Government of Canada / Gouvernement du Canada

PROPOSED RISK MANAGEMENT APPROACH

for

2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-

(Pigment Red 3)

Chemical Abstracts Service Registry Number (CAS RN):
2425-86-6

Environment Canada
Health Canada

March 2009

Canada

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This proposed risk management approach document builds on the previously released risk management scope document for Pigment Red 3, 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) where necessary. Comments received on the proposed risk management approach will be taken into consideration in developing the instrument(s). Consultation will also take place as instrument(s) are developed.

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 a) are considered to be persistent (P) and/or bioaccumulative (B), based on the criteria set out in the *Persistence and Bioaccumulation Regulations,* and "inherently toxic" (iT) to humans or other organisms; or b) present, to individuals in Canada, the greatest potential for exposure (GPE). 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 the definition of "toxic" set out in section 64 of CEPA 1999.

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 comment, profiles of batches containing 15 to 30 high-priority substances.

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

The substance 2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-, Chemical Abstracts Service Registry Number (CAS RN)[1] 2425-85-6, referred to throughout this document by "Pigment Red 3," was included in Batch 3 of the Challenge under the Chemicals Management Plan.

[1] 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.

1.2 Final Screening Assessment Report Conclusion for Pigment Red 3

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 Pigment Red 3 on March 7, 2009, under subsection 77(6) of CEPA 1999. The final screening assessment report concluded that Pigment Red 3 is entering or may be entering the environment in a quantity or a concentration or under conditions that constitute or may constitute a danger in Canada to human life or health.

Based on the information presented in the draft screening assessment (Canada 2008a), it is proposed that Pigment Red 3 is not entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity or that constitute or may constitute a danger to the environment on which life depends.

On the basis of carcinogenicity of Pigment Red 3, for which there may be a probability of harm at any level of exposure, it is proposed that Pigment Red 3 be considered a substance that may be entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health.

It is therefore concluded that Pigment Red 3 meet the criterion in paragraph 64(c) of CEPA 1999. Additionally, Pigment Red 3 meets the criteria for persistence but does not meet the criteria for bioaccumulation as defined by the *Persistence and Bioaccumulation Regulations* made under CEPA 1999. The presence of Pigment Red 3 in the environment results primarily from human activity.

For further information on the final screening assessment report conclusion for Pigment Red 3, refer to the final screening assessment report, available at www.chemicalsubstanceschimiques.gc.ca/challenge-defi/batch-lot_3_e.html

1.3 Proposed Measure

Following a screening assessment of a substance under section 74 of CEPA 1999, a substance may be found to meet 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 CEPA 1999. Under certain circumstances, the Ministers must make a specific proposal either to recommend addition to the List of Toxic Substances or to recommend the implementation of virtual elimination (or both). In this case, the Ministers proposed to recommend the addition of Pigment Red 3 to the List of Toxic Substances in Schedule 1 of CEPA 1999. As a result, the Ministers will develop a regulation or instrument respecting preventive or control actions to protect the health of Canadians and the environment from the potential effects of exposure to this substance.

The final screening assessment report did not conclude that Pigment Red 3 meets the conditions set out in subsection 77(4) of CEPA 1999. As a result, Pigment Red 3 will not be subject to the virtual elimination provisions under CEPA 1999 and will be managed using a life-cycle approach, to prevent or minimize its release into the environment.

2. BACKGROUND

2.1 Substance Information

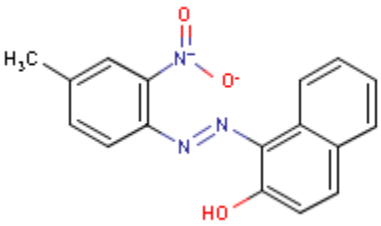
Pigment Red 3 is part of the chemical grouping discrete organics and the chemical sub grouping azo compounds; naphthalenes.

Table 1 presents other names, trade names, chemical groupings, the chemical formula, the chemical structure and the molecular mass for Pigment Red 3.

