File No: LTD/1020

June, 2002

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

ECA 10793

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is administered by the National Occupational Health and Safety Commission which also conducts the occupational health and safety assessment. The assessment of environmental hazard is conducted by the Department of the Environment and Heritage and the assessment of public health is conducted by the Department of Health and Ageing.

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TEL:	+ 61 2 8577 8800
FAX	+ 61 2 9577 8888.
Website:	www.nicnas.gov.au

Director
Chemicals Notification and Assessment

TABLE OF CONTENTS

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FULL PUBLIC REPORT

ECA 10793

1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT
Infineum Australia Pty Ltd, Level 2, 6 Riverside Quay, Southbank, Victoria, 3006

NOTIFICATION CATEGORY
Limited-small volume: Chemical other than polymer, (1 tonne or less per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)
Data items and details claimed exempt from publication:
Chemical name, CAS Number, molecular and structural formula, molecular weight, spectral data, purity, impurities, concentration in products.

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)
No variation to the schedule of data requirements is claimed.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)
Previously imported under Commercial Evaluation Permits 419 (Oct 99 to Oct 2000) and 496 (Dec 2001 to Dec 2003).

NOTIFICATION IN OTHER COUNTRIES
USA (TSCA), Europe (EINECS), Japan (MITI), Korea (KECL)

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
ECA 10793

MOLECULAR WEIGHT
<500

METHODS OF DETECTION AND DETERMINATION

Analytical Method	FT-IR Spectra, UV-Vis Spectra
Remarks	The notifier has provided copies of the spectra.

3. COMPOSITION

Degree of Purity
High

Hazardous Impurities
None

4. INTRODUCTION AND USE INFORMATION

MODE OF INTRODUCTION OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS
The notified chemical will be imported into Australia as a component of 'Infineum T4219' at less than 5%.

MAXIMUM INTRODUCTION VOLUME OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	<1	<1	<1	<1	<1

USE
ECA 10793 will be used as a component in a lubricant additive package.

5. PROCESS AND RELEASE INFORMATION

5.1. Distribution, Transport and Storage

PORT OF ENTRY
Sydney

IDENTITY OF RECIPIENTS
'Infineum T4219' will be imported by Infineum Australia Pty Ltd and onsold to an oil company for further processing. The finished product, an automatic transmission oil containing the notified chemical at <1%, will be sold to a local car manufacturer.

TRANSPORTATION AND PACKAGING
'Infineum T4219' will be imported in 205 L drums and transported by truck. The finished product will be repackaged into consumer size containers.

5.2. Operation Description

'Infineum T4219' will be delivered to the BP lubricant blending plant, to be blended with mineral oil to form the finished lubricant. The additive container is connected by the operator to the transfer system via a flexible transfer hose. The additive is then pumped out of the containers through a stainless steel pipeline into a 10,000 to 100,000 L blending tank. On completion of the blending process, the finished lubricant is transferred into 1 L to 205 L containers on an automated filling line. Containers are automatically filled with prescribed quantities of blended product and sealed, usually with screwcaps. The container, transfer hose, pipeline and pump are cleaned of the additive by flushing with mineral baseoil, and the transfer lines disconnected.

The end-use product, an automotive transmission oil, will be used in automobile assembly, automotive repair and maintenance workshops and by do-it-yourself users.

5.3. Release

RELEASE OF CHEMICAL AT SITE
At the customer's blending facility losses during the highly automated blending process are not expected. It is expected that the equipment used will be cleaned with oil and these washings will be used in the formulation of the next batch or another oil blend. In these situations release would only be through accidental spills that would be recycled or collected for incineration. It is expected that less than 1% of the annual import volume will be released during blending and repackaging. The notifier indicates that up to 20 kg of the notified chemical per annum remains in the empty import containers and will be incinerated as drums washings or disposed of with consumer containers in landfill.

