From:	Eric Blischke
To:	rjw@nwnatural.com; ricka@bes.ci.portland.or.us; Jim.McKenna@portofportland.com
Cc:	johnt@windwardenv.com; kpine@anchorenv.com; jworonets@anchorenv.com
Subject:	Assessing Benthic Risk at the Portland Harbor Site
Date:	09/17/2008 04:40 PM
Attachments:	Portland Harbor Benthic Risk Evaluation 091708.pdf

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Attached is an evaluation of the approach for assessing risks to the benthic community at the Portland Harbor site developed by Don MacDonald and Peter Landrum. This evaluation was performed independently, without active participation by either EPA or Parametrix.

EPA requested Don's assistance because EPA and the LWG were unable to reach agreement on procedures for assessing this important receptor group. EPA provided Don with background information on the assessment of benthic risk at the Portland Harbor site and requested an evaluation of the existing data and the state of the science to answer the following questions:

1) What hit/no-hit criteria should be applied to the empirical sediment toxicity tests?

2) What pooling of endpoints, if any, should be applied for use in each of the predictive models? Pooling may include pooling the growth (total biomass) and mortality endpoints for each test organism (2 endpoints) or both test organisms (1 endpoint) and the application of the RSET one-hit/2-hit criteria.
3) What hit/no-hit criteria should be applied for the logistic regression and floating percentile models? Note that one, two or three criteria may be applied to each endpoint and each model. However, this will increase the amount of work required to develop the models.
4) Should non-site data be considered in the development of the logistic regression model?
5) Once the models have been run, what analysis, if any, should be performed to optimize model performance?
6) Should the predictive models be used at all given their reliability?
7) How should the results of the predictive models be used, in conjunction with other site data, in a weight of evidence evaluation aimed at assessing risk to the benthic community?

An initial version of the recommendations was submitted to EPA on September 3, 2008. Upon initial review of the document, EPA identified a set of 4 clarifying questions. Answers to these questions are provided in Addendum 1. The main body of the document was unaffected by EPA's clarifying questions.

EPA believes that the recommendations presented in the attached document provide a basis for resolving our differences regarding the evaluation of benthic risk at the Portland Harbor site. However, it is important that both the LWG and EPA accept the recommendations provided in the attachment in their entirety. Discussion and dissection of specific elements of the recommendations defeats the purpose of the evaluation.

We look forward to discussing the path forward for assessing benthic risk at the Portland Harbor site once you have had time to review the attached document.

Thanks, Eric

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