

**A Response to *Canada Gazette* Part I,
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NGO comments on Draft Assessment for
Stream 1 of the Petroleum Sector Stream of
the Chemicals Management Plan**

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Introduction

The Canadian Environmental Law Association (CELA) and Chemical Sensitivities Manitoba (CSM) are submitting the following comments in response to the *Canada Gazette* Part 1, Vol. 144, No. 22, May 29, 2010 release of draft assessments documents for selected substances identified under the Chemicals Management Plan (CMP), Petroleum Sector Stream Approach – Stream 1 (gas oils and heavy fuel oils (HFOs)).

CELA (www.cela.ca) is a non-profit, public interest organization established in 1970 to use existing laws to protect the environment and to advocate for environmental law reform. It is also a legal aid clinic that provides legal services to citizens or citizens' groups who are otherwise unable to afford legal assistance. In addition, CELA also undertakes substantive environmental policy and legislation reform activities in the areas of access to justice, pollution and health, water sustainability and land use issues. Under its pollution and health program, CELA has been actively involved in matters that promote the prevention and elimination of toxic chemicals addressed in the *Canadian Environmental Protection Act*, including the categorization process and implementation of the CMP.

Chemical Sensitivities Manitoba (CSM), a volunteer organization, was founded in 1997 by four individuals who saw the need to address the effects of toxic chemicals on human health and the possible link between the onset of chemical sensitivities and chemical exposure and, in particular, chronic low-level exposure. CSM raises awareness of the presence of toxic chemicals in the home and the environment and strongly advocates for the safe substitution of these toxins.

Our respective organizations have submitted substantial comments on assessment results and proposed management options for assessed substances under the Challenge Program of the Chemicals Management Plan. To date, our organizations have commented on substances under Batches 1 to 9 and provided substantial comments on the government's risk management approach on these substances. While our organizations have supported some of proposed assessment results, we have elaborated on the gaps and limitations on specific aspects of the risk assessment conducted and the proposed management instruments for specific chemicals. Consequently, we developed substantial recommendations to address these gaps and limitations.

For this report we will combine the gas oils and the Heavy Fuel Oils (HFOs) for comments and recommendations.

Background

In this submission, we have provided commentary to the draft risk assessments for the following substances:

Gas oils: CAS #s - 64741-82-8 and 68333-25-5 (site-restricted)

Heavy fuel oils CAS #s: 64741-45-3, 64741-61-3, 64741-80-6, 64742-90-1, 68333-22-2, 68333-27-7, 68476-32-4, 68478-17-1 (site-restricted)

While the government has informed stakeholders through its Chemicals Management Plan website portal and various CMP stakeholder consultations held since 2007 that the approach to the petroleum stream substances will be conducted separately and in a different format from the substances under the Industry Challenge, the approach attempts to identify “efficiencies for screening assessments and risk management can be made.”¹ Since the ten substances are the first set of substances in the Petroleum Stream to be assessed under this approach, these assessments may establish the template for the assessments conducted on the remaining substances under the Petroleum Stream. Therefore, our comments are intended to ensure that these assessments contain a complete toxicity data set to make decisions on the toxicity of the substances and full disclosure of information gaps and limitations on the data considered for these assessments.

We have outlined a number of gaps and concerns with the assessment conducted on the above stated substances. These include:

- the proposed conclusion that these substances do not meet the criteria set out in section 64 of CEPA 1999 based on the level of uncertainty with specific data;
- the absence of general data such as quantity use, number of facilities that use these substances, and general location of these facilities. This information would be relevant to determine if additional focus should be given to specific locations in Canada;
- the lack of detail and rationale on how these substances are effectively addressed and managed through the relevant legislation and regulatory framework that current exist (e.g. Fisheries Act); and
- the absence of statistical data regarding controlled or uncontrolled releases to the environment and the possibility of health effects to vulnerable populations, including workers, children, and fence line communities.

Based on these and other gaps and concerns provided in this document, we encourage your departments to reconsider the findings of the draft screening assessments and change your decision on these substances. These comments are intended to provide your departments with a broad understanding of the

¹ Government of Canada. Chemical Substances. Access <http://www.chemicalsubstanceschimiques.gc.ca/plan/approach-approche/petrole-eng.php>, dated July 27, 2010.

public interest expectations of the government to protect Canadians and their environment from toxic chemicals.

Comments & Recommendations

1) Release information of site-restricted gas oils and HFOs

The risk assessments for the site-restricted gas oils and the HFOs do not give any indications of the amount of these substances produced or released in the refineries and the upgraders, for any year. Also, any controlled or unintentional releases of these substances from these facilities were not included in the assessments. In fact, the absence of this information provides a significant data gap that severely affects the quality of the assessment. We are unsure if the information was not presented due to confidential business information, the lack of information provided by stakeholders or a combination of both. The assessment should clearly indicate the status of such information and what data were used to conclude that any releases of the substances would be minimal. This is critical information since the HFOs are considered to be human carcinogens, show genetic toxicity properties and appear to adversely affect reproduction and development.