RELEASE OF CHEMICAL FROM USE
Eventually the entire import volume of the notified chemical will be released into the environment. Some minor, diffuse, exposure will result from spills during addition of the lubricant to vehicles. However, the greatest potential for exposure is through disposal of wastes containing the additive. The notifier indicates that automatic transmission fluids are not frequently changed and that around 80% of motor vehicle services take place in specialised automotive service centres. Presumably, old fluid drained from transmission is disposed of responsibly either to recycling or incineration. Therefore, up to 800 kg/annum will be disposed of either to recycling or incineration. The remaining 20% are removed by "do it yourself" (DIY) enthusiasts, and in these cases some of the

used fluid would be either incinerated, left at transfer stations where it is again likely to be recycled, or deposited into landfill. A small proportion may also be released to sewer. However, in a recent survey tracing the fate of used lubricating oil in Australia Snow (1997) found that only around 20% of used oil removed by enthusiasts is collected for recycling, approximately 25% is buried or disposed of in landfill, 5% is disposed of into stormwater drains and the remaining 50% is used in treating fence posts, killing grass and weeds or disposed of in other ways. The notifier indicates that up to 200 kg of the notified chemical will be disposed of by DIY enthusiasts, which equates to 40 kg/annum collected for recycling, 50 kg/annum buried or disposed of in landfill, 10 kg/annum disposed of into stormwater drains and 100 kg/annum used for treating fence posts, killing grass and weeds or disposed of in other ways.

5.4. Disposal

The notified chemical will be either disposed of by incineration, in landfill or recycled. A small proportion of the import volume may be irresponsibly disposed of into stormwater drains (1%).

6. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa Light brown solid

Melting Point 71.0 to 73.5°C

Method OECD TG 102 Melting Point/Melting Range.
EC Directive 92/69/EEC A.1 Melting/Freezing Temperature.
Remarks
Test Facility Huntingdon Life Sciences Ltd (2001)

Boiling Point Not determinable

Method OECD TG 103 Boiling Point.
EC Directive 92/69/EEC A.2 Boiling Temperature.
Remarks The test material decomposed at temperatures above 230°C without boiling.
Test Facility Huntingdon Life Sciences Ltd (2001)

Density 1040 kg/m^3 at 21°C

Method OECD TG 109 Density of Liquids and Solids.EC Directive 92/69/EEC A.3 Relative Density.
Remarks
Test Facility Huntingdon Life Sciences Ltd (2001)

Vapour Pressure <$4.30x10^{-6}$ Pa for temperatures up to 50°C.

Method OECD TG 104 Vapour Pressure.
EC Directive 92/69/EEC A.4 Vapour Pressure.
Remarks The vapour pressure was determined by the gas saturation method. Evaluation of the notified chemical at 40°C for 24 h and 50°C for 48 h showed no measurable vapour pressure. Therefore, the notified chemical's vapour pressure is below the limit of detection (4.30×10^{-6} Pa) for this experimental method The low value determined indicates that the notified chemical is classified as being very slightly volatile.
Test Facility ExxonMobil Biomedical Sciences, Inc (2001a)

Water Solubility $4x10^{-5}$ g/L at 20°C

Method OECD TG 105 Water Solubility.
EC Directive 92/69/EEC A.6 Water Solubility.
Remarks The water solubility was determined by the column elution method. The notified chemical was adsorbed onto the stationary phase using dichloromethane. Water at 20°C was then pumped through the column at a flow rate of between 0.26 and 0.51 mL/min. Samples of the column eluant were taken, extracted with ethyl acetate, converted to the corresponding dimethyl ester and analysed by GC. The notified chemical is classified as very slightly

soluble.
Test Facility ExxonMobil Biomedical Sciences, Inc (2000a)

Hydrolysis as a Function of pH Not determined.

Remarks The notified chemical does not contain any groups capable of hydrolysis.

Partition Coefficient (n-octanol/water) log Pow at 20ºC = >6.20

Method OECD TG 117 Partition Coefficient (n-octanol/water), HPLC Method.
EC Directive 92/69/EEC A.8 Partition Coefficient.
Remarks The retention time for the notified chemical was longer than that of the reference standard DDT. The low water solubility is consistent with the high log P_{ow}, indicating a very high affinity for the organic component of soils and sediments.
Test Facility ExxonMobil Biomedical Sciences, Inc (2001b)

Adsorption/Desorption Not determined.

