Government of **Western Australia**
Department of **Environment Regulation**

Your ref L8333/2009/2
Our ref DEC10478
Enquiries C. Conway-Physick
Phone (08) 9964 0901
Fax (08) 9921 5713
Email caroline.conway-physick@der.wa.gov.au

Mr Scott Antonio
Registered Manager
Imerys Talc Australia Pty Ltd
PO Box 116
THREE SPRINGS WA 6519

Dear Mr Antonio

***ENVIRONMENTAL PROTECTION ACT 1986*: LICENCE GRANTED**

Premises: Three Springs Talc Mine, Mining Tenements M70/919, M70/918, M70/101 & M70/243
Licence Number: L8333/2009/2

A licence under the *Environmental Protection Act 1986* (the Act) has been granted for the above premises. The Department of Environment Regulation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper. The licence includes attached conditions. Under section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to $125,000 and a daily penalty of up to $25,000.

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at admin@appealsconvenor.wa.gov.au.

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Caroline Conway-Physick on (08) 9964 0901.

Yours sincerely

Danielle Eyre
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

27 March 2014

Government of **Western Australia**
Department of **Environment Regulation**

Licence

Environmental Protection Act 1986, Part V

Licensee: Imerys Talc Australia Pty Ltd

Licence: L8333/2009/2

Registered office: 3610 Glenelg Highway
PITTONG VIC 3360

ACN: 095 284 469

Premises address: Imerys Talc Australia Pty Ltd Operations
Mining Tenements M70/919, M70/918, M70/101, M70/243 and L70/58
Perenjori Road
THREE SPRINGS WA 6519
As depicted in Schedule 1

Issue date: Thursday, 27 March 2014

Commencement date: Sunday, 4 May 2014

Expiry date: Friday, 3 May 2019

Prescribed premises category
Schedule 1 of the Environmental Protection Regulations 1987

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore: premises on which – (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	50 000 tonnes or more per year	300 000 tonnes per annual period
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	50 000 tonnes or more per year	950 000 tonnes per annual period
64	Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the CEO and as amended from time to time) is acceptable for burial.	20 tonnes or more per year	200 tonnes per annual period

Conditions
This Licence is subject to the conditions set out in the attached pages.

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Officer delegated under section 20
of the *Environmental Protection Act 1986*

Contents

Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role
The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to protect and conserve the state's environment on behalf of the people of Western Australia.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitor and audit compliance with works approvals and licence conditions, take enforcement action as appropriate and develop and implement licensing and industry regulation policy.

Licence requirements
This licence is issued under Part V of the Act. Conditions contained within the licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- Environmental Protection (Unauthorised Discharges) Regulations 2004 – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- Environmental Protection (Controlled Waste) Regulations 2004 - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- Environmental Protection (Noise) Regulations 1997 – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees
If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non-payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions
If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for the Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary
Imerys Talc (formerly a subsidiary of Luzenac) is now wholly owned by Imerys Australia.

Imerys Talc mines, processes, transports and sells a wide range of talc-based products from its plants in Europe, North and Central America and Asia-Pacific to customers in over 100 countries.

The Three Springs Operation is an open-pit talc mine located about 330 kilometers north-east of Perth, Western Australia. Talc has been mined at the site since the late 1940s. Current output stands at around 70 000 tonnes/year; production is expected to ramp up to over 120 000 tonnes over the next five years. The operation employs 16 people.

The operation supplies a full range of high brightness, highly pure microcrystalline talc grades essentially for the paint, paper, rubber and technical ceramics markets. Talc enhances performance in applications such as paper, paints, plastics, ceramics, personal care products, agriculture and pharmaceuticals.

The Three Springs Operation is home to the largest talc deposit in Western Australia.

Imerys Talc has held a DER environmental licence for the premises operation since 1978. The company is consistently working towards ISO 9001 compliance requirements.

This Licence is the successor to licence L8333/2009/1 and includes only minor administrative changes and updates. The licence has also been converted into the new REFIRE format (v2.6).

The licences and works approvals issued for the Premises since 30/04/2009 are:

Instrument log		
Instrument	**Issued**	**Description**
L5877/1978		(previous Licence held)
L8333/2009/1	30/04/2009	Licence reissue
L8333/2009/1	13/09/2010	Licence amendment
L8333/2009/1	19/07/2012	Licence amendment
L8333/2009/2	27/03/2014	Licence reissue and conversion to REFIRE format

Severance
It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986;*

'annual period' means the inclusive period from 1 January until 31 December in the same year;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters;*

'averaging period' means the time over which a limit or target is measured or a monitoring result is obtained;

'car tyre equivalents' are based on 1 truck tyre equals 7 car tyres; 1 light truck tyre equals 1.5 car tyres; 1 super single tyre equals 14 car tyres and 1 earth moving tyre equals 20 car tyres.

'code of practice for the storage and handling of dangerous goods' means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

'controlled waste' has the definition in Environmental Protection (Controlled Waste) Regulations 2004;

'dangerous goods' has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007;

'Director' means Director, Environmental Regulation Division of the Department of Environment Regulation for and on behalf of the Chief Executive Officer as delegated under Section 20 of the Act;

'Director' for the purpose of correspondence means;

Regional Leader, Industry Regulation, Midwest Region
Department of Environment Regulation
PO Box 72
GERALDTON WA 6530
Telephone: (08) 9964 0901
Facsimile: (08) 9921 5713;
Email: GeraldtonIR@der.wa.gov.au;

'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities;

The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

'fugitive emissions' means all other emissions not arising from point sources as identified in Section 2;

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'inert waste type 1 & 2' means waste as defined in the document titled 'Landfill Waste Classification and Waste Definitions 1996 (as amended)' published by the Chief Executive Officer and as amended from time to time;

'Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009)' means the document entitled *'Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)'* published by the Chief Executive Officer, and as amended from time to time;

'Licence' means this Licence numbered L8333/2009/2 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'putrescible waste' means waste as defined in the document titled 'Landfill Waste Classification and Waste Definitions 1996 (as amended)' published by the Chief Executive Officer and as amended from time to time;

'quarterly' means the four inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December in the same year;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'shut-down' means the period when plant or equipment is brought from normal operating conditions to inactivity;

'six monthly' means the two inclusive periods from 1 January to 30 June and 1 July to 31 December in the same year;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'start-up' means the period when plant or equipment is brought from inactivity to normal operating conditions;

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia; and

'windrows' means parallel rows where each row is no more than three metres high and no more than four metres wide and separated by a minimum of then metres of clear ground from any other row.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 General conditions

1.2.1 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
(a) pollution;
(b) unreasonable emission;
(c) discharge of waste in circumstances likely to cause pollution; or
(d) being contrary to any written law.

1.2.2 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.

1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the code of practice for the Storage and handling of dangerous goods.

1.2.4 The Licensee shall:
(a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises;
(b) ensure mechanical workshops and refuelling areas are constructed and maintained to prevent hydrocarbons from being discharged to the environment; and
(c) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.[1]

Note1: The Environmental Protection (Unauthorised Discharges) Regulations 2004 make it an offence to discharge certain materials into the environment.