Table 1. Identity of Pigment Red 3

Chemical Abstracts Service Registry Number (CAS RN)	2425-85-6
DSL name	2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-
National Chemical Inventories (NCI) names[2]	2-Naphthalenol, 1-[2-(4-methyl-2-nitrophenyl)diazenyl]-(TSCA) 2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]- (AICS, PICCS, ASIA-PAC, NZIoC) 1-(4-methyl-2-nitrophenylazo)-2-naphthol (EINECS) Pigment Red 3 (ENCS) Pigment Red 003(ECL) 2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-(toluidine red) (PICCS) C.I. Pigment Red 3, Naphth-2-ol, 1-[(4-methyl-2-nitrophenyl)azo](Toluidine Red) (PICCS) Toluidine Red (PICCS)
Other names	1-(o-Nitro-p-tolylazo)-2-naphthol, 1-[(2-Nitro-4-methylphenyl)azo]-2-naphthol, 2-Nitro-p-toluidine-2-naphthol
Chemical group (DSL stream)	Discrete organics
Major chemical class or use	Azo compounds; naphthalenes
Major chemical sub-class	Beta-naphthol pigment
Chemical formula	$C_{17}H_{13}N_3O_3$

[2] National Chemical Inventories (NCI). 2006: 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); ENCS (Japanese Existing and New Chemical Substances); NZIoC (New Zealand Inventory of Chemicals); PICCS (Philippine Inventory of Chemicals and Chemical Substances); and TSCA (Toxic Substances Control Act Chemical Substance Inventory).

Chemical Abstracts Service Registry Number (CAS RN)	2425-85-6
DSL name	2-Naphthalenol, 1-[(4-methyl-2-nitrophenyl)azo]-
Chemical structure	
SMILES	O=N(=O)c(c(N=Nc(c(c(ccc1)cc2)c1)c2O)ccc3C)c3
Molecular mass	307.31 g/mol

3. WHY WE NEED ACTION

3.1 Characterization of Risk

Based on consideration of relevant available information, including a weight-of-evidence assessment by an international agency (IARC 1993), a critical effect for characterization of risk to human health for Pigment Red 3 is carcinogenicity. In a two-year bioassay, exposure-related tumours were observed at multiple sites in both male and female rats, and in male mice (NTP 1992). The neoplastic effects included liver tumours in female rats, adrenal gland, skin and malignant Zymbal gland tumours in male rats, and tumours in the kidney and thyroid gland in male mice. No exposure-related tumours were observed in female mice.

Although a mode-of-action analysis for tumour induction at the multiple sites in rats and mice is considered to be beyond the scope of this Challenge screening assessment, in light of the equivocal evidence for genotoxicity based on a limited database (with positive results observed at high doses for mutagenicity in some strains of *Salmonella* under certain metabolic activation conditions and the induction of DNA damage in the colon of orally exposed mice), a mode of induction of tumours involving direct interaction with genetic material cannot be precluded.

With respect to consideration of critical non-cancer effects in a screening context, a margin-of-exposure (MOE) approach is applied for the risk characterization. Due to its uses and its physical and chemical properties of low vapour pressure, Henry's law constant and solubility, exposure in the general environment is expected to be negligible. The major source of population exposure to Pigment Red 3 is from dermal consumer product exposures. Due to the absence of dermal exposure toxicity studies, the critical effect levels from oral studies are applied to the MOE calculation and it is assumed that Pigment Red 3 induces similar toxicity through oral exposure or dermal exposure. In the available short-term, subchronic and chronic studies in experimental animals identified, effects were observed at the lowest doses tested, with the lowest lowest-observed-adverse-effect level (LOAEL) of 183 mg/kg/day for histopathological and hematological effects in rats. Comparison of this critical effect level of 183 mg/kg/day and the upper-bounding estimate of dermal exposure of Pigment Red 3 from hand washing with a soap bar by adults (4.4×10^{-3} mg/kg-bw/day) results in a margin of exposure of approximate 41 600. When dermal exposure to Pigment Red 3 during use of paints (2.0 mg/kg-bw per event, 132 min exposure) is compared to the LOAEL of 738 mg/kg-bw/day from a short-term (14-day) oral study, a margin of exposure of approximately 370 is derived; however, considering the conservative nature of the exposure assessment, the actual exposures may be lower and would result in a higher MOE against this endpoint. It can be argued that in a highly refined risk assessment, a margin of exposure of 370 may not adequately address uncertainties, especially since non-carcinogenic effects were observed at all doses tested. Weighing the conservative nature of the exposure assessment to Pigment Red 3 in paints, the MOE of 370 does not cause any concern for short-term non-carcinogenic effects (Canada 2008a).

3.2 Exposure of Children

Pigment Red 3 is used in consumer paints in the typical concentration range of 1–15%. These paints are not intended for use by children.

For cosmetic products, the greatest dermal exposure to Pigment Red 3 was 4.4×10^{-3} mg/kg-bw/day, for handwashing, by adults, with soap. Children's dermal exposures were lower for both soap handwashing and showering exposures.

