

RESPONSE TO COMMENTS RECEIVED
FOLLOWING THE RELEASE OF A DRAFT SCREENING ASSESSMENT REPORT

DNOC (CAS 534-52-1)

A Notice was published in the *Canada Gazette*, Part I, on June 23, 2007, indicating the availability of the draft screening assessment report for phenol, 2-methyl-4,6-dinitro-, also known as 4,6-dinitro-ortho-cresol (DNOC), and inviting comments from interested parties for a period of 60 days. Comments were received from the Industry Coordinating Group for CEPA (ICG for CEPA) and Nova Chemicals Corporation.

Comments and responses are summarized below.

Comment	Response
The submission notes that the use of “individuals having relevant technical expertise” to conduct a science review of the report is a good practice. It suggests that the qualifications of the reviewers be stated, and that some experts external to the government be included.	Information on the reviewers is available on request. In the specific case of DNOC, it was considered that the government scientists external to the assessment program who served as reviewers provided sufficient breadth and depth of expertise. The external reviewers who considered the human health aspects of the report are identified in the assessment.
The submission notes that Nova ceased using DNOC in late 2002 after having responded to the information collection activities relating to the assessment (which was based on the year 2000).	The assessment has been updated to reflect this information.
The submission points out that the draft assessment report states that the Nova facility is located on the St. Clair River, while the plant is actually removed from it by 600 metres at the closest point.	This has been clarified in the assessment report.

<p>The submission expresses concern that the assessment used an exposure scenario that included an estimated quantity of the substance that may be released to the environment, even though the user company (Nova Chemicals) declared in its annual reporting to the National Pollutant Release Inventory (NPRI) that none of the substance was being released from its facility.</p>	<p>It was decided to develop a conservative exposure scenario for two reasons:</p> <p>First, it is recognized that our exposure scenarios identify potential sources of release of substances to the environment. Such sources can include rinsate from the cleaning of reactors and transport and storage vessels. The latter may occur at the facility of the user or through handling by a third party, such as a transport company or drum recycler. The assumed release of 0.2% of the annual import quantity of DNOC is a generic value for substances that are handled in bulk.</p> <p>Second, while Nova Chemicals was the sole respondent to the NPRI for this substance, only facilities that are using greater than 10,000 kg per year of DNOC are required to report to NPRI. Therefore, the initial tier exposure characterization was developed to identify whether there could be issues if other facilities were using/transporting/handling/processing this substance.</p> <p>It was not the intent of the draft assessment report to imply that Nova Chemicals had inappropriately omitted to report releases of this substance from its facility. Wording in the report has been reviewed.</p>
<p>The Nova submission provides more detailed information on the handling of DNOC in its facility. It further points out that such information was available to Environment Canada on request.</p> <p>The ICG submission expresses the belief that this was a missed opportunity for seeking stakeholder input during development of the assessment.</p>	<p>While conducting assessments, individual facilities may be contacted to obtain information that is believed to be critical to the evaluation. Publication of the draft document for public comment provides the opportunity for all parties, including implicated industry, to provide further information that is considered in revising assessments and their conclusions.</p>
<p>The submission recognizes that the lack of current Canadian exposure data presents an important gap in the DNOC assessment. It questions the practice of using European exposure data as a surrogate.</p>	<p>In the absence of Canadian monitoring data, other approaches are being used to estimate concentrations of a substance to which organisms may be exposed in different environmental media (air, water, soil) in Canada. This can include the application of approaches for estimation of quantities of a substance released to the environment, and use of models to estimate its dispersion. Also of potential relevance are studies and monitoring activities that have been conducted in other countries. In applying any of these approaches, their relevance and uncertainty are taken into consideration in evaluating the weight that they should carry in concluding on whether the substance poses an ecological risk in Canada.</p> <p>The non-Canadian monitoring data that was considered in the DNOC assessment showed that the substance had been detected in air and precipitation at a number of locations in Europe. There were also scientific studies relating to mechanisms for the formation of DNOC in air. Given the presence of reactive species in the atmosphere in</p>

	<p>Canada, as in Europe, the formation of the substance in the Canadian environment was identified as being possible. This was supported by consultations with an expert in atmospheric pollutants.</p>
<p>The submissions point out that DNOC was identified through categorization as being persistent in air and inherently toxic to aquatic organisms. However, level III multimedia modelling results included in the draft ecological assessment report indicate that only about 2% of the substance partitions to air. Since categorization used a 5% minimum partitioning for “realistic presence” of a substance in a compartment, persistence in air should not be pertinent to the assessment. Further, it was felt that DNOC does not therefore meet the ecological categorization criteria.</p>	<p>The final categorization results were that DNOC is persistent in water but not in air and is inherently toxic to aquatic organisms, and therefore does meet the categorization criteria.</p> <p>The Level III fugacity model estimates have been subsequently re-calculated since publication of the draft screening assessment for public comment. The use of experimental input data instead of predicted data did not change the results when DNOC is released solely to water. However, if released to air, the updated Level III fugacity model predictions indicate that partitioning will be divided between air (47%), soil (32%) and water (20%).</p> <p>Research on the potential formation of DNOC in the atmosphere is outlined in the assessment report. Whereas multimedia models are very useful in predicting in which environmental media substances may be found under equilibrium or steady state conditions, for some period of time after being formed in the atmosphere, DNOC would be present in that compartment. Therefore its characteristics in the atmosphere are relevant to the assessment.</p> <p>The information included in the Environmental Fate and Partitioning section of the draft assessment report has been updated to reflect these outcomes.</p>
<p>The submission recognizes the importance of the section on “Uncertainties”, and suggests that it be updated based on the submitted comments.</p>	<p>All of the comments have been carefully considered and any changes to the uncertainty section have been made as appropriate.</p>