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PROPOSED RISK MANAGEMENT APPROACH

for

1,4-Benzenediamine, N,N'-mixed Phenyl and tolyl derivatives (BENPAT)

Chemical Abstract Service Registry Number (CAS RN):
68953-84-4

Environment Canada
Health Canada

September 2011

Canada

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This proposed risk management approach document builds on the previously released risk management scope document for BENPAT and outlines the proposed control actions for this substance. Stakeholders are invited to submit comments on the content of this proposed risk management approach or provide other information that would help to inform decision making. Following this consultation period, the Government of Canada will initiate the development of the specific risk management instrument(s) and/or regulation(s) where necessary. Comments received on the proposed risk management approach will be taken into consideration in developing the instrument(s) and/or regulation(s). Consultation will also take place as instrument(s) and/or regulation(s) are developed.

SUMMARY OF RISK MANAGEMENT

1. The Government of Canada plans to develop a control instrument under the *Canadian Environmental Protection Act, 1999* (CEPA 1999) to address releases to the environment from the industrial use of BENPAT, as appropriate.
2. The Government of Canada plans to implement Significant New Activity (SNAc) provisions under CEPA 1999 to BENPAT.
3. The Government of Canada will work with stakeholders to further quantify sources of releases of BENPAT to the environment throughout its lifecycle and will develop risk management control actions under CEPA 1999 to address these releases as required.
4. The Government of Canada will add BENPAT to the CMP monitoring and surveillance program to quantify levels of this substance that may be found in the environment.

Note: This summary is an abridged list of the instruments and tools proposed to risk manage this substance. Please see section 9.1 of this document for a complete explanation of risk management.

1. ISSUE

1.1 Categorization and the Challenge to Industry and Other Interested Stakeholders

The *Canadian Environmental Protection Act, 1999* (CEPA 1999) (Canada 1999) requires the Minister of the Environment and the Minister of Health (the Ministers) to categorize substances on the *Domestic Substances List* (DSL). Categorization involves identifying those substances on the DSL that, in accordance with the criteria at section 73 of the Act, a) are considered to be persistent (P) or bioaccumulative (B), based on the criteria set out in the *Persistence and Bioaccumulation Regulations* (Canada 2000), and "inherently toxic" (iT) to humans or other organisms, or b) may present, to individuals in Canada, the greatest potential for exposure (GE). In addition, the Act requires the Ministers to conduct screening assessments of substances that meet the categorization criteria. The assessment further determines whether the substance meets one or more of the criteria set out in section 64 of the Act[1].

[1] A determination of whether one or more of the criteria of section 64 are met and whether risk management may be required is based upon an assessment of potential risks to the environment and/or to human health associated with exposures in the general environment. For humans, this includes exposures from ambient and indoor air, drinking water, foodstuffs and the use of consumer products. A conclusion under CEPA 1999 on

In December 2006, the Challenge identified 193 chemical substances through categorization which became high priorities for assessment due to their hazardous properties and their potential to pose risks to human health and the environment. In February 2007, the Ministers began publishing, for industry and stakeholder comments, profiles of batches containing 12 to 19 high-priority substances. New batches are released for comments every three months.

Information-gathering authority in section 71 of CEPA 1999 is being used under the Challenge to gather specific information where it is required. The information that is collected through the Challenge is used to make informed decisions and appropriately manage any risks that may be associated with these substances.

The substance 1,4-Benzenediamine, N,N'-mixed phenyl and tolyl derivatives, Chemical Abstract Service Registry Number (CAS RN[2]) 68953-84-4 referred to throughout this document as "BENPAT" is included in Batch 11 of the Challenge under the Chemicals Management Plan (Canada 2009).

