

## Summary of Public Comments Received on the Challenge substance BNST (CAS No. 68921-45-9) Proposed Risk Management Approach Document for Batch 4.

Comments on the proposed risk management approach document for **BNST** to be addressed as part of the Chemicals Management Plan Challenge were provided by Chemical Sensitivities Manitoba, Chemtura Corporation, and Inuit Tapiriit Kanatami. The table contains a condensed version of each comment and a response on non-technical terms.

A summary of comments and responses is included below, organized by topic:

- [Proposed risk management](#)
- [Economic impacts](#)
- [Substitutes/alternatives](#)
- [Alternative techniques/technologies](#)
- [Virtual elimination](#)
- [Petroleum sector](#)
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| TOPIC                    | COMMENT                                                                                                                                                                                                                                                                                                                      | RESPONSE                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Proposed risk management | The Government of Canada should consider extending the manufacture and use of BNST for at least five years to allow for the reformulation of existing product lines that contain BNST. This would enable industry to better absorb and offset any potential impacts due to the reformulation costs and loss of income due to | <p>Proposed amendments to the <i>Prohibition of Certain Toxic Substances Regulations, 2012</i> were published in <i>Canada Gazette</i>, Part I on July 23, 2011. These amendments proposed the addition of BNST to the Regulations and would prohibit the manufacture, use, sale, offer for sale or import of BNST or products containing it.</p> <p>The need for a phased approach to implementation has been considered in the development of the</p> |

| TOPIC | COMMENT                                                                                                                                                                                                                                                                                                   | RESPONSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|       | <p>loss of customers. If exemptions for certain uses of BNST are permitted in Canada, it is suggested that the manufacture of BNST be permitted to continue in order to supply those end uses.</p>                                                                                                        | <p>proposed Regulations. Environment Canada (EC) intends to allow two-year temporary permitted uses. The manufacture, use, sale, offer for sale or import of BNST or products containing it would temporarily be allowed only for the use of BNST as an additive in vehicle engine oil and as an additive in commercial and industrial lubricants. During the development of the proposed Regulations Environment Canada received information of potential substitutes for BNST. At the end of the two years, permits may be obtained every year for up to three years, if the conditions indicated in the proposed Regulations are met. Therefore, the previous mentioned uses of BNST could be allowed for a maximum of 5 years following the coming into force of the Regulations.</p> |
|       | <p>Permitting the manufacture of BNST only for export would not be an option because companies located outside of Canada would not be able to guarantee that their additive packages containing BNST would not be coming into Canada in the form of passenger car motor oil or heavy duty diesel oil.</p> | <p>The proposed Regulations do not include an exemption for manufacturing of BNST for export only. The proposed Regulations do prohibit the manufacture, use, sale, offer for sale or import of BNST or products containing it, so companies will need to comply with this aspect by ensuring that any passenger car motor oil or heavy duty diesel oil imported and sold in Canada does not contain BNST.</p>                                                                                                                                                                                                                                                                                                                                                                            |
|       | <p>The addition of BNST to the <i>Prohibition of Certain Toxic Substances Regulations, 2012</i> is supported; however such a prohibition should also include the</p>                                                                                                                                      | <p>The proposed amendments to the <i>Prohibition of Certain Toxic Substances Regulations, 2012</i> would prohibit the manufacture, use, sale, offer for sale or import of BNST or products containing it. Although export is not directly covered by the proposed</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| TOPIC | COMMENT                                                                                                                                                                                                      | RESPONSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|       | manufacture and export of BNST.                                                                                                                                                                              | Regulations, the prohibition on import and manufacture of BNST or products containing it would result in a control on the export of BNST.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|       | Occupational exposure to BNST and exposure to BNST through leaks, spills and disposal are not addressed.                                                                                                     | <p>The scope of screening assessment reports under CEPA 1999 are focused on the potential risks to the general Canadian public. In terms of risk management, again the focus is on protecting the health of the Canadian public at large; however the detailed scientific information with the assessment report is made available to officials at the federal and provincial levels responsible for occupational health and safety and they may subsequently consider additional action with respect to workers.</p> <p>The proposed Regulations include a prohibition of the manufacture, use, sale, offer for sale or import of BNST or products containing it. Once fully implemented, this prohibition would prevent human exposure to BNST in Canada and also prevent releases to the environment from leaks, spills and improper disposals of BNST or products containing it.</p> |
|       | It is recommended that the government develop a workplan that focuses on the complete destruction of stockpiles of BNST and add BNST to the <i>Environmental Emergency Regulations</i> , in order to address | <p>Once fully implemented, the addition of BNST to the <i>Prohibition of Certain Toxic Substances Regulations, 2012</i> will mean that this substance and products containing it cannot be manufactured, used, sold, offered for sale or imported.</p> <p>While stockpiles are not expected beyond the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| TOPIC                    | COMMENT                                                                                                                                                                                                                  | RESPONSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|                          | potential stockpiles of BNST, even if BNST is prohibited.                                                                                                                                                                | <p>proposed permitted regulatory timelines (maximum of 5 years), any manufacture, use, selling, offer for sale or import of BNST would be considered in violation of the proposed Regulations once the full prohibition is in place for that substance.</p> <p>BNST was assessed under section 200 of CEPA 1999 and was found to meet the criteria for addition to the <i>Environmental Emergency Regulations</i>. However, Environment Canada does not intend to add BNST to the <i>Environmental Emergency Regulations</i> since the outcome of the proposed Regulations will be that BNST is not longer present in Canadian commerce.</p> |
| Economic impacts         | Prohibition of the manufacture of BNST in Canada would have negative economic impacts on the Canadian manufacturers of BNST in terms of risk of job losses, costs, and cost-competitiveness of their remaining products. | A Regulatory Impact Analysis Statement that summarizes the socio-economic impact of the proposed regulations was published with the proposed Regulations in <i>Canada Gazette</i> , Part I. Based on the Regulatory Impact Analysis, the Government of Canada is of the view that the impacts on businesses would be manageable, given the existence of potential BNST substitutes and the provision in the proposed Regulations that allow for temporary permitted uses.                                                                                                                                                                    |
| Substitutes/alternatives | All possible substitutes for BNST should be identified and assessed for their safety under CEPA 1999. A cumulative assessment should have been done for the diphenylamines in order to consider the additive, cumulative | Many of the potential substitutes for BNST are on the DSL. These substitutes are proposed to be assessed for environmental and health risks in the next phase of the Chemicals Management Plan. Patented substitutes not on the DSL would be subject to an assessment under the <i>New Substances Notification Regulations</i> .                                                                                                                                                                                                                                                                                                             |