1.2.5 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

1.3 Premises operation

1.3.1 The Licensee shall only accept waste to the landfill if:
(a) it is of a type listed in Table 1.3.1;
(b) the quantity accepted is below any quantity limit listed in Table 1.3.1; and
(c) it meets any specification listed in Table 1.3.1.

Table 1.3.1: Waste acceptance

Waste type	Quantity limit tonnes/year	Specification[1]
Inert Waste Type 1	Combined total of 200 tonnes per annual period	None specified
Inert Waste Type 2		Tyres and plastic only
Putrescible Waste		None specified
Contaminated solid waste		Must meet acceptance criteria for Class II landfill

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004 and Landfill Waste Classification and Waste Definitions 1996 (as amended).

1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a segregated storage area or container and removed to an appropriately authorised facility as soon as practicable.

1.3.3 The Licensee shall ensure that wastes accepted onto the landfill are only subjected to the processes set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing

Waste type	Processes	Process limits[1, 2]
Inert Waste Type 1 Inert Waste Type 2 (Tyres only) Putrescible Waste	Receipt, handling and disposal of waste by landfilling	All waste types Disposal of waste by landfilling shall only take place within the landfill area. No waste shall be temporarily stored or landfilled within 35 m from the boundary of the premises. The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3 m. Tipping area should not be greater than 2 m above ground level in height and 30 m in length. Waste shall be placed in a defined trench or within an area enclosed by earthen bunds. Inert Waste Type 2 (Tyres only) Tyres are to be covered at regular intervals such that no more than 100 car tyre equivalents are left exposed at any one time. Batches of tyres are to be separated from each other by at least 300 mm of soil with each batch consisting of not more than 60 whole car tyre equivalents. Used tyres are to be stored, before burial, in windrows with at least ten metres separating each windrow to allow access by fire fighting equipment.
Hydrocarbon contaminated soil	Bioremediation	Ensure soil is bio-remediated by maintaining a suitable soil thickness; maintaining an appropriate moisture content and nutrient level within the soil which sustains biological activity; at least monthly soil aeration, when facility is in use; or by removing to a licenced landfill for remediation.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the Environmental Protection Regulations1987.
Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004.

1.3.4 The Licensee shall ensure that cover is applied and maintained on all accessible waste in accordance with Table 1.3.3 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.3: Cover requirements[1]			
Waste Type	**Material**	**Depth**	**Timescales**
Inert Waste Type 1	Dense, inert and incombustible material.	-	Weekly or as soon as practicable after deposit.
Putrescible Waste		200mm	
Inert Waste Type 2 (Tyres only)		300mm	As soon as practicable after deposit.
		1000mm	As soon as practicable following the achievement of final waste levels in the area(s) in which tyres are deposited

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the Environmental Protection Regulations 1987.

1.3.5 The Licensee shall implement the following security measures at the site:
(a) erect and maintain suitable fencing to prevent unauthorised access to the site;
(b) ensure that any entrance gates to the premises are securely locked when the premises are unattended; and
(c) undertake regular inspections of all security measures and repair damage as soon as practicable.

1.3.6 The Licensee shall ensure that wind-blown waste is contained within the boundary of the landfill and that wind-blown waste is returned to the tipping area on at least a monthly basis.

1.3.7 The Licensee shall ensure that no waste is burnt on the premises.

1.3.8 The Licensee shall keep an annual tyre inventory detailing the number and types of tyres stored, buried and disposed of by other means at the premises, including a map detailing the locations in which the tyres were buried, and include this information in the AER.

1.3.9 The Licensee shall:
(a) undertake inspections as detailed in Table 1.3.4;
(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
(c) maintain a record of all inspections undertaken, including the date of the inspection and the name of the person who made the inspection.

Table 1.3.4: Inspection of infrastructure		
Scope of inspection	**Type of inspection**	**Frequency of inspection**
Dewatering pipeline	Visual integrity	Daily (during pumping)

1.3.10 The Licensee shall ensure that should a failure in the dewatering pipeline be discovered, dewatering to the lake system shall be ceased immediately, and not resume until the pipeline has been repaired. The Director shall be advised of the failure and provided with an estimate of discharge lost due to the failure, within three days of the incident.

1.3.11 The Licensee shall ensure that any discharge of water from the operational and wash down areas shall be discharged via fuel/oil traps and silt traps, and is removed from the premises by a controlled waste carrier.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit or target specified in any part of section 2 of this Licence.

2.2 Point source emissions to air

There are no specified conditions relating to point source emissions to air in this section.

2.3 Point source emissions to surface water

2.3.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.3.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this licence.

Table 2.3.1: Emission points to surface water

Emission point reference	Emission point reference on Map of emission points	Description	Source including abatement
Discharge point to lake (Saline dewatering effluent)	W1	Discharge of saline water to lake	Water from dewatering of mine pit D to pit B

2.3.2 The Licensee shall limit point source emissions to surface water at or below the levels specified in Table 2.3.2.

Table 2.3.2: Point source emission limits to surface water

Emission point reference	Parameter	Limit (including units)	Averaging period
Discharge point to lake (W1)	Total Suspended Solids (TSS)	80mg/L	Spot sample
	Total Recoverable Hydrocarbons (TRH)	10mg/L	

2.4 Point source emissions to groundwater

There are no specified conditions relating to point source emissions to groundwater in this section.

2.5 Emissions to land

2.5.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.5.1 and identified on the map of emission points and storage locations in Schedule 1 it is done so in accordance with the conditions of this licence.

Table 2.5.1: Emissions to land

Emission point reference	Description	Source including abatement
Dewatering effluent discharged from storage pit B	Extraction of saline water from open pit talc mine Pit D to Pit B	Dust suppression; and Discharged to previously mined pits, in a manner that minimises damage to surrounding vegetation.

2.5.2 The Licensee shall limit emissions to land at or below the levels specified in Table 2.5.2.

Table 2.5.2: Emission limits to land

Emission point reference	Parameter	Limit (including units)	Averaging period
Dewatering effluent discharged from extraction pit/s (Pit D and Pit B)	Total Recoverable Hydrocarbons (TRH)	10mg/L	Spot sample

2.6 Fugitive emissions

2.6.1 The Licensee shall use all reasonable and practical measures to prevent or where that is not practicable to minimise dust emissions from the Premises.

2.6.2 The Licensee shall ensure that no visible dust generated by the activities on the Premises crosses the boundary of the Premises.

2.6.3 The licensee shall maintain all installed dust collection or dust control systems including:
(a) coverings on conveyors, transfer points and discharge points;
(b) skirtings; and
(c) dust filters.

2.7 Odour

2.7.1 There are no specified conditions relating to noise in this section.

2.8 Noise

There are no specified conditions relating to noise in this section.

3 Monitoring

3.1 General monitoring

3.1.1 The licensee shall ensure that:
(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
(b) all wastewater samples are collected in accordance with AS/NZS 5667.10;
(c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

3.1.2 The Licensee shall ensure that:
(a) monthly monitoring is undertaken at least 15 days apart;
(b) quarterly monitoring is undertaken at least 45 days apart; and
(c) six monthly monitoring is undertaken at least 5 months apart.