1.2 Final Screening Assessment Report Conclusion for BENPAT

A notice summarizing the scientific considerations of a final screening assessment report was published by Environment Canada and Health Canada in the *Canada Gazette*, Part I, for BENPAT on September 10, 2011, under subsection 77(6) of CEPA 1999. The final screening assessment report concluded that BENPAT is entering or may be entering the environment in a quantity or a concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity. In addition, it is concluded that BENPAT meets the criteria for persistence, but not for bioaccumulation, as out in the *Persistence and Bioaccumulation Regulations* under CEPA 1999.

For further information on the final screening assessment report conclusion for BENPAT, refer to the final screening assessment report, available at http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/batch-lot-11/index-eng.php

1.3 Proposed Measure

As a result of a screening assessment of a substance under section 74 of CEPA 1999, the substance may be found to meet one or more of the criteria under section 64 of CEPA 1999. The Ministers can propose to take no further action with respect to the substance, add the substance to the Priority Substances List (PSL) for further assessment, or recommend the addition of the substance to the List of Toxic Substances in Schedule 1 of the Act. Under certain circumstances, the Ministers must make a specific proposal to recommend the implementation of virtual elimination.

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the substances in the Chemicals Management Plan (CMP) Challenge Batches 1-12 is not relevant to nor does it preclude an assessment against the hazard criteria specified in the Workplace Hazardous Materials Information System [WHMIS] *Controlled Products Regulations* for products intended for workplace use. Similarly, a conclusion based on the criteria contained in section 64 of CEPA 1999 does not preclude actions being taken under other sections of CEPA or other Acts.

[2] CAS RN: Chemical Abstracts Service Registry Number. The Chemical Abstracts Service information is the property of the American Chemical Society and any use or redistribution, except as required in supporting regulatory requirements and/or for reports to the Government of Canada when the information and the reports are required by law or administrative policy, is not permitted without the prior, written permission of the American Chemical Society.

In this case, the Ministers proposed to recommend the addition of BENPAT to the List of Toxic Substances in Schedule 1. As a result, the Ministers will propose an instrument respecting preventive or control actions to protect the environment from the potential effects of exposure to this substance. As BENPAT is not subject to the virtual elimination provisions under CEPA 1999, it will be managed using a lifecycle approach, to prevent or minimize its release into the environment.

2. BACKGROUND

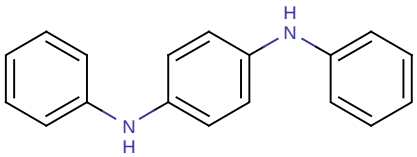
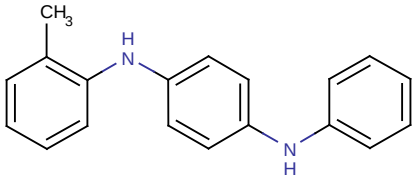
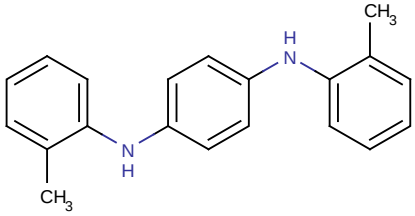
2.1 Substance Information

BENPAT is part of the chemical grouping Amines and the chemical sub grouping Aromatic Amines.

Table 1 presents other names, trade names, chemical groupings, the chemical formula, the chemical structure and the molecular mass for BENPAT.