Remarks The notified chemical is expected to be immobile in soil due to its very low water solubility and high partition coefficient.

Dissociation Constant No observable dissociation

Method OECD TG 112 Dissociation Constants in Water.
Remarks The notified chemical and the standard, benzoic acid, were titrated with sodium hydroxide. The test substance titration curve was indistinguishable for the blank indicating it did not dissociate under the conditions of the test. This is presumably due to low water solubility, despite the presence of two carboxylic acid groups.
Test Facility ExxonMobil Biomedical Sciences, Inc (2001c)

Particle Size

Method OECD TG 110 Particle Size Distribution/Fibre Length and Diameter Distributions.
Remarks As the substance forms a solid block, measurement of the particle size was not considered necessary.

Flammability limits Not highly flammable.

Method EC Directive 92/69/EEC A.10 Flammability (Solids).
Remarks The test substance melted but failed to ignite.
Test Facility Huntingdon Life Sciences Ltd (2001)

Autoignition Temperature 364ºC

Method 92/69/EEC A.15 Auto-Ignition Temperature (Liquids and Gases).
Remarks
Test Facility Huntingdon Life Sciences Ltd (2001)

Explosive Properties Not explosive.

Method EC Directive 92/69/EEC A.14 Explosive Properties.
Remarks Not explosive according to results of shock, friction and thermal tests.
Test Facility Huntingdon Life Sciences Ltd (2001)

Oxidising Properties The test substance is non-oxidising.

Method EC Directive 92/69/EEC A.17 Oxidizing Properties (Solids).
Remarks
Test Facility Huntingdon Life Sciences Ltd (2001)

Reactivity	Stable.

7. TOXICOLOGICAL INVESTIGATIONS

7.1. Acute toxicity – oral

TEST SUBSTANCE ECA 10793

METHOD OECD TG 401 Acute Oral Toxicity – Limit Test.
Species/Strain Rat/CD®IGSBR
Vehicle Corn oil
Remarks - Method

RESULTS

Group	*Number and Sex of Animals*	*Dose mg/kg bw*	*Mortality*
1	5 males, 5 females	2000	0

LD50 >2000 mg/kg bw
Signs of Toxicity Staining of the ano-genital area and mucoidal stool appeared in four female rats at the 1-hour observation. Females and males with the same signs and/or soft stool were observed at later observations during Day 0. On Day 1 two females were noted with staining of the ano-genital area. No clinical signs were observed after the Day 1 observation. Two male rats and one female rat were free of clinical signs during the study.
Effects in Organs Mottled lungs were observed in two male and two female rats. All other animals were free of gross postmortem abnormalities.
Remarks - Results Oral intubation of the test substance at the dose level tested did not produce mortality or overt signs of toxicity under the conditions of this study.

CONCLUSION The notified chemical is low toxicity via the oral route.

TEST FACILITY ExxonMobil Biomedical Sciences, Inc (2000b)

7.4. Irritation – skin

TEST SUBSTANCE ECA 10793

METHOD OECD TG 404 Acute Dermal Irritation/Corrosion.
Species/Strain Rabbit/New Zealand White
Number of Animals 3 males
Vehicle None
Observation Period 8 days
Type of Dressing Semi-occlusive.
Remarks - Method The notified chemical was melted at 70ºC and then applied to the gauze patch and cooled.

RESULTS

Lesion	*Mean Score* Animal No.*			*Maximum Value*	*Maximum Duration of Any Effect*	*Maximum Value at End of Observation Period*
	1	2	3			
Erythema/Eschar	0	0	0	0	0	0
Oedema	0	0	0	0	0	0

*Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

Remarks - Results Topical application of the test substance did not elicit any signs of irritation. Erythema and oedema were not observed in any animal at any

interval. Since all animals were free of irritation at the 72-hour observation the study was terminated.

CONCLUSION The notified chemical is non-irritating to skin.