Personal communication with the Chemicals Strategies Division of Health Canada confirmed that Pigment Red 3 is not currently being used in a popular brand of crayons sold in North America (as per email from Crayola Consumer Affairs, dated 2008 July 23, unreferenced).

4. CURRENT USES AND INDUSTRIAL SECTORS

According to 2006 calendar year data obtained from the section 71 survey to Canadian industry under CEPA 1999, Pigment Red 3 is used in a variety of industrial and commercial applications as an organic pigment in primarily alkyd and acrylic enamel gloss paints for both interior and exterior applications including anti-rust proofing, in plastics, printing inks (toner), textiles and polyurethane coatings. Industrial applications include manufactured or imported industrial enamel paints for use on metal tools or equipment. Other industrial applications are in plastic compounding, plastic coloration and the manufacture of industrial printing inks. Pigment Red 3 has not been reported in food products. Pigment Red 3 is on the Pest Management Regulatory Agency List of Formulants, List 2, which contains formulants that are considered potentially toxic. The substance has known international uses as a colouring agent in cosmetics in some countries.

Based on the section 71 survey to industry, twelve (12) companies were identified as either a) manufacturers or importers or users of Pigment Red 3 whether alone, in a product, in a mixture or in a manufactured item in a quantity ≥ 100 kg; or b) users of a quantity ≥ 1000 kg at any concentration (Environment Canada 2008a). Only one company reported manufacturing Pigment Red 3 above the 100-kg reporting threshold (100 000–1 000 000 kg). Of this manufactured quantity, all but 30 000 and 50 000 kg were exported from Canada. Additionally, six companies reported importing above the 100-kg reporting threshold, while one company reported importing below that threshold, with total reported imports ranging between 10 000 and 100 000 kg. Seven companies reported using Pigment Red 3 above the 1000-kg threshold and two were below. The total amount in use for 2006 was approximately 40 000 kg.

5. PRESENCE IN THE CANADIAN ENVIRONMENT AND EXPOSURE SOURCES

5.1 Releases to the Environment

Pigment Red 3 was identified to be primarily used in paints according to the results of the CEPA section 71 notice (Canada 2007). The imported and manufactured quantities of Pigment Red 3 reported in 2006 and its reported use pattern were used to estimate releases.

To estimate potential release of the substance to the environment at different stages of its life cycle, a mass flow tool was developed (Environment Canada 2008b). Calculations by Environment Canada indicate that Pigment Red 3 can be expected to be found largely in waste

management sites (91%), due to the eventual disposal of manufactured items containing it. Unless specific information on the rate or potential for release of the substance from landfills and incinerators becomes available, these calculations do not quantitatively account for releases to the environment from disposal. A small fraction of solid waste is incinerated, which is expected to result in transformation of the substance. Based largely on information contained in OECD emission scenario documents for processing and uses associated with this substance, it is estimated that 1.7% and 4.5% of Pigment Red 3 may be released to soil and wastewater, respectively. Releases of Pigment Red 3 to soil are expected to occur from flaking and chipping of paints during industrial and consumer use. Releases of Pigment Red 3 to water are predicted to be mostly due to releases from transfer lines, cleaning equipment and from transferring the substance from the vessel to bags during formulation. Releases to water are also predicted to occur from brush residues during industrial and consumer use.

The particulate character of Pigment Red 3 should have a key influence on its fate in the environment. Its particle size and density, together with its chemical stability and low aqueous solubility indicate that it will partition by gravity to sediments if released to surface waters, and will tend to remain in soils if released to terrestrial environments (Canada 2008a).

5.2 Exposure Sources

Pigment Red 3 has international uses as a colouring agent in cosmetics in some countries. In Europe, Pigment Red 3 is allowed exclusively in cosmetic products intended for brief contact with the skin surface. Pigment Red 3 is expected to be used in low volumes in Canada as a cosmetic ingredient. It has reported uses in only three notifications to Health Canada: a nail polish and two soap products, one of which is intended for children. The maximum concentration was less than 0.1% wt/wt%.

Pigment Red 3 is used in commercial settings to manufacture items that consumers may come in contact with after application, such as specialty paints, pigmented polymers and pigments used in printing inks.

Pigment Red 3 is used in paints for sale to the general public, most notably rust paints, acrylic and enamel gloss. Its use in consumer paints could result in possible dermal and/or inhalation exposure.