Table 1. Substance identity for BENPAT

Chemical Abstracts Service Registry Number (CAS RN)	**68953-84-4**
DSL name	*1,4-Benzenediamine, N,N'-mixed Phenyl and tolyl derivatives*
National Chemical Inventories (NCI) names[1]	*1,4-Benzenediamine, N,N'-mixed Ph and tolyl derivs. (TSCA, DSL, REACH, EINECS, ENCS, PICCS, ASIA-PAC, NZIoC);* *Benzene-1,4-diamine, derives mixtes de N,N'-(phenyle et tolyle) (French) (DSL);* *benzenediamine-1,4, melange de N,N'-derives phenyles et tolyles (French) (EINECS);* *1,4-Benzoldiamin, N,N'-gemischte Phenyl und Tolylderivate (German) (EINECS);* *1,4-bencenodiamina, N,N'-mezcla de fenil y tolil derivados (Spanish) (EINECS);* *1,4-Benzenediamine, N,N'-mixed phenyl and tolyl derivatives (AICS);* *1,4-Benzenediamine, N,N'-mixed phenyl and tolyl derivs. (ECL);* *DERIVATIVES, BENZENE-1,4-DIAMINE, N,N'-MIXED PHENYL AND TOLYL (PICCS);* *MIXED PHENYL AND TOLYL P-PHENYLENEDIAMINE (PICCS)*
Other names	*Hydroquinone, o-toluidine, aniline condensate;* *N,N'-Diphenyl-p-phenylenediamine, methylated;* *Amines (Chemical Category);* *Wingstay 100 (Huntink et al. 2006, IUCLID Data Set 2003);* *Polystay 100AZ (MSDS 2002a);* *Accinox 100, blend of phenyl and tolyl p-phenylenediamines, DAPD, mixed diaryl-p-phenylenediamines, mixed di-aryl-p-phenylenediamines, diaryl-p-phenylenediamines, Naugard 496, Vulkanox 3100,Polystay 100, WTR Number 4a, Nailax (Nailax B)(IUCLID Data Set 2003), DTPD (XingChun Chemical Corporation c2006, Kirk-Othmer c2010)*
Chemical group (DSL Stream)	Organic Unknown or Variable Composition, Complex Reaction Products, or Biological Materials (UVCB)
Major chemical class or use	Amines
Major chemical sub-class	Aromatic amines
Chemical formula	**Complex reaction product that includes the following:**

	Structure 1 = $C_{18}H_{16}N_2$ **Structure 2** = $C_{19}H_{18}N_2$ **Structure 3** = $C_{20}H_{20}N_2$
Representative chemical structure used to run the estimation models [2]	 **Structure 1**  **Structure 2**  **Structure 3**
Representative SMILES used to run the estimation models [3]	**Structure 1** N(C1=CC=CC=C1)C1=CC=C(NC2=CC=CC=C2)C=C1 **Structure 2** CC1=C(NC2=CC=C(NC3=CC=CC=C3)C=C2)C=CC=C1 **Structure 3** CC1=CC=CC=C1NC1=CC=C(NC2=CC=CC=C2C)C=C1
Molecular mass (g/mol)	**Structure 1** = 260.33 **Structure 2** = 274.36 **Structure 3** = 288.39

[1] National Chemical Inventories (NCI) 2009: AICS (Australian Inventory of Chemical Substances); ASIA-PAC (Asia-Pacific Substances Lists); ECL (Korean Existing Chemicals List); EINECS (European Inventory of Existing Commercial Chemical Substances); ELINCS (European List of Notified Chemical Substances); ENCS (Japanese Existing and New Chemical Substances); PICCS (Philippine Inventory of Chemicals and Chemical Substances); and TSCA (Toxic Substances Control Act Chemical Substance Inventory).

[2] This substance is a UVCB (**U**nknown or **V**ariable Composition, **C**omplex Reaction Products, or **B**iological Materials); i.e., it is not a discrete chemical and thus may be characterized by a variety of structures. To assist with modelling, the structure and corresponding SMILES presented here were chosen to represent the substance.

[3] Simplified Molecular Input Line Entry System.

3. WHY WE NEED ACTION

3.1 Characterization of Risk

Given the information on the amount of BENPAT that is imported into Canada and on the nature of its reported uses, there is potential for release of this substance into the Canadian environment. Once released in the environment, because of its resistance to degradation, BENPAT will remain in water, sediment and soil for long periods of time. BENPAT has also demonstrated very high toxicity to aquatic organisms (Canada 2010).