3.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

3.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the Director accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to air

There are no specified conditions relating to monitoring of point source emissions to air in this section.

3.3 Monitoring of point source emissions to surface water

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Units	Frequency
Discharge point to lake (W1)	pH	pH	Quarterly
	Total Recoverable Hydrocarbons	mg/L	
	Total Dissolved Solids	mg/L	
	Total Suspended Solids	mg/L	

3.4 Monitoring of point source emissions to groundwater

There are no specified conditions relating to monitoring of point source emissions to groundwater in this section.

3.5 Monitoring of emissions to land

3.5.1 The Licensee shall undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Monitoring of point source emissions to land			
Emission point reference	**Parameter**	**Units**	**Frequency**
Dewatering effluent discharged from extraction pit/s (Pit D and Pit B)	Total Recoverable Hydrocarbons (TRH)	mg/L	Quarterly

3.6 Monitoring of inputs and outputs

3.6.1 The Licensee shall undertake the monitoring in Table 3.6.1 according to the specifications in that table.

Table 3.6.1 Monitoring of inputs and outputs				
Input/ Output	**Parameter**	**Units**	**Averaging Period**	**Frequency**
Landfill waste input	Inert Waste Type 1,	tonnes or (where no weighbridge is present) m^3	N/A	Each load arriving at the landfill
	Inert Waste Type 2 (tyres only)	Total number		
	Putrescible Waste	tonnes or (where no weighbridge is present) m3		

3.7 Process monitoring

3.7.1 The Licensee shall undertake the monitoring in Table 3.7.1 according to the specifications in that that table

Table 3.7.1 Process monitoring				
Monitoring point reference	**Process description**	**Parameter**	**Units**	**Frequency**
W1	Discharge to salt lake system	Volume of mine dewatering effluent entering the salt lake system	Litres	Monthly cumulative volumes

3.8 Ambient environmental quality monitoring

There are no specified conditions relating to ambient environment quality monitoring in this section.

3.9 Meteorological monitoring

There are no specified conditions relating to meteorological monitoring in this section.

4 Improvements

There are no specified improvement conditions in this section.

5 Information

5.1 Records

5.1.1 All information and records required by the Licence shall:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

5.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
- (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

5.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

5.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

5.2 Reporting

5.2.1 The Licensee shall submit to the Director an Annual Environmental Report by no later than 31 March each year. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

Table 5.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
1.3.8	Tyre inventory record	None specified
1.3.9	Summary of corrective actions	None specified
Tables 2.3.2 & 2.5.2	Limit exceedances	None specified
Table 3.3.1	Monitoring of point source emissions to surface water	WR1
Table 3.5.1	Monitoring of emissions to land	None specified
Table 3.6.1	Monitoring of inputs and outputs	None specified
Table 3.7.1	Monthly cumulative volumes of mine dewatering effluent	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
(a) any relevant process, production or operational data recorded under Condition 3.1.3;
(b) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets; and
(c) a list of any original monitoring reports submitted to the Licensee from third parties for the annual period and make these reports available on request.

5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the Director in accordance with the notification requirements of the table.

Table 5.3.1: Notification requirements

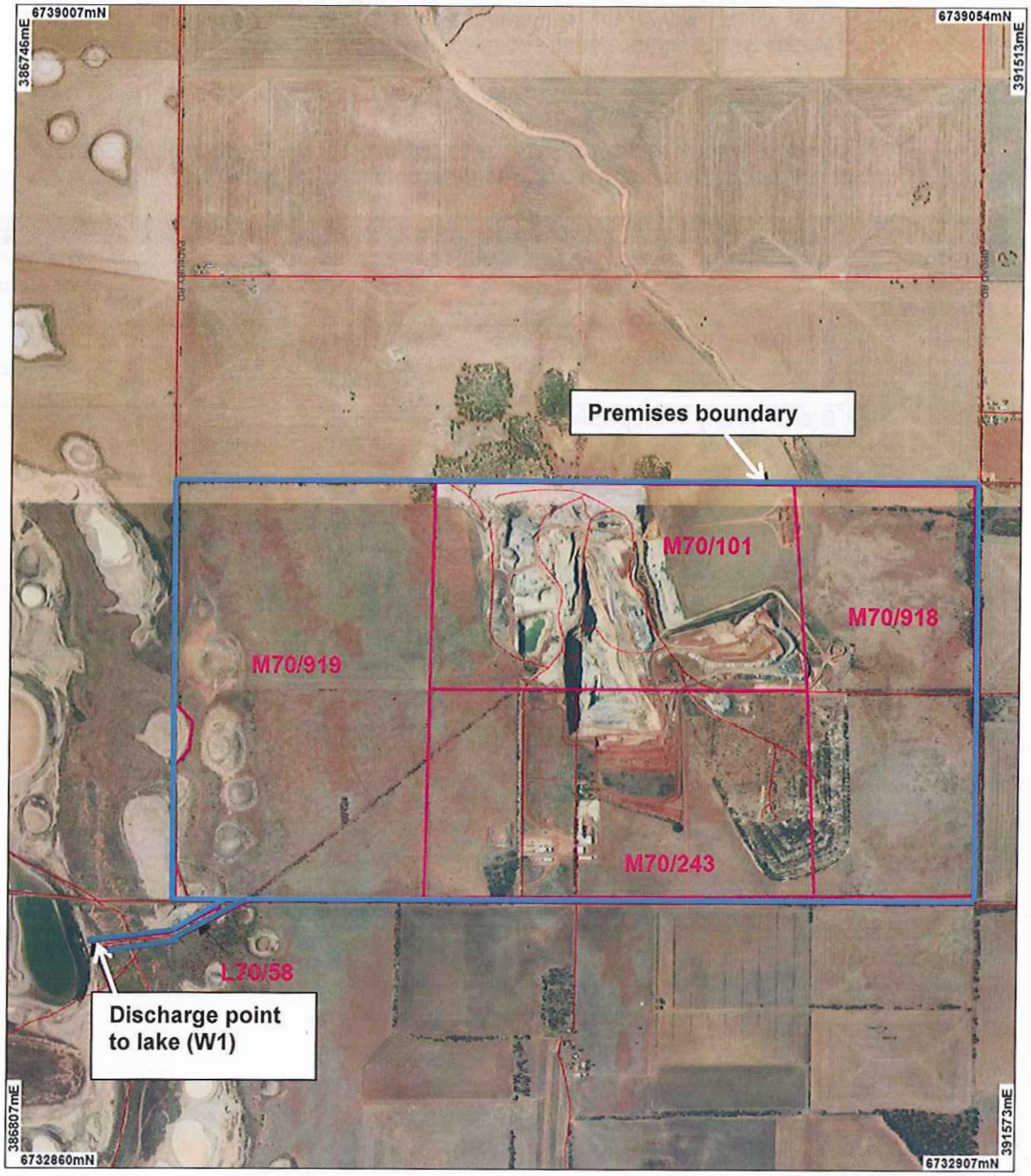
Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
3.1.4	Calibration report	As soon as practicable.	None specified
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
-	Any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution		