| TOPIC                               | COMMENT                                                                                                                                                                                                                                                                                                                                                                  | RESPONSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|                                     | and synergistic impacts of this family of chemicals.                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                     | Other substitute antioxidants manufactured in Canada may not be suitable for the applications in which BNST is used. As a result, there is no guarantee that Canadian industry would be able to replace the lost volume due to the prohibition of BNST with alternative chemicals or substitutes.                                                                        | Information received from industry suggested that there are potential substitutes to BNST that have been identified.                                                                                                                                                                                                                                                                                                                                                         |
| Alternative techniques/technologies | <p>Consideration should be given to the level of wastewater treatment that is required to remove BNST. Wastewater treatment plants should not be considered as adequate in addressing BNST.</p> <p>The Government of Canada should also identify and promote alternative technologies and/or techniques that prevent the use and release of BNST to the environment.</p> | The proposed addition of BNST to the <i>Prohibition of Certain Toxic Substances Regulations, 2012</i> would remove BNST from the Canadian market when fully implemented and as a result prevent BNST from entering wastewater systems. For that reason, Environment Canada does not anticipate considering technologies which would remove BNST from wastewater systems or industrial effluents nor technologies to prevent the use and releases of BNST to the environment. |
| Virtual elimination                 | The addition of BNST to the Virtual Elimination list is strongly supported, however further consultation is required on the details of this process (i.e. Level of                                                                                                                                                                                                       | BNST meets the requirements for the implementation of virtual elimination (VE). It will be considered for addition to the VE list. Stakeholders will have the opportunity to comment on the proposed addition of substances to the VE list as part of the consultation                                                                                                                                                                                                       |

| TOPIC                | COMMENT                                                                                                                                                                                                                                                                                                         | RESPONSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|                      | Quantification).                                                                                                                                                                                                                                                                                                | process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Petroleum sector     | Measures under the Petroleum Sector Stream Approach should be considered for BNST.                                                                                                                                                                                                                              | To address risks identified in screening assessments for Schedule 1 substances, a wide variety of risk management options are considered. Considerations in the process of making decisions relating to the protection of the environment and human health include the nature of the environmental or health risks, and social, economic and technical matters. The decision process for BNST identified a prohibition as the most effective approach to address the issues raised in the risk assessment.                                                                                                                                                                                                                                                          |
| International        | Linkages should be made with international programs in high volume chemicals, such as the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals program (REACH), or the United States Environmental Protection Agency's (US EPA) High Production Volume (HPV) Chemical program. | Substituted diphenylamines, including BNST, are part of the U.S. EPA's High Production Volume (HPV) Chemical program, which requires sponsoring companies to provide and make public basic hazard information on the chemical. Under the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals substances (REACH) Program, BNST was pre-registered in 2008. By December 1, 2010, manufacturers and importers were required to submit a technical dossier to the European Chemicals Agency containing available information on chemical properties, persistence, bioaccumulation and toxicity. Opportunities to cooperate on risk assessment and risk management of these substances are being pursued with both the EU and the U.S. |
| Exposure of children | No risk management actions are being proposed for BNST that specifically protect children, nor are vulnerable populations                                                                                                                                                                                       | BNST did not meet the criteria for greatest potential for exposure (GPE) or intermediate potential for exposure (IPE) and was not identified as posing a high hazard to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| TOPIC      | COMMENT                                                                                                                                                                                                                                                                              | RESPONSE                                                                                                                                                                                                                                                                       |
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|            | considered. The Government of Canada should take actions to protect vulnerable populations, including children, from exposure to BNST; this should be done through a mandatory survey under section 71 of CEPA 1999.                                                                 | human health based on classifications by other national or international agencies for carcinogenicity, genotoxicity, developmental toxicity or reproductive toxicity. The risk assessment focused principally on information relevant to the evaluation of ecological risks.   |
| Monitoring | The monitoring program for BNST is supported with qualifications that monitoring should not slow down the phase-out process for BNST. The government should ensure that the monitoring program is designed with explicit timeframes, locations, frequencies and environmental media. | Environmental monitoring of BNST will provide information on baseline levels and assist in measuring the performance of risk management activities. Work is ongoing to develop analytical methods to detect the components of BNST in wastewater, surface water and sediments. |