A site-specific risk quotient analysis, integrating estimates of exposure with toxicity information, was performed for the aquatic medium at three industrial sites to determine whether there is potential for ecological harm in Canada (Canada 2010). The analysis was based on two

scenarios to account for differences in estimations of releases to water and soil. In release Scenario 1, releases are distributed at 66% to water and 33% to soil, and of the 66 % water releases, 50% is assumed to be distributed to the sewer and 50 % to other receiving water. In release Scenario 2, a 50/50% distribution to water and soil is used.

Predicted Environmental Effect Concentrations (PECs) were in the range of of 0.8 to 64.82 µg/L for Scenario 1 and 0.04 to 3.24 µg/L for Scenario 2. A predicted no-effect concentration (PNEC) for BENPAT was derived from the chronic toxicity value (as the most sensitive experimental value) for algae, *S. capricornutum* (0.00043 mg/L). The resulting risk quotients (PEC/PNEC) for BENPAT resulting from release Scenario 1 are in the range of 1.9 – 150.7 and in the range of 0.1 – 7.5 for Scenario 2. As a result, two to three sites were identified as having a risk quotient (RQ) above the level of concern (> 1); therefore, harm to aquatic organisms is possible at these sites from the release of BENPAT.

Using a similar risk analysis approach, consumer release scenarios were developed and resulted in PECs for BENPAT potentially exceeding the PNEC in about 4 to 11% of the water bodies receiving wastewater across Canada under low (10^{th} percentile) flow conditions. Maximum RQ calculated for Scenario 1 was 3.7 and 5.1 for Scenario 2 (Canada 2010).

Based on this information, BENPAT has the potential to cause ecological harm in Canada (Canada 2010).

4. CURRENT USES AND INDUSTRIAL SECTORS

The substance BENPAT is not naturally produced in the environment. Based on information collected through a survey conducted pursuant to section 71 of CEPA 1999 (Canada 2010), seven notifiers indicated that between 1 000 000 and 10 000 000 kg of BENPAT were imported into Canada in 2006. The substance was not reported to be manufactured in Canada. Additionally, one company identified stakeholder interest in BENPAT.

In Canada, industrial uses of BENPAT were identified as a result of section 71 survey under CEPA 1999 (Canada 2010). While most of these uses are considered confidential business information and cannot be disclosed, they were all taken into consideration in the assessment. One company reported that the substance BENPAT is used in the manufacturing of rubber products in concentrations of 0.29 to 2.17% (Environment Canada 2010).

In general, BENPAT is used as additive to protect elastomers against ozone deterioration (Kirk-Othmer c2010). It is commonly referred to as an antiozonant or antioxidant as the protective effects on rubber products ensue from a reaction of the chemical additive with ozone.

BENPAT belongs to a class of commercial chemical antiozonants that are derivatives of N,N'-diaryl-*p*-phenylenediamine (N,N'-diaryl-*p*-PDA), where the aryl group may be phenyl, methylphenyl, or napthalenyl (Miller et al. 1985). They are moderately active antiozonants, used at low concentrations due to their poor water solubility (Kirk-Othmer c2010). Their main advantage was recognized to be high resistance to loss by consumption and vaporization (Ambelang et al. 1963). Thus, in combination with more reactive antiozonants, they offer an increased protection in longer-term applications such as radial passenger tires (Miller et al. 1985).

BENPAT is known to be used as an antioxidant/antiozonant in high durability rubber products including tires and hoses (Iatropoulos et al. 1997). It should be noted that rubber protective agents, i.e. antioxidants and antiozonants are typically added to make up approximately 1% (wt-%) of a typical tire thread composition (Wik and Dave 2009). However, as different chemicals may be used as protective agents and processing aids, the composition of different tires varies (Wik and Dave 2009).

5. PRESENCE IN THE CANADIAN ENVIRONMENT AND EXPOSURE SOURCES

5.1 Releases to the Environment

The losses estimated for BENPAT over its lifecycle (based on conservative assumptions) are presented in Table 2 (Environment Canada 2010). BENPAT is not manufactured in Canada above the reporting threshold, so the estimated losses are based on import quantities reported for the year 2006. The 2006 quantities reported in Canadian commerce were between 1 000 000 and 10 000 000 kg/year for BENPAT (Canada 2010).

