

Model Remedies

The background image shows a wide expanse of blue water in the foreground. In the middle ground, there is a city skyline with several buildings and a large industrial facility with smokestacks emitting white smoke. In the background, a large, snow-capped mountain rises against a clear blue sky. The overall scene is a coastal or waterfront view.

August 26, 2015

Toxics Cleanup Program
Department of Ecology

Agenda

The background of the slide features a scenic view of a large, snow-capped mountain peak, likely Mount Rainier, rising behind a city skyline. The city is situated on a waterfront, with buildings and industrial structures visible. The foreground is dominated by a body of water, possibly a bay or lake, with gentle ripples on its surface. The overall atmosphere is bright and clear, suggesting a sunny day.

- ◉ Welcome
- ◉ Introductions
- ◉ Background
- ◉ Summary of Past Cleanup Decisions
- ◉ Open Discussion
- ◉ Next Steps
- ◉ Summary of Meeting
- ◉ Adjourn

Background – 2001 MTCA Rule Amendments

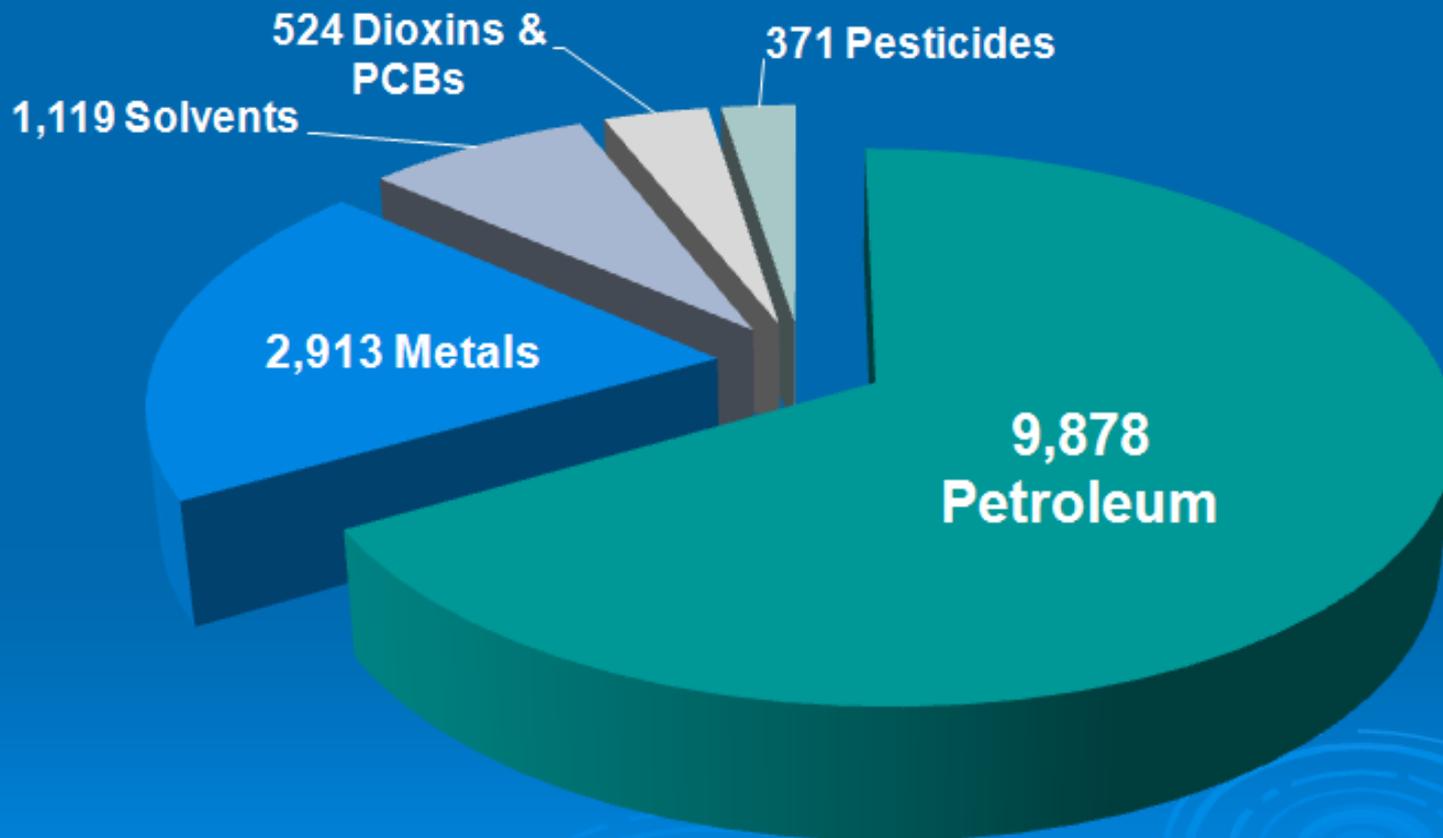
- ◎ The 2001 MTCA rule amendments included new provisions for establishing model remedies.
- ◎ The purpose was to streamline and accelerate the selection of cleanup actions.
- ◎ Sites meeting the criteria for use of a model remedy are not required to conduct a:
 1. Feasibility Study, or
 2. Disproportionate Cost Analysis

