing a soil cap may be different than the area where vapor or groundwater contamination is a concern.

The area subject to the restrictions, if less than the entire property, should be a contiguous area with even boundaries that follow physical features on the site so the boundary can be easily discerned in the field.

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Exhibit D

SUBORDINATION AGREEMENT

KNOW ALL PERSONS, That _____, the owner and holder of that certain _____ (Instrument) bearing the date the _____ day of _____, 20____, executed by _____, _____, and recorded in the office of the County Auditor of _____ County, State of Washington, on the _____, 20____, under Auditor's File Number _____, does hereby agree that said Instrument shall be subordinate to the interest of the State of Washington, Department of Ecology, under the environmental (restrictive) covenant dated _____, 20____, executed by _____, _____, and recorded in _____ County, Washington under Auditor's File Number _____.

Dated _____, 20____.

NAME

STATE OF _____

COUNTY OF _____

On this _ day of _____, 20 ____, I certify that _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

Notary Public in and for the State of

Washington, residing at _____.

My appointment expires _____.

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APPENDIX 1

EXAMPLE SITE-SPECIFIC COVENANT PROVISIONS

a. Land Use.¹⁰

Option 1 Industrial Land Use: The remedial action for the Property is based on a cleanup designed for industrial property. As such, the Property shall be used in perpetuity only for industrial uses, as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, growing of food crops, and non-industrial commercial uses.

Option 2 Commercial Land Use: The remedial action for the Property is based on a cleanup designed for commercial property. As such, the Property shall be used in perpetuity only for commercial land uses as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, and growing of food crops.

Option 3 Park: The remedial action for the Property is based on a cleanup designed for a public park. As such, the Property shall be used in perpetuity only for a public park. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, grazing of animals, and growing of food crops.

Option 4 [Specify other land use limitations as appropriate.]

b. Containment of Soil/Waste Materials.¹¹

[Use where contaminated soil or solid or hazardous waste remains on the property.]

The remedial action for the Property is based on containing contaminated soil [and waste materials] under a cap consisting of [Insert a description of the cap]¹² and located as illustrated in [Exhibit B/C]¹³. The primary purpose of this cap is to [Insert purpose of cap].¹⁴ As such, the following restrictions shall apply within the area illustrated in [Exhibit B/C]¹⁵:

Option 1 [Use where a cap is required.] Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

¹⁰ Use one of these restrictions only if the underlying zoning allows the use.

¹¹ Waste materials means solid wastes as defined in Chapter 70.95 RCW or hazardous wastes as defined in Chapter 70.105 RCW and the rules promulgated under these statutes.

¹² Such as: an X foot thick layer of clean soil; an engineered cap consisting of X inches of clean soil overlying a X mil thick geomembrane and/or clay layer; asphalt pavement; an X square foot building, etc.]

¹³ Be very clear in describing or diagramming where the contamination is located relative to a legally defined benchmark such as a property line or survey monument; or use a legal description.

¹⁴ Such as: minimize the potential for contact with contaminated soil; minimize leaching of contaminants to groundwater and surface water; prevent runoff from contacting contaminated soil; minimize airborne contaminants. A cap may have multiple purposes.

¹⁵ NOTE: More than one exhibit may be necessary to illustrate the area restricted by this and other limitations.

Option 2 [Use when contamination is left behind under a building.]

The Grantor shall not alter or remove the existing structures on the Property in any manner that would expose contaminated soil [and waste materials], result in a release to the environment of contaminants, or create a new exposure pathway, without prior written approval of Ecology. Should the Grantor propose to remove all or a portion of the existing structures illustrated in [Exhibit B/C] so that access to the underlying contamination is feasible, Ecology may require treatment or removal of the underlying contaminated soil [and waste materials].

Option 3: [Use when periodic inspections of a cap/building are included.]

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the [cap/building] and report within thirty (30) days of the inspection the condition of the [cap/building] and any changes to the [cap/building] that would impair its performance.

c. Stormwater facilities. [Use when infiltration needs to be controlled to minimize leaching from soil or waste materials, or spreading of groundwater contamination.]

To minimize the potential for mobilization of contaminants remaining in the [soil/waste materials/groundwater] on the Property, no stormwater infiltration facilities or ponds shall be constructed [on the Property] OR [within the area of the Property illustrated in Exhibit B/C]. All stormwater catch basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction.¹⁶

d. Vapor/gas controls. [Use when vapors or methane gas are a concern.]

The residual contamination on the Property includes [volatile chemicals that may generate harmful vapors] AND/OR [biodegradable wastes/chemicals that may generate methane, a combustible gas]. As such, the following restrictions shall apply [on the Property] OR [within the area of the Property illustrated in Exhibit B/C] to minimize the potential for exposure to these vapors:

Option 1 No building or other enclosed structure shall be constructed [on the Property/within this area].

Option 2 Any building or other enclosed structure constructed [on the Property/within this area] shall be constructed with a sealed foundation and with a [vapor/gas] control system installed and maintained to prevent the migration of [vapors/gas] into the building or structure.

e. Groundwater Use. [Use when groundwater use restrictions are required.]

The groundwater beneath [the Property] OR [within the area of the Property illustrated in Exhibit B/C] remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted [from the Property/within this area] for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

¹⁶ NOTE: Most local ordinances require on-site infiltration of runoff. If redevelopment of the Property is anticipated, the cleanup plan should reserve an area for this infiltration to occur without exacerbating leaching of residual soil contamination or enhancing movement of contaminants within the groundwater.

f. **Sediments.** [Use for sediment cleanup sites.]¹⁷

The residual contamination on the Property includes contaminated sediments. As such, the following restrictions shall apply to minimize potential disturbance of these sediments [on the Property] OR [within the area of the Property illustrated in Exhibit B/C]:

Option 1 [Use where a cap is required.] Any activity [on the Property/within this area] that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; excavation; installation of buried utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

Option 2 No docks or other structures shall be constructed [on the Property/within this area] without prior written approval of Ecology.

Option 3 No dredging shall be allowed [on the Property/within this area] without prior written approval of Ecology.

Option 4 No ships or boats shall be allowed to anchor or use side thrusters [on the Property/within this area]. A no wake zone shall be enforced and ships and boats shall be limited to a draft depth of [XX] feet [on the Property/within this area].

Option 5 No digging for clams, setting of crab pots or fishing nets, anchoring of mooring buoys or channel markers, or similar activities that could disturb the surface of the sediment shall be allowed [on the Property/within this area] without prior written approval of Ecology.

g. **Monitoring.** [Use for long-term protection of monitoring devices.]

Several [groundwater monitoring wells, vapor probes, etc.] are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

h. **Other.**

[Add other property-specific use or activity restrictions and affirmative obligations that are necessary but not identified above. Examples include special remedy-specific requirements such as restrictions on structures over leachate/groundwater collection systems, or protection requirements for cut-off walls or sheet piling.]

¹⁷ NOTE: Sediment restrictions are currently evolving. Additional guidance can be found in Ecology's Sediment Cleanup Users Manual II (SCUM II), Publication No. 12-09-057.

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