Table 2. Estimated Losses of BENPAT during its Lifecycle[3]

Type of Loss	Proportion (%)		
	BENPAT		
	Industrial use	Commercial/Consumer use	Total
Wastewater	0 – 0.6	5.6 – 5.7*	5.7 – 6.3
Land	-	5.5**	5.5
Air emission	0.004 – 0.1	-	0.004 – 0.1
Chemical transformation* **	Non-zero	Non-zero	
Landfill	0.5 – 0.6	12.3 – 12.5	12.8 – 13.1
Incineration	0.001 – 0.004	8.3	8.3
Recycling	-	67 – 67.4	67 – 67.4
Export	Unknown	Unknown	

[1]

[3] For BENPAT, information from the following key documents was used to estimate releases to the environment and the distribution of the substance, as summarized in this table: OECD 2004a, b and c; US EPA 2007 and ChemRisk LLC 2010. Note that ChemRisk LLC 2010 documents are developed by industry for their use in the European **R**egistration, **E**valuation, **A**uthorisation and Restriction of **Ch**emical substances (REACH) context. Other documentation may have provided information for some assumptions.

*For the consumer/commercial use scenario developed for BENPAT, it is expected that in some locations across Canada roadway run-off is collected by the municipal wastewater treatment plants, but in some locations this run-off could be discharged untreated directly into ambient waters.

** For the consumer/commercial use scenario developed for BENPAT, the type of loss denoted as 'Land' generally refers to streets, roads and associated nearby soil.

*** Potential chemical transformation of antiozonants such as BENPATstemming from the process of oxidation is acknowledged; however, at the present time the extent to which it occurs is not adequately documented in the available literature.

Industrial Releases

Releases of BENPAT estimated from industrial uses are less than 1% to both wastewater and landfill and up to 0.1% to air. BENPAT released in air is not considered to be persistent and is likely to degrade via direct photolysis. Environmental concentrations were estimated and used to predict site-specific exposure from the potential releases of BENPAT as a result of its industrial use as a rubber additive. Two to three sites were identified as having the potential to cause ecological harm from the release of BENPAT.

Product Releases

Potential releases of BENPAT from the use of rubber products and tires are most likely coming from the abrasion of tires on the road. Based on the results of the MFT, the majority of BENPAT in commercial/consumer products is estimated to be recycled (approximately 67%). BENPAT is also estimated to be released onto land and into the roadway run-off water at approximately equal proportions of 5.5 and 5.7 %, respectively, as a result of consumer or commercial use of products containing this substance. Moreover, in the consumer/commercial release scenario, approximately 13% of BENPAT is estimated to be disposed of in landfills and about 8% is estimated as destined for incineration.

In general, wastewater is a common source for releases of a substance to water and soil through wastewater treatment facilities and the subsequent waste management of sludge. Tire rubber particles containing BENPAT can be deposited on the side of roads and washed into sewers. BENPAT can subsequently leach out once the rubber particles come into contact with water (Wik 2007). A small fraction of rubber tire particles may be transferred by wind or rain to nearby soil, however concentrations of these rubber particles tend to decrease with distance from the roads, and reductions of greater than 80% have been reported at 30 m from roads (Wik and Dave 2009). Further investigation and research is required to confirm potential chemical transformation of BENPAT and release mechanisms of BENPAT from tire wear particles. Environmental fate of tire wear particles is subject to on-going investigation by the Tire Industry Product Group under the World Business Council for Sustainable Development (ChemRisk, Inc. 2008); results are anticipated by the end of 2011. This study should help quantify the scope and magnitude of releases of antioxidants such as BENPAT from tire wear particles.