TEST FACILITY ExxonMobil Biomedical Sciences, Inc (2000c)

7.5. Irritation - eye

TEST SUBSTANCE ECA 10793

METHOD OECD TG 405 Acute Eye Irritation/Corrosion.
Species/Strain Rabbit/New Zealand White
Number of Animals 3 males
Observation Period 21 days
Remarks - Method The test substance was ground to a fine powder for dosing.

RESULTS

Lesion	*Mean Score* Animal No.*			*Maximum Value*	*Maximum Duration of Any Effect*	*Maximum Value at End of Observation Period*
	1	2	3			
Conjunctiva: redness	2.3	2.7	3	3	21	1
Conjunctiva: chemosis	0.7	1.7	1.7	2	21	1
Conjunctiva: discharge	0	2.3	0.7	3	7	0
Corneal opacity	0	1.7	1.3	2	7	0
Iridial inflammation	0.3	1.0	1.0	1	7	0

*Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

Remarks - Results

All three animals displayed conjunctival redness, chemosis and discharge at the 1, 24, 48, and 72-hour observations, and the day 7 observations; in two animals on days 10 and 14, and one animal on day 21. Necrosis occurred in one animal at 48 hours, two animals at 72 hours and one animal on days 7, 10 and 14. Chemosis and redness persisted for 21 days in one animal.

Irritation of the iris (grade 1) was observed at 24 hours for all animals, for two animals at 48 and 72 hours and for one animal on day 7.

Irritation of the cornea (opacity and/or dye retention) was recorded for all animals at 24, 48 and 72 hours, for two animals on day 7, and dye retention was seen in three animals on days 10, 14, and 21. Corneal opacity, grade + (slight dulling of the normal lustre) at day 21 for one animal.

Blistering of the cornea was observed at the 1-hour observation in all animals. Dye retention of the palpebral conjunctiva and of the nictitating membrane occurred at 24 and 72 hours, in one animal; at 7, 10 and 14 days (palpebral conjunctiva) and 24 and 48 hours (nictitating membrane) in one animal; and at 7, 10 and 14 days (palpebral conjunctiva) and 24, 48 and 72 hours (nictitating membrane) in one animal.

CONCLUSION The notified chemical is severely irritating to the eye.

TEST FACILITY ExxonMobil Biomedical Sciences, Inc (2000d)

7.8. Genotoxicity - bacteria

TEST SUBSTANCE	ECA 10793
METHOD	OECD TG 471 Bacterial Reverse Mutation Test. Plate incorporation procedure/Pre incubation procedure
Species/Strain	*S. typhimurium*: TA1538, TA1535, TA1537, TA98, TA100, TA102, TA97, TA97a. *E. coli*: WP2 uvrA, WP2 uvrA (pKM101), WP2 (pKM101).
Metabolic Activation System	Rat liver S9 mix
Concentration Range in Main Test	a) With metabolic activation: 0.5, 1.6, 5.0, 15.6, 50.0 µg/plate. b) Without metabolic activation: 0.1, 0.3, 1.0, 3.2, 10.0 µg/plate.
Vehicle	Tetrahydrofuran
Remarks - Method	
RESULTS	The test substance did not induce positive points in mean revertant colonies compared to the vehicle control in any tester strains, at any dose level tested, with or without metabolic activation in either the initial or repeat assays.
Remarks - Results	All positive control substances produced at least a two- or three-fold increase in revertant colonies in their respective strains when compared with the vehicle control. The vehicle controls responded in a manner consistent with data from previous assays (i.e. positive controls administered with DMSO and the THF plate counts were within the 95% confidence limits of the range of means in the historical control data).
CONCLUSION	The notified chemical was not mutagenic to bacteria under the conditions of the test.
TEST FACILITY	ExxonMobil Biomedical Sciences, Inc (2001d)

8. ENVIRONMENT

8.1. Environmental fate

No results or test reports were provided.

8.2. Environmental Effects

No results or test reports were supplied by the notifier.