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

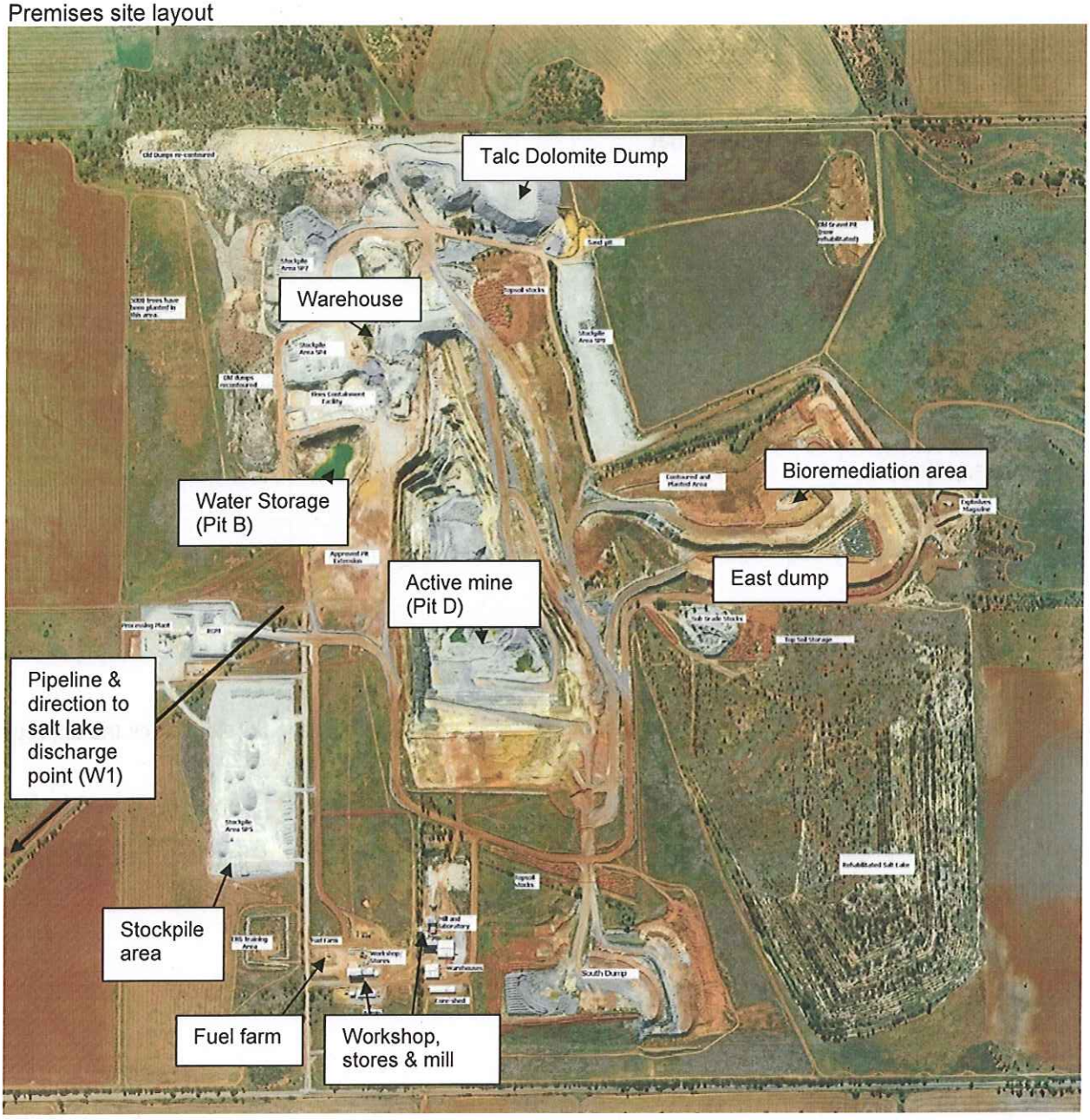
Schedule 1: Maps

Premises map and emission point

The Premises is shown in the maps below. The blue line depicts the Premises boundary.



Premises site layout



Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A

LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:

SECTION B
DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
☐ Yes ☐ Reported to DER verbally Date _____ ☐ Reported to DER in writing Date _____	☐ No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:

SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	□	by the individual licence holder, or
	□	by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	□	by affixing the common seal of the licensee in accordance with the *Corporations Act 2001*; or
	□	by two directors of the licensee; or
	□	by a director and a company secretary of the licensee, or
	□	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	□	by the chief executive officer of the licensee; or
	□	by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SEAL (if signing under seal)

Licence: L8333/2009/2
Form: WR1
Name: Monitoring of point source emissions to surface water

Licensee: Imerys Talc Australia Pty Ltd
Period :

Form WR2: Monitoring of point source emissions to surface water						
Emission point	**Parameter**	**Limit**	**Result**	**Averaging period**	**Method**	**Sample date & times**
Discharge point to lake (W1)	pH		pH	Spot sample		
	Total Suspended Solids (TSS)	80mg/L	mg/L			
	Total Dissolved Solids (TDS)		mg/L			
	Total Recoverable Hydrocarbons (TRH)	10mg/L	mg/L			

Signed on behalf of Imerys Talc Australia Pty Ltd: ..... Date: .....

Licence: L8333/2009/2 Licensee: Imerys Talc Australia Pty Ltd
Form: N1 Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Imerys Talc Australia Pty Ltd	
Date	

ENVIRONMENTAL ASSESSMENT REPORT

LICENCE NUMBER: L8333/2009/2
LICENCE FILE NUMBER: DEC10478
APPLICATION DATE: 29/06/2012
EXPIRY DATE: 03/05/2019

PREMISES DETAILS

LICENSEE AND OCCUPIER

Imerys Talc Australia Pty Ltd
PO Box 116
THREE SPRINGS WA 6519
ACN: 095 284 469

PREMISES

Three Springs Talc Mine
Located on M70/919, M70/918, M70/11, M70/243 and L70/58
Perenjori Road
THREE SPRINGS WA 6519

PRESCRIBED PREMISES CATEGORY

Table 1: Prescribed Premises Category from Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Description	Production or Design Capacity	Nominated Rate of Throughput	Throughput Classification *
5	Processing or Beneficiation of Metallic or Non-metallic Ore.	300,000 tonnes per year	300,000 tonnes per year	100,000 to 500,000 tonnes per year
6	Mine Dewatering	500 000 tonnes or more per year	950 000 tonnes per year	500 000 tonnes or more per year
64	Putrescible Landfill Site	20 tonnes or more per year	200 tonnes tonnes per year	Not more than 5000 tonnes per year

* From Schedule 4 of the *Environmental Protection Regulations 1987*

This Environmental Assessment Report (EAR) has been drafted for the purposes of detailing information on the management and mitigation of emissions and discharges from the prescribed premises. The objective of the EAR is to provide a risk assessment of emissions and discharges, and information on the management of other activities occurring onsite which are not related to the control of emissions and discharges from the prescribed premises activity. It is important to note that the licence is not a mechanism to regulate those activities that occur on-site that are not related to the prescribed premises activity.