As a result of recycling activities, a substance could find its way to water or soil, depending upon the operational characteristics of facilities. Finally, landfills have the potential to leach substances into groundwater, most likely in instances when the landfill has no liner and/or leachate collection system. However, offgassing or migration of BENPAT from landfills is not expected to be a significant source of release, as the substance has low volatility and adsorbs highly to soils.

5.2 Exposure Sources

BENPAT is not naturally produced in the environment. Data concerning concentrations of BENPAT in the Canadian environment were not identified. Information regarding the presence of rubber antidegradents such as BENPAT in the environment is generally very limited and exposure stems from only one source, tire wear particles (Canada 2010).

Once released into the environment and due to its resistance to degradation and very high aquatic toxicity, BENPAT has the potential to cause ecological harm in Canada.

Human exposure to this substance from environmental media and food is expected to be low to negligible (Canada 2010).

6. OVERVIEW OF EXISTING ACTIONS

6.1 Existing Canadian Risk Management

All Canadian provinces (as well as the Yukon Territory) have Extended Producer Responsability or product stewardship programs in place for managing end-of-life (EoL) tires. As a result, BENPAT contained in tires is expected to be managed in an environmentally responsible manner at the end of its service life (Cheminfo 2010).

6.2 Existing International Risk Management

BENPAT has been identified as a High Production Volume (HPV) chemical on the lists from the following organisations: the US Environmental Protection Agency (US EPA 2009), the European Union (EU Commission Joint Research Centre) (ESIS c1995–2009), and the Organisation for Economic Co-oporation and Development (OECD 2004d).

In the United States:

- The HPV program challenges companies to make health and environmental effects data publicly available on chemicals produced or imported into the United States in quantities of 1 million pounds or more per year.
- the Diaryl-p-phenylenediamine, where the aryl group may be phenyl, tolyl, or xylyl is permitted as an indirect food additive according to Title 21 – Food and Drugs, Chapter 1 – Food and Drug Administration (FDA), Department of Health and Human Services, under the following parts (US Department of Health & Human Services, 2009):
  - 175.105 Components of Adhesives (US Department of Health & Human Services, 2009a);
  - 177.2600 Rubber Articles intended for repeated use.
- Diaryl-p-phenylenediamine, where the aryl group may be phenyl, tolyl, or xylyl refers to CAS RN 68953-84-4 under the FDA's List of Indirect Additives Used in Food Contact Substances (U.S. Department of Healt & Human Services, 2010).

In Europe, two important tire-specific regulations were adopted in 2009. While not specific to BENPAT, the first regulation [Regulation 661/2009] sets minimum requirements for lowering tire rolling resistance, wet grip and rolling noise; lowering fuel consumption; and requiring mandatory fitting of tire pressure monitoring systems. The second [Regulation 1222/2009], ask for mandatory labelling of tires (European Commission 2009; ETRMA 2010). Tires (whole or shredded) are also banned in landfills in Europe (European Commission 1999).

7. CONSIDERATIONS

7.1 Alternative Chemicals or Substitutes

At this time, no suitable alternative chemicals or substitutes have been identified.

7.2 Alternative Technologies and/or Techniques

At this time, no alternative technologies and/or alternative techniques that would minimize or eliminate the use of the substance have been identified. However, control techniques to reduce or eliminate industrial releases are available.

7.3 Socio-economic Considerations

Socio-economic factors have been considered in the selection process for a regulation and/or instrument respecting preventive or control actions, and in the development of the risk management objective(s). Socio-economic factors will also be considered in the development of regulations, instrument(s) and/or tool(s) as identified in the *Cabinet Directive on Streamlining Regulation* (Treasury Board of Canada Secretariat 2007) and the guidance provided in the Treasury Board document *Assessing, Selecting, and Implementing Instruments for Government Action*.

Socio-economic considerations for BENPAT include:

- Antioxidants are needed in rubber products and tires for safety reasons.
- Costs and benefits for the Canadian government, industry and consumers.