9. RISK ASSESSMENT

9.1. Environment

9.1.1. Environment – exposure assessment

As a component of automotive lubricants, the notified chemical has the potential to be released to the environment during lubricant change, but losses during lubricant formulation and transfer would be small. If deposited into landfill the chemical will be immobilised through adsorption onto soil particles. The chemical is not likely to be readily biodegradable, but in a landfill is expected to be slowly degraded through micro-biological and abiotic processes. Incineration would produce water vapour and oxides of carbon.

Due to its high P_{ow}, low water solubility and high hydrocarbon content the notified chemical that enters the aquatic environment would be expected to become associated with suspended organic chemical which would settle out into the sediments and eventually biodegrade. Losses during blending are not expected because the process is highly automated and the equipment used will be cleaned with oil and these washings will be used in the formulation of the next batch or another oil blend. In these situations release would only be through accidental spills that would be recycled or collected for incineration.

9.1.2. Environment – effects assessment

Not relevant as no data were provided and there will be limited release to the aquatic compartment.

9.1.3. Environment – risk characterisation

The environmental risk from the notified chemical is considered to be small provided that the chemical is used as indicated, and that disposal of used lubricant takes place via the routes indicated above.

9.2. Human health

9.2.1. Occupational health and safety – Exposure Assessment

Transport and Delivery

Two people would be involved in receiving the imported intermediate product, an additive package called Infineum T4219, at the dock and a further 1-2 people would be involved in transporting the product to the blending facilities at the BP facility. Approximately 12 deliveries would be made each year. Skin contact would only be expected if spillage occurred.

Blending into Transmission Fluid

Between 1 and 4 lubricant workers will be involved in blending the additive package with mineral oil to produce the automatic transmission fluid. These workers operate levers and pumps in the automated process described in Section 5.2. One or two maintenance personnel would also be involved in maintaining the pumps, lines and other equipment used in the process. Altogether ten workers may be exposed to the imported additive package containing <1% wt of the notified chemical.

The processing operation takes place in a closed system. Incidental loss may occur during drumming off and the connection/disconnection of transfer hoses, which may result in exposure

to skin or eyes from splashes. To minimise the possibility of exposure to the chemical, engineering controls such as enclosure and ventilation, including local exhaust ventilation are provided. Operators are required to wear suitable industrial clothing, including footwear to comply with Australian Standard (AS2210), coveralls (AS3765.2), safety glasses with side shields (AS1336) and gloves (AS2161). In-house training in the safe handling of chemicals is provided whenever appropriate but at least annually. The MSDS for the product is available and is reviewed before each operating shift before the product is introduced.

End-use

The automatic transmission oil will be used in a variety of work situations, including car assembly factories and repair and maintenance workshops and service centres. It will also be used by do-it-yourself consumers. The likely route of exposure in all these situations is from splashes to the skin. In all except the factory environment, it is unlikely that any protective clothing, other than overalls, would be worn.

9.2.2. Public health

Users may come into contact with both fresh and "used oils" (at <1% of the notified chemical), and skin exposure is the main pathway. However, the notified chemical, as part of the finished lubricant, will be contained in essentially closed systems until such time as the lubricant is changed or removed, and the automatic transmission fluid is not frequently changed. It is expected that the oil changes will occur during service of the car at an auto garage by skilled workers rather than by members of the public.

9.2.3. Human health - effects assessment

9.2.3.1 SUMMARY OF TOXICOLOGICAL INVESTIGATIONS

Endpoint and Result	*Assessment Conclusion*
Rat, acute oral LD50 >2000 mg/kg bw	low toxicity
Rabbit, skin irritation	non-irritating
Rabbit, eye irritation	Severely irritating
Genotoxicity - bacterial reverse mutation	Non mutagenic

9.2.3.2 DISCUSSION

The notified chemical is of low acute toxicity by the oral route, is not irritating to the skin, and is not mutagenic. In the only other toxicological study provided, the Draize scores summarised in the table in Section 7.5 (Irritation – eye) would indicate a classification of irritating, and risk phrase R36 (Irritating to the eyes), based on the incidence of redness of the conjunctiva and iris inflammation at 24, 48 and 72 hours. However, the persistence and severity of some symptoms need to be considered. Specifically, the persistence of chemosis and redness of the conjunctiva and corneal opacity (grade +) for 21 days in one animal, dye retention in all three animals for 21 days; the observation of conjunctival necrosis in one animal at 72 hours, one animal at 48 and 72 hours, and one animal on days 7 to 14; and of blistering in all animals at the one-hour observation suggest that a classification of risk of serious damage to the eyes is appropriate to this substance. It is recommended, therefore, that the label and MSDS for ECA 10793-10793 include the risk phrase R 41 – Risk of serious damage to eyes in accordance with *Approved Criteria for Classifying Hazardous Substances* (NOHSC:1999).