Pigment Red 3 is often directly incorporated into the matrix of the solid material (i.e., polymer) and, generally, solid materials have the lowest potential for exposure by the dermal route as migration through the solid matrix and subsequent absorption through the skin would be very limited.

6. OVERVIEW OF EXISTING ACTIONS

6.1 Existing Canadian Risk Management

Pigment Red 3 is included on the Pest Management Regulatory Agency's (PMRA) List of Formulants, Appendix 1 (Single-substance Formulants).

6.2 Existing International Risk Management

Pigment Red 3 is not approved for use in cosmetics in the United States.

In Europe, Pigment Red 3 (CI 12120) is allowed exclusively in cosmetic products intended to come into contact only briefly with the skin as per Council Directive 76/768/EEC, Annex IV Part I.

7. CONSIDERATIONS

7.1 Alternative Chemicals or Substitutes

It is important to note that these substitutes have not undergone an assessment to determine whether they meet the criteria under section 64 of CEPA 1999.

Pigment Red 3 possesses superior weather-fastness to most alternate pigments in its cost range; as such, there are no direct alternatives for certain applications. Alternatives are available for some other applications but according to the industry, are more expensive and do not disperse as well.

Safety marking paints coloured with Pigment Red 3 are considered a replacement for safety paints coloured with Pigment Red 104, which is based on lead and chromium compounds. The Government of Canada is reviewing Pigment Red 104 and is currently developing risk management options to reduce human exposure to Pigment Red 104 and encourage the use of alternative pigments (Canada 2008b; Health Canada 2008).

7.2 Alternative Technologies and/or Techniques

No information is available on alternative technologies and/or techniques.

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*.

- Pigment Red 3 is manufactured and used in Canada, and Canadian firms also reported imports of Pigment Red 3 in 2006, either alone, in a product, in a mixture or in a manufactured product. According to section 71 reports, Pigment Red 3 was manufactured in Canada in amounts between 100 000 and 1 000 000 kg in 2006, and the quantity imported was between 10 000 and 100 000 kg in 2006. A total of approximately 40 000 kg was used in the industrial sector in 2006, mainly in the paints and coatings sector (95%). (Source: Batch 3 - RM Overview, HC, Sept 11, 2008).
- An analysis from Statistics Canada, *Annual Survey of Manufactures and Logging* (ASML) (2006), suggests that the total revenue of the Paint and Coating Manufacturing industry (NAICS 32551) was in excess of $2.4 billion in 2006. Even though the total work force dropped by 18% between 1997 and 2006, this industry still employs 6131 persons, with approximately 58% of the work force in manufacturing positions (Statistics Canada, ASML, 2006).
- There were 300 establishments in the paint and coating sector in Canada in June 2008, divided between 206 employers and 94 intermediates (Statistics Canada, *Canadian Business Patterns Database*, June 2008). And 48.7% of the establishments are located in Ontario and 21.7% in Quebec. The number of plants steadily increased between 1997 and 2004 but has been decreasing since (Statistics Canada, *Canadian Business Patterns Database*, June 2008).
- Manufacturing costs have been increasing, especially for materials and supplies, at a compound annual growth rate of 1.4% between 1997 and 2006. The annual average salary per employee in the paint and coating sector was $50,108 in 2006, which represents $22,308 more than the annual average personal income in Canada from 2002 to 2006 (Statistics Canada, ASML, 2006).
- Canadian annual exports for paint and coating manufactured products increased from $414 million to $454 million between 1996 and 2007, with a peak of $463 million in 2006 (Statistics Canada, ASML, 2006). At the same time, Canadian annual imports dropped from 1.011 million to $955.830 million, with a low at $948.717 million in 2005.
- Alternatives are available but according to the industry, are more expensive and do not disperse as well.
- The price of paint depends on the intended end use. Decorative paints are cheaper than performance paints and safety paints since they do not have to withstand harsh conditions like UV, chemical resistance or high heat.
- The other industry on which the proposed risk management action may have an economic impact is the chemical manufacturing sector, which represents 4.54% of the total Pigment Red 3 use in Canada.

8. PROPOSED OBJECTIVES

8.1 Human Health Objective

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

The proposed human health objective for Pigment Red 3 is to minimize exposure to, and hence risk to human health associated with, exposure to Pigment Red 3 to the extent practicable.

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 Pigment Red 3 is to prevent increases in exposure to this substance.