Background (cont.)

2013 Model Remedy Changes

- ◎ The 2013 MTCA legislation (SB 5296) directed Ecology to place increased emphasis on model remedies.
- ◎ Model remedy guidance for sites with petroleum contaminated soil becomes effective on September 1, 2015.
- ◎ The focus now shifts to developing model remedies for sites with petroleum impacts to groundwater.

Most Commonly Reported Contaminants



Many sites have more than one contaminant.
85% of all contaminated sites have petroleum contamination.

Assessing Potential Model Remedies at Sites with Petroleum Contaminated Groundwater

- ◎ The Statute requires that model remedies meet the cleanup standards and the requirements for remedy selection set forth in MTCÁ.
- ◎ To help ensure these requirements are met, we evaluated data for sites with petroleum impacts to groundwater that have received an NFA letter since January, 2012.
- ◎ This information provides some insights into the cleanup standards selected and what remedial approaches have been successfully used at these types of sites.

Summary of Past Cleanup Decisions at Sites with Petroleum Contaminated Groundwater

- ◎ Approximately 300 sites have received an NFA letter since January 1, 2012.
- ◎ On-line information was evaluated for over 50% of this total.
- ◎ This information typically included the NFA letter or NFA determination. In some cases other information was included such as:
 - Site investigation and remedial action reports.
 - Monitoring data.

Summary of Past Cleanup Decisions (cont.)

- ◎ LUST systems were responsible for the contamination at approximately 85% of the sites.
- ◎ It was not always possible to determine the exact source of the release for these sites.
- ◎ The vast majority of sites (nearly 85%) used Method A for establishing soil cleanup levels.
- ◎ Over 80% of those met the Method A soil cleanup levels following remedial action.

Summary of Past Cleanup Decisions (cont.)

- ◎ Method A groundwater cleanup levels were used at nearly 95% of the sites.
- ◎ Approximately 98% of the sites evaluated met the selected groundwater cleanup levels.
- ◎ Restrictive covenants were used to address residual contamination in about 11% of the cases.

Summary of Past Cleanup Decisions (cont.)

- ◎ Soil removal was used as the sole remedial option or as a portion of the remedy in nearly 87% of the cases.
- ◎ The other major remedies used were:
 1. Soil vapor extraction (22%),
 2. Groundwater extraction (18%),
 3. Chemical injection (15%),
 4. Air sparging (13%),
 5. Free product removal (8%), and
 6. Capping (4%)
- ◎ Approximately half of the sites with free product were spill response situations.

Open Discussion

◎ Ecology is particularly interested in:

1. Feedback on what the scope of this effort should include, including whether there are specific issues you feel we should address.
2. Specific recommendations for changes to current practices, including the rationale and justification.
3. Whether anyone has data that would allow us to consider other options for model remedy development.

Next Steps

- ◎ We will be presenting a summary of the feedback and suggestions to our Program Management Team (PMT).
- ◎ Based on direction from PMT an outline and schedule for completing a draft version of the guidance will be completed.
- ◎ The site summary information presented earlier will be used to help develop potential model remedies.

Meeting Summary