Furthermore, alternative antioxidant formulations or alternative ozone-resistant elastomers for rubber products and tires will need to be investigated by the Rubber Sector (tire and rubber products manufacturers) against suitability (quality, durability and safety) performance standards.

8. PROPOSED OBJECTIVES

8.1 Environmental Objective

An environmental objective is a quantitative or qualitative statement of what should be achieved to address environmental concerns identified during a risk assessment.

The proposed environmental objective for BENPAT is to prevent or minimize releases of the substance in the environment.

8.2 Risk Management Objective

A risk management objective is a target expected to be achieved for a given substance by the implementation of risk management regulations, instrument(s) and/or tool(s).

The proposed risk management objective for BENPAT is to reduce releases of the substance to the environment from the rubber products and tire manufacturing, and from consumer products to the greatest extent possible.

9. PROPOSED RISK MANAGEMENT

9.1 Proposed Risk Management Instrument and Tool

As required by the Government of Canada's *Cabinet Directive on Streamlining Regulation*[4] and criteria identified in the Treasury Board document entitled *Assessing, Selecting, and Implementing Instruments for Government Action*, the proposed risk management was selected using a consistent approach, and took into consideration the information that was received through the Challenge and other information available at the time.

In order to achieve the risk management objective and to work towards achieving the environmental objective, the Government of Canada is proposing the following actions for BENPAT:

1. Addressing releases from the industrial use of BENPAT by developing a control instrument under CEPA 1999, as appropriate.
2. Implementing Significant New Activity (SNAc) provisions under CEPA 1999 for BENPAT.
3. Working with stakeholders to further quantify sources of releases of BENPAT to the environment throughout its lifecycle and developing risk management control actions under CEPA 1999 to address these releases as required.
4. Adding BENPAT to the CMP monitoring and surveillance program to quantify levels of this substance that may be found in the environment.

[4] Section 4.4 of the *Cabinet Directive on Streamlining Regulation* states that "Departments and agencies are to: identify the appropriate instrument or mix of instruments, including regulatory and non-regulatory measures, and justify their application before submitting a regulatory proposal".

9.2 Implementation Plan

The proposed measure respecting preventative or control actions in relation to BENPAT will be published in the Canada Gazette, Part I, by September 2013, as per the timelines legislated in CEPA 1999.

10. CONSULTATION APPROACH

The risk management scope document for BENPAT, which summarized the proposed risk management under consideration at that time, was published on October 2, 2010. Industry and other interested stakeholders were invited to submit comments on the risk management scope document during a 60-day comment period. Comments received on the risk management scope document were taken into consideration in the development of this proposed risk management approach document.

The primary stakeholders include

- Tire manufacturers and distributors
- Rubber manufacturers, importers and distributors
- Chemical manufacturers, importers and distributors
- Non-governmental organizations
- Provincial/territorial governments

There will be additional opportunities for public consultation during the development of the risk management instrument.

11. NEXT STEPS / PROPOSED TIMELINE

Actions	Date
Electronic consultation on proposed risk management approach document	September 10, 2011 to November 9, 2011
Response to comments on proposed the risk management approach document	No later than the time of publication of the proposed instrument
Consultation on the draft instrument	Spring/Summer 2012
Publication of the proposed instrument	No later than September 2013
Formal public comment period on the proposed instrument	No later than Fall 2013
Publication of the final instrument	No later than March 2015

Industry and other interested stakeholders are invited to submit comments on the content of this proposed risk management approach or provide other information that would help to inform decision making. Please submit comments prior to November 9, 2011 since the risk management of BENPAT will be moving forward after this date. During the development of the instrument(s) and tool(s), there will be opportunity for consultation. Comments and information submissions on the proposed risk management approach should be submitted to the address provided below:

Chemicals Management Division
Gatineau Quebec K1A 0H3
Tel: 1-888-228-0530 / 819-956-9313
Fax: 819-953-7155
Email: Substances@ec.gc.ca

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