Basis of Assessment

Imerys Talc Australia Pty Ltd (Imerys Talc) has been assessed as a "prescribed premises" under Schedule 1 of the *Environmental Protection Regulations 1987*.

Category 5

Category 5 is described as:-
Processing or beneficiation of metallic or non-metallic ore: premises on which

(a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed;
(b) <0.7mm fines from metallic or non-metallic ore are processed; or
(c) <0.7mm fines or residue from metallic or non-metallic ore are discharged into a containment cell or dam.

Imerys Talc processing plant maximum design capacity is 300,000 tonnes of produce per year using a crushing and screening beneficiation plant and related infrastructure. Waste from the processing is discharged to a fines containment facility.

Category 6

Category 6 is described as:-
Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.

Water management on site involves dewatering of groundwater from an open pit and discharging the effluent into nearby salt lakes. All water requirements for the mining operations are supplied by the mine dewater. Scheme water is used for all non-industrial uses. Groundwater pumped to the water dam is used for dust suppression on roads and stockpiles, or discharged off site. Effluent from the water dam is pumped via an underground pipe to the outfall of the closest point at the Yarra Yarra Salt Lakes.

Category 64

Category 64 is described as:-
Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.

Imerys Talc operations produce approximately 0-200 tonnes of waste per year. Disposal of the waste is onsite at the putrescibles landfill site. The proponent also plans to bury old tyres within the designated Tyre Disposal area of the site landfill using DER's recommended method of tyre disposal.

BACKGROUND

1.1 GENERAL COMPANY DESCRIPTION

The proponent for this proposal is Imerys Talc Australia which is now wholly owned by Imerys.

Imerys Talc Australia Pty Ltd mines, processes, transports, and sells a wide range of talc-based products from its plants in Europe, North and Central America and Asia-Pacific to customers in over 100 countries.

Three Springs Talc Mine is an open-pit talc mine located about 330 kilometers north-east of Perth, Western Australia. Talc has been mined at the site since the late 1940's. Current output is approximately 115 000 tonnes/year. Forecasts show that production will increase. The operation employs 16 people currently.

Three Springs Talc Mine supplies a full range of high brightness, highly pure microcrystalline talc grades essentially for the paint, paper, rubber and technical ceramics markets. Talcs enhance performance in applications such as paper, paints, plastics, ceramics, personal care products, agriculture and pharmaceuticals.

The state-of-the-art beneficiation plant at the Three Springs Talc Mine is home to the largest talc deposit in Western Australia.

Imerys Talc Australia Pty Ltd has held a DER environmental licence for the Three Springs Talc mine since 1978. The company is consistently working towards ISO 9001.

1.2 LOCATION OF PREMISES

The Imerys Talc operation is located in the Shire of Three Springs in the northern wheat-belt region of Western Australia. The mine is located approximately 12 km east of the Three Springs town site and 330 km north-north east of Perth.

The premises covers mining tenements M70/101, M70/243, M70/918 and M70/919, all of which are held by Imerys Talc Australia Pty Ltd. The main mining activities are located on M70/101 and M70/243.

The current mining operations are located 2 km east of the Yarra Yarra saline lakes system. These lakes are a significant land feature in this area and stretch approximately 80 km north to south and 10 km east to west at the widest point.

The topography of the area is one of low relief, with local elevated hills merging with undulating rises and depressions in the landscape. Ephemeral streams drain these low rises into numerous salt lakes and clay pans, which are often subject to inundation. The mine site is located on a topographical rise in the area which slopes gradually to the east towards broad acre farming areas and west towards salt lakes.

The nearest sensitive receptor (homestead) is located approximately 2 km east of the mine. The occupier of the homestead is an employee of the mine.

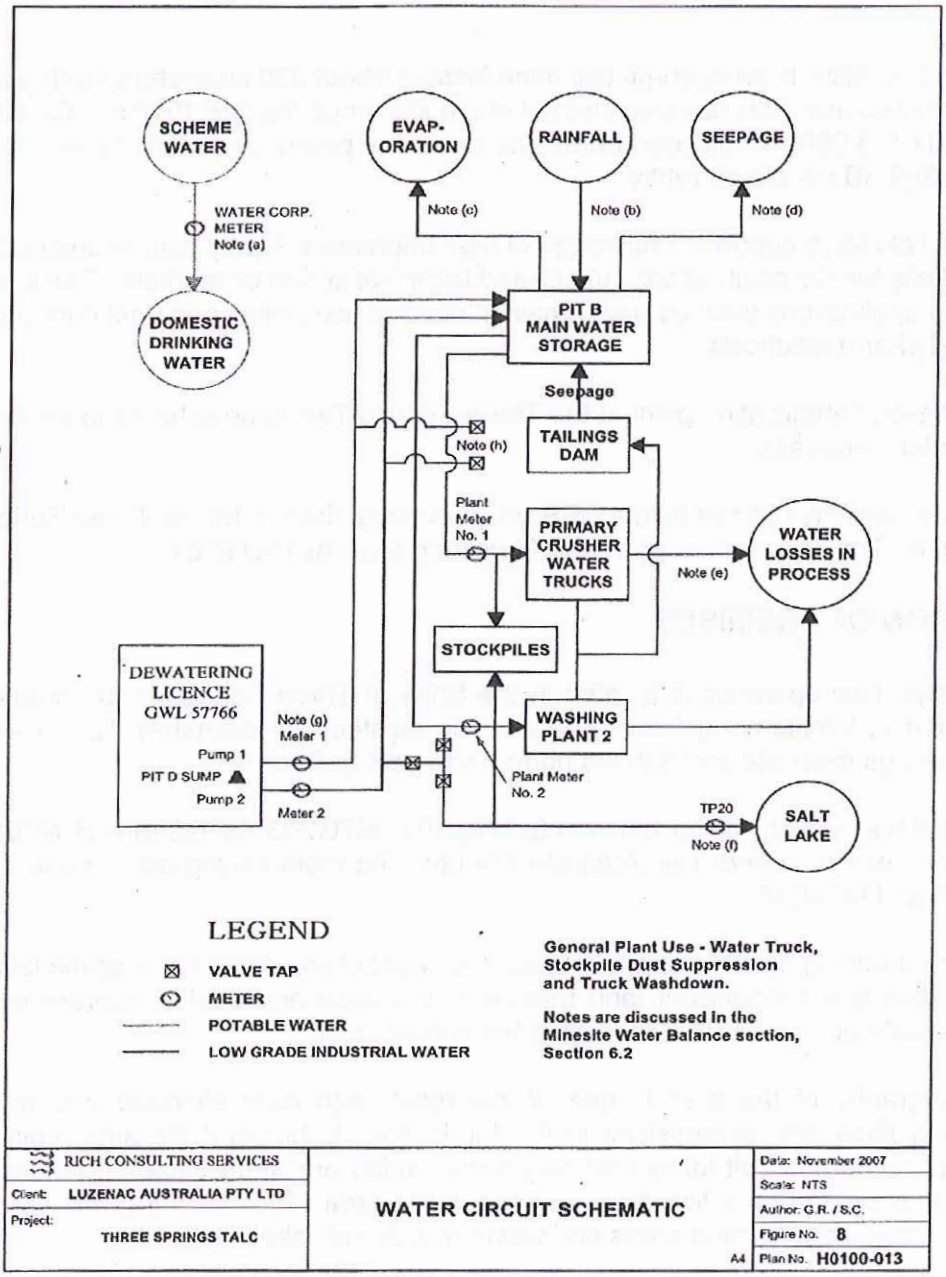
The surrounding land use outside of the mining leases is general farming and crown land associated with the salt lakes.