Due to their low content of notified chemical, the additive package and transmission fluid would not be classified as eye irritants

9.2.4. Human health – risk characterisation

9.2.4.1 Occupational Health and Safety

The blending the imported additive packages containing the notified chemical into transmission oil will occur in automated, closed systems. Exposure to the notified chemical will be limited to incidental skin and to a lesser extent eye contact during procedures involved

in connection and disconnection of pump lines and during sampling for laboratory analysis. Other scenarios of exposure to the notified chemical are at concentrations of less than 1% and also limited to incidental skin contact. Overall, the toxicological profile, mode of use, use of personal protective gear and in situ engineering controls indicate that significant risks to human health through occupational exposure to the notified chemical are unlikely. Control measures are required to reduce the potential, albeit slight, for eye irritation.

9.2.4.2 Public Health

In view of its low concentration in the product, the end-use pattern, and low toxicity, the notified chemical is unlikely to pose a significant risk to public health.

10. CONCLUSIONS – ASSESSMENT LEVEL OF CONCERN FOR THE ENVIRONMENT AND HUMANS

10.1. Hazard classification

Based on the available data the notified chemical is classified as hazardous under the NOHSC Approved Criteria for Classifying Hazardous Substances. The classification and labelling details are: Irritant (Xi). Risk of serious damage to eyes (R41).

10.2. Environmental risk assessment

On the basis of the available information, the overall environmental risk of the notified chemical is expected to be low.

10.3. Human health risk assessment

10.3.1. Occupational health and safety

There is Low Concern to occupational health and safety under the conditions of the occupational settings described.

10.3.2. Public health

There is No Significant Concern to public health when used in the proposed manner.

11. RECOMMENDATIONS

Regulatory Controls

- The NOHSC Chemicals Standards Sub-committee should consider the following hazard classification for the notified chemical:
  Xi Irritant.
  R41 Risk of serious damage to eyes.

- Use the following risk phrases for products/mixtures containing the notified chemical:
  - ≥ 10% R 41 Risk of serious damage to eyes
  - 5%≤conc≥10% R36 Irritating to eyes

- Products containing more than 5% notified chemical and available to the public must carry the following safety directions on the label:
  - S25 Avoid contact with eyes
  - S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.

Control Measures

Occupational Health and Safety

- Employers should ensure that the following personal protective equipment is used by workers to minimise occupational exposure to the notified chemical as introduced in the product:
  - Coveralls, safety glasses and gloves.

Guidance in selection of personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

- A copy of the MSDS should be easily accessible to employees.
- If products and mixtures containing ECA 10793 10793 are classified as hazardous to health in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances*, workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must be in operation.

Disposal

- The notified chemical should be disposed of either by incineration, into landfill or recycled.

Emergency procedures

Spills/release of the notified chemical should be contained as described in the MSDS (contained by adsorbent chemical) prior to disposal.

Secondary notification

The Director of Chemicals Notification and Assessment must be notified in writing within 28 days by the notifier, other importer or manufacturer:

(1) Under subsection 64(2) of the Act:
- if any of the circumstances listed in the subsection arise.

The Director will then decide whether secondary notification is required.

No additional secondary notification conditions are stipulated.

12. MATERIAL SAFETY DATA SHEET

The MSDS for the ECA 10793 was provided in a format consistent with the *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC:1994).

This MSDS was provided by the applicant as part of the notification statement. It is reproduced here as a matter of public record. The accuracy of this information remains the responsibility of the applicant.

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