9. PROPOSED RISK MANAGEMENT

9.1 Proposed Risk Management

As required by the Government of Canada's *Cabinet Directive on Streamlining Regulation*,[3] and criteria identified in the Treasury Board document entitled *Assessing, Selecting, and Implementing Instruments for Government Action*, the proposed risk management instruments were selected using a consistent approach, and took into consideration the information that has been 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 human health objective, the risk management being considered for Pigment Red 3 is listing on the Cosmetic Ingredient Hotlist and investigating possible further actions under the *Hazardous Products Act*.

9.1.1 Pigment, Paint and Plastics Sectors

Pigment Red 3 is used in Canada for plastic formulation for commercial applications and export; and commercial and consumer paints and coatings. These uses lock the pigment into the cured paint or plastic matrix and minimize its availability to the general public. The Government will investigate whether action under the *Hazardous Products Act* is required with regard to consumer exposures from use of paints containing Pigment Red 3. The initial step will involve further characterization of the exposure potential to reduce the uncertainty in the exposure estimates.

[3] 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".

9.1.2 Industrial Use Sector

All industrial chemical uses are governed under federal, provincial or territorial health and safety regulations and all workplace chemicals must comply with the *Controlled Products Regulations*, which includes Workplace Hazardous Materials Information System (WHMIS) labelling, supply of Material Safety Data Sheets (MSDS) and worker training. This regulation also extends to workplace facilities that are under federal jurisdiction.

9.1.3 Cosmetics Sector

Pigment Red 3 was found to be in two soap products notified in Canada, one intended specifically for use by children. The exposure modelling in the screening assessment report indicated that handwashing had a higher margin of exposure than dermal paint exposure. However, the frequency of use could considerably increase the exposure to this carcinogen for which there may be a probability of harm at any exposure. Therefore, the government will take action to manage Pigment Red 3 in cosmetic products, in accordance with section 16 of the *Food and Drugs Act*, which states that no person shall sell a cosmetic product that has in it any substance that may injure the health of the user when the cosmetic is used according to its customary method. The government will achieve this goal through addition of Pigment Red 3 to the Health Canada Cosmetic Ingredient Hotlist, which is an administrative tool to help cosmetic manufacturers satisfy the provisions of section 16. Compliance with the provisions of section 16 are monitored, in part, through the mandatory notification provisions of section 30 of the *Cosmetic Regulations of the Food and Drugs Act*, which requires that all manufacturers and importers provide a list of the cosmetic's ingredients to Health Canada.

9.1.4 Pest Control Products Sector

Pigment Red 3 is used in two anti-fouling paints at a concentration of <1.0%. Anti-fouling paints are industrial paints used to prevent organisms attaching to ship hulls and are registered pest control products governed by the *Pest Control Products Act* (PMRA 2007).

9.2 Implementation Plan

The proposed regulation or instrument respecting preventative or control actions in relation to Pigment Red 3 will be published in the *Canada Gazette*, Part I, no later than March 2011, as per the timelines legislated in CEPA 1999.

10. CONSULTATION APPROACH

The risk management scope for Pigment Red 3, which summarized the proposed risk management under consideration at that time, was published on August 23, 2008, and is available at www.chemicalsubstanceschimiques.gc.ca/challenge-defi/batch-lot_3_e.html. Industry and other interested stakeholders were invited to submit comments on the risk management scope 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.

Consultation for the risk management approach will involve publication on March 7, 2009, and a 60-day public comment period.

The primary stakeholders include

- pigment manufacturers
- the paint and plastics manufacturing industries
- cosmetics manufacturers

11. NEXT STEPS / PROPOSED TIMELINE

Actions	Date
Electronic consultation on proposed risk management approach	March 7, 2009, to May 6, 2009
Response to comments on the risk management approach	At time of publication of proposed instrument
Consultation on the draft instrument	Summer-Fall 2009
Publication of the proposed instrument	No later than March 2011
Formal public comment period on the proposed instrument	No later than spring 2011
Publication of the final instrument	No later than September 2012

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 May 6, 2009, since the Government of Canada will be moving forward with the risk management of Pigment Red 3 after this date. Pursuant to section 313 of CEPA 1999, any person who provides information to the Minister of the Environment under CEPA 1999 may submit with the information a request that it be treated as confidential. During the development of regulations, instrument(s) and/or 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 QC K1A 0H3
Tel: 1-888-228-0530 / 819-956-9313
Fax: 1-800-410-4314 / 819-953-4936
Email: Existing.Substances.Existantes@ec.gc.ca

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