

Summary of the Model Remedy Listening Sessions

Sites with Petroleum Impacts to Groundwater

June 13, 2016 1:00 – 3:00, Ecology Headquarters, Lacey WA

June 14, 2016 1:00 – 3:00, NWRO, Bellevue WA

Introduction

The purpose of the Listening Sessions was to give participants an opportunity to ask questions and provide feedback on the draft groundwater model remedy guidance document. In addition, Ecology also solicited recommendations on whether the next step should be to develop model remedies for other types of contaminants or focus on addressing some of the recommendations provided at a meeting on August 26, 2015. The notes from that meeting are available at: <http://www.ecy.wa.gov/programs/tcp/policies/model-remedies/Meeting-Info/150826-mtg/Meeting%20Summary%208-26-15.pdf>. This document does not represent a complete record of the 2 meetings, but rather is intended to summarize the key discussion points.

Summary of the Major Discussion Points and Recommendations

Both meetings began with Ecology presenting some background information and an overview of the general approach used to develop the draft model remedies guidance. A copy of the slides used are available at: <http://www.ecy.wa.gov/programs/tcp/policies/model-remedies/mtgs.html>. The remainder of this document provides a summary of the major comments received on the draft guidance and the activities Ecology should focus on next.

A. MAJOR FEEDBACK ON THE DRAFT GUIDANCE

1. *Timeframe for Completing Cleanups* – A question was asked if one of the goals for developing model remedies was to reduce the time necessary to complete a cleanup, and if so how much do we expect the timeframe to be reduced. Ecology indicated the expectation is that eliminating the need for a Feasibility Study and Disproportionate Cost Analysis along with Ecology review of the selected remedy, should shorten the timeframe although the actual amount will depend on a number of site specific factors.
2. *Definition of Petroleum Constituents* – The draft guidance specifies that the 12 model remedies identified only apply to petroleum compounds except when a hazardous constituent meets the definition of natural background. Metal concentrations can often be above background, but are usually below either the Method A or B cleanup levels. It was recommended that this provision of the guidance be changed to allow model remedies to be utilized at sites where metal concentrations do not exceed the Method A

groundwater cleanup levels and where the soil concentrations do not exceed the applicable direct contact levels. The concern was that establishing a site-specific background level for metals can be expensive and is often difficult in urban environments.

3. *Selection of the Applicable Cleanup Standards* – The question was raised about how to prepare a draft Cleanup Action Plan since it won't be known up front whether the proposed remedy will be adequate to meet the specified standards. Ecology indicated that the guidance provides flexibility to modify the option used (and therefore the applicable cleanup standards) provided the criteria that apply to the alternative model remedy have been met.
4. *Utilizing Data from Direct Push Sampling* – A comment was made that analyzing groundwater collected from direct push borings can provide helpful information to better identify potential areas of contamination. However, elevated metal concentrations can occur due to high turbidity in the samples. Several participants indicated that some Ecology Site Managers continue to utilize data collected for initial screening purposes throughout the entire remedial investigation and compliance monitoring period, rather than relying on subsequent results from permanent wells constructed to State standards. Ecology indicated that inconsistencies between Site Managers can be an issue, but a considerable amount of work is going into developing guidance on a number of issues that will hopefully provide better direction on how implementation should occur.
5. *Non-Potable Groundwater* – A suggestion was made to add another model remedy option that would apply to situations where groundwater has been determined to meet the definition of non-potable. Follow-up discussions took place on the specific requirements in MTCA and what additional guidance would be useful for making a non-potable groundwater demonstration.

One suggestion included establishing non-potable zones by rule. Ecology indicated that issues associated with non-potable groundwater determinations were also identified during the August, 2015 listening session and several recommendations were made at that time for improving how non-potable groundwater evaluations are completed. Ecology went on to say that follow-up on those recommendations has not been completed.

6. *Reasonable Restoration Timeframe* – A question was asked on how reasonable restoration timeframe applies to sites that want to pursue a conditional point of compliance. Ecology explained that it doesn't directly apply since this factor is intended

to be considered during preparation of a Feasibility Study when comparing multiple remedies that meet the threshold requirements in MTCA. Since sites using a model remedy are not required to prepare a Feasibility Study an alternate approach was necessary, so Ecology evaluated a number of sites where a conditional point of compliance was approved. Based on this evaluation, Appendix B was developed to identify those factors that need to be considered when proposing a conditional point of compliance.

7. *Post NFA Monitoring* – A question was asked on how often and for how long groundwater monitoring is required after the NFA letter is issued. Ecology indicated over 75% of sites with soil only contamination that received an NFA letter since 2009 were not required to perform post-NFA monitoring. Conversely, over the same timeframe, nearly 80% of sites where a conditional point of compliance was approved did have a requirement to perform long-term monitoring....typically at least until the first 5-year review was completed. In some cases monitoring was terminated following completion of the review. A related question was asked about whether a statistical evaluation could be used when evaluating groundwater data and the answer was that it could be used.

B. ACTIVITIES TO FOCUS ON NEXT

1. *Sites with Chlorinated Contamination* – A number of participants felt that developing model remedies for sites with chlorinated contamination would be very helpful. Ecology responded that model remedies are intended for routine, lower risk sites and chlorinated contamination typically has long plumes with off-site impacts, higher potential for vapor intrusion and greater difficulty achieving cleanup standards. Based on these factors, Ecology expressed concern as to whether these types of sites would be appropriate for model remedy development.
2. *Evaluating Whether Groundwater is Non-Potable* – Many of the participants stated Ecology very seldom accepts a demonstration that the groundwater meets the definition of non-potable. They went on to request that Ecology provide additional guidance on the criteria that are used for determining whether an aquifer meets the rule definition of non-potable. Ecology pointed out that several issues of concern were also identified during the August, 2015 meeting including: 1) there is not a “standard” timeframe over which the yield test needs to be completed, 2) no guidance is available for how to calculate a Method B direct contact groundwater cleanup level when a non-potability determination is made, and 3) a groundwater restriction is required if groundwater concentrations exceed the potable cleanup levels which often results in

on-going groundwater monitoring at sites where a non-potability determination has been made.

3. *Immobility of LNAPL* – Participants felt that better direction was necessary on how to address situations where LNAPL was present in low hydraulic conductivity formations. It was pointed out that very small amounts of LNAPL can result in an NFA determination being held up while numerous attempts are made to remove LNAPL from the site. Ecology indicated the LUST rules and the model remedies guidance specify that free product must be removed to the maximum extent practicable, but acknowledged that this term is not defined so implementation could be inconsistent.
4. *Silica Gel Cleanup* – It was stated that consideration should be given to allowing the use of silica gel cleanup when groundwater samples are being evaluated for heavier petroleum compounds. Participants felt it was possible to use chromatograms to help determine when the presence of TPH may not be due to a release of petroleum. They stated that a number of other states allow this approach and that Ecology should review the technical evaluation those states completed prior to concluding that silica gel cleanup would be appropriate under certain conditions.

Next Steps

Ecology indicated that the suggestions and feedback received would be evaluated along with the all of the written comments submitted during the public review process. The goal is to address the comments and then finalize the groundwater model remedies in August. After the guidance is finalized, work will begin on the Model Remedies Legislative Report which is due on November 1, 2016.