Distance to groundwater in this area is three to five metres and is used for livestock watering purposes. This proposal is not in a public drinking water source area.

1.3 PROCESS DESCRIPTION

General processing of the talc ore involves crushing, washing, screening and stockpiling as can be seen in the flow schematic process diagram (Figure 1):

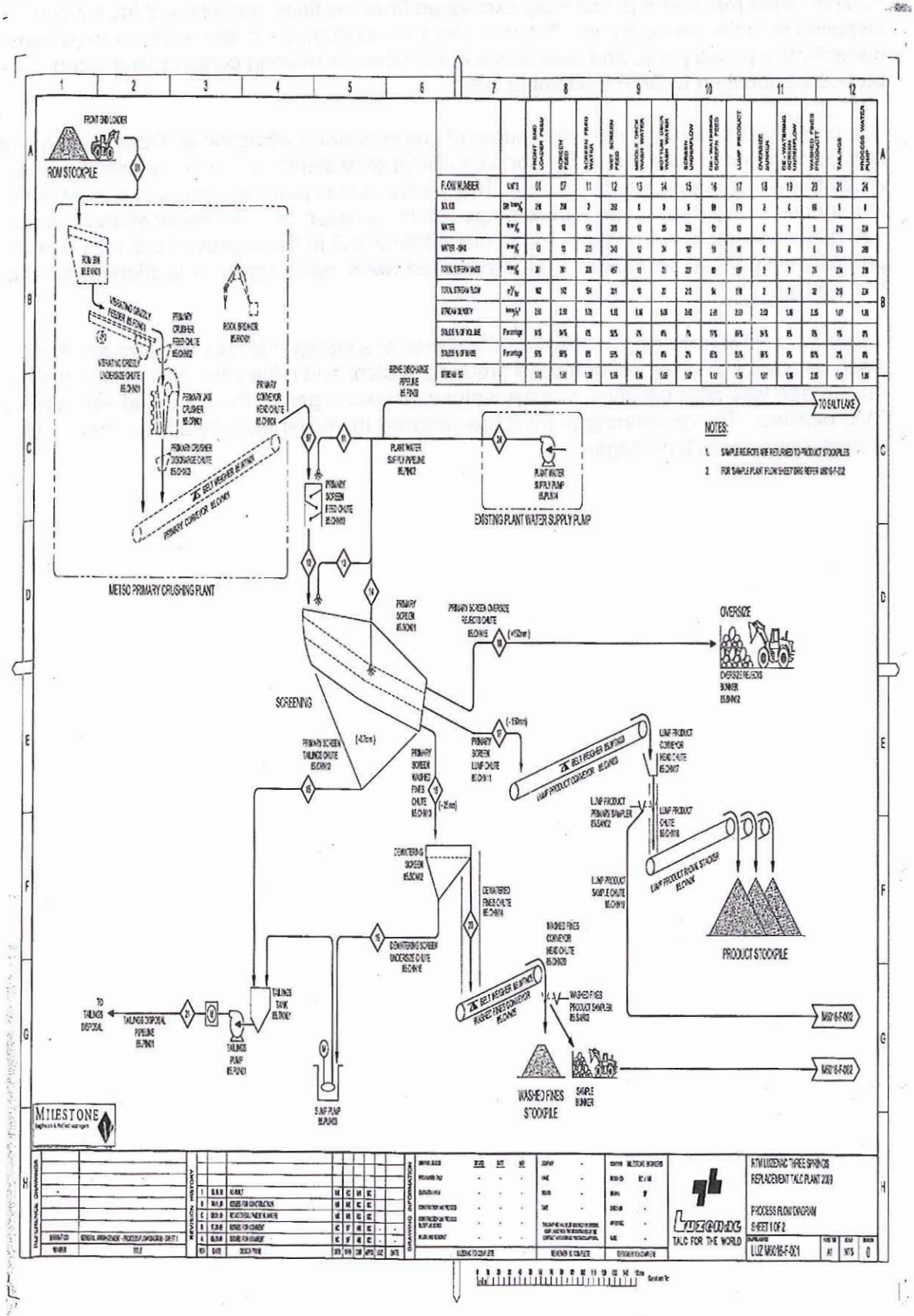
Figure 1: Process Diagram



Beneficiation Plant

The beneficiation plant consists of a crushing and screening process plant and related infrastructure to process up to 300 000 tonnes of talc per year. A flow sheet schematic of the plant process is provided in Figure 2.

Figure 2: Beneficiation Plant Process Diagram



The waste material from the beneficiation process is comprised of natural talc fines. The fines are washed out of the ore and discharged to the fines containment facility. The <0.7mm fines material is periodically excavated from the fines containment facility and disposed of in the waste dumps. There are two waste dumps, south waste dump (which is currently the primary site) and east waste dump which is nearing completion (mining proposal submitted to DMP in October 2008).

The proponent states that the only source of groundwater abstraction at Three Springs Talc Mine is dewatering from the active mine pit (Pit D) (dewatering occurs from specific circuits within the water management system). This abstraction is pumped from a one in-pit sump at the base of the Pit D to the Pit B storage (Pit B has been used for water storage since 1981). Mine water is no longer pumped direct from Pit D to the approved salt lake due to potential suspended solids within the discharged water being significantly higher than the licence limit.

Water from Pit B (including incidental rainfall over the storage) is recycled through the washing plant and other general uses around the plant and mine site. Historically, when the storage was near capacity, surplus water was discharged to the approved salt lake via a PVC pipeline. The dewatering of Pit B has reduced the water level by approximately 15 metres since operations began.

1.4 REGULATORY CONTEXT

1.4.1 Part IV Environmental Protection Act 1986, Environmental Impact Assessment

This proposal is not subject to a Part IV referral.

1.4.2 Part V Environmental Protection Act 1986, Environmental Management

The current licence (number L8333/2009/1) includes mine dewatering (category 6), putrescible landfill (category 64) and the beneficiation plant (category 5).

1.4.3 Rights in Water Irrigation Act 1914

The property owners hold a Groundwater Licence (GWL) under the *Rights in Water Irrigation Act 1914*. Licence number GWL 57766(2) allocates 850,000 kL of groundwater from the Gascoyne Combined Fractured Rock West Fractured Rock aquifer to the property per year. This licence entitles abstraction for dewatering purposes, dust suppression, and mineral ore processing uses.

1.4.4 Local Government Authority

This prescribed premises is located within the Shire of Three Springs and is a permitted land use under their Town Planning Scheme.

2.0 STAKEHOLDER AND COMMUNITY CONSULTATION

SUBMISSIONS RECEIVED DURING 21 DAY PUBLIC COMMENT PERIOD

This proposal is not subject to a 21-day public comment period due to the nature of the insignificant licence amendment being carried out (administrative change).

3.0 EMISSIONS AND DISCHARGES RISK ASSESSMENT

DER considers that conditions should focus on regulating emissions and discharges of significance. Where appropriate, emissions and discharges which are not significant should be managed and regulated by other legislative tools or management mechanisms.

The following section assesses the environmental risk of potential emissions from the Imerys Talc Australia Pty Ltd operations. In order to determine the site's appropriate environmental regulation, an emissions and discharges risk assessment was conducted of the Three Springs Talc Mine operations using the environmental risk matrix outlined in Appendix B. The results of this are summarized in Table 2 below:

d with this	N/A	N/A	LIC– No Conditions	N/A	General provisions of the *Environmental Protection Act 1986.*
t on closest idence 2km	No- Noise emissions have not been raised as an issue in public submissions.	E – other management mechanisms	LIC– No conditions	N/A	*Environmental Protection (Noise) Regulations 1997.*
agnetic radiation erates during	N/A	N/A	LIC– No conditions	N/A	General provisions of the *Environmental Protection Act 1986.*
d into Pit B to scharged water ake 4km south ng along the to impact on iately. The mine g an organic flows into a he lake. lakes where the fall. The chain of as water is ter from the ough the process within the licence oring of discharge porting rring on site is	No- Discharges to water has not been raised as an issue in public submissions.	E – licence conditions. It is reasonable to require monitoring and reporting conditions due to uncertainty.	LIC – Conditions relating to volume, monitoring and reporting for the discharged water to the lake.	See Appendix A 1.1	General provisions of the *Environmental Protection Act 1986.* *Environmental Protection (Unauthorised Discharges) Regulations 2004.*

fines from the sting storage rdance with the *gulations 2002.* e of tyres to burial, conditions relating					
y with the DMP eficiation Plant t states that they ing fuel, oil or designed to the largest volume of mpound is graded d and is designed	Low - Hydrocarbon/ chemical storage has not been raised as an issue in public submissions however will be included within the licence to ensure no unauthorised discharge of these occur.	D – Licence conditions are relevant for the management of chemicals and Total Recoverable Hydrocarbons at the premises	LIC – conditions have been included within the licence relating to the washdown bays and chemical and Total petroleum Hydrocarbon storage and management		*Environmental Protection (Controlled Waste) Regulations 2004.* *Environmental Protection (Unauthorised Discharges) Regulations.2004.* DMP (Dangerous Goods) requirements.
associated with	No- Native vegetation clearing has not been raised as an issue in public submissions.	E – other management mechanisms	LIC- No conditions		*Environmental Protection (Clearing of Native Vegetation) Regulations 2004.*
roposed area.	No- contaminated sites has not been raised as an issue in public submissions.	E – other management mechanisms	LIC- No conditions		*Environmental Protection (Contaminated Sites) Regulations 2006.* *Contaminated Sites Act 2003.*

4.0 GENERAL SUMMARY AND COMMENTS

The Three Springs Talc Mine licence L8333/2009/1 is being reissued as L8333/2009/2. Recent amendments have included conditions relating to monitoring of emissions to land, chemical storage, washdown bays and Total Recoverable Hydrocarbon management (TRH).

The Licence has also been converted to the new REFIRE format v2.6.

The EAR has been updated to reflect these changes.

OFFICER PREPARING REPORT

Caroline Conway-Physick

Position: Environmental Officer
Midwest Regional Office
Department of Environment Regulation
(08) 9921 5955

11 December 2013

ENDORSEMENT

Craig McLernon

Position: Regional Leader
Midwest Regional Office
Department of Environment Regulation
(08) 9921 5955

11 December 2013

APPENDIX A: EMISSIONS AND DISCHARGES OF SIGNIFICANCE

1.1 DISCHARGES TO WATER

Water management at Imerys Talc involves the dewatering of groundwater from the open pit B and discharging the effluent into nearby salt lakes. All water requirements for the mining operations are supplied by the dewatered groundwater. The groundwater pumped to the water dam is used for dust suppression on roads and stockpiles, or discharged off site. The discharged water is pumped via an underground pipe, buried just below the surface to monitor pipeline failure, to the outfall to the closest point at the Yarra Yarra Salt Lakes. In the area of the discharge outlet (TP20), the chain of lakes is approximately 3-4 kilometres in width, however the smaller lake in which the discharge is dispersed is approximately 700 metres in length and 200 metres wide.

Direct rainfall, overland runoff and groundwater seepage collect in the Pit D sump, from where it is pumped directly to the licensed discharge point (LDP) at the edge of the discharge lake, which is part of the Yarra Yarra Lakes system. The water is only pumped directly to the LDP when the level of total suspended solids is below 70 mg/L as a preventative measure to ensure that the license limit of 80 mg/L is not exceeded. Total suspended solids (TSS) are monitored using an *in situ* field meter in the Pit D sump and at the LDP every three months and sampled as required by a NATA accredited laboratory. If the concentration of TSS is above 70 mg/L, pumping is temporarily ceased or, if it is necessary to remove the water from the sump immediately, the water is pumped to Pit B to allow for sediment to settle before being pumped to the LDP.

Water from Pit D is currently used for general uses around the mine site, primarily for dust suppression. The new plant is operational, water from Pit D is utilised to run the plant and for dust suppression.

No talc was mined during the period from December 2009 to December 2010, nor was any talc processed through the beneficiation plant, so there were no <0.7mm fines produced. Water from the <0.7mm fines stored in the <0.7mm fines dam normally evaporates to the air and runoff is piped to Pit B. No new <0.7mm fines were placed in the <0.7mm fines dam during the period from December 2009 to October 2010, now the beneficiation plant is operational, <0.7mm fines are placed in the <0.7mm fines dam.

Scheme water is used for all domestic purposes in the administration building but is not used for any mining processes. Domestic waste water is not recycled through the mine water circuit, hence the scheme water circuit is completely separate from the mine water circuit.

A full site ground water study was carried out in 2010 by Golders (Water Balance), resulting in a full water management plan being completed for the site. A study of the results of groundwater monitoring was also carried out by Golders during 2011.

The proponent states that groundwater and surface water salinity (as Electrical Conductivity - EC) has varied since monitoring commenced in 1992. However, in the past 12 months salinity has been generally consistent with slight seasonal variations (see Table 3). Ground water salinity at Pits B and D and the Lake Discharge Point (LDP) are significantly lower than levels found above and below the LDP. The TDS concentration in the discharge lake ranged from 224 to 254 g/L whereas the TDS concentration in the control lakes ranged from 323 to 353 g/L, which is approaching the saturation point for sodium chloride. The EC of the discharge lake (204,000 – 206,000 µS/cm) was also lower than that of both the upstream

(226,000 µS/cm) and the downstream lakes (227,000 – 228,000 µS/cm). The water in the upstream and downstream lakes is more saline than that in the discharge lake because of the high evaporation rate and the low rate of surface water runoff entering the lakes. Both the upstream and downstream lakes are intermittent whereas the discharge lake has permanent water due to the influx of dewatering effluent from the discharge pipeline.

Water from Pit D is currently used for general uses around the mine site, primarily for dust suppression. The new plant is operational, water from Pit D is utilised to run the plant and for dust suppression.

Imerys Talc have in the past, generally complied with the monthly discharge limits under its previous licences for Total Suspended Solids (TSS) of 80 mg/L. . Total Oil and Grease (TOG) levels have ranged from <2 to 26 mg/L with the highest detected level recorded in December 2008. TOG levels remained below the historical licence limit allocated amount of 30 mg/L throughout the review period. However, current limits as Total Recoverable Hydrocarbons (TRH), from the oil separator have now been placed at no more than 10 mg/L. This change has been effectively complied with. The most recent Annual Environmental Report (AER), 2011, has shown no significant compliance issues however elevated Nitrate levels in Pit B, Pit D and the Lake Discharge Point requires further monitoring and investigation which will be reported on in the next AER.

The pH across all monitoring locations was close to neutral and varied little. The range of values recorded was from 7.3 to 7.57. The downstream lake was slightly more acidic than the upstream or discharge lakes, but only by 0.2 pH units.

The total organic carbon (TOC) concentration was 25 mg/L in the upstream lake, ranged between 6 to 18 mg/L in the discharge lake, and was 13 mg/L in the downstream lake. Actis suggested that the higher values in the upstream lake may be due to the increased evapo-concentration occurring in the control lakes, but the data does not show any clear link between salinity and TOC.

The concentration of total nitrogen (TN) was below the detection limit (5 mg/L) for all monitoring locations and therefore the dewatering effluent is not significantly increasing the concentration of TN in the discharge lake. The concentration of total phosphorus (TP) was below the detection limit (0.5 mg/L) for all monitoring locations with the exception of R2 and L1 from the discharge lake (6.51 and 7.04 mg/L respectively) and DWL1 from the downstream lake (0.5 mg/L).

The results of the monitoring performed by "Actis" indicate that the dewatering effluent is not having a significant impact on the chemistry of the receiving lake system. The only discernible difference between the discharge lake and the control lakes is that the salinity of the discharge lake is lower than that of the controls, due to the continuous influx of dewatering effluent.

DISCHARGES TO WATER RISK ASSESSMENT

Socio-Political Context of Discharge to Water

No known or expected socio-political interest/ impact. The nearest residence is located approximately 2 km east of the mine. The occupier of the homestead is an employee of the mine.

Risk Matrix Assessment of Discharge to Water

Based on an emission significance of "1" with a socio-political context on "No", the overall risk associated with the discharge to water at the Imerys Talc mine site has been assessed as "E", no regulation, other management mechanisms. However, due to the relatively limited

monitoring period associated with discharging into the Yarra Yarra Lakes it is reasonable to include conditions in the licence.

RECOMMENDED STRATEGY FOR MANAGING DISCHARGES TO WATER

Discharges to water is suitable for licence conditions. Conditions relating to limits for specific parameters (total suspended solids, and total oil and grease) metering, monitoring, inspections and reporting of pipeline failure for effluent entering the salt lake, and the general management of the Yarra Yarra saline lake system, are to be included.

1.2 SOLID AND LIQUID WASTE

Mining operations since July 2008 have focussed on stripping overburden. Topsoil and overburden were removed in the southern pit expansion area in preparation for the mining of talc, which has recommenced now the new beneficiation plant is constructed, also removed from Stage 4.1-1 and cutback Pit D. The construction of the new beneficiation plant commenced in October 2009 and was completed in October 2010. Overburden removed was placed in the south waste dump and dolomite was placed in the talc/dolomite dump

During the period from December 2010 and December 2011 mining, crushing and beneficiation of talc ore was undertaken.

The types of mineral waste from the Imerys Talc mine relate to laterite material, talcose clays, dolerite, and dolomite, with dolomite being the main contaminant that occurs in the talc zones of the mine, and is present as a massive intersection above the talc formation.

Liquid Waste <0.7mm fines

The fines material from the beneficiation process is comprised of natural talc fines. The fines are washed out of the ore and discharged to the fines containment facility. Fines material is periodically excavated from the fines containment facility and disposed of in the waste dumps.

Imerys Talc produces approximately 10% of the feed in <0.7mm fines from the crushing and sorting process. The <0.7mm fines comprise of wet talc fines, and contain no chemicals or processing reagents, as none are used in the process. The materials of <0.71 mm fraction, are currently discharged into disused Pit A (east waste dump). Historically tailings of up to 5mm fraction have been discharged into Pit A.

<0.7mm fines are pumped in a slurry form to pits which are unlined. The dewatered groundwater is allowed to infiltrate back in.

Solid Waste

Overburden removed from mining activities is currently being disposed of in two locations. The locations are the east waste dump (Pit A) and the south waste dump.

Imerys Talc has a Waste Management Plan that details how wastes are to be treated, which includes; reducing the amount of waste generated and sent to landfill, recycle waste products where practical and reuse products instead of disposing of them.

Other waste material allowed to be disposed of on site is transported to the mineral waste stockpiles, which is either to south waste dump or east waste dump. The waste is buried under the stockpiles as soon as it is transported to the dump site.

Imerys Talc also plan to dispose of old tyres in the same manner as the other waste on site. The burial of tyres within the waste stockpiles will be using DER's recommended method of tyre disposal.

SOLID AND LIQUID WASTE RISK ASSESSMENT

Socio-Political Context of Solid and Liquid Waste

No known or expected socio-political interest/ impact. The nearest homestead is located approximately 2 km east of the mine. The occupier of the homestead is also an employee of the mine.

Risk Matrix Assessment of Solid and Liquid Waste

Based on an emission significance of "1" with a socio-political context on "No", the overall risk associated with the solid and liquid waste at the IMERYS TALC mine site has been assessed as "E", no regulation, other management mechanisms. However, due to the proposed burial of tyres within the designated Tyre Disposal area of the site landfill and the need to stipulate acceptable types of waste to be buried at the landfill, it is reasonable to include conditions relating to these matters in the licence.

RECOMMENDED STRATEGY FOR MANAGING SOLID AND LIQUID WASTES

Discharges of solid and liquid waste are suitable for licence conditions. Conditions relating to the acceptability of specific waste types, arrangement of tyre stockpiles and burial of tyres are to be included in the licence.

APPENDIX B: EMISSIONS AND DISCHARGES RISK ASSESSMENT MATRIX

Table 3: Measures of Significance of Emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95th Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50th Percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 4: Socio-Political Context of Each Regulated Emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case
*This is determined by the DER using the DER "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.

Table 5: Emissions Risk Reduction Matrix

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS
A = Do not allow (fix)
B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)
C = licence condition (setting targets + EMPs - longer timeframes)
D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools
E = No regulation, other management mechanisms

Note: The above matrix is taken from the DER Officer's Guide to Emissions and Discharges Risk Assessment May 2006.