Recommendation: Based on the lack of data mentioned above, the government should use its authority under CEPA to fill in these data gaps using section 71(1)(c).

Recommendation: The assessment report should provide information to outline if this information is available or not. These assessment reports need to accurately justify why these substances do not meet the criteria for toxicity under CEPA.

2) Significant New Activity (SNAc) provision

Under the CMP, there has been a trend toward issuing SNAcs to high hazard – low volume “existing” substances without designating them as CEPA toxic. These substances have been proposed for the SNAc provision under section 83(1) of the *Canadian Environmental Protection Act*. We continue to have concerns with the proposal to apply a SNAc provision for these types of substances. These concerns include the following:

a) Application of SNAcs will not reduce the use of these substances over time but rather provide a signal to other potential users that notification will be required. This is of significant concern as the assessment has presented substantial evidence of harm to health and potential harm to the aquatic environment. The current practice will be permitted without further additional requirements to reduce the use or unintentional releases of substances based on the assessment conclusion and application of SNAcs. Continued use of these substances will not minimize or eliminate potential health impacts.

- b) SNACs will require the further assessment of chemicals under the New Substances Program. The results of these assessments may not necessarily result in applying elimination or reduction strategies on these substances, regardless of the initial data gathered through the categorization process.
- b) Failure to designate a substance CEPA toxic means that no government action is required to develop management measures on these chemicals unless the SNAC provisions are completed and a finding of toxicity is made under CEPA. This also means that there is no incentive to discover and test safe alternatives for this chemical at this particular time to prevent its use in Canada in the future.
- c) The New Substances Program under which the SNAC notices will be implemented, lacks a public engagement component for reviewing results of the assessment.
- d) The SNAC provision was originally designed to address substances “new” to Canada and assessed under the New Substances Program. This provision was not designed to address existing substances on chemicals listed under the Domestic Substances List.
- e) It is assumed that notifications under the SNAC provision will require data collected under Schedule 6 of the New Substances Notification Regulations based on the SNAC provisions applied to other substances in the CMP. Schedule 6 will not address all the existing data gaps for substances on the DSL. Industry will not be required to submit data on vulnerable populations such as infants and children, workers and aboriginal communities, or on chronic toxicity, endocrine disruption potential, and neurotoxicity, or on cumulative and synergistic impacts.
- f) We note that under the CMP, SNACs have been proposed for approximately 159 substances (148 from the top 500 high priority chemicals and 11 chemicals from Batches 1-5).² It is our view that it is more protective and precautionary for the government to list all of these chemicals as CEPA toxic and to develop regulations to prohibit their import, use and manufacture in the future.
- g) There has been very limited public policy debate on the advisability of applying SNAC notices to existing substances under the CMP, despite efforts by ENGOs to raise this important policy issue in submissions on the various batches. The government had committed to releasing a guidance document on the SNAC program in the fall of 2009 but the report has yet to be released. It remains unclear if this document is to initiate policy discussions between government and stakeholders.

² Ibid.

Recommendation: *We urge the government to designate as CEPA toxic substances CAS #s - 64741-82-8 and 68333-25-5 (site-restricted) and 64741-45-3, 64741-61-3, 64741-80-6, 64742-90-1, 68333-22-2, 68333-27-7, 68476-32-4, 68478-17-1 (site-restricted) that are not in use, manufactured or imported into Canada, but have been found to meet the hazard criteria for designation as toxic under CEPA. These CEPA toxic chemicals should be added to Schedule 1 of CEPA.*

Recommendation: *We urge the government to list these toxic chemicals on the Prohibition of Certain Toxic Chemicals Regulations under CEPA to ensure that future manufacture, import, or use of these chemicals are prevented.*

Recommendation: *The government should initiate a comprehensive policy dialogue to assess the applicability of SNACs to existing substances under the CMP, beginning with the release of a guidance document.*

Recommendation: *The government should make revisions to the New Substances Program to ensure public engagement on substances that are notified under the SNAC provision.*

3) Precautionary principle should be applied with uncertain data

The draft assessment reports notes that “the site-restricted gas oils are UVCBs, their specific chemical compositions are not well defined... Consequently, it is difficult to obtain a truly representative toxicological dataset. For this reason, all available toxicological data were pooled across multiple CAS RNs to develop a comprehensive toxicity profile by including the available data for all gas oils.”³ Data related to the composition, physical and chemical properties of these substances, are often uncertain. However, the conclusion made by the government is to assume that the impacts to human health and the environment are low, because these substances are site-restricted. In these situations, we expect government to apply a more precautionary approach due to the absence of good data or known uncertainty on these chemicals.

This approach is made more obvious when considering the bioaccumulation factor of these substances. While data exist to show that some of these site restricted chemicals do not have the potential to bioaccumulate, there are situations where the data using modelled log Kow values (3.3-11) have demonstrated moderate to high bioaccumulation factors for these substances. One representative structure (C15 two-ring cycloalkanes) has a BCF value over 5000, but no additional effort or information was given in the report to indicate approximately, how much of this structure is present in the substances under

³ Environment Canada and Health Canada. Draft Screening Assessment Petroleum Sector Stream Approach Gas Oils [Site-Restricted], Chemical Abstracts Service Registry Numbers 64741-82-8, 68333-25-5. May 29, 2010. pg 17.

assessment or the volume of these substances that is applicable to the petroleum sector. The absence of this information makes it difficult to support the conclusions in the assessment report on bioaccumulation. In this instance, the assessment report concluded that "...given that only small portions of these gas oils exhibit potential to bioaccumulate, site-restricted gas oils do not meet the bioconcentration criteria as set out in the Persistence and Bioaccumulation Regulations (Canada 2000)."⁴ Based on the data presented on BAF or BCF, the bioaccumulation criteria remain uncertain for these substances. With this level of uncertainty remaining on the bioaccumulation criteria of these substances, it would be difficult to support the current draft assessment decision. Hence, this draft assessment conclusion has profound implications for decisions made by government to better manage these substances in the future.

Similarly, the data presented on persistence remain weak, particularly since there is some acknowledgement that longer chain (C20-C25 two-ring cycloalkanes) are expected to be persistent. The assessment process did not provide additional data to refute this assumption but relied on the "likely low concentrations of C20 to C25 cycloalkanes". It then concluded that the substances are not persistent according to the *Persistence and Bioaccumulation Regulations*. Again, these conclusions have a profound impact on decisions to manage these substances. It is our view that the uncertainty in this dataset for persistence and bioaccumulation should have been better addressed by the government by using its authority to collect additional data from affected facilities using section 71(1)(c) of CEPA.

Recommendation: See previous recommendation under #1. We urge the government to seek additional data for chemicals for which data remain uncertain, for example, for criteria such as bioaccumulation factor. The government should use its authority under section 71(1)(c) of CEPA to fill this data gap or to reduce uncertainty.

4) Disposal of site-restricted substances

With the assumption that the releases of these site-restricted substances to the environment will be minimal, there was no elaboration of the disposal for these substances. In fact, the assessment does not explore the complete life cycle of these chemicals from their use to their eventual disposal process, further treatment processes or recycling processes. While we recognize that there would likely be provincial regulations regarding waste disposal of these substances, we consider the type of disposal to be also relevant as there are concerns about the breakdown by-products of these substances.

Recommendation: For the petroleum sector, the government should include in their risk assessment reports, relevant details about the full life

⁴ Ibid, pg. 11.

cycle of the substances with particular emphasis on the disposal of the substances being assessed.

5) Consideration of vulnerable populations

The assessment process conducted on these chemicals was focused on the site-restricted parameters of the substances. However, there is no solid evidence or data presented in the draft assessment reports that support the notion that these substances remain on the facility site. In fact, we would hope that the government's efforts under these assessments had included a focus on vulnerable populations - people living in communities outside of the fence-line.

We are extremely disappointed that the assessment report did not provide any further explanations of the potential impacts these substances may have on plant workers. We understand that assessments conducted under CEPA do not address occupational settings. However, in the assessment documents there are several references to studies on occupational health. It is not clear how the information was considered in the draft assessment reports. Given the nature of these "site-restricted" substances, valued information should be gathered and further considered by assessors. This approach will improve and inform existing safety practices in the workplace required under the authority of the provincial jurisdiction for the petroleum sector. The assessment on these "site-restricted" substances" should have been used to identify future plans for protecting workers. As a result, the draft assessment reports do not provide any recommendations to the provinces as to areas of work that could be undertaken on these substances to determine the impacts to workers who work with these substances.

As noted, the other vulnerable populations that have not been considered in the assessment report are those communities which are located outside the fence line of the facilities. These communities, in close proximity to the facilities or located downwind from the facilities, could be negatively affected by substances released from these plants. The issue could be chronic exposure to these substances and, in particular, for vulnerable populations such as children, infants and pregnant women. The assessment report does not offer information to confirm that the processes used on site do not release any of the substances or other by-products that may be toxic to health or environment.

Recommendation: While these substances are considered site-restricted, the government should consider the health of vulnerable populations in these draft risk assessments, particularly for people living in close proximity or downwind from the facility and expand on worker exposure to these substances. The scope of the assessment should be revised to consider impacts to the health of vulnerable populations.

6) Conclusion of toxicity under CEPA

Based on the uncertainty of the data, particularly on persistence and bioaccumulation, and the absence of critical data on emissions or production in the assessment report, we question the conclusion that these substances do not meet the criteria of section 64 of CEPA. The draft assessment report presents sufficient evidence outlining the significant health impacts from these substances and also provides some insight on impacts to the aquatic environment (although no data are presented). We would expect, based on the health evidence that these substances would meet the criteria set under section 64 of CEPA. However, the absence of exposure data makes it difficult to meet the requirements under section 64 of CEPA.

Recommendation: We do not support the conclusion of the draft assessment on these substances without additional data on releases of substances.

Recommendation: The government should take additional steps to provide data on releases of substances or by-products from processes using these substances. These data would provide the evidence to demonstrate that these substances remain on